

TRANSISTOR D.A.T.A.BOOK

2 MAR 1971

SPRING 1971

30th EDITION

THIS D.A.T.A.BOOK VALID UNTIL FALL 1971 EDITION

D.A.T.A. REFERENCE STANDARDS OR INDUSTRY

New Types Added	966
Types With Revised Specifications	521
Types and Manufacturers Added	3,358
Types and Manufacturers Deleted	481
TOTAL TYPE NUMBERS INCLUDED IN THIS EDITION	18,389
New Manufacturers Added	4
(Indicated by * in Manufacturer Listing)	
Manufacturers Deleted	0
TOTAL MANUFACTURERS THIS EDITION	100

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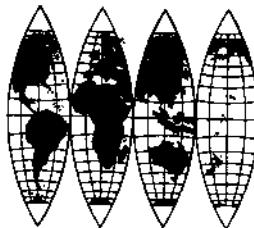
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TRANSISTOR D.A.T.A.BOOK

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30TH
EDITION

EDITORIAL PROCEDURES AND OBSERVATIONS

Purpose

This D.A.T.A.BOOK is designed to report comprehensively on what is presently being produced (throughout the free world) in this specific component field. While a D.A.T.A.BOOK such as this cannot possibly provide 100% of the answers you might need, its primary aim is that of both facilitating the selection of types suitable to your technical requirements and directing you to sources of their manufacture.

Technical Data Collection

D.A.T.A. acquires and processes the information presented in this D.A.T.A.BOOK with the cooperation of the participating manufacturers who supply us with latest changes. Manufacturers are not charged for technical listings of their products.

JEDEC Type Numbers

For 2N and 3N types, the electrical and physical characteristics data included in this D.A.T.A.BOOK are those registered with JEDEC. Indicated manufacturers' types may or may not conform exactly with the registered specifications; therefore, individual manufacturers' complete specifications should be checked to determine suitability for particular requirements.

Substitute Types

This D.A.T.A.BOOK cannot truly claim to be an interchangeability chart; however, because of the sequencing arrangement, by characteristics, in the technical data sections, types with near-identical or similar characteristics appear together, one after the other. For the engineer, this immediate source of technical comparison is superior to, and safer than, a mere listing of possible replacement type numbers.

Price and Availability

Because of the rapid change in the transistor field, back-up, delivery, and price information should be obtained direct from the manufacturers or their local offices, as included in this D.A.T.A.BOOK. See Table of Contents.

Manufacturers' Specifications

This D.A.T.A.BOOK includes currently manufactured types, with their major characteristics and their manufacturers. Every effort is made to ensure the accuracy of all entries herein; however, the publisher cannot be held responsible or guarantee against the possibility of error or omission. Only the manufacturers themselves can provide you with complete technical details.

Discontinued Transistors

Since the first edition of this D.A.T.A.BOOK in 1956, thousands of transistors have been discontinued by the manufacturers. In response to many requests from our subscribers, there is now available the annual D.A.T.A. DISCONTINUED TRANSISTOR D.A.T.A.BOOK, providing the most complete compilation of discontinued transistors, along with their characteristics, ever assembled. See order card inside front cover of this D.A.T.A.BOOK.

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HOW TO MAKE MAXIMUM USE OF THE TRANSISTOR D.A.T.A.BOOK

For maximum information in minimum time, follow the 1-2-3 Basic Procedure in the box below:

1. Find in the following nine "known-unknown" situations the one corresponding with your present need;
2. Follow the outlined steps;
3. If the answer leads to another "known-unknown" situation, repeat 1. and 2. until all possible answers are obtained.

NOTE: Each section of the D.A.T.A.BOOK is organized in a distinct sequence, as indicated at the top of each page.

1ST	KNOWN: Electrical and Mechanical Requirements. UNKNOWN: Suitable Type Number(s). <ol style="list-style-type: none"> a. Turn to Technical Data Section coinciding with your general requirements. b. By checking the order of listing at top of each page, you will be able to quickly locate those types most closely fitting your requirements. The drawing number referenced at end of each technical data line will be found in Outline Drawings, Section 15, in drawing number order. The Lead Code referenced at the end of a technical data line is applicable to JEDEC (TO) devices; and the Code identification will be found at the end of Section 15. c. To ascertain manufacturers of selected type numbers, see "2nd known-unknown" situation below.
2ND	KNOWN: Type Number UNKNOWN: Manufacturer(s), Address, Local Offices <ol style="list-style-type: none"> a. Turn to Type No. Cross Index, Section 1 (in Type Number order). b. The manufacturers (coded) are shown for each type number. c. Manufacturers' names, in code order, are listed at back of D.A.T.A.BOOK with addresses.
3RD	KNOWN: Type Number UNKNOWN: Its Characteristics <ol style="list-style-type: none"> a. Turn to Type No. Cross Index, Section 1 (in type number order). b. Opposite each type number is the page and line number, which is significant only for locating the technical data. Line numbers can change from issue to issue of the D.A.T.A.BOOK. c. Turn to pertinent line number in Technical Data Sections. In addition to the electrical data, the drawing number referenced at end of the technical data line will be found in Outline Drawings, Section 15, in drawing number order. The Lead Code referenced at the end of a technical data line is applicable to JEDEC (TO) devices; and the Code identification will be found at the end of Section 15.
4TH	KNOWN: Type Number UNKNOWN: Equivalents or Similar Types <ol style="list-style-type: none"> a. Follow through "3rd known-unknown" situation above. . . and b. Survey characteristics of types immediately above and below that line number to determine which type numbers might fill your need. c. To ascertain manufacturers of suitable type numbers, see "2nd known-unknown" situation above.
5TH	KNOWN: Type Number UNKNOWN: Case, Dimensions, and Lead Configuration <ol style="list-style-type: none"> a. Follow through "3rd known-unknown" situation above.
6TH	KNOWN: Military Requirement UNKNOWN: Suitable Type Number(s) with MIL Specs. <ol style="list-style-type: none"> a. Turn to the Technical Data Section coinciding with your general military requirements. b. By checking the order of listing at the top of each page, you will be able to quickly locate those military types (prefixed by JAN) most closely fitting the requirements. In addition to the electrical data, the drawing number referenced at end of the technical data line will be found in Outline Drawings, Section 15, in drawing number order. The Lead Code referenced at the end of a technical data line is applicable to JEDEC (TO) devices; and the Code identification will be found at the end of Section 15. c. To ascertain qualified manufacturers of type numbers under consideration, turn to Types with U.S. MIL Specs., Section 14, where types are listed in type number order, giving manufacturers (coded) and MIL Spec. number. d. The manufacturers codes are explained at back of D.A.T.A.BOOK with addresses.
7TH	KNOWN: Type Number with MIL Specs. UNKNOWN: Qualified Manufacturer(s) and/or MIL Spec. Number <ol style="list-style-type: none"> a. Turn to Types with U.S. Military Specification, Section 14, where opposite each type number are the qualified manufacturers (coded) and the MIL Spec. number. b. Manufacturer codes are explained at back of D.A.T.A.BOOK with addresses.
8TH	KNOWN: Type Number Not Included in D.A.T.A.BOOK Type No. Cross Index. UNKNOWN: What Happened to it? <ol style="list-style-type: none"> a. Consult the D.A.T.A. DISCONTINUED TRANSISTOR D.A.T.A.BOOK.

HOW UNITS OF MEASURE ARE PRESENTED IN THIS D.A.T.A.BOOK

The basic unit, for each column heading in the technical data sections, is the one most applicable in tabulating that parameter. There are exceptions, however, which require the use of space-saving "suffix indicators", as explained below.

1. Since the column heading indicates a basic unit only, a "suffix indicator" may be added to the technical data presented in the column. The "suffix indicator" modifies the basic unit in accordance with established engineering practices.

EXAMPLES:	Column Heading	Data if Based on Column Heading	Space-saving Listing Technique	Meaning
	A	0.003	3.0m	3 milliamperes
	Hz	5,000	5.0k	5 kilohertz
	Ohms	9,000,000	9.0M	9 megaohms
	Sec.	0.000007	7.0μ	7 microseconds

See box below for prefixes and symbols

PREFIXES & SYMBOLS			Recommended by International Committee on Weights and Measures		
Indicating Powers of Ten			Adopted by National Bureau of Standards		
Power	Prefix	Symbol	Power	Prefix	Symbol
10 ¹²	tera	T	10 ⁻¹	deka	da
10 ⁹	giga	G	10 ⁻²	deci	d
10 ⁶	mega	M	10 ⁻³	centi	c
10 ³	kilo	k	10 ⁻⁴	milli	m
10 ²	hecto	h	10 ⁻⁶	micro	μ
			10 ⁻⁹	nano	n
			10 ⁻¹²	pico	p
			10 ⁻¹⁵	femto	f
			10 ⁻¹⁸	atto	a

HOW TYPE NUMBERS ARE SEQUENCED

Type numbers are listed in numeric-alphabetic sequence; i.e. type numbers beginning with a number (decimal, fraction, or whole) precede type numbers beginning with a letter.

EXPLANATION AND EXAMPLES		
1. Decimals and fractions precede whole numbers. An equivalent decimal precedes the fraction when the remainder of type number is identical.	.25Z15D 1/4Z15D 3/4M12Z 1T3	
2. Zeros are ignored in sequencing except when the zero is the only basis for distinguishing one type number from another. In this case the type number containing the zero is listed first.	0112 112 0113 00115 AP01 AP1 AP02	
3. Number and/or letter groupings preceding hyphens or slashes are the controlling factors in sequencing. The hyphens and slashes themselves precede any identically positioned letters also having the same beginning number/letter groupings.	66-0706 66M1 70/10 70A9	
4. Identical type numbers representing devices with different characteristics are listed in order of manufacturer letter code.	TD6 GESY TD6 GIC	
5. A military prefix (JAN) is ignored in the numeric-alphabetic sequencing of type numbers. A military type number directly follows its equivalent JEDEC type number provided that the sequencing data are identical.	2N645 JAN 2N645	

1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE							
TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line
TN4378	△TII 218-90	JAN2N44A	GESY 59-70	2N123	CNS 60-17	2N173	CNS 64-11
1N5722	△TII 218-91	2N45	CNS 59-7	△ETC	IOC 192-88 (cont)	CNS 64-11	CNS 64-11
1N5723	△TII 218-92	+ ETC	GIC 59-7	ITC	NJS 64-11	△ETC	NJS 64-11
1N5724	△TII 218-93	2N45A	NJS 59-7	JAN2N123	none 59-101	△ETC	CNS 67-87
1N5725	△TII 218-94	2N59	CNS 61-88	△ETC	NJS 64-11	△ETC	NJS 67-88
2AC132	MINA 213-80	2N59A	CNS 61-89	2N124	CNS 66-4	2N174	△DEL 136-22
2AC187	PHIC RADF	213-81	2N59B	△ETC	NJS 66-19	△ETC	NJS 67-88
2AC188	MINA 213-82	2N59C	NJS 61-90	2N125	CNS 66-20	△ETC	SCA SPR
2ACY17	MULB 213-83	CNS 61-91	JAN2N128	CNS 66-20	△ETC	PHIC 67-9	CNS 67-9
2ACY18	MULB 213-84	2N60	CNS 61-91	2N130	CNS 66-20	△ETC	RADF 67-10
2ACY19	MULB 213-85	+ ETC	NJS 61-91	2N130A	CNS 66-20	△ETC	PHIC 67-10
2AD139	PHIC 213-88	UPI	△ETC	NJS 61-91	2N174A	△DEL 136-23	△ETC
2AD140	PHIC 213-89	2N60A	CNS 61-92	2N131	CNS 66-29	2N234A	△SOD 130-9
2AD149	MINA 213-87	MULB 213-87	△ETC	NJS 61-92	2N175	CNS 66-29	△ETC
MINA PHIC	BELI 213-88	2N60B	CNS 61-93	2N131A	CNS 66-30	△MOTA 133-48	△SOD 130-11
2AD161	MINA 213-89	2N60C	△ETC	NJS 61-93	2N132	CNS 66-30	△ETC
2AD162	PHIC 213-90	2N61	CNS 61-94	2N132A	CNS 66-30	△MOTA 133-49	△SOD 130-12
2AD163	PHIC 213-90	UPI	△ETC	NJS 61-94	2N133	CNS 66-30	△ETC
2AT329	SERA 213-91	2N61A	CNS 61-76	2N133A	CNS 66-30	CNS 66-30	△SOD 130-13
2AT331	SERA 213-92	2N61B	CNS 61-77	2N135	CNS 66-30	△ETC	△ETC
2BC119	SGSI 213-93	+ ETC	NJS 61-78	2N136	CNS 66-30	△ETC	NJS 66-30
2BC138	SGSI 213-94	2N61C	CNS 61-78	2N137	CNS 66-30	△ETC	PPC 66-30
2BC139	SGSI 213-95	+ ETC	NJS 61-78	2N138	CNS 66-30	△ETC	PPC 66-30
2BC142	SGSI 213-96	2N63	CNS 66-58	2N139	CNS 66-30	△ETC	PPC 66-30
2BC143	SGSI 213-97	+ ETC	NJS 66-58	2N140	CNS 66-30	△ETC	PPC 66-30
2BC144	SGSI 213-98	2N64	CNS 66-60	2N141/13	CNS 66-30	△ETC	PPC 66-30
2BC221	SGSI 213-99	+ ETC	NJS 66-60	2N142/13	CNS 66-30	△ETC	PPC 66-30
2BC222	SGSI 213-100	2N65	CNS 66-4	2N143/13	CNS 66-30	△ETC	PPC 66-30
2BC286	SGSI 213-101	2N65	CNS 66-4	2N144/13	CNS 66-30	△ETC	PPC 66-30
2BD124	+ PHIN 213-103	KSC	128-107	2N145	CNS 66-25	△ETC	SES 66-30
2BD131	MULB 213-104	2N68/13	CNS 53-39	2N146	CNS 66-26	△ETC	SES 66-30
2BDY20	MULB 213-105	NJS	2N77	2N147	CNS 66-27	△ETC	SES 66-30
2BDY38	+ MULB 213-106	+ ETC	NJS	2N155	CNS 66-16	△ETC	SES 66-30
2C111	SGSI 222-94	CNS	+ ETC	GESY 66-45	2N188	CNS 66-72	△ETC 111-95
2C415	SGSI 101-59	2N78A	+ ETC	66-24	2N188A	CNS 66-72	△ETC 111-95
2C425	SGSI 222-95	CNS	+ ETC	66-32	2N188A	CNS 66-72	△ETC 111-96
2C444	SGSI 106-61	JAN2N78A	GESY 66-32	66-8	2N188A	CNS 66-72	△ETC 111-96
2CY30	TIIB 72-95	2N94A	CNS 67-8	NJS	2N188A	CNS 66-72	△ETC 111-96
2CY31	TIIB 72-96	+ ETC	NJS	2N188A	CNS 66-72	△ETC 111-96	SES 66-72
2CY32	TIIB 72-99	2N95	CNS 138-1	2N158	2N189	CNS 66-72	△ETC 111-96
2CY33	TIIB 72-100	NJS	2N158	2N189	CNS 66-72	△ETC 111-96	SES 66-72
2CY34	TIIB 72-104	2N97	CNS 66-8	JAN2N158	CNS 66-72	△ETC 111-96	SES 66-72
2CY38	TIIB 79-103	+ ETC	NJS	2N158A	CNS 66-72	△ETC 111-96	SES 66-72
2CY39	TIIB 79-104	2N98	CNS 66-9	2N158A	CNS 66-72	△ETC 111-96	SES 66-72
2G101	TIIB 57-5	+ ETC	NJS	2N160	CNS 66-42	△GESY 62-43	△TII 133-50
2G102	TIIB 57-8	2N99	+ ETC	NJS	2N191	CNS 66-43	△GESY 62-43
2G103	TIIB 60-94	2N101/13	KSC	127-70	2N192	CNS 66-54	△TII 133-50
2G104	TIIB 60-95	2N103	CNS 66-7	2N160A	CNS 66-54	△TII 133-50	SES 66-54
2G106	TIIB 60-75	2N104	CNS 58-99	2N161	CNS 66-54	△TII 133-50	SES 66-54
2G107	TIIB 207-78	+ ETC	NJS	2N161A	CNS 66-54	△TII 133-50	SES 66-54
2G110	TIIB 64-94	2N105	CNS 53-40	2N162	CNS 66-56	△TII 133-50	SES 66-56
2G210	TIIB 136-20	+ ETC	NJS	2N162A	CNS 66-57	△TII 133-50	SES 66-57
2G220	TIIB 133-45	2N106	CNS 53-61	2N163A	CNS 66-57	△TII 133-50	SES 66-57
2G221	TIIB 133-46	+ ETC	NJS	2N163A	CNS 66-57	△TII 133-50	SES 66-57
2G222	TIIB 133-47	2N107	CNS 53-67	2N163A	CNS 66-57	△TII 133-50	SES 66-57
2G240	TIIB 129-64	+ ETC	NJS	2N163A	CNS 66-57	△TII 133-50	SES 66-57
2H1254	EMLS 73-38	SES	195-46	2N108	CNS 66-58	△TII 133-50	SES 66-58
2H1255	EMLS 73-42	+ ETC	NJS	2N163A	CNS 66-58	△TII 133-50	SES 66-58
2H1256	EMLS 197-48	2N109	CNS 61-35	2N164	CNS 66-58	△TII 133-50	SES 66-58
2H1257	EMLS 195-44	2N111	CNS 58-24	2N164A	CNS 66-58	△TII 133-50	SES 66-58
2H1258	EMLS 197-49	2N111A	CNS 58-25	2N165	CNS 66-58	△TII 133-50	SES 66-58
2H1259	EMLS 195-45	2N112	CNS 58-26	2N166	CNS 66-58	△TII 133-50	SES 66-58
2N2X	THF 213-108	+ ETC	NJS	2N167	△GESY 66-46	△TII 133-50	SES 66-58
2N34	CNS 58-85	2N113	CNS 58-28	2N167A	△GESY 66-49	△TII 133-50	SES 66-58
+ ETC	NJS	+ ETC	NJS	2N167A	△GESY 66-49	△TII 133-50	SES 66-58
2N34A	CNS 53-63	2N114	CNS 58-31	2N167A	△GESY 66-49	△TII 133-50	SES 66-58
+ ETC	NJS	+ ETC	NJS	2N167A	△GESY 66-49	△TII 133-50	SES 66-58
2N35	CNS 67-7	2N117	+ ETC	85-41	2N171	△GESY 66-49	△TII 133-50
+ ETC	GIC	CNS	+ ETC	JAN2N167A	GESY 66-49	△TII 133-50	SES 66-58
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+ ETC	NJS	2N118	SSI	85-55	2N169A	△ETC 66-38	△RCA 66-43
2N38	CNS 53-57	CNS	SSI	85-55	2N169A	△ETC 66-38	△RCA 66-43
+ ETC	NJS	2N118A	SSI	85-55	2N169A	△ETC 66-38	△RCA 66-43
2N43	GESY 63-92	JAN2N118	TII	85-35	CNS 66-23	△ETC 66-38	△RCA 66-43
CNS NJS	GESY 63-92	2N118A	TII	85-55	CNS 66-23	△ETC 66-38	△RCA 66-43
SES	GESY 63-93	2N119	TII	85-55	CNS 66-23	△ETC 66-38	△RCA 66-43
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2N44A	CNS NJS	CNS	SSI	85-54	2N170	△ETC 66-2	△RCA 66-43
SES	GESY 63-91	CNS	SSI	85-54	2N170	△ETC 66-2	△RCA 66-43
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SES	GESY 63-91	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
JAN2N43A	GESY 63-91	2N122	CNS	85-54	2N173	△DEL 136-21	△TII 64-10
2N44A	CNS NJS	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
SES	GESY 63-91	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
JAN2N43A	GESY 63-91	2N122	CNS	85-54	2N173	△DEL 136-21	△TII 64-10
2N44A	CNS NJS	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
SES	GESY 63-91	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
JAN2N43A	GESY 63-91	2N122	CNS	85-54	2N173	△DEL 136-21	△TII 64-10
2N44A	CNS NJS	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
SES	GESY 63-91	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
JAN2N43A	GESY 63-91	2N122	CNS	85-54	2N173	△DEL 136-21	△TII 64-10
2N44A	CNS NJS	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
SES	GESY 63-91	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
JAN2N43A	GESY 63-91	2N122	CNS	85-54	2N173	△DEL 136-21	△TII 64-10
2N44A	CNS NJS	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
SES	GESY 63-91	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
JAN2N43A	GESY 63-91	2N122	CNS	85-54	2N173	△DEL 136-21	△TII 64-10
2N44A	CNS NJS	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
SES	GESY 63-91	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
JAN2N43A	GESY 63-91	2N122	CNS	85-54	2N173	△DEL 136-21	△TII 64-10
2N44A	CNS NJS	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
SES	GESY 63-91	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
JAN2N43A	GESY 63-91	2N122	CNS	85-54	2N173	△DEL 136-21	△TII 64-10
2N44A	CNS NJS	CNS	SSI	85-54	2N173	△DEL 136-21	△TII 64-10
SES	GESY 63-91						

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TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line	TYPE No.	MFRS Pg&Line
2N265	CNS 55- 2	2N311	(cont)	♦ ETC NJS	♦ ETC CNS	JAN2N333	TEC TII	♦ MOTA 133- 52	2N385 CNS 67- 52
2N268	♦ ETC KSC NJS	130-104	GIC CNS	66-106	♦ ETC SSI	2N333A CNS	106-106	♦ ETC KSC SOD	♦ GIC NJS
	SOD		♦ ETC GIC		♦ ETC TEC			♦ ETC CNS	67- 54
2N268A	CNS 130-105	2N312	NJS	192- 42	JAN2N333A	none 106- 99	♦ MOTA 133- 53	2N385A CNS 67- 54	
	♦ ETC KSC NJS		♦ ETC CNS	59-102	2N334	85- 60	♦ ETC KSC SOD	♦ GIC NJS	
2N269	CNS 57- 29	2N315A	NJS	192- 43	♦ ETC SCA	♦ ETC TEC	2N350A CNS	♦ MOTA 133- 53	2N388 CNS 67- 71
	♦ ETC NJS		♦ ETC UPI	59-103		TII		♦ ETC IDC NJS	♦ GIC 192- 89
2N270	CNS 63- 98	♦ ETC MST	ETC	192- 43	SSA	♦ ETC PPC	2N351 CNS	♦ MOTA 133- 54	♦ ETC PHIN SES
	♦ ETC NJS		♦ ETC TEC		♦ ETC TEK	TII		♦ ETC TII	♦ ETC THF
2N271	CNS 58- 29	2N316	CNS	193- 85	SSA	♦ ETC PPC	2N351A CNS	♦ MOTA 133- 55	JAN2N388 GIC 67- 39
	♦ ETC NJS		♦ ETC UPI	60- 37	♦ ETC TEC	TII		♦ ETC RCA TII	200- 18
2N271A	CNS 58- 30	2N316A	♦ ETC	193- 85	SSA	♦ ETC PPC	2N351A CNS	♦ MOTA 133- 55	2N388A CNS 67- 55
	♦ ETC NJS		♦ ETC UPI	60- 38	♦ ETC TEC	TII		♦ ETC GIC 192- 91	
2N272	CNS 58- 89	2N316A	♦ ETC	193- 84	SSA	♦ ETC PPC	2N356 CNS	♦ GIC 66- 64	♦ ETC NJS SES
	♦ ETC NJS		♦ ETC UPI	60- 38	♦ ETC TEC	TII		♦ ETC 191- 43	♦ TII THF
2N273	CNS 59- 9	2N317	CNS	194- 71	SSA	♦ ETC PPC	2N356A CNS	♦ GIC 66- 64	2N389 CNS 168- 73
	♦ ETC NJS		♦ ETC UPI	60- 52	JAN2N335	TEC TII		♦ ETC NJS SES	
2N274	♦ &RCA 55- 80	2N317	CNS	194- 71	SSA	♦ ETC PPC	2N357 CNS	♦ GIC 66- 64	♦ TII 168- 73
			♦ ETC UPI	60- 52		TII			
2N277	♦ &DEL 136- 25	2N317A	CNS	194- 72	SSA	♦ ETC PPC	2N357A CNS	♦ GIC 66- 64	JAN2N389 SEN 168- 110
	♦ ETC KSC		♦ ETC UPI	60- 53	JAN2N354	TEC TII		♦ ETC NJS SES	
	♦ MOTA NJS		♦ ETC UPI	194- 72	SSA	♦ ETC PPC	2N357A CNS	♦ GIC 66- 64	2N389A CNS 168- 74
	♦ MULB RADF		♦ ETC UPI	60- 53	JAN2N354	TEC TII		♦ ETC NJS SES	
2N278	♦ &DEL 136- 26	2N319	♦ EGESY	63- 57	SSA	♦ ETC PPC	2N358 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC KSC		♦ ETC UPI	63- 57	JAN2N354	TEC TII		♦ ETC NJS SES	
	♦ MOTA NJS		♦ ETC UPI	63- 57	SSA	♦ ETC PPC	2N358 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ MOTA NJS		♦ ETC UPI	63- 57	JAN2N354	TEC TII		♦ ETC NJS SES	
2N279	CNS 57- 97	2N320	♦ EGESY	63- 64	SSA	♦ ETC PPC	2N358 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	63- 64	JAN2N358A	TEC TII		♦ ETC NJS SES	
2N280	CNS 57- 98	2N320	♦ EGESY	63- 64	SSA	♦ ETC PPC	2N358 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	63- 64	JAN2N358A	TEC TII		♦ ETC NJS SES	
2N281	CNS 57-100	2N321	♦ EGESY	63- 66	SSA	♦ ETC PPC	2N360 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	63- 66	JAN2N36A	TEC TII		♦ ETC NJS SES	
2N282	CNS 213-109	2N321	♦ EGESY	63- 66	SSA	♦ ETC PPC	2N360 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	63- 66	JAN2N36A	TEC TII		♦ ETC NJS SES	
2N283	CNS 57-106	2N322	♦ EGESY	62- 25	SSA	♦ ETC PPC	2N361 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	62- 25	JAN2N36A	none 106-101		♦ ETC NJS SES	
2N284	CNS 57-101	2N323	♦ MOTA	NJS	SSA	♦ ETC PPC	2N361 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	62- 25	JAN2N36A	none 106-101		♦ ETC NJS SES	
2N284A	CNS 57-102	2N323	♦ EGESY	62- 55	SSA	♦ ETC PPC	2N362 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	62- 55	JAN2N337	TEC TII		♦ ETC NJS SES	
2N285A	♦ &SOD 131-100	2N324	♦ EGESY	62- 71	SSA	♦ ETC PPC	2N363 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC PPC		♦ ETC UPI	62- 71	JAN2N337	TEC TII		♦ ETC NJS SES	
2N285B	♦ &SOD 131-101	2N324	♦ EGESY	62- 71	SSA	♦ ETC PPC	2N364 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC PPC		♦ ETC UPI	62- 71	JAN2N337	TEC TII		♦ ETC NJS SES	
2N291	CNS 61- 70	2N327A	♦ MOTA	NJS	SSA	♦ ETC PPC	2N365 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	61- 70	JAN2N326	TEC TII		♦ ETC NJS SES	
2N292	CNS 66- 35	2N326	♦ KSC	NJS	SSA	♦ ETC PPC	2N366 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	66- 35	JAN2N326	TEC TII		♦ ETC NJS SES	
2N292A	CNS 66- 68	2N327A	♦ RAYN	71- 55	SSA	♦ ETC PPC	2N366 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	66- 68	JAN2N327A	TEC TII		♦ ETC NJS SES	
2N293	CNS 66- 39	2N327A	♦ ECRY	71- 55	SSA	♦ ETC PPC	2N367 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	66- 39	JAN2N327A	TEC TII		♦ ETC NJS SES	
2N296	CNS 129- 25	2N327B	♦ ACRY	78- 24	SSA	♦ ETC PPC	2N367 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	129- 25	JAN2N327B	TEC TII		♦ ETC NJS SES	
2N297	CNS 130-106	2N328A	♦ ACRY	71- 61	SSA	♦ ETC PPC	2N368 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC KSC		♦ ETC UPI	130-106	JAN2N328A	TEC TII		♦ ETC NJS SES	
2N297A	CNS 130- 14	2N328A	CRY	78- 6	SSA	♦ ETC PPC	2N368 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC IDC KSC		♦ ETC UPI	130- 14	JAN2N328A	TEC TII		♦ ETC NJS SES	
JAN2N297A	KSC 130-107	2N328B	♦ ACRY	78- 27	SSA	♦ ETC PPC	2N369 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC PPC		♦ ETC UPI	130-107	JAN2N328B	TEC TII		♦ ETC NJS SES	
2N301	CNS 132- 95	2N329A	♦ ACRY	77-103	SSA	♦ ETC PPC	2N370 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC KSC MINA		♦ ETC UPI	132- 95	JAN2N329A	TEC TII		♦ ETC NJS SES	
2N301A	CNS 132- 96	2N329B	CRY	78- 33	SSA	♦ ETC PPC	2N371 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC KSC MOTA		♦ ETC UPI	132- 96	JAN2N329B	TEC TII		♦ ETC NJS SES	
2N302	CNS 60- 9	2N330A	CRY	77-101	SSA	♦ ETC PPC	2N372 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	60- 9	JAN2N330A	TEC TII		♦ ETC NJS SES	
2N303	CNS 60- 44	2N330A	SRA	77-101	SSA	♦ ETC PPC	2N373 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	60- 44	JAN2N330A	TEC TII		♦ ETC NJS SES	
2N306	CNS 67- 89	2N331	SRA	64- 92	SSA	♦ ETC PPC	2N374 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	67- 89	JAN2N331	TEC TII		♦ ETC NJS SES	
2N307	CNS 130-108	2N332	♦ ECRY	85- 63	SSA	♦ ETC PPC	2N375 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC KSC MOTA		♦ ETC UPI	130-108	JAN2N332	TEC TII		♦ ETC NJS SES	
2N307A	CNS 130-109	2N332A	BNT	85- 63	SSA	♦ ETC PPC	2N376 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC KSC MOTA		♦ ETC UPI	130-109	JAN2N332A	TEC TII		♦ ETC NJS SES	
2N308	CNS 53- 24	2N333	♦ ECRY	85- 58	SSA	♦ ETC PPC	2N377 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	53- 24	JAN2N333	TEC TII		♦ ETC NJS SES	
2N309	CNS 53- 25	2N333	♦ ECRY	85- 58	SSA	♦ ETC PPC	2N378 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	53- 25	JAN2N333	TEC TII		♦ ETC NJS SES	
2N310	CNS 53- 26	2N333	♦ ECRY	85- 58	SSA	♦ ETC PPC	2N379 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	53- 26	JAN2N333	TEC TII		♦ ETC NJS SES	
2N311	CNS 58- 45	2N333	♦ ECRY	85- 58	SSA	♦ ETC PPC	2N380 CNS	♦ GIC 66- 64	♦ TII 168- 74
	♦ ETC NJS		♦ ETC UPI	58- 45	JAN2N333	TEC TII		♦ ETC NJS SES	

cont next col

D.A.T.A.

Δ-Registered with JEDEC
by this manufacturer

♦-Copy of mfr's data sheet
may be ordered from D.A.T.A.

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2N511B (cont)	CNS ♦ ETC ♦ SOD	PPC TEK TIB	2N527 (cont)	PHIN SES TUF	♦ VALG	2N557 ♦ MOTA	63- 83	2N560	CNS ♦ ETC CNS ♦ SOD	63- 83	JAN2N559	CNS ♦ ETC CNS ♦ SOD	60- 96	2N609	SSSI CNS GIC ITC	57- 53	2N604A	SSSI CNS GIC ITC	61- 92	2N652	♦ MOTA	62- 44													
2N512 ♦ TII	CNS ♦ SOD	♦ ETC TEK TIB	2N527A 136- 36	2N529 ♦ ETC	CNS ♦ ETC CNS ♦ SOD	59- 63	2N560	CNS ♦ ETC CNS ♦ SOD	59- 63	JAN2N560	MEHK CNS SSSI TADI	107- 12 198-101 131-102	2N610	CNS ♦ ETC CNS ♦ SOD	61- 85	2N611	CNS ♦ ETC CNS ♦ SOD	61- 79	2N652A	♦ MOTA	62- 45														
2N512A ♦ TII	CNS ♦ SOD	♦ ETC TEK TIB	2N530 136- 37	2N531 ♦ ETC	CNS ♦ ETC CNS ♦ SOD	59- 75	2N561	CNS ♦ ETC CNS ♦ SOD	59- 86	JAN2N560	KSC CNS ITC	106- 79 186- 29	2N612	CNS ♦ ETC CNS ♦ SOD	61- 72	2N613	CNS ♦ ETC CNS ♦ SOD	61- 74	JAN2N652A 2N653	♦ MOTA	62- 46														
2N512B ♦ TII	CNS ♦ SOD	♦ ETC TEK TIB	2N532 136- 38	2N533 ♦ ETC	CNS ♦ ETC CNS ♦ SOD	59- 94	2N563	CNS ♦ ETC CNS ♦ SOD	59- 94	JAN2N563	PPC CNS ITC	58-109	2N614	CNS ♦ ETC CNS ♦ SOD	58- 10	2N654	CNS ♦ ETC CNS ♦ SOD	58- 8	CNS ITC SES	♦ MOTA	62- 57														
2N513 ♦ SOD	CNS ♦ ETC ♦ SOO	♦ TIB	2N535 136- 39	2N535	CNS ♦ ETC CNS ♦ SOD	56- 35	2N565	CNS ♦ ETC CNS ♦ SOD	56- 36	2N566	ETC CNS ITC	59- 13	2N615	CNS ♦ ETC CNS ♦ SOD	58- 12	2N617	CNS ♦ ETC CNS ♦ SOD	58- 12	2N655	♦ MOTA	62- 81														
2N513A ♦ SOO	CNS ♦ ETC ♦ TEK	TIB	2N535A 136- 40	2N535B	CNS ♦ ETC CNS ♦ SOD	56- 37	2N567	CNS ♦ ETC CNS ♦ SOD	56- 38	2N568	GIC CNS ITC	66- 6	2N619	SCA CNS SCA	93- 30 93- 31	2N656	♦ TII	149- 95																	
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2N514 ♦ SOD	CNS ♦ ETC ♦ TEK	TIB	2N538A 136- 42	2N538B	♦ SOD ♦ ETC CNS ♦ SOD	129-103	2N569	ETC CNS ITC	129-104	2N570	GIC CNS ITC	59- 49	2N622	SCA CNS SCA	83- 1	2N657	♦ MOTA	MST	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N514A ♦ SOD	CNS ♦ ETC ♦ SOD	TIB	2N539 JAN2N539	2N539	♦ SOD ♦ ETC CNS ♦ SOD	129-105	2N570	ETC CNS ITC	129-105	2N571	GIC CNS ITC	59- 76	2N628	♦ MOTA	133- 70	2N658	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N514B ♦ SOD	CNS ♦ ETC ♦ TEK	TIB	2N539A 136- 44	2N539B	♦ SOD ♦ ETC CNS ♦ SOD	129-106	2N571	ETC CNS ITC	129-106	2N572	GIC CNS ITC	59- 77	2N629	♦ MOTA	133- 72	2N659	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N515 ♦ SOD	CNS ♦ ETC ♦ TEK	TIB	2N539A JAN2N539A	2N540	♦ SOD ♦ ETC CNS ♦ SOD	129-107	2N573	ETC CNS ITC	129-107	2N574	GIC CNS ITC	61-100	2N630	♦ MOTA	133- 73	2N660	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N516 ♦ SOD	CNS ♦ ETC ♦ TEK	TIB	2N539AM JAN2N539AM	2N540	♦ SOD ♦ ETC CNS ♦ SOD	129-108	2N574	ETC CNS ITC	129-108	2N575	GIC CNS ITC	61-100	2N631	♦ MOTA	133- 72	2N661	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N517 ♦ SOD	CNS ♦ ETC ♦ TEK	TIB	2N539AM JAN2N539AM	2N541	♦ SOD ♦ ETC CNS ♦ SOD	129-109	2N575	ETC CNS ITC	129-109	2N576	GIC CNS ITC	61-100	2N632	♦ MOTA	133- 72	2N662	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N518 ♦ SOD	CNS ♦ ETC ♦ ITC	TIB	2N540 60- 36	2N540A	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N576	ETC CNS ITC	129-110	2N577	GIC CNS ITC	61-100	2N633	♦ MOTA	133- 72	2N663	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N519 ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N540A 62- 56	2N541	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N577	ETC CNS ITC	129-110	2N578	GIC CNS ITC	61-100	2N634	♦ MOTA	133- 72	2N664	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N519A ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N541 58- 92	2N542	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N578	ETC CNS ITC	129-110	2N579	GIC CNS ITC	61-100	2N635	♦ MOTA	133- 72	2N665	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N520 ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N542 59- 73	2N542	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N579	ETC CNS ITC	129-110	2N580	GIC CNS ITC	61-100	2N636	♦ MOTA	133- 72	2N666	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N520A ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N542 59- 74	2N542A	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N580	ETC CNS ITC	129-110	2N581	GIC CNS ITC	61-100	2N637	♦ MOTA	133- 72	2N667	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N521 ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N542A 59- 74	2N543	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N581	ETC CNS ITC	129-110	2N582	GIC CNS ITC	61-100	2N638	♦ MOTA	133- 72	2N668	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N521A ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N543 60- 20	2N543A	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N582	ETC CNS ITC	129-110	2N583	GIC CNS ITC	61-100	2N639	♦ MOTA	133- 72	2N669	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N522A ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N543A 60- 20	2N544	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N583	ETC CNS ITC	129-110	2N584	GIC CNS ITC	61-100	2N640	♦ MOTA	133- 72	2N670	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N522 ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N544 60- 46	2N545	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N584	ETC CNS ITC	129-110	2N585	GIC CNS ITC	61-100	2N641	♦ MOTA	133- 72	2N671	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N522A ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N545 60- 46	2N546	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N585	ETC CNS ITC	129-110	2N586	GIC CNS ITC	61-100	2N642	♦ MOTA	133- 72	2N672	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N523 ♦ GIC	CNS ♦ ETC ♦ ITC	TIB	2N546 60- 55	2N547	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N586	ETC CNS ITC	129-110	2N587	GIC CNS ITC	61-100	2N643	♦ MOTA	133- 72	2N673	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N524 ♦ GESY	CNS ♦ ETC ♦ ITC	TIB	2N547 60- 55	2N548	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N587	ETC CNS ITC	129-110	2N588	GIC CNS ITC	61-100	2N644	♦ MOTA	133- 72	2N674	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N524A ♦ GESY	CNS ♦ ETC ♦ ITC	TIB	2N548 60- 56	2N549	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N588	ETC CNS ITC	129-110	2N589	GIC CNS ITC	61-100	2N645	♦ MOTA	133- 72	2N675	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N525 ♦ GESY	CNS ♦ ETC ♦ ITC	TIB	2N549 60- 56	2N550	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N589	ETC CNS ITC	129-110	2N590	GIC CNS ITC	61-100	2N646	♦ MOTA	133- 72	2N676	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N525A ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N550 60- 57	2N551	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N590	ETC CNS ITC	129-110	2N591	GIC CNS ITC	61-100	2N647	♦ MOTA	133- 72	2N677	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N526 ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N551 60- 57	2N552	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N591	ETC CNS ITC	129-110	2N592	GIC CNS ITC	61-100	2N648	♦ MOTA	133- 72	2N678	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N526A ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N552 60- 58	2N553	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N592	ETC CNS ITC	129-110	2N593	GIC CNS ITC	61-100	2N649	♦ MOTA	133- 72	2N679	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N526B ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N553 60- 59	2N554	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N593	ETC CNS ITC	129-110	2N594	GIC CNS ITC	61-100	2N650	♦ MOTA	133- 72	2N680	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N527 ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N554 60- 60	2N555	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N594	ETC CNS ITC	129-110	2N595	GIC CNS ITC	61-100	2N651	♦ MOTA	133- 72	2N681	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N527A ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N555 60- 60	2N556	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N595	ETC CNS ITC	129-110	2N596	GIC CNS ITC	61-100	2N652	♦ MOTA	133- 72	2N682	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N528 ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N556 60- 61	2N557	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N596	ETC CNS ITC	129-110	2N597	GIC CNS ITC	61-100	2N653	♦ MOTA	133- 72	2N683	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N529 ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N557 60- 61	2N558	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N597	ETC CNS ITC	129-110	2N598	GIC CNS ITC	61-100	2N654	♦ MOTA	133- 72	2N684	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N529A ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N558 60- 62	2N559	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N598	ETC CNS ITC	129-110	2N599	GIC CNS ITC	61-100	2N655	♦ MOTA	133- 72	2N685	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N530 ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N559 60- 63	2N560	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N599	ETC CNS ITC	129-110	2N600	GIC CNS ITC	61-100	2N656	♦ MOTA	133- 72	2N686	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N531 ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N560 60- 64	2N561	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N600	ETC CNS ITC	129-110	2N601	GIC CNS ITC	61-100	2N657	♦ MOTA	133- 72	2N687	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N532 ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N561 60- 65	2N562	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N601	ETC CNS ITC	129-110	2N602	GIC CNS ITC	61-100	2N658	♦ MOTA	133- 72	2N688	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC	♦ TEC	♦ TEC													
2N533 ♦ MOTA	CNS ♦ ETC ♦ ITC	TIB	2N562 60- 66	2N563	♦ SOD ♦ ETC CNS ♦ SOD	129-110	2N602	ETC CNS ITC	129-110	2N603	GIC CNS ITC	61-100	2N659	♦ MOTA	133- 72	2N689	♦ TII	149- 95	FSC ♦ ETC ♦ GESY	♦ TEC</td															

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1. TYPE No. CROSS INDEX

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TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line			
2N1015F	SEN	179- 62	2N1035	CRY	71- 62	JAN2N1049A	SEN	163- 30	2N1102	CNS	67- 83	2N1132A	(cont)	RAY			
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♦ETC	SEN	189- 48	SSI	TADI		CNS	ETC			195- 47	2N1132B	SCA	EMLS	79- 12			
♦SIL	SPC		2N1036	♦RAYN	71- 65	♦SEN	SIL		2N1107	CNS	53- 34	2N1132B46	SCA	80- 95			
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SPC	SSI		SSI	TADI		♦ETC	SEN		ETC	ETC		SS	TEC				
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CNS	ETC	189- 49	SSI	TADI		♦ETC	SEN		ETC	ETC		KSC	PPC				
SEN	SIL		ETC	SOD		2N1050B	♦TII	163- 46	2N1114	CNS	53- 33	2N1136B	♦SOD	132- 49			
SPC	SSI		SSI	TADI		♦ETC	SIL		ETC	ETC		KSC	PPC				
2N1016B	♦WESY	179- 65	ETC	SOD		2N1050A	♦TII	163- 45	2N1111	CNS	53- 31	2N1136A	♦SOD	132- 49			
CNS	ETC	189- 50	SSI	TADI		♦ETC	SEN		ETC	ETC		KSC	PPC				
SEN	SIL		ETC	SOD		2N1051	♦TII	128- 77	JAN2N1050A	SEN	163- 31	2N1111A	♦SOD	132- 49			
SPC	SSI		SSI	TADI		♦MOTA	TEK		SIL	TII	2N1111B	KSC	PPC				
JAN2N1016B	SEN	179- 66	♦KSC	♦MOTA		2N1050B	♦TII	128- 57	JAN2N1050B	SEN	163- 31	2N1111A	♦SOD	132- 49			
SIL	SPC		♦NPC	TEK		♦ETC	SIL		SIL	TII	2N1111B	KSC	PPC				
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♦ETC	SEN	189- 51	2N1038-2	KSC	128- 58	♦TII	128- 78	♦SIL	SPC	ETC	2N1115	CNS	67- 63	2N1136B	♦SOD	132- 50	
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♦SIL	SPC		2N1040	♦TII	128- 79	2N1054	♦TII	109- 61	2N1053	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
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2N1016F	SEN	179- 72	CNS	ESMF		2N1058	♦TII	109- 61	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
SPC	SSI		♦MOTA	TEK		♦TII	109- 61	♦TII	♦SEN	ETC	2N1117	CNS	109- 62	2N1137A	♦SOD	132- 52	
2N1017	ETC	189- 54	CNS	♦MOTA		2N1058	♦TII	109- 61	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
MST	ITC		♦MPC	TEK		♦TII	109- 61	♦TII	♦SEN	ETC	2N1117	CNS	109- 62	2N1137A	♦SOD	132- 52	
2N1018	MST	UPI	JAN2N1041	KSC	128- 61	2N1059	♦TII	109- 61	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
ETC	ITC		2N1041-1	KSC	128- 63	2N1066	♦TII	109- 61	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
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CNS	♦DEL		CNS	♦MOTA		2N1067	♦TII	128- 65	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
♦ETC	KSC		♦MPC	TEK		♦TII	128- 65	♦TII	♦SEN	ETC	2N1117	CNS	109- 62	2N1137A	♦SOD	132- 52	
♦MOTA	PPC		JAN2N1042	KSC	128- 66	2N1068	♦TII	128- 66	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
♦SOD	TIIB		2N1043	♦TII	128- 67	2N1069	♦TII	128- 67	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
2N1021A	♦TII	133- 76	2N1042-1	KSC	128- 66	2N1069	♦TII	128- 67	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
CNS	♦DEL		2N1042-2A	KSC	128- 67	2N1069	♦TII	128- 67	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
♦ETC	KSC		2N1043	♦TII	128- 68	2N1069	♦TII	128- 68	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
♦MOTA	PPC		2N1044	♦TII	128- 69	2N1069	♦TII	128- 69	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
♦SOD	TIIB		2N1044	♦TII	128- 70	2N1069	♦TII	128- 70	JAN2N1118	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
JAN2N1021A	none	136- 45	JAN2N1043	KSC	128- 82	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
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CNS	♦DEL		2N1043-2A	KSC	128- 70	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
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♦MOTA	PPC		2N1044	♦TII	128- 72	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
♦SOD	TIIB		2N1044	♦TII	128- 73	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
JAN2N1022A	none	136- 46	2N1044-1	KSC	128- 73	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
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♦ETC	RAYN		2N1045-2A	KSC	128- 76	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
♦SOD	TIAD		2N1046	♦TII	128- 77	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
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2N1025	♦SOD	71- 79	CNS	♦ETC		2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
CNS	♦CRY		2N1046	♦TII	128- 79	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
♦ETC	RAYN		2N1046	♦TII	128- 80	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
♦SOD	TIAD		2N1046	♦TII	128- 81	2N1070	♦TII	128- 82	JAN2N1072	SEN	109- 60	2N1117	♦TII	109- 62	2N1137A	♦SOD	132- 52
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2N1158	CNS ITC SES SOD SCS KSC	2N1189	ITC *SES *SOD *MOTA 62- 96	2N1158	*△ETC 54- 9	2N1189	*△MOTA 62- 96	2N1158	*△ETC 54- 108	2N1189	*△MOTA 62- 110		
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2N1160	*△DEL 132- 55	2N1191	CNS ITC MST SES SOD SCS KSC	2N1160	*△ETC 189- 28	2N1191	*△MOTA 62- 59	2N1160	*△ETC 132- 55	2N1191	*△MOTA 62- 59		
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2N1163	*△MOTA 133-100	CNS ITC SES SOD SCS KSC	2N1163	*△ETC 133-100	2N1194	*△MOTA 62- 88	2N1163	*△MOTA 133-100	2N1194	*△MOTA 62- 88			
2N1163A	*△MOTA 133-101	CNS ITC SES SOD SCS KSC	2N1163A	*△ETC 133-101	2N1195	*△MOTA 64-105	2N1163A	*△MOTA 133-101	2N1195	*△MOTA 64-105			
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2N1169	CNS ITC MISI PPC SEN SOD SCS KSC	2N1209	*△SIL SOD SPC SSI UNI	2N1169	CNS ITC MISI PPC SEN SOD SCS KSC	2N1209	*△SIL SOD SPC SSI UNI	2N1169	CNS ITC MISI PPC SEN SOD SCS KSC	2N1209	*△SIL SOD SPC SSI UNI		
2N1170	CNS ITC MISI PPC SEN SOD SCS KSC	2N1209	*△TEC 168- 93	2N1170	CNS ITC MISI PPC SEN SOD SCS KSC	2N1209	*△TEC 168- 93	2N1170	CNS ITC MISI PPC SEN SOD SCS KSC	2N1209	*△TEC 168- 93		
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2N1184B	*△RCA 127- 89	KSC	2N1224	*△CNS ETC	JAN2N1184B	KSC	127- 89	2N1224	*△CNS ETC	JAN2N1184B	KSC	127- 89	
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JAN2N1185	RCA	127- 90	2N1225	*△APX	JAN2N1185	RCA	127- 90	2N1225	*△APX	JAN2N1185	RCA	127- 90	
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JAN2N1188	RCA	127- 90	2N1228	*△APX	JAN2N1188	RCA	127- 90	2N1228	*△APX	JAN2N1188	RCA	127- 90	
2N1189	*△MOTA 62- 91	CNS ITC SES	2N1229	*△APX	JAN2N1189	CNS ITC SES	62- 91	2N1229	*△APX	JAN2N1189	CNS ITC SES	62- 91	
JAN2N1189	RCA	127- 91	2N1229	*△APX	JAN2N1189	RCA	127- 91	2N1229	*△APX	JAN2N1189	RCA	127- 91	
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2N1191	*△MOTA 62- 93	CNS ITC SES	2N1231	*△APX	JAN2N1191	CNS ITC SES	62- 93	2N1231	*△APX	JAN2N1191	CNS ITC SES	62- 93	
JAN2N1191	RCA	127- 93	2N1231	*△APX	JAN2N1191	RCA	127- 93	2N1231	*△APX	JAN2N1191	RCA	127- 93	
2N1192	*△MOTA 62- 94	CNS ITC SES	2N1232	*△APX	JAN2N1192	CNS ITC SES	62- 94	2N1232	*△APX	JAN2N1192	CNS ITC SES	62- 94	
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2N1193	*△MOTA 62- 95	CNS ITC SES	2N1233	*△APX	JAN2N1193	CNS ITC SES	62- 95	2N1233	*△APX	JAN2N1193	CNS ITC SES	62- 95	
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JAN2N1194	RCA	127- 96	2N1234	*△APX	JAN2N1194	RCA	127- 96	2N1234	*△APX	JAN2N1194	RCA	127- 96	
2N1195	*△MOTA 62- 97	CNS ITC SES	2N1235	*△APX	JAN2N1195	CNS ITC SES	62- 97	2N1235	*△APX	JAN2N1195	CNS ITC SES	62- 97	
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2N1198	*△MOTA 62- 100	CNS ITC SES	2N1238	*△APX	JAN2N1198	CNS ITC SES	62- 100	2N1238	*△APX	JAN2N1198	CNS ITC SES	62- 100	
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2N1555A	♦MOTA 134- 57	CNS KSC PPC SOD TII	2N1605A CNS TADI	MOTA 134- 92	2N1624 2N1624 CNS	166- 105 166- 105	SCA RAYN TSC	2N1692 2N1692	♦MOTA none	2N1714	♦TII 112- 68
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SSI	TEC	SEN	2N1818	♦WESY	183- 28	SGSI	SSI	♦ETC	SCA	201- 22	ETC	HSC			
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♦SPR		SEN	2N1822	♦WESY	183- 32	JAN2N1893	FSC	2N1970	♦DEL	134- 81	SSI	SSGI			
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ETC	ETC	SEN	2N1827	♦WESY	183- 37	LTTF	PHIN	2N1973	SES	2N1996	♦TII	CNS			
♦TII	59-110	SEN	2N1828	♦WESY	183- 38	2N1900	♦TRW	2N1973	SGSI	2N1997	♦TII	64- 29			
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♦TII	67- 44	SEN	2N1830	♦WESY	183- 40	2N1902	♦TRW	2N1973	ETC	113- 49	CNS	ETC			
ETC	ETC	SEN	2N1831	♦WESY	183- 41	2N1903	SSI	2N1973	ITC	113- 49	GIC	ITC			
♦TII	54- 18	SEN	2N1832	♦WESY	183- 42	2N1904	♦TRW	2N1973	SES	113- 49	SES	ITC			
IDC	♦MOTA	SEN	2N1833	♦WESY	183- 43	2N1905	SSI	2N1974	SGSI	113- 49	CNS	ETC			
♦SPR		SEN	2N1834	♦WESY	183- 44	2N1906	♦RCA	2N1974	SSI	113- 49	GIC	ITC			
♦ETC	SCA	SEN	2N1835	♦WESY	183- 45	2N1907	♦RCA	2N1974	SES	113- 49	MST	ITC			
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♦ETC	SCA	SEN	2N1837	♦WESY	183- 47	2N1909	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦TII	54- 51	SEN	2N1838	♦WESY	183- 48	2N1910	ETC	2N1975	ETC	113- 49	GIC	ITC			
IDC	SCA	SEN	2N1839	♦WESY	183- 49	2N1911	SSI	2N1975	SES	113- 49	MST	ITC			
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♦ETC	SCA	SEN	2N1841	♦WESY	183- 51	2N1913	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦SPR		SEN	2N1842	♦WESY	183- 52	2N1914	ETC	2N1975	ETC	113- 49	GIC	ITC			
♦ETC	SCA	SEN	2N1843	♦WESY	183- 53	2N1915	SSI	2N1975	SES	113- 49	MST	ITC			
♦SPR		SEN	2N1844	♦WESY	183- 54	2N1916	ETC	2N1975	SGSI	113- 49	SES	ITC			
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♦TII	54- 23	SEN	2N1846	♦WESY	183- 56	2N1918	ETC	2N1975	ETC	113- 49	GIC	ITC			
ETC	ETC	SEN	2N1847	♦WESY	183- 57	2N1919	SSI	2N1975	SES	113- 49	MST	ITC			
♦SPR		SEN	2N1848	♦WESY	183- 58	2N1920	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦ETC	SCA	SEN	2N1849	♦WESY	183- 59	2N1921	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦SPR		SEN	2N1850	♦WESY	183- 60	2N1922	ETC	2N1975	ETC	113- 49	GIC	ITC			
♦TII	134- 80	SEN	2N1851	♦WESY	183- 61	2N1923	SSI	2N1975	SES	113- 49	MST	ITC			
KSC	♦MOTA	SEN	JAN2N1852	RCA	183- 62	2N1924	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦SPR		SEN	2N1853	♦WESY	183- 63	2N1925	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦ETC	SCA	SEN	2N1854	♦WESY	183- 64	2N1926	ETC	2N1975	ETC	113- 49	GIC	ITC			
♦SPR		SEN	2N1855	♦WESY	183- 65	2N1927	SSI	2N1975	SES	113- 49	MST	ITC			
♦ETC	SCA	SEN	2N1856	♦WESY	183- 66	2N1928	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦SPR		SEN	2N1857	♦WESY	183- 67	2N1929	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦TII	134- 81	SEN	2N1858	♦WESY	183- 68	2N1930	ETC	2N1975	ETC	113- 49	GIC	ITC			
KSC	♦MOTA	SEN	JAN2N1859	RCA	183- 69	2N1931	SSI	2N1975	SES	113- 49	MST	ITC			
♦SPR		SEN	2N1860	♦WESY	183- 70	2N1932	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦ETC	SCA	SEN	2N1861	♦WESY	183- 71	2N1933	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦SPR		SEN	2N1862	♦WESY	183- 72	2N1934	ETC	2N1975	ETC	113- 49	GIC	ITC			
♦TII	134- 82	SEN	2N1863	♦WESY	183- 73	2N1935	SSI	2N1975	SES	113- 49	MST	ITC			
ETC	ETC	SEN	2N1864	♦WESY	183- 74	2N1936	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦SPR		SEN	2N1865	♦WESY	183- 75	2N1937	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦TII	134- 83	SEN	2N1866	♦WESY	183- 76	2N1938	ETC	2N1975	ETC	113- 49	GIC	ITC			
ETC	ETC	SEN	2N1867	♦WESY	183- 77	2N1939	SSI	2N1975	SES	113- 49	MST	ITC			
♦SPR		SEN	2N1868	♦WESY	183- 78	2N1940	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦TII	134- 84	SEN	2N1869	♦WESY	183- 79	2N1941	SSI	2N1975	SSI	113- 49	CNS	ETC			
ETC	ETC	SEN	2N1870	♦WESY	183- 80	2N1942	ETC	2N1975	ETC	113- 49	GIC	ITC			
♦SPR		SEN	2N1871	♦WESY	183- 81	2N1943	SSI	2N1975	SES	113- 49	MST	ITC			
♦TII	134- 85	SEN	2N1872	♦WESY	183- 82	2N1944	ETC	2N1975	SGSI	113- 49	SES	ITC			
ETC	ETC	SEN	2N1873	♦WESY	183- 83	2N1945	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦SPR		SEN	2N1874	♦WESY	183- 84	2N1946	ETC	2N1975	ETC	113- 49	GIC	ITC			
♦TII	134- 86	SEN	2N1875	♦WESY	183- 85	2N1947	SSI	2N1975	SES	113- 49	MST	ITC			
ETC	ETC	SEN	2N1876	♦WESY	183- 86	2N1948	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦SPR		SEN	2N1877	♦WESY	183- 87	2N1949	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦TII	134- 87	SEN	2N1878	♦WESY	183- 88	2N1950	ETC	2N1975	ETC	113- 49	GIC	ITC			
ETC	ETC	SEN	2N1879	♦WESY	183- 89	2N1951	SSI	2N1975	SES	113- 49	MST	ITC			
♦SPR		SEN	2N1880	♦WESY	183- 90	2N1952	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦TII	134- 88	SEN	2N1881	♦WESY	183- 91	2N1953	SSI	2N1975	SSI	113- 49	CNS	ETC			
ETC	ETC	SEN	2N1882	♦WESY	183- 92	2N1954	ETC	2N1975	ETC	113- 49	GIC	ITC			
♦SPR		SEN	2N1883	♦WESY	183- 93	2N1955	SSI	2N1975	SES	113- 49	MST	ITC			
♦TII	134- 89	SEN	2N1884	♦WESY	183- 94	2N1956	ETC	2N1975	SGSI	113- 49	SES	ITC			
ETC	ETC	SEN	2N1885	♦WESY	183- 95	2N1957	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦SPR		SEN	2N1886	♦WESY	183- 96	2N1958	ETC	2N1975	ETC	113- 49	GIC	ITC			
♦TII	134- 90	SEN	2N1887	♦WESY	183- 97	2N1959	SSI	2N1975	SES	113- 49	MST	ITC			
ETC	ETC	SEN	2N1888	♦WESY	183- 98	2N1960	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦SPR		SEN	2N1889	♦WESY	183- 99	2N1961	SSI	2N1975	SSI	113- 49	CNS	ETC			
♦TII	134- 91	SEN	2N1890	♦WESY	183- 100	2N1962	ETC	2N1975	ETC	113- 49	GIC	ITC			
ETC	ETC	SEN	2N1891	♦WESY	183- 101	2N1963	SSI	2N1975	SES	113- 49	MST	ITC			
♦SPR		SEN	2N1892	♦WESY	183- 102	2N1964	ETC	2N1975	SGSI	113- 49	SES	ITC			
♦TII	134- 92	SEN	2N1893	♦WESY	183- 103										

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2N2042	♦△MOTA 62- 2	2N2081	♦△MOTA 136- 66	2N2132	♦△WESY 183- 55	2N2165	(cont.)	221- 47	2N2194A	(cont.)	MISI
ITC	SES	CNS	♦DEL	SEN	♦SIL	SPC	♦IDC	SSSI	♦MOTA	NSC	
2N2042A	♦△MOTA 62- 3	♦ETC	KSC	SOD	2N2133	♦SIL	♦IDC	SSSI	♦RAYN	SCA	
2N2043	♦△MOTA 62- 8	2N2081A	♦△MOTA 136- 67	PTI	♦SIL	♦SPC	221- 48	TADI	SSSI	TADI	
ITC	SES	CNS	ETC	188- 56	2N2137	♦SIL	♦SPC	SSSI	♦TII	THB	
2N2043A	♦△MOTA 62- 9	CNS	60- 78	2N2082	♦△MOTA 136- 68	♦DEL	♦IDC	221- 49	2N2194B	♦TSC	
2N2048	♦△MOTA 60- 78	♦ETC	ETC	203- 29	♦MOTA	KSC	221- 49	2N2194B	♦HSC	113- 18	
♦ETC	IDC	♦SPR	♦ETC	60- 79	2N2137A	SOD	221- 49	2N2194B	♦ITC	198- 110	
2N2048A	CNS	♦MOTA	60- 79	202- 78	2N2082A	♦△MOTA 136- 69	♦DEL	221- 49	2N2194B	♦MOTA	
2N2049	♦△FSC 113- 9	CNS	ETC	113- 9	2N2084	♦△APX 58- 19	KSC	221- 49	2N2194B	♦RAYN	
CNS	♦RAYN	2N2084	PHIC	58- 19	2N2138A	CNS	♦ETC	221- 49	2N2195	♦TSC	
SCA	SES	2N2085	APX	58- 16	2N2139	♦ETC	♦ETC	221- 49	CNS	109- 90	
SGSI	SSI	JAN2N2084	CNS	67- 59	2N2139	♦ETC	♦ETC	221- 49	♦ESMF	ETC	
TADI	♦TSC	2N2085	ETC	67- 59	2N2139	KSC	221- 49	♦FSC	HSC		
VALG					2N2139	SOD	221- 49	♦ITC	MEHK		
2N2060	♦△FSC 107- 54	CNS	110- 64	2N2086	♦△MOTA 132- 62	2N2139A	♦DEL	221- 49	2N2195	♦RAYN	
ESMF	FERB	214- 1	SCA	203- 46	2N2087	CNS	♦ETC	221- 49	2N2195A	♦TSC	
GESY	♦GIC	2N2087	110- 65	2N2089	♦△MOTA 132- 63	2N2139A	♦MOTA	221- 49	2N2195A	♦ESMF	
♦MEHK	♦MISI	2N2089	ETC	203- 47	2N2140	♦DEL	♦ETC	221- 49	♦FSC	ETC	
♦MOTA	♦RAYN	2N2089	♦APX	56- 91	2N2140	KSC	221- 49	♦HSC	HSC		
SGSI	SSI	2N2090	PHIC	56- 92	2N2140A	SOD	221- 49	♦ITC	ITC		
TADI	♦TII	2N2091	PHIC	56- 93	2N2141	♦ETC	221- 49	♦MISI	MISI		
TIIB	♦TII	2N2092	♦APX	56- 94	2N2141	♦ETC	221- 49	♦RAYN	RAYN		
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GESY	MOTA	214- 2	2N2095	65- 73	2N2141A	KSC	221- 49	TADI	TADI		
RAYN	TII	2N2095	♦MOTA	64- 41	2N2141A	SOD	221- 49	♦TSC	TSC		
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ESMF	♦FSC	214- 3	♦MOTA	64- 42	2N2142	CNS	221- 49	♦RAYN	RAYN		
GIC	♦MEHK	2N2097	♦MOTA	209- 96	2N2142A	KSC	221- 49	♦SGSI	SGSI		
♦MISI	♦MOTA	2N2099	♦MOTA	64- 43	2N2142A	SOD	221- 49	SSI	SSI		
RAYN	SSI	2N2100	CNS	64- 44	2N2143	♦ETC	221- 49	♦TADI	TADI		
TADI	♦TSC	2N2100	♦MOTA	209- 97	2N2143	PPC	221- 49	♦RAYN	RAYN		
2N2060B	♦△FSC 107- 56	2N2101	CNS	168- 50	2N2143A	KSC	221- 49	♦SPR	SPR		
♦MEHK	SSI	214- 4	♦SOD	2N2143A	♦MOTA	132- 70	221- 49	2N2195B	♦GESY		
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2N2061	♦ETC	130- 40	2N2102	♦△RCA	165- 53	2N2144	♦RAYN	221- 49	2N2196	♦GESY	
2N2061A	♦ETC	134- 82	ATEI	CNS	2N2144	SSI	221- 49	CNS	159- 65		
KSC	FERB	214- 82	MEHK	2N2144	♦ETC	221- 49	ESMF	ESMF			
2N2062	CNS	130- 41	MST	2N2144	KSC	221- 49	♦TADI	TEC			
♦ETC	MOTA	214- 83	♦RAYN	2N2144A	SOD	221- 49	♦RAYN	SES			
2N2062A	CNS	134- 83	TADI	2N2144A	♦ETC	221- 49	♦SPR	SES			
♦ETC	KSC	TII	TEC	2N2145	CNS	221- 49	2N2198	2N2199			
2N2063	CNS	130- 42	♦TSC	2N2145	KSC	221- 49	♦TADI	CNS			
♦ETC	MOTA	2N2102A	150- 94	2N2145A	SOD	221- 49	55- 14				
2N2063A	♦ETC	134- 84	CNS	2N2145A	♦ETC	221- 49	♦TADI	55- 15			
KSC	SSI	2N2102A	♦RAYN	2N2145A	♦MOTA	132- 71	221- 49	♦GESY	204- 83		
2N2064	CNS	130- 43	TADI	2N2145A	♦RAYN	221- 49	♦FSC	204- 83			
♦ETC	MOTA	2N2106	♦TSC	2N2146	CNS	221- 49	♦TADI	2N2198			
2N2064A	CNS	134- 85	SCA	2N2146	KSC	221- 49	♦TADI	2N2199			
♦ETC	KSC	SSI	TEC	2N2146A	SOD	221- 49	♦TADI	2N2200			
2N2065	CNS	130- 44	2N2107	♦GESY	148- 43	2N2147	♦ESMF	221- 49	♦TADI		
♦ETC	MOTA	CNS	ETC	2N2147	ITC	221- 49	♦RAYN	2N2200			
2N2065A	CNS	134- 86	SSI	2N2147	MISI	221- 49	♦SPR	♦FSC			
♦ETC	KSC	2N2108	TEC	2N2147	♦RAYN	221- 49	2N2200	97- 41			
2N2066	CNS	130- 45	2N2108	♦GESY	148- 44	2N2148	♦TADI	♦FSC	204- 84		
♦ETC	KSC	CNS	SCA	2N2148	♦TADI	221- 49	♦TADI	64- 62			
2N2066A	CNS	134- 87	SSI	2N2148	♦TADI	221- 49	♦TADI	132- 103			
KSC	TEC	2N2109	♦△WESY	183- 38	2N2149	♦TADI	221- 49	♦TADI	134- 88		
2N2067	ETC	129- 81	SEN	2N2149	♦TADI	221- 49	♦TADI	2N2217			
KSC	SOD	2N2110	♦△WESY	183- 39	2N2150	♦TADI	221- 49	KSC	2N2217		
2N2067D	ETC	129- 82	PTI	2N2150	♦TADI	221- 49	♦TADI	2N2217			
KSC	2N2110	♦△WESY	183- 39	2N2151	♦TADI	221- 49	♦TADI	2N2217			
2N2067E	ETC	129- 83	♦SIL	2N2151	♦TADI	221- 49	♦TADI	2N2217			
KSC	2N2111	♦△WESY	183- 40	2N2152	♦TADI	221- 49	♦TADI	2N2217			
2N2067G	ETC	129- 84	PTI	2N2152	♦TADI	221- 49	♦TADI	2N2217			
KSC	SOD	2N2112	♦△WESY	183- 41	2N2152A	♦TADI	221- 49	♦TADI	2N2217		
2N2067W	ETC	129- 85	SEN	2N2152A	♦TADI	221- 49	♦TADI	2N2217			
KSC	2N2112	♦△WESY	183- 41	2N2153	♦TADI	221- 49	♦TADI	2N2217			
2N2068	ETC	129- 86	SEN	2N2153	♦TADI	221- 49	♦TADI	2N2217			
KSC	2N2113	♦△WESY	183- 42	2N2153	♦TADI	221- 49	♦TADI	2N2217			
2N2068-O	ETC	129- 87	SEN	2N2153	♦TADI	221- 49	♦TADI	2N2217			
KSC	2N2113	♦△WESY	183- 42	2N2153	♦TADI	221- 49	♦TADI	2N2217			
2N2068G	ETC	129- 88	SEN	2N2153	♦TADI	221- 49	♦TADI	2N2217			
KSC	2N2114	♦△WESY	183- 43	2N2153A	♦TADI	221- 49	♦TADI	2N2217			
2N2075	♦△MOTA 136- 54	CNS	SEN	2N2153A	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2116	♦△WESY	183- 44	2N2154	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2118	SEN	2N2154	♦TADI	221- 49	♦TADI	2N2217			
2N2076A	♦△MOTA 136- 57	CNS	SEN	2N2154	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2118	♦△WESY	183- 45	2N2155	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2118	SEN	2N2155	♦TADI	221- 49	♦TADI	2N2217			
2N2076A	♦△MOTA 136- 57	CNS	SEN	2N2155	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2119	♦△WESY	183- 47	2N2156	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2119	SEN	2N2156	♦TADI	221- 49	♦TADI	2N2217			
2N2077	♦△MOTA 136- 58	CNS	SEN	2N2156	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2119	♦△WESY	183- 47	2N2157	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2119	SEN	2N2157	♦TADI	221- 49	♦TADI	2N2217			
2N2077A	♦△MOTA 136- 59	CNS	SEN	2N2157	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2120	♦△WESY	183- 48	2N2157A	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2120	SEN	2N2157A	♦TADI	221- 49	♦TADI	2N2217			
2N2078	♦△MOTA 136- 60	CNS	SEN	2N2157A	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2123	♦△WESY	183- 48	2N2158	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2123	SEN	2N2158	♦TADI	221- 49	♦TADI	2N2217			
2N2078A	♦△MOTA 136- 61	CNS	SEN	2N2158	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2124	♦△WESY	183- 49	2N2159	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2124	SEN	2N2159	♦TADI	221- 49	♦TADI	2N2217			
2N2079	♦△MOTA 136- 62	CNS	SEN	2N2159	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2125	♦△WESY	183- 50	2N2160	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2125	SEN	2N2160	♦TADI	221- 49	♦TADI	2N2217			
2N2079A	♦△MOTA 136- 63	CNS	SEN	2N2160	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2126	♦△WESY	183- 51	2N2161	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2126	SEN	2N2161	♦TADI	221- 49	♦TADI	2N2217			
JAN2N2079A	MOTA	136- 64	2N2127	♦△WESY	183- 52	2N2162	♦TADI	221- 49	♦TADI	2N2217	
♦DEL	KSC	136- 64	2N2127	♦△WESY	183- 52	2N2163	♦TADI	221- 49	♦TADI	2N2217	
♦ETC	SOD	2N2127	SEN	2N2163	♦TADI	221- 49	♦TADI	2N2217			
2N2080	♦△MOTA 136- 64	CNS	SEN	2N2163	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2130	♦△WESY	183- 53	2N2164	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2130	SEN	2N2164	♦TADI	221- 49	♦TADI	2N2217			
2N2080A	♦△MOTA 136- 65	CNS	SEN	2N2164	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2131	♦△WESY	183- 54	2N2165	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2131	SEN	2N2165	♦TADI	221- 49	♦TADI	2N2217			
2N2080A	♦△MOTA 136- 65	CNS	SEN	2N2165	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2132	♦△WESY	183- 54	2N2166	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2132	SEN	2N2166	♦TADI	221- 49	♦TADI	2N2217			
2N2081	♦△MOTA 136- 66	CNS	SEN	2N2166	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2133	♦△WESY	183- 55	2N2167	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2133	SEN	2N2167	♦TADI	221- 49	♦TADI	2N2217			
2N2082	♦△MOTA 136- 67	CNS	SEN	2N2167	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2134	♦△WESY	183- 56	2N2168	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2134	SEN	2N2168	♦TADI	221- 49	♦TADI	2N2217			
2N2083	♦△MOTA 136- 68	CNS	SEN	2N2168	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2135	♦△WESY	183- 57	2N2169	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2135	SEN	2N2169	♦TADI	221- 49	♦TADI	2N2217			
2N2084	♦△MOTA 136- 69	CNS	SEN	2N2169	♦TADI	221- 49	♦TADI	2N2217			
♦DEL	KSC	2N2136	♦△WESY	183- 58	2N2170	♦TADI	221- 49	♦TADI	2N2217		
♦ETC	SOD	2N2136	SEN	2N2170	♦TADI	221- 49	♦TADI	2N2217			
2N2085	♦△MOTA 136- 70	CNS	SEN								

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2N2219	BNT CNS ESMF ETC FSC GIC HSC IDC INTG ITT ITTB LTTF MEHK MISI MULB NJS NPC NSC NTLB MISI PHIC RADF RAYN SCA SES SSGI SPR TEC TII TIF TSC VALG	2N2222	♦MOTA 108- 63 BNT CNS ESMF ETC FSC GIC HSC IDC INTG ITTB LTTF MEHK MISI MULB NJS NPC NSC NTLB MISI PHIC RADF RAYN SCA SES SSGI SPR TEC TII TIF TSC TRW UPI TSC	2N2243	♦GIC NSC RAYN SCA TEC TII TIF TSC TADI TEC 113- 20 SSI 113- 19	2N2297	ITB MINA MST MULT PHIC 80- 96	2N2353A	CNS 101- 85 ITT 199- 85 SCA SSI TADI TSC UPI	2N2354	SSI 67- 80 ITT 199- 80 SCA SSI TADI TSC UPI
JAN2N2219	FSC 114-109 GESY ITT MOTA NSC RAYN TEC TII TSC	JAN2N222	FSC 108- 64 ITT MOTA 206- 104 MOTA 206- 106	2N2256	♦MOTA 97- 87 SCA 206- 20 SSI 206- 21	2N2303	♦FSC 80- 96 GESY 109- 96 SSI 221- 62 SSI 221- 62	2N2355A	AGESY 95- 69 SSI 221- 63 SOD 136- 84	2N2355	SSI 67- 80 ITT 199- 80 SCA SSI TADI TSC UPI
2N2219A	♦MOTA 115- 33 BNT CNS ESMF ETC FSC GIC HSC INTG ITTB LTTF MEHK MISI MULB NJS NPC NSC NTLB MISI PHIC RADF RAYN SCA SES SSGI SPR TEC TII TIF TSC VALG	2N2222A	♦MOTA 108- 99 BNT CNS 207-103 ESMF ETC FSC GIC HSC IDC INTG ITTB LTTF MEHK MISI MULB NJS NPC NSC NTLB MISI PHIC RADF RAYN SCA SES SSGI SPR TEC TII TIF TSC TRW UPI TSC	2N2270	CNS FERB FSC GIC MEHK NSC RAYN TADI TEC TII FSC 150- 95	2N2309	♦RAYN 110- 66 SSI 110- 66	2N2364	RAYN 105- 38 SCA SSI TADI TSC UPI	2N2359	SOD 136- 86 MOTA TEK 136- 86
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2N2220	♦MOTA 108- 58 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2222B	♦TSC 108-100 207-104 CNS 207-103 ESMF FERB 214- 5	2N2271	CNS FERB FSC GIC MEHK NSC RAYN TADI TEC TII FSC 64- 9	2N2310	♦RAYN 105- 77 SSI 105- 77	2N2364A	RAYN 105- 39 SCA SSI TADI TSC UPI	2N2358	SOD 136- 85 MOTA TEK 136- 85
JAN2N2220A	♦MOTA 108- 58 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2223	CNS 107- 26 ESMF FERB 214- 5	2N2273	♦MOTA 56- 99 SSI 56- 99	2N2311	♦RAYN 105- 78 SSI 105- 78	2N2365	RAYN 105- 38 SCA SSI TADI TSC UPI	2N2359	SOD 136- 86 MOTA TEK 136- 86
2N2221	♦MOTA 108- 59 BNT CNS ESMF ETC FSC GIC HSC INTG ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2224	♦MOTA 115- 1 107- 27 CNS 107- 27 ESMF FERB 214- 6	2N2277	♦CRY 69- 81 SSI 69- 81	2N2312	♦RAYN 105- 79 SSI 105- 79	2N2366	FSC 110- 91 SCA SSI TADI TSC UPI	2N2364	RAYN 105- 38 SCA SSI 199- 7
JAN2N2221	FSC 108- 60 ITT MOTA 206- 105 NSC RAYN TII TSC	JAN2N223A	FSC 108- 65 ITT MOTA 206- 82 NSC RAYN TII TSC	2N2276	♦CRY 69- 80 SSI 69- 80	2N2317	♦SOD 160- 24 SEN 160- 24	2N2367	IDC 54- 92 SPR 54- 92	2N2362	IDC 54- 92 SPR 54- 92
2N2222	♦MOTA 108- 58 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2222B	♦TSC 108-100 207-104 CNS 207-103 ESMF FERB 214- 5	2N2278	♦CRY 69- 92 SSI 69- 92	2N2313	♦RAYN 105- 80 SSI 105- 80	2N2368	FSC 110- 91 SCA SSI TADI TSC UPI	2N2364	RAYN 105- 38 SCA SSI 199- 7
JAN2N2222	FSC 108- 60 ITT MOTA 206- 105 NSC RAYN TII TSC	JAN2N222A	FSC 108- 65 ITT MOTA 206- 82 NSC RAYN TII TSC	2N2279	♦CRY 69- 79 SSI 69- 79	2N2314	♦RAYN 105- 81 SSI 105- 81	2N2369	FSC 110- 91 SCA SSI TADI TSC UPI	2N2365	RAYN 105- 38 SCA SSI 199- 7
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JAN2N2223	FSC 108- 60 ITT MOTA 206- 105 NSC RAYN TII TSC	JAN2N222A	FSC 108- 65 ITT MOTA 206- 82 NSC RAYN TII TSC	2N2277	♦CRY 69- 54 SSI 69- 54	2N2316	♦RAYN 105- 93 SSI 105- 93	2N2371	FSC 110- 91 SCA SSI TADI TSC UPI	2N2367	RAYN 105- 38 SCA SSI 199- 7
2N2224	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2224A	♦MOTA 115- 1 107- 27 CNS 107- 27 ESMF FERB 214- 6	2N2278	♦CRY 69- 81 SSI 69- 81	2N2317	♦RAYN 101- 93 SSI 101- 93	2N2372	FSC 110- 91 SCA SSI TADI TSC UPI	2N2368	RAYN 105- 38 SCA SSI 199- 7
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2N2225	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2225A	CNS 107- 26 ESMF FERB 214- 6	2N2277	♦CRY 69- 81 SSI 69- 81	2N2319	♦RAYN 105- 77 SSI 105- 77	2N2374	FSC 110- 91 SCA SSI TADI TSC UPI	2N2365	RAYN 105- 38 SCA SSI 199- 7
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2N2226	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2226A	CNS 107- 26 ESMF FERB 214- 6	2N2279	♦CRY 69- 82 SSI 69- 82	2N2321	♦RAYN 105- 78 SSI 105- 78	2N2376	FSC 110- 91 SCA SSI TADI TSC UPI	2N2367	RAYN 105- 38 SCA SSI 199- 7
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2N2227	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2227A	CNS 107- 27 ESMF FERB 214- 6	2N2277	♦CRY 69- 83 SSI 69- 83	2N2323	♦RAYN 105- 80 SSI 105- 80	2N2378	FSC 110- 91 SCA SSI TADI TSC UPI	2N2369	RAYN 105- 38 SCA SSI 199- 7
JAN2N2227	FSC 108- 60 ITT MOTA 206- 105 NSC RAYN TII TSC	JAN2N223A	FSC 108- 65 ITT MOTA 206- 82 NSC RAYN TII TSC	2N2278	♦CRY 69- 83 SSI 69- 83	2N2324	♦RAYN 105- 81 SSI 105- 81	2N2379	FSC 110- 91 SCA SSI TADI TSC UPI	2N2367	RAYN 105- 38 SCA SSI 199- 7
2N2228	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2228A	CNS 107- 27 ESMF FERB 214- 6	2N2279	♦CRY 69- 84 SSI 69- 84	2N2325	♦RAYN 105- 82 SSI 105- 82	2N2380	FSC 110- 91 SCA SSI TADI TSC UPI	2N2368	RAYN 105- 38 SCA SSI 199- 7
JAN2N2228	FSC 108- 60 ITT MOTA 206- 105 NSC RAYN TII TSC	JAN2N223A	FSC 108- 65 ITT MOTA 206- 82 NSC RAYN TII TSC	2N2278	♦CRY 69- 84 SSI 69- 84	2N2326	♦RAYN 105- 83 SSI 105- 83	2N2381	FSC 110- 91 SCA SSI TADI TSC UPI	2N2369	RAYN 105- 38 SCA SSI 199- 7
2N2229	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2229A	CNS 107- 27 ESMF FERB 214- 6	2N2279	♦CRY 69- 85 SSI 69- 85	2N2327	♦RAYN 105- 84 SSI 105- 84	2N2382	FSC 110- 91 SCA SSI TADI TSC UPI	2N2367	RAYN 105- 38 SCA SSI 199- 7
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2N2232	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2232A	CNS 107- 27 ESMF FERB 214- 6	2N2279	♦CRY 69- 88 SSI 69- 88	2N2333	♦RAYN 105- 90 SSI 105- 90	2N2388	FSC 110- 91 SCA SSI TADI TSC UPI	2N2367	RAYN 105- 38 SCA SSI 199- 7
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2N2233	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2233A	CNS 107- 27 ESMF FERB 214- 6	2N2279	♦CRY 69- 89 SSI 69- 89	2N2335	♦RAYN 105- 92 SSI 105- 92	2N2390	FSC 110- 91 SCA SSI TADI TSC UPI	2N2367	RAYN 105- 38 SCA SSI 199- 7
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2N2234	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2234A	CNS 107- 27 ESMF FERB 214- 6	2N2279	♦CRY 69- 90 SSI 69- 90	2N2337	♦RAYN 105- 94 SSI 105- 94	2N2392	FSC 110- 91 SCA SSI TADI TSC UPI	2N2367	RAYN 105- 38 SCA SSI 199- 7
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2N2235	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2235A	CNS 107- 27 ESMF FERB 214- 6	2N2279	♦CRY 69- 91 SSI 69- 91	2N2339	♦RAYN 105- 96 SSI 105- 96	2N2394	FSC 110- 91 SCA SSI TADI TSC UPI	2N2367	RAYN 105- 38 SCA SSI 199- 7
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2N2236	♦MOTA 108- 59 BNT CNS FSC GIC IDC ITC ITT ITTB LTTF MEHK MULB NJS NSC NTLB MISI MULB NJS RAYN SCA SES SPR TADI TEC TII TIF TSC VALG	2N2236A	CNS 107- 27 ESMF FERB 214- 6	2N2279	♦CRY 69- 92 SSI 69- 92	2N2341	♦RAYN 105- 98 SSI 105- 98	2N2396	FSC 110- 91 SCA SSI TADI TSC UPI	2N2367	RAYN 105- 38 SCA SSI 199- 7
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♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 83				2N2579/5	MULB	PHIC	221- 74					
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♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 89				2N2582/5	MULB	PHIC	221- 77					
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	RAYN	2N2517	♦ SOD	105- 90				2N2583	♦ △APX	96- 45						
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 91				2N2583/5	MULB	PHIC	221- 78					
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	RAYN	2N2517	♦ SOD	105- 92				2N2584	♦ △APX	96- 45						
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 93				2N2584/5	MULB	PHIC	221- 79					
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	RAYN	2N2517	♦ SOD	105- 94				2N2585	♦ △APX	96- 45						
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 95				2N2585/5	MULB	PHIC	221- 80					
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	RAYN	2N2517	♦ SOD	105- 96				2N2586	♦ △APX	96- 45						
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 97				2N2586/5	MULB	PHIC	221- 81					
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	RAYN	2N2517	♦ SOD	105- 98				2N2587	♦ △APX	96- 45						
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 99				2N2587/5	MULB	PHIC	221- 82					
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	RAYN	2N2517	♦ SOD	105- 100				2N2588	♦ △APX	96- 45						
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 101				2N2588/5	MULB	PHIC	221- 83					
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	RAYN	2N2517	♦ SOD	105- 102				2N2589	♦ △APX	96- 45						
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 103				2N2589/5	MULB	PHIC	221- 84					
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	RAYN	2N2517	♦ SOD	105- 104				2N2590	♦ △APX	96- 45						
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	TADI	2N2517	♦ SOD	105- 105				2N2590/5	MULB	PHIC	221- 85					
♦ △TII	119- 6	2N2436	♦ TSC 107- 87	SCA	SSS	RAYN	2N2517	♦ SOD	105- 106				2N2591	♦ △APX</td							

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JAN2N2606	SIX	117- 98	CNS	ESMF	222- 100	FERB	95- 38	APX	PTI	187- 29	ITT	RAYN	202- 11			
2N2607	ASIX	117- 99	♦FSC	♦GESY	♦MOTA	NSC	222- 100	APX	SEN	187- 29	SCA	SGSI	202- 11			
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CNS	KER	164- 40	2N2658	♦SOD	152- 35	2N2726	♦SOD	181- 45	2N2771	♦WESY	181- 45	2N2807	△MOTA	SCA	222- 103	
SEN	SIL	164- 40	2N2659	♦SOD	194- 33	2N2727	♦SOD	181- 45	2N2771	♦WESY	181- 45	2N2807	△MOTA	SCA	222- 103	
SSI	TEC	164- 40	2N2660	♦TII	128- 34	2N2728	♦SOD	181- 45	2N2771	♦WESY	181- 45	2N2807	△MOTA	SCA	222- 103	
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2N2636	△SOD	135- 77	2N2662	♦TII	128- 37	2N2727	♦GESY	147- 31	2N2772	♦SOD	181- 47	2N2812	△FSC	167- 1		
CNS	KSC	135- 77	2N2663	♦TII	128- 38	2N2728	♦MOTA	136- 92	2N2772	♦SOD	181- 47	2N2812	△FSC	167- 1		
2N2637	△SOD	135- 78	2N2664	♦TII	128- 39	2N2729	♦FSC	189- 9	2N2773	♦SOD	181- 48	JAN2N2812	PIR	169- 4		
CNS	KSC	135- 78	2N2665	♦TII	128- 40	2N2729	♦FSC	189- 9	2N2773	♦SOD	181- 48	JAN2N2812	PIR	169- 4		
2N2638	△SOD	135- 79	2N2666	♦TII	128- 41	2N2729	♦FSC	189- 9	2N2773	♦SOD	181- 48	JAN2N2812	PIR	169- 4		
CNS	KSC	135- 79	2N2667	♦TII	128- 42	2N2730	♦SOD	181- 49	2N2774	♦SOD	181- 49	2N2813	△SOD	167- 2		
2N2639	△TII	95- 33	2N2659	♦TII	128- 34	2N2730	♦SOD	181- 49	2N2774	♦SOD	181- 49	2N2813	△SOD	167- 2		
CNS	ESMF	95- 33	2N2660	♦TII	128- 35	2N2731	♦SOD	181- 49	2N2775	♦WESY	181- 50	2N2815	△SIL	177- 75		
♦FSC	GESY	214- 14	2N2661	♦TII	128- 36	2N2732	♦SOD	181- 49	2N2775	♦WESY	181- 50	2N2815	△SIL	177- 75		
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♦MOTA	NSC	214- 14	2N2663	♦TII	128- 38	2N2734	♦SOD	181- 49	2N2776	♦WESY	181- 51	2N2814	△SOD	167- 3		
♦RAYN	SGSI	214- 14	2N2664	♦TII	128- 39	2N2735	♦SOD	181- 49	2N2777	♦WESY	181- 52	2N2813	△SOD	167- 2		
♦SOD	SSI	214- 14	2N2665	♦TII	128- 40	2N2736	♦SOD	181- 49	2N2777	♦WESY	181- 52	2N2813	△SOD	167- 2		
TADI	TEC	214- 14	2N2666	♦TII	128- 41	2N2737	♦SOD	181- 49	2N2777	♦WESY	181- 52	2N2813	△SOD	167- 2		
TIIB	TIIF	214- 14	2N2667	♦TII	128- 42	2N2738	♦SOD	181- 49	2N2777	♦WESY	181- 52	2N2813	△SOD	167- 2		
♦TSC	UPI	214- 14	2N2668	♦TII	128- 43	2N2739	♦SOD	181- 49	2N2777	♦WESY	181- 52	2N2813	△SOD	167- 2		
2N2640	△TII	95- 34	2N2665	♦TII	128- 40	2N2739	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
CNS	ESMF	95- 34	2N2666	♦TII	128- 41	2N2740	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
♦FSC	GESY	214- 16	2N2667	♦TII	128- 42	2N2740	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
GIC	GESY	214- 16	2N2668	♦TII	128- 43	2N2741	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
♦MOTA	NSC	214- 16	2N2669	♦TII	128- 44	2N2742	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
♦RAYN	SGSI	214- 16	2N2670	♦TII	128- 45	2N2742	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
♦SOD	SSI	214- 16	2N2671	♦TII	128- 45	2N2743	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
TADI	TEC	214- 16	2N2672	♦TII	128- 46	2N2743	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
TIIB	TIIF	214- 16	2N2673	♦TII	128- 47	2N2744	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
♦TSC	UPI	214- 16	2N2674	♦TII	128- 48	2N2744	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
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CNS	ESMF	95- 35	2N2671	♦TII	128- 45	2N2746	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
♦FSC	GESY	222- 99	2N2672	♦TII	128- 46	2N2747	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
GIC	GESY	222- 99	2N2673	♦TII	128- 47	2N2747	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
♦MOTA	NSC	222- 99	2N2674	♦TII	128- 48	2N2748	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
♦RAYN	SGSI	222- 99	2N2675	♦TII	128- 49	2N2748	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
♦SOD	SSI	222- 99	2N2676	♦TII	128- 50	2N2749	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
TADI	TEC	222- 99	2N2677	♦TII	128- 51	2N2750	♦SOD	181- 49	2N2778	♦WESY	181- 53	JAN2N2814	PIR	169- 5		
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SEN SPC SSI TRW		2N2853 MISI PTI SCA	PPC SOD 115- 73	*△NSC PIR	SEN 196- 33	MINA MISI					
2N2821	*△SIL 177- 81	2N2852-3 ESMF KER GSE SCA	SSI 159- 69	*△SIL TEC	SSI 196- 34	MST MULB					
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ESMF KER GSE SCA		2N2855-1 MISI PTI SCA	PPC SOD 156- 11	*△TII TRW	TRW 196- 39	TFKG TII					
SEN SPC SSI TRW		2N2855-3 ESMF KER GSE SCA	SSI 159- 75	2N2880 SEN PPC SOD	*△SOD 164-109	TIIF VALG					
2N2824	*△SIL 177- 84	2N2854-3 MISI PTI SCA	SSI 159- 71	JAN2N2880 FSC PIR SOD	164-110	JAN2N2904	*△MOTA BNT CNS 81- 10	JAN2N2906A	TII TSC	79- 55	
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ESMF KER GSE SCA		2N2855-3 CNS PPC SOD	SSI 196- 42	*△SIL UNI	UNI 196- 43	*△SIL TEC					
SEN SPC SSI TRW		2N2856 CNS PPC SOD	PPC SOD 159- 72	*△CRY SCA	TEC 196- 43	INTG ITT					
2N2826	*△SIL 163- 56	2N2856 CNS PPC SOD	SSI 196- 43	2N2883 *△UNI 115- 84	SSI 115- 49	ITB MEHK					
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BNT	CNS	214 - 42	SSII	TIIF		2N3040	♦TII	♦TSC	2N3099	♦TII	55 - 112	♦FSC	♦MOTA	
♦GESY	GIC		♦TRW	SSCI		2N3041	♦TII	♦TSC	2N3100	♦TII	55 - 113	RAYN	SGSI	
♦MEHK	♦MOTA		2N2952	♦MOTA	148 - 72	2N3042	♦TII	♦TSC	2N3101	♦TII	55 - 114	♦FSC	♦MOTA	
♦NSC	♦QDC		CNS	ETC		2N3043	♦TII	♦TSC	2N3102	♦TII	55 - 115	RAYN	SGSI	
♦RAYN	SGSI		2N2953	♦ARCA	57 - 46	2N3044	♦TII	♦TSC	2N3103	♦TII	55 - 116	♦FSC	♦MOTA	
♦SOD	♦SODI		2N2955	♦MOTA	60 - 82	2N3045	♦TII	♦TSC	2N3104	♦TII	55 - 117	RAYN	SGSI	
SSI	TADI		SSI	204 - 93	2N3046	♦TII	♦TSC	2N3105	♦TII	55 - 118	♦FSC	♦MOTA		
TEC	♦TII		2N2956	♦MOTA	61 - 13	2N3047	♦TII	♦TSC	2N3106	♦TII	55 - 119	RAYN	SGSI	
TIB	TIIF		SSI	206 - 70	2N3048	♦TII	♦TSC	2N3107	♦TII	55 - 120	♦FSC	♦MOTA		
♦TSC			2N2957	♦MOTA	61 - 15	2N3049	♦TII	♦TSC	2N3108	♦TII	55 - 121	RAYN	SGSI	
JAN2N2920	FSC	95 - 107	2N2957	♦MOTA	207 - 105	2N3050	♦TII	♦TSC	2N3109	♦TII	55 - 122	♦FSC	♦MOTA	
NSC	RAYN		SSII	TIIF		2N3051	♦TII	♦TSC	2N3110	♦TII	55 - 123	RAYN	SGSI	
2N2920A	♦FSC	95 - 108	2N2958	♦MOTA	110 - 89	2N3052	♦TII	♦TSC	2N3111	♦TII	55 - 124	♦FSC	♦MOTA	
BNT	CNS	214 - 44	SSII	TIIF		2N3053	♦TII	♦TSC	2N3112	♦TII	55 - 125	RAYN	SGSI	
RAYN	SGSI		2N2959	♦MOTA	207 - 57	2N3054	♦TII	♦TSC	2N3113	♦TII	55 - 126	♦FSC	♦MOTA	
SSI	TADI		SSCI	TIIF		2N3055	♦TII	♦TSC	2N3114	♦TII	55 - 127	RAYN	SGSI	
♦TII	♦TSC		2N2960	RAYN	110 - 91	2N3056	♦TII	♦TSC	2N3115	♦TII	55 - 128	♦FSC	♦MOTA	
2N2922	ESMF	89 - 57	2N2961	RAYN	110 - 92	2N3057	♦TII	♦TSC	2N3116	♦TII	55 - 129	RAYN	SGSI	
MISI	♦NPC		SSII	TIIF		2N3058	♦TII	♦TSC	2N3117	♦TII	55 - 130	♦FSC	♦MOTA	
2N2923	ESMF	89 - 58	2N2962	RAYN	110 - 92	2N3059	♦TII	♦TSC	2N3118	♦TII	55 - 131	RAYN	SGSI	
MISI	♦NPC		SSII	TIIF		2N3060	♦TII	♦TSC	2N3119	♦TII	55 - 132	♦FSC	♦MOTA	
NSC	♦SPR		2N2963	RAYN	110 - 92	2N3061	♦TII	♦TSC	2N3120	♦TII	55 - 133	RAYN	SGSI	
TEK	♦SPR		2N2964	RAYN	110 - 92	2N3062	♦TII	♦TSC	2N3121	♦TII	55 - 134	♦FSC	♦MOTA	
2N2924	♦GESY	89 - 59	2N2970	♦ASPR	213 - 25	2N3063	♦TII	♦TSC	2N3122	♦TII	55 - 135	RAYN	SGSI	
BNT	ESMF		2N2968	♦ASPR	213 - 23	2N3064	♦TII	♦TSC	2N3123	♦TII	55 - 136	♦FSC	♦MOTA	
IDC	MISI		2N2969	♦ASPR	213 - 24	2N3065	♦TII	♦TSC	2N3124	♦TII	55 - 137	RAYN	SGSI	
♦NPC	NSC		2N2971	♦ASPR										

△-Registered with JEDEC
by this manufacturer

♦ Copy of mfr's data sheet
may be ordered from D.A.T.A.

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2N3059	*CRY 78- 56	2N3110 (cont.)	ITC 200- 5	2N3145	SIL 160- 30	2N3196	*SIL 143- 97	2N3235 (cont.)	SSI TEK	SSR	
ICD SCA SSI	*RAYN SPC SPR	NSC TEC	RAYN SGSI	2N3146	*TII 136- 96	SCA	SOD		TRW		
2N3060	*CRY 78- 37	SSI TEC	TADI TIF	2N3147	*TII 136- 97	PIR	SSI		TEK		
ICD SOD SSI	*RAYN SPC SPR	2N3112	*SIX 117-109	2N3148	*SIL 181- 56	SEN	SOD		SSR		
SSD TADI	TEC	2N3113	*SIX 117- 16	PTI	PIR	SPC	SSI		TRW		
2N3061	*CRY 78- 47	2N3114	*MOTA 112- 86	2N3150	*SIL 181- 57	TEC	SOD		TEK		
ICD SSI	*RAYN TEC	SSI TADI	SGSI TEC	KER	PIR	SSP	SSI		SSR		
*SPR TADI	TEC	2N3115	*TRW	2N3151	*SIL 181- 58	SSP	SSI		TRW		
2N3062	*CRY 78- 28	TIIB	TIF	2N3152	*SIL 181- 59	TEC	SOD		TEK		
*RAYN TADI	TEC	2N3116	*MOTA 105- 98	2N3153	*CRY 64- 91	PIR	SSI		SSR		
SSD TADI	TEC	CNS FSC	ETC HSC	2N3154	*KSC 130- 51	SEN	SOD		TRW		
2N3063	*CRY 78- 38	RAYN SCA	SGSI SSA	2N3155	*KSC 130- 52	SSP	SSI		TEK		
*RAYN TADI	TEC	2N3117	*MOTA 105- 99	2N3156	*KSC 130- 53	TEC	SOD		SSR		
SSD TADI	TEC	ETC FSC	207- 61	2N3157	*KSC 130- 54	PIR	SSI		TRW		
2N3064	*CRY 78- 26	RAYN SCA	SGSI SSA	2N3158	*KSC 130- 55	SSP	SSI		WESY		
*RAYN TADI	TEC	2N3118	*MOTA 105- 99	2N3159	*CRY 64- 92	TEC	SOD		TEK		
SSD TADI	TEC	CNS SES	ETC RAYN	2N3160	*KSC 130- 56	PIR	SSI		SSR		
2N3065	*CRY 78- 31	HSC RAYN	SGSI SSA	2N3161	*KSC 130- 57	SEN	SOD		TRW		
*RAYN TADI	TEC	2N3119	*MOTA 105- 99	2N3162	*KSC 130- 58	SSP	SSI		TEK		
SSD TADI	TEC	CNS SCA	ETC RAYN	2N3163	*SIL 143- 100	TEC	SOD		SSR		
2N3066	*TSC 121-104	2N3120	*TII	2N3164	*SIL 143- 101	PIR	SSI		TRW		
BNT *NPC	SSD SIX	CNS SES	ETC RAYN	2N3165	*SIL 143- 102	SEN	SOD		TEK		
2N3067	*TSC 121-105	SGSI SSI	SGSI SSI	2N3166	*SIL 143- 103	SSP	SSI		SSR		
BNT *NPC	SSD SIX	2N3119	*RCA 149- 97	2N3167	*SIL 143- 104	TEC	SSI		TRW		
2N3068	*TSC 121-106	2N3120	*TII	2N3168	*SIL 143- 105	PIR	SSI		TEK		
BNT *NPC	SSD SIX	CNS ETC	ETC RAYN	2N3169	*SIL 143- 106	SEN	SOD		SSR		
2N3069	*TSC 124- 59	SGSI SSI	SGSI SSI	2N3170	*SIL 143- 107	SSP	SSI		TRW		
BNT ECD	SSD SIX	2N3121	*RCA 149- 98	2N3171	*SIL 143- 108	TEC	SSI		TEK		
ECD *NSC	SSD SIX	CNS ETC	ETC RAYN	2N3172	*SIL 143- 109	PIR	SSI		SSR		
2N3070	*TSC 124- 60	SGSI SSI	SGSI SSI	2N3173	*SIL 143- 110	SEN	SOD		TRW		
BNT CNS	ECO *NSC	2N3122	*MOTA 124- 60	2N3174	*SIL 143- 111	SSP	SSI		TEK		
ECD *NSC	SSD SIX	CNS ETC	ETC RAYN	2N3175	*SIL 143- 112	TEC	SSI		SSR		
2N3071	*TSC 124- 61	SGSI TADI	SGSI TADI	2N3176	*SIL 143- 113	PIR	SSI		TRW		
BNT ECD	SSD SIX	CNS ETC	ETC RAYN	2N3177	*SIL 143- 114	SEN	SOD		TEK		
2N3072	*FSC 82- 11	SGSI TADI	SGSI TADI	2N3178	*SIL 143- 115	SSP	SSI		SSR		
CNS ITT	ETC MOTA	202- 61	SGSI TADI	2N3179	*SIL 143- 116	TEC	SSI		TRW		
NSC RAYN	SGSI TADI	JAN2N3127	*MOTA 82- 11	2N3180	*SIL 143- 117	PIR	SSI		TEK		
SCA TADI	TEC	2N3132	*MOTA 82- 11	2N3181	*SIL 143- 118	SEN	SOD		SSR		
2N3073	*FSC 76- 80	2N3124	*MOTA 82- 11	2N3182	*SIL 143- 119	SSP	SSI		TRW		
CNS ITT	ETC MOTA	2N3125	*MOTA 82- 11	2N3183	*SIL 143- 120	TEC	SSI		TEK		
NSC RAYN	SGSI TADI	2N3126	*MOTA 82- 11	2N3184	*SIL 143- 121	PIR	SSI		SSR		
SCA TADI	TEC	2N3127	*MOTA 82- 11	2N3185	*SIL 143- 122	SEN	SOD		TRW		
2N3074	PHIC 58- 36	CNS FSC	GIC HSC	2N3186	*SIL 143- 123	SSP	SSI		TEK		
2N3075	PHIC 58- 37	2N3128	MULB TADI	2N3187	*SIL 143- 124	TEC	SSI		SSR		
2N3076	*TRW 175- 68	SGSI TADI	MULB TADI	2N3188	*SIL 143- 125	PIR	SSI		TRW		
2N3077	PHIC 102- 60	SGSI TADI	PHIC RAYN	2N3189	*SIL 143- 126	SEN	SOD		TEK		
*SCA SSI	TEC SPR	2N3190	SGSI TADI	2N3190	*SIL 143- 127	SSP	SSI		SSR		
2N3078	PHIC 102- 61	SGSI TADI	VALG TADI	2N3191	*SIL 143- 128	TEC	SSI		TRW		
*SCA SSI	TEC SPR	2N3192	VALG TADI	2N3192	*SIL 143- 129	PIR	SSI		TEK		
2N3079	*DEL 179- 80	SGSI TADI	VALG TADI	2N3193	*SIL 143- 130	SEN	SOD		SSR		
189- 64	DEL 179- 81	SGSI TADI	VALG TADI	2N3194	*SIL 143- 131	SSP	SSI		TRW		
189- 65	DEL 179- 82	SGSI TADI	VALG TADI	2N3195	*SIL 143- 132	TEC	SSI		TEK		
2N3080	*DEL 179- 83	SGSI TADI	VALG TADI	2N3196	*SIL 143- 133	PIR	SSI		SSR		
189- 66	DEL 179- 84	SGSI TADI	VALG TADI	2N3197	*SIL 143- 134	SEN	SOD		TRW		
2N3081	*MOTA 81- 2	SGSI TADI	VALG TADI	2N3198	*SIL 143- 135	SSP	SSI		TEK		
RAYN SCA	SGSI TADI	203- 30	VALG TADI	2N3199	*SIL 143- 136	TEC	SSI		SSR		
2N3081/46	SGSI TADI	203- 31	VALG TADI	2N3200	*SIL 143- 137	PIR	SSI		TRW		
2N3082	*CRY 125- 58	2N3134	*MOTA 81- 17	2N3201	*SIL 143- 138	SEN	SOD		TEK		
BNT CNS	ECO GIC	205- 97	MOTA 81- 17	2N3202	*SIL 143- 139	SSP	SSI		SSR		
ECD ITT	DEL 179- 85	2N3177	*MOTA 81- 17	2N3203	*SIL 143- 140	TEC	SSI		TRW		
2N3083	*DEL 179- 86	SGSI TADI	VALG TADI	2N3204	*SIL 143- 141	PIR	SSI		TEK		
189- 67	DEL 179- 87	SGSI TADI	VALG TADI	2N3205	*SIL 143- 142	SEN	SOD		SSR		
2N3084	*CRY 125- 59	2N3135	*MOTA 79- 61	2N3206	*SIL 143- 143	SSP	SSI		TRW		
BNT CNS	ECO GIC	205- 98	MOTA 79- 61	2N3207	*SIL 143- 144	TEC	SSI		TEK		
ECD ITT	DEL 179- 88	SGSI TADI	VALG TADI	2N3208	*SIL 143- 145	PIR	SSI		SSR		
2N3085	*CRY 125- 60	2N3181	*MOTA 79- 62	2N3209	*SIL 143- 146	SEN	SOD		TRW		
BNT CNS	ECO GIC	205- 99	MOTA 79- 62	2N3210	*SIL 143- 147	SSP	SSI		TEK		
ECD ITT	DEL 179- 89	SGSI TADI	VALG TADI	2N3211	*SIL 143- 148	TEC	SSI		SSR		
2N3086	*CRY 125- 61	2N3182	*MOTA 79- 63	2N3212	*SIL 143- 149	PIR	SSI		TRW		
BNT CNS	ECO GIC	205- 100	MOTA 79- 63	2N3213	*SIL 143- 150	SEN	SOD		TEK		
ECD ITT	DEL 179- 90	SGSI TADI	VALG TADI	2N3214	*SIL 143- 151	SSP	SSI		SSR		
2N3087	*CRY 125- 62	2N3183	*MOTA 79- 64	2N3215	*SIL 143- 152	TEC	SSI		TRW		
BNT CNS	ECO GIC	205- 101	MOTA 79- 64	2N3216	*SIL 143- 153	PIR	SSI		TEK		
ECD ITT	DEL 179- 91	SGSI TADI	VALG TADI	2N3217	*SIL 143- 154	SEN	SOD		SSR		
2N3088	*CRY 125- 63	2N3184	*MOTA 79- 65	2N3218	*SIL 143- 155	SSP	SSI		TRW		
BNT CNS	ECO GIC	205- 102	MOTA 79- 65	2N3219	*SIL 143- 156	TEC	SSI		TEK		
ECD ITT	DEL 179- 92	SGSI TADI	VALG TADI	2N3220	*SIL 143- 157	PIR	SSI		SSR		
2N3089	*CRY 125- 64	2N3185	*MOTA 79- 66	2N3221	*SIL 143- 158	SEN	SOD		TRW		
BNT CNS	ECO GIC	205- 103	MOTA 79- 66	2N3222	*SIL 143- 159	SSP	SSI		TEK		
ECD ITT	DEL 179- 93	SGSI TADI	VALG TADI	2N3223	*SIL 143- 160	TEC	SSI		SSR		
2N3090	*CRY 125- 65	2N3186	*MOTA 79- 67	2N3224	*SIL 143- 161	PIR	SSI		TRW		
BNT CNS	ECO GIC	205- 104	MOTA 79- 67	2N3225	*SIL 143- 162	SEN	SOD		TEK		
ECD ITT	DEL 179- 94	SGSI TADI	VALG TADI	2N3226	*SIL 143- 163	SSP	SSI		SSR		
2N3091	*CRY 125- 66	2N3187	*MOTA 79- 68	2N3227	*SIL 143- 164	TEC	SSI		TRW		
BNT CNS	ECO GIC	205- 105	MOTA 79- 68	2N3228	*SIL 143- 165	PIR	SSI		TEK		
ECD ITT	DEL 179- 95	SGSI TADI	VALG TADI	2N3229	*SIL 143- 166	SEN	SOD		SSR		
2N3092	*CRY 125- 67	2N3188	*MOTA 79- 69	2N3230	*SIL 143- 167	SSP	SSI		TRW		
BNT CNS	ECO GIC	205- 106	MOTA 79- 69	2N3231	*SIL 143- 168	TEC	SSI		TEK		
ECD ITT	DEL 179- 96	SGSI TADI	VALG TADI	2N3232	*SIL 143- 169	PIR	SSI		SSR		
2N3093	*CRY 125- 68	2N3189	*MOTA 79- 70	2N3233	*SIL 143- 170	SEN	SOD		TRW		
BNT CNS	ECO GIC	205- 107	MOTA 79- 70	2N3234	*SIL 143- 171	SSP	SSI		TEK		
ECD ITT	DEL 179- 97	SGSI TADI	VALG TADI	2N3235	*SIL 143- 172	TEC	SSI		SSR		
2N3094	*CRY 125- 69	2N3190	*MOTA 79- 71	2N3236	*SIL 143- 173	PIR	SSI		TRW		
BNT CNS	ECO GIC	205- 108	MOTA 79- 71	2N3237	*SIL 143- 174	SEN	SOD		TEK		
ECD ITT	DEL 179- 98	SGSI TADI	VALG TADI	2N3238	*SIL 143- 175	SSP	SSI		SSR		
2N3095	*CRY 125- 70	2N3191	*MOTA 79- 72	2N3239	*SIL 143- 176	TEC	SSI		TRW		
BNT CNS	ECO GIC	205- 109	MOTA 79- 72	2N3240	*SIL 143- 177	PIR	SSI		TEK		
ECD ITT	DEL 179- 99	SGSI TADI	VALG TADI	2N3241	*SIL 143- 178	SEN	SOD		SSR		
2N3096	*CRY 125- 71	2N3192	*MOTA 79- 73	2N3242	*SIL 143- 179	SSP	SSI		TRW		
BNT CNS	ECO GIC	205- 110	MOTA 79- 73	2N3243	*SIL 143- 180	TEC	SSI		TEK		
ECD ITT	DEL 179- 100	SGSI TADI	VALG TADI	2N3244	*SIL 143- 181	PIR	SSI		SSR		
2N3097	*CRY 125- 72	2N3193	*MOTA 79- 74	2N3245	*SIL 143- 182	SEN	SOD		TRW		
BNT CNS	ECO GIC	205- 111	MOTA 79								

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2N3261 (cont) FERB SSI	ATEI 207- 80	2N330B MISI	ESMF 70-106 150- 4	2N3350 TII	73- 53	2N3396 GESY	87- 81	2N3427 MOTA	62-103	ITC SES	
2N3262 FERB ITCA SSISI	△RCA 154- 7 ITC 202- 79	2N3309 MISI	NP C 150- 4 SSI	BNT FSC	ESMF 214- 73	CNS IDC	ESMF MISI	2N3428 MOTA	63- 10	ITC SES	
2N3263 SSITRW	△RCA 171- 3	2N3311 CNS	ETC 136- 98	MOTA RAYN	NSC TADI	NSC TEK	ESMF MISI	2N3429 WESY	178- 59	KER SEN	
2N3264 SSITRW	△RCA 171- 4	2N3312 CNS	ETC KSC 136- 99	TADI TII	TADI TII	2N3397 GESY	87- 82	KER SEN	189- 35	SIL SSI	
2N3265 KER PIR PPC SEN SOD SSI TEC TRW	△RCA 175- 71	2N3313 CNS	ETC KSC 136-100	MOTA RAYN	NSC SSI	2N3398 GESY	87- 83	KER SEN	189- 36	SSISI	
2N3266 KER PIR PPC SEN SOD SSI TEC TRW	△RCA 175- 72	2N3314 CNS	ETC KSC 136-101	TADI TII	TADI TII	2N3399 APX	56- 7	2N3432 MOTA	178- 60	KER SEN	
2N3267 SSITEC	△TII 55- 39	2N3317 CRY	IDC 136-102	BNT ECD	ESMF 214- 75	2N3401 NPC	PHIC CRY	2N3433 WESY	178- 63	KER SEN	
2N3268 SSITEC	△TII 85- 40	2N3318 CRY	IDC 69- 94	BNT SIX	ESMF 121-107	2N3402 NPC	IDC MISI	2N3436 TSC	122- 3	SIL SSI	
2N3277 △FSC	117- 5	2N3319 CRY	IDC 221- 78	2N3365 TADI	TADI TII	2N3403 GESY	109- 19	2N3437 TSC	122- 4	SSISI	
2N3278 △FSC	117- 13	2N3319 CRY	IDC 69-109	BNT SIX	ESMF 121-108	CNS IDC	MISI	BNT ECO	122- 5	SSISI	
2N3279 △MOTA	57- 14	2N3319 CRY	IDC 221- 79	BNT SIX	ESMF 121-109	2N3404 GESY	109- 20	2N3438 ATSC	122- 5	SSISI	
2N3280 △MOTA	57- 15	2N3320 IDC	54- 76	2N3367 TADI	TADI TII	2N3405 GESY	109- 21	2N3439 ATSC	147- 43	SSISI	
2N3281 △MOTA	57- 12	2N3321 IDC	54- 77	2N3368 BNT	ECD 121-109	2N3406 GESY	109- 21	CNS BNT	178- 64	SSISI	
2N3282 △MOTA	57- 13	2N3321 IDC	54- 77	2N3368 BNT	SIX 121-110	2N3407 GESY	109- 22	2N3440 BNT	112- 64	SSISI	
2N3283 △MOTA	56-106	2N3322 IDC	54- 78	2N3369 BNT	ECD 122- 1	2N3408 GESY	109- 22	2N3440 BNT	147- 44	SSISI	
2N3284 △MOTA	56-107	2N3322 IDC	54- 78	2N3370 BNT	SIX 122- 2	2N3409 GESY	108- 71	JAN2N3439 GESY	112- 64	SSISI	
2N3285 △MOTA	56-108	2N3323 IDC	54- 75	2N3370 BNT	SIX 122- 2	2N3410 GESY	108- 72	JAN2N3440 GESY	112- 65	SSISI	
2N3286 △MOTA	56-109	2N3323 IDC	54- 75	2N3370 BNT	SIX 122- 2	2N3411 GESY	108- 73	JAN2N3439 GESY	112- 64	SSISI	
2N3287 ETC SCA	△MOTA 90- 24	2N3324 SCA	△MOTA 61- 23	2N3370 BNT	SIX 122- 2	2N3412 GESY	108- 73	JAN2N3440 GESY	112- 64	MOTA MST	
2N3288 ETC SCA	△MOTA 90- 25	2N3325 SCA	△MOTA 60- 83	2N3370 BNT	SIX 122- 2	2N3413 GESY	108- 72	JAN2N3440 GESY	112- 64	SSCA SCA	
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2N3290 ETC SCA	△MOTA 90- 10	2N3328 SCA	SSSI	2N3370 BNT	SIX 122- 2	2N3415 GESY	108- 73	JAN2N3440 GESY	112- 65	SSCA SCA	
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BNT	CNS	♦TSC	♦TSC	2N3734	♦△MOTA 174 - 78	2N3757	♦△MOTA 141 - 100	2N3789	△MOTA 159 - 78	JAN2N3792	SS 190 - 73
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2N3823	△TII 122- 18	SSA	TEC	2N3905	△GESY 194- 57	△GESY 194- 57	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3824	△TII 122- 18	SSA	TRW	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3825	△TII 122- 18	SSA	MEHK	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
JAN2N3821	TII 122- 17	IDC	TEC	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3826	△TII 122- 18	SSA	TRW	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3827	△TII 122- 18	SSA	MEHK	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3828	△TII 122- 18	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
JAN2N3822	TSC 122- 19	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3829	△TII 122- 20	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
JAN2N3823	TII 122- 21	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3824	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3825	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3826	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3827	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3828	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
JAN2N3828	TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3829	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
JAN2N3829	TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3830	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3831	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3832	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3833	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3834	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3835	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3836	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3837	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3838	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
JAN2N3838	TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3839	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3840	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3841	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3842	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3843	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3844	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3845	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3846	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3847	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3848	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3849	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
2N3850	△TII 122- 22	SSA	SSA	2N3905	△TII 152- 46	△TII 152- 46	△SODI 121- 37	2N3954	△SODI 121- 37	△GESY 102- 97	△GESY 102- 97
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TIIF	TSC		2N4045	♦SODI	TII	215- 28	♦SIX	♦SODI	2N4139 TII	120- 92	SS1	
UPI	UPI		2N4045	♦QDC	TII	215- 28	2N4140 MEHK	97- 89	TEC	TRW	204-104	
BNT	♦FSC	79- 71	2N4046	♦FSC	HSC	115- 15	TADI	2N4140 BNT	97- 89	PPC	162- 4	
NSC	♦MOTA	215- 19	2N4046	♦FSC	ITTB	206- 88	JAN2N4092	none	2N4140 BNT	97- 89	SS1	162- 4
SGSI	SGSI		2N4047	♦FSC	NSC	115- 16	2N4091A	△TSC	2N4141 CNS	97- 90	TEC	162- 4
SSI	TADI		2N4047	♦FSC	RAYN	206- 89	2N4092	△TSC	2N4141 CNS	97- 90	PPC	162- 4
TADI	TADI		2N4048	♦FSC	SGSI	136-104	APX	126- 56	2N4141 CNS	97- 90	SS1	162- 4
SGSI	SSI	223- 5	2N4048	♦FSC	TSC	188-101	JAN2N4093	none	2N4142 TSC	97- 90	TEC	162- 4
BNT	♦FSC	78- 81	2N4048	♦FSC	SGSI	188-101	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
NSC	NSC		2N4049	♦FSC	ITTB	188-102	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
SGSI	SSI	223- 6	2N4049	♦FSC	NSC	188-102	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
TADI	♦TSC		2N4050	♦FSC	RAYN	188-103	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	223- 7	2N4050	♦FSC	SGSI	188-103	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
BNT	♦FSC	78- 82	2N4051	♦FSC	SOD	136-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
NSC	NSC		2N4051	♦FSC	RAYN	188-104	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	215- 21	2N4052	♦FSC	SGS1	136-108	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
TADI	♦TSC		2N4052	♦FSC	APX	188-105	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
BNT	♦FSC	78- 95	2N4053	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
NSC	NSC		2N4053	♦FSC	RAYN	188-105	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
SGSI	SSI	215- 22	2N4053	♦FSC	SGSI	136-108	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
TADI	♦TSC		2N4054	♦FSC	SOD	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	215- 24	2N4054	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
BNT	♦FSC	78- 84	2N4055	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
NSC	NSC		2N4055	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	215- 25	2N4056	♦FSC	SGS1	136-108	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
TADI	♦TSC		2N4056	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
SGSI	SSI	215- 26	2N4057	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
BNT	♦FSC	78- 97	2N4058	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
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SGSI	SSI	215- 27	2N4059	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
TADI	♦TSC		2N4059	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
SGSI	SSI	215- 28	2N4060	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
BNT	♦FSC	80- 85	2N4060	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
NSC	NSC		2N4060	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
SGSI	SSI	215- 29	2N4061	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
TADI	♦TSC		2N4061	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	215- 30	2N4062	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
BNT	♦FSC	80- 96	2N4062	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
NSC	NSC		2N4062	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	215- 31	2N4063	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
TADI	♦TSC		2N4063	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
SGSI	SSI	215- 32	2N4064	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
BNT	♦FSC	80- 97	2N4064	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
NSC	NSC		2N4064	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
SGSI	SSI	215- 33	2N4065	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
TADI	♦TSC		2N4065	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
SGSI	SSI	215- 34	2N4066	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
BNT	♦FSC	81- 97	2N4066	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
NSC	NSC		2N4066	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
SGSI	SSI	215- 35	2N4067	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
TADI	♦TSC		2N4067	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	215- 36	2N4068	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
BNT	♦FSC	81- 98	2N4068	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
NSC	NSC		2N4068	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	215- 37	2N4069	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
TADI	♦TSC		2N4069	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
SGSI	SSI	215- 38	2N4070	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
BNT	♦FSC	81- 99	2N4070	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
NSC	NSC		2N4070	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
SGSI	SSI	215- 39	2N4071	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
TADI	♦TSC		2N4071	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
SGSI	SSI	215- 40	2N4072	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
BNT	♦FSC	82- 15	2N4073	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
NSC	NSC		2N4073	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
SGSI	SSI	215- 41	2N4074	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
TADI	♦TSC		2N4074	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	215- 42	2N4075	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
BNT	♦FSC	82- 16	2N4075	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
NSC	NSC		2N4075	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
SGSI	SSI	215- 43	2N4076	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
TADI	♦TSC		2N4076	♦FSC	APX	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
SGSI	SSI	215- 44	2N4077	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
BNT	♦FSC	82- 16	2N4077	♦FSC	TII	188-106	APX	126- 56	2N4142 TSC	97- 90	SS1	162- 4
NSC	NSC		2N4077	♦FSC	RAYN	188-106	APX	126- 56	2N4142 TSC	97- 90	TEC	162- 4
SGSI	SSI	215- 45	2N4078	♦FSC	SOD	136-108	APX	126- 56	2N4142 TSC	97- 90	PPC	162- 4
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CNS FSC SCA SEN SSI			TEC			SSII			FSC	
	♦TII		SCA		2N5046	△FSC TEC	144 - 77	2N5091	△APX FSC	159 - 79
2N4938	151 - 25		♦MOTA			SSII			FSC	
CNS FSC SCA SEN SSI			TEC		2N5047	△FSC TEC	144 - 77	2N5092	△APX FSC	159 - 79
	♦TII		SCA			SSII			FSC	
2N4939	151 - 26		♦MOTA		2N5048	△FSC TEC	144 - 77	2N5093	△APX FSC	159 - 79
CNS FSC SCA SEN SSI			TEC			SSII			FSC	
	♦TII		SCA		2N5049	△FSC TEC	144 - 77	2N5094	△APX FSC	159 - 79
2N4940	151 - 27		♦MOTA			SSII			FSC	
CNS FSC SCA SEN SSI			TEC		2N5050	△FSC TEC	144 - 77	2N5095	△APX FSC	159 - 79
	♦TII		SCA			SSII			FSC	
2N4941	151 - 28		♦MOTA		2N5051	△FSC TEC	144 - 77	2N5096	△APX FSC	159 - 79
CNS FSC SCA SEN SSI			TEC			SSII			FSC	
	♦TII		SCA		2N5052	△FSC TEC	144 - 77	2N5097	△APX FSC	159 - 79
2N4942	151 - 29		♦MOTA			SSII			FSC	
CNS FSC SCA SEN SSI			TEC		2N5053	△FSC TEC	144 - 77	2N5098	△APX FSC	159 - 79
	♦TII		SCA			SSII			FSC	
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CNS FSC SCA SEN SSI			TEC			SSII			FSC	
	♦TII		SCA		2N5055	△FSC TEC	144 - 77	2N5100	△APX FSC	159 - 79
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CNS FSC SCA SEN SSI			TEC		2N5056	△FSC TEC	144 - 77	2N5101	△APX FSC	159 - 79
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NJS	NSC	2N5162	*MOTA 142-106	2N5235	*GESY 101- 48	SOD	PPC 144- 78	TEC	SSI 200- 80		
SGSI	TSC	2N5163	BNT 120- 67		CNS 101- 48	SSD	PPC 144- 78	TEC	SSI 200- 80		
2N5131	*FSC 89- 4	ECD	SODI	2N5236	*FSC 111- 7	KER	PPC 144- 79	2N5331	*TRW 175- 82		
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CSI	ETC	2N5172	CNS 87- 91		SOD 154- 26	KER	PPC 144- 79	2N5332	*TII 77- 87		
NPC	NSC		*GESY	2N5237	SEN 199- 71	PIR	PPC 144- 79		*MOTA 224-104		
SGSI	TSC		*SPR		TEK	SEN 199- 71	PPC 144- 79	JAN2N5332	none 77- 80		
2N5132	*FSC 89- 67	2N5174	*GESY 87- 92	JAN2N5237	SSD 154- 27	FSC	PPC 144- 92	2N5333	224-105		
BNT	CNS		CNS		2N5238	SOD 200- 66	PPC 144- 92		*TII 141- 95		
CSI	ETC	2N5175	*GESY 87- 93		SOD 154- 28	FSC	PPC 144- 92		SSI 141- 95		
NPC	NSC		CNS		2N5238	SSD 199- 72	PPC 144- 92		TEC 141- 95		
SGSI	TSC	2N5176	*GESY 87- 94	KER	PIR 199- 72	FSC	PPC 144- 92		SSI 141- 95		
2N5133	*FSC 88- 53	2N5177	*TRW 163- 49	SEN	PIR 200- 67	FSC	PPC 144- 92		TEC 141- 95		
BNT	CNS		ECD		SEN 154- 29	FSC	PPC 144- 92		SSI 141- 95		
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NJS	NSC				none 154- 29	FSC	PPC 144- 92		SSI 141- 95		
SGSI	RAYN	2N5179	*RCA 91- 7		170- 41	FSC	PPC 144- 92		TEC 141- 95		
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BNT	CNS	206- 25	SCA		178- 39	FSC	PPC 144- 92		TEC 141- 95		
*CSI	MEHK	2N5181	*RCA 87- 53	JAN2N5241	SCA 192- 11	FSC	PPC 144- 92		SSI 141- 95		
NJS	NSC	2N5182	*RCA 87- 54		173- 76	FSC	PPC 144- 92		TEC 141- 95		
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*CSI	NPNC	2N5186	*RCA 99- 2	ITT	224- 102	FSC	PPC 144- 92		TEC 141- 95		
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SGSI	TSC		ATEI 147- 55		124- 100	FSC	PPC 144- 92		SSI 141- 95		
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BNT	CNS	2N5190	*MOTA 165- 30		TIB 124- 100	FSC	PPC 144- 92		SSI 141- 95		
*CSI	ETC	2N5191	*MOTA 165- 31	2N5249	CNS 101- 49	FSC	PPC 144- 92		TEC 141- 95		
NPC	NSC	2N5192	*MOTA 165- 32		GESY 101- 50	FSC	PPC 144- 92		SSI 141- 95		
RAYN	SGSI	2N5193	*MOTA 143- 56	2N5249A	101- 50	FSC	PPC 144- 92		TEC 141- 95		
	TSC	2N5194	*MOTA 143- 57		150- 55	FSC	PPC 144- 92		SSI 141- 95		
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BNT	CNS	2N5196	*SIX 121- 47	KER	PIR 193- 68	FSC	PPC 144- 92		SSI 141- 95		
CSI	MEHK	2N5197	*SIX 121- 48	PTI	101- 51	FSC	PPC 144- 92		TEC 141- 95		
NPC	NSC	2N5198	*SIX 121- 49	2N5246	152- 55	FSC	PPC 144- 92		SSI 141- 95		
SGSI	TSC	2N5199	*SIX 121- 50	2N5247	181- 78	FSC	PPC 144- 92		TEC 141- 95		
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SSI	TEC		SEN	2N5266	181- 80	FSC	PPC 144- 92		TEC 141- 95		
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SOD	SSI	2N5216	SEN	2N5268	181- 80	FSC	PPC 144- 92		SSI 141- 95		
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2N5149	*FSC 139- 54		KER	2N5270	181- 80	FSC	PPC 144- 92		SSI 141- 95		
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SOD	SSI		SEN	2N5278	181- 80	FSC	PPC 144- 92		SSI 141- 95		
2N5150	*FSC 147- 74	2N5218	*SOD 169- 15		181- 80	FSC	PPC 144- 92		TEC 141- 95		
CNS	KER	2N5219	KER	2N5279	181- 80	FSC	PPC 144- 92		SSI 141- 95		
SOD	SSI		SEN	2N5279	181- 80	FSC	PPC 144- 92		TEC 141- 95		
TEC	TRW	2N5220	*MOTA 100- 61	MST	181- 80	FSC	PPC 144- 92		SSI 141- 95		
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KER	PPC	2N5221	*MOTA 75- 52	2N5281	181- 80	FSC	PPC 144- 92		SSI 141- 95		
SOD	SSI	2N5221	BNT	2N5281	181- 80	FSC	PPC 144- 92		TEC 141- 95		
2N5152	*FSC 147- 75	2N5222	*MOTA 101- 15	MST	181- 80	FSC	PPC 144- 92		SSI 141- 95		
CNS	KER	2N5223	*MOTA 100- 62	2N5282	181- 80	FSC	PPC 144- 92		TEC 141- 95		
SOD	SSI	2N5223	BNT	2N5282	181- 80	FSC	PPC 144- 92		SSI 141- 95		
2N5153	*FSC 139- 56	2N5224	*MOTA 100- 88	CNS	181- 80	FSC	PPC 144- 92		TEC 141- 95		
KER	PPC	2N5225	*MOTA 100- 49	CNS	181- 80	FSC	PPC 144- 92		SSI 141- 95		
SOD	SSI	2N5225	BNT	2N5284	181- 80	FSC	PPC 144- 92		TEC 141- 95		
2N5154	*FSC 147- 76	2N5226	*MOTA 75- 50	CNS	181- 80	FSC	PPC 144- 92		SSI 141- 95		
CNS	KER	2N5227	*MOTA 75- 53	CNS	181- 80	FSC	PPC 144- 92		TEC 141- 95		
SOD	SSI	2N5227	BNT	2N5285	181- 80	FSC	PPC 144- 92		SSI 141- 95		
TEC	TRW	2N5228	*MOTA 75- 80	CNS	181- 80	FSC	PPC 144- 92		TEC 141- 95		
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CNS	KSC	189- 68	2N5229	*MOTA 139- 87	181- 80	FSC	PPC 144- 92		TEC 141- 95		
+MOTA	SOD	189- 68	2N5229	SSI 221-102	181- 80	FSC	PPC 144- 92		SSI 141- 95		
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MOTA	SOD	189- 69	2N5231	TEC 221-104	181- 80	FSC	PPC 144- 92		SSI 141- 95		
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MOTA	SOD	189- 69	2N5231	PIR 221-103	181- 80	FSC	PPC 144- 92		SSI 141- 95		
JAN2N5156		189- 69	2N5231	PIR 221-103	181- 80	FSC	PPC 144- 92		TEC 141- 95		
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2N5388	♦△TII	145- 84	2N5449	♦△TII	102- 75	2N5514	♦△TSC	117-96	2N5564	♦UNI	215-91		
	KER				TFKG			215-72		SCA	214-48		
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2N5736	△SSS TRW	2N5839	△GESY 106- 119	2N5915	△MOTA 170- 94	2N5988	△TII 172- 433	2N6101	△PHIN 231- 78		
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2N5743	△SSS TRW	2N5846	△GESY 106- 126	2N5922	△MOTA 170- 101	2N5995	△TII 172- 503	2N6108	△PHIN 231- 85		
2N5744	△SSS TRW	2N5847	△GESY 106- 127	2N5923	△MOTA 170- 102	2N5996	△TII 172- 513	2N6109	△PHIN 231- 86		
2N5745	△SSS TRW	2N5848	△GESY 106- 128	2N5924	△MOTA 170- 103	2N5997	△TII 172- 523	2N6110	△PHIN 231- 87		
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	SPR			RCA	188- 48	151-62	WESY	179- 99	154-134	WESY	187- 66
3N143	CRY	222- 74	3TE604	RCA	124- 76	151-63	WESY	179- 99	154-136	WESY	187- 67
	SPR			RCA	188- 49	151-64	WESY	179- 99	154-138	WESY	187- 68
3N144	CRY	222- 75	3TE609	RCA	124- 77	151-65	WESY	179- 99	154-140	WESY	187- 69
	SPR			RCA	188- 50	151-66	WESY	179- 99	154-142	WESY	187- 70
3N145	CRY	222- 76	3TE610	RCA	124- 78	151-67	WESY	179- 99	154-144	WESY	187- 71
	SPR			RCA	188- 51	151-68	WESY	179- 99	154-146	WESY	187- 72
3N146	CRY	222- 77	3TE611	RCA	124- 79	151-69	WESY	179- 99	154-148	WESY	187- 73
	SPR			RCA	188- 52	151-70	WESY	179- 99	154-150	WESY	187- 74
3N147	CRY	222- 78	3TX601	RCA	124- 80	151-71	WESY	179- 99	154-152	WESY	187- 75
	SPR			RCA	188- 53	151-72	WESY	179- 99	154-154	WESY	187- 76
3N148	CRY	222- 79	3TX602	RCA	124- 81	151-73	WESY	179- 99	154-156	WESY	187- 77
	SPR			RCA	188- 54	151-74	WESY	179- 99	154-158	WESY	187- 78
3N149	CRY	222- 80	3TX615	RCA	124- 82	151-75	WESY	179- 99	154-160	WESY	187- 79
	SPR			RCA	188- 55	151-76	WESY	179- 99	154-162	WESY	187- 80
3N150	CRY	222- 81	3TX616	RCA	124- 83	151-77	WESY	179- 99	154-164	WESY	187- 81
	SPR			RCA	188- 56	151-78	WESY	179- 99	154-166	WESY	187- 82
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1571-1025	WESY 184-25	1723-1005	♦ WESY 174-70	1763-1010	WESY 174-86	2849-1	40309	PIR	151-40	
1571-1220	WESY 184-26		196-64	1763-1020	♦ WESY 174-87	(cont.)	156-55	♦ RCA	SCA	
1571-1225	WESY 184-27	1723-1010	♦ WESY 174-71	1763-1030	WESY 174-88		196-47	40310	PIR	
1571-1425	WESY 184-28		196-74	1763-1210	WESY 174-89	2849-2	UNI	115-86	♦ RCA	
1571-1620	WESY 184-29	1723-1205	♦ WESY 174-72	1763-1220	♦ WESY 174-90		165-99	40311	PIR	
1571-1625	WESY 184-30		196-65	1763-1230	WESY 174-91		196-48	♦ RCA	SCA	
1714-0402	♦ WESY 163-87	1723-1210	♦ WESY 174-73	1763-1410	WESY 174-92	2849-3	UNI	115-87	40312	PIR
	197-110		196-75	1763-1420	♦ WESY 174-93		156-56	♦ RCA	SCA	
1714-0405	♦ WESY 163-88	1723-1405	♦ WESY 174-74	1763-1430	WESY 174-94		196-49	40313	♦ RCA	
	198-25		196-66	1763-1610	WESY 174-95	2850-1	♦ UNI	157-56	♦ RCA	
1714-0602	♦ WESY 163-89	1723-1410	♦ WESY 174-75	1763-1620	WESY 174-96		197-80	40314	PIR	
	198-1		196-76	1763-1630	WESY 174-97	2850-2	♦ UNI	166-11	♦ RCA	
1714-0605	♦ WESY 163-90	1723-1605	♦ WESY 174-76	1763-1810	WESY 174-98		197-81	40315	PIR	
	198-26		196-67	1763-1820	WESY 174-99	2850-3	♦ UNI	157-57	♦ RCA	
1714-0802	♦ WESY 163-91	1723-1610	♦ WESY 174-77	1763-1830	WESY 174-100		197-82	40316	PIR	
	198-2		196-77	1768-0610	WESY 175-33	2851-1	♦ UNI	157-58	♦ RCA	
1714-0805	♦ WESY 163-92	1723-1805	♦ WESY 174-78	1768-0620	♦ WESY 175-34		197-83	40317	PIR	
	198-27		196-68	1768-0630	WESY 175-35	2851-2	♦ UNI	165-12	♦ RCA	
1714-1002	♦ WESY 163-93	1723-1810	♦ WESY 174-79	1768-0810	WESY 175-36		197-84	40318	♦ RCA	
	198-3		196-78	1768-0820	♦ WESY 175-37	2851-3	♦ UNI	157-59	40319	
1714-1005	♦ WESY 163-94	1743-0610	♦ WESY 175-3	1768-0830	WESY 175-38		197-85	♦ RCA		
	198-28		196-105	1768-1010	WESY 175-39	2852-1	♦ UNI	157-60	40320	
1714-1202	♦ WESY 163-95	1743-0630	♦ WESY 175-4	1768-1020	WESY 175-40		196-6	♦ RCA	SCA	
	198-4		197-31	1768-1030	WESY 175-41	2852-2	♦ UNI	165-13	40321	
1714-1205	♦ WESY 163-96	1743-0820	♦ WESY 175-5	1768-1210	WESY 175-42		196-7	♦ RCA	SCA	
	198-29		197-23	1768-1220	♦ WESY 175-43	2852-3	♦ UNI	157-61	40322	
1714-1402	♦ WESY 163-97	1743-1010	♦ WESY 175-6	1768-1230	WESY 175-44		196-8	♦ RCA	SCA	
	198-5		196-108	1768-1410	WESY 175-45	2853-1	♦ UNI	157-62	40323	
1714-1405	♦ WESY 163-98	1743-1030	♦ WESY 175-7	1768-1420	♦ WESY 175-46		197-86	♦ RCA	SCA	
	198-30		197-32	1768-1430	WESY 175-47	2853-2	♦ UNI	165-14	40324	
1714-1602	♦ WESY 163-99	1743-1220	♦ WESY 175-8	1768-1610	WESY 175-48		197-87	♦ RCA	PIR	
	198-6		197-24	1768-1620	WESY 175-49	2853-3	♦ UNI	157-63	40325	
1714-1605	♦ WESY 163-100	1743-1410	♦ WESY 175-9	1768-1630	WESY 175-50	2854-1	♦ UNI	197-88	♦ RCA	
	198-31		196-107	1768-1810	WESY 175-51		197-89	40326	PIR	
1714-1802	♦ WESY 163-101	1743-1430	♦ WESY 176-10	1768-1820	WESY 175-52		199-23	♦ RCA	SCA	
	198-7		197-33	1768-1830	WESY 175-53	2854-2	♦ UNI	185-15	40327	
1714-1805	♦ WESY 163-102	1743-1620	♦ WESY 176-11	1776-0640	WESY 180-180		199-24	40328	♦ RCA	
	198-32		197-25		WESY 180-194	2854-3	♦ UNI	157-65	40329	
1716-0402	WESY 169-52	1743-1810	♦ WESY 176-12	1776-0660	WESY 180-6		199-25	40340	KER	
	198-8		196-108		WESY 180-7	2855-1	♦ UNI	157-66	♦ RCA	
1716-0405	WESY 169-53	1743-1820	♦ WESY 176-13	1776-0840	WESY 180-8		197-89	40341	KER	
	198-33		197-26		WESY 180-9	2855-2	♦ UNI	165-16	♦ RCA	
1716-0602	WESY 169-54	1743-1830	♦ WESY 176-14	1776-0860	WESY 180-8		197-90	40346	SCA	
	198-9		197-34		WESY 180-9	2855-3	♦ UNI	157-67	♦ RCA	
1716-0605	WESY 169-55	1748-0610	♦ WESY 176-15	1776-1040	WESY 180-9	2856-1	♦ UNI	197-91	40346V1	
	198-34		196-79		WESY 180-10		197-92	40346V2	♦ RCA	
1716-0802	WESY 169-58	1748-0630	♦ WESY 176-16	1776-1060	WESY 180-10	2856-2	♦ UNI	165-17	♦ RCA	
	198-10		196-109		WESY 180-11		196-10	40347V1	♦ RCA	
1716-0805	WESY 169-57	1748-0810	♦ WESY 176-17	1776-1240	WESY 180-11	2856-3	♦ UNI	157-69	40347V2	
	198-35		196-80		WESY 180-12		196-11	40348	PIR	
1716-1002	WESY 169-58	1748-0820	♦ WESY 176-18	1776-1260	WESY 180-13	40022	♦ RCA	131-27	40348V1	
	198-11		196-94		WESY 180-14	40050	♦ RCA	131-28	40348V2	
1716-1202	WESY 169-60	1748-1010	♦ WESY 176-20	1776-1460	WESY 180-15		194-102	40081	♦ RCA	
	198-12		196-81		WESY 180-16		194-102	40081	♦ RCA	
1716-1205	WESY 169-61	1748-1030	♦ WESY 176-21	1776-1640	WESY 180-17		194-102	40081	♦ RCA	
	198-37		197-1		WESY 180-18		194-102	40081	♦ RCA	
1716-1402	WESY 169-62	1748-1210	♦ WESY 176-22	1776-1660	WESY 180-19		195-28	40082	♦ RCA	
	198-13		196-82		WESY 180-20		194-103	40084	♦ RCA	
1716-1405	WESY 169-63	1748-1220	♦ WESY 176-23	1776-1840	WESY 180-17		195-29	40231	♦ RCA	
	198-38		196-95		WESY 180-18		195-29	40361	PIR	
1716-1602	WESY 169-64	1748-1230	♦ WESY 176-24	1776-1860	WESY 180-19		195-30	40362	♦ RCA	
	198-14		197-2		WESY 180-20		195-30	40363	♦ RCA	
1716-1605	WESY 169-65	1748-1410	♦ WESY 176-25	1843-2005	♦ WESY 174-101		195-31	40364	♦ RCA	
	198-39		196-83		WESY 180-21		195-31	40364	♦ RCA	
1716-1802	WESY 169-66	1748-1430	♦ WESY 176-26	1843-2010	♦ WESY 174-102		195-32	40365	♦ RCA	
	198-15		197-3		WESY 180-22		195-32	40359	♦ RCA	
1716-1805	WESY 169-67	1748-1610	♦ WESY 176-27	1843-2020	♦ WESY 174-103		195-33	40366	♦ RCA	
	198-40		196-84		WESY 180-23		195-33	40366	♦ RCA	
1718-0402	WESY 166-83	1748-1620	♦ WESY 176-28	1843-2205	♦ WESY 174-104		195-34	40367	PIR	
	198-16		196-96		WESY 180-24		195-34	40367	♦ RCA	
1718-0405	WESY 166-84	1748-1630	WESY 176-29	1843-2210	♦ WESY 174-105		195-35	40368	♦ RCA	
	198-41		197-4		WESY 180-25		195-35	40368	PIR	
1718-0602	WESY 166-85	1748-1810	♦ WESY 176-30	1843-2220	♦ WESY 174-106		195-36	40368	♦ RCA	
	198-17		196-85		WESY 180-26		195-36	40368	♦ RCA	
1718-0605	WESY 166-86	1748-1820	♦ WESY 176-31	1843-2505	♦ WESY 174-107		195-37	40369	♦ RCA	
	198-42		196-97		WESY 180-27		195-37	40369	♦ RCA	
1718-0802	WESY 166-87	1748-1830	WESY 176-32	1843-2510	♦ WESY 174-108		195-38	40372	♦ RCA	
	198-18		197-5		WESY 180-28		195-38	40372	♦ RCA	
1718-0805	WESY 166-88	1756-0640	WESY 173-38	1843-2520	♦ WESY 174-109		195-39	40373	♦ RCA	
	198-43		195-19		WESY 180-29		195-39	40373	♦ RCA	
1718-1002	WESY 166-89	1756-0660	WESY 173-39	1843-2705	♦ WESY 174-110		195-40	40250	♦ RCA	
	198-19		195-16		WESY 180-30		195-40	40250	♦ RCA	
1718-1005	WESY 166-90	1756-0840	WESY 173-40	1843-2710	♦ WESY 175-1		195-41	40250V1	♦ RCA	
	198-44		194-91		WESY 180-31		195-41	40250V1	♦ RCA	
1718-1202	WESY 166-91	1756-0860	WESY 173-41	1843-2720	♦ WESY 175-2		195-42	40251	ATEI	
	198-20		195-17		WESY 180-32		195-42	40251	PIR	
1718-1205	WESY 166-92	1756-1040	WESY 173-42	1843-3005	♦ WESY 175-3		195-43	40253	♦ RCA	
	198-45		194-92		WESY 180-33		195-43	40254	♦ RCA	
1718-1402	WESY 166-93	1756-1060	WESY 173-43	1843-3010	♦ WESY 175-4		195-44	40279	♦ RCA	
	198-21		195-18		WESY 180-34		195-44	40279	♦ RCA	
1718-1405	WESY 166-94	1756-1240	WESY 173-44	1843-3020	♦ WESY 175-5		195-45	40280	♦ RCA	
	198-46		194-93		WESY 180-35		195-45	40280	♦ RCA	
1718-1602	WESY 166-95	1756-1260	WESY 173-45	1843-3205	♦ WESY 175-6		195-46	40281	♦ RCA	
	198-22		195-19		WESY 180-36		195-46	40281	♦ RCA	
1718-1605	WESY 166-96	1756-1440	WESY 173-46	1843-3210	♦ WESY 175-7		195-47	40282	♦ RCA	
	198-47		194-94		WESY 180-37		195-47	40282	♦ RCA	
1718-1802	WESY 166-97	1756-1460	WESY 173-47	1843-3220	♦ WESY 175-8		195-48	40283	♦ RCA	
	198-23		194-95		WESY 180-38		195-48	40283	♦ RCA	
1718-1805	WESY 166-98	1756-1640	WESY 173-48	1843-3505	♦ WESY 175-9		195-49	40290	♦ RCA	
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40422	SCA 158- 60	A5T3645	* TII 76-110	A604	PHIC 216- 18	AC171	TFKG 56- 44	AD161/AD162			
40424	SCA 158- 81	TIIB 204- 76	A605	PHIC 216- 19	AC172	BELI 67- 96	(cont)				
40426	SCA 158- 62	A5T3903	* TII 103- 35	A606	PHIC 216- 20	MINA	MULB				
40439	* RCA 131- 32	A5T3904	* TII 103- 90	A640L	* APX 88- 82	PHIN	PHIC				
40440	* RCA 155- 69	TIIB 208- 17	A640S	* APX 88- 83	AC176	VALG	* PHIN	* RADF			
40446	* RCA 107- 82	A5T3905	* TII 77- 1				TFKG	68- 7			SHWG
40457	* RCA 108- 42	TIIB 204- 77	A641L	* APX 88- 84	AC176K	MULB	68- 20	AD162	APX	128- 52	
40458	SCA 205- 55	A5T3906	* TII 77- 2			SHWG	127- 46				
40459	* RCA 149- 54	TIIB 188- 98	A641S	* APX 88- 85	AC179	TFKG	64- 50				
40462	* RCA 126- 56	A5T5058	* TII 112- 81	A642L	* APX 88- 86	AC180	TFKG	68- 8			
40464	* RCA 131- 34	TIIB 112- 82	A642S	* APX 88- 87	AC180K	MULB	68- 25				
40465	SCA 165- 48	TIIB 112- 82	A643L	* APX 88- 65	AC181	SHWG	127- 51				
40466	SCA 165- 49	A130	PHIC 102- 50			TFKG	64- 50				
40467A	* RCA 125- 78	A132	PHIC 102- 51			RADF	64- 56				
40468A	* RCA 125- 55	A134	* APX 98- 24			SHWG	128- 4				
40481	SCA 158- 63	A135	* APX 98- 25	A643S	* APX 88- 66	AC181K	TFKG	68- 8			
40500	SCA 107- 83	A136	* APX 98- 26			ESMF	64- 82	AD163			
40513	* RCA 171- 65	A137	* APX 98- 27	A644L	* APX 88- 67	AC182	MISI	AD164	TFKG	128- 5	
40514	* RCA 171- 66	A138	* APX 98- 28			ESMF	62- 104	AD165	TFKG	128- 10	
40519	* RCA 98- 22	A139	* APX 98- 29	A644S	* APX 88- 68	AC183	MISI	AD262	ATEI	128- 55	
40537	* RCA 139- 43	A141	* APX 83- 16			ESMF	68- 12	AD263	ATEI	128- 56	
SCA	A142	* APX 83- 17	A645L	* APX 88- 69	AC184	MISI	ADY26	* MULB	ADY27	SHWG	136- 16
40538	* RCA 139- 44	A143	* APX 83- 18			ESMF	138- 3				
SCA	A157A	* APX 83- 30	A645S	* APX 88- 70	AC185	PHIC	PHIN				
40539	* RCA 151- 110	A157B	* APX 83- 31			MISI	RADF	* VALG			
SCA	A158B	* APX 83- 32	A649L	* APX 88- 88	AC186	TFKG	67- 102	ADZ12	MULB	135- 1	
40542	* RCA 171- 67	A158C	* APX 83- 33			68- 22	PHIC	PHIN			
40543	* RCA 171- 68	A159B	* APX 83- 34	A649S	* APX 88- 89	AC187	* BELI				
40544	* RCA 152- 81	A159C	* APX 83- 35			ATF	MULB				
SCA	A160	* APX 83- 7	A705	* APX 167- 79	AC187/01	PHIC	PHIN				
40559A	* RCA 125- 56	A161	* APX 69- 8	A747A	* APX 93- 99	AC187/01/AC188/01	PHIC	PHIN			
40577	* RCA 108- 83	A162	* APX 69- 9	A747B	* APX 93- 100	AC188/01	* RADF				
40578	KER 151- 54	A177	* APX 73- 92	A748B	* APX 93- 101	AC188/01/AC188/01	PHIC	PHIN			
* RCA	A178A	* APX 73- 93	A748C	* APX 93- 102	AC188/01/AC188/01	PHIC	PHIN				
40581	* RCA 151- 55	A178B	* APX 73- 94	A749B	* APX 93- 103	AC188/01/AC188/01	PHIC	PHIN			
40582	* RCA 155- 70	A179A	* APX 73- 95	A749C	* APX 93- 104	AC188/01/AC188/01	* BELI	MINA			
40594	* RCA 155- 71	A179B	* APX 73- 96	A777	* APX 110- 55	AC188/01/AC188/01	PHIC	PHIN			
SCA	A203	* APX 147- 29	A778	* APX 110- 56	AC187K	* RADF					
40595	* RCA 140- 91	A208	* APX 157- 81	A779	* APX 110- 57	AC187K	ATEI	68- 24	AF114N	MINA	55- 9
SCA	A209	* APX 152- 1	A1109	* TSC 88- 57		SHWG	TFKG		AF115	BELI	53- 91
40600	* RCA 125- 79	A210	* APX 147- 7	A1170	* TSC 90- 17	VALG	MULB				
40601	* RCA 125- 80	A211	* APX 147- 8	A1341	* TSC 88- 58	AC187K-AC188K	SHWG				
40602	* RCA 125- 81	A214	* APX 106- 71	A1480	* TSC 216- 35	AC188K	AC188K				
40603	* RCA 125- 82	A230	* APX 115- 69	A107	MULB 55- 49	AC188K	AC188K				
40604	* RCA 125- 83	A235	* APX 162- 45		PHIC	AC188K	AC188K				
40605	* RCA 152- 82	A249	* APX 147- 87		PHIN	MULB	MULB				
40608	* RCA 149- 55	A253	* APX 158- 30	AC116	VALG	PHIC	PHIN				
SCA	A270	* APX 153- 98	AC117		TFKG	MULB	MULB				
40611	* RCA 151- 56	A271	* APX 158- 37	AC121	65- 67	AC188/01	AC188/01				
SCA	A272	* APX 161- 30	AC122		SHWG	AC188/01	AC188/01				
40612	* RCA 128- 19	A274	* APX 153- 99	AC123	54- 15	AC188K	AC188K				
40613	* RCA 164- 63	A275	* APX 158- 38	AC124	AC188K	AC188K	AC188K				
40616	* RCA 151- 57	A276	* APX 161- 31	AC125	65- 30	AC189	AC189				
SCA	A298	* APX 147- 88			AC192	AC192	AC192				
40618	* RCA 164- 64	A301	PHIC 95- 37		AC193	AC193	AC193				
40621	* RCA 164- 65	A306	PHIC 102- 78	AC126	65- 31	AC193K	AC193K				
40622	* RCA 164- 66	A307	PHIC 102- 79		AC194	AC194	AC194				
40623	* RCA 128- 20	A310	PHIC 95- 38		AC194K	AC194K	AC194K				
40624	* RCA 167- 75	A311	PHIC 96- 5		AC194K	AC194K	AC194K				
40625	* RCA 149- 56	A411	APX 55- 23		AC194K	AC194K	AC194K				
40626	* RCA 128- 21	A417	* APX 84- 102	AC127	68- 15	AC194	AC194				
40627	* RCA 167- 77	A418	* APX 84- 97		AC194	AC194	AC194				
40628	* RCA 149- 57	A419	* APX 84- 98		AC194	AC194	AC194				
40629	* RCA 164- 67	A420	* APX 84- 99		AC194	AC194	AC194				
40630	* RCA 164- 68	A427	* APX 88- 99		AC194	AC194	AC194				
40631	* RCA 164- 69	A430	* APX 94- 51	AC127-01	68- 16	AC194	AC194				
40632	* RCA 167- 78	A467	* APX 84- 91		AC194	AC194	AC194				
40633	KER 171- 69	A473	* APX 94- 64	AC127/AC128	213- 45	AC194	AC194				
* RCA	A480	* APX 86- 82			AC194	AC194	AC194				
40634	* RCA 140- 22	A481	* APX 86- 64		AC127/AC132	213- 46	AC194	AC194			
SCA	A482	* APX 86- 76			AC127/AC132	213- 46	AC194	AC194			
40635	* RCA 151- 58	A483	* APX 86- 90		AC127/AC132	213- 46	AC194	AC194			
40636	KER 171- 70	A485	* APX 86- 77		AC127/AC132	213- 46	AC194	AC194			
* RCA	A486	* APX 86- 100			AC127/AC132	213- 46	AC194	AC194			
40637	* RCA 98- 23	A490	* APX 91- 28	AC127/AC152	213- 47	AC194	AC194				
40665	* RCA 159- 57	A492	* APX 90- 109	AC128	65- 38	AC194	AC194				
40666	PIR 155- 109	A494	* APX 87- 13		AC128	AC128	AC128				
* RCA	A495	* APX 87- 8			AC128	AC128	AC128				
40673	* RCA 124- 58	A496	* APX 94- 6		AC128	AC128	AC128				
40675	* RCA 171- 71	A497	* APX 94- 24		AC128	AC128	AC128				
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A3T929	* TII 92- 73	A570	PHIC 222- 75		AC128	AC128	AC128				
A3T930	* TII 92- 74				AC128	AC128	AC128				
A3T2221	* TII 92- 81	A580-0402	WESY 178- 6	AC131	54- 109	AC128	AC128				
A3T2221A	* TII 92- 82	A580-0403	WESY 178- 7	AC132	61- 45	AC128	AC128				
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A3T2222A	* TII 92- 86	A580-0803	WESY 178- 10		AC132	AC132	AC132				
A3T2484	* TII 92- 75	A580-1205	WESY 178- 12	AC132-01	65- 32	AC132	AC132				
A3T2894	* TII 71- 44	A580-1602	WESY 178- 15	AC138	65- 37	AC132	AC132				
A3T2906	* TII 71- 37	A580-1605	WESY 178- 17	AC141	65- 103	AC132	AC132				
A3T2906A	* TII 71- 38	A580-2005	WESY 178- 18	AC141B	67- 104	AC132	AC132				
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A3T2906	* TII 205- 1	A580-2003	WESY 178- 22	AC150	54- 14	AC142	AC142				
A3T2907A	* TII 205- 2	A580-2202	WESY 178- 24	AC151R	59- 45	AC142	AC142				
A3T2907	* TII 205- 3	A601	WESY 178- 25	AC152	56- 68	AC142	AC142				
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A3T2907	* TII 205- 5	A580-2403	WESY 178- 28	AC153K	65- 72	AC142	AC142				
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A3T2907	* TII 206- 109	A601	PHIC 216- 15	AC152	59- 44	AC142	AC142				
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♦ PHIN	♦ RADF	AT101	♦ AVA	92- 26	AT448	SERA	111- 84	B3577	SOD	165-109	B143026	♦ SOD	156-101	
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♦ PHIN	SHWG	AT140	♦ AVA	92- 28	AT451	SERA	70- 89	B3579	SOD	166- 1	B143028	♦ SOD	156-103	
AF239S	ATEI	54- 85	AT141	♦ AVA	92- 29	AT452	SERA	70- 70	B3580	SOD	166- 2	B143029	♦ SOD	156-104
♦ VALG	VALG	AT201A	♦ AVA	106- 56	AT453	SERA	70- 71	B3581	SOD	166- 3	B144000	KER	166- 7	
AF240	ATEI	54- 83	AT240	♦ AVA	106- 57	AT455	SERA	72- 25	B3583	SOD	166- 5	B144001	♦ SOD	166- 8
♦ PHIC	♦ PHIN	AT240A	♦ AVA	106- 58	AT460	SERA	81- 99	B3584	SOD	166- 6	B144002	KER	166- 9	
♦ RADF	SHWG	AT241	♦ AVA	106- 59	AT461	SERA	81-100	B3585	SOD	162- 46	B144002	KER	166- 10	
♦ VALG	VALG	AT242	♦ AVA	106- 60	AT462	SERA	81-101	B3586	SOD	162- 47	B144003	♦ SOD	166- 11	
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AF252	♦ TFKG	56- 50	AT318	SERA	93- 76	AT464	SERA	81-103	B3588	SOD	162- 49	B144004	♦ SOD	166- 11
AF253	♦ TFKG	56- 49	AT319	SERA	93- 77	AT465	SERA	81-104	B3589	SOD	162- 50	B144004	KER	166- 12
AF256	♦ TFKG	56- 47	AT320	♦ AVA	148- 60	AT466	SERA	81-105	B3590	SOD	162- 51	B144005	♦ SOD	166- 13
AF267	♦ VALG	54- 87	AT321	SERA	93- 78	AT467	SERA	81-106	B3591	SOD	162- 52	B144005	KER	166- 14
AF279	SHWG	54- 88	AT322	SERA	93- 79	AT468	SERA	81-107	B3592	SOD	162- 53	B144005	♦ SOD	166- 15
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AFY12	ATEI	54- 55	AT325	SERA	93- 82	AT472	SERA	113- 64	B3595	SOD	154- 52	B144007	KER	166- 18
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♦ PHIN	SHWG	AT328	SERA	93- 73	AT475	SERA	113- 67	B3598	SOD	154- 55	B144008	♦ SOD	166- 21	
♦ VALG	VALG	AT329	SERA	93- 58	AT476	SERA	113- 68	B3599	SOD	154- 56	B145000	♦ SOD	166- 22	
AFY18	SHWG	61- 95	AT330	SERA	93- 74	AT477	SERA	113- 69	B3600	SOD	154- 57	B145001	♦ SOD	166- 23
AFY19	MULB	65- 63	AT331	SERA	72- 53	AT478	SERA	113- 70	B3601	SOD	154- 58	B145002	♦ SOD	166- 24
PHIN	VALG	65- 63	AT335	SERA	93- 83	AT479	SERA	114- 26	B3602	SOD	154- 59	B145003	♦ SOD	166- 25
AFY37	SHWG	57- 19	AT337	♦ AVA	93- 75	AT480	SERA	81- 61	B3603	SOD	154- 60	B145004	♦ SOD	166- 26
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♦ VALG	VALG	AT341	SERA	93- 85	AT484	SERA	81- 65	B3607	SOD	154- 64	B145008	♦ SOD	166- 30	
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B176026	♦ SOD 172- 12	BC140-6	♦ INTG 111-107	BC169A	♦ TFKG 92- 66	MEHK	MISI 92- 66	♦ PHIN 98- 53	♦ TFKG 98- 53
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♦ TFKG	♦ MULB	♦ PHIN	♦ RADF	♦ TIIF	♦ TIIF	BC205V	ESMF 74- 74	♦ INTG 98- 57	♦ TFKG 98- 57
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ATEI	ESMF	BC147A	♦ PHIN	BC177B	♦ TIIF	BC205V	ESMF 74- 76	♦ INTG 98- 57	♦ TFKG 98- 57
ESMF	INTG	BC147B	♦ RADF	BC177B	♦ MISI	BC205V	ESMF 74- 77	♦ INTG 98- 57	♦ TFKG 98- 57
ITTB	MEHK	BC147B	♦ TIIF	BC177B	♦ TIIF	BC205V	ESMF 74- 78	♦ INTG 98- 57	♦ TFKG 98- 57
MINA	MISI	BC147B	♦ PHIN	BC177B	♦ MISI	BC205V	ESMF 74- 79	♦ INTG 98- 57	♦ TFKG 98- 57
MULB	NSC	BC147B	♦ RADF	BC177B	♦ TIIF	BC205V	ESMF 74- 80	♦ INTG 98- 57	♦ TFKG 98- 57
♦ NTLB	PHIC	BC148A	♦ PHIN	BC177B	♦ MISI	BC205V	ESMF 74- 81	♦ INTG 98- 57	♦ TFKG 98- 57
PHIN	♦ RADF	BC148A	♦ TIIF	BC177B	♦ TIIF	BC205V	ESMF 74- 82	♦ INTG 98- 57	♦ TFKG 98- 57
SGSI	SHWG	BC148A	♦ PHIN	BC177B	♦ MISI	BC205V	ESMF 74- 83	♦ INTG 98- 57	♦ TFKG 98- 57
TIIB	BC148A	APX	92- 59	ATEI	♦ BELI	BC205V	ESMF 74- 84	♦ INTG 98- 57	♦ TFKG 98- 57
♦ VALG	BC148A	♦ VALG	92- 60	BC178A	♦ TIIF	BC205V	ESMF 74- 85	♦ INTG 98- 57	♦ TFKG 98- 57
INTG	MEHK	BC148B	♦ PHIN	BC178A	♦ MISI	BC205V	ESMF 74- 86	♦ INTG 98- 57	♦ TFKG 98- 57
MISI	NSC	BC148B	♦ RADF	BC178A	♦ TIIF	BC205V	ESMF 74- 87	♦ INTG 98- 57	♦ TFKG 98- 57
♦ RADF	SGSI	TIIF	♦ PHIN	BC178A	♦ MISI	BC205V	ESMF 74- 88	♦ INTG 98- 57	♦ TFKG 98- 57
♦ TFKG	♦ PHIN	♦ RADF	♦ TIIF	BC178A	♦ TIIF	BC205V	ESMF 74- 89	♦ INTG 98- 57	♦ TFKG 98- 57
BC108B	ESMF 98- 41	BC148B	♦ BELI	BC178B	♦ MISI	BC205V	ESMF 74- 90	♦ INTG 98- 57	♦ TFKG 98- 57
INTG	MEHK	BC148B	♦ PHIN	BC178B	♦ TIIF	BC205V	ESMF 74- 91	♦ INTG 98- 57	♦ TFKG 98- 57
MISI	NSC	BC148B	♦ RADF	BC178B	♦ MISI	BC205V	ESMF 74- 92	♦ INTG 98- 57	♦ TFKG 98- 57
♦ RADF	SGSI	TIIF	♦ PHIN	BC178B	♦ TIIF	BC205V	ESMF 74- 93	♦ INTG 98- 57	♦ TFKG 98- 57
♦ TFKG	♦ TIIF	♦ RADF	♦ PHIN	BC178B	♦ MISI	BC205V	ESMF 74- 94	♦ INTG 98- 57	♦ TFKG 98- 57
BC108C	ESMF 98- 42	BC148C	♦ BELI	BC178B	♦ TIIF	BC205V	ESMF 74- 95	♦ INTG 98- 57	♦ TFKG 98- 57
INTG	MEHK	BC149A	♦ PHIN	BC178B	♦ MISI	BC205V	ESMF 74- 96	♦ INTG 98- 57	♦ TFKG 98- 57
MISI	NSC	BC149A	♦ RADF	BC178B	♦ TIIF	BC205V	ESMF 74- 97	♦ INTG 98- 57	♦ TFKG 98- 57
♦ RADF	SGSI	TIIF	♦ PHIN	BC178B	♦ MISI	BC205V	ESMF 74- 98	♦ INTG 98- 57	♦ TFKG 98- 57
♦ TFKG	♦ TIIF	♦ RADF	♦ PHIN	BC178B	♦ TIIF	BC205V	ESMF 74- 99	♦ INTG 98- 57	♦ TFKG 98- 57
BC109	APX 96- 98	BC149A	♦ VALG	BC178V	♦ MISI	BC205V	ESMF 74- 100	♦ INTG 98- 57	♦ TFKG 98- 57
ATEI	ESMF	BC149B	♦ BELI	BC178V	♦ TIIF	BC205V	ESMF 74- 101	♦ INTG 98- 57	♦ TFKG 98- 57
ESMF	INTG	BC149B	♦ PHIN	BC178V	♦ MISI	BC205V	ESMF 74- 102	♦ INTG 98- 57	♦ TFKG 98- 57
ITTB	MEHK	BC149B	♦ RADF	BC178V	♦ TIIF	BC205V	ESMF 74- 103	♦ INTG 98- 57	♦ TFKG 98- 57
MINA	MISI	BC149B	♦ TIIF	BC178V	♦ MISI	BC205V	ESMF 74- 104	♦ INTG 98- 57	♦ TFKG 98- 57
MULB	NSC	BC149C	♦ PHIN	BC178V	♦ TIIF	BC205V	ESMF 74- 105	♦ INTG 98- 57	♦ TFKG 98- 57
♦ NTLB	PHIC	BC149C	♦ RADF	BC178V	♦ MISI	BC205V	ESMF 74- 106	♦ INTG 98- 57	♦ TFKG 98- 57
PHIN	♦ RADF	BC149C	♦ TIIF	BC178V	♦ TIIF	BC205V	ESMF 74- 107	♦ INTG 98- 57	♦ TFKG 98- 57
SGSI	SHWG	BC153	MEHK	BC178V	♦ VALG	BC205V	ESMF 74- 108	♦ INTG 98- 57	♦ TFKG 98- 57
TIIB	BC153	SGSI	MEHK	BC178V	♦ TIIF	BC205V	ESMF 74- 109	♦ INTG 98- 57	♦ TFKG 98- 57
♦ VALG	BC154	MEHK	MEHK	BC178V	♦ VALG	BC205V	ESMF 74- 110	♦ INTG 98- 57	♦ TFKG 98- 57
BC109B	ESMF 98- 43	BC155A	♦ TIIF	BC179A	♦ BELI	BC205V	ESMF 74- 111	♦ INTG 98- 57	♦ TFKG 98- 57
INTG	MEHK	BC155A	♦ VALG	BC179A	♦ TIIF	BC205V	ESMF 74- 112	♦ INTG 98- 57	♦ TFKG 98- 57
MISI	NSC	BC155B	♦ TIIF	BC179A	♦ TIIF	BC205V	ESMF 74- 113	♦ INTG 98- 57	♦ TFKG 98- 57
♦ RADF	SGSI	TIIF	♦ VALG	BC179A	♦ TIIF	BC205V	ESMF 74- 114	♦ INTG 98- 57	♦ TFKG 98- 57
♦ TFKG	♦ TIIF	♦ RADF	♦ VALG	BC179A	♦ TIIF	BC205V	ESMF 74- 115	♦ INTG 98- 57	♦ TFKG 98- 57
BC109C	ESMF 98- 44	BC155B	♦ TIIF	BC179B	♦ TIIF	BC205V	ESMF 74- 116	♦ INTG 98- 57	♦ TFKG 98- 57
INTG	MEHK	BC155B	♦ VALG	BC179B	♦ TIIF	BC205V	ESMF 74- 117	♦ INTG 98- 57	♦ TFKG 98- 57
MISI	NSC	BC155C	♦ TIIF	BC179B	♦ TIIF	BC205V	ESMF 74- 118	♦ INTG 98- 57	♦ TFKG 98- 57
♦ RADF	SGSI	TIIF	♦ VALG	BC179B	♦ TIIF	BC205V	ESMF 74- 119	♦ INTG 98- 57	♦ TFKG 98- 57
♦ TFKG	♦ TIIF	♦ RADF	♦ VALG	BC179B	♦ TIIF	BC205V	ESMF 74- 120	♦ INTG 98- 57	♦ TFKG 98- 57
BC110	SHWG 96- 49	BC156A	♦ TIIF	BC182	♦ TIIF	BC205V	ESMF 74- 121	♦ INTG 98- 57	♦ TFKG 98- 57
♦ VALG	BC156A	APH	♦ SHWG	BC182	♦ TIIF	BC205V	ESMF 74- 122	♦ INTG 98- 57	♦ TFKG 98- 57
BC112	83- 19	BC158B	ATEI	BC182A	♦ TIIF	BC205V	ESMF 74- 123	♦ INTG 98- 57	♦ TFKG 98- 57
BC113	88- 90	BC158A	MINA	BC182B	♦ TIIF	BC205V	ESMF 74- 124	♦ INTG 98- 57	♦ TFKG 98- 57
NSC	SGSI	MEHK	♦ MULB	BC182L	♦ TIIF	BC205V	ESMF 74- 125	♦ INTG 98- 57	♦ TFKG 98- 57
BC114	88- 36	BC158A	PHIC	BC183	♦ TIIF	BC205V	ESMF 74- 126	♦ INTG 98- 57	♦ TFKG 98- 57
NSC	SGSI	MEHK	♦ RADF	BC183	♦ TIIF	BC205V	ESMF 74- 127	♦ INTG 98- 57	♦ TFKG 98- 57
BC115	95- 50	BC158A	PHIN	BC183B	♦ TIIF	BC205V	ESMF 74- 128	♦ INTG 98- 57	♦ TFKG 98- 57
NSC	SGSI	MEHK	♦ RADF	BC183B	♦ TIIF	BC205V	ESMF 74- 129	♦ INTG 98- 57	♦ TFKG 98- 57
BC116	74- 40	BC158B	PHIN	BC184	♦ TIIF	BC205V	ESMF 74- 130	♦ INTG 98- 57	♦ TFKG 98- 57
NSC	SGSI	MEHK	♦ RADF	BC184	♦ TIIF	BC205V	ESMF 74- 131	♦ INTG 98- 57	♦ TFKG 98- 57
BC116A	82- 21	BC159	ATEI	BC184B	♦ TIIF	BC205V	ESMF 74- 132		

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BC325	♦ TIB 76- 48	BCY30	(cont.)	BCY89	216- 49	BD163	ATEI 181- 31	BF159	MEHK 91- 2		
BC326	♦ TIB 76- 47	PHIN	RAOF	PHIC	216- 49	BD215	ATEI 160- 13	SGSI	SGSI		
BC327	SHWG 76- 75	♦ VALG	RAOF	♦ PHIN	216- 49	BOY10	APX 184- 16	BF160	MEHK 90- 83		
BC328	SHWG 76- 76	MULB	71- 97	BCY90	75-104	MULB	PHIN	♦ VALG	SGSI	SGSI	
BC328/BC338	SHWG 216- 43	PHIC	PHIN	BCY90B	78- 64	BDY11	PHIC 189- 21	BF161	SGSI 87- 35		
BC337	SHWG 102- 80	RAOF	♦ VALG	BCY91	75-105	MULB	PHIN	APX 184- 17	BF162	SGSI 90- 84	
BC337/BC327	SHWG 216- 44	PHIC	PHIN	BCY91B	78- 65	BDY11	RAOF 189- 22	BF163	SGSI 90- 85		
BC338	SHWG 102- 81	RAOF	♦ VALG	BCY92	75-106	PHIN	♦ VALG	APX 189- 22	BF164	SGSI 90- 86	
BC340-6	♦ INTG 114- 30	PHIC	PHIN	BCY92B	78- 66	BDY12	SHWG 163-109	BF165	SGSI 98- 60		
BC340-10	♦ INTG 114- 31	RAOF	♦ VALG	BCY93	193-104	BDY13	SHWG 163-110	BF166	SGSI 87- 30		
BC340-16	♦ INTG 114- 32	PHIC	PHIN	BCY93B	75-107	BDY15A	INTG 157-105	BF167	APX 84- 92		
BC341-6	♦ INTG 114- 33	RAOF	♦ VALG	BCY94	78- 67	ITTB	ESMF MINA				
BC341-10	♦ INTG 114- 34	♦ VALG	MULB	BCY94B	75-108	ITTB	MISI MULB				
BC360-6	♦ INTG 81-108	PHIC	PHIN	BCY95	78- 68	ITTB	PHIC ♦ PHIN				
BC360-10	♦ INTG 81-109	RAOF	♦ VALG	BCY95B	78- 69	ITTB	RAOF ♦ VALG				
BC360-16	♦ INTG 81-110	PHIC	PHIN	BCY96	193-105	ITTB	SHWG TFKG				
BC361-6	♦ INTG 82- 1	RAOF	♦ VALG	BCY96B	75-109	ITTB	TIIIF ♦ VALG				
BC361-10	♦ INTG 82- 2	PHIC	PHIN	BCY97	76- 1	ITTB	APX 94- 65				
BC370	ATEI 77- 98	RAOF	♦ VALG	BCY97B	78- 71	ITTB	ESMF MINA				
BC377	ATEI 104-109	PHIC	PHIN	BCY98	78- 72	ITTB	MISI MULB				
BC378	ATEI 104-110	RAOF	♦ VALG	BCY98B	78- 73	ITTB	PHIC ♦ PHIN				
BC394	SGSI 112- 95	♦ VALG	MULB	BCZ10	71- 89	ITTB	RAOF ♦ VALG				
BC395	SGSI 96- 6	BCY42	ITTB	PHIC	71- 96	ITTB	SHWG TFKG				
BC396	SGSI 72- 85	BCY43	MULB	PHIN	71- 97	ITTB	TIIIF ♦ VALG				
BC400	SGSI 70- 83	BCY54	PHIC	BCZ11	71- 98	ITTB	APX 110- 58				
BC477	SGSI 76- 88	RAOF	♦ VALG	BCZ12	71- 99	ITTB	ESMF MINA				
BC477A	SGSI 76- 88	♦ VALG	MULB	BCZ13	71- 99	ITTB	MISI MULB				
BC477V1	SGSI 76- 90	BCY55	♦ VALG	BCZ14	71- 99	ITTB	PHIC ♦ PHIN				
BC478	SGSI 76- 91	♦ NTLB	PHIC	BCZ15	71- 99	ITTB	RAOF ♦ VALG				
BC478A	SGSI 76- 92	♦ PHIN	RAOF	BCY56	97-107	ITTB	SHWG TFKG				
BC478B	SGSI 76- 93	♦ VALG	MINA	BCD106	157- 99	ITTB	TIIIF ♦ VALG				
BC479	SGSI 76- 94	♦ PHIN	RAOF	BCD106A	157-100	ITTB	APX 114- 12				
BC479B	SGSI 76- 95	♦ VALG	MULB	BCD106B	157-101	ITTB	ESMF MINA				
BCW25	♦ TIB 107- 39	TIIF	♦ VALG	BCD107	157-102	ITTB	MISI MULB				
BCW26	♦ TIIB 107- 40	♦ PHIN	RAOF	BCD107A	157-103	ITTB	PHIC ♦ PHIN				
BCW29	♦ PHIN 69- 42	TIIF	♦ VALG	BCD107B	157-104	ITTB	RAOF ♦ VALG				
RAOF	♦ VALG	BCY58	ATEI	BD107C	160- 46	ITTB	SHWG TFKG				
BCW29R	APX 69- 43	SHWG	♦ VALG	BD107D	162- 64	ITTB	TIIIF ♦ VALG				
♦ MULB	♦ RADF	TIIF	♦ VALG	BD111A	164- 66	ITTB	APX 116- 60				
BCW30	♦ PHIN 69- 44	BCY58A	INTG	BD111B	165- 67	ITTB	ESMF MINA				
RAOF	♦ VALG	TIIF	♦ MULB	BD111C	166- 68	ITTB	MISI MULB				
BCW30R	APX 69- 45	BCY58B	INTG	BD111D	167- 69	ITTB	PHIC ♦ PHIN				
♦ MULB	♦ RADF	TIIF	♦ PHIN	BD112A	168- 70	ITTB	RAOF ♦ VALG				
BCW31	♦ PHIN 84- 30	BCY58C	INTG	BD112B	169- 71	ITTB	SHWG TFKG				
RAOF	♦ VALG	TIIF	♦ MULB	BD112C	170- 72	ITTB	TIIIF ♦ VALG				
BCW31R	APX 84- 31	BCY58D	INTG	BD112D	171- 73	ITTB	APX 117- 68				
♦ MULB	♦ RADF	TIIF	♦ PHIN	BD113A	172- 74	ITTB	ESMF MINA				
BCW32	♦ PHIN 84- 32	BCY59	ATEI	BD113B	173- 75	ITTB	MISI MULB				
RAOF	♦ VALG	SHWG	♦ VALG	BD113C	174- 76	ITTB	PHIC ♦ PHIN				
BCW32R	APX 84- 33	TIIB	♦ MULB	BD113D	175- 77	ITTB	RAOF ♦ VALG				
♦ MULB	♦ RADF	♦ VALG	♦ PHIN	BD124A	176- 78	ITTB	SHWG TFKG				
BCW33	♦ PHIN 84- 34	BCY59A	INTG	BD124B	177- 79	ITTB	TIIIF ♦ VALG				
RAOF	♦ VALG	TIIF	♦ MULB	BD124C	178- 80	ITTB	APX 118- 69				
BCW33R	APX 84- 35	BCY59B	INTG	BD124D	179- 81	ITTB	ESMF MINA				
♦ MULB	♦ RADF	TIIF	♦ PHIN	BD125A	180- 82	ITTB	MISI MULB				
BCW34	TIIB 102- 91	SGSI	♦ VALG	BD125B	181- 83	ITTB	PHIC ♦ PHIN				
BCW35	TIIB 78- 95	♦ VALG	RAOF	BD125C	182- 84	ITTB	RAOF ♦ VALG				
BCW36	TIIB 97- 4	BCY59C	ATEI	BD125D	183- 85	ITTB	SHWG TFKG				
BCW37	TIIB 73- 98	INTG	♦ MULB	BD126A	184- 86	ITTB	TIIIF ♦ VALG				
BCW44	SGSI 113-106	TIIB	♦ VALG	BD126B	185- 87	ITTB	APX 119- 68				
BCW45	SGSI 82- 24	BCY59D	INTG	BD126C	186- 88	ITTB	ESMF MINA				
BCW46	VALG 86- 19	SGSI	♦ VALG	BD126D	187- 89	ITTB	MISI MULB				
BCW47	VALG 86- 20	BCY65	ATEI	BD127A	188- 90	ITTB	PHIC ♦ PHIN				
BCW48	VALG 86- 21	BCY65E	SHWG	BD127B	189- 91	ITTB	RAOF ♦ VALG				
BCW49	VALG 86- 22	BCY65E	♦ VALG	BD127C	190- 92	ITTB	SHWG TFKG				
BCW50	SGSI 107- 41	♦ VALG	♦ MULB	BD127D	191- 93	ITTB	TIIIF ♦ VALG				
BCW54	♦ ITTB 98- 58	BCY66	SHWG	BD128A	192- 94	ITTB	APX 114- 69				
BCW55	♦ ITTB 98- 59	TIIF	♦ PHIN	BD128B	193- 95	ITTB	ESMF MINA				
BCW56	VALG 70- 27	BCY67	♦ VALG	BD128C	194- 96	ITTB	MISI MULB				
BCW57	VALG 70- 28	BCY69	ESMF	BD128D	195- 97	ITTB	PHIC ♦ PHIN				
BCW58	VALG 70- 29	MISI	♦ VALG	BD129A	196- 98	ITTB	RAOF ♦ VALG				
BCW59	VALG 70- 30	BCY70	♦ VALG	BD129B	197- 99	ITTB	SHWG TFKG				
BCW60A	♦ SHWG 86- 11	MEHK	♦ VALG	BD129C	198- 100	ITTB	TIIIF ♦ VALG				
BCW60B	♦ SHWG 86- 12	MULB	♦ VALG	BD129D	199- 101	ITTB	APX 86- 83				
BCW60C	♦ SHWG 86- 13	♦ PHIN	♦ RADF	BD130A	200- 102	ITTB	ESMF MINA				
BCW60D	♦ SHWG 86- 14	BCY71	MEHK	BD130B	201- 103	ITTB	MISI MULB				
BCW61A	♦ SHWG 203-108	♦ NTLB	♦ VALG	BD130C	202- 104	ITTB	PHIC ♦ PHIN				
BCW61B	♦ SHWG 203-109	♦ NTLB	♦ RADF	BD130D	203- 105	ITTB	RAOF ♦ VALG				
BCW61C	♦ SHWG 204- 1	MULB	♦ VALG	BD131A	204- 106	ITTB	SHWG TFKG				
BCW61D	♦ SHWG 204- 2	♦ NTLB	♦ RADF	BD131B	205- 107	ITTB	TIIIF ♦ VALG				
BCY10	PHIC 75- 90	TIIB	♦ VALG	BD131C	206- 108	ITTB	APX 86- 91				
PHIN	♦ VALG	BCY78	ATEI	BD131D	207- 109	ITTB	ESMF MINA				
BCY11	PHIC 75- 91	INTG	SHWG	BD132A	208- 110	ITTB	MISI MULB				
PHIN	♦ VALG	TIIF	♦ PHIN	BD132B	209- 111	ITTB	PHIC ♦ PHIN				
BCY12	PHIC 75- 92	♦ VALG	RAOF	BD132C	210- 112	ITTB	RAOF ♦ VALG				
PHIN	♦ VALG	BCY79	ATEI	BD132D	211- 113	ITTB	SHWG TFKG				
BCY17	TAGS 75-101	INTG	SHWG	BD140A	212- 104	ITTB	TIIIF ♦ VALG				
BCY18	TAGS 75-102	♦ TFKG	TIIF	BD140B	213- 105	ITTB	APX 86- 92				
BCY19	TAGS 75- 99	♦ VALG	♦ PHIN	BD140C	214- 106	ITTB	ESMF MINA				
BCY21	TAGS 75- 96	BCY87	♦ MULB	BD141A	215- 107	ITTB	MISI MULB				
BCY22	TAGS 75- 97	NSC	♦ VALG	BD141B	216- 108	ITTB	PHIC ♦ PHIN				
BCY23	TAGS 75- 98	♦ PHIN	RAOF	BD142A	217- 109	ITTB	RAOF ♦ VALG				
BCY24	TAGS 75- 100	♦ VALG	♦ PHIN	BD142B	218- 110	ITTB	SHWG TFKG				
BCY25	TAGS 75- 103	♦ VALG	RAOF	BD144A	219- 111	ITTB	TIIIF ♦ VALG				
BCY26	TAGS 75- 98	BCY88	♦ MULB	BD144B	220- 112	ITTB	APX 86- 93				
BCY27	TAGS 72- 79	NSC	PHIC	BD145A	221- 113	ITTB	PHIC ♦ PHIN				
BCY28	TAGS 72- 80	♦ PHIN	RAOF	BD145B	222- 114	ITTB	RAOF ♦ VALG				
BCY29	TAGS 71- 50	♦ VALG	♦ PHIN	BD146A	223- 115	ITTB	SHWG TFKG				
BCY30	MULB 71- 91	BCY89	♦ MULB	BD146B	224- 116	ITTB	TIIIF ♦ VALG				
cont.next col	cont.next col	cont.next col	cont.next col	BD162	225- 117	ITTB	APX 94- 25				

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ESMF MISI RADF	MINA MULB VALG	BFR59	TIIF 184-56	BFV30	*TIIF 70-32	BFV91N	*TIIF 79-98	BFW92	RADF 84-93		
♦ MISI PHIC RADF	♦ MULB PHIN VALG	BFS11	ATEI 86-93	BFV31	*TIIF 70-46	BFV92	*TIIF 106-11	BFW93	VALG 120-80		
BF222	SGSI 87-29	BFS13G	SGSI 83-35	BFV32	*TIIF 70-47	BFV92N	*TIIF 106-12	BFW96	♦ RADF 99-65		
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BF224	TIB 103-94	BFS14F	SGSI 69-14	BFV34	*TIIF 69-51	BFV93	*TIIF 109-102	BFX11	SGSI 80-47		
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BF229	♦ TFKG 83-23	BFS15G	SGSI 83-38	BFV36	*TIIF 69-53	BFV93AN	*TIIF 105-103	BFX13	♦ MULB 75-4		
BF230	♦ TFKG 83-21	BFS16E	SGSI 69-19	BFV37	*TIIF 222-76	BFV93A	*TIIF 105-104	TIIB	♦ VALG 75-8		
BF234	ESMF 97-108	BFS16F	SGSI 69-20	BFV38	*TIIF 222-77	BFV93AN	*TIIF 105-105	TIIF	♦ VALG 216-63		
MISI	SGSI 97-109	BFS16G	SGSI 69-21	BFV39	*TIIF 222-78	BFV93N	*TIIF 105-106	TIIB	♦ MULB 75-8		
BF235	ESMF 97-109	BFS17	♦ PHIN 84-41	BFV40	*TIIF 85-75	BFV94	*TIIF 105-104	TIIF	♦ VALG 109-98		
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MJE1291	♦ MOTA 144- 92	MJM4545	♦ MOTA 141- 91		188- 65	MPS3705	♦ MOTA 100- 59	MQ3799A	♦ MOTA 202- 100		
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MJE1661	♦ MOTA 173- 80	MJM4546	♦ MOTA 141- 92	MP1612A	♦ MOTA 133- 38	MPS3707	♦ MOTA 100- 35	MQ3799A	♦ MOTA 72- 45		
MJE2010	♦ MOTA 144- 66		197- 74	MP1612B	♦ MOTA 133- 39	MPS3708	♦ MOTA 100- 36	MQ3799A	♦ MOTA 217- 81		
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MSP45	MST	154- 92	NF506	♦ NSC	123- 49	NN7503	♦ SPR	110- 30	OC122	PHIC	64- 68	PL4021	♦ TIIF	86- 36							
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SDT8752	KER 177- 35	♦ FSC	SE1001	90- 32	MISI	♦ NPC 132- 68	SG314N	♦ AKER 121- 21	SP3138F	RAYN 224- 63	
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SPC152-28	SPC	180-50			193-44	STC1016	♦SIL	180-60	STC5805	♦SIL	139-82	TAGS
SPC152-30	SPC	180-51	ST18007	TEC	177-52	STC1016A	♦SIL	180-61	STC5806	♦SIL	139-83	TCH99B
SPC153-04	SPC	179-21	ST18008	TEC	177-53	STC1016B	♦SIL	180-62	STC5807	♦SIL	139-84	TAGS
SPC153-06	SPC	179-22	ST18009	TEC	177-54	STC1016C	♦SIL	180-63	STC7114	SIL	168-102	TD100
SPC153-08	SPC	179-23	ST18010	TEC	177-55	STC1016D	♦SIL	180-64	STC7115	SIL	168-103	♦SPR
SPC153-10	SPC	179-24	ST18011	TEC	172-95	STC1015E	SIL	180-65	STC7116	SIL	168-104	♦SPR
SPC153-12	SPC	179-25	ST18012	TEC	172-96	STC1024	SIL	180-69	STC7117	SIL	168-105	♦SPR
SPC153-14	SPC	179-26	ST18013	TEC	172-97	STC1080	♦SIL	168-44	STC7518	SIL	168-106	TD102
SPC153-16	SPC	179-27	ST18014	TEC	172-98	STC1081	♦SIL	168-45	STC7519	SIL	168-107	♦SPR
SPC153-18	SPC	179-28	ST18015	TEC	168-64	STC1082	♦SIL	168-46	STC7520	SIL	168-108	TD200
SPC153-20	SPC	179-29	ST18016	TEC	168-65	STC1083	♦SIL	168-47	STC7521	SIL	168-109	♦SPR
SPC153-22	SPC	179-30	ST18017	TEC	166-66	STC1084	♦SIL	168-48	STC7644	♦SIL	155-32	TD201
SPC153-24	SPC	179-31	ST18018	TEC	166-67	STC1085	♦SIL	168-49	STC7645	♦SIL	155-33	TD202
SPC153-26	SPC	179-32	ST28135	TEC	178-32	STC1094	♦SIL	178-38	STE400	♦GIC	98-80	TD202
SPC153-28	SPC	179-33	ST28136	TEC	178-33	STC1201	♦SIL	180-80	STE401	♦GIC	98-81	TD250
SPC153-30	SPC	179-34	ST28137	TEC	178-34	STC1300	♦SIL	163-57	STP20S	MST	145-65	TD400
SPC154-04	SPC	179-35	ST28138	TEC	178-35	STC1336	♦SIL	163-58	STP30P	MST	145-60	TD401
SPC154-06	SPC	179-36	ST28139	TEC	178-36	STC1400	♦SIL	180-66	STP30S	MST	145-66	TD402
SPC154-08	SPC	179-37	ST28140	TEC	178-37	STC1500	SIL	168-71	STP40P	MST	145-61	TD401
SPC154-10	SPC	179-38	ST28141	TEC	183-59	STC1550	♦SIL	168-51	STP40S	MST	145-67	TD401
SPC154-12	SPC	179-39	ST28142	TEC	183-60	STC1551	♦SIL	168-52	STP50P	MST	145-62	TD402
SPC154-14	SPC	179-40	ST28143	TEC	183-61	STC1552	♦SIL	168-53	STP50S	MST	145-68	TD402
SPC154-16	SPC	179-41	ST28045	TEC	145-23	STC1553	♦SIL	168-54	STP60P	MST	145-63	TD500
SPC154-18	SPC	179-42	ST29046	TEC	145-24	STC1554	♦SIL	168-55	STP60S	MST	145-69	TD500
SPC154-20	SPC	179-43	ST29047	TEC	145-25	STC1555	♦SIL	168-56	STP70P	MST	145-64	TD501
SPC154-22	SPC	179-44	ST29048	TEC	145-26	STC1726	PTI	177-56	STP70S	MST	145-70	TD501
SPC154-24	SPC	179-45	ST29049	TEC	145-27		♦SIL	177-57	STS1121	SEN	172-100	TD502
SPC154-26	SPC	179-46	ST29050	TEC	145-28	STC1728	PTI	177-57	STS1122	SEN	172-101	TD502
SPC154-28	SPC	179-47	ST29051	TEC	145-41		♦SIL	177-58	STS1131	SEN	172-102	TD550
SPC154-30	SPC	179-48	ST29052	TEC	145-42	STC1731	PTI	177-58	STS1132	SEN	172-103	TD550
SPC163-04	SPC	182-62	ST29053	TEC	145-43		♦SIL	177-59	STS1133	SEN	172-104	TD600
SPC163-06	SPC	182-63	ST40002	♦TEC	142-54	STC1733	PTI	177-59	STS1134	SEN	172-105	TD600
SPC163-08	SPC	182-64			194-108		♦SIL	177-60	STT2400	♦SIL	158-109	TD601
SPC163-10	SPC	182-65	ST40003	♦TEC	142-55	STC1736	PTI	177-60	STT2401	♦SIL	158-110	TD602
SPC163-12	SPC	182-66			194-109		♦SIL	177-61	STT2402	♦SIL	159-1	TD700
SPC163-14	SPC	182-67	ST40004	♦TEC	142-56	STC1738	PTI	177-61	STT2403	♦SIL	159-2	TD701
SPC163-16	SPC	182-68			194-110		♦SIL	177-62	STT2404	♦SIL	159-3	TD2219
SPC163-18	SPC	182-69	ST54004	♦TEC	142-92	STC1800	♦SIL	158-104	STT2405	♦SIL	159-5	TD2219
SPC163-20	SPC	182-70			195-1	STC1850	♦SIL	158-105	STT2406	♦SIL	159-6	TD2219
SPC163-22	SPC	182-71	ST54005	♦TEC	142-93	STC1860	♦SIL	158-106	STT2650	♦SIL	173-82	TD2905
SPC163-24	SPC	182-72			195-2	STC1861	♦SIL	158-107	STT2651	♦SIL	173-83	TD2219
SPC163-26	SPC	182-73	ST54006	♦TEC	142-94	STC1862	♦SIL	158-108	STT2652	♦SIL	173-84	TF78/30
SPC163-28	SPC	182-74			195-3	STC2103	PTI	182-99	STT2653	♦SIL	173-85	SHWG127-62
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SPC164-08	SPC	182-78	ST72014	♦TEC	143-55	STC2105	PTI	182-101	STT2600	♦SIL	168-12	TH2221A
SPC164-10	SPC	182-79	ST72015	♦TEC	144-50		♦SIL	182-102	STT2601	♦SIL	168-13	TH2222
SPC164-12	SPC	182-80	ST72016	♦TEC	144-51	STC2106	PTI	182-102	STT2602	♦SIL	168-14	TH2222A
SPC164-14	SPC	182-81	ST72017	♦TEC	144-52		SIL	182-103	STT2603	♦SIL	168-15	TH2369
SPC164-16	SPC	182-82	ST72018	♦TEC	145-13	STC2107	PTI	182-103	STT2604	♦SIL	168-16	TH2906
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SPC164-20	SPC	182-84	ST72020	♦TEC	145-15	STC2108	PTI	182-104	STT2606	♦SIL	168-18	TH2907
SPC164-22	SPC	182-85	ST72021	♦TEC	145-16		SIL	182-105	STT4451	♦SIL	153-72	TH2907A
SPC164-24	SPC	182-86	ST72036	♦TEC	143-74	STC2220	♦SIL	177-62	STT4452	♦SIL	153-73	TH2926
SPC164-26	SPC	182-87			195-4	STC2221	♦SIL	177-63	STT4453	♦SIL	153-74	TH2944
SPC164-28	SPC	182-88	ST72037	♦TEC	143-75	STC2222	♦SIL	177-64	STT4454	♦SIL	153-75	TH2945
SPC164-30	SPC	182-89			195-5	STC2223	♦SIL	177-66	STT4455	♦SIL	153-76	TH2946
SPC401	SPC	177-47	ST72038	♦TEC	143-76	STC2224	♦SIL	177-68	STT4456	♦SIL	153-77	TH3638
SPC402	SPC	179-49			195-6	STC2225	♦SIL	177-69	STT4483	♦SIL	153-78	TH3877
SPC410	SPC	179-50	ST72039	♦TEC	139-76	STC2226	♦SIL	177-70	STT6309	♦SIL	166-71	TH3904
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SPC423	SPC	179-52			195-8	STC2229	♦SIL	177-71	STT6313	♦SIL	166-74	TH4384
SPC424	SPC	179-53	ST72041	♦TEC	139-78	STC2230	♦SIL	177-72	STT6315	♦SIL	166-75	TH4386
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SPC430	SPC	180-52	ST74049	♦TEC	157-110	STC2500	SIL	183-73	STT6409	♦SIL	166-77	TD4415
SPC431	SPC	180-53			197-14	STC2501	SIL	183-74	STT6410	♦SIL	166-78	TH7500
SPC40411	SPC	175-30	ST74050	♦TEC	158-1	STC2502	SIL	183-75	STT6412	♦SIL	166-80	TI92
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SP3T3440	SSI	151-88	ST74051	♦TEC	158-2	STC3722	♦SIL	182-105	STT6415	♦SIL	166-81	TII
SP3T3713	SSI	172-94			197-16	STC3723	♦SIL	182-106	STT6416	♦SIL	166-82	TII
SP3T3738	SSI	160-1	ST75004	♦TEC	141-25	STC3724	♦SIL	182-107	STT9001	♦SIL	153-79	TII
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ST60	ROSG	221-29	ST75005	♦TEC	141-26	STC3726	♦SIL	182-109	STT9003	♦SIL	153-81	TII
ST10007	♦TEC	145-10			195-11	STC3727	♦SIL	182-110	STT9004	♦SIL	153-82	TII
ST10008	♦TEC	145-11			195-12	STC3729	♦SIL	183-2	STT9005	♦SIL	153-83	TII
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ST14011	♦TEC	182-91	ST76020	♦TEC	143-86	STC3734	♦SIL	183-5	STT9009	♦SIL	153-86	TII
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ST14013	♦TEC	182-93	ST84027	TEC	155-30	STC3737	♦SIL	183-7	STU2074	TSC	121-95	TII
ST14026	TEC	182-94	ST84028	TEC	155-31	STC3738	♦SIL	183-8	STU2075	TSC	121-96	TII
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T11136	♦ TII 173- 7			TII B	204- 34	TR43	ITC 59- 65	TRS160HP	♦ ITC 151- 90
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T11142	♦ TII 173- 9			TII B	206- 39	TR45	ITC 59- 48	TRS175HC	♦ ITC 155- 38
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T11151	♦ TII 173- 14	TIP41C	TII 170- 27	TIS114	♦ TII 111- 74	TR482	ITC 59- 87	TRS200HC	♦ ITC 155- 39
T11152	♦ TII 173- 15			TII B	204- 61	TR508	ITC 59- 98	TRS200HP	♦ ITC 151- 92
T11153	♦ TII 173- 16	TIP42	TII 144- 54	TIS115	♦ TII 111- 75	TR650	♦ ITC 59- 58	TRS200MP	♦ ITC 147- 12
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T13031	♦ TII 135- 49	TIS18	TII B 94- 37	TIXS36	♦ TII 126- 90	TR-C72	ITC 58- 76	TRS275HP	♦ ITC 151- 95
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TIL76	♦ TII 220- 14		TII B 209- 77	TN54	♦ SPR	110- 34	ITC 184- 54	TRS425	♦ ITC 110- 2
TIL77	♦ TII 220- 15	TIS48	TII B 104- 76	TN59	♦ SPR	110- 35	ITC 184- 55	TRS425HP	♦ ITC 151-101
TIL78	♦ TII 220- 16		TII B 211- 5		♦ SPR	200- 108	ITC 184- 56	TRS425MP	♦ ITC 147- 21
TIL79	♦ TII 220- 17	TIS49	TII B 104- 77	TN60	♦ SPR	108- 13	ITC 184- 57	TRS450	♦ ITC 110- 3
TIL80	♦ TII 220- 18		TII B 211- 6	TN64	♦ SPR	200- 109	ITC 184- 58	TRS450	♦ ITC 110- 4
TIL81	♦ TII 220- 19	TIS50	TII B 77- 67	TN61	♦ SPR	114- 54	ITC 184- 59	TRS451	♦ ITC 147- 22
TIL82	♦ TII 220- 20		TII B 210- 35	TN79	♦ SPR	113- 42	ITC 184- 60	TRS451HP	♦ ITC 110- 5
TIL83	♦ TII 220- 21	TIS51	TII B 104- 44	TN80	♦ SPR	108- 42	ITC 184- 61	TRS451MP	♦ ITC 147- 23
TIP29	♦ TII 163- 75		TII B 209- 92	TN81	♦ SPR	114- 98	ITC 184- 62	TRS475	♦ ITC 110- 6
TIP29A	♦ TII 163- 76	TIS52	TII B 104- 21	TN83	♦ SPR	112- 79	ITC 184- 63	TRS475HP	♦ ITC 147- 24
TIP29B	♦ TII 163- 77		TII B 209- 30	TN64	♦ SPR	109- 29	ITC 184- 64	TRS501	♦ ITC 110- 7
TIP29C	♦ TII 163- 78	TIS53	TII B 77- 76	TN64	♦ SPR	107- 29	ITC 184- 65	TRS501HP	♦ ITC 147- 25
TIP30	♦ TII 163- 79	TIS54	TII B 211- 24	TN79	♦ SPR	109- 30	ITC 184- 66	TRS550	♦ ITC 110- 8
TIP30A	♦ TII 163- 80	TIS55	TII B 211- 25	TN80	♦ SPR	108- 30	ITC 184- 67	TRS550MP	♦ ITC 147- 26
TIP30B	♦ TII 163- 81		TII B 211- 26	TN81	♦ SPR	107- 30	ITC 184- 68	TRS575	♦ ITC 110- 9
TIP30C	♦ TII 163- 82	TIS56	TII B 90- 67	TN83	♦ SPR	201- 34	ITC 184- 69	TRS575MP	♦ ITC 147- 27
TIP31	♦ TII 165- 39		TII B 203- 44	TPR3638A	♦ SPR	194- 29	ITC 184- 70	TRS601	♦ ITC 110- 10
TIP31A	♦ TII 165- 40	TIS57	TII B 90- 68	TPR3638A	♦ SPR	194- 30	ITC 184- 71	TRS601HP	♦ ITC 147- 28
TIP31B	♦ TII 165- 41		TII B 203- 44	TPR4123	♦ SPR	103- 67	ITC 184- 72	TRS701	♦ ITC 110- 12
TIP31C	♦ TII 165- 42	TIS63	TII B 125- 34	TPR4124	♦ SPR	103- 68	ITC 184- 73	TRS750	♦ ITC 110- 13
TIP32	♦ TII 165- 43	TIS64	TII B 125- 35	TPR4125	♦ SPR	77- 38	ITC 184- 74	TRS801	♦ ITC 110- 14
TIP32A	♦ TII 165- 44	TIS65	TII B 125- 36	TPR4126	♦ SPR	77- 46	ITC 184- 75	TRS801HP	♦ ITC 150- 37
TIP32B	♦ TII 165- 45		TII B 125- 37	TPR4257	♦ SPR	71- 11	ITC 184- 76	TRS805	♦ ITC 150- 38
TIP33	♦ TII 165- 46	TIS66	TII B 125- 38	TPR56512	♦ SPR	211- 14	ITC 184- 77	TRS2004	♦ ITC 150- 42
TIP34	♦ TII 165- 47		TII B 125- 39	TPR56513	♦ SPR	203- 44	ITC 184- 78	TRS2005	♦ ITC 150- 43
TIP35	♦ TII 165- 48	TIS67	TII B 125- 40	TPR56514	♦ SPR	103- 67	ITC 184- 79	TRS2006	♦ ITC 160- 2
TIP36	♦ TII 165- 49		TII B 125- 41	TPR56515	♦ SPR	90- 55	ITC 184- 80	TRS2254	♦ ITC 150- 43
TIP37	♦ TII 165- 50	TIS68	TII B 125- 42	TPR56516	♦ SPR	209- 78	ITC 184- 81	TRS2255	♦ ITC 150- 44
TIP38	♦ TII 165- 51		TII B 125- 43	TPR56517	♦ SPR	76- 41	ITC 184- 82	TRS2504	♦ ITC 150- 45
TIP39	♦ TII 165- 52	TIS69	TII B 125- 44	TPR56518	♦ SPR	209- 79	ITC 184- 83	TRS2505	♦ ITC 150- 46
TIP310	♦ TII 165- 53		TII B 125- 45	TPR56519	♦ SPR	76- 44	ITC 184- 84	TRS2754	♦ ITC 150- 47
TIP311	♦ TII 165- 54	TIS70	TII B 125- 46	TPR56520	♦ SPR	102- 44	ITC 184- 85	TRS2755	♦ ITC 150- 48
TIP312	♦ TII 165- 55		TII B 125- 47	TPR56521	♦ SPR	102- 45	ITC 184- 86	TRS2804S	♦ ITC 150- 49
TIP313	♦ TII 165- 56	TIS71	TII B 125- 48	TPR56522	♦ SPR	102- 46	ITC 184- 87	TRS2805S	♦ ITC 150- 50
TIP314	♦ TII 165- 57		TII B 125- 49	TPR56523	♦ SPR	80- 103	ITC 184- 88	TRS3006	♦ ITC 160- 3
TIP315	♦ TII 165- 58	TIS72	TII B 125- 50	TPR56524	♦ SPR	80- 104	ITC 184- 89	TRS3011	♦ ITC 95- 75
TIP316	♦ TII 165- 59		TII B 125- 51	TPR56525	♦ SPR	79- 37	ITC 184- 90	TRS3255	♦ ITC 150- 27
TIP317	♦ TII 165- 60	TIS73	TII B 125- 52	TPR56526	♦ SPR	76- 43	ITC 184- 91	TRS3012	♦ ITC 95- 76
TIP318	♦ TII 165- 61		TII B 125- 53	TPR56527	♦ SPR	76- 44	ITC 184- 92	TRS3501	♦ ITC 150- 47
TIP319	♦ TII 165- 62	TIS74	TII B 125- 54	TPR56528	♦ SPR	76- 45	ITC 184- 93	TRS3502	♦ ITC 95- 75
TIP320	♦ TII 165- 63		TII B 125- 55	TPR56529	♦ SPR	76- 46	ITC 184- 94	TRS3503	♦ ITC 150- 50
TIP321	♦ TII 165- 64	TIS75	TII B 125- 56	TPR56530	♦ SPR	80- 103	ITC 184- 95	TRS3505	♦ ITC 150- 51
TIP322	♦ TII 165- 65		TII B 125- 57	TPR56531	♦ SPR	80- 104	ITC 184- 96	TRS3604S	♦ ITC 150- 52
TIP323	♦ TII 165- 66	TIS76	TII B 125- 58	TPR56532	♦ SPR	76- 41	ITC 184- 97	TRS3604S	♦ ITC 150- 53
TIP324	♦ TII 165- 67		TII B 125- 59	TPR56533	♦ SPR	80- 104	ITC 184- 98	TRS3605	♦ ITC 150- 54
TIP325	♦ TII 165- 68	TIS77	TII B 125- 60	TPR56534	♦ SPR	79- 38	ITC 184- 99	TRS3605	♦ ITC 150- 55
TIP326	♦ TII 165- 69		TII B 125- 61	TPR56535	♦ SPR	80- 105	ITC 184- 100	TRS3605	♦ ITC 150- 56
TIP327	♦ TII 165- 70	TIS78	TII B 125- 62	TPR56536	♦ SPR	79- 39	ITC 184- 101	TRS37014	♦ ITC 150- 57
TIP328	♦ TII 165- 71		TII B 125- 63	TPR56537	♦ SPR	79- 40	ITC 184- 102	TRS37014	♦ ITC 95- 77
TIP329	♦ TII 165- 72	TIS79	TII B 125- 64	TPR56538	♦ SPR	79- 41	ITC 184- 103	TRS37014	♦ ITC 150- 58
TIP330	♦ TII 165- 73		TII B 125- 65	TPR56539	♦ SPR	79- 42	ITC 184- 104	TRS37014	♦ ITC 95- 78
TIP331	♦ TII 165- 74	TIS80	TII B 125- 66	TPR56540	♦ SPR	201- 6	ITC 184- 105	TRS37014	♦ ITC 150- 59
TIP332	♦ TII 165- 75		TII B 125- 67	TPR56541	♦ SPR	201- 7	ITC 184- 106	TRS37014	♦ ITC 95- 79
TIP333	♦ TII 165- 76	TIS81	TII B 125- 68	TPR56542	♦ SPR	201- 8	ITC 184- 107	TRS37014	♦ ITC 95- 80
TIP334	♦ TII 165- 77		TII B 125- 69	TPR56543	♦ SPR	201- 9	ITC 184- 108	TRS37014	♦ ITC 95- 81
TIP335	♦ TII 165- 78	TIS82	TII B 125- 70	TPR56544	♦ SPR	201- 10	ITC 184- 109	TRS37014	♦ ITC 95- 82
TIP336	♦ TII 165- 79		TII B 125- 71	TPR56545	♦ SPR	201- 11	ITC 184- 110	TRS37014	

1. TYPE No. CROSS INDEX

IN TYPE NUMBER SEQUENCE												
TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	TYPE No.	MFRS	Pg&Line	
TRS4505	ITC	157 - 35	TRSP5015S	♦ ITC	139 - 107	UC714	SODI	124 - 3	ZDT44	♦ FERB	98 - 28	
TRS4506	ITC	160 - 6	TRSP5281	ITC	140 - 103	UC734	♦ SODI	124 - 4	ZDT44	218 - 88	ZT403	
TRS4754	ITC	150 - 59	TRSP5282	ITC	140 - 104	UC734E	♦ SODI	124 - 5	ZDT45	98 - 11	ZT404	
TRS4755	ITC	157 - 36	TRSP5415	ITC	140 - 105	UC755	♦ SODI	120 - 7		218 - 89	ZT600	
TRS4804S	♦ ITC	150 - 60	TRSP5416	ITC	140 - 106	UC756	♦ SODI	120 - 8	ZM100	220 - 23	FERB	
TRS4805S	♦ ITC	157 - 37	TRSP6008	ITC	141 - 66	UC805	SODI	118 - 82	ZM110	220 - 24	ZT696	
TRS4926	ITC	155 - 91	TRSP7006	ITC	141 - 67	UC807	SODI	119 - 33	ZT20	101 - 73	ZT697	
TRS4927	ITC	155 - 92	TRSP8006	ITC	141 - 68	UC814	♦ SODI	118 - 83		201 - 106	ZT706	
TRS5006	ITC	160 - 7	TS2218	TIF	114 - 83	UC851	♦ SODI	118 - 84	ZT21	101 - 74	ZT706A	
TRS5011	♦ ITC	95 - 83	TS2219	TIF	114 - 84	UC854	SODI	118 - 85		201 - 107	FERB	
TRS5012	♦ ITC	95 - 84	TS2221	TIF	105 - 89	UC855	SODI	118 - 86	ZT22	101 - 75	ZT708	
TRS5014	♦ ITC	150 - 61	TS2222	TIF	105 - 90	UC1764	SODI	119 - 2		201 - 108	ZT709	
TRS5015	ITC	157 - 38	TS2904	TIF	81 - 5	UC2139	♦ SODI	126 - 33	ZT23	101 - 76	FERB	
TRS5204S	♦ ITC	150 - 62	TS2905	TIF	81 - 6			224 - 88		201 - 109	ZT1479	
TRS5205S	♦ ITC	157 - 39	TS2906	TIF	79 - 51	UC2147	♦ SODI	121 - 103	ZT24	101 - 77	FERB	
TRS5254	ITC	150 - 63	TS2907	TIF	79 - 52	UC2148	♦ SODI	124 - 89		201 - 110	ZT1480	
TRS5255	ITC	157 - 40	TSP3	♦ NPC	220 - 22	UC2149	♦ SODI	126 - 34	ZT40	96 - 68	FERB	
TRS5404S	♦ ITC	150 - 64	TZ81	♦ SPR	102 - 56			224 - 90		202 - 1	ZT1481	
TRS5405S	♦ ITC	157 - 41	TZ82	♦ SPR	102 - 57	UC2766	♦ SODI	118 - 87	ZT41	96 - 68	FERB	
TRS5501	ITC	95 - 85	TZ551	♦ SPR	26 - 99			224 - 91		202 - 2	ZT1482	
TRS5502	♦ ITC	95 - 86		203 - 23	UCX2910	♦ SODI	106 - 33	ZT42	96 - 70	FERB		
TRS5504	♦ ITC	150 - 65	TZ552	♦ SPR	76 - 100			218 - 80		202 - 3	ZT1483	
TRS5505	♦ ITC	157 - 42		203 - 24	UD3005	♦ SPR	204 - 13	ZT43	96 - 71	ZT1484		
TRS5754	ITC	150 - 66	TZ553	♦ SPR	76 - 101			224 - 92		202 - 4	ZT1485	
TRS5755	ITC	157 - 43		203 - 25	UD3006	♦ SPR	204 - 14	ZT44	96 - 72	ZT1486		
TRS5804S	♦ ITC	160 - 67	TZ554	♦ SPR	76 - 102			224 - 93		202 - 5	ZT1487	
TRS5805S	♦ ITC	157 - 44		203 - 26	UD3007	♦ SPR	204 - 15	ZT60	FERB	101 - 78	FERB	
TRS6006	ITC	160 - 8	TZ581	♦ SPR	76 - 54			213 - 79		202 - 17	ZT1488	
TRS6011	♦ ITC	95 - 87	TZ582	♦ SPR	76 - 55	UPA15	NECJ	218 - 81	ZT61	101 - 79	FERB	
TRS6012	♦ ITC	95 - 88	U110	♦ SIX	118 - 70	UPA36A	NECJ	222 - 90		202 - 18	ZT1489	
TRS6014	♦ ITC	150 - 68	U112	♦ SIX	118 - 71	UPI404	UPI	60 - 43	ZT62	101 - 80	FERB	
TRS6015	ITC	157 - 45	U114	♦ SIX	118 - 72	UPI404A	UPI	59 - 99		202 - 19	ZT1490	
TRS6204S	♦ ITC	150 - 69	U133	♦ SIX	118 - 73	UPI706	UPI	98 - 84	ZT63	101 - 81	FERB	
TRS6205S	♦ ITC	157 - 46	U139	♦ SIX	118 - 74	UPI706A	UPI	97 - 59		202 - 20	ZT1613	
TRS6504	ITC	150 - 70	U139D	♦ SIX	118 - 75	UPI706B	UPI	99 - 19	ZT64	101 - 82	ZT1700	
TRS6605	ITC	157 - 47	U146	♦ SIX	118 - 76	UPI1301	UPI	60 - 67		202 - 21	ZT1701	
TRS6604S	♦ ITC	150 - 71	U147	♦ SIX	118 - 77	UPI1303	UPI	58 - 77	ZT66	101 - 83	ZT1702	
TRS6605S	♦ ITC	157 - 48	U148	♦ SIX	118 - 78	UPI1305	UPI	58 - 78		202 - 22	ZT1708	
TRS7006	ITC	160 - 9	U149	♦ SIX	118 - 79	UPI1307	UPI	58 - 79	ZT68	112 - 10	FERB	
TRS7014	ITC	150 - 72	U168	♦ SIX	118 - 80	UPI1309	UPI	58 - 80		202 - 23	ZT1711	
TRS7014S	♦ ITC	150 - 73	U183	♦ SIX	121 - 18	UPI1345	UPI	58 - 81	ZT80	101 - 84	ZT2015	
TRS7015	ITC	157 - 49	U184	♦ SIX	123 - 79	UPI1347	UPI	60 - 4		202 - 24	ZT2016	
TRS7015S	♦ ITC	157 - 50	U197	♦ SIX	123 - 80	UPI1352	UPI	59 - 69	ZT81	97 - 61	ZT2102	
TRS7504	ITC	150 - 74	U198	♦ SIX	123 - 81	UPI1353	UPI	62 - 98		202 - 25	ZT2205	
TRS7505	ITC	157 - 51	U199	♦ SIX	123 - 82	UPI2217	UPI	115 - 28	ZT82	97 - 62	FERB	
TRS8006	ITC	160 - 10	U200	♦ SIX	126 - 76	UPI2218	UPI	115 - 29		202 - 26	ZT2206	
TRS8014	ITC	150 - 75	U201	♦ SIX	126 - 77	UPI2222	UPI	94 - 106	ZT83	97 - 63	ZT2270	
TRS8015	ITC	157 - 52	U202	♦ SIX	126 - 78	UPI2226	UPI	108 - 103		202 - 27	ZT2270	
TRSP15X5	ITC	141 - 6	U221	♦ SIX	126 - 46	UPI4046	UPI	115 - 30	ZT84	97 - 64	ZT2368	
TRSP15X5	ITC	140 - 92	U222	♦ SIX	126 - 47	UPI4046-46	UPI	106 - 2		202 - 28	FERB	
TRSP20X5	ITC	141 - 7	U231	♦ SIX	123 - 83	UPI4047	UPI	115 - 31	ZT86	97 - 65	ZT2369	
TRSP20X	ITC	140 - 93		218 - 74	UPI4047-46	UPI	106 - 3		202 - 29	FERB		
TRSP25X5	ITC	141 - 8	U232	♦ SIX	123 - 84	USA55191/33	none	149 - 4	ZT87	97 - 66	ZT2369A	
TRSP25X	ITC	140 - 94		218 - 75	USA55191/33	none	149 - 5		202 - 30	FERB		
TRSP30X5	ITC	141 - 9	U233	♦ SIX	123 - 85	USA55191/34	none	149 - 5	ZT88	97 - 67	ZT2475	
TRSP30X	ITC	140 - 95		218 - 76	USA55191/36	none	199 - 69		202 - 31	FERB		
TRSP2006	ITC	141 - 56	U234	♦ SIX	123 - 86	USA55191/36	none	197 - 98	ZT89	97 - 68	ZT2476	
TRSP2254	♦ ITC	139 - 57		218 - 77	UT100	♦ SIX	124 - 6		202 - 32	FERB		
TRSP2254S	♦ ITC	139 - 58	U235	♦ SIX	123 - 87	UT101	♦ SIX	124 - 7	ZT90	152 - 19	ZT2477	
TRSP2255	♦ ITC	139 - 90		218 - 78	V205	SGSI	74 - 10	ZT91	152 - 20	FERB		
TRSP2255S	♦ ITC	139 - 91	U240	♦ SIX	125 - 96	V405A	SGSI	75 - 33	ZT93	152 - 21	ZT2857	
TRSP2504	♦ ITC	139 - 59		185 - 88	V405A	SGSI	210 - 39	ZT94	152 - 22	ZT2876		
TRSP2504S	♦ ITC	139 - 60	U241	♦ SIX	125 - 97	V410A	SGSI	81 - 58	ZT95	152 - 24	ZT2887	
TRSP2505	♦ ITC	139 - 92		185 - 89	V410A	SGSI	73 - 76	ZT110	97 - 64	ZT2938		
TRSP2754	♦ ITC	139 - 61		185 - 90	V435A	SGSI	75 - 29	ZT113	202 - 33	FERB		
TRSP2754S	♦ ITC	139 - 62	U243	♦ SIX	125 - 99	V435A	SGSI	74 - 11	ZT111	97 - 70	ZT3440	
TRSP2755	♦ ITC	139 - 94		185 - 91	V654	SGSI	81 - 88		202 - 34	ZT3441		
TRSP2755S	♦ ITC	139 - 95	U244	♦ SIX	126 - 88	V655	SGSI	70 - 61	ZT112	97 - 71	ZT3442	
TRSP3006	ITC	141 - 57	U257	♦ SIX	121 - 102	V658	♦ NECJ	94 - 54		202 - 36	ZT107	
TRSP3014	ITC	139 - 63		218 - 79	V721	SGSI	75 - 29	ZT113	97 - 72	ZT108		
TRSP3014S	ITC	139 - 64	U266	♦ SIX	126 - 88	V723	SGSI	77 - 71	ZT114	97 - 73	ZT114	
TRSP3015	ITC	139 - 96	U273	♦ SIX	123 - 88	V723	SGSI	210 - 61	ZT116	97 - 74	ZT300	
TRSP3015S	ITC	139 - 97	U274	♦ SIX	123 - 89	V741	SGSI	76 - 63	ZT116	97 - 75	ZT302	
TRSP3254S	ITC	139 - 15	U275	♦ SIX	123 - 90	V743	SGSI	77 - 72	ZT117	97 - 76	ZT303	
TRSP3255S	ITC	139 - 16	U277	♦ TSC	123 - 92	V745	SGSI	82 - 29	ZT118	97 - 77	ZT311	
TRSP3504	ITC	139 - 65	U278	♦ TSC	123 - 93	V745	SGSI	81 - 53	ZT119	97 - 78	ZT312	
TRSP3504S	ITC	139 - 17	U279	♦ TSC	123 - 94	V761	SGSI	79 - 96	ZT118	97 - 79	ZT312	
TRSP3505S	ITC	139 - 18	U280	♦ TSC	123 - 95	V761	SGSI	207 - 77	ZT118	202 - 41	ZT313	
TRSP3514S	ITC	139 - 66	U282	♦ TSC	123 - 96	V765	SGSI	81 - 53	ZT119	97 - 77	ZT314	
TRSP3515S	ITC	139 - 99	U283	♦ TSC	123 - 97	VX3375	♦ ECO	157 - 53		202 - 41	ZT312	
TRSP3743	ITC	140 - 96	U284	♦ TSC	123 - 98	VX3733	♦ ECO	159 - 58	ZT152	73 - 41	ZT312	
TRSP3743S	ITC	140 - 97	U285	♦ TSC	123 - 99	VX3866	♦ ECO	151 - 102	ZT180	73 - 101	ZT313	
TRSP4000	ITC	140 - 97	U325	♦ TSC	123 - 101	XB404	TIIB	159 - 59	ZT181	203 - 56	ZT313	
TRSP4001	ITC	140 - 98	U714	♦ TSC	123 - 102	XB408	TIIB	161 - 90		203 - 57	ZT314	
TRSP4002	ITC	140 - 99	U715	♦ TSC	126 - 48	XB433	TIIB	149 - 19	ZT182	97 - 77	ZT320	
TRSP4003	ITC	140 - 100	U837E	♦ TSC	123 - 103	XB434	TIIB	149 - 20		97 - 78	ZT321	
TRSP4006	ITC	141 - 58	U897E	♦ TSC	123 - 104	XB436	TIIB	165 - 110	ZT183	97 - 79	ZT321	
TRSP4014	♦ ITC	139 - 67		185 - 88	XB437	TIIB	159 - 27		97 - 80	ZT322		
TRSP4014S	♦ ITC	139 - 68	U1698E	♦ TSC	123 - 105	XB473	TIIB	149 - 21	ZT184	97 - 80	ZT322	
TRSP4015	♦ ITC	139 - 100		185 - 92	XB474	TIIB	149 - 22		97 - 81	ZT327		
TRSP4015S	♦ ITC	139 - 101	U1899E	♦ TSC	123 - 106	XB475	TIIB	156 - 1	ZT187	97 - 82	ZT330	
TRSP4016S	ITC	141 - 59		186 - 19	XB475	TIIB	160 - 81		203 - 61	ZT331	97 - 83	ZT330
TRSP4254S	♦ ITC	139 - 69	U1994E	♦ TSC	123 - 107	ZDT10	♦ FERB	97 - 15	ZT188	97 - 84	ZT331	
TRSP4255S	♦ ITC	139 - 102	U2047									

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C (W)	DE RATE fab W/C (Hz)	ABS MAX RATINGS @ 25°C					MAX. Vcb (V)	TYPICAL R PARAMETERS					Cob	STRUCTURE	DWG #	LC S/a TO200 D E	
				IN FREE AIR X P (V)	M BVcbo (V)	E BVceo (V)	A BVbeo (V)	Ic (A)		Icb (A)	Vcb (V)	Ie (A)	hfe	COMMON Emitter hoe (Ω)	hie (Ω)	X.0001 (F)			
1	GT34	9.0m*	25	25	25	25	25	10u	5.0	1.0m	20	500nb	15	35p	A	T05			
2	2N231	9.0m*	20m	434u	*S 30	4.5	4.5	12	3.0m	3.0u	3.0	500u	19 Δ	6.0p	Δ	TO24	F		
3	JAN2N220															50p	Δ	T01 A	
4	OC60	20m	666u	J 7.0	3.0	7.0	15.0m	1.5u	2.0	3.8m	75								
5#	OC57	20m*	10kΔ	666u	J 7.0	3.0	7.0	10m		5.0	250u	35	60u	2.9k	17	60p	A	R19	
6	OC58	20m*	10kΔ	666u	J 7.0	3.0	7.0	10m		5.0	250u	55	80u	4.0k	17	60p	A	R19	
7	2N175	20m	850u	J 10		10	2.0m	1.2u	4.0	500u	65					36p	Δ	T040 A	
8	2N220	20m	850u	J 10		10	2.0m	1.2u	4.0	500u	65					36p	Δ	T01 A	
9	OC59	20m	2.2M	666u	J 7.0	3.0	7.0	5.0m	3.0u	5.0	250u	80	100u	5.1k	17	60p	A	R19	
10	2N344	20m†	50M*	666u	*S 20	5.0	5.0		5.0m	3.0u	3.0	500u	22	5.0ub	100	6.0p	SA	T024 F	
11	2N345	20m†	50M*	666u	*S 5.0	5.0	5.0		5.0m	3.0u	3.0	500u	66	5.0ub	100	6.0p	SA	T024 F	
12	2N346	20m†	75M*	666u	*S 5.0	5.0	5.0		5.0m	3.0u	3.0	500u	10 Δ	5.0ub	100	6.0p	SA	T024 F	
13	2N14991	25m*	625u	#S 20	15	2.0	2.0	50m	100u	2.5	10m	35				1.5p	AD	T09 A	
14	JAN2N240	25m	25MΔ	416u	#J 6.0	6.0	6.0	15m	1.0u	3.0	500u	16 Δ				6.0p	Δ	R143 F	
15	2N128	25m	28MΔ	#S 10	4.5	2.0	10	5.0m	3.0u	3.0	500u	19 Δ	1.5ub	75		5.0p	D	T024 F	
16	2N1122†	25m*	40MΔ	625u	#J 12	11	2.0		50m	5.0u	2.5	10m	25	1Δ		6.0p	MA	T024 A	
17	2N1122A†	25m*	40MΔ	625u	#J 15	14	2.0		50m	5.0u	2.5	10m	25	1Δ		6.0p	MA	T024 A	
18	JAN2N128	25m	45MΔ	417u	#A 10		10		4.0u	3.0	500u	19 Δ				5.0p	D	T024 F	
19	2N3931	25m*	50M*	455u	#J 6.0	6.0	6.0	5.0m	5.0u	3.0	50m	155				3.5p	MA	T024 F	
20	2N1427†	25m*	60M*	625u	#J 6.0	6.0	6.0	5.0m	5.0u	3.0	500u	120	1.0ub	55	20	3.5p	MD	T024 A	
21	2N451	25m	80M*		#J 6.0	6.0	6.0	5.0m	5.0u	2.5	10m	25	1Δ		5.0p	MA	T024 A		
22	2N503	25m*	350M*	625u	#J 20	20	2.0	50	50m	100u	10	2.0m	45			1.0p	MD	T09 A	
23	2N252	30m			#A 20				5.0m	10u						1.0p	GD	OV9	
24	2N308	30m			#A 30				5.0m	10u						1.0p	GD	OV9	
25	2N309	30m			#A 20				5.0m	10u						1.0p	GD	OV9	
26	2N310	30m			#A 30				5.0m	10u						1.0p	GD	OV9	
27	2N240	30m	30MΔ	500u	#J 16	6.0			15m	3.0u	3.0	500u	30	1.5ub	66	2.9p	SA	T024 F	
28	2N1109	30m	30M		#J 16				5.0m	10u	6.0	50m	20			1.5p	GD	T022	
29	2N1108	30m	35M		#J 16				5.0m	10u	6.0	50m	33			1.5p	GD	T022	
30	2N1110	30m	35M		#J 16				5.0m	10u	6.0	50m	29			1.5p	GD	T022	
31	2N1111	30m	35M		#J 20				5.0m	10u	6.0	50m	25			1.0p	GD	T022	
32	2N1111A	30m	35M		#J 20				5.0m	10u	6.0	50m	29			1.0p	GD	T022	
33	2N1111B	30m	35M		#J 20				5.0m	10u	6.0	50m	29			1.0p	GD	T022	
34	2N1107	30m	40M		#J 16				5.0m	10u	6.0	50m	34			1.0p	GD	T022	
35	2N499	30m*	170M*	769u	#J 30	18	50	50m	100u							1.3p	MD	T01 A	
36	2N588	30m	25GM	769u	#J 15	15	50	50m	15u							1.5p	MD	T01 A	
37	2N5044	30m	2.5GΔ	1.2m	#S 15	7.0		30	30m	6.0u	5.0	3.0m	150	1Δ		1ps	Δ	T072 G	
38	2N5043	30m	3.0GΔ	1.2m	#S 15	7.0		30	30m	6.0u	5.0	3.0m	150	1Δ		1ps	Δ	T072 G	
39	2N77	35m	70M		#A 25				15m	10u	4.0	70m	55	14u	2.7k	3.2	400	A	T01 A
40	2N105	35m	75M	1.2m	#A 25				15m	5.0u	4.0	70m	55	16u	2.8k	5.5	17p	A	T02 A
41	2N139	35m	13M		#A 16	12	50	15m	10u	9.0	1.0m	48	1Δ		9.5p	Δ	TO40 A		
42	2N218	35m	13M		#A 16	12	50	15m	10u	9.0	1.0m	48	1Δ		9.5p	Δ	TO1 A		
43#	2SA107	35m	20M		#S 16				10m	10u	3.0	1.0m	40			4.0p	D	R143 F	
44	JAN2N393	35m	30MΔ	476u	#J 10	6.0	10	50m	5.0u	3.0	500u	40 Δ				6.0p	Δ	R139 A	
45#	JAN2N1411	35m	30MΔ	450u	#J 8.0	8.0			50m	5.0u	1.0	50m	20 Δ						
46#	2SA106	35m	30M		#S 6.0				10m	10u	3.0	1.0m	50						
47#	2SA105	35m	75M		#S 6.0				10m	10u	3.0	1.0m	50						
48	2N768	35m	175M	476u	#S 12	10	1.5	100m	10u	200	2.0m	40	t			1.6p	MD	TO18 A	
49	2N769†	35m	900M	476u	#J 12	7.0	2.0	100m	10u	500	20m	55	t			1.5p	MD	TO18 A	
50#	2S8302	40m	12M		#J 10				50	2.0m	6.0	1.0m	80	27u	4.5k	40	10p	A	T01 A
51#	2SA448	40m	1.6G		#J 15				50	5.0m	3.0	3.0m	40	t		3p	PL	T017	
52	2N1785	45m	50M*	1.3m	#S 10	10	10	1.0	50m	10u	6.0	1.0m	40	2.0u	40		3p	ME	T09 A
53	2N1786	45m	50M*	1.3m	#S 10	10	10	1.0	50m	10u	6.0	1.0m	40	1.5u	2.0u	40	3p	ME	T09 A
54	2N1787	45m	50M*	1.3m	#S 15	15	50	50m	10u	6.0	1.0m	40	2.5	2.0u	40	3p	ME	T09 A	
55	2N36	50m			#J 20				8.0m		6.0	1.0m	45				OV14 A		
56	2N37	50m			#J 20				8.0m		6.0	1.0m	30				OV11 A		
57	2N38	50m			#J 20				8.0m		6.0	1.0m	15				OV11 A		
58	2N108	50m			#J 20				15m		6.0	1.0m					R108 A		
59#	2SA295	50m	900u		#J 15	15	15	50m	15u	1.0	50m	50 t							
60#	2S8303	50m			#J 30				25	20m	14u	1.0	50t						
61#	2SB68	50m	.50M	833u	#J 105				50	100m	35	5.0m	60 t			8.0p	A	T05	
62#	2SB8121	50m	.50M	833u	#J 105	60	50	50	14u	350	5.0m	60 t							
63	2N34A	50m	.60M		#J 25				8.0m		6.0	1.0m	60				OV15 A		
64	2N506	50m	.60M		#J 40				100m	15u	1.0	10m	40				OV11 A		
65	2N591	50m	.700K		#J 32	32			20m	7.0u	120	2.0m	70						
66#	2SB39	50m	.85M	833u	#J 10				10	2.0m	10u	4.0	50	65		2.5p	A	T01 A	
67	2N107	50m	1.0M		#J 12				10m	10u	5.0	1.0m	18			2.5p	D	R3 A	
68	2N1265/5	50m	1.0M		#J 10				100m	6.0	1.0m	75							
69#	OC41	50m*	4.0M		#J 16	15			50m	10u	50	5.0m	35				△	R8	
70#	OC42	50m*	7.0M		#J 16	15			50m	10u	50	5.0m	70						
71#	2SA116	50m	12M		#S 30	105	50		10u	12u	12	1.0m	15			2.5p	D	T044	
72	2N398	50m	20M†		#A 105	105	50		14u	350	5.0m	60				2.5p	A	T09 A	
73#	2SA113	50m	20M		#S 34				10m	7.0u	12	1.0m	45						
74#	2SA114	50m	20M		#S 34				10m	7.0u	12	1.							

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) f_{ab} & (3) TYPE No.

LINE No.	TYPE No.	COLL. @25°C (W)	DE RATE IN DISS. FREE AIR XP W/C	ABS MAX RATINGS @25°C				MAX. IC @MAX Vcb	TYPICAL "H" PARAMETERS				STRUCTURE	DWG #	C			
				Vcbo	BVceo	BVbeo	IC		BIAS	COMMON Emitter	EMITTER	Cob						
(V)	(V)	(V)	(A)	Vcb	Ie	hoe	hie	hfe	(mhos)	(Ω)	X.0001	(F)						
1# HEP640S	55m*	#J 18	18 05	50	5.0m	12us	25	200	1	10p	A	T01	A					
2# 2SA255	55m	5.0M	#J 12	50	10m	10u	60	1.0m	50	10p	A	R18	A					
3# 2SA254	55m	10.M	#J 12	50	10m	10u	60	1.0m	80	10p	A	R18	A					
4# 2SA253	55m	30.M	#J 20	50	10m	10u	60	1.0m	45	2.2p	D	R18	A					
5# 2SA258	55m	40M	#J 20	50	10m	10u	60	1.0m	45	2.2p	D	R18	A					
6# 2SA257	55m	50M	#J 20	50	10m	10u	60	1.0m	60	2.2p	D	R18	A					
7# 2SA256	55m	60 M	#J 20	50	10m	10u	60	1.0m	75	2.2p	D	R18	A					
8 JAN2N501A†	60m	769u	#S 15	12 0	2.0	25u	.500	10m	30 △	3.0p	D	R139	A					
9 2N1158	60m	769u	#S 20	20 0	1.0	50m	5.0u	10	3.0m	5.7	p	T09	A					
10 2N1744	60m	500u	4S	20	20 0	.50	50m	10u	2.0m	10	1.5p	T09	A					
11# 2SA49	60m	1.2m	#J 18	12	5.0m	10u	10u	1.0m	100	1.1p	A	T01	A					
12# 2SA53	60m	1.2m	#J 18	12	5.0m	10u	10u	1.0m	100	1.1p	A	T01	A					
13# AF109R	60m	1.3m	#J 20	15	3.0	10m	8.0u	120	1.5m	50	ME	T072	A					
14# AC150	60m	1.0M	#J 30	12	50m	16u	6.0	2.0m	85	A	R60							
15# AC122	60m	1.2M	#J 30	12	50m	15u	6.0	2.0m	90	A	R60							
16 2N1743	60m	1.7M△	500u	*S 20	20 0	50	50m	10u	100	2.0m	10	1.1p	T09	A				
17# 2SA52	60m	7.0M	1.2m	#J 18	12	5.0m	10u	10u	1.0m	100	1.5p	∅	T09	A				
18 2N1742	60m	10.M△	500u	*S 20	20 0	50	50m	10u	100	2.0m	10	1.1p	T09	A				
19# 2SA101	60m	15M	1.2m	#J 40	50	10m	16u	6.0	1.0m	30	4.0p	D	T01	A				
20# 2SA102	60m	25M	1.2m	#J 40	50	10m	16u	6.0	1.0m	40	4.0p	D	T01	A				
21# 2SA103	60m	35M	1.2m	#J 40	50	10m	16u	6.0	1.0m	50	4.0p	D	T01	A				
22 2N1748	60m	50M△	769u	#S 25	25 0	1.0	50m	10u	6.0	1.0m	30	2.5p	MD	T09	A			
23 2N1752	60m	50M△	769u	#S 12	12 0	2.0	50m	10u	6.0	1.0m	30	3.0p	MD	T09	A			
24# 2SA104	60m	50M	1.2m	#J 40	50	10m	16u	6.0	1.0m	100	4.0p	D	T01	A				
25# AF124	60m	75Ms	1.3m	#J 20	20	10m	8.0u	8.0	1.0m	150	2.5p	AD	T018	A				
26# AF125	60m	75Ms	1.3m	#J 20	20	10m	8.0u	6.0	1.0m	150	2.5p	AD	T018	A				
27# AF126	60m	75Ms	1.3m	#J 20	20	10m	8.0u	6.0	1.0m	150	2.5p	AD	T018	A				
28# AF127	60m	75Ms	1.3m	#J 20	20	10m	8.0u	6.0	1.0m	150	2.5p	AD	T018	A				
29 2N501	60m	90M	769u	#S 15	12 0	2.0	50m	100u	500	10m	1.5p	MD	T01	A				
30 2N501A†	60m	90M	769u	#J 15	12 0	2.0	50m	25u	500	50m	1.5p	MD	T01	A				
31 2N9797	60m	100M△	769u	#S 20	20 0	2.0	100m	3.0u	500	40m	1.5p	MD	T018	A				
32 2N980	60m	100M△	7.7m	#S 20	12	2.0	100m	5.0u	500	40m	1.5p	MD	T018	A				
33 JAN2N1499A†	60m	100M△	769u	#A 20	20 0	2.0	25u	300	10m	30 △	3.0p	T09	A					
34 JAN2NT6001	60m	100M△	769u	#J 15	12 0	2.0	50m	10u	500	50m	2.0p	MD	T09	A				
35 2N1726	60m	100M*	1.3m	#S 20	20 0	1.0	50m	10u	6.0	1.0m	50	1.5p	ME	T09	A			
36 2N1727	60m	100M*	1.3m	#S 20	20 0	1.0	50m	10u	6.0	1.0m	50	1.5p	ME	T09	A			
37 2N1728	60m	100M*	1.3m	#S 20	20 0	1.0	50m	10u	6.0	1.0m	50	1.5p	ME	T09	A			
38 2N1788	60m	100M*	1.3m	#S 35	35 0	1.0	50m	5.0u	120	1.0m	50	1.5p	ME	T09	A			
39 2N1789	60m	100M*	1.3m	#S 35	35 0	1.0	50m	7.0u	120	1.0m	50	1.5p	ME	T09	A			
40 2N1790	60m	100M*	1.3m	#S 20	20 0	1.0	50m	7.0u	120	1.0m	50	1.5p	ME	T09	A			
41 2N1864	60m	100M*	1.3m	#S 20	20 0	1.0	50m	10u	6.0	1.0m	10	1.5p	ME	T09	A			
42 2N3412	60m	100M△	833u	#S 20	20 0	2.0	100m	3.0u	5.0	1.0m	25	3.0p	T05	A				
43# HEP638s	60m*	100Ms	#J 30	20 0	50	50m	10us	20	60	1	1.5p	ME	T09	A				
44 2N1499A†	60m	110Ms	769u	#S 20	20 0	2.0	100m	25u	500	40m	50	1.5p	ME	T09	A			
45 2N499A	60m	120Ms△	833u	#S 30	18	50	50m	5.0u	9.0	1.0m	20	2.5p	MD	T01	A			
46 JAN2N499A	60m	120M△	769u	#S 30	18	50	50m	100u	9.0	1.0m	20	2.5p	R139	A				
47 2N1748A	60m	132Ms	769u	#S 25	25 0	1.0	50m	10u	6.0	1.0m	70	1.3p	ME	T09	A			
48 2N16001	60m	175Ms	769u	#S 15	12 0	2.0	50m	25u	500	10m	1.5p	MD	T09	A				
49 2N1746	60m	175M*	769u	#S 20	20 0	2.0	50m	10u	6.0	1.0m	60	1.5p	ME	T09	A			
50 2N1745	60m	200Ms	769u	#S 20	20 0	2.0	50m	10u	6.0	1.0m	60	1.5p	MD	T09	A			
51 2N1747	60m	200M	769u	#S 20	20 0	2.0	50m	10u	6.0	1.0m	60	1.5p	ME	T09	A			
52 2N1865	60m	200M△	769u	#S 20	20 0	2.0	50m	10u	6.0	1.0m	70	1.5p	ME	T09	A			
53 2N1866	60m	200M△	769u	#S 35	35 0	50	50m	10u	120	1.0m	70	2.0k	ME	T09	A			
54 2N1867	60m	200M△	769u	#S 35	35 0	50	50m	10u	120	1.0m	50	2.0k	ME	T09	A			
55# AF106	60m	220Ms	1.3m	#J 25	18	3.0	10m	10u	120	1.0m	50	1.5p	ME	T072	A			
56# AFY12	60m*	230Ms	1.3m	#J 25	18	0.5	10m	10u	120	1.0m	50	1.5p	ME	T072	A			
57# 2N502	60m	260Ms	1.0m	#J 20	20 0	50	50m	20u	100	2.0m	65	1.0p	MD	T09	A			
58 2N7791	60m	320Ms△	800u	#S 15	15 0	2.0	100m	3.0u	500	10m	50	2.5p	T018	A				
59 2N779A†	60m	320Ms△	833u	#S 15	15 0	2.0	100m	3.0u	500	10m	50	2.5p	T018	A				
60 2N846A†	60m	320Ms	833u	#S 15	15 0	2.0	100m	3.0u	500	10m	25	2.5p	T018	A				
61 2N9841	60m	350Ms	769u	#S 15	10	2.0	100m	5.0u	500	10m	70	1.9p	MD	T018	A			
62 2N2170†	60m	350Ms	769u	#S 15	16 0	2.0	100m	5.0u	500	10m	70	1.9p	MD	T09	A			
63# 2SA440A	60m	350Ms	#J 20	5.0	5.0m	30u	6.0	2.0m	50	1.5p	ME	S146	B					
64 2N2487	60m	360M△	#J 20	10	10m	3.0u	500	500	10m	20	3.0p	MA	T018	A				
65 2N2488	60m	360M△	#J 20	10	10m	3.0u	500	500	20m	20	3.0p	MA	T018	A				
66 2N2489	60m	360M△	#J 15	15	10m	2.5u	500	500	10m	20	3.0p	MA	T018	A				
67# 2SA436	60m	400M	#J 20	20	50	10m	30u	6.0	3.0m	10	1.2p	ME	T018	A				
68# 2SA437	60m	400M	#J 20	20	50	10m	30u	6.0	3.0m	10	1.2p	ME	T018	A				
69# 2SA438	60m	400M	#J 20	20	50	10m	30u	6.0	3.0m	10	1.2p	ME	T018	A				
70 2N9821	60m	450Ms	769u	#S 20	15	2.0	100m	3.0u	500	10m	100	1.5p	MD	T018	A			
71 2N9831	60m	450Ms	769u	#S 15	15	2.0	100m	3.0u	500	10m	85	1.9p	MD	T018	A			
72 2N2168†	60m	450Ms	769u	#S 20	20	0	2.0	100m	3.0u	500	10m	100	1.9p	MD	T09	A		
73# 2N2169†	60m	450Ms	769u	#S 15	15	0	2.0	100m	3.0u	500	10m	85	1.9p	MD	T09	A		
74# AF280	60m	550Ms	1.7m	#J 15	30	10m	1.0u	100	2.0m	25	4.2ps	T050	A					
75# AF129	60m	580Ms	800u	#J 20	15	30	10m	8.0u	120	1.5m	40	2.30p	ME	T072	G			
76 2N3320†	60m	600Ms△	769u	#S 15	10	2.0	100m	5.0u	500	40m	40	3.0p	TO18	A				
77 2N3321†	60m	600Ms△	769u	#S 12	7.0	2.0	100m	5.0u	500	40m	40	3.5p	TO18	A				
78 2N3322†	60m	600Ms△	769u	#S 12	7.0	2.0	100m	5.0u	500	40m	25	3.5p	TO18	A				
79# 2SA453	60m	600Ms	#J 22	22	10m	1.0u	100	1.0u	1.0m	60	6.0p	PL	T018	A				
80# 2SA454	60m	600Ms	#J 22	22	10m	1.0u	100	1.0u	1.0m	12	6.0p	PL	T018	A				
81# 2SA455	60m	600Ms	#J 22	22	10m	1.0u	100	1.0u	1.0m	24	6.0p	PL	T018	A				
82# 2SA456	60m	600Ms	#J 22	22	10m	1.0u	100	1.0u	1.0m	48	6.0p	PL	T018	A				
83# AF240	60m*	650Ms																

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX		DE RATE		ABS MAX RATINGS @ 25°C				MAX.		TYPICAL "H" PARAMETERS				Cob	STRUCTURE	DWG # Y200 s/a TO200 Ser.	
		COLL. (W)	DISS. (H ₂)	IN fab	FREE AIR @25°C	M A X P	BV _{cbo} (V)	BV _{ceo} (V)	BV _{beo} (V)	I _c (A)	@MAX V _{cb}	BIAS	COMMON Emitter						
		V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}	(mhos)	(Ω)	X.0001 (F)									
1#	NKT111	75m	1.0M _A	1.5m	#J	18	10	12	100m	5.0u ₀	4.5 ₀	1.0m ₀	90	△	1.3p ₀	T01	A		
2#	2N265	75m	1.5M _A	2.0m	#J	25	5	10	50m	16u	5.0 ₀	1.0m ₀	115	11p	40p	R32			
3#	NKT73	75m	2.5M _A	1.5m	#J	15	10	10	5.0u ₀	4.5 ₀	1.0m ₀	25	△	1.1p	T01	A			
4#	NKT126 _F	75m	3.0M _A	1.5m	#J	20	20	5	6.0	500m	5.0u ₀	4.5 ₀	1.0m ₀	75		2.2p ₀	T05	A	
5#	NKT72	75m	6.2M _A	1.5m	#J	15	10	10	5.0u ₀	4.5 ₀	1.0m ₀	40	△	1.1p	T01	A			
6#	NKT125 _F	75m	7.0M _A	1.5m	#J	20	20	5	6.0	500m	5.0u ₀	4.5 ₀	1.0m ₀	100		2.2p ₀	T05	A	
7#	NKT12	75m	7.5M _A	1.5m	#J	18	10	12	100m	5.0u ₀	4.5 ₀	1.0m ₀	45	△	1.3p ₀	T01	A		
8#	NKT124 _F	75m	15M _A	1.5m	#J	20	20	5	6.0	500m	5.0u ₀	4.5 ₀	1.0m ₀	150		2.2p ₀	T05	A	
9#	AF114N	75m	75M _A	1.6m	#J	32	15	10	8.0u ₀	6.0 ₀	6.0 ₀	1.0m ₀	150		AD ₀	T044	C		
10#	AF115N	75m	75M _A	1.6m	#J	32	15	10	8.0u ₀	6.0 ₀	6.0 ₀	1.0m ₀	150		AD ₀	T044	C		
11#	AF116N	75m	75M _A	1.6m	#J	32	15	10	8.0u ₀	6.0 ₀	6.0 ₀	1.0m ₀	150		AD ₀	T044	C		
12#	AF117N	75m	75M _A	1.6m	#J	32	15	10	8.0u ₀	6.0 ₀	6.0 ₀	1.0m ₀	150		AD ₀	T044	C		
13	2N1749	75m	80M _A	1.0m	#S	40	40	5	1.0	10m	10u ₀	6.0 ₀	1.0m ₀	30	△	1.0ub	40	D	
14	2N2199	75m	120M _A	1.0m	#S	15	10	50	100m	5.0u ₀	10 ₀	3.0m	20	△	2.8p ₀	T09	A		
15	2N2200	75m	120M _A	1.0m	#S	15	10	50	100m	5.0u ₀	10 ₀	3.0m	70	△	2.8p ₀	T09	A		
16	2N1499BT	75m	150M _A	1.0m	#S	30	20	2	100m	3.0u ₀	30 ₀	10m ₀	40	△	3p ₀	T09	A		
17#	AF178	75m	180M _A	1.6m	#J	25	25	50	10m	50u	12	1.0m ₀	20	△	7.5p ₀	AD ₀	T012		
18	2N502A	75m	260M _A	1.0m	#J	30	30	50	50m	20u	10 ₀	2.0m ₀	65		1.0p	MD ₀	T09	A	
19	JAN2N2998	75m	400M _A	1.0m	#S	15	10	30	50m	5.0u ₀	6.0 ₀	4.0m ₀	35	△	3Op	Ø	T072	G	
20	JAN2N2997	75m	400M _A	1.0m	#S	30	15	30	50m	5.0u ₀	12 ₀	4.0m ₀	50	△	1.0p	Ø	T072	G	
21	2N2795†	75m	450M _A	1.0m	#S	25	15	2.5	100m	3.0u ₀	10m ₀	100	†	2.5p	D	T018	A		
22	2N2795†	75m	450M _A	1.0m	#S	20	12	2	100m	3.0u ₀	10m ₀	60	1	1.2p	Ø	T072	G		
23	2N2416	75m	600M _A	1.0m	#J	15	10	50	20m	5.0u ₀	6.0 ₀	2.0m ₀	30		2.0p	EM	T018		
24	TI390	75m	900M _A	1.0m	#S	18	18	30	50m	6.0u ₀	6.0 ₀	2.0m ₀	40	△	2.0p	EØ	R80	X	
25	TI391	75m	900M _A	1.0m	#S	18	18	30	50m	6.0u ₀	6.0 ₀	2.0m ₀	20	△	2.0p	EØ	R80	X	
26	TI400	75m	900M _A	1.0m	#S	18	18	30	50m	6.0u ₀	6.0 ₀	2.0m ₀	40	△	2.0p	EØ	R80	X	
27	TI401	75m	900M _A	1.0m	#S	18	18	30	50m	6.0u ₀	6.0 ₀	2.0m ₀	20	△	2.0p	EØ	R80	X	
28	TI402	75m	500M _A	1.0m	#S	18	18	30	50m	5.0u ₀	6.0 ₀	2.0m ₀	20	△	3Op	DM ₀	T072	G	
29	TI403	75m	500M _A	1.0m	#S	18	18	30	50m	5.0u ₀	6.0 ₀	2.0m ₀	35	△	3Op	ME	T092	G	
30	2N2996	75m	550M _A	1.0m	#S	15	10	30	50m	100u	6.0 ₀	4.0m ₀	200		1.4p	DM ₀	T072	G	
31	2N2415	75m	560M _A	1.0m	#J	15	10	50	20m	5.0u ₀	6.0 ₀	2.0m ₀	45		1.2p	Ø	T072	G	
32	JAN2N502A	75m	600M _A	1.0m	#S	30	30	50	10u	10 ₀	10 ₀	2.0m ₀	15	△	2.0p	Ø	ZA27	A	
33	JAN2N502B	75m	600M _A	1.0m	#S	30	30	50	10u	10 ₀	10 ₀	2.0m ₀	25	△	2.0p	Ø	ZA27	A	
34	2N2997	75m	600M _A	1.0m	#S	30	15	30	50m	100u	12 ₀	4.0m ₀	200		1.8p	DM ₀	T072	G	
35	2N700	75m	800M _A	1.0m	#J	25	20	20	50m	2.0u ₀	6.0 ₀	2.0m ₀	10		1.1p	ME	T072	G	
36	2N700A	75m	800M _A	1.0m	#J	25	25	20	100u	6.0	6.0 ₀	2.0m ₀	40	△	1.4p	ME	T092	G	
37	JAN2N700A	75m	800M _A	1.0m	#J	25	25	30	50m	2.0u ₀	6.0 ₀	2.0m ₀	40	△	b	30	1.4p	T072	G
38	2N2998	75m	900M _A	1.0m	#S	15	12	30	20m	100u	6.0 ₀	3.0m ₀	200		1.7p	DM ₀	T072	G	
39	2N3267	75m	900M _A	1.0m	#S	15	8.0	20	20m	5.0u ₀	6.0 ₀	3.0m ₀	15	△	1.7p	Ø	T072	G	
40#	GM656A	75m	930M _A	1.0m	#A	18	15	30	50m	5.0u ₀	12 ₀	3.0m ₀	20	△	3p	EM	R80	X	
41	TIXM101	75m	15G _A	1.0m	#S	15	7.0	30	50m	6.0u ₀	5.0 ₀	2.0m ₀	70		1.7p	PEØ	T072	G	
42	2N2999	75m	1.6G _A	1.0m	#S	15	10	20	20m	100u	6.0 ₀	3.0m ₀	100	1	1.7p	DM ₀	T072	G	
43	2N370	80m	1.7m	ØA	24	50	10	10	10u	10u ₀					30f	AD	T07	H	
44	2N372	80m	1.7m	ØA	24	50	10	10	10u	10u ₀					30f	AD	T07	H	
45#	2SB470	80m	1.2m	#J	25	18	5	2.5	50	50m	6.0u ₀	6.0 ₀	1.0m ₀	160		40u	5.0k	15	
46#	AF170	80m	1.3m	#J	24	24	24	50	10m	12u ₀	6.0 ₀	1.0m ₀	80		3.5p	D	T044		
47#	AF172	80m	1.3m	#J	24	24	24	50	10m	12u ₀	6.0 ₀	1.0m ₀	70		3.5p	D	T044		
48	2N1266	80m	1.0M	ØA	10	10	10	10	10m	10u ₀	3.0 ₀	1.0m ₀	48		1.1p	AD ₀	R89		
49#	AC107	80m	2.0M	1.6m	#J	15	15	50	10m	3.0u ₀	5.0 ₀	1.0m ₀	80		14p	AD ₀	T09	A	
50#	2SA12H	80m	5.0M _A	1.0m	#A	16	16	12	15m	6.0u ₀	6.0 ₀	1.0m ₀	60		10p	A	T01		
51#	2SA15H	80m	5.0M _A	1.0m	#A	16	13	13	15m	4.0u ₀	6.0 ₀	1.0m ₀	70		10p	A	T01		
52#	2SA31	80m	5.0M _A	1.3m	#J	12	12	50	10m	10u ₀	6.0 ₀	1.0m ₀	50		24u	24u	1.5k	3.2	
53#	2SA36	80m	5.0M _A	1.3m	#J	16	50	15	15m	6.0u ₀	6.0 ₀	1.0m ₀	55		24u	24u	1.5k	3.2	
54#	2SA401	80m	5.0M _A	1.3m	#J	25	18	5	12	50m	6.0u ₀	6.0 ₀	1.0m ₀	65		10p	A	T01	
55#	2SA137	80m	5.0M _A	1.3m	#J	6.0	6.0	50	10m	10u ₀	3.0 ₀	1.0m ₀	50		32u	32u	1.6k	4.6	
56#	2SA189	80m	6.0M _A	1.3m	#J	12	12	50	15m	10u ₀	6.0 ₀	1.0m ₀	65		10p	A	T040	A	
57	2N409	80m	6.8M _A	1.5m	#A	13	50	15	15m	10u ₀	9.0 ₀	1.0m ₀	48		9.5p	A	T040	A	
58	2N410	80m	6.8M _A	1.5m	#A	13	50	15	10u	9.0 ₀	10 ₀	1.0m ₀	48		9.5p	A	T01		
59#	2SA12	80m	8.0M _A	1.6m	#J	16	16	10	15m	4.0u ₀	6.0 ₀	1.0m ₀	70		11p	A	T01		
60#</																			

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) I_{FB} & (3) TYPE No.

LINE No.	TYPE No.	1) MAX. COLL. DISS. @25°C (W)	2) DE RATE IN FREE AIR W/C (Hz)	3) ABS MAX. RATINGS @25°C (V)	TYPICAL 'H' PARAMETERS						Cob	STRUCTURE	DWG #			
					M E BV _{cbo}	B V _{ceo}	B V _{ebo}	I _c @MAX	V _{cb}	I _e	h _{fe}	C O M M O N E M I T T E R	I _{cbo}	S/a		
1# AF166		80m	130M	1.3m	#J	30	30	0.1	10m	8.0u	6.0	1.5m ²	85	3.1p	T044	
2# 2SA235		80m	135M	1.3m	#J	20	30	0.5	10m	30u	6.0	1.0m ²	90	2.1p	ME	
3# NKT603F†		80m	140M	1.6m	#J	40	40	1.0	50m	5.0u	4.5	1.0m ²	100	3.5p ²	T07	
4# NKT813F		80m	140M	1.6m	#J	40	40	1.0	50m	5.0u	4.5	1.0m ²	40	2.0p ²	T07	
5# NKT674F		80m	140M	1.6m	#J	20	20	0.5	10m	8.0u	4.5	1.0m ²	60	3.0p ²	T07	
6# NKT877F		80m	140M	1.6m	#J	20	20	0.5	10m	8.0u	4.5	1.0m ²	60	3.0p ²	T07	
7# 2N3399		80m	400M ²	1.1m	#S	20	30	7.0m	8.0u	120	1.5m ²	10	1.1p	Zp ²		
8# 2SA434		80m	400M			20	20	0.5	10m	30u	6.0	3.0m	10	1.4p	ME	
9# 2SA435		80m	400M			20	20	0.5	10m	30u	6.0	3.0m	10	1.4p	ME	
10# 2SB335		83m	1.0M	1.6m	#J	20	10	60m	10u	6.0	1.0m ²	70	A	R18		
11# 2SB336		83m	1.0M	1.6m	#J	20	20	0.5	10m	60u	1.0	60m	80	A	R18	
12# OC41N		83m	3.0M ²	1.6m	#J	16	15	12	50m	10u	0.0	50m ²	20	AD	T01	
13# OC45N		83m	3.0M ²	1.6m	#J	15	15	12	5.0m	10u	6.0	1.0m ²	25	AD	A	
14# OC46		83m	3.0M	1.6m	#J	20	20	15	125m	30u	5.0	3.0m	80	AD	R9	
15# OC42N		83m	5.5M ²	1.6m	#J	16	15	15	50m	10u	0.0	50m ²	40	AD	T01	
16# OC47		83m	5.5M		#J	20	20	15	125m	30u	5.0	15m	200	AD	R9	
17# 2SA145		83m	6.0M	1.6m	#J	15	12	10m	12u	6.0	1.0m ²	50	12p	A		
18# OC45		83m	6.0M	1.6m	#J	15	15	0.5	12	10m	10u	6.0	1.0m ²	50	10p	A
19# OC44N		83m	7.5M ²	1.6m	#J	20	12	5.0m	10u	6.0	1.0m ²	45	A	T01		
20# 2SA144		83m	12M	1.7m ²	J	15	12	10m	12u	6.0	1.0m ²	100	11p	A		
21# UC43N		83m	12M ²	1.7m ²	J	15	15	12	50m	10u	0.0	50m ²	50	AD	T01	
22# OC44		83m	15M	1.7m ²	J	15	12	10m	10u	2.0	1.0m ²	100	1.5p ¹	R9		
23# A411		83m	100M ²	600	J	40	10	10m	6.0u	6.0	1.0m ²	20	2.5p	AD		
24# ASZ20		83m	100M	1.7m ²	J	40	40	50	25m	4.5u	6.0	1.0m ²	45	AD	T07	
25# AFZ11		83m	140M ²	1.7m ²	J	20	20	#	50	10m	50u	6.0	1.0m ²	70	2.0p	AD ²
26# 2SA343		83m	150M	1.7m ²	J	20	20	40	5.0m	12u	6.0	1.0m ²	100	1.5p	AD	
27# AFZ12		83m	180M ²	1.7m ²	J	20	20	50	10m	50u	6.0	1.0m ²	70	2.0p	AD ²	
28# 2N130		85m	700K	2.0m	J	25	22	5	12	10m	12u	6.0	1.0m ²	24	40p	A
29# 2N131		85m	800K	2.0m	J	25	15	5	12	10m	12u	6.0	1.0m ²	50	40p	A
30# 2N133		85m	800K	2.0m	J	25	15	5	12	10m	12u	6.0	1.0m ²	50	40p	A
31# 2N132		85m	1.0M	2.0m	J	25	12	5	12	10m	12u	6.0	1.0m ²	90	40p	A
32# 2N207		85m	2.0M	1.2m	J	12	12	12	20m	15u	5.0	1.0m ²	100	400n	33	
33# 2N207A		85m	2.0M	1.2m	J	12	12	12	20m	10u	5.0	1.0m ²	100	400n	33	
34# 2N207B		85m	2.0M	1.2m	J	12	12	12	20m	10u	5.0	1.0m ²	100	40p	A	
35# 2N535		85m	2.0M	833u	J	20	20	20	20m	12u	5.0	1.0m ²	100	400n	33	
36# 2N535A		85m	2.0M	833u	J	20	20	20	20m	12u	5.0	1.0m ²	100	40p	A	
37# 2N535B		85m	2.0M	833u	J	20	20	20	20m	12u	5.0	1.0m ²	100	400n	33	
38# 2N536		85m	2.0M	833u	J	20	20	20	20m	12u	5.0	1.0m ²	150	40p	A	
39# JAN21987		86m	100M ²	1.3m	#J	40	40	5	10	10m	8.0u	6.0	1.0m ²	100	25p	A
40# AF186G		90m	2.0m	2.0m	J	25	30	15	3.5u	3.5u	1.0	1.0m ²	15	1.9p ²	AD ²	
41# AF186W		90m	2.0m	2.0m	J	25	25	30	15m	3.5u	6.0u	5.0 ²	1.0m ²	16p	AD ²	
42# GT1604		90m	50M	1.8m	#S	25	25	15	10	100m	10u	6.0	2.0m ²	125	65u	2.5k
43# AC170		90m	1.2M	2.0m	#J	32	15	10	100m	10u	6.0	2.0m ²	200	63u	4.0k	
44# AC171		90m	1.2M	2.0m	#J	32	15	10	100m	10u	6.0	2.0m ²	300	1.8p ²		
45# GT1605		90m	6.5M	1.8m	#S	15	1.0	25u	9.0	1.0m ²	30	AD	T09			
46# GT1606		90m	10M	1.8m	#S	15	1.0	25u	9.0	1.0m ²	50	1.8p ²	T09			
47# AF256		90m*	330M ²	2.0m	#J	25	18	30	10m	8.0u	120	1.0m ²	10	5.5p ²	PL	
48# 2SA447		90m*	650M ²	3.3m	J	25	25	30	15m	10u	100	2.0m ²	80	1.6p	PL	
49# AF253		90m*	700M ²	2.0m	#J	20	15	1.0	10m	8.0u	120	2.0m ²	100	4pt	PL	
50# AF252		90m*	750M ²	2.0m	#J	20	15	1.0	10m	5.0u	120	2.0m ²	100	4pt	PL	
51# AF251		90m*	800M ²	2.0m	#J	20	15	1.0	10m	5.0u	120	2.0m ²	100	4pt	PL	
52# ASZ21		94m	300M ²	2.0m	#J	20	15	30m	1.0	10m	5.0	1.0m ²	30	AD ²	T018	
53# 2N987		100m	1.5m	#S	40	40	10	10	10m	8.0u	6.0	1.0m ²	40	4.0p ²	T072	
54# 2N2496		100m	1.6m	#S	40	40	0.5	10	10m	6.0u	6.0	1.0m ²	25	2.0p ²	AD ²	
55# 2N2671		100m	2.0m	0.5	S	25	1.0	10m	8.0u	6.0	1.0m ²	40	2.5p ²	T012		
56# 2N2672		100m	2.0m	0.5	S	25	1.0	10m	8.0u	6.0	1.0m ²	40	2.5p ²	T029		
57# GT758		100m	500K	2.0m	#S	20	15	200m	25u	4.5	1.0m ²	15	14p	A		
58# 2N63		100m	80M	1.7m	#J	22	15	10m	20u	6.0	1.0m ²	22	40p	F		
59# 2N130A		100m	70M	1.7m	#J	44	44	12	100m	15u	6.0	1.0m ²	26	17u	900	
60# 2N64		100m	80M	1.7m	#J	15	15	12	10m	20u	6.0	1.0m ²	45	40p	F	
61# 2N106		100m	80M	1.7m	#J	15	12	10m	100m	1.5u	1.0m ²	45	36p	F		
62# 2N131A		100m	80M	1.7m	#J	30	30	12	100m	15u	6.0	1.0m ²	45	18u	1.4k	
63# 2N133A		100m	80M	1.7m	#J	30	30	12	100m	15u	6.0	1.0m ²	50	19u	2.5k	
64# 2N186		100m	80M	3.0m	#S	25	50	200m	16u	5.0	1.0m ²	24	40p	A		
65# 2SB134		100m	800K	1.7m	#J	30	30	15	100m	10u	1.5	500u	70	19u	3.2k	
66# 2SB135		100m	800K	1.7m	#J	30	30	15	100m	10u	6.0	1.0m ²	70	21u	3.2	
67# 2N132A		100m	1.0M	1.7m	#J	24	24	12	100m	15u	6.0	1.0m ²	90	20u	30k	
68# 2N187		100m	1.0M	3.0m	#S	25	5.0	200m	16u	5.0	1.0m ²	36	2.0k	.56		
69# 2N1265		100m	1.0M ²	1.7m	#J	20	10	10	100m	10u	6.0	1.0m ²	50	40p	A	
70# 2SB557		100m	1.2M	2.2m	J	30	10	100m	15u	6.0	1.0m ²	65	300nb	30		
71# 2SB400		100m	1.0M	1.2m	#J	20	10	40m	15u	6.0	1.0m ²	100	35u	3.0k		
72# 2N188		100m	1.2M	3.0m	#S	25	5.0	200m	16u	5.0	1.0m ²	54	2.6k	40p		
73# 2N241		100m	1.3M		#J	25			200m	16u	1.0	100m	73		R32	
74# 2SB443A		100m	2.5M	1.7m	#J	18	18	12	10m	10u	6.0	1.0m ²	110	43u	3.0k	
75# 2SB444A		100m	2.5M	1.7m	#J	18	18	12	10m	20u	6.0	1.0m ²	120	50u	3.3k	
76# 2SB443B		100m	3.5M	1.7m</												

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) I_{AB} & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C (W)	DE RATE fab	ABS MAX RATINGS @25°C				MAX. IC	TYPICAL h PARAMETERS				Cob	STRUCTURE	DWG # Y200 s/a TO200 Ser.	LC E O A D D E			
				IN FREE AIR W/C	M AM	E BV _{cbo}	V BV _{ceo}	E BV _{ebo}	IC	@MAX V _{cb}	BIAS I _c	COMMON Emitter h _{fe}	h _{oe}	h _{ie}	h _{re}				
1# SFT171	100m	250Ms	1.7m	#J	30	20	25m	10u	9.00	1.5m ²	3.5 1Δ					2.5pA	ME	T033	
2# SFT172	100m	250Ms	1.7m	#J	30	20	25m	10u	9.00	1.5m ²	3.5 1Δ					2.5pA	ME	T033	
3# SFT173	100m	250Ms	1.7m	#J	30	20	25m	10u	9.00	1.5m ²	7.0 1Δ					2.5pA	ME	T033	
4# SFT174	100m	250Ms	1.7m	#J	30	20	25m	10u	9.00	1.5m ²	3.5 1Δ					2.5pA	ME	T033	
5# 2G101	100m	320Ms	1.7m	#J	15	15	1.0	20m	10u	5.00	12.0m	20				3.5p	MEØ	T05	
6# 2N2717	100m	390Ms	2.2m	2J	25	25	15m	8.0u	100	3.0m	30 1Δ					1.8p	Δ	T018 A	
7# AF1721	100m	390Ms	2.2m	2J	25	25	15m	8.0u	100	3.0m	30 1Δ					1.8p	AD	T018	
8# 2G102	100m	400Ms	1.7m	#J	15	15	1.0	20m	10u	5.0	2.0m	20				3.5p	ME	T05	
9# 2N3127	100m	400Ms	1.3m	#S	25	20	75	50m	5.0u	100	3.0m ²	125 1Δ				1.2pA	Ø	T072 G	
10 JAN2N3127	100m	400Ms	1.3m	#J	25	20	75	50m	5.0u	100	3.0u ²	20 Δ				1.2pA	Ø	T072 G	
11# 2SA4131	100m	500Ms	1.0m	#J	20	15	2.5	30m	5.0u	1.00	3.0m ²	70 1Δ				1.2pA	AD	T018	
12# 2N3281	100m	550Ms	1.3m	#J	30	15	.50	50m	15.0u	100	3.0m ²	10 Δ				1.2pA	Ø	R96d G	
13# 2N3282	100m	550Ms	1.3m	#J	30	15	.50	50m	5.0u	100	3.0m ²	10 Δ				1.2pA	Ø	R96d G	
14# 2N3279	100m	600Ms	1.3m	#J	30	20	1.0	50m	5.0u	100	3.0m ²	10 Δ				1pA	Ø	R96d G	
15# 2N3280	100m	600Ms	1.3m	#J	30	20	1.0	50m	6.0u	100	3.0m ²	10 Δ				1pA	Ø	R96d G	
16# AF1721S	100m*	270Ms	2.3m	#J	32	32	10m	8.0u	6.00	1.0m ²	45 Δ				45pt		R90 J		
17# AS220N	110m	40Ms ²	1.6m	2J	40	15	25m	50u	6.00	1.0m ²	45 Δ				AD	MEØ	T072 IC		
18# AFY16	112m*	550Ms	1.3m	#J	30	25	.50	10m	3.0u	120	1.5m ²	40 1Δ							
19# AFY37	112m	600Ms	1.3m	#J	32	32	10	20m	40u								E	T072	
20# 2N1450	120m	2.0m	#S	30	10	100m	100u	1.00	10m	20 1Δ					DΔ	T09	A		
21 JAN2N1450M1	120m	2.0m	#S	30	20	1.0	100m	10u	1.00	10m ²	20 1Δ						R81p	A	
22# 2SB459	120m				30	18	2.5	50m	12u	6.00	1.0m	180	78u	5.2k	1.1		A	T01	
23# 2SB460	120m				40	25	2.5	50m	6.0u	6.00	1.0m	180	78u	5.2k	1.1		A	T05	
24# TH34	120m	1.6Ms ²	2.0m	#J	40		10	150m	20u	6.00	1.0m	15				15p			
25# GET1896	120m	1.7Ms ²	2.0m	#J	20	15		100m	5.0u	1.00	25m ²	42 1Δ					A	T05	
26# GET1897	120m	1.7Ms ²	2.0m	#J	20	15		100m	5.0u	1.00	25m ²	65 1Δ					A	T05	
27# GET1898	120m	1.7Ms ²	2.0m	#J	20	15		100m	5.0u	1.00	25m ²	110 1Δ					A	T05	
28# 2SA2081	120m	3.0M	2.0m	#J	20		12	400m	20u	.30	200m	.15 1Δ				25p		T05	
29# 2N269	120m	4.0Ms ²	2.8m	#A	20	20	9.0	100m	20u	30	20m ²	40 1Δ				20p	AΔ	T01 A	
30# 2N2613	120m	4.0Ms ²	2.6m	#J	30	25	.50	50m	5.0u	4.00	50m ²	120 1Δ	45u	6.8k	26		A	T01	
31# 2N2614	120m	4.0Ms ²	2.6m	#J	30	35	.50	50m	5.0u	6.00	1.0m	100	60u	4.3k	14		12pA	A	T01 A
32# 2SA2121	120m	4.0M	2.0m	#J	25		15	100m	20u	.30	100m	.30 1Δ				20p	A	T05	
33# 2N5781	120m	5.0M	#A	20			12	400m	20u	.30	400m ²	.15 1Δ					A	T05	
34# 2SA2091	120m	5.0M	2.0m	#J	20		12	400m	20u	.30	200m	.30 1Δ				25p		T05	
35# GET1880	120m	6.5Ms ²	2.0m	#J	20	15		100m	5.0u	1.00	25m ²	42 1Δ					A	T05	
36# GET1881	120m	6.5Ms ²	2.0m	#J	20	15		100m	5.0u	1.00	25m ²	65 1Δ					A	T05	
37# GET1887	120m	6.5Ms ²	2.0m	#J	20	15		100m	5.0u	1.00	25m ²	110 1Δ					A	T05	
38# GET1891	120m	6.5Ms ²	2.0m	#J	25		12	50m	15.0u	.250	5.0m ²	150 1Δ					A	T05	
39# 2SB482	120m	7.0Ms ²	2.0m	#J	35	25	.50	12	50m	6.0u						6.5p	A	T01 A	
40# 2SB488	120m	7.0Ms ²	2.0m	#J	25	20	.50	12	50m	6.0u	6.00	1.0m	200	56u	6.5k	9.0		6.5p	
41# GET1889	120m	7.5Ms ²	2.0m	#J	20	15		100m	5.0u	6.00	1.0m	110 1Δ	300nb	28	4.0		AØ	T05	
42# 2N5791	120m	8.0M	#A	20			12	400m	20u	.30	400m ²	.30 1Δ					A	T05	
43# 2N5831	120m	8.0M	#A	18			10	100m	20u	.30	20m ²	.30 1Δ				12p	A	T01 A	
44# 2SA538	120m	8.0M	2.3m	#J	25		12	50m	50u	6.00	1.0m	70				20pA	A	T01	
45# 2N1670	120m	10M	2.0m	#J	100		3.0	7.0u	50	10m	15 1Δ				5.0p		T09 F		
46# 2N2953	120m	10M	385u	#J	30	25	.50	15	50m	50u	100	10m ²	200 Δ				25p	A	T01 A
47# 2SA2101	120m	10M	2.0m	#J	20		12	400m	50u	.30	200m	.15 1Δ					A	T01 A	
48# 40359	120m#	10M	2.7m	#J	20	18	.50	50m	12u	6.00	1.0m ²	100 1Δ					A	T01 A	
49# 40395	120m#	10M	2.6m	#J	20	18	.50	20	50m	12u	6.00	1.0m ²	250 1Δ					A	T01 A
50# GET1888	120m	10Ms ²	2.0m	#J	20	15		100m	5.0u	6.00	1.0m	220 1Δ	250nb	28	5.0		AØ	T05 A	
51# 2N602A	120m	12Ms ²	3.5m	#J	35	25	.50	15	50u	1.00	500u	1.00	80 1Δ	2.0u			7.0pA	D	T09 A
52# 2N603A	120m	12Ms ²	3.0m	#J	30	20	2.0		50u	1.00	500u	1.00	100 1Δ	2.0u			5.0pA	D	T09 A
53# 2N604A	120m	12Ms ²	2.5m	#J	30	20	2.5		50u	1.00	500u	1.00	120 1Δ	2.0u			6.0pA	D	T09 A
54# GET1882	120m	12Ms ²	2.0m	#J	20	15		12	500m	50u	250	5.0m ²	150 1Δ					A	T05 A
55# GET1890	120m	12Ms ²	2.0m	#J	20	15		100m	5.0u	6.00	1.0m	220 1Δ	250nb	28	5.0		AØ	T05 A	
56# GET1892	120m	12Ms ²	2.0m	#J	25	20		12	500m	50u	250	5.0m ²	150 1Δ				A	T05 A	
57# 2SA2171	120m	14.0M	2.0m	#J	25		12	100m	5.0u	.30	100m	.30 1Δ				20p		T05	
58# 2N5801	120m	15M	#A	20			12	400m	20u	.30	400m ²	.45 1Δ					A	T05 A	
59# 2N5841	120m	18M	#A	25			12	100m	20u	.20	240m	.60 1Δ				12p	A	T01 A	
60# 2N602	120m	20Ms ²	2.0m	#S	20	20	1.0		8.0u	1.00	500u	1.00	500 1Δ	400nb	33	3.0	4.0p	D	T09 A
61# GET1885	120m	20Ms ²	2.0m	#J	20	15		12	500m	50u	250	5.0m ²	220 1Δ					A	T05 A
62# GET1895	120m	20Ms ²	2.0m	#J	25	20		12	500m	50u	250	5.0m ²	40 1Δ					A	T05 A
63# GT5116	120m	20Ms ²	2.0m	#J	15	15		10	10u	1.00	40m	20 1Δ				8.0p	D	T09 A	
64# JAN2N384	120m	25Ms ²	1.6m	#S	40	20	.50	10m	50u	12u	1.5m ²	20 Δ				3.0pA		T044 G	
65# 2N1678	120m	25Ms ²	2.0m	#J	60	60	.50	40	50u	25u	1.5m ²	25 1Δ				5.0p	D	T09 A	
66# 2N1224	120m	30M	1.6m	#A	40	40	.50	10m	12u	12u	1.5m ²	50 1Δ				2.0p	D	T01 G	
67# JAN2N1224	120m	30M ²	1.6m	#S	40	50	.50	10											

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX COLL. DISS @25°C	2 IN W/C	DE RATE fab	T ABS FREE AIR	MAX RATINGS @25°C			MAX ICBO @MAX	TYPICAL 'H' PARAMETERS						Cob	STRUCTURE	DWG # Y200 s/a	C E AD TO200 D E Ser.				
						M E BV _{cbo}	BV _{ceo}	BV _{ebo}		I _c	V _{cbo}	BIAS	COMMON Emitter	h _{fe}	h _{oe}	h _{ie}	h _{re}						
1#	OC75	125m	750k	2.5m	0J	30	30	2	50m	5.0u	2.0	3.0m	90					A	R9				
2#	2SB177	125m	900k	2.5m	0J	60	10	125m	12uΦ	300m	65	1					A	T01					
3#	OC72	125m	900k	2.5m	0J	32	10	125m	10u	70	80m	50	1				A	R8					
4	2N65	125m	1.0M	1.7m	#J	20	15	100m	10u	5.0	1.0m	75					35p	A	OV4	A			
5#	2SB172	125m	1.0M	2.5m	0J	32	10	125m	12uΦ	1.0Φ	100m	50	1				A	T01					
6#	2SB176	125m	1.4M	2.5m	0J	32	10	125m	12uΦ	1.0Φ	100m	100	1				A	T01					
7	40329	125m	1.5M	2.8m	#J	25	25	2	2.5	100m	14uΦ	10Φ	10m	75	△	175u	400	30	35p	A	T01	A	
8	2N614	125m	3.0M	2.0m	#J	20	15	10	150m	6.0u	9.0	.50m	4.5				8.0p	A	T05	A			
9#	ASV31	125m	4.0M	2.5m	0J	25	15	20	200m	3.0uΦ	0.0	20m	30	1A			16ps	A	R9				
10	2N615	125m	5.0M	2.5m	#J	20	15	10	150m	6.0u	9.0	50m	7.5				8.0p	A	T05				
11#	ASV32	125m	6.0M	2.5m	0J	25	15	20	200m	3.0uΦ	0.0	20m	50	1A			16ps	A	R9				
12	2N617	125m	7.5M	2.1m	#J	15	10	150m	6.0u	9.0	.50m	15				7.0p	A	T05	A				
13	2N505	125m	8.0M	2.0m	#J	40	40	20	250m		1.0Φ	10m	40				10p		T09	A			
14	2N616	125m	9.0M	2.5m	#J	15	12	10	6.0u	9.0	.50m	25				7.0p		T05	A				
15#	2SA358	125m	20.0M	2.1m	#J	75	1.0	50m	12uΦ	9.0Φ	1.0m	90				3p	D	X35					
16	JAN2N2084	125m	40M	1.6m	#J	40	40	5	1.0	10m	8.0uΦ	6.0Φ	1.0m	1	40	△	4.0p		T033	G			
17	2N2188	125m	60M	2.5m	#S	40	25	2.0	30m	3.0uΦ	9.0	1.5m	40				ME	R58	A				
18	2N2190	125m	60M	2.5m	#S	60	25	2.0	30m	3.0uΦ	9.0	1.5m	40				ME	T058	A				
19	2N2084	125m	100M	5.9m	#S	40	40	5	1.0	10m	8.0uΦ	6.0Φ	1.0m	2	40	△	4p	AD	T033	G			
20	2N2189	125m	102M	2.5m	#S	40	25	2.0	30m	3.0uΦ	9.0	1.5m	60				ME	T058	A				
21	2N2191	125m	102M	2.5m	#S	60	25	2.0	30m	3.0uΦ	9.0	1.5m	60				ME	T058	A				
22#	2SA401	125m	230M	3.0m	#J	30	50	40m	300	6.0Φ	1.0m	70				3.0p	ME	T044					
23	MM1139	125m	550M	1.7m	#J	30	15	30	8.0uΦ	10Φ	2.0m	35	1			17ps		T072	G				
24	2N111	130m	3.0M	2.5m	#J	30	20	200m		6.0	1.0m	25				12p	F	OV4					
25	2N111A	130m	3.0M	2.5m	#J	30	20	200m		6.0	1.0m	25				12p	F	OV4	A				
26	2N112	130m	5.0M	2.5m	#J	30	20	200m		6.0	1.0m	30				12p	F	OV4					
27	2N112A	130m	5.0M	2.5m	#J	30	20	200m		6.0	1.0m	30				12p	F	OV4	A				
28	2N113	130m	10.0M	2.5m	#J	30	20	200m		6.0	1.0m	45				12p	F	OV4					
29	2N271	130m	10.0M	2.5m	#J	30	20	200m		6.0	1.0m	45				12p	F	OV4					
30	2N271A	130m	10.0M	2.5m	#J	30	20	200m		6.0	1.0m	45				12p	F	OV4					
31	2N114	130m	20.0M	2.5m	#J	30	20	200m		6.0	1.0m	75				12p	F	OV4					
32	2N1097	140m			#J	16	100m	16u	1.0Φ	20m	34	1A						T05	A				
33	2N1098	140m			#J	16	100m	16u	1.0Φ	20m	25							T05	A				
34	2N1144	140m	4.0M	2.5m	#J	16	16	5	100m	16u	5.0	1.0m	55				40p	A	R32				
35	2N1145	140m	4.0M	2.5m	#J	16	16	5	100m	16u	5.0	1.0m	45				40p	A	R32				
36	2N3074	140m	3.1m	0J	25	25	5	20m	10uΦ	5.0Φ	14m	14	1A				3.0p	AD	T012	G			
37	2N3075	140m	3.1m	0J	35	25	5	50	20m	10uΦ	6.0Φ	12m	20	1A		100	3.0p	AD	T012	G			
38#	AFY181	140m	350M	3.1m	0J	30	30	20m	10uΦ	6.0Φ	12m	27	1			1.8p	AD	T012					
39#	AFY40R	140m	600M	2.2m	#J	20	15	30	8.0u	6.0	20m	55				25p	EM	R96	G				
40#	AFY40	140m	700M	2.3m	#S	32	20	30	8.0uΦ								ME	R90	A				
41	2N138	150m			0A	20			150m	20u	1.0Φ	50m	44					A	T022	A			
42	2N185	150m			*A	20			150m	14u	1.0Φ	50m	80					A	T022	A			
43	2N217	150m			1.5m	0J	25	25	12	70m	14u	1.0Φ	50m	75				A	T01	A			
44	2N238	150m			2.0m	#S	15	15	6.0	150m	14u	1.0Φ	50m	45				A	T022	F			
45	2N311	150m			2.0m	#S	15	15	6.0	60u	5.0Φ	10m	50	1	500nb		A	T05	A				
46	2N407	150m			3.0m	0J	20	18	2.5	70m	14uΦ	1.0Φ	50m	65				A	T040	A			
47	2N408	150m			3.0m	0J	20	18	2.5	70m	14uΦ	1.0Φ	50m	65				A	T01	A			
48	2N680	150m			2.0				50m	14u							OV9						
49	JAN2N7051	150m			2.0m	#J	15	15	3.5	100m	30u	30m	25	1A				DM	T018	A			
50	2N710A1	150m			2.0m	#S	15	15	3.0	50m	3.0uΦ	50	10m	25			8p		T018	A			
51	2N782†	150m			2.0m	#J	12	12	3.0	200m	3.0uΦ	25	10m	20					T018	A			
52	2N8371	150m			2.0m	#S	12	6.0	1.0	100m	3.0uΦ	50	10m	30	1A			9p					
53	2N1303	150m			2.5m	#J	30	25	30m	6.0u	1.0Φ	10m	20	1				20p	#	T05	A		
54	2N1305	150m			2.5m	#J	30	25	30m	6.0u	1.0Φ	10m	40	1A			20p	#	T05	A			
55	2N1307	150m			2.5m	#J	30	25	30m	6.0u	1.0Φ	10m	60	1			20p	#	T05	A			
56	2N1309	150m			2.5m	#J	30	25	30m	6.0u	1.0Φ	10m	80	1			20p	#	T05	A			
57	2N1408	150m			2.0m	#S	50	50	10	7.0u	5.0Φ	1.0m	10	1A	2.0ub				T05	A			
58	JAN2N1646†	150m			2.0m	#S	18	18	#	4.0m	35u	1.0Φ	200u	30	1A			5.0p		X25	A		
59	2N1729†	150m			2.5m	#J	25	15	#	20	300m	6.0u	300	10m	30	1A			20p		T05	A	
60	2N1853	150m			2.5m	#J	18	2.0	10	100m	4.0uΦ	50	100m	90	1			50p		T05	A		
61	JAN2N1853†	150m			2.5m	#S	18	18	#	4.0	100m	35u	1.0Φ	200u	30	1A							
62#	2SB155	150m			2.5m	0J	16	25	300m	14u	4.0Φ	1.0m	30					A	T01				
63#	2SB156	150m			2.5m	0J	16	25	300m	14u	4.0Φ	1.0m	45					A	T01				
64#	2SB158A	150m			2.0		6.0	300m		4.0Φ	1.0m	45					A	T01					
65#	2SB185	150m			2.0		25	25	50m	15u	1.5Φ	30m	45				A	T01					
66#	2SB186	150m			2.0		25	25	50m	15u	1.5Φ	30m	170				A	T01					
67#	2SB187	150m			2.0		25	25	50m	15u	1.5Φ	30m	100				A	T01					
68#	2SB188	150m			2.0		25	25	50m	15u	1.5Φ	30m	100				A	T01					
69	GT34N	150																					

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX		2 DERATE		ABS MAX RATINGS @ 25°C				MAX.		TYPICAL 'H' PARAMETERS						Cob	STRUCTURE	DWG # Y200 s/a	E C AD	
		COLL. (W)	DISS. (W)	IN fab @ 25°C	FREE AIR W/°C	M E A M	BV _{cbo}	BV _{ceo}	BV _{ebo}	I _c	@ MAX	I _{cbo}	V _{cb}	I _e	h _{fe}	h _{ao}	h _{ie}	h _{re}	X.0001			
1# 2SB32	150m	BOOK	2.5m	#J 20		2.5	50m			14u ₀	6.00	1.0m	40		16u	1.5k	4.2		A	T01		
2# 2SB136	150m	.80M	2.5m	#J 25	25	0	12	150m		10u	1.50	50m ₀	120 t						A	T01	A	
3# 2SB136A	150m	.80M	2.5m	#J 60	40	s	12	300m		10u ₀	1.50	50m ₀	120 t					A	T01	A		
4# 2SB168	150m	.80M	2.5m	#J 9.0			2.5	100m		14u	3.00	1.0m	60		20u	1.3k	4.9		A	T01	A	
5# 2SB457	150m	.80M	2.5m	#J 20	20	0	2.5	500m		15u ₀	1.00	150m ₀	110 t					A	T01	A		
6# 2SB457A	150m	.80M	2.5m	#J 32	32	0	6.0	500m		15u ₀	1.00	150m ₀	110 t					A	T01	A		
7 2N45	150m	1.0M	2.0m	#J 45		15	50m			10u	5.0	1.0m	12					A	T029	A		
8 2N45A	150m	1.0M	2.0m	#J 45		5.0	10m			15u	5.00	1.0m ₀	15 t					40p	T05	A		
9 2N273	150m	1.0M	1.3m	J 20	30		10	10m		10u	25u	50m ₀	20					40p	A	T05		
10 2N398A	150m	1.0M	2.0m	#J 105	105		50	200m		50u	35u	50m ₀	65 t									
11 JAN2N422	150m	1.0M ₀	2.5m	#S 35		12				20u	35u	0.0	30 t		1.0u ₀	45	0	60p		R81a	A ₀	
12 2N565	150m	1.0M	2.5m	#S 30		10				25u	5.00	1.0m	55		550nb	30	3.5	30p		R116		
13 2N566	150m	1.0M	2.0m	#S 30		10				25u	5.0	1.0m	55		550nb	30	3.5	30p				
14# 2SB33	150m	1.0M	2.5m	#J 20		2.5	50m			14u ₀	6.00	1.0m	80		20u	2.6k	5.5		A	T01		
15# 2SB37	150m	1.0M	2.5m	#J 30	20	s	12	50m		14u ₀	6.00	1.0m	80 *		20u	2.6k	5.5		A	T01	A	
16# 2SB54	150m	1.0M ₀	3.0m	J 30	20	s	12	150m		14u ₀	8.00	1.0m	140					35p	A	T01	A	
17# 2SB55	150m	1.0M ₀	3.0m	J 60	60	t	12	150m		14u ₀	1.00	50m ₀	80 t					35p	A	T01		
18# 2SB56	150m	1.0M ₀	3.0m	J 30	25	s	12	150m		14u ₀	1.00	50m ₀	80 t					35p	A	T01		
19# 2SB56A	150m	1.0M ₀	3.0m	J 45	45	s	12	150m		14u ₀	1.00	50m ₀	80 t					35p	A	T01	A	
20# 2SB59	150m	1.0M	2.5m	#J 30	20		10	100m		15u	1.00	50m ₀	70 t						A ₀	T01		
21# 2SB60	150m	1.0M	2.5m	#J 20		2.5	50m			14u ₀	6.0	1.0m	65		300nb	30	3.0			A	T01	
22# 2SB60A	150m	1.0M	2.5m	#J 20	20	0	2.5	50m		14u ₀	1.00	50m ₀	70 t						A	T01		
23# 2SB61	150m	1.0M	2.5m	#J 30		12	50m			10u	6.00	1.0m	85		30u	3.0k	7.0		40p	A	T01	
24# 2SB65	150m	1.0M	2.5m	#J 30	20	s	12	100m		15u	6.00	1.0m	65		30u	3.0k	7.0		40p	A	T01	
25# 2SB169	150m	1.0M	2.5m	#J 9.0		2.5	100m			14u	3.00	1.0m	85									
26 MA200	150m	1.0M	2.0m	#J 105	105		10	200m		50u	35u	50m ₀	20 t									
27 MA201	150m	1.0M	2.0m	#J 105	105		20	200m		50u	36u	50m ₀	20 t									
28 MA202	150m	1.0M	2.0m	#J 105	105		10	200m		50u	35u	50m ₀	40 t									
29 MA203	150m	1.0M	2.0m	#J 105	105		20	200m		50u	35u	50m ₀	20 t									
30 MA204	150m	1.0M	2.0m	#J 90	90		20	200m		50u	35u	50m ₀	20 t									
31 MA205	150m	1.0M	2.0m	#J 75	75		20	200m		50u	35u	50m ₀	20 t									
32 MA206	150m	1.0M	2.0m	#J 60	60		10	200m		50u	35u	50m ₀	20 t									
33 2N1128	150m	1.2M	2.5m	#J 25		25				250u	20u	1.0m	120		500nb	14	1.8	45p	A	R2		
34# 2SB75AH	150m	1.2M		#S 45	45	0	12	100m		6.0u	8.00	1.0m	55		23u	1.6k	3.0	52p	A	T01		
35# 2SB75H	150m	1.2M		#S 30		12	100m		6.0u	6.00	1.0m	55		23u	1.6k	3.0	52p	A	T01			
36# 2SB364	150m	1.2M	3.0m	J 20	20	s	12	400m		14u ₀	100u	1.0m	90 t					50p	A	T01		
37# AC116	150m	1.2M	5.0m	J 30		30				12	100m	15u	6.0	4.0m						X9		
38# AC123	150m	1.2M	5.0m	J 45			12	100m		15u	6.0	4.0m	90							X9		
39 2N389	150m ₀	1.3M		#S 30		10	50m			5.0	1.0m	95								OV9		
40 2N568	150m	1.5M	2.0m	#S 30		10				25u	5.00	1.0m	100		400nb	30	4.0	30p	A	T05	A	
41# 2SB66	150m	1.5M		#S 30		12	70m			14u	6.00	1.0m	70		27u	2.2k	5.0	32p	A	T01		
42# 2SB77AH	150m	1.5M		#J 45	30		12	100m		6.0u	6.00	1.0m	70		26u	1.9k	3.8		A	T01		
43# 2SB77H	150m	1.5M		#J 30	30		12	100m		6.0	8.00	1.0m	70		26u	1.9k	3.8		A	T01		
44# AC151	150m [*]	1.5M ₀	3.3m	#J 32	24		10	200m		25u	1.00	2.0m ₀	110		130u	1.0k	14	27p	A ₀	T01		
45# AC151R	150m [*]	1.5M ₀	3.3m	#J 32	24		10	200m		100u	1.00	2.0m ₀	80		100u	750	9.0	27p	A ₀	T01		
46# ACY23	150m [*]	1.5M ₀	3.3m	#J 32	30		16	200m		10u ₀	5.00	1.0m ₀	100		40u	3.0k	7.0	27p	A	T01		
47# ACY32	150m [*]	1.5M ₀	3.3m	#J 32	30		16	200m		10u ₀	5.00	1.0m ₀	100		40u	3.0k	7.0	27p	A ₀	T01		
48 TR45	150m	1.5M	2.5m	#J 45		5.0	400m			16u	1.00	20m ₀	20 t									
49 2N569	150m	2.0M	2.5m	#S 30		10				25u	5.00	1.0m	150		400nb	30	5.0	30p		R116		
50 2N570	150m	2.0M	2.0m	#S 30		10				25u	5.00	1.0m	150		400nb	30	5.0	30p		A	T05	
51# 2SB75	150m	2.0M		#S 2.5	25	0	12	100m		14u ₀	1.0m	100	17k									
52# 2SB75A	150m	2.0M		#S 45	45	0	12	100m		6.0u	1.0m	55	17k									
53# 2SB77	150m	2.0M		#S 25		25				14u	6.00	1.0m	70		26u	1.9k	3.8		A	T01		
54# 2SB77A	150m	2.0M		#S 45	45	0	12	100m		25u	6.00	1.0m	70		26u	1.9k	3.8		A	T01		
55# 2SB439	150m	2.0M	3.0m	J 30	20	s	12	150m		14u ₀	6.00	1.0m	130		45u	4.0k	8.0	30p	A ₀	T01		
56# 2SB440	150m	2.0M	3.0m	J 30	20	s	12	150m		14u ₀	6.00	1.0m	130		45u	4.0k	8.0	30p	A ₀	T01		
57# CT122	150m	2.0M		#S 25		10				25u	5.00	1.0m	100		500nb	40	5.0	35p	A ₀			
58 TR650	150m	2.0M	2.5m	#J 45	25		25	400m		15u ₀	6.00	1.0m	40									
59 TR653	150m	2.0M	2.5m	#J 30	15		25	400m		15u ₀	6.00	1.0m	40									
60 TR44	150m	2.2M	2.5m	#J 45	30	s	5.0	150m		16u	1.00	20m ₀	30 t									
61 2N413A	150m	2.5M	2.5m	#J 30		10				5.0u	6.00	1.0m	30									
62 JAN2N4251	150m	2.5M ₀	2.0m	#S 30	20		20	400m		3.0u ₀	25u	1.0m ₀	18									

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) I_{BO} & (3) TYPE No.

LINE No.	TYPE No.	MAX. COLL. DISS. @25°C (W)	DE RATE IN FREE AIR (Hz)	ABS MAX RATINGS @25°C	TYPICAL "T" PARAMETERS								Cob	STRU C TURE	DWG # Y200 s/a TO200 Ser.	# C A D E			
					COLL. DISS. @25°C (W)	IN FREE AIR (Hz)	M E X P W/C	BV _{CEO}	BV _{CEO}	I _C	MAX. I _{BO} @MAX	V _{CB}	BIAS	COMMON Emitter	h _{FE}	h _{OE}	h _{IE}	h _{RE}	
1#	AFT87	150m	5.0M	18	15	15	100m	6.0uA	1.00	10m	90	700nb	30	6.0	15p	A	T01		
2#	GT123†	150m	5.0MΔ	2.0m	#S 25	15	15	6.0uA	1.00	10m	90	20pΩ					T06		
3#	NKT1351	150m	5.0M	2.1m	#J 30	20	25	300m	6.0uA	1.00	10m	90	12p	A	T05	A			
4#	UP1T347	150m	5.0M	2.5m	#J 20	12	10	200m	6.0uA	1.00	10m	50	12p	A	T05	A			
5#	2N483	150m	5.5M	2.5m	#J 12	30	20	200m	6.0uA	1.0u	1.0m	60	12p	FA	T05	A			
6#	2SA4141	150m	5.5Ms	#J 30	25	20	200m	3.0uA	500	100m	30	12p	A	T05	A				
7#	SFT2261	150m	5.5Ms	2.5m	#J 40	32	24	250m	10u	500	10m	25	12p	A	T05	A			
8#	ASY27†	150m	6.0MΔ	2.5m	#J 25	20	20	3.0uA	0.0	200m	20	12p	A	T05	A				
9#	2N302	150m	7.0MΔ	2.5m	#J 30	10	20	200m	1.0uA	6.0	1.0m	45	16pΩ	AF	OV4	F			
10#	2N354A	150m	7.0M	2.5m	#J 30	15	20	200m	6.0uA	1.00	10m	90	12p	A	T05	A			
11#	2N414A	150m	7.0M	2.5m	#J 30	200m	6.0uA	6.0	6.0	6.0	12p	A	T05	A					
12#	2N1344†	150m	7.0MΔ	2.5m	#J 15	10	10	400m	10u	1.00	20m	90	12p	A	T05	A			
13#	SFT307	150m	7.0M	2.5m	#J 18	12	100m	10u	6.0	1.0m	40	8Op	A	T01	A				
14#	2N439A	150m	7.5M	2.5m	#J 25	25	300m	10u	1.00	50m	45	9Op	A	T05	A				
15#	2N485	150m	7.5M	2.5m	#J 12	10	10m	10u	6.0	1.0m	50	12p	FA	T05	A				
16#	SFT227†	150m	7.5Ms	2.5m	#J 30	24	18	250m	10u	500	10m	35	12p	A	T05	A			
17#	2N1231	150m	8.0M	2.5m	#J 20	15	10	125m	6.0u	1.00	10m	75	65u	b	3.0k	6.0	R32		
18#	2N396†	150m	8.0M	3.3m	#S 30	20	20	200m	6.0uA	1.00	10m	30	12p	A	T05	A			
19#	2N521†	150m	8.0MΔ	1.6m	#S 15	10	10	25u	4.5p	1.0m	7.0	700nb	30	10	14p	A	T05	A	
20#	2N521A	150m	8.0MΔ	2.0m	#S 25	10	10	25u	2.5p	20m	150	700nb	30	10	14p	A	T05	A	
21#	2N5811	150m	8.0M	2.5m	#A 18	10	100m	20	300	20m	30	12p	A	T05	A				
22#	2SA4151†	150m	8.0Ms	#J 25	20	20	200m	3.0uA	500	100m	45	12p	A	T05	A				
23#	TR-C44	150m	8.0M	2.5m	#J 6.0	6.0	10u	6.0	1.0m	80	12p								
24#	2N415	150m	10M	2.5m	#J 12	12	50m	2.0u	6.0	1.0m	30	30p	F	T05	A				
25#	2N418A	150m	10M	2.5m	#J 30	20	200m	6.0	6.0	80	20pΩ	A	T05	A					
26#	JAN2N4281	150m	10MΔ	2.0m	#S 30	12	20	400m	25u	250	1.0m	60	10m	20pΩ	A	T05	A		
27#	2N428A1	150m	10MΔ	2.0m	#S 30	18	20	4.0uA	250	10m	20	12p	A	T05	A				
28#	2N450	150m	10M	2.5m	#J 20	12	10	125m	6.0u	5.0	1.0m	130	90u	4.0k	6.5	20pΩ	A	R116	
29#	2N484	150m	10M	2.5m	#J 12	10	10	25u	10u	6.0	1.0m	90	12p	FA	T05	A			
30#	JAN2N1307	150m	10MΔ	2.5m	#S 30	15	25	300m	6.0uA	1.00	10m	60	20pΩ	A	T05	A			
31#	2N1345†	150m	10MΔ	2.5m	#J 10	8.0	6.0	400m	6.0u	300	400m	60	14p	A	T05	A			
32#	2N1346†	150m	10MΔ	2.5m	#J 12	10	8.0	400m	5.0uA	250	35m	125	14p	A	T05	A			
33#	2N1969†	150m	10MΔ	2.5m	#J 30	15	20	400m	25u	250	20m	50	20pΩ	A	T05	A			
34#	AFT88	150m	10M	1.8m	#J 18	10	100m	10m	10m	60	1.0m	60	12p	A	T01	A			
35#	NKT137†	150m	10M	2.1m	#J 30	15	25	300m	6.0uA	1.00	10m	60	20pΩ	A	T05	A			
36#	2N518	150m	11M	2.5m	#J 45	15	30	125m	6.0u	1.00	10m	60	12p	A	R32				
37#	2N3161	150m	12M	2.0m	#S 20	10	20	500m	25u	200	200m	30	14p	A	T05	A			
38#	2N316A	150m	12M	2.0m	#S 30	20	20	25u	200	200m	35	14p	A	T05	A				
39#	2N486	150m	12M	2.5m	#J 12	10	10m	10u	6.0	1.0m	100	12p	FA	T05	A				
40#	SFT2281	150m	12Ms	2.5m	#J 24	20	12	250m	10u	500	10m	50	12p	A	T05	A			
41#	2N404†	150m	13M	2.5m	#A 25	12	12	100m	20u	200	24m	40	12p	A	T05	A			
42#	SFT303	150m	13M	2.5m	#J 18	12	12	100m	10u	6.0	1.0m	70	9.0p	A	T01	A			
43#	UPI404	150m	13M	2.5m	#A 27	15	150m	12	100m	200	25m	40	12p	A	T05	A			
44#	2N303	150m	14MΔ	2.5m	#J 30	10	20	200m	1.0uA	6.0	1.0m	75	12p	AF	OV4	F			
45#	JAN2N417	150m	15MΔ	2.0m	#J 30	12	12	25u	6.0	6.0	1.0m	60	20pΩ	D	R81	A			
46#	2N522A	150m	15MΔ	2.0m	#S 25	10	25	300m	6.0uA	1.00	10m	80	14p	A	T05	A			
47#	JAN2N1309	150m	15MΔ	2.5m	#S 30	25	300m	6.0uA	1.00	10m	80	20pΩ	A	T05	A				
48#	2N1309A	150m	15MΔ	2.5m	#J 35	15	35	300m	6.0uA	1.00	10m	80	12p	A	T05	A			
49#	ACY38	150m	15Ms	2.5m	#S 15	15	#	9.0	100m	2.0uA	6.0	1.0m	100	60u	3.0k	5.0	A	T05	A
50#	SFT288†	150m	16M	2.5m	#J 24	15	#	9.0	100m	2.0uA	10u	350	400m	40	12p	A	T05	A	
51#	2N5821	150m	18M	2.5m	#A 25	12	12	500m	20u	200	24m	60	12p	A	T05	A			
52#	2N317†	150m	20M	2.5m	#S 20	6.0	20	400m	2.0uA	250	400m	40	12p	A	T05	A			
53#	2N17A†	150m	20M	2.0m	#S 25	20	20	25u	250	400m	40	500nb							
54#	SFT319	150m	20Ms	2.5m	#J 20	50	10m	15u	9.0	9.0	1.0m	50	2.5p	D	T01	A			
55#	2N523A	150m	21MΔ	2.0m	#S 25	10	12	25u	250	20m	250	700nb	30	20	14p	A	T05	A	
56#	MM404†	150m	25M	2.0m	#J 25	24	12	150m	5.0uA	6.0	1.0m	135	50u	3.0k	8.0p	A	T018	A	
57#	MM404A†	150m	25M	2.0m	#J 40	35	25	150m	5.0uA	6.0	1.0m	135	50u	3.0k	8.0p	A	T018	A	
58#	SFT229†	150m	25M	2.5m	#J 18	15	#	12	250m	10u	500	10m	75	12p	A	T05	A		
59#	SFT320	150m	35Ms	2.5m	#J 20	1.5	1.5	100m	4.2u	500	20m	40	2.5p	D	T01	A			
60#	2N7941	150m	40M	2.5m	#A 13	12	1.0	100m	3.0uA	300	10m	50	8.0p	ME	T018	A			
61#	2N1854	150m	40MΔ	3.7m	#S 18	2.0	2.0	100m	4.0uA	750	100m	25	12p	A	T05	A			
62#	JAN2N1854†	150m	40MΔ	3.7m	#S 18	2.0	2.0	100m	40uA	750	100m	25	12p	A	T05	A			
63#	SFT317	150m	40Ms	2.5m	#J 20	1.5	1.5	100m	15u	9.0	1.0m	100	2.5p	D	T01	A			
64#	2N795†	150m	60Ms	2.5m	#A 13	12	4.0	100m	3.0uA	300	10m	50	8.0p	ME	T018	A			
65#	2N3011†	150m	60Ms	2.5m	#A 13	12	5	4.0	100m	3.0uA	30	30	12p	A	R81m	A			
66#	2SA4121	150m	60Ms	2.5m	#J 12	12	1.2	100m	5.0uA	500	10m	50	12p	A	T018	A			
67#	UPI1301	150m	60M	2.5m	#A 13	12	4.0	100m	3.0u	.30	10m	50	8Op	ME	OV9	A			
68#	2N796†	150m	80Ms	2.5m	#A 13	12	4.0	100m	3.0uA	.30	10m	75	8Op	ME	T018	A			
69#	2N16831	150m	80M	2.0m	#A 13	12	4.0	100m	3.0uA	.50	40m	85	12p	A	T05	A			
70#	T1397	150m	90Ms	2.5m	#J 35	35	2.0	50m	3.0uA	5.0	50m	28	2.0p	ME	T058	F			
71#	T1398	150m	90Ms	2.5m	#J 35	35	2.0	50m	5.0uA	6.0	50m	28	2.0p	ME	T058	F			
72#	HEP1S	150m	100Ms	2.5m	#J 12	1.5	2.5	100m	3.0uA	.50	50m	85	12p	A	T018	A			
73#																			

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX. COLL. @25°C	2. DERATE DISS. @25°C	ABS MAX RATINGS @25°C						MAX. ICBO @MAX	TYPICAL N' PARAMETERS						Cob	STRUCTURE	DWG # Y200 s/a TO200 Ser.	E A D E	
				IN [W]	M [Hz]	BVCBO	BVCEO	BVBE0	IC		VCB	BIAS	COMMON Emitter (mhos)	HFE	HOE	HEE	CRE				
1	2N969t	150m	300MΔ	2.0m	#J 12	12 0	2.0	200m	3.0uØ	.500	10mØ	17 Δ					8pØ	T018	AØ		
2	2N970t	150m	300MΔ	2.0m	#J 12	12 0	1.2	200m	3.0uØ	.500	10mØ	17 Δ					8.0pØ	T018	AØ		
3	2N971t	150m	300MΔ	2.0m	#J 7.0	7.0 0	1.2	200m	10uØ	.500	10mØ	17 Δ					8.0pØ	T018	AØ		
4	2N972t	150m	300MΔ	2.0m	#J 15	15 0	2.5	200m	3.0uØ	.500	10mØ	40 Δ					8pØ	T018	AØ		
5	2N973t	150m	300MΔ	2.0m	#J 12	12 0	2.0	200m	3.0uØ	.500	10mØ	17 Δ					8pØ	T018	AØ		
6	2N974t	150m	300MΔ	2.0m	#J 12	12 0	1.2	200m	3.0uØ	.500	10mØ	17 Δ					8.0pØ	T018	AØ		
7	2N975t	150m	300MΔ	2.0m	#J 7.0	7.0 0	1.2	200m	10uØ	.500	10mØ	40 Δ					8.0pØ	T018	AØ		
8	2N985t	150m	300M	2.0m	#J 15	15 0	3.0	200m	100u	.500	100m	60 Δ					6.0p	T018	AØ		
9	2N34491	150m	300MΔ	2.0m	#S 15	6.0	1.5	100m	3.0uØ	.250	10mØ	20 Δ					5pØ	T018	AØ		
10	JAN2N34491	150m	300MΔ	2.0m	#S 15	6.0	1.5	100m	100u	.250	10mØ	20 Δ					5.0pØ	T018	AØ		
11	2N741	150m	360M	2.0m	#J 15	15 0	1.0	100m	3.0uØ	6.0	5.0mØ	25 t	45ub	8.0			6.0p	ME	T018	AØ	
12	2N741A	150m	360M	2.0m	#J 20	20 0	1.0	100m	3.0uØ	6.0	5.0mØ	25 t					6.0p	ME	T018	AØ	
13	2N2956t	150m	375M	2.0m	#J 40	20	3.5	100m	1.0	50mØ	75 t					4pØ	EMΔ	T018	A		
14	2N828A	150m	400M	2.0m	#J 15	15 0	2.5	100m	3.0u	.300	10mØ	25 Δ					4pØ	EMΔ	T018	AØ	
15	2N2957t	150m	400M	2.0m	#J 40	18	3.5	100m	1.0	6.0	50mØ	130 t					4pØ	EMΔ	T018	A	
16	2N3371	150m	400MΔ	2.0m	#S 15	15 0	3.0	100m	7.0uØ	6.0	12mØ	25 Δ					4.0pØ	T018	AØ		
17#	2SA4417t	150m	400M	2.0m	#J 15	15 0	2.5	200m	3.0uØ	.300	10mØ	70 t					4.0p	EM	T046	AØ	
18#	2SA4450H1	150m	530M	2.0m	#J 12	6.0	1.5	100m	3.0uØ	1.00	50mØ	45					2.3p	EM	T018	A	
20#	2SA4452H1	150m	630M	2.0m	#J 12	6.0	1.6	100m	3.0uØ	1.00	50mØ	95					2.3p	EM	T018	A	
21	JAN2N1094	150m	580MΔ	2.0m	#J 30	10	4.0	5.0uØ	6.0	4.0mØ	15 t	20u/b	15 t	30 t			D	T029	AØ		
22	2N3323	150m	600M	2.0m	#J 35	35 0	3.0	100m	10uØ	100	3.0mØ	30 Δ					3pØ	T018	A		
23	2N3324	150m	600M	2.0m	#J 35	35 0	3.0	100m	10uØ	100	3.0mØ	30 Δ					3pØ	T018	A		
24*	HEP636s	150m	600M	2.0m	#J 35	35 0	3.0	100m	500u	10		120 t					1pØ	EMØ	T072	G	
25	2N3784	150m	700MΔ	2.0m	#J 30	20	50	20m	5.0uØ	100	3.0mØ	20 Δ					1.2pØ	EMØ	T072	G	
26	2N3785	150m	700M	2.0m	#J 15	12	50	20m	5.0uØ	100	3.0mØ	15 Δ					1pØ	EMØ	T072	G	
27	2N3783	150m	800MΔ	2.0m	#J 30	20	50	20m	5.0uØ	100	3.0mØ	20 Δ									
28*	HEP637s	150m	800M	2.0m	#J 20	15 0	30	10m	5.0uØ	10		120 t									
29	MM5000	150m	800MΔ	2.0m	#J 30	15	30	10m		120	3.0mØ	30 Δ					6pØ	Ø	T072	G	
30	MM5001	150m	800MΔ	2.0m	#J 30	15	30	10m		120	3.0mØ	30 Δ					6.0pØ	Ø	T072	G	
31	MM5002	150m	800MΔ	2.0m	#J 30	15	30	10m		120	3.0mØ	30 Δ					6.5pØ	Ø	T072	G	
32	2N444A	155m	1.0MØ	2.5m	#S 25	25	50m	8.0u	5.0	1.0m	31					40p	R32	A			
33#	AC132	156m	250M	3.1m	#J 25	25	25	10uØ	5.0	14m	14 Δ					3.0p	ADØ	T012	A		
34	AFY42	170m	650M	1.3m	#S 30	25	30	10m	6.0u	100	2.0mØ	33 t					250f	T018	A		
35	2N109	165m	2.8m	#S 25	25	12	150m	10uØ	1.00	50mØ	65					60pØ	ADØ	T040	A		
36#	2SB345	165m	17k1	3.3m	#J 32	32	10	100m	10uØ	5.0	2.0m	125									
37#	2SB346	165m	17k1	3.3m	#J 32	32	10	100m	10uØ	5.0	2.0m	220									
38	2N2428	165m	1.2MØ	303u	#J 32	32	10	30m	10uØ	5.0	2.0m	120									
39#	2SB371	165m	2.0M	3.3m	#J 32	32	10	200m	15uØ	50	50m	125 t									
40	2N2429	165m	2.3M	303u	#J 32	30	10	100m	10uØ	5.0	2.0m	40					50pØ	A	T01	A	
41	JAN2N1008B	167m	500kΔ	2.2m	#S 60	55	20	300m	15u	5.0	10mØ	40 Δ	800nb	7			50pØ	A	T05	A	
42	2N1008	167m	1.0M	2.8m	#J 20	20	30	300m		5.0	10mØ	90	300u	600	10						
43	2N1008A	167m	1.0M	2.8m	#J 40	40	30	300m		5.0	10mØ	90	300u	600	10						
44	2N1008B	167m	1.0M	2.8m	#J 60	60	30	300m		5.0	10mØ	90	300u	600	10						
45#	AC132	170m	1.3M	3.3m	#J 32	32	10	200m	10uØ	0.0	50mØ	15 t									
46#	2SB22	170m	2.5M	#J 25	25	75	150m	15uØ	1.50	30m	95										
47	2N446	170m	1.0M	2.9m	#J 45	40	12	100m	15uØ	6.0	1.0m	26	17u	1900	35						
48	2N4465	170m	1.1M	2.9m	#J 45	30	12	100m	15uØ	6.0	1.0m	45	18u	11.4k	43						
49	2N363	170m	1.5M	2.9m	#J 32	30	6.0	100m	15uØ	6.0	1.0m	50									
50	2N466	170m	1.5M	2.9m	#J 35	20	12	100m	15uØ	6.0	1.0m	90	20u	13.0k	6.5						
51	2N633	170m	1.5M	2.9m	#J 32	30	6.0	100m	25u	6.0	50mØ	60 t									
52	2N362	170m	2.0M	2.9m	#J 25	18	8.0	100m	15uØ	6.0	1.0m	90									
53	2N360	170m	2.5M	2.9m	#J 32	30	6.0	200m	15uØ	1.00	50m	100 t									
54	2N361	170m	2.5M	2.9m	#J 32	30	6.0	200m	15uØ	1.00	50m	90 t									
55	2N4413	170m	2.5M	2.8m	#J 30	18	20	200m	5.0uØ	6.0	1.0m	30	600nb	25	50		12p	FAØ	T05	A	
56	2N632	170m	2.5M	2.9m	#J 30	24	6.0	100m	25u	5.00	50m	120 t									
57	2N467	170m	2.7M	2.9m	#J 35	15	12	100m	15uØ	6.0	1.0m	180	22u	5.5k	6.2						
58	2N359	170m	3.5M	2.9m	#J 25	18	6.0	200m	15uØ	1.00	50m	200 t									
59	2N631	170m	3.5M	2.9m	#J 25	18	6.0	100m	25u	6.0	1.0m	200 t									
60	2N4251	170m	4.0M	2.9m	#J 30	20	20	200m	4.0uØ	250	1.0mØ	30 t					5.5	14p	FA	T05	A
61	2N4261	170m	6.0M	2.9m	#J 30	18	20	400m	4.0uØ	250	1.0mØ	40 t									
62	2N414	170m	7.0M	2.8m	#J 30	15	20	200m	5.0uØ	6.0	1.0m	60	620nb	25	5.0		12p	FAØ	T05	A	
63	2N416	170m	10M	2.8m	#J 30	12	20	200m	5.0uØ	6.0	1.0m	80 t	650nb	25	7.0		12p	FAØ	T05	A	
64	2N1171	170m	10MØ	2.9m	#J 30	12	20	400m	5.0uØ	250	1.0mØ	30 t					14p	FAØ	T05	A	
65	2N427t	170m	11M	2.9m	#J 30	15	20	400m	4.0uØ	250	1.0mØ	55 t					14p	FA	T05	A	
66	2N4281	170m	17M	2.9m	#J 30	12	20	400m	4.0uØ	250	1.0mØ	80 t					14p	FA	T05	A	
67	2N417	170m	20M	2.8m	#J 30	10	20	200m	5.0uØ	6.00	1.0m	140	770nb	26	11		12p	FA	T05	A	
68	2N1017	170m	20M	2.9m																	

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE NO.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR (Hz)	T ABS MAX RATINGS @25°C (V)	TYPICAL "H" PARAMETERS								Cob	STRUCTURE	DWG #						
					IN AIR (Hz)	M E AIR (Hz)	BV _{cbo}	BV _{ceo}	BV _{beo}	I _c	MAX. I _{cbo} @MAX V _{cbo}	COMMON Emitter	h _{fe}	h _{oe}	h _{ie}	h _{re}					
1	JAN2N331	200m	400k Δ	2.7m	#S 30	16	12	200m	100	6.0 μ	1.0m Ω	30 Δ	1.0u _{db}	50 μ A	50p μ	A	T05	A			
2	2N2042	200m	500k Δ	2.6m	#J 105	105	75	200m	25u	6.0 μ	1.0m Ω	80	550nb	40	25p μ	A	T05	A			
3	2N2042A	200m	500k Δ	2.7m	#S 105	105 \emptyset	75	200m	25u	6.0	1.0m	20 Δ	7.0u _{db}	50 μ A	25p μ	A	T05	A			
4	MA885	200m	500k Δ	2.6m	#J 50	50 \emptyset	15	500m	100u	6.0 μ	1.0m	15 Δ	7.0u _{db}	40 μ	25p	A	T05	A			
5	2N650	200m	750k Δ	2.7m	#S 45	30 \emptyset	30	500m	10u _{db}	6.0 μ	1.0m	30 Δ	37 μ b	64	25p μ	A	T05	A			
6	2N650A	200m	750k Δ	2.7m	#S 45	30 \emptyset	30	500m	10u _{db}	6.0 μ	1.0m	30 Δ	1.0u _{db}	37 μ b	25p μ	A	T05	A			
7	JAN2N650A	200m	750k Δ	2.6m	#S 45	30	30	500m	50u	6.0 μ	1.0m	30 Δ	700n _{db}	37 μ	8.0 μ	25p μ	A	T05	A		
8	2N2043	200m	750k Δ	2.6m	#J 105	105	75	200m	25u	6.0 μ	1.0m Ω	180	550nb	40	25p μ	A	T05	A			
9	2N2043A	200m	750k Δ	2.7m	#S 105	105 \emptyset	75	200m	25u	6.0	1.0m Ω	45	1.0u _{db}	50 μ	25p μ	A	T05	A			
10	MA881	200m	750k Δ	2.6m	#J 60	60 \emptyset	15	500m	100u	6.0 μ	1.0m	30 Δ	100n _{db}	40 μ	25p	A	T05	A			
11	MA886	200m	750k Δ	2.6m	#J 50	50 \emptyset	15	500m	100u	6.0 μ	1.0m	30 Δ	1.0u _{db}	40 μ	25p	A	T05	A			
12	2N188A	200m	80M	3.3m	#J 25	25 \emptyset	5.0	200m	16u	1.0 μ	100m	24 Δ	1.2k	40p	R32						
13	ZN189	200m	800k	3.3m	#J 25	25 \emptyset	10	200m	16u	5.0	1.0m Ω	32 Δ	1.0ub	29	4.0	40p	A	R32			
14#	NKT210	200m	90M Δ	3.1m	#J 45	30	10	500m	10u _{db}	0.06	25m Ω	50 μ A	80p μ	TO1	A						
15#	NKT211	200m	90M Δ	3.1m	#J 32	30	10	100m	10u _{db}	0.06	50m Ω	40 μ A	80p μ	TO1	A						
16#	NKT212	200m	90M Δ	3.1m	#J 32	32 \emptyset	10	500m	10u _{db}	0.06	50m Ω	50 μ A	60p μ	TO1	A						
17#	NKT213	200m	90M Δ	3.1m	#J 32	32 \emptyset	10	250m	10u _{db}	4.5 μ	1.0m Ω	50 μ A	60p μ	TO1	A						
18#	NKT214	200m	90M Δ	3.1m	#J 32	32 \emptyset	10	250m	10u _{db}	4.5 μ	1.0m Ω	30 Δ	60p μ	TO1	A						
19#	NKT215	200m	90M Δ	3.1m	#J 32	32 \emptyset	10	250m	10u _{db}	4.5 μ	1.0m Ω	15 Δ	60p μ	TO1	A						
20#	NKT216	200m	90M Δ	3.1m	#J 32	32 \emptyset	10	250m	10u _{db}	4.5 μ	1.0m Ω	50 μ A	60p μ	TO1	A						
21#	NKT217	200m	90M Δ	3.1m	#J 60	40	10	500m	10u _{db}	0.06	25m Ω	60 μ A	60p μ	TO1	A						
22#	NKT219	200m	90M Δ	3.1m	#J 32	32 \emptyset	10	250m	10u _{db}	4.5 μ	1.0m Ω	85 μ A	60p μ	TO1	A						
23	2N187A	200m	1.0M	3.3m	#J 25	25 \emptyset	5.0	200m	16u	1.0 μ	100m	36 Δ	80p μ	40p	R32						
24	2N190	200m	1.0M	3.3m	#J 25	25 \emptyset	10	200m	16u	5.0	1.0m	42	800nb	29	4.0	40p	A	R32			
25	ZN322	200m	1.0M Δ	2.7m	#J 18	18 \emptyset	5.0	200m	16u	1.0 μ	1.0m Ω	20m Ω	34 Δ	35p μ	A	T05	A				
26	2N651	200m	1.0M Δ	2.7m	#S 45	30 \emptyset	30	500m	10u _{db}	6.0 μ	1.0m	50 μ A	100n _{db}	40 μ	25p	A	T05	A			
27	2N651A	200m	1.0M Δ	2.7m	#S 45	30 \emptyset	30	500m	10u _{db}	6.0 μ	1.0m	50 μ A	1.0u _{db}	37 μ b	25p μ	A	T05	A			
28	JAN2N651A	200m	1.0M Δ	2.6m	#S 45	30	30	500m	50u	6.0 μ	1.0m	50 μ A	700n _{db}	37 μ	10 μ	25p μ	A	T05	A		
29#	ZSB415	200m	1.0M	3.3m	#J 32	32 \emptyset	16.0	1	14u _{db}	0.0	300m	70 Δ	80p μ	TO1	A						
30#	ZSB494	200m	1.0M	3.3m	#J 25	25	18	5.0	1.0	20u _{db}	1.0 μ	150m	38 Δ	80p μ	TO1	A					
31#	ZSB495	200m	1.0M	3.3m	#J 25	25	18	5.0	1.0	20u _{db}	1.0 μ	150m	110 Δ	80p μ	TO1	A					
32#	ZSB495A	200m	1.0M	3.3m	#J 32	25	16.0	1.0	20u _{db}	1.0 μ	150m	110 Δ	80p μ	TO1	A						
33#	HEP6295	200m	1.0M Δ	2.5M	#J 55	40 \emptyset	30	400m Δ	10u _{db}	20	50 μ A	50 μ A	50 μ A	50 μ A	50 μ A	50 μ A	50 μ A	50 μ A	50 μ A		
34#	HEP6305	200m	1.0M Δ	2.5M	#J 55	40 \emptyset	30	400m Δ	10u _{db}	20	100m	110 Δ	100n _{db}	40 μ	25p μ	A	T05	A			
35	MA100	200m	1.0M Δ	2.7m	#J 60	60	10	500m	100u	6.0 μ	1.0m	50 μ A	100n _{db}	40 μ	25p	A	T05	A			
36	MA882	200m	1.0M Δ	2.6m	#J 60	60	10	500m	100u	6.0 μ	1.0m	50 μ A	1.0u _{db}	37 μ b	25p	A	T05	A			
37	MA887	200m	1.0M Δ	2.6m	#J 50	50 \emptyset	15	500m	100u	6.0 μ	1.0m	50 μ A	1.0u _{db}	40 μ	25p	A	T05	A			
38#	NKT271	200m	1.0M	3.1m	#J 15	15	15 \emptyset	5.0	500m	10u _{db}	1.5 μ	50m Ω	50 μ A	35 μ A	TO1	A					
39#	NKT272	200m	1.0M	3.1m	#J 15	15	15 \emptyset	5.0	250m	10u _{db}	4.5 μ	1.0m Ω	35 μ A	35 μ A	TO1	A					
40#	NKT274	200m	1.0M	3.1m	#J 15	15	15 \emptyset	5.0	250m	10u _{db}	4.5 μ	1.0m Ω	85 μ A	85 μ A	TO1	A					
41#	NKT275	200m	1.0M	3.1m	#J 15	15	15 \emptyset	5.0	250m	10u _{db}	4.5 μ	1.0m Ω	100 μ A	100 μ A	100 μ A	100 μ A	100 μ A	100 μ A	100 μ A		
42	2N188A	200m	1.2M	3.2m	#J 25	25 \emptyset	5.0	200m	16u	1.0 μ	100m	54 Δ	2.6k	40p	R32						
43	ZN191	200m	1.2M	3.3m	#J 25	25 \emptyset	5.0	200m	16u	5.0	1.0m Ω	67	600nb	29	4.0	40p	A	R32			
44	2N652	200m	1.2M Δ	2.7m	#S 45	30 \emptyset	30	500m	10u _{db}	6.0 μ	1.0m	100 Δ	37 μ b	25p μ	A	T05	A				
45	2N652A	200m	1.2M Δ	2.7m	#S 45	30 \emptyset	30	500m	10u _{db}	6.0 μ	1.0m	100 Δ	1.0u _{db}	37 μ b	25p μ	A	T05	A			
46	JAN2N652A	200m	1.2M Δ	2.6m	#J 45	30	10	500m	50u	6.0 μ	1.0m	100 Δ	700n _{db}	37 μ	12 μ	25p μ	A	T05	A		
47#	ZSB167	200m	1.2M	3.3m	#J 20	20	25 \emptyset	2.5	500m	50u	6.0 μ	1.0m Ω	20u _{db}	6.0 μ	38u	2.4k	8.9	A	TO1	A	
48#	ZSB431	200m	1.2M	3.3m	#J 32	32 \emptyset	12	500m	20u _{db}	6.0 μ	1.0m Ω	80	38u	2.4k	8.9	A	TO1	A			
49	MA883	200m	1.2M Δ	2.6m	#J 60	60	10	500m	100u	6.0 μ	1.0m	100 Δ	100n _{db}	40 μ	25p	A	T05	A			
50	MA888	200m	1.2M Δ	2.6m	#J 50	50 \emptyset	15	500m	100u	6.0 μ	1.0m	100 Δ	1.0u _{db}	40 μ	25p	A	T05	A			
51#	SFT351	200m	1.2M	3.3m	#J 24	24	12	500m	15u	6.0 μ	1.0m Ω	30	1.0k	2.7	32p	A	TO1	A			
52	2N241A	200m	1.3M	4.0m	#J 25	25 \emptyset	5.0	200m	16u	1.0 μ	100 Δ	40 μ	4.0k	32p	A	R32					
53#	SFT321	200m	1.3M	3.3m	#J 24	24	12	250m	15u	1.0 μ	100 Δ	30 μ	1.0k	3.0	32p	A	TO1	A			
54	2N192	200m	1.5M	5.0m	#J 25	25 \emptyset	10	200m	16u	5.0	1.0m Ω	90 μ									

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. (W)	2 DERATE DISS. @25°C	ABS MAX RATINGS @25°C					MAX. ICBO @MAX	TYPICAL H _E PARAMETERS					Cob	STRUCTURE	DWG # Y200 s/a TO200 Ser.	C E A D E			
				IN (Hz)	M FREE AIR W/C	E BV _{cbo}	BV _{ceo}	BV _{beo}	I _c	I _{cbo}	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}					
1	ZNT3541	200m	4.5M	3.3m	#J 30	15	20	200m	6.0u _o	1.00	10m _o	70 t	6	90	12p	A	T05	A			
2	ZN396A1	200m	5.0M	3.3m	#S 30	20	20	200m	6.0u _o	1.00	10m _o	30 t _Δ			20p _z		T05	A ₅			
3	JAN2N396A	200m	5.0M _Δ	3.3m	#S 30	20	20	200m	100u	1.00	10m _o	30 t _Δ			20p _z		T05	A			
4	ZN1280	200m	6.0M	3.3m	#J 16		10	400m	10u	1.00	20m _o	60 t					T05	A			
5	ZN1284	200m	6.0M	3.3m	#J 20		10	400m	6.0u	1.00	10m _o	90 t			15p		T05	A			
6	ZN1348	200m	6.0M	3.3m	#J 40		25	400m	10u	300	10m _o	95 t			12p	A	T05	A			
7	ZN13561	200m	5.0M _Δ	2.6m	#J 30	20	20	200m	6.0u _o	1.00	10m _o	80 t			12p	A	T05	A			
8	ZN1449	200m	5.0M	3.3m	#J 45	25	15	400m	10u _o	6.0	1.0m	80		770nb	25	11	20p	A _Δ	T05	A	
9	ZN1471	200m	5.0M	3.3m	#J 12		7.0	200m	5.0u	6.0	1.0m _o	160 t			18p		T05	A			
10	ZN3428	200m	5.0M _Δ	2.7m	#S 45	30	5	300m	50u	6.00	10m _o	350 Δ	500n _z b	35		20p _z		T05	A		
11	MA1704	200m	5.0M	2.6m	#J 25	25	5	250m	15u	1.00	100m _o	150 t _Δ			20p _z		A _Δ	T05	A		
12	ZN4148	200m	7.0M	3.3m	#J 30		20	400m	6.0u	6.0	1.0m	60			12p		T05	A			
13	ZN414C	200m	7.0M	3.3m	#J 30		20	400m	6.0u	6.0	1.0m	60			12p		T05	A			
14	ZN1281	200m	7.0M	3.3m	#J 16		10	400m	10u	1.00	20m _o	90 t			10p		T05	A			
15	ZN1350	200m	8.0M	3.3m	#J 50		25	400m	20u	300	10m _o	95 t			12p	A	T05	A			
16	ZN1351	200m	8.0M	3.3m	#J 40		25	400m	10u	300	10m _o	65 t			12p	A	T05	A			
17	ZN13551	200m	8.0M	3.3m	#J 30	20	20	200m	6.0u _o	1.00	10m _o	80 t			12p	A	T05	A			
18	ZN2172	200m	8.0M	2.6m	#S 20		10	400m	6.0u	5.0	1.0m	55		600nb	28	80	12p	A	T05	A	
19	ZNT282	200m	10M	3.3m	#J 16		10	400m	10u	1.00	20m _o	100 t			10p		T05	A			
20	ZN13161	200m	10M _Δ	3.3m	#J 30	15	20	400m	25u	250	1.0m _o	100 t			14p	A	T05	A			
21	ZN13171	200m	10M _Δ	3.3m	#J 20	12	15	400m	25u	250	1.0m _o	95 t			14p	A	T05	A			
22	ZN1318	200m	10M _Δ	3.3m	#J 10	6.0	8.0	400m	7.0u	250	1.0m _o	85 t			14p		T05	A			
23	ZN1349	200m	10M	3.3m	#J 40		25	400m	10u	300	1.0m _o	110 t			12p		T05	A			
24	ZN3971	200m	12M	3.3m	#S 30	15	20	200m	6.0u _o	1.00	10m _o	95 t			110		12p	A	T05	A ₅	
25	ZN13571	200m	12M	3.3m	#J 30	15	20	200m	6.0u _o	1.00	10m _o	85 t			110		12p	A	T05	A	
26	ZN522	200m	18M	2.6m	#S 15	8.0	10	200m	2.0u _o	4.50	1.0m	120		700nb	30	14	12p	A	T05	A	
27	ZN523	200m	25M	2.6m	#S 15	6.0	10	200m	2.0u _o	4.50	1.0m	200		700nb	30	20	12p	A	T05	A	
28	ZN1204A1	200m	220M _Δ	2.6m	#S 20	15	4.0	500m	7.0u _o	100	20m	1.1 _Δ			8p _z		T039	A ₅			
29	ZN12041	200m	320M _Δ	2.7m	#S 20	15	4.0	500m	7.0u _o	1.50	400m _o	35 t _#			7.0p		T039	A ₅			
30#	ZB5370AH	200m	1.4G			32	32	12	500	25m	1.00	16m _o	70 t _Δ								
31	ZN6581	210m	5.0M	2.9m	#J 30	18	12	1	5.0u _o	350	50m _o	50 t			12p	F _A	T05	A			
32	ZN662	210m	8.0M	2.9m	#J 30	14	12	1	5.0u _o	350	50m _o	70 t			12p	F _A	T05	A			
33	ZN6591	210m	10M	2.9m	#J 30	16	12	1	5.0u _o	350	50m _o	70 t			12p	F _A	T05	A			
34	ZN6601	210m	15M	2.9m	#J 30	14	12	1	5.0u _o	350	50m _o	90 t			12p	F _A	T05	A			
35	ZN6811	210m	20M	2.9m	#J 30	9.0	12	1	5.0u _o	350	50m _o	120 t			12p	F _A	T05	A			
36	ZN25411	215m	10M _Δ	2.9m	#S 30	14	12	1	20u _o	350	50m _o	60 t _Δ			20p _z		T05	A ₅			
37#	AC138	220m	1.5M	3.3m	#J 32	32	10	1.2	14u	6.00	5.0m _o	100					A	T01			
38#	AC139	220m	1.5M	3.3m	#J 32	32	10	1.2	14u	400	400m _o	80 t					A	T01			
39#	AC142	220m	1.5M	3.3m	#J 32	32	10	1.2	14u	400	400m _o	80 t					A	T01			
40#	INKT281	220m	1.5M _Δ	3.4m	#J 32	16	10	1.0	10u _o	0.00	50m _o	55 t _Δ			100p		T01	A			
41#	AF200	225m	2.2M	2.2m	#J 25	25	20	30	10m _o	10u _o	120	1.0m _o	50 t					M _E			
42#	AF201	225m	2.2M	2.2m	#J 25	25	20	30	10m _o	10u _o	120	1.0m _o	50 t					M _E			
43#	AF202L	225m	2.2M	2.2m	#J 32	32	30	30	30m	10u _o	100	300m _o	65 t					R43			
44#	ZB5178	225m	70M	4.5m	#J 40		6.0	300	20u _o	1.00	300m _o	65 t					A	R43			
45#	JAN2N526	225m	1.0M _Δ	3.0m	#S 45	30	5	15	500m	10u _o	15.0	1.0m _o	24 Δ					A	T05	A ₅	
46	ZB5304	225m	1.0M	3.0m	#J 30	20	10	500m	15u	1.00	50m _o	70 t					A	T05	A		
47#	ZB5304A	225m	1.0M	3.0m	#J 45	30	5	15	500m	10u _o	1.00	50m _o	70 t					A	T05	A	
48#	ZB5376	225m	1.0M	4.5m	#J 20	20	6.0	300m	20u _o	50	300m _o	50 t					A	R43			
49#	ZB5427	225m	1.0M	5.0m	#J 20	20	6.0	300m	20u _o	50	300m _o	50 t					A	T05	A		
50#	ZB5427	225m	1.0M	5.0m	#J 45	30	5	15	500m	15u	1.00	100m _o	60 t					A	T05	A	
51#	ZB5428	225m	1.0M	5.0m	#J 45	30	5	15	500m	15u	1.00	100m _o	60 t					A	T05	A	
52	ZN460	225m	2M	3.0m	#J 45	35	5	10	400m	15u	5.0	1.0m	24		10ub	40	3.0	50p	A	T05	A ₅
53#	SFT221	225m	1.3M	3.7m	#J 30	24	5	15	250m	15u	1.00	100m _o	30 t			25p		A	T05	A ₅	
54#	SFT251	225m	1.3M	3.7m	#J 30	24	5	15	150m	15u	1.00	100m _o	30		20u	900	3.0	25p	A	T05	A
55#	ZN2431	225m	1.5M ₄	3.4m	#J 32	32	10	1	10u _o	0.00	40m _o	90 t			100p _z		A	T01	A		
56#	SFT241	225m	1.6M	3.7m	#J 45	35	5	25	500m	15u	1.00	100m _o	45 t		25u	1.2k	4.0	25p	A	T05	A ₅
57#	ZN21919	225m	2.0M	3.7m	#J 20	20	2.5	2.5	400m _o	15u _o	20	20m _o	34 t		32u	1.6k	4.5	25p	A	T05	A
58#	ASTY81	225m	2.0M	3.7m	#J 20	20	2.5	2.5	500m _o	15u _o	1.00	100m _o	60 t		32u	1.6k	4.5	25p	A	T05	A
59#	HEP2535	225m	2.0M ₄	3.0m	#J 20	20	2.5	2.5	400m _o	15u _o	1.00	20m _o	34 t					A	T05	A	
60#	HEP2545	225m	2.0M ₄	3.0m	#J 20	20	2.5	2.5	400m _o	15u _o	1.00	20m _o	34 t					A	T05	A	
61#	SFT222	225m	2.0M	3.7m	#J 30	24	5	15	250m	15u	1.00	100m _o	50 t					A	T05	A ₅	
62#	SFT243	225m	2.0M	3.7m	#J 60	35	5	25	500m	15u	1.00	100m _o	60 t		32u	1.6k					

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COL. DISS. @25°C (W)	2 DERATE fab (Hz)	ABS MAX RATINGS @25°C					MAX. I _{cbo} @MAX V _{cbo}	TYPICAL H _E PARAMETERS					Cob	STRUCTURE	DWG # Y200 s/a	E O A D TO200 Ser.					
				IN FREE AIR W/C	M A X P	BV _{cbo}	BV _{ceo}	BV _{ebo}		I _c	V _c	I _e	h _{fe}	COMMON Emitter									
				(V)	(V)	(V)	(A)	(A)		(V)	(A)	(A)	(mhos)	(Ω)	X.0001								
1	ZN1378	250m	3.3m	#S	12	12.5	7.0	200m	7.0u	5.0	1.0m	385	55	20u	1.8k	3.3		T05	A				
2	ZN1379	250m	3.3m	#S	25	25.5	15	200m	7.0u	5.0	1.0m	385	55					T05	A				
3	ZN1380	250m	3.3m	#S	12	12.5	7.0	200m	14u	5.0	1.0m	385	55					T05	A				
4	ZN1381	250m	3.3m	#S	25	25.5	15	200m	14u	5.0	1.0m	385	55					T05	A				
5	ZN1382	250m	3.3m	#S	25	25.5	15	200m	14u	5.0	1.0m	187	55					T05	A				
6	ZN1383	250m	3.3m	#S	25	25.5	15	200m	14u	5.0	1.0m	187	55					T05	A				
7#	ZSB89	250m																A	T07				
8#	ZSB89A	250m																A	R27				
9	ZN2271	250m	0.1mA																T05	A			
10	ZN226	250m	400k	3.3m	ØJ	30												A	T025	A			
11	ZN227	250m	400k	Pair of ZN226 with hFE matched to within 20 percent.														A	T025	A			
12	JAN2N461	250m	500kΔ	3.3m	#J	45	35.5*	10	400m	10u	6.0	1.0m	31Δ	1.5u	2b	40		20p	R81	A			
13	ET670	250m	50MΔ	4.2m	#J	40			5.0	1.5	#	50u	1.5	10	40	TA							
14	ZN224	250m	510k	3.3m	ØJ	25			150m	25u	6.0	1.0m	2.0ub	7.5				A	T025	A			
15	ZN225	250m	510k	Pair of ZN224 with hFE matched to within 20 percent.														A	T025	A			
16	ZN223	250m	600k	5.0m	*J	18			150m	20u	14.5	2.0m	Ø	110				A	T025	A			
17	ZN1416	250m	600k	Pair of ZN223 with hFE matched to within 20 percent.					150m	14u	6.0	1.0m	85	22	u	2.4k	4.9		A	T025	A		
18#	ZSB34	250m	80M	4.2m	#J	20			150m	14u	6.0	1.0m	85	22	u	2.4k	4.9		A	T07			
19#	ZSB38	250m	80M	4.2m	#J	30	20.5		12.5	150m	16u	6.0	1.0m	90	33u				A	T07			
20#	ZSB199	250m	80M	4.2m	#J	12			2.5	300m	13u	3.0	1.0m	6.1				A	T07				
21	ZN3986	250m	1.0M	#A	105	105	ØJ	75	200m	6.0u	2.50	5.0m	Ø	20	TA			A	T05	A			
22#	ZSB189	250m	1.0M	ØJ	25				12.5	250m	14u	1.0	100m	70				35p	A	X5			
23	ZSB476	250m	1.2M ¹	3.8m	#J	20	10		12	150m	50u	0.0	2	75	↑				A	T039			
24#	ZSB88AH	250m	1.5M		#J	45	45	ØJ	12	150m	50u	6.0	1.0m	60				A	T07				
25#	ZSB89H	250m	1.5M		#J	30	30.5		12.5	150m	12u	6.0	1.0m	60				A	T07				
26	ZN597	250m	3.0MΔ	3.3m	#J	45	40	ØJ	45	500m	25u	1.0	100m	40	TA			20p	A	A			
27	ZN2930†	250m	4.0M ¹ Δ	3.3m	#S	30	12		20	500m	7.0u	50	1.0m	60				20p	A	A			
28	JAN2N5981	250m	5.6M ¹ Δ	3.3m	#S	35	35	ØJ	30		25u	1.0	200m	50	TA			20p	A	A			
29	ZN1997	250m	6.0M	3.3m	#J	45			45	500m	25u	1.0	100m	70				10p	A	A			
30	ZN1478	250m	8.0M	3.3m	#J	30	20		20	500m	5.0u	1.0	100m	70				15p	A	A			
31	ZN2375	250m	9.0M	3.0m	#	35	35	ØJ	35	150m	100u	12	2.0m	Ø	75		66u	1.4k	5.4	14p	A	T05	
32	ZN2376	250m	9.0M	#					Matched pair of ZN2375										A	T05	A		
33	ZN5981	250m	10M	3.3m	#J	35	35	ØJ	30	500m	25u	5.0	3.0m	1.4	Δ			20p	A	A			
34	ZN5991	250m	10M ¹ Δ	3.3m	#J	30	20	ØJ	20	500m	25u	1.0	200m	75	TA			20p	A	A			
35	JAN2N5991†	250m	10M ¹ Δ	3.3m	#S	30	20	ØJ	20		25u	1.0	200m	75	TA			20p	A	A			
36	ZN1998	250m	10M	3.3m	#J	35			30	500m	25u	1.0	200m	95				10p	A	A			
37	ZN2374	250m	15M	3.0m	#J	35	35	ØJ	35	500m	100u	12	2.0m	Ø	140		90u	3.0k	8.7	14p	A	T05	
38	ZN1999	250m	17M	3.3m	#J	30	20		20	500m	25u	1.0	200m	150				10p	A	A			
39	ZN14951	250m	150M ¹ Δ	3.3m	#S	40	25	ØJ	40	500m	7.0u	5.0	200m	25	Δ			6.5p	A	A			
40	JAN2N1195	250m	400M ¹ Δ	3.3m	#S	30	20		1.0	40m	5.0u	10	10m	2.4	Δ		20u	2b	10	10	2.0p	T05	A
41	ZN20961	250m	400M ¹	3.3m	#S	25			1.0	40m	12u	1.5	400m	40	TA			15p	D	T031	A		
42	ZN2097†	250m	400M ¹	3.3m	#S	40			4.0	500m	12u	1.0	200m	70				15p	D	T031	A		
43	ZN2099	250m	400M ¹	3.3m	#S	25			4.0	500m	12u	1.5	400m	40				15p	D	T09	A		
44	ZN21001	250m	400M ¹	3.3m	#S	40			4.0	500m	12u	1.0	200m	70				15p	D	T09	A		
45	ZN1562	250m	450M	3.3m	#J	25			2.0	250m	10u	1.0	200m	140				7.0p	ME	R70			
46	ZN1561	250m	500M ¹	3.3m	#J	25	25		3.0	250m	10u	1.0	200m	50				7.0p	ME	R70			
47	MM380	250m	600M ¹	3.3m	#J	25	10		30	100u	10u	1.0	3.0m	50	↑			1.4p		T018	A		
48#	ZSA373	250m	640M		#J	25	12		50	150m	15u	10	5.0m	40				3.2p	EM	T05			
49	ZN382	255m	4.0M	3.0m	#J	50	25	ØJ	20	400m	10u	5.0	10m	90				20p	A	T05			
50	ZC178	260m	0.1M ¹	4.0m	#J	20	15		10	700m	40u	2.0	150m	60	TA			A	X9				
51#	ACY41†	260m	600k ¹	4.0m	#J	32	18		12	500m	100u	6.0	3.0m	1.4	Δ			A	A	A			
52#	ACY40†	260m	800k ¹	4.0m	#J	32	18		12	500m	100u	6.0	1.0m	45				A	A	A			
53#	ACY171	260m	1.0M ¹	4.0m	#J	70	32		12	500m	100u	6.0	1.0m	85				A	A	A			
54#	ACY18†	260m	1.0M ¹	4.0m	#J	50	30		12	500m	100u	6.0	1.0m	60				A	A	A			
55#	ACY20	260m	1.0M ¹	4.0m	#J	40	20		12	500m	100u	6.0	1.0m	85				A	A	A			
56#	ACY22†	260m	1.0M ¹	4.0m	#J	20	15		12	500m	100u	6.0	1.0m	75				A	A	A			
57#	ACY39†	260m	1.0M ¹	4.0m	#J	110	40		25	500m	100u	6.0	1.0m	85				A	A	A			
58#	ACY44	260m	1.0M ¹	4.0m	#J	50	30		12	500m	100u	6.0	1.0m	60				A	A	A			
59#	ACY19†	260m	1.3M ¹	4.0m	#J	50	30		12	500m	100u	6.0	1.0m	140				A	A	A			
60#	ACY21†	260m	1.3M ¹	4.0m	#J	40	20		12	500m	100u	6.0	1.0m	140				A	A	A			
61#	AC142K	260m	1.5M	4.0m	#J	32	32	ØJ	10	1.2	14u		400m	80			A	T01					
62#	ZN2207	260m	140M ¹ Δ	5.2m	ØS	70	50	50	150m	10u	1.0	20m	42	1	500nb	27	3.5		A	T05	H		
63#	ZSB381	270m	1.3M	#J	32	30	5		300m	10u	1.0	20m	134					A	T05				
64#	ZSB377	270m	1.4M ¹	#J	32	30	5		300m	10u	1.0	20m	84	1	500nb	27	5.0		A	T05			
65#	ZSB382	270m	1.5M	#J	32	30	5		300m	10u	1.0	20m	84	1				A	T05				
66#	ZSB383	270m	3.0M	#J</td																			

2. GERMANIUM PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) tab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX. COLL. (W)	2. DERATE DISS. @25°C	ABS MAX RATINGS @25°C				TYPICAL "H" PARAMETERS				Cob	STRUCTURE	DWG # s/a	E O AD TO200 Ser.						
		IN (Hz)	W/°C	M FREE AIR	E AM X P	BV _{cbo}	BV _{ceo}	BV _{beo}	I _c @MAX	V _{cb}	I _e	h _{fe}	COMMON Emitter (mhos)	X.0001	(F)						
1#	2SB67	350m	1.0M			55	12	150m	10u	6.00	1.0m	45	21u	1.3k	2.1	45p	A	T01			
2#	2SB67A	350m	1.0M			60	30	150m	10u	6.00	1.0m	45	21u	1.3k	2.1	45p	A	T01			
3#	SFT124	350m	1.0M	5.9m	#J	24	12	500m	20u	1.00	250m ²	30↑		220			A	R13			
4#	SFT143	350m	1.0M	5.9m	#J	45	20	25	500m	20u	1.00	250m ²	30↑		220		60p	A	R13		
5#	SFT144	350m	1.8M	5.9m	#J	45	20	25	600m	20u	1.00	250m ²	60↑		380		60p	A	R13		
6#	SFT125	350m	2.0M	5.9m	#J	24	12	500m	20u	1.00	250m ²	70↑		500			A	R13			
7#	SFT125P	350m	2.0M	5.9m	#J	30	15	15	500m	25u	1.00	250m ²	70↑		500			A	R13		
8#	2N1692	350m	500M ²	3.3m	#J	25	25	3.0	250m	10u ²							7 Op	ME	MT30		
9#	AF118	375m	125M ²	4.0m ²	J	70	70	30m	16.0u								2.3p ²	AD	T07		
10	JAN2N1039	400m		5.2m	#J	60	40	20	70u ²	1.50	500u ²	20↑		60					R81c		
11	JAN2N1041	400m		5.2m	#J	100	60	20	70u ²	1.50	500u ²	20↑		60					R81c		
12#	AC124	400m		14m	J	45	10		500u	6.0	50m	85↑						A	X9		
13#	AC117	400m	10kt	14m	J	30	10		500u	6.0	50m	85↑						A	X9		
14#	KF2000	400m	0.1M	5.6m	#J	80	50	3	100u ²	500	1.0	35 TΔ						A ²	T05		
15#	KF2001	400m	0.1M	5.6m	#J	120	100	3	100u ²	500	1.0	40 TΔ						A ²	T05		
16#	KF2002	400m	0.1M	5.6m	#J	80	50	3	100u ²	500	1.0	35 TΔ						A ²	T05		
17#	KF2003	400m	0.1M	5.6m	#J	120	100	3	100u ²	500	1.0	40 TΔ						A ²	T05		
18#	2N1494A	400m	220M ²	5.3m	#S	20	15	4.0	500m	7.0u ²	500	200m ²	25 TΔ					8p ²	T031		
19#	2N14941	400m	320M ²	5.3m	#S	20	15	4.0	500m	7.0u ²	1.50	400m ²	35 TΔ					7.0p	AD	T031	
20	AC139K/AC142K																				
		420m	1.5M	6.7m	#J	40	25	3.0	12	10u ²	0.0	400m ²	100 T					40p	A	T01	
21#	SFT234	450m	30M	7.7m	#J	80	50	20	1	750u	5.0	1.0	40 T						A	T011	
22#	SFT234A	450m	30M	7.7m	#J	80	60	20	1	125u ²	5.0	50m ²	30 TΔ						A	T011	
23#	2SB347	500m ²	17kt	3.3m	J	32	10	100m	10u ²	5.0	2.0m	125						A	T01		
24#	2SB348	500m		17kt	J	32	10	100m	10u ²	5.0	2.0m	180						A ²	T01		
25#	ASY76	500m	300M ²	4.0m	#J	40	32	10	300m	40u	0.0	300m	26 TΔ						A ²	T05	
26#	ASY77	500m	300M ²	4.0m	#J	60	60	10	300m	40u	0.0	300m	26 TΔ						A ²	T05	
27#	ASY80	500m	700M ²	4.0m	#J	40	40	20	300m	40u	0.0	300m	5 TΔ						A ²	T05	
28#	SFT232	500m	700M ²	6.6m	#S	40	30	20	3.0	50u ²	500	50m ²	110 T						A	T011	
29#	SFT233	500m	700M ²	6.6m	#S	60	40	20	3.0	50u ²	500	50m ²	110 T						A	T011	
30#	AC125	500m	1.3M ²	3.3m	J	32	32	10	100m	200u	5.0	2.0m	125	80u	1.7k	6.5		A	T01		
31#	AC126	500m	1.7M ²	3.3m	J	32	32	10	100m	200u	5.0	2.0m	100 TΔ	100u	2.4k	8.0		A	T01		
32#	AC132-01	500m	2.0M ²	5.2m	#J	32	12	10	200m	10u ²	200m ²	70↑					40ps	A*	X9c		
33#	2N14981	500m	150M ²	8.7m	#J	40	25	4.0	500m	7.0u ²	500	200m ²	25 TΔ					6.5p ²	T031		
34#	OC74N	500m	550M ²	8.0M ²	11m	J	20	10	6.0	300m	20u ²	6.0m ²	60 TΔ						A	MS5	
35#	SFT130	500m	1.0M	9.1m	#J	24	12	500m	20u	1.0	250m ²	30 T		220							
36#	SFT145	550m	1.0M	9.1m	#J	45	20	25	500m	20u	1.0	250m ²	30 T		220			60p	A	MS5	
37#	OC79	550m	1.2M	11m	J	26	26	20	200m	10u	6.0	50m ²	42						R8		
38#	AC128	550m	1.5M ²	3.3m	#J	32	32	10	1	10u	0.0	50m ²	55 TΔ						A	T01	
39#	OC74	550m	1.5M	11m	J	20	20	20	300m	10u	8.0	5.0m	75						A	R8	
40#	SFT146	550m	1.8M	9.1m	#J	45	20	25	500m	20u	1.0	250m ²	60 T		380			60p	A	MS5	
41#	OC80	550m	2.0M	11m	J	32	32	20	600m	10u	6.0	50m ²	85						A ²	R8	
42#	SFT131	550m	2.0M	9.1m	#J	24	12	500m	20u	1.0	250m ²	70↑		500					A ²	MS5	
43#	SFT131P	550m	2.0M	9.1m	#J	30	15	15	500m	25u	1.0	250m ²	70↑		500				A ²	MS5	
44#	AFY11	560m*	300M ²	4.0m	#J	30	15	1.0	70m	18u ²	100	10m ²	60					1.2p	ME ²	T05	
45#	OC83	600m	85M ²	4.0m	#J	32	20	3.0	500m	100u	6.0	1.0m ²	90						A ²	T01	
46#	OC84	600m	1.0M ²	4.0m	#J	32	32	10	500m	100u	6.0	1.0m ²	90						A ²	T01	
47#	2SB496	600m	2.0M			25	18	5	2.5	250	14m	1.50	50m ²	60 TΔ						A	T01
48#	SFT367	650m	4.0M ²			32	1	1	1	10	300m	250 TΔ						A	R111		
49#	NKT1351	700m	1.0M	100m	#J	30	5.0	2.5	100u ²	0.00	1.0	30 TΔ						A ²	R66b		
50#	2SB405	720m ²	700M ²	#J	25	25	5	6.0	1.0	50u	1.0	200m ²	100 T						A	T01	
51#	2N6011	750m	10 M ²	10m ²	#J	30	20	20	500m	5.0u ²	1.0	100m ²	175 T					15p	A	MT60	
52#	NKT302	750m	1.0M	11m	#J	60	40	15	2.5	50u ²	1.0	50m ²	50 TΔ						A	MT60	
53#	NKT304	750m	1.0M	11m	#J	30	20	15	2.5	50u ²	1.0	50m ²	50 TΔ						A	MT60	
54#	2N1123	750m ²	5.0M ²	10m ²	#J	45	40	45	500m	25u	1.0	100m ²	70↑					15p	A	MT60	
55#	JAN2N600T	750m	5.6M ²	10m ²	#S	35	35	30	500m	25u	1.0	200m ²	50 TΔ					20p ²	A	MT60	
56#	2N600	750m ²	10M ²	10m ²	#J	35	35	30	500m	25u	1.0	100m ²	125 T					15p	A	MT60	
57#	2N1385	750m ²	250M ²	10m ²	#S	25	10	4.0	100m	10u ²	100	10m ²	10 TΔ					2.5p ²	A	R100	
58#	GM378A	750m	400M ²			20	15	30	50m	10u ²	3.0m ²	20 TΔ						EM ²	R80		
59#	2N2929	750m ²	700M ²	.10m ²	#S	25	10	75	100m	5.0u ²	10u ²	10m ²	10 TΔ					3p ²	T05		
60#	GM290A	750m	700M ²			20	15	30	50m		3.0m ²	20 TΔ									
61#	AC188	800m	1.5M ²	13m	#J	25	15	10	1	200u	1.0	300m ²	200 T						90ps	A	R51a
62#	AC188K	800m	1.5M ²	13m	#J	25	15	10	1	200u	1.0	300m ²	200 T							X9a	
63#	AFY19	800m	350M ²	4.0m	#J	32	32	50	300m	10u ²	12	80m	40 TΔ	18					A	T01	
64#	JAN2N2553	900m	1.1M ²	12m	#J	60	40</														

3. GERMANIUM NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) f_{ab} & (3) TYPE No.

LINE No.	TYPE No.	ABS MAX RATINGS @ 25°C										TYPICAL 'H' PARAMETERS										Cob	STRUCTURE	DWG #			
		COLL. DISS. @ 25°C		IN FREE AIR		BVcbo		BVceo		BVbeo		MAX. Icbo @ MAX. Vcb		BIAS			COMMON Emitter										
		W	Hz	fab	X	A	M	V	(V)	(V)	(A)	(A)	(V)	(A)	Ie	hfe	hoe	hie	hre	X.0001	(F)						
1	2N170	20m	2.0M	567 <u></u>	*A	10	10	10	2.0m	100u	3.0 <u></u>	30m	35								4.0p	A/D G	T01	A			
2	2N170	26m	2.5M	1.1m	*S	6.0			20m	3.0u	5.0	1.0m	20										OV5	R5	A		
3	2N166	25m	3.0M	*	6.0				20m	5.0u	6.0	1.0m	32														
4	2N174	50m	3.0M	714u	Ø	10			5.0	8.0m	2.0 <u></u>	5.0	1.0mØ	18								10p		OV9			
5	2N507	50m	1.6M	#	40				100m	15u	50	1.0m	26	Δ										TO22	R116	F	
6	2N567	50m	1.6M	#	40				100m	15u	1.0	1.0m	40														
7	2N103	50m	.75M	*	Ø	35			10m	50u	4.5	1.0m	4.0														
8	2N97	50m	1.0M	*	Ø	30			10m	2.0u	4.5	1.0m	13														
9	2N98	50m	2.5M	*	Ø	40			10m	2.0u	4.5	1.0m	40														
10	2N194	50m	3.0M	1.0m	ØJ	20			18 <u></u>	100m	25u	6.0 <u></u>	1.0mØ	8.0													
11	2N194A	50m	3.0M	1.0m	ØJ	18			100m	50u	6.0 <u></u>	1.0mØ	8.0														
12	2N211	50m	3.0M	1.0m	ØJ	10			50m	20u	6.0 <u></u>	1.0m	5.0														
13	2N216	50m	3.0M	1.0m	ØJ	18			50m	50u	6.0 <u></u>	1.0mØ	7.5														
14	2N515	50m	3.0M	1.0m	ØJ	18			10m	50u	6.0 <u></u>	1.0mØ	7.5														
15	2N516	50m	3.0M	1.0m	ØJ	18			10m	50u	6.0 <u></u>	1.0mØ	7.5														
16	2N517	50m	3.0M	1.0m	#J	18			10m	50u	6.0 <u></u>	1.0mØ	7.5														
17	2N99	50m	3.5M	*	Ø	40			10m	2.0u	4.5	1.0m	40														
18	2N1058	50m	4.0MΔ	2.5m	#J	18			50m	50u	6.0 <u></u>	1.0mØ	17														
19	2N125	50m	5.0M	1.4m	ØJ	10			5.0	8.0m	2.0 <u></u>	5.0	1.0mØ	36													
20	2N126	50m	5.0M	1.4m	ØJ	10			5.0	8.0m	2.0 <u></u>	5.0	1.0m	20													
21	2N169	55m	4.0M	1.1m	ØA	15	15		20m	5.0u												2.4p	G	OV17	A		
22	2N169A	55m	5.0M	1.1m	ØA	25	25		20m	5.0u												2.4p	G	OV17	A		
23	2N168	55m	6.0M	1.1m	#S	20	20	5.0	20m	5.0u												2.4p	G	OV17	F		
24	2N78A	65m																									
25	2N145	65m																									
26	2N146	65m																									
27	2N147	65m																									
28	2N172	65m																									
29	2N253	65m																									
30	2N254	65m																									
31#	2SD162	85m	3.0M	1.1m	#J	20	15	5	2.5	30m	12uØ	6.0 <u></u>	1.0m	60									R18				
32	JAN2N78A	65m	3.4MΔ	920u	#S	20	20	5.0	20m	3.0uØ	1.0 <u></u>	1.0mØ	45	tA#										OV17			
33	2N164	65m	4.0MΔ	*	#J	15	15	1.0	30m	5.0u	1.0 <u></u>	1.0mØ	80	tA													
34	2N165	85m	5.0M	1.1m	#J	15	15		20m	5.0u	1.0 <u></u>	0.2mΔ	72	t													
35	2N292	85m	5.0M	1.1m	#S	15	15		20m	5.0u	1.0 <u></u>	1.0mØ	25	t													
36	2N448	65m	5.0M	1.1m	#S	15	15		20m	5.0u	1.0 <u></u>	1.0mØ	40	t													
37	2N1198	65m	5.0MΔ	*	#J	25			75m		8.0mØ	17t															
38	2N168A	65m	8.0M	1.1m	#A	15	15		20m	5.0u	1.0 <u></u>	1.0mØ	25	t													
39	2N293	65m	8.0M	1.1m	#S	15	15		20m	5.0u	1.0 <u></u>	1.0mØ	67u														
40	2N449	65m	8.0M	1.1m	#J	9.0	9.0		20m	5.0u	1.0 <u></u>	1.0mØ	40														
41	2N1086	65m	8.0M	1.1m	#J	9.0	9.0		20m	3.0uØ	5.0 <u></u>	1.0mØ	40														
42	2N1086A	65m	8.0M	1.1m	#J	9.0	9.0		20m	3.0uØ	5.0 <u></u>	1.0mØ	40														
43	2N1087	65m	8.0M	1.1m	#J	9.0	9.0		20m	3.0uØ	5.0 <u></u>	1.0mØ	40														
44	2N1121	65m	8.0M	1.1m	#S	15	15	5.0	20m	3.0u	5.0	1.0m	58														
45	2N78	65m	9.0M	1.1m	#S	15	15	5.0	20m	3.0u	5.0	1.0m	58														
46	2N167	65m	9.0M	1.1m	#S	30	30	5.0	75m	1.5uØ	1.0m	65															
47	JAN2N167A†	70m	5.0MΔ	1.1m	#A	27			75m	2.0u	1.0 <u></u>	5.0mØ	20	tA													
48	2N1510	75m							75	70	8.0	20m	5.0u	1.0													
49	2N167A	75m	9.0M	1.2m	#S	30	30	5.0	25m	1.5uØ	1.0	8.0mØ	30	t													
50	2N1217	75m	9.0M	1.3m	#S	20	20	5.0	25m	1.5uØ	1.0	2.0mØ	60	t													
51	2N1654†	75m	9.0M	1.3m	#J	20	20	10	25m	1.5uØ	1.0	2.0mØ	25	t													
52	2N8211†	75m	10MΔ	1.3m	#J	30	15	25	400m	10uØ	1.0 <u></u>	5.0mØ	70	t													
53#	2SD35	83m																									
54#	2SD36	83m																									
55	2N556	100m																									
56	2N557	100m																									
57	2N558	100m																									
58	2N647	100m	2.0M	2.0m	#S	25	25	12	50m	14u	1.0 <u></u>	5.0mØ	70	t													
59	2N649	100m	2.0M	2.0m	#S	20	18	2.5	50m	14uØ	1.0 <u></u>	5.0mØ	65	t													
60	2N444	100m	5.0MΔ	2.0m	#S	15	15		200m	2.0uØ	4.5 <u></u>	1.0mØ	15														
61	2N445	100m	2.0M	2.0m	#S	15	12		20m	2.0uØ	4.5 <u></u>	1.0mØ	35														
62	2N1366	100m	2.5M	1.6m	Ø	12	18	5	10m	15u	6.0 <u></u>	1.0m	10														
63	2N1367	100m	2.5M	1.7m	Ø	12	18	5	10m	15u	6.0 <u></u>	1.0mØ	20	tA													
64	2N356†	100m	3.0M	2.0m	#S	20	18		20m	500m	#5.0uØ	5.0 <u></u>	1.0mØ	30													
65	2N182	100m	3.8M	2.0m	#J	25	15		10	5.0u	6.0 <u></u>	1.0m	25														
66	2N164A	100m	4.0MΔ	2.0m	#J	15	15		10	30m	5.0u	1.0 <u></u>	80	tA													
67	GT792	100m	4.8M	2.0m	#S	20			100m	6.0uØ	5.0	5.0mØ	37	tA													
68	2N292A	100m	5.0M	1.7m	#J	15	15		50	20m	5.0u	1.0 <u></u>	51	tA													
69	2N446	100m	5.0MΔ	2.0m	#S	15	10		20	2.0uØ	4.5 <u></u>	1.0m	60														
70	2N1357†	100m	6.0M	2.0m	#S	20	15		20	500m	#5.0uØ	5.0 <u></u>	1.0mØ	45													
71	2N1313†	120m	1.5M	2.																							

3. GERMANIUM NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX COLL. DISS. @25°C (W)	MAX DE RATE IN fab	ABS MAX RATINGS @25°C	TYPICAL "H" PARAMETERS										Cob	STRUCTURE	DWG #	LC s/a			
					M FREE AIR X P	E BVcebo	BVceo	BVebo	Ic	ICBO @MAX	Vcb	BIAS	COMMON Emitter	hFE	hoe	hie	hre	X.0001	(F)		
1	2N17301	150m	2.5m	#J 25 15 #	20	300m	6.0u	3.00	100m Δ	30 T Δ								20p Δ	T05	AS	
2	GT229	150m	2.0m	#S 12	200m	5.0	200m	20u	5.00	1.0m 20								A	T05		
3#	NKT773	150m	2.5m	#J 15 15 Δ	10	300m	15u Δ	1.50	50m Δ	50 T Δ								A	T01	A	
4	2N1251	150m	75k Δ	#J 20 15 Δ	10	100m	50u	6.00	1.0m	150								A	T022	F	
5	2N444A	150m	500m Δ	#S 40 25	10	4,000m	5.00	1.0m	15 Δ	1.0u Δ b								A	T05	AS	
6	GT949	150m	700k Δ	#S 30	200m	2.5	200m	25u	3.50	1.0m 30	500m Δ							A	T05		
7	2N35	150m	800m	#J 40	100m	50u	6.00	1.0m Δ	75	30u	25k	60	1.6p	AA	T022	A					
8	2N94	150m	2.0m Δ	#J 20 20 Δ	100m	50u	6.00	1.0m Δ	50 T	100p	A	T022	F					A	T022	F	
9	2N233	150m	2.0m Δ	#J 10 15 Δ	100m	50u	6.00	1.0m Δ	3.5 Δ	11p	A	T022	F					A	T022	F	
10	2N233A	150m	2.0m Δ	#J 18 18 Δ	5.0	100m	6.00	1.0m Δ	15	11p	A	T022	F					A	T05		
11	2N445A	150m	2.0m Δ	#S 30 18	10	4,000m	5.00	1.0m	35 Δ	1.0u Δ b	17u	17k	3.8					A	T05	AS	
12#	2SD33	150m	2.0m	#J 20 15 Δ	2.5	50m	14u Δ	6.00	1.0m	60 * Δ	17u	30p	A	T01					A	T01	
13#	2SD37	150m	2.0m	#J 30 20 Δ	12	50m	14u Δ	6.00	1.0m	60 * Δ	17u	30p	A	T01					A	T01	
14#	NKT717	150m	2.0m	#J 45 45 Δ	10	150m	15u Δ	1.50	50m Δ	40 T Δ								A	T01	A	
15	2N364	150m	2.5m	#S 30	2.0	100m	10u	5.0	1.0m	15 Δ	100nb	55	900m	10p	G	OV9					
16#	2SD195	150m	2.5m Δ	#J 20 15 Δ	2.5	50m	14u Δ	1.00	1.0m Δ	70 Δ								A	T01		
17	2N193	150m	3.0m	#J 18 18 Δ	5.0	50m	50u	6.00	1.0m	7.5								A	T022	A	
18	2N365	150m	3.0m	#S 30	2.0	50m	10u	5.0	1.0m	34	100nb	55	900m	10p	G	OV9					
19	2N679T	150m	3.0m	#J 25	25	25 Δ	25u	500	3.0m Δ	30 T								A	R5		
20	2N1012t	150m	3.0m Δ	#S 40 22	35	250	5.0u Δ	250	100m	40 T Δ								20p Δ	T05	AS	
21	2N1302t	150m	3.0m Δ	#S 25 25	25	300m	6.0u	1.00	10m Δ	20 T Δ							20p Δ	A	T05	AS	
22	JAN2N1302	150m	3.0m Δ	#S 25	25	300m	6.0u	1.00	10m Δ	20 T Δ								A	T05		
23	2N1391	150m	3.0m Δ	#J 30 18	15	100m	10u	6.00	1.0m Δ	50 Δ								A	T05	A	
24	2N1993t	150m	3.0m Δ	#J 30 18	30	300m	10u	6.00	1.0m Δ	50 Δ								A	T05	AS	
25#	2SD75AH	150m	3.0m	#J 45 30	12	100m	6.00	1.0m	40	15u	1.1k	25	4.2p	A	T01						
26#	2SD75H	150m	3.0m	#S 30 30	12	100m	10u	6.00	1.0m	40	15u	1.1k	25	4.2p	A	T01					
27	2N366	150m	3.5m	#S 30	2.0	50m	2.0	50m	10u	5.0	1.0m	95	100nb	55	900m	10p	G	OV9			
28#	2SD77	150m	3.5m	#J 30	25	25 Δ	12	100m	14u	6.00	1.0m	55	16u	1.6k	3.1			A	T01		
29#	2SD77A	150m	3.5m	#J 45 45 Δ	12	100m	6.00	1.0m	55	16u	1.6k	3.1	1.5p	A	T01						
30#	2SD77AH	150m	3.5m	#J 45 30	12	100m	6.00	1.0m	55	19u	1.4k	2.7	5.0p	A	T01						
31#	2SD77H	150m	3.5m	#J 30 30	12	100m	10u	6.00	1.0m Δ	20 Δ								A	T022	F	
32	2N438T	150m	3.7M	#J 30 25	25	300m	6.0u	1.00	1.0m Δ	25 Δ								A	T05		
33	2N212	150m	4.0M Δ	#A 18 18	50	100m	50u	6.00	1.0m Δ	20								A	T022	F	
34#	2SD75	150m	4.0M	#J 25 25	12	100m	14u	6.00	1.0m	40	15u	1.2k	3.0					A	T01		
35#	2SD75A	150m	4.0M	#J 45 45 Δ	12	100m	25u	6.00	1.0m	40	15u	1.2k	3.0					A	T01		
36	GT904	150m	4.0M	#S 20	200m	2.0	200m	25u	200	1.0m Δ	30 Δ							A	T05		
37	GT948	150m	4.0M Δ	#S 20	50	200m	20u	3.50	1.0m Δ	30 T								A	T05		
38	2N94A	150m	5.0M	#J 20 20 Δ	100m	50u	6.00	1.0m Δ	20 T								100p	A	T022	F	
39	JAN2N388T	150m	5.0M	#S 25 20 Δ	100m	10u	500	30m Δ	60 T Δ								20p Δ	A	T05	AS	
40	2N446A	150m	5.0M Δ	#S 30 15	10	4,000m	5.00	1.00	1.0m Δ	60 Δ								A	T05	AS	
41	2N1299	150m	5.0M	#J 40 40	15	100m	10u	1.00	1.0m Δ	35 T Δ								A	T05	AS	
42	2N1304t	150m	5.0M Δ	#S 25 20	25	300m	6.0u	1.00	1.0m Δ	40 T Δ								A	T05	AS	
43	JAN2N1304	150m	5.0M Δ	#S 25	25	300m	6.0u	1.00	1.0m Δ	40 T Δ								A	T05		
44	2N1732	150m	5.0M	#S 30 30 Δ	25	300m	6.0u	1.00	1.0m Δ	40 T Δ								A	T05		
45	2N1891*	150m	5.0M Δ	#S 25 15	25	300m	5.0u Δ	150	100m Δ	25 T Δ								A	T05		
46	2N1892t	150m	5.0M Δ	#J 30 15	25	300m	6.0u Δ	5.00	2.0m Δ	30 Δ								A	T05		
47	GT167	150m	5.0M	#S 25 15	15	250m	25u	1.00	8.0m	25 T	500nb	28	3.0					A	T05		
48#	NKT7341	150m	5.0M	#J 25 20	25	300m	6.0u	1.00	10m Δ	40 T Δ								A	T05		
49#	SFT184	150m	5.0M Δ	#J 15 15	100m	5.0u	6.00	1.0m Δ	60 Δ									A	T05		
50	2N377t	150m	6.0m	#J 25 20 Δ	15	200m	10u	500	30m Δ	40 T								A	T05		
51	2N377At	150m	6.0m	#J 40	20	200m	20u	1.00	30m Δ	20 T Δ								A	T05		
52	2N385	150m	6.0m	#J 25 25 Δ	15	200m	10u	750	30m	60 Δ								A	T05		
53	2N1000t	150m	7.0M Δ	#S 40 25	40	150m	15u	500	100m	25 T Δ								A	T05		
54	2N385A	150m	8.0M	#J 40 15	15	200m	40u	500	30m	70 Δ								A	T05		
55	2N388AT	150m	8.0M	#J 40 15	15	200m	10u	750	30m Δ	60 Δ								A	T05		
56	2N634	150m	8.0M	#J 20 20	15	300m	15u	750	200m Δ	15 Δ								A	T09	AS	
57	2N1624T	150m	8.0M	#J 25 25	15	300m	6.0u Δ	1.0	10m Δ	55 Δ								A	T05	AS	
58	2N2085	150m	8.0M	#J 33	12	500m	5.0u Δ	250	10m	100							20p	A	T05	A	
59	2N447A	150m	9.0M Δ	#S 30 12	10	500m	4.0u Δ	5.00	1.0m	85 Δ								A	T05	AS	
60	2N440f	150m	10M Δ	#J 30 15	25	300m	10u	1.00	50m Δ	40 T Δ	1.0ub	27	4.0	15p Δ	A	T05	A				
61	2N440A	150m	10M	#J 25 25	25	300m	10u	1.00	50m Δ	40 T Δ	1.0ub	27	4.0	9.0p	A	T05	A				
62	2N440A	150m	10M	#J 25 25	25	200m	10u	1.00	20m Δ	110 T							A	T05	A		
63	2N1114	150m	10M	#J 25 25	25	200m	10u	1.00	10m Δ	190 T							A	T05	A		
64	2N1306t	150m	10M	#J 25 15	15	25															

3. GERMANIUM NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX. COLL. DISS. @25°C (W)	2. DERATE fab (Hz)	3. ABS MAX RATINGS @25°C	TYPICAL 'h' PARAMETERS						Cob	STRUCTURE	DWG Y200 s/a TO200 Ser.	# C E O A D D E			
					M E IN FREE AIR X P W/C	BV _{cbo}	BV _{ceo}	BV _{ebo}	I _c @MAX	I _{cbo} @MAX	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}	
1#	2SD128	250m		#J 32 30 5 500m	20u _Ø	1.0 _Ø	20m _Ø	82 1									A T01
2#	2SD128A	250m		#J 32 30 5 500m	20u _Ø	1.0 _Ø	500m _Ø	46 1#Δ									A T01
3#	SFT377	250m	1.0M _Ø Δ	3.3m #S	16	10	600m	10u _Ø	1.0 _Ø	300m _Ø	50 1*						A T01
4#	2SD34	250m	2.0M	4.2m #J	20	15 5 25 150m	14u _Ø	6.0 _Ø	1.0m	60							A T07
5#	2SD38	250m	2.0M	4.2m #J	30	20 5 12 150m	16u _Ø	6.0 _Ø	1.0m	60 *	20u	1.8k	5.0			A T07	
6#	2N1473	250m	8.0M	4.2m #J	40	40 5 15 400m	5.0u _Ø	.60 _Ø	400m	50 *						45p 15p	
7#	AC175	260m	0.2M ₁	14.0m #J	25	18	10 1	35u _Ø	1.0 _Ø	300m _Ø	150 1						A X9
8#	AC179	260m	0.2M ₁	4.0m #J	20	15	10 700m	10u _Ø	2.0 _Ø	150m _Ø	60 TΔ						A X9
9#	AC141K	260m	3.0M	4.0m #J	32	32 Ø	10 1.2	14u _Ø		400m	80						A T01
10#	2N2430	280m	2.5M ₅	2.7m #J	32	32	10 500m	10u	0.0	50m	105					70p	A T01 A
11#	2SD30	300m			25		200m		15u	1.5 _Ø	100m	150					A T01
12#	AC181	300m	1.0M _Ø Δ	4.0m #S	32	24 5 10 1.0	200n	1.0 _Ø	600m _Ø	110 1#*						A* R134	
13#	403967/N	300m	#2.0M	10m #J	18	18 5 2.5 500m	14u _Ø	1.0 _Ø	50m _Ø	50 TΔ							T01
14#	2SD96	300m	4.0M		25	18 5 2.5 250m	14u	1.5 _Ø	50m _Ø	90 T						A T01	
15#	AC127	340m	2.5M ₅	2.7m #J	32	32 5 10 500m	10u _Ø	0.0	20m _Ø	50 TΔ						A T01	
16#	AC127-01	340m*	2.5M ₅	4.0m #J	32	12	10 500m	10u _Ø	0.0	500m _Ø	50 T					70ps	A X9c A
17#	ASV731	500m	4.0M _Ø Δ	2.9m #J	30	20	30 400m	3.0u	0.0	.05m	25 TΔ						A T05
18#	ASV741	500m	6.0M _Ø Δ	2.9m #J	30	20	30 400m	3.0u	0.0	.05m	40 TΔ						A T05
19#	ASV751	500m	10M _Ø Δ	2.9m #J	30	20	30 400m	3.0u	0.0	.05m	65 TΔ						A T05
20#	AC176	700m	1.0M _Ø Δ	25m #J	32	32 5.0 1	30u _Ø	0.0	500m	180 TΔ						A T01	
21#	2SD72	720m _Ø	750k ₅	#J	25	25 5 6.0 600m	50u	1.0 _Ø	200m _Ø	80 T						A T01	
22#	AC187	800m	1.5M ₅	13m #J	25	15	10 1	100u	1.0 _Ø	300m _Ø	200 T					150ps	A R51a A
23#	AC188/01	800m	1.5M ₅	6.3u #J	25	15	10 1	15u _Ø	1.0 _Ø	50m _Ø	165 T					110ps	A X9c A
24#	AC187K	800m	3.0M ₅	13m #J	25	15	10 1	200u									A X9a
25#	AC187/01	800m*	5.0M ₅	14m #J	25	15	10 10	100u	1.0 _Ø	300m _Ø	200 T					150ps	A* X9c A

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX COLL. DISS. @25°C (W)	DE RATE IN FREE AIR (Hz)	ABS MAX RATINGS @25°C						MAX. ICBO @MAX Vcb (A)	TYPICAL "B" PARAMETERS						C E D E		
				M E BV _{cbo} BV _{ceo} BV _{beo}	I _c A M X P	V _c (V)	V _e (V)	V _b (A)	BIAS V _{cb} V _{cb}	I _e hfe	COMMON Emitter hoe hie hre	(mhos)	(Ω)	X.0001	(F)				
1# BC303		7.0m	40u	90	65	7.0	1.0	20m ²	100	150m	60						PL ²	T039	
2# 2S326C		50m	1.0M	400u	SJ	6.0	6.0	6.0	10m	10n	3.0	1.0m ²	80			40p	A	R51	
3# 2S306C		50m	1.5M ²	400u	SJ	6.0	6.0	6.0	10m	10n	3.0	1.0m ²	80			A	A	T05	
4# 2S307C		50m	2.0M ²		SJ	15	15	15	10m	10u	3.0	1.0m ²	80			A	A	T05	
5# 2S327C		50m	2.0M ²		SJ	15	15	15	10m	10u	3.0	1.0m ²	80			A	A	R51	
6# BC200		50m	9.0M ²	625u	SJ	20	20	50m	500 ²	200t	18u	15				PE ²			
7# A160		50m*	90M ²	625u	SJ	20	20	50	50m	100n	500 ²	200u ²	13u	12k	13	5.0p ²	PE ²	u45	
8# A161		50m*	90M ²	625u	SJ	20	20	50	50m	100n	500 ²	200u ²	140	18u	25	5.0p ²	PE ²	u45	
9# A162		50m*	90M ²	625u	SJ	20	20	50	50m	100n	500 ²	200u ²	250	33u	20k	40	5.0p ²	PE ²	u45
10# BC196A		50m*	T30M ²	625u	SJ	30	25	50	100m	50n ²	5.0	2.0m ²	125	△		4.0p ²	PET	u47	
11# BC196B		50m*	130M ²	625u	SJ	30	25	50	100m	50n ²	5.0	2.0m ²	240	△		4.0p ²	PET	u47	
12# BC196VI		50m*	130M ²	625u	SJ	30	25	50	100m	50n ²	5.0	2.0m ²	75	△		4.0p ²	PET	u47	
13# BF514E		60m	1.8m	*J	40	40	50			50n ²	5.0	1.0m ²	70	△		7.0p ²	PE	D	
14# BF514F		60m	1.8m	*J	40	40	50			50n ²	5.0	1.0m ²	70	△		7.0p ²	PE	D	
15# BF514G		60m	1.8m	*J	40	40	50			50n ²	5.0	1.0m ²	70	△		7.0p ²	PE	D	
16# BF526E		60m	1.6m	*J	20	20	50			150n	1.0	10m ²	50	△		7.0p ²	PE	D	
17# BF526F		60m	1.6m	*J	20	20	50			150n	1.0	10m ²	50	△		7.0p ²	PE	D	
18# BF526G		60m	1.6m	*J	20	20	50			150n	1.0	10m ²	50	△		7.0p ²	PE	D	
19# BF518E		75m	1.3m	*J	40	30	50			50n ²	1.0	10m ²	30	△		10p ²	PE	D	
20# BF518F		75m	1.3m	*J	40	30	50			50n ²	1.0	10m ²	30	△		10p ²	PE	D	
21# BF518G		75m	1.3m	*J	40	30	50			50n ²	1.0	10m ²	30	△		10p ²	PE	D	
22# BC213		85m ²	500k ²	833u	SJ	20	20	20	10m	10n ²	2.0	1.0m ²	25			40p ²	A	R19	
23# BCZ14		85m ²	500k ²	833u	SJ	20	20	20	10m	10n ²	2.0	1.0m ²	55			40p ²	A	R19	
24# D30A1		90m	1.2m	#J	25	25	40			25n ²	5.0	10m ²	30	IA#		8.0p ²	PEA	u40b	
25# D30A2		90m	1.2m	#J	25	25	40			25n ²	5.0	10m ²	60	IA#		8.0p ²	PEA	u40b	
26# D30A3		90m	1.2m	#J	25	25	40			25n ²	5.0	10m ²	140	IA#		8.0p ²	PEA	u40b	
27# D30A4		90m	1.2m	#J	25	25	40			25n ²	5.0	10m ²	250	IA#		8.0p ²	PEA	u40b	
28# D30A5		90m	1.2m	#J	25	25	40			25n ²	5.0	10m ²	400	IA#		8.0p ²	PEA	u40b	
29# 3N1230		100m	6.0M ²	571u	SJ	30	25	25	20m	10n ²	1.0	1.0m ²	25			10p ²		T072	
30# 2N2177		100m	8.0M ²	666u	SJ	60	60	60	50m	10n ²	1.5	20u ²	50	t		10p	A ²	T05	
31# 2N2178		100m	8.0M ²	666u	SJ	60	60	60	50m	10n ²	1.5	20u ²	50	t		10p	A ²	T018	
32# 2N2175		100m	10M ²	666u	SJ	60	60	60	50m	10n ²	1.5	20u ²	50	t		10p	A ²	T05	
33# 2N2176		100m	10M ²	666u	SJ	60	60	60	50m	10n ²	1.5	20u ²	60k	t		10p	A ²	T018	
34# MT0411		100m	30M ²	800u	SJ	20	20	6.0			10n ²	6.0	1.0m ²	60	△		1.0u ² b	35	□
35# MT0413		100m	30M ²	800u	SJ	20	20	5.0			50n ²	6.0	1.0m ²	50	△		1.0u ² b	40	□
36# 2N1677C		100m	32M ²	833u	SS	4.5	4.5		50m	100n	3.0	1.0m ²	50	△		8.0p ²	PEA	u40b	
37# MT0412		100m	40M ²	800u	SJ	20	20	16.0			10n ²	6.0	10m ²	60	IA#		8.0p ²	PEA	u40b
38# 2N1678C		100m	42M ²	833u	SS	4.5	4.5		50m	100n	3.0	1.0m ²	10			1.0u ² b	35	□	
39# MT0414		100m	60M ²	800u	SJ	25	20	4.0			2.0u ²	5.0	1.0m ²	200			7.0p	A	T05
40# 2SA609		100m	80M ²		SJ	30	15	5.0	100m	10u	6.0	1.0m ²	80	t		12u	15k	20	
41# 2SA6081		100m	180M ²		SJ	30	20	5.0	50m	100n ²	1.0	10m ²	100	t		12p	PE	R145	
42# BCW29		110m	150M ²		1.1m	J	30	20	5.0	50m	100n ²	1.0	10m ²	90	t		7.0s ²	PE	A
43# BCW29R		110m	150M ²		1.1m	J	30	20	5.0	50m	100n ²	1.0	10m ²	100	t		7.0s ²	PE	u56
44# BCW30		110m	150M ²		1.0m	J	30	20	5.0	50m	100n ²	1.0	10m ²	150	t		7.0s ²	PE	u56
45# BCW30R		110m	150M ²		1.1m	J	30	20	5.0	50m	100n ²	1.0	10m ²	150	t		7.0s ²	PE	u56
46# MT0463		125m	300M ²		1.0m	SJ	30	20	5.0		10n ²	1.0	10m ²	150	△		8.0p ²	PE	u81
47# MT0461t		125m	350M ²		1.0m	SJ	60	50	*	60	10n ²	1.0	10m ²	110	t		8.0p ²	PE	u81
48# MT0462t		125m	350M ²		1.0m	SJ	50	40	*	60	10n ²	1.0	10m ²	200	t		3.5p	PL ²	u81
49# BT316		130m	700M ²		1.0m	SJ	40	35	4.0	15m	100n ²	1.0	10m ²	50	t		50ff	PL	T072
50# BF272		130m	1.0G ²		1.0m	SJ	40	35	4.0	15m	100n ²	1.0	10m ²	60	t		100ff	PL ²	T072
51# BFV340		150m	1.0G ²		1.1m	SJ	15	10	15	100m	10n ²	5.0	1.0m ²	80	t		10p ²	PE	p
52# BFV350		150m	1.1m	SJ	25	20	25	100m	10n ²	10n ²	5.0	1.0m ²	40	△		10p ²	PE	u34b	
53# BFV360		150m	1.1m	SJ	40	35	40	100m	10n ²	10n ²	5.0	1.0m ²	30	△		8.0p ²	PE	u34b	
54# PL1031		150m	1.0m	SJ	60	40	*	5.0		20n ²	100	1.0m ²	25	△		8.0p ²	PEA	u50	
55# PL1032		150m	1.0m	SJ	60	60	*	5.0		10n ²	100	1.0m ²	40	△		8.0p ²	PEA	u50	
56# PL1033		150m	1.0m	SJ	60	40	*	5.0		20n ²	100	1.0m ²	50	△		8.0p ²	PEA	u50	
57# PL1034		150m	1.0m	SJ	60	60	*	5.0		10n ²	100	1.0m ²	100	t		8.0p ²	PEA	u50	
58# PL1101		150m	1.0m	SJ	25	20	*			500 ²	10m ²	20	10m ²		5.0p ²	PEA	u50		
59# PL1102		150m	1.0m	SJ	25	20	*			500 ²	10m ²	40	10m ²		5.0p ²	PEA	u50		
60# PL1103		150m	1.0m	SJ	25	20	*			500 ²	10m ²	15	10m ²		5.0p ²	PEA	u50		
61# PL1104		150m	1.0m	SJ	25	20	*			500 ²	10m ²	30	10m ²		5.0p ²	PEA	u50		
62# SA539		150m	1.0m	SJ	25	20	*			50m	10n ²	5.0	1.0m ²	30	IA		9.0p ²	PAZ	

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX. COLL. DISS. @25°C (W)	DE RATE fab	TABS MAX RATINGS @25°C					MAX. IC @MAX	TYPICAL h ^Y PARAMETERS					Cob	STRUCTURE	DWG #			
				FREE AIR W/C (Hz)	M IN A X P	BV _{cbo} (V)	BV _{ceo} (V)	BV _{ebo} (V)	I _c (A)	V _{cb} (V)	I _e (A)	h _{fe}	COMMON Emitter	h _{oe} (mhos)	h _{ie} (Ω)	h _{re} (F)				
1	2N8591	150m	14M ₅	1.3m	\$A	40	40	25	50m	1.0u	500	5.0m ₂	35 ↑		5.0p	PA	T018	A		
2	2N8601	150m	14M ₅	1.3m	\$A	25	25	20	50m	1.0u	500	5.0m ₂	20 ↑		5.0p	PA	T018	A		
3	2N8621	150m	14M ₅	1.3m	\$A	30		30		10n ₂	500	5.0m ₂	20 ↑		5.0p	PA	T018	A		
4	2N2280 ₀	150m	18M ₅ _Δ	1.3m	\$J	10	6.0	10	50m	3.0n ₂	500	5.0m ₂	10 ↑ Δ		10p ₂	E	T018	A		
5	2N1118A	150m	18M ₅ _Δ	1.3m	\$J	25	25	10	50m	1.0u	6.0 ₂	1.0m	25		6.0p	A	T05	A		
6	2N2165	150m	18M ₅ _Δ	1.3m	\$S	30		30		20n ₂	8.0 ₂	1.0m	25		6.0p	S	T05	A		
7	2N2166	150m	18M ₅ _Δ	1.3m	\$S	15		15		20n ₂	6.0 ₂	1.0m	25		6.0p	S	T05	A		
8	2N11191	150m	20M ₅	1.3m	\$	10	10	10	50m	100n	.50	15m	25 ↑		6.0p	PA	T05	A		
9	2N2162 ₀	150m	20M ₅	1.3m	\$S	30		30		10n ₂	3.0 ₂	1.0m	35		6.0p	S	T05	A		
10	2N2163 ₀	150m	20M ₅	1.3m	\$S	15		15		10n ₂	3.0 ₂	1.0m	35		6.0p	A	T05	A		
11	2N2377	150m	20M ₅	1.3m	\$S	25	25	10	50m	1.0u	6.0 ₂	1.0m ₂	15 ↑ Δ		12p ₂	ΔΔ	T018	A		
12	2N2378	150m	20M ₅	1.3m	\$S	10	10	10	50m	100n	.50 ₂	15m ₂	25 ↑		12p ₂	ΔΔ	T018	A		
13	2N1118	150m	21M ₅ _Δ	1.3m	\$	25	25	10	50m	1.0u	6.0 ₂	1.0m	25		35u	1.4k	3.5			
14	2N8611	150m	22M ₅	1.3m	\$A	25	25	20	50m	1.0u	.50 ₂	5.0m ₂	35 ↑		5.0p	PA	T018	A		
15	2N8631	150m	22M ₅	1.3m	\$A	15	15	10	50m	1.0u	.50 ₂	5.0m ₂	35 ↑		5.0p	PA	T018	A		
16	2N8641	150m	22M ₅	1.3m	\$A	6.0	6.0	6.0	50m	100n ₂	.50 ₂	5.0m ₂	35 ↑		5.0p	PA	T018	A		
17	# 2SA542	150m	30M ₅ _Δ	1.3m	\$J	30	25	5.0	50m	50n ₂	100 ₂	500u ₂	160 ↑		8.0p ₂	PE	u23a	C		
18	# BFV25	150m	30M ₅ _Δ	1.1m	\$S	60	45	6.0	30m	50n ₂	5.0 ₂	1.0m	60 ↑		6.0p ₂	PE	u34b	P		
19	# BFV26	150m	30M ₅ _Δ	1.1m	\$S	60	45	8.0	30m	50n ₂	5.0 ₂	1.0m	150 ↑		6.0p ₂	PE	u34b	P		
20	12N2167	150m	35M ₅	1.3m	\$S	12		12		20n ₂	6.0 ₂	1.0m	38		6.0p	S	T05	A		
21	2N2164 ₀	150m	44M ₅	1.3m	\$S	12		12		20n ₂	3.0 ₂	1.0m	40		6.0p	S	T05	A		
22	2N8651	150m	52M ₅	1.3m	\$A	10	6.0	10	50m	100n ₂	.50 ₂	5.0m ₂	75 ↑		5.0p	PA	T018	A		
23	# S2A429	150m	100M ₅	1.0m	\$J	150	150	3.0	30m	1.0u ₂	2.0 ₂	2.0m ₂	60 ↑		4.0p	PL	R67a	B		
24	# 2SA6281	150m	100M ₅	1.5m	\$J	30	25	4.0	100m	1.0u ₂	2.0 ₂	1.0m ₂	100 ↑				PTQ2	D		
25	# 2SA828A1	150m	100M ₅	1.5m	\$J	60	60	4.0	100m	1.0u ₂	6.0 ₂	1.0m ₂	100 ↑				PE	T092	D	
26	# 2SA629	150m	100M ₅	1.5m	\$J	30	25	4.0	30m	1.0u ₂	6.0 ₂	1.0m ₂	200 ↑				PE	T092	D	
27	# BCW56	150m	130M ₅	2.0m	\$J	80	60	6.0	100m	1.0u	.50 ₂	2.0m ₂	125 ↑ Δ		4.5p ₂	PE	MM13	F		
28	# BCW57	150m	130M ₅	2.0m	\$J	50	45	6.0	100m	1.0u	.50 ₂	2.0m ₂	125 ↑ Δ		4.5p ₂	PE	MM13	F		
29	# BCW58	150m	130M ₅	2.0m	\$J	30	20	5.0	100m	1.0u	.50 ₂	2.0m ₂	125 ↑ Δ		4.5p ₂	PE	MM13	F		
30	# BCW59	150m	130M ₅	2.0m	\$J	30	20	5.0	100m	1.0u	.50 ₂	2.0m ₂	125 ↑ Δ		4.5p ₂	PE	MM13	F		
31	# 2SA480	150m	140M ₅	1.3m	\$J	30	20	5.0	100m	3.0u ₂	3.0 ₂	1.0m ₂	60 ↑		5.0p	PE	T018	A		
32	# BFV301	150m	140M ₅	1.1m	\$J	20	15	4.0	100m	50n ₂	1.0 ₂	50m ₂	15 ↑ Δ		7.0p	u34b	D			
33	# BFV33	150m	140M ₅	1.0m	\$J	25	20	5.0	50m	1.0u	10 ₂	10m ₂	30 ↑		5.0p	u34b	P			
34	# 2SA564	150m	150M ₅	1.5m	\$J	25	25	5.0	50m	1.0u ₂	.50 ₂	2.0m	200 ↑				PE	T092	A	
35	# 2SA564A	150m	150M ₅	1.5m	\$J	45	45	5.0	50m	1.0u ₂	.50 ₂	2.0m	200 ↑				PE	T092	B	
36	# BFV20	150m	150M ₅ _Δ	1.0m	\$J	40	30	5.0	600m	50n ₂	100 ₂	150m ₂	40 ↑ Δ		10p ₂					
37	# BFV21	150m	150M ₅ _Δ	1.0m	\$J	40	30	5.0	600m	50n ₂	100 ₂	150m ₂	100 ↑ Δ		10p ₂	PE	u34b	P		
38	# BFV22	150m	150M ₅ _Δ	1.0m	\$J	50	50	5.0	600m	50n ₂	100 ₂	1.0m ₂	80 ↑ Δ		10p ₂	PE	u34b	P		
39	# BCW61AT	150m	180M ₅	1.2m	\$J	32	50	5.0	100m	20n ₂	5.0 ₂	2.0m ₂	200 ↑	18	2.7k	1.5	6.0p ₂	PE	u56a	A
40	# BCW61BT	150m	180M ₅	1.2m	\$J	32	50	5.0	100m	20n ₂	5.0 ₂	2.0m ₂	260 ↑	24	3.6	2.0	6.0p ₂	PE	u56a	A
41	# BCW61C1	150m	180M ₅	1.2m	\$J	32	50	5.0	100m	20n ₂	5.0 ₂	2.0m ₂	330 ↑	30	4.5	2.0	6.0p ₂	PE	u56a	A
42	# BCW61D1	150m	180M ₅	1.2m	\$J	32	50	5.0	100m	20n ₂	5.0 ₂	2.0m ₂	520 ↑	50	7.5	3.0	6.0p ₂	PE	u56a	A
43	# BFS32P	200m	200M ₅	1.2m	\$	45	45	5.0	200m	20n	100 ₂	50m ₂	30 ↑ Δ		10p	PE	u17c	EEE		
44	# BFS33P	200m	200M ₅	1.2m	\$	45	45	5.0	200m	20n	100 ₂	50m ₂	60 ↑ Δ		10p	PE	u17c	EEE		
45	# BFS34P	200m	200M ₅	1.2m	\$	45	30	5.0	200m	20n	100 ₂	2.0m ₂	100 ↑ Δ		10p	PE	u17c	EEE		
46	# BFV311	200m	350M ₅ _Δ	1.1m	\$J	12	12	4.0	200m	150n ₂	1.0 ₂	30m ₂	30 ↑ Δ		8.0p ₂	PE	u34b	P		
47	# BFV321	200m	350M ₅ _Δ	1.1m	\$J	10	10	3.5	200m	200n ₂	1.0 ₂	30m ₂	20 ↑ Δ		8.0p ₂	PE	u34b	P		
48	2N4411	200m	400M ₅ _Δ	1.0m	\$J	15	12	5.0	25m	5.0n ₂	.50 ₂	500u ₂	40 ↑ Δ		700fs ₂	E	T072	G		
49	# BFV297	200m	400M ₅ _Δ	1.1m	\$S	20	15	5.0	200m	50n ₂	.50 ₂	10m ₂	30 ↑ Δ		4.5p	PE	u34b	P		
50	# BSV55AP1	200m	400M ₅ _Δ	1.2m	\$S	20	15	5.0	200m	50n ₂	.50 ₂	10m ₂	40 ↑ Δ		6.0p	PE	u17c	E		
51	# V655	200m	850M ₅	1.5m	\$	40	35	6.0	20m	50n ₂	100 ₂	3.0m ₂	25 ↑ Δ		300ft	PL	T072	A		
52	# BFV16	180m	180M ₅ _Δ	1.4m	\$J	25	25	* 4.0	100m	100n ₂	5.0 ₂	50m ₂	30 ↑ Δ		12p ₂	PL	u81	B		
53	# MTO404	180m	200M ₅ _Δ	1.4m	\$J	40	30	* 5.0	100m	50n ₂	1.0 ₂	10m ₂	20 ↑ Δ		10p ₂	PL	u81	B		
54	# MTO404-1	180m	200M ₅ _Δ	1.4m	\$J	40	30	* 5.0	100m	50n ₂	1.0 ₂	10m ₂	20 ↑ Δ							
55	# MTO404-2	180m	200M ₅ _Δ	1.4m	\$J	40	30	* 5.0	100m	50n ₂	1.0 ₂	10m ₂	40 ↑ Δ		10p ₂	PL	u81	B		
56	# 2N24248	200m	200M ₅ _Δ	2.0m	\$J	40	40	5.0	100m	10n ₂	5.0 ₂	1.0m ₂	50 ↑ Δ		6.0p	PL	R124	A		
57	# 2N24249	200m	200M ₅ _Δ	2.0m	\$J	60	60	5.0	100m	10n ₂	5.0 ₂	1.0m ₂	100 ↑ Δ		6.0p	PL	R124	A		
58	# 2N24250	200m	200M ₅ _Δ	2.0m	\$J	60	60	5.0	100m	10n ₂	5.0 ₂	1.0m ₂	250							

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX COLL. DISS. @ 25°C	2 IN fab	1 M FREE	2 E AM	3 AIR X P	T ABS MAX RATINGS @ 25°C			MAX Icbo @MAX	TYPICAL "H" PARAMETERS			Cob	STRU CTURE	DWG # Y200 E 0 s/a TO200 D E Ser.						
							(W)	(Hz)	(W/C)		Vcb	Ie	hfe	hoe	hie	hre	[mhos]	(Ω)	X 0001	(F)		
1	2N4389†	200m	400m ^Δ	2.0m	4J	12	12	4.0	100m	100n [#]	1.0 ⁰	10m ⁰	180	1#			6.0p ^Δ		R124 A			
2	2N4916†	200m	400m ^Δ	2.0m	4J	30	30	5.0	100m	25n [#]	1.0 ⁰	1.0m ⁰	60	1Δ			4.5p ^Δ	Ø	R124 A			
3	2N5140†	200m	400m ^Δ	2.0m	4J	50	50	4.0	50m	50n [#]	1.0 ⁰	10m ⁰	140	1#			5.0p ^Δ		TO106 A			
4#	2SA548	200m	400m ^Δ	2.0m	4J	35	50	5.0	100m	1.0 ^u	6.0 ⁰	1.0m ⁰	100				3.0p ^Δ		PE			
5	2N4122†	200m	450m ^Δ	2.0m	4J	40	40	5.0	100m	25n [#]	1.0 ⁰	1.0m ⁰	150	1Δ			4.5p ^Δ	Ø	R110 A			
6	2N4917†	200m	450m ^Δ	2.0m	4J	30	30	5.0	100m	25n [#]	1.0 ⁰	1.0m ⁰	150	1Δ			4.5p ^Δ		TO124 A			
7	2N3639†	200m	500m ^Δ	2.0m	4J	6.0	6.0	4.0	80m	50n [#]	1.0 ⁰	50m ⁰	20	1Δ			3.5p ^Δ		R110 A			
8	2N3640†	200m	500m ^Δ	2.0m	4J	12	12	4.0	80m	50n [#]	1.0 ⁰	50m ⁰	20	1Δ			3.5p ^Δ		R110 A			
9	2N4257†	200m	500m ^Δ	2.0m	4J	6.0	6.0	4.5	50m	10n [#]	3.0 ⁰	10m ⁰	30	1Δ			3.0p ^Δ		R124 A			
10	2N4257A†	200m	500m ^Δ	2.0m	4J	6.0	6.0	4.5	50m	10n [#]	3.0 ⁰	10m ⁰	30	1Δ			3.0p ^Δ		R124 A			
11#	TP4257†	200m	500m ^Δ	2.0m	4J	8.0	6.0	4.5	50m	10n [#]	5.0 ⁰	1.0m ⁰	15	1Δ			3.0p ^Δ	PL	X55a A			
12	2N5056†	200m	550m ^Δ	2.0m	4J	12	12	4.5	100m	50n [#]	1.0 ⁰	10m ⁰	12	1Δ			4.5p ^Δ		R124 A			
13	2N4258†	200m	700m ^Δ	2.0m	4J	12	12	4.5	50m	10n [#]	3.0 ⁰	10m ⁰	30	1Δ			3.0p ^Δ		R110 A			
14	2N4258A†	200m	700m ^Δ	2.0m	4J	12	12	4.5	50m	10n [#]	3.0 ⁰	10m ⁰	30	1Δ			3.0p ^Δ		R124 A			
15	2N4313†	200m	700m ^Δ	2.0m	4J	12	12	4.5	100m	50n [#]	3.0 ⁰	30m ⁰	30	1Δ			4.5p ^Δ		R124 A			
16*	TP4258†	200m	700m ^Δ	2.0m	4J	12	12	4.5	50m	10n [#]	5.0 ⁰	1.0m ⁰	15	1Δ			3.0p ^Δ	PL	X55a A			
17	2N4958	200m	1.0G ^Δ	1.1m	SS	30	30	3.0	30m	100n [#]	1.0 ⁰	2.0m ⁰	20	Δ			800f ^Δ		TO72 G			
18	2N4959	200m	1.0G ^Δ	1.1m	SS	30	30	3.0	30m	100n [#]	1.0 ⁰	2.0m ⁰	20	Δ			800f ^Δ		TO72 G			
19	2N4957	200m	1.2G ^Δ	1.1m	SS	30	30	3.0	30m	100n [#]	1.0 ⁰	2.0m ⁰	20	Δ			800f ^Δ		TO72 G			
20	JAN2N4957	200m	1.2G ^Δ	1.1m	SS	30	30	3.0	30m	100n [#]	1.0 ⁰	5.0m ⁰	30	1Δ			4.5p ^Δ	DPE	TO106 A			
21	EN2894A†	200m	1.2G ^Δ	2.0m	4J	12	12	4.5	50m	50n [#]	1.0 ⁰	100m ⁰	30	1#			400f ^Δ	AN	L17K			
22	MD4957*	200m	1.5G ^Δ	1.1m	SS	30	30	3.0	30m	100n [#]	1.0 ⁰	2.0m ⁰	20	Δ			3.0p ^Δ	Ø	T072 G			
23	2N4260	200m	1.6G ^Δ	1.1m	SS	15	15	4.5	30m	5.0n [#]	1.0 ⁰	1.0m ⁰	25	1Δ			3.0p ^Δ	Ø	T072 G			
24	2N4261	200m	2.0G ^Δ	1.1m	SS	15	15	4.5	30m	5.0n [#]	1.0 ⁰	1.0m ⁰	25	1Δ			3.0p ^Δ	Ø	T072 G			
25	MM4049	200m	4.0G ^Δ	1.1m	SS	15	10	4.5	30m	10n [#]	2.0 ⁰	25m ⁰	80	1Δ			1.2p ^Δ	AN	T072 G			
26#	BC257	220m	130m ^Δ	2.2m	4J	45	50	5.0	100m	100n [#]	2.0 ⁰	2.0m ⁰	260	1#*			50u ^Δ	4.5p ^Δ	3.0p ^Δ	6.0p ^Δ	PE	TO92 A
27#	BC258	220m	130m ^Δ	2.2m	4J	25	50	5.0	100m	100n [#]	2.0 ⁰	2.0m ⁰	500	1#*			70u ^Δ	8.0k ^Δ	3.5p ^Δ	6.0p ^Δ	PE	TO92 A
28#	BC259	220m	130m ^Δ	2.2m	4J	20	50	5.0	100m	100n [#]	5.0 ⁰	2.0m ⁰	500	1#*			80p ^Δ	8.0p ^Δ	3.5p ^Δ	6.0p ^Δ	PE	TO92 A
29#	BC157	220m	200m ^Δ	2.2m	4J	45	60	5.0	100m	100n [#]	5.0 ⁰	2.0m ⁰	50	1Δ			1.2p ^Δ	PET	MM10 A			
30#	BC158	220m	200m ^Δ	2.2m	4J	20	50	5.0	100m	100n [#]	5.0 ⁰	2.0m ⁰	240	1Δ			1.2p ^Δ	PET	MM10 A			
31#	BC159	220m	200m ^Δ	2.2m	4J	40	50	5.0	100m	100n [#]	5.0 ⁰	2.0m ⁰	150	1Δ			2.0p ^Δ	AN	u43 C			
32	MM771	225m	2.0m	1.1m	1J	25	20	4.0	50m	50n [#]	2.0 ⁰	2.0m ⁰	150	1Δ			5.0p ^Δ	AN	u43 C			
33	MM7751	225m	2.0m	1.1m	1J	30	20	5.0	200m	100n [#]	1.0 ⁰	50m ⁰	20	1Δ								
34	GT1644	225m	2.0m	1.8m	SS	12	12	10	6.0	1.0 ⁰	1.0 ⁰	15	1#			1.0ub	35	20	A	TO5		
35	MM73798	225m	4.0m ^Δ	2.0m	1J	60	60	3.0	50m	50n [#]	1.0 ⁰	1.0m ⁰	275	18u	8 Ok	20	4.0p ^Δ	AN	u43 D			
36	MM73799	225m	4.0m ^Δ	2.0m	1J	60	60	3.0	50m	50n [#]	1.0 ⁰	1.0m ⁰	475	30u	4.0	4.0p ^Δ	AN	u43 D				
37	A3T29061	225m	200m ^Δ	1.8m	SS	60	40	5.0	500m	20n [#]	1.0 ⁰	1.0m ⁰	25	1Δ			12p ^Δ	PET	u44 A			
38	A3T29061A†	225m	200m ^Δ	1.8m	SS	60	60	5.0	500m	10n [#]	1.0 ⁰	1.0m ⁰	40	1Δ			12p ^Δ	PET	u44 A			
39	A3T29071	225m	200m ^Δ	1.8m	SS	60	40	5.0	500m	20n [#]	1.0 ⁰	1.0m ⁰	50	1Δ			12p ^Δ	PET	u44 A			
40	A3T29071A†	225m	200m ^Δ	1.8m	SS	60	60	5.0	500m	10n [#]	1.0 ⁰	1.0m ⁰	100	1Δ			12p ^Δ	PET	u44 A			
41	MM73905†	225m	200m ^Δ	2.0m	1J	40	40	5.0	200m	50n [#]	1.0 ⁰	1.0m ⁰	50	1Δ			5.0p ^Δ	IAN	u23c F			
42	MM73906†	225m	250m ^Δ	2.0m	1J	40	40	5.0	200m	50n [#]	1.0 ⁰	1.0m ⁰	100	1Δ			4.8p ^Δ	AN	u43 D			
43	MM72901†	225m	260m ^Δ	2.0m	1J	60	40	5.0	600m	20n [#]	1.0 ⁰	1.0m ⁰	50	1Δ			6.0p ^Δ	PET	u44 A			
44	A3T2894†	225m	400m ^Δ	1.8m	SS	12	12	4.0	200m	2.0t ⁰	500	30m ⁰	30	1Δ			5.0p ^Δ	AN	u43 C			
45	MM7731†	225m	400m ^Δ	2.0m	1J	8.0	8.0	4.0	200m	100n [#]	1.0 ⁰	10m ⁰	30	1Δ			4.0p ^Δ	AN	u43 D			
46	MM72369†	225m	500m ^Δ	2.0m	1J	40	15	4.5	200m	100n [#]	1.0 ⁰	10m ⁰	120	1#			6.0p ^Δ	AN	u43 C			
47	MM73546†	225m	700m ^Δ	2.0m	1J	15	12	4.5	250m	100n [#]	1.0 ⁰	10m ⁰	30	1Δ			4.0p ^Δ	AN	u43 C			
48*	MM7808	225m	2.5G ^Δ	2.0m	1J	8.0	5.0	10	50m	10n [#]	1.0 ⁰	1.0m ⁰	65	1			420f	AN	u43 C			
49*	MM7809	225m	2.5G ^Δ	2.0m	1J	8.0	5.0	10	100m	25n [#]	1.0 ⁰	10u ⁰	70	1			470f	AN	u43 C			
50#	BCY29	230m*	500k	2.2m	SS	60	60	30	50	100n [#]	1.0 ⁰	5.0m ⁰	30	1Δ			4.5p ^Δ	A	TO5			
51	2N3342†	250m	1.6m	SS	20	80	20	50m	20n [#]	1.0 ⁰	5.0m ⁰	30	1Δ							TO5		
52#	2SA539	250m	2.5m	4J	60	45	5.0	200m	200n [#]	1.0 ⁰	10m ⁰	40	1Δ							TO92 B		
53#	2SA545	250m	1.0m ^Δ	4J	70	60	5.0	200m	100n [#]	1.0 ⁰	50m ⁰	80	1							TO92 B		
54	2N4010†	250m	100k ^Δ	2.0m	SS	25	25	25	100m	100n [#]	1.0 ⁰	1.0m ⁰	4.0	Δ			15p ^Δ	AN	u43 A			
55	2N327A	250m	200k	1.8m	SS	50	40	20	50m	100n [#]	1.0 ⁰	1.0m ⁰	15									

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C	1 MAX (W)	2 DERATE (Hz)	T ABS IN FREE AIR (W)	M E BV _{cbo} @25°C	A M BV _{ceo} @25°C	T ABS MAX RATINGS @25°C	MAX. ICBO @MAX	TYPICAL 'H' PARAMETERS						Cob	STRUCTURE	DWG # Y200 s/a TO200 Ser.				
										V _{cb}	I _e	h _{fe}	COMMON Emitter (mhos)	h _{oe}	h _{ie}	h _{re}	X.0001					
1	ZN33450	250m	2.0M Δ	1.7m	SS	50	50	50	50m	5n \emptyset	500	1.0m \emptyset	15 T Δ					25p \emptyset	A	T05		
2	ZN33460	250m	2.0M Δ	1.7m	SS	50	50	50	50m	5n \emptyset	500	1.0m \emptyset	25 T Δ					25p \emptyset	A	T05		
3#	BCY34	250m	2.4M Δ	2.0m	SJ	32	32	16	100m	0.5u \emptyset	6.00	1.0m \emptyset	35						A	T05		
4#	BCY32	250m	2.5M Δ	2.0m	SJ	64	64	32	100m	0.5u \emptyset	6.00	1.0m \emptyset	55						A	T05		
5#	OC201	250m	3.2M Δ	2.0m	SJ	25	20	20	50m	50u	6.00	1.0m \emptyset	40	80u \emptyset	2.5K Δ	7 T Δ		R8				
6#	OC202	250m	3.2M Δ	2.0m	SJ	15	10	10	50m	50u	6.00	1.0m \emptyset	70	42u	2.1K Δ	6.0		R8				
7	ZN1027	250m	4.0M Δ	1.6m	SJ	18	15	18	100m	25n \emptyset	6.00	1.0m \emptyset	30	1.4ub	35	10	7.0p	A	T05			
8	ZN1219	250m	5.0M Δ	1.7m	SJ	30	25	20	100m	10u \emptyset	2.50	5.0m \emptyset	18 T Δ				15p \emptyset	IA	T05			
9	ZN1221	250m	5.0M Δ	1.7m	SJ	30	25	10	100m	10u \emptyset	6.00	1.0m \emptyset	18 T Δ				15p \emptyset	A	T05			
10	ZN1028	250m	6.0M Δ	1.6m	SJ	18	10	12	100m	25n \emptyset	6.00	1.0m \emptyset	90 T Δ				1.4ub	35	10	7.0p	A	T05
11	ZN9420	250m	10.0M Δ	1.7m	SJ	25	8.0	25	50m	2.5u \emptyset	8.0	1.0m \emptyset	50				25	7.0p	A	TO18		
12	ZN1918	250m	10.0M Δ	1.7m	SJ	25	8.0	25	50m	2.5u \emptyset	8.0	1.0m \emptyset	50				7.0p	A	T05			
13	ZN9410	250m	12.0M Δ	1.7m	SS	25	8.0	25	50m	2.5u \emptyset	6.0	1.0m \emptyset	50						A	TO18		
14	ZN3812*	250m	30M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	150	60u \emptyset	15K Δ	25	4p \emptyset	L17s				
15	ZN3813*	250m	30M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	300	40u \emptyset	40K Δ	25	4p \emptyset	L17s				
16	ZN3814*	250m	30M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	150	60u \emptyset	15K Δ	25	4p \emptyset	*S	L17s			
17	ZN3815*	250m	30M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	300	60u \emptyset	40K Δ	25	4p \emptyset	*S	L17s			
18	ZN3816*	250m	30M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	150	60u \emptyset	15K Δ	25	4p \emptyset	*S	L17s			
19	ZN3817*	250m	30M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	300	60u \emptyset	40K Δ	25	4p \emptyset	*S	L17s			
20#	ZTX530	250m	30M Δ	2.5m	*A	30	30	50	500m	200n	5.00	100u \emptyset	60				8.0p \emptyset	PL \emptyset	X59	F		
21#	ZTX531	250m	30M Δ	2.5m	*A	45	45	50	500m	200n	5.00	1.0m \emptyset	60				8.0p \emptyset	PL \emptyset	X59	F		
22*	ZN4288	250m	40M Δ	2.0m	SS	30	25	6.0	100m	50n \emptyset	5.00	1.0m \emptyset	50	10u \emptyset b	40	1.2	8.0p \emptyset	U29	B			
23*	ZN4289	250m	40M Δ	2.0m	SS	60	45	7.0	100m	10n \emptyset	5.00	1.0m \emptyset	60	10u \emptyset b	40	1.2	8.0p \emptyset	*S	U29	B		
24#	AT454	250m	40M Δ	2.5m	*J	30	30	5.0	50u	20n	100	100u \emptyset	60				6.0p \emptyset	PE	MM12d	D		
25#	AT455	250m	40M Δ	2.5m	*J	45	45	5.0	50u	20n	100	100u \emptyset	60				6.0p \emptyset	PE	MM12d	D		
26	ZN2802*	250m	60M Δ	1.6m	SS	25	20	5.0	30m	10n	5.00	1.0m \emptyset	20	1.0u \emptyset b	32	12	8.0p \emptyset	L17k				
27	ZN2803*	250m	60M Δ	1.6m	SS	25	20	5.0	30m	10n	5.00	1.0m \emptyset	20	1.0u \emptyset b	32	12	8.0p \emptyset	L17k				
28	ZN2804*	250m	60M Δ	1.6m	SS	25	20	5.0	30m	10n	5.00	1.0m \emptyset	40	1.0u \emptyset b	32	12	8.0p \emptyset	L17k				
29	ZN2805*	250m	60M Δ	1.6m	SS	25	20	5.0	30m	10n	5.00	1.0m \emptyset	40	1.0u \emptyset b	32	12	8.0p \emptyset	L17k				
30	ZN2806*	250m	60M Δ	1.6m	SS	25	20	5.0	30m	10n	5.00	1.0m \emptyset	40	1.0u \emptyset b	32	12	8.0p \emptyset	L17k				
31	ZN2807*	250m	60M Δ	1.6m	SS	25	20	5.0	30m	10n	5.10	1.0m \emptyset	40	1.0u \emptyset b	32	12	8.0p \emptyset	L17k				
32	ZN3800*	250m	100M Δ	1.4m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	150	60u \emptyset	30K Δ	25	4p \emptyset	L17e				
33	ZN3801*	250m	100M Δ	1.4m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	300	60u \emptyset	40K Δ	25	4p \emptyset	L17e				
34	ZN3802*	250m	100M Δ	1.4m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	150	60u \emptyset	30K Δ	25	4p \emptyset	L17e				
35	ZN3803*	250m	100M Δ	1.4m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	300	60u \emptyset	40K Δ	25	4p \emptyset	L17e				
36	ZN3804*	250m	100M Δ	1.4m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	150	60u \emptyset	30K Δ	25	4p \emptyset	L17e				
37	ZN3804A*	250m	100M Δ	1.4m	SS	60	60	50	50m	10n \emptyset	100	1.0m \emptyset	150	60u \emptyset	30K Δ	25	4.0p \emptyset	*S	L17e			
38	ZN3805*	250m	100M Δ	1.4m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	300	60u \emptyset	40K Δ	25	4p \emptyset	*S	L17e			
39	ZN3805A*	250m	100M Δ	1.4m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	300	60u \emptyset	40K Δ	25	4p \emptyset	*S	L17e			
40	ZN3816A*	250m	100M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	150	60u \emptyset	15K Δ	25	4p \emptyset	*S	L17s			
41	ZN3817A*	250m	100M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	300	60u \emptyset	40K Δ	25	4p \emptyset	*S	L17s			
42*	ZN4290	250m	100M Δ	2.0m	SS	30	20	5.0	600m	500n	5.00	1.0m \emptyset	60	10u \emptyset b	40	1.2	10p \emptyset	U29	B			
43*	ZN4291	250m	100M Δ	2.0m	SS	40	30	6.0	600m	200n	5.00	1.0m \emptyset	60	10u \emptyset b	40	1.2	10p \emptyset	U29	B			
44	MQ3799*	250m	100M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	500	12u	12K Δ	2.5	4p \emptyset	AN \emptyset	L56c			
45	MQ3799A*	250m	100M Δ	1.5m	SS	60	60	50	50m	0.1u \emptyset	100	1.0m \emptyset	500	12u	12K Δ	2.5	4p \emptyset	AN \emptyset	L56c			
46#	BC156A	250m	150M Δ	2.5m	*J	30	25	5.0	100m	100n	5.00	2.0m \emptyset	125				4.5p	PE	MM10	A		
47#	BC156B	250m	150M Δ	2.5m	*J	30	25	5.0	100m	100n	5.00	2.0m \emptyset	240				4.5p	PE	MM10	A		
48#	BC159A	250m	150M Δ	2.5m	*J	25	20	5.0	100m	100n	5.00	2.0m \emptyset	125				4.5p	PE	MM10	A		
49*	BC159B	250m	150M Δ	2.5m	*J	25	20	5.0	100m	100n	5.00	2.0m \emptyset	240				4.5p	PE	MM10	A		
50#	ZSA402	250m	200M Δ	60	SJ	38	30	5.0	100m	1.0u \emptyset	100	2.0m \emptyset	200	1			6.0p	PE	TO18			
51#	ZSA22A	250m	200M Δ	1.7m	SJ	50	40	5.0	100m	10u \emptyset	100	1.0m \emptyset	50				4.0p	PE	TO18			
52#	ZSA22A	250m	200M Δ	1.7m	SJ	50	40	5.0	100m	10u \emptyset	100	1.0m \emptyset	50				25p	PL				
53#	AT331	250m	200M Δ	2.5m	*J	20	20	4.0	250m	50n	2.00	150m \emptyset	35	#1 Δ			8p \emptyset	AN \emptyset	L17d			
54	MD2904AF*	250m	200M Δ	1.4m	SS	60	60	5.0	600m	0.2u \emptyset #	100	150m \emptyset										

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX. DE RATE.		TABS MAX RATINGS @25°C				MAX. Icbo @MAX	TYPICAL PARAMETERS				Cob	STRUCTURE	DWG # Y200 s/a TO200 Ser.						
		COLL. DISS. @25°C	fab	IN FREE AIR	M A X P	V W/C	(V)		Vcb	Ie	hfe	hoe	hie	hre							
1#	2S3020	300m	80M _Δ	1.7m	SS	40	40	20	100m	10u	6.0 ₀	10m ₀	11	17u	800	2.7	40p	A ₀	ZAT11		
2#	2S3021	300m	80M _Δ	1.7m	SS	15	15	10	100m	10u	6.0 ₀	10m ₀	11	17u	800	2.7	40p	A ₀	ZAT11		
3#	OC206	300m	85M _Δ	2.5m	SJ	32	32	12	250m	50u	1.0 ₀	150m ₀	16	1 _Δ				R8			
4#	2N3842 ₀	300m	1.0M _Δ	1.7m	SS	120	120	120	100m	20n ₀	50 ₀	1.0m ₀	10	1 _Δ			9p ₀		TO18 A		
5#	2S321	300m	1.0M	2.4m	▼J	80	80	30	50m	10u	6.0 ₀	1.0m	15				40p	A	R51		
6#	2S322	300m	1.0M	2.4m	▼J	40	40	20	50m	10u	6.0 ₀	1.0m	20				40p	A	R51		
7#	2S330	300m	1.2M _Δ	1.7m	SS	25	25	20	100m	10u	6.0 ₀	1.0m	35				40p	A	T05		
8#	2S3030	300m	1.2M _Δ	1.7m	SS	25	25	10	100m	10u	6.0 ₀	10m ₀	19	29u	1.5k	4.3	40p	A ₀	ZAT11		
9#	2N3841 ₀	300m	1.5M _Δ	1.7m	SS	100	100	80	100m	2n ₀	50 ₀	1.0m ₀	20	1 _Δ			9p ₀		TO18 A		
10#	2S323	300m	2.0M	2.4m	▼J	25	25	20	50m	10u	6.0 ₀	1.0m	35				40p	A	R51		
11#	2S324	300m	3.0M	2.4m	▼J	15	15	15	50m	10u	6.0 ₀	1.0m	75				40p	A	R51		
12#	2S304	300m	3.5M	1.7m	SJ	15	15	15	100m	10u	6.0 ₀	1.0m	75				40p	A	T05		
13#	2S3040	300m	3.5M _Δ	1.7m	SS	15	15	10	100m	10u	6.0 ₀	10m ₀	39	78u	3.2k	8.4	40p	A ₀	ZAT11		
14#	3N900 ₀	300m	6.0M _Δ	1.7m	SS	50	50	30	20m	0.1u ₀						10p ₀		GD0			
15#	3N910 ₀	300m	6.0M _Δ	1.7m	SS	50	50	50	20m	0.1u ₀						10p ₀		GD0			
16#	3N920 ₀	300m	6.0M _Δ	1.7m	SS	50	50	30	20m	0.1u ₀						10p ₀		GD0			
17#	3N930 ₀	300m	6.0M _Δ	1.7m	SS	50	50	50	20m	0.1u ₀						10p ₀		GD0			
18#	JAN3N930 ₀	300m	6.0M _Δ	1.7m	SS	50	50	50	20m	0.1u ₀						10p ₀		GD0			
19#	3N940 ₀	300m	6.0M _Δ	1.7m	SS	50	50	50	20m	0.1u ₀						10p ₀		GD0			
20#	3N950 ₀	300m	6.0M _Δ	1.7m	SS	50	50	50	20m	0.1u ₀						10p ₀		GD0			
21#	3N128 ₀	300m	8.0M _Δ	6m	SS	20		10	20m	1.0 ₀						10p ₀		GC0			
22#	3N130 ₀	300m	8.0M _Δ	6m	SS	30		20	20m	1.0 ₀						10p ₀		GC0			
23#	3N131 ₀	300m	8.0M _Δ	6m	SS	40		30	20m	1.0 ₀						10p ₀		GC0			
24#	3N132 ₀	300m	8.0M _Δ	6m	SS	50		40	20m	1.0 ₀						10p ₀		GC0			
25#	3N133 ₀	300m	8.0M _Δ	6m	SS	60		50	20m	1.0 ₀						10p ₀		GC0			
26#	3N134 ₀	300m	8.0M _Δ	1.7m	SS	20		15	20m	0.1u ₀						12p ₀		GC0			
27#	3N135 ₀	300m	8.0M _Δ	1.7m	SS	40		30	20m	0.1u ₀						12p ₀		GC0			
28#	3N136 ₀	300m	8.0M _Δ	1.7m	SS	60		50	20m	0.1u ₀						12p ₀		GC0			
29#	2N864A1	300m	12M _Δ	1.6m	SS	60	60	6.0	100m	1.0 ₀	6.0 ₀	1.0m	25	△	700	9.0p ₀		TO18			
30#	JAN3N108 ₀	300m	12M _Δ	1.6m	SS	50	50	20	100m	250p ₀						10p ₀		T072			
31#	3N114 ₀	300m	12M _Δ	1.7m	SS	30		12	20m	0.1u ₀						10p ₀		GD0			
32#	3N115 ₀	300m	12M _Δ	1.7m	SS	30		12	20m	0.1u ₀						10p ₀		GD0			
33#	3N116 ₀	300m	12M _Δ	1.7m	SS	30		12	20m	0.1u ₀						10p ₀		GD0			
34#	3N117 ₀	300m	12M _Δ	1.6m	SS	50		20	20m	10n ₀						10p ₀		TO18			
35#	3N118 ₀	300m	12M _Δ	1.7m	SS	50		20	20m	0.1u ₀						10p ₀		TO18			
36#	3N119 ₀	300m	12M _Δ	1.7m	SS	50		20	20m	0.1u ₀						10p ₀		TO18			
37#	2N865Af	300m	24M _Δ	1.6m	SS	10	80	10	100m	1.0 ₀	6.0 ₀	1.0m	100	△	700	9.0p ₀		TO18			
38#	2H1254 _t	300m	25M	2.0m	SJ	25		150		200n ₀	10	2.0m	25	b	30	2	10p ₀	ME	TO18		
39#	2H1256 _t	300m	25M	2.0m	SJ	35		50		200n ₀	10	2.0m	25	b	30	2	10p ₀	ME	TO18		
40#	2H1258 _t	300m	25M	2.0m	SJ	25		50		200n ₀	10	2.0m	25	b	30	2	10p ₀	ME	TO18		
41#	ZT152	300m	30M _Δ	2.4m	SJ	20	20	15	500m	10u	6.0 ₀	100m	35	†		5.0p	PE	TO18			
42#	ZT1255 _t	300m	40M	2.0m	SJ	25		50		200n ₀	10	2.0m	55	b	30	2	10p ₀	ME	TO18		
43#	ZT1257 _t	300m	40M	2.0m	SJ	35		50		200n ₀	10	2.0m	55	b	30	2	10p ₀	ME	TO18		
44#	ZT1259 _t	300m	40M	2.0m	SJ	35		50		200n ₀	10	2.0m	55	b	30	2	10p ₀	ME	TO18		
45#	ZSA637	300m	40M _Δ	2.0m	SJ	150	150	50	50m	1.0u ₀	3.0 ₀	15m ₀	30	†△		10p ₀	DPL	TO18			
46#	HT1001	300m	40M	2.0m	SJ	20	20	150	50m	200n ₀	10	2.0m	11	b	30	2	10p ₀	ME	TO18		
47#	HT101t	300m	40M	2.0m	SJ	20	20	150	50m	200n ₀	10	2.0m	35	†△		10p ₀	ME	TO18			
48#	2N2852	300m	45M _Δ	1.7m	SS	25		50	100m	0.1u ₀	5.0 ₀	1.0m ₀	25	△	50u ₀	5p ₀	BT	TO18			
49#	ZT2881	300m	60M _Δ	1.7m	SS	25		50	100m	0.1u ₀	5.0 ₀	1.0m ₀	50	△	500u ₀	5p ₀	BT	TO18			
50#	ZN3437*	300m	60M	2.0m	SS	60	45	60		10n ₀	5.0 ₀	1.0m ₀	60	△	100u ₀	6.0p ₀	L17k				
51#	ZN3438*	300m	60M	2.0m	SS	60	45	60		10n ₀	5.0 ₀	1.0m ₀	60	△	100u ₀	6.0p ₀	L17k				
52#	ZN3349*	300m	60M _Δ	2.0m	SS	60	45	60		10n ₀	5.0 ₀	1.0m ₀	60	△	100u ₀	6.0p ₀	L17k				
53#	ZN3350*	300m	60M _Δ	2.0m	SS	60	45	60		10n ₀	5.0 ₀	1.0m ₀	150	△	100u ₀	6.0p ₀	L17k				
54#	ZN3351*	300m	60M _Δ	2.0m	SS	60	45	60		10n ₀	5.0 ₀	1.0m ₀	150	△	100u ₀	6.0p ₀	L17k				
55#	ZN3352*	300m	60M _Δ	2.0m	SS	60	45	60		10n ₀	5.0 ₀	1.0m ₀	150	△	100u ₀	6.0p ₀	L17k				
56#	BC137	300m	60M _Δ	3.0m	SJ	40	40	40	600m	0.6u ₀	100	2.0m	85	130u	400	1.4	10p ₀	DPE	R97		
57#	#BC186	300m	60M _Δ	2.0m	SJ	40	25	50	50m	0.1u ₀	40	2.0m	40	†	45p ₀	DPE	TO106 A				
58#	ENT1132	300m	60M _Δ	3.0m	SJ	50	35	50		10u ₀	100	2.0m	30	†#△	1.0u ₀	35	2	20p ₀	PE	R67a B	
59#	ZSA561	300m	70M _Δ	3.0m	SJ	50	50	50	150m	1.0u ₀	1.0 ₀	20m	100	†	40	10 ₀	4.0 ₀	20p ₀	PE	R67a B	
60#	ZSA562	300m	70M _Δ	3.0m	SJ	30	30	50	400m	1.0u ₀	100	2.0m	40	†	40	10 ₀	4.0 ₀	20p ₀	PE	R67a B	
61#	ZN3838 _t	300m	100M _Δ	3.0m	SJ	25	25	40	500m	35n ₀	100	10m ₀	25	△	1.2m ₀	20K ₀	25	2	20p ₀	PE	R110a A
62#	2N5120 ₀	300m	100M _Δ	1.7m	SS	45	45	70	10m	100p ₀	5.0 ₀	10u									

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COL. DISS. @25°C (W)	2 IDEATE fab (Hz)	3 TABS FREE AIR W/C	MAX RATINGS @25°C						MAX. IC @MAX	TYPICAL 'h' PARAMETERS						Cob	STRUCTURE	DWG #	LC
					M IN A M X P	E BV _{cbo} BV _{ceo} BV _{ebo}	I _c (V)	(V)	(A)	V _{cb} (V)	I _e (A)	h _{fe}	h _{oe} (mhos)	h _{ie} (Ω)	h _{re} (F)						
1# ZT2841		300m	150M _Δ	2.4m	\$J	45	45	4.0	500m ^Δ	50n	6.00	1.0m ^Δ	90					15p _Δ	PLQ	R81K	AØ
2# ZT2871		300m	150M _Δ	2.4m	\$J	25	25	4.0	500m ^Δ	500n	6.00	1.0m ^Δ	90					15p _Δ	PLQ	R81K	AØ
3# ZTX500		300m	150M _Δ	3.0m	♦A	25	25	5.0	500m ^Δ	200n	6.00	1.0m ^Δ	50 ^Δ					6.0p _Δ	PLQ	X59	F
4# ZTX501		300m	150M _Δ	3.0m	♦A	35	35	5.0	500m ^Δ	200n	6.00	1.0m ^Δ	50 ^Δ					6.0p _Δ	PLQ	X59	F
5# ZTX502		300m	150M _Δ	3.0m	♦A	35	35	5.0	500m ^Δ	200n	6.00	1.0m ^Δ	100 ^Δ					6.0p _Δ	PLQ	X59	F
6# ZTX503		300m	150M _Δ	3.0m	♦A	45	45	5.0	500m ^Δ	200n	6.00	1.0m ^Δ	50 ^Δ					6.0p _Δ	PLQ	X59	F
7# ZTX504		300m	150M _Δ	3.0m	♦A	70	70	5.0	500m ^Δ	200n	6.00	1.0m ^Δ	50 ^Δ					6.0p _Δ	PLQ	X59	F
8# 2N4888		300m	160M _Δ	3.0m	♦J	150	150	6.0	100m ^Δ	50n	10p _Δ	1.0m ^Δ	500	40u _Δ	20k _Δ		4p _Δ	R124	B	A	
9# 2N4889		300m	160M _Δ	3.0m	♦J	150	150	6.0	100m ^Δ	50n	10p _Δ	1.0m ^Δ	400	25u _Δ	12k _Δ	5 _Δ	4p _Δ	R124	B	A	
10# V2051		300m	160M _Δ	2.0m	\$A	15	10	3.0			02u _Δ	1.0 _Δ	20m ^Δ	55 ^Δ				8.0p	PE	T018	A
11# V435A		300m	170M _Δ	3.0m	♦J	35	35	5.0			10u _Δ	1.0 _Δ	10m ^Δ	40 ^Δ				6.0p	PE	R97	A
12# BC250A		300m	180M _Δ	3.0m	♦J	20	20	5.0	100m ^Δ	10u _Δ	1.0 _Δ	1.0m ^Δ	35 ^Δ				4.0p	PE	X64	A	
13# BC250B		300m	180M _Δ	3.0m	♦J	20	20	5.0	100m ^Δ	10u _Δ	1.0 _Δ	1.0m ^Δ	80 ^Δ				4.0p	PE	X64	A	
14# BC250C		300m	180M _Δ	3.0m	♦J	20	20	5.0	100m ^Δ	10u _Δ	1.0 _Δ	1.0m ^Δ	200 ^Δ				4.0p	PE	X64	A	
15# BC260A		300m	180M _Δ	2.0m	\$J	20	20	5.0	100m ^Δ	10u _Δ	1.0 _Δ	1.0m ^Δ	35 ^Δ				4.0p	PE	T018	A	
16# BC260B		300m	180M _Δ	2.0m	\$J	20	20	5.0	100m ^Δ	10u _Δ	1.0 _Δ	1.0m ^Δ	80 ^Δ				4.0p	PE	T018	A	
17# BC260C		300m	180M _Δ	2.0m	\$J	20	20	5.0	100m ^Δ	10u _Δ	1.0 _Δ	1.0m ^Δ	200 ^Δ				4.0p	PE	T018	A	
18# MPSH54		300m	185M _Δ	2.7m	♦J	80	80	4.0	100m ^Δ	50n ^Δ	10p _Δ	1.5m ^Δ	70 ^Δ	6.0u			1.0p _Δ	AN	T092	A	
19# MPSH55		300m	185M _Δ	2.7m	♦J	80	80	4.0	100m ^Δ	50n ^Δ	10p _Δ	1.5m ^Δ	70 ^Δ	6.0u			1.0p _Δ	AN	T092	A	
20# CS40121		300m	190M _Δ	3.0m	♦J	25	25	4.0	500m ^Δ	50n ^Δ	5.0p _Δ	4.0m ^Δ	70 ^Δ	60u	1.5k	250m	6.0p	TE	T0105	A	
21# CS40131		300m	190M _Δ	3.0m	♦J	25	25	4.0	500m ^Δ	50n ^Δ	5.0p _Δ	4.0m ^Δ	160 ^Δ	60u	1.5k	250m	6.0p	TE	T0105	A	
22# BC187		300m	191M _Δ	2.0m	\$J	30	25	5.0	100m ^Δ	100n ^Δ	5.0p _Δ	2.0m ^Δ	140	29u	2.0k	1.4	4.5pt	PE	T018	A	
23# 2N24111		300m	200M _Δ	1.7m	♦S	25	20	5.0	100m ^Δ	10u _Δ	5.0p _Δ	1.0m ^Δ	35 ^Δ				3.7p	PE	T018	A	
24# 2N24121		300m	200M _Δ	1.7m	♦S	25	20	5.0	100m ^Δ	10u _Δ	5.0p _Δ	1.0m ^Δ	55 ^Δ				3.7p	PE	T018	A	
25# 2N3644T		300m	200M _Δ	3.0m	♦J	45	45	5.0	500m ^Δ	35ns	100	1.0m ^Δ	80 ^Δ				8.0p _Δ	R110a	A		
26# 2N3645T		300m	200M _Δ	3.0m	♦J	60	60	5.0	500m ^Δ	35ns	100	1.0m ^Δ	80 ^Δ				8.0p _Δ	R110a	A		
27# 2N41421		300m	200M _Δ	3.0m	♦J	60	40	5.0	200m ^Δ	50n ^Δ	10p _Δ	1.5m ^Δ	120 ^Δ				8.0p _Δ	R110	A		
28# 2N4143T		300m	200M _Δ	3.0m	♦J	60	40	5.0	200m ^Δ	50n ^Δ	10p _Δ	1.5m ^Δ	300 ^Δ				8.0p _Δ	R110	A		
29# 2N4228		300m	200M _Δ	3.0m	♦J	60	40	5.0	200m ^Δ	50n ^Δ	10p _Δ	1.5m ^Δ	150 ^Δ				8.0p _Δ	PE	R110	A	
30# 2SA467		300m	200M _Δ	3.0m	♦J	40	30	5.0	400m ^Δ	50u _Δ	1.0p _Δ	1.0m ^Δ	100 ^Δ				10p	PE	R67a	B	
31# AT410		300m	200M _Δ	2.4m	♦J	30	30	5.0	500m ^Δ	200n ^Δ	10p _Δ	1.5m ^Δ	30 ^Δ				8.0p _Δ	PE	MM72a0		
32# AT412		300m	200M _Δ	2.4m	♦J	45	45	5.0	500m ^Δ	200n ^Δ	10p _Δ	1.5m ^Δ	30 ^Δ				8.0p _Δ	PE	MM12a0		
33# AT413		300m	200M _Δ	2.4m	♦J	45	45	5.0	500m ^Δ	200n ^Δ	10p _Δ	1.5m ^Δ	100 ^Δ				8.0p _Δ	PE	MM12a0		
34# AT414		300m	200M _Δ	2.4m	♦J	30	30	5.0	500m ^Δ	200n ^Δ	10p _Δ	1.5m ^Δ	100 ^Δ				8.0p _Δ	PE	MM12a0		
35# AT415		300m	200M _Δ	2.4m	♦J	30	30	5.0	500m ^Δ	200n ^Δ	10p _Δ	1.5m ^Δ	30 ^Δ				8.0p _Δ	PE	MM12a0		
36# AT416		300m	200M _Δ	2.4m	♦J	45	45	5.0	500m ^Δ	200n ^Δ	10p _Δ	1.5m ^Δ	30 ^Δ				8.0p _Δ	PE	MM12a0		
37# AT417		300m	200M _Δ	2.4m	♦J	45	45	5.0	500m ^Δ	200n ^Δ	10p _Δ	1.5m ^Δ	100 ^Δ				8.0p _Δ	PE	T018	A	
38# AT418		300m	200M _Δ	2.4m	♦J	30	30	5.0	500m ^Δ	200n ^Δ	10p _Δ	1.5m ^Δ	100 ^Δ				8.0p _Δ	PE	MM12a0		
39# AT419		300m	200M _Δ	2.4m	♦J	30	30	5.0	500m ^Δ	200n ^Δ	10p _Δ	1.5m ^Δ	90 ^Δ				8.0p _Δ	PE	MM12aA		
40# BC116		300m	200M _Δ	3.0m	♦J	45	40	5.0	600m ^Δ	0.8u _Δ	10p _Δ	1.0m ^Δ	20 ^Δ				5.0p	OPE	R97		
41# BC126		300m	200M _Δ	3.0m	♦J	35	30	5.0	600m ^Δ	0.8u _Δ	10p _Δ	1.0m ^Δ	20 ^Δ				5.0p	OPE	R97		
42# BC177		300m	200M _Δ	2.0m	♦J	45	45	5.0	100m ^Δ	0.5u _Δ	5.0p _Δ	2.0m ^Δ	240 ^Δ				4.0p	EE	T018	A	
43# BC177A		300m	200M _Δ	2.0m	♦J	50	45	5.0	100m ^Δ	0.5u _Δ	5.0p _Δ	2.0m ^Δ	180 ^Δ				4.0p	EE	T018	A	
44# BC177B		300m	200M _Δ	2.0m	♦J	50	45	5.0	100m ^Δ	0.5u _Δ	5.0p _Δ	2.0m ^Δ	290 ^Δ				4.0p	EE	T018	A	
45# BC177V		300m	200M _Δ	2.0m	♦J	50	45	5.0	100m ^Δ	0.5u _Δ	5.0p _Δ	2.0m ^Δ	125 ^Δ				4.0p	EE	T018	A	
46# BC177VI		300m	200M _Δ	2.0m	♦J	50	45	5.0	100m ^Δ	0.5u _Δ	5.0p _Δ	2.0m ^Δ	240 ^Δ				4.0p	EE	T018	A	
47# BC178		300m	200M _Δ	2.0m	♦J	20	20	5.0	100m ^Δ	10u _Δ	5.0p _Δ	2.0m ^Δ	240 ^Δ				4.0p	PE	T018	A	
48# BC178A		300m	200M _Δ	2.0m	♦J	30	25	5.0	100m ^Δ	10u _Δ	5.0p _Δ	2.0m ^Δ	180 ^Δ				4.0p	PE	T018	A	
49# BC178B		300m	200M _Δ	2.0m	♦J	30	25	5.0	100m ^Δ	10u _Δ	5.0p _Δ	2.0m ^Δ	290 ^Δ				4.0p	PE	T018	A	
50# BC178V		300m	200M _Δ	2.0m	♦J	30	25	5.0	100m ^Δ	10u _Δ	5.0p _Δ	2.0m ^Δ	75 ^Δ				4.0p	PE	T018	A	
51# BC179		300m	200M _Δ	2.0m	♦J	20	20	5.0	100m ^Δ	0.5u _Δ	5.0p _Δ	2.0m ^Δ	240 ^Δ				4.0p	PE	T018	A	
52# BC179B	</td																				

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1) MAX COLL. (W)	2) DERATE DISS. @25°C	ABS MAX RATINGS @25°C				MAX. ICBO @MAX Vcb	TYPICAL h' PARAMETERS						Cob	STRUCTURE	DWG # S/a TO200 Ser				
				IN FREE AIR (Hz)	M A P	BVCBO (V)	BVCEO (V)	BVBO (V)	Ic (A)	Vcb (V)	BIAS le (V)	hfe (A)	COMMON Emitter hoe (mhos)	hie (Ω)	X.0001 (F)						
1# BFW90T		300m	200Ms	3.0m	J	40	40	5.0	500m	5.00	10m \varnothing	150	68u	340	1.6	18pt	PLT	Y200 E O MM10 A			
2# BFW911		300m	200Ms	3.0m	J	20	20	5.0	500m	5.00	10m \varnothing	150	68u	340	1.6	18pt	PLT	MM10 A			
3# G13644T		300m	200Ms	3.0m	J	45	45	5.0	500m	0.3u \varnothing	100	150m \varnothing	100	1Δ		8pt		T018 A			
4# BFX12		200m	210Ms	12.0m	J	20	15	5.0	100m	0.1u \varnothing	350	10m \varnothing	20	1Δ			PEA	T018 A			
5# BSY401		300m	210Ms	2.0m	J	25	20	5.0	100m	0.1u \varnothing	500	10m \varnothing	40	1			PE	T018 A			
6# BFW87T		300m	230Ms	3.0m	J	60	60	5.0	500m	5.00	10m \varnothing	220	95u	500	1.6	18pt	PLT	MM10 A			
7# BFW89T		300m	230Ms	3.0m	J	40	40	5.0	500m	5.00	10m \varnothing	220	95u	500	1.6	18pt	PEA	MM10 A			
8# BFX13		300m	230Ms	2.0m	J	20	15	5.0	100m	0.1u \varnothing	350	10m \varnothing	50	1			PE	T018 A			
9# BSY411		300m	230Ms	2.0m	J	25	20	5.0	100m	0.1u \varnothing	500	10m \varnothing	60	1			PE	T018 A			
10# CS3906T		300m	250Ms	2.4m	J	40	40	5.0	200m	50n \varnothing	10m \varnothing	100	60u	12k \varnothing	10	2	4.5p \varnothing	R97a	A		
11# G136381		300m	250Ms	3.0m	J	25	25	4.0	500m	0.3u \varnothing	3.00	50m \varnothing	1.0	Δ	1.2m \varnothing	2k \varnothing	26	20p \varnothing	R97d	A	
12# G13638AT		300m	250Ms	3.0m	J	25	25	4.0	500m	0.3u \varnothing	3.00	50m \varnothing	1.5	Δ	1.2m \varnothing	2k \varnothing	15	10p \varnothing	R97d	A	
13# BSW21		300m	300Ms	2.0m	J	25	25	5.0	200m	50u	4.50	2.0m \varnothing	130	1			4Op	E	T018 A		
14# BSW21A		300m	300Ms	1.2m	J	50	50	5.0	200m	50u	4.50	2.0m \varnothing	130	1			4Op	E	T018 A		
15# BSW22		300m	300Ms	2.0m	J	25	25	5.0	200m	50u	4.50	2.0m \varnothing	250	1			4Op	E	R110 A		
16# BSW22A		300m	300Ms	2.0m	J	50	50	5.0	200m	50u	4.50	2.0m \varnothing	250	1			4Op	E	T018 A		
17# BSW44		300m	300Ms	3.0m	J	25	25	5.0	200m	50u	4.50	2.0m \varnothing	130	1			4Op	E	R110 A		
18# BSW44A		300m	300Ms	3.0m	J	50	50	5.0	200m	50u	4.50	2.0m \varnothing	130	1			4Op	E	R110 A		
19# BSW45		300m	300Ms	3.0m	J	25	25	5.0	200m	50u	4.50	2.0m \varnothing	250	1			4Op	E	R110 A		
20# BSW45A		300m	300Ms	3.0m	J	50	60	5.0	200m	50u	4.50	2.0m \varnothing	250	1			4Op	E	R110 A		
21# 2N4451T		300m	400Ms	1.7m	S	12	40	100m	0.08u \varnothing	500	30m \varnothing	40	1Δ			6p \varnothing		T046 A			
22# 2N4453T		300m	400Ms	1.7m	S	18	50	200m	0.1u \varnothing	500	30m \varnothing	40	1Δ			6p \varnothing		T046 A			
23# JAN2N4453T		300m	400Ms	1.7m	S	25	18	50	10ns	5.00	10m \varnothing	40	1Δ			6Op	Ø	T046 A			
24# BFW81T		300m	400Ms	5.88u	J	12	12	4.0	200m	10u \varnothing	300	10m \varnothing	30	1Δ			6p \varnothing	PE	U26a B		
25# BFW81A1		300m	400Ms	5.88u	J	12	12	4.0	200m	10u \varnothing	300	10m \varnothing	25	1Δ			6p \varnothing	PE	U26a B		
26# BFW81B1		300m	400Ms	5.88u	S	20	15	5.0	200m	10u \varnothing	500	10m \varnothing	40	1Δ			4.5p	PE	U26a B		
27# BSV55T		300m	400M	2.4m	S						500	30m \varnothing	40	1Δ			6.0p		U34 A		
28# BSV55AT		300m	400M	2.4m	S						500	30m \varnothing	30	1Δ			6.0p		U34 A		
29# V721T		300m	480Ms	1.7m	S						100	10m \varnothing	50	1			3.0p	PE	T018 A		
30# 2N3304T		300m	500Ms	1.7m	J	6.0	6.0	4.0		0.1u \varnothing	300	10m \varnothing	63	1			3.5p \varnothing	PE	T018 A		
31# 2N5040		300m	500Ms	3.0m	J	25	25	4.0	1	0.5u \varnothing	100	150m \varnothing	30	1Δ			35ps		R124 b A		
32# 2N5041		300m	500Ms	3.0m	J	40	40	5.0	1	0.5u \varnothing	100	150m \varnothing	40	1Δ			35ps		R124 b A		
33# V405AJ		300m	550Ms	2.0m	J	12	12	4.0		100u \varnothing	120	5.0m \varnothing	35	1			6.0p \varnothing	DPE	T018 Ø		
34# 2N42071		300m	850Ms	1.7m	J	6.0	6.0	4.5	50m	0.1u \varnothing	300	10m \varnothing	50	1Δ			3p \varnothing		T018 A		
35# 2N42081		300m	700Ms	1.7m	J	12	12	4.5	50m	0.1u \varnothing	300	10m \varnothing	50	1Δ			3p \varnothing		T018 A		
36# FT17021		300m	700Ms	1.7m	J	12	12	4.0		0.1u \varnothing	300	10m \varnothing	63	1			4p \varnothing	DPE	T018 A		
37# 2N4209T		300m	850Ms	1.7m	S	15	15	4.5	50m	0.1u \varnothing	300	10m \varnothing	50	1Δ			3p \varnothing		T018 A		
38# MD5000*		300m	900Ms	1.9m	J	20	15	5.0	50m	10n \varnothing	100	3.0m \varnothing	50	1			1.7p	AN	L66b		
39# MD5000A*		300m	900Ms	1.9m	J	20	15	5.0	50m	10n \varnothing	100	3.0m \varnothing	50	1			1.7p	AN	L66b		
40# MD5000B*		300m	900Ms	1.9m	J	20	15	5.0	50m	10n \varnothing	100	3.0m \varnothing	50	1			1.7p	AN	L66b		
41# 2N4080		300m	10G \varnothing	1.7m	S	20	15	3.0	50m	0.1u \varnothing	100	3.0m \varnothing	20	1Δ			1.7s	Ø	T072 GØ		
42# 2C027		310m	2.0Ms	2.5m	J	50	50	12	250m	50u \varnothing	500	10m \varnothing	50	1			100p \varnothing	A	R8		
43# HEP739S		310m	4.0Ms	2.8m	TJ	40	35	4	25	150m \varnothing	100ns	10	250	1				20p \varnothing	AN	T092 A	
44# MPS4041		310m	4.0Ms	2.8m	TJ	25	24	12	150m	100n \varnothing	100	12m \varnothing	30	1Δ			20p \varnothing	AN	T092 A		
45# MPS4044AT		310m	4.0Ms	2.8m	TJ	40	35	25	150m	100n \varnothing	100	12m \varnothing	30	1Δ			4p5 \varnothing		T092 A		
46# ZN5086		310m	40Ms	3.6m	Ts	50	50	3.0	50m	0.5u \varnothing	500	1.0m \varnothing	150	1			4p5 \varnothing		T092 A		
47# ZN5087		310m	40Ms	3.6m	Ts	50	50	3.0	50m	0.5u \varnothing	500	1.0m \varnothing	250	1			4p5 \varnothing		T092 A		
48# CS5086		310m	40Ms	3.6m	Ts	50	50	3.0	50m	0.5u \varnothing	500	1.0m \varnothing	150	1			4p5 \varnothing		T0106 A		
49# CS5087		310m	40Ms	3.6m	Ts	50	50	3.0	50m	0.5u \varnothing	500	1.0m \varnothing	250	1			4p5 \varnothing		T0106 A		
50# 2N5226		310m	50Ms	2.8m	Ts	25	26	4.0	500m	30u \varnothing	100	50m \varnothing	30	1Δ			20p \varnothing		T092 A		
51# MPS551		310m	60Ms	2.8m	Ts	100	100	4.0	600m	1.0u \varnothing	100	10m \varnothing	20	1Δ			8.0p \varnothing	AN	T092 A		
52# 2N5221		310m	100Ms	2.8m	Ts	15	15	3.0	500m	10u \varnothing	100	10m \varnothing	30	1Δ			15p \varnothing		T092 A		
53# 2N5227		310m	100Ms	2.8m	Ts	30	30	3.0	500m	10u \varnothing	100	2.0m \varnothing	50	1			5p \varnothing		T092 A		
54# 2N5400		310m	100Ms	2.8m	Ts	130	120	5.0	600m	100n \varnothing	100	1.0m \varnothing	30	1Δ			6.0p \varnothing		T092 A		
55# 2N5401		310m	100Ms	2.8m	Ts	160	150	5.0	600m	50n \varnothing	100	1.0m \varnothing	40	1Δ			6.0p \varnothing		T092 A		
56# MPS3638AT		310m	100Ms	2.8m	#J	25	25	4.0	500m	0.4u \varnothing	100	10m \varnothing	100	1Δ			100u \varnothing	7.5k \varnothing	8.5p \varnothing	T092 A	
57# MPS3702		310m	100Ms	2.8m	TJ	40	25	4.0	500m	10u \varnothing	500	60m \varnothing	30	1Δ			100u \varnothing	7.5k \varnothing	8.5p \varnothing	T092 A	
58# HEP717S		310m	120Ms	2.8m	TJ	25	25	4.0	100ms	100ns	15	1350	1							T092 A	
59# 2N4402T		310m	150Ms	2.8m	S	40	40	5.0	600m	1u \varnothing	100	10m \varnothing	30	1Δ			1.2m \varnothing	1.5k \varnothing	26	p \varnothing	T092 A
60# 2N4402T		310m	150Ms	2.8m	S	40	40	5.0	600m	1u \varnothing	100	10m \varnothing	60	1Δ			1.2m \varnothing	1.5k \varnothing	12p \varnothing	EA	T092 A

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C	MAX fab	DE RATE	ABS MAX RATINGS @25°C						MAX ICBO @MAX	TYPICAL "H" PARAMETERS						Cob	STRUCTURE	DWG Y200 s/a	L C A D E O		
					IN FREE AIR (W)	M A M (Hz)	E BVceo (V)	B BVbeo (V)	Ic (A)	Vcb (V)		BIAS le (A)	hfe (mhos)	COMMON Emitter hoe (Ω)	hie (Ω)	hre (Ω)	X.0001 (F)						
1#	BCY97	350m	15M ⁵	2.9m	\$J	90	90	30	50m	2n ²	6.0 ²	1.0m ²	42					4ps	PEO	T018	A ²		
2#	TCH981	350m	15M ⁵	2.9m	\$J	40	40	20	50m	2n ²	6.0 ²	1.0m ²	125					4ps	PEO	T018	A ²		
3#	TCH991	350m	15M ⁵	2.9m	\$J	70	70	30	50m	2n ²	6.0 ²	1.0m ²	125					4ps	PEO	T018	A ²		
4#	BFS37	350m	30M ⁵	2.3m	\$J	45	45	5.0	500m ²	10n ²	5.0 ²	10u ²	100 ²	Δ									
5#	BFS37A	350m	30M ⁵	2.3m	\$J	30	30	5.0	500m ²	100n ²	5.0 ²	100u ²	100 ²	Δ									
6#	2N1196	350m	40M ⁵	2.0m	\$A	70	70	4.0	15m	250n ²	10 ²	2.0m ²	10										
7#	2N5254*	350m	40M ⁵	3.4m	↑J	40	40	5.0	50m	0.1u ²	5.0 ²	1.0m ²	70 ²	Δ	20u ²	25k ²	12 ²				L17 ¹		
8#	2N5255*	350m	40M ⁵	3.4m	↑J	40	40	5.0	50m	0.1u ²	5.0 ²	1.0m ²	175 ²	Δ	70u ²	25k ²	12 ²				L17 ¹		
9#	2N5256*	350m	40M ⁵	3.4m	↑J	40	40	5.0	50m	0.1u ²	5.0 ²	1.0m ²	175 ²	Δ	70u ²	25k ²	12 ²				L17 ¹		
10#	2N1197	350m	45M ⁵	2.0m	\$A	70	40	4.0	15m	250n ²	10 ²	2.0m ²	10		300nb	20	600m	3Op	MEO	T05	A		
11#	BFS44	350m	60M ⁵	2.3m	\$J	60	30	5.0	1.0 ²	100n ²	10 ²	10m ²	25	Δ				25p ²					
12#	BFS45	350m	60M ⁵	2.3m	\$J	60	30	5.0	1.0 ²	100n ²	10 ²	10m ²	35	Δ				25p ²					
13#	2N43541	350m	100M ⁵	3.4m	↑J	60	60	5.0	500m ²	0.5u ²	10 ²	1.0m ²	25 ²	Δ				3p ²		R124	H A		
14#	2N43551	350m	100M ⁵	3.4m	↑J	60	60	5.0	500m ²	0.5u ²	10 ²	1.0m ²	60 ²	Δ				3p ²		R124	b A		
15#	2N43561	350m	100M ⁵	3.4m	↑J	80	80	5.0	500m ²	0.5u ²	10 ²	1.0m ²	25 ²	Δ				3p ²		R124	b A		
16#	BFS40	350m	150M ⁵	2.3m	45	35	5.0	500m ²	6.0 ²	100u ²	20	Δ						5Op ²					
17#	BFS40A	350m	150M ⁵	2.3m	45	25	5.0	500m ²	6.0 ²	100u ²	60	Δ						5Op ²					
18#	BFS41	350m	150M ⁵	2.3m	45	45	5.0	500m ²	6.0 ²	100u ²	40	Δ						5Op ²					
19#	ZV205+	350m	160M ⁵	2.3m	\$J	15	30	5.0	1.0 ²	100u ²	10 ²	1.0m ²	42 ²	Δ				8Op	DPEO	L17 ¹			
20#	ZN36731	350m	200M ⁵	2.0m	\$S	60	50	5.0	600m ²	10n ²	10 ²	10m ²	55 ²	Δ						T046	A ²		
21#	ZN44521	350m	200M ⁵	2.0m	\$J	45	45	5.0	600m ²	10u ²	10 ²	135 ²	800u ²	2.3k ²	15 ²						T046	A	
22#	BCY72	350m	200M ⁵	2.0m	\$J	25	25	5.0	200m ²	100n ²	10 ²	10m ²	50 ²	Δ						PE	T018		
23#	BCY70	350m	250M ⁵	2.0m	\$J	50	40	5.0	200m ²	10n ²	10 ²	10m ²	50 ²	Δ						PE	T018		
24#	MD3467FT	350m	250M ⁵	2.0m	\$J	40	40	5.0	1 ²	10u ²	10 ²	500m ²	40 ²	1 ²									
25#	MD3762FT	350m	250M ⁵	2.0m	\$J	40	40	5.0	1 ²	10u ²	2.0 ²	1 ²	40 ²	1 ²									
26#	BCY71	350m	300M ⁵	2.0m	\$J	45	45	5.0	200m ²	0.1u ²	10 ²	10m ²	100 ²	Δ						PEO	T018	A ²	
27#	BCY71A	350m	380M ⁵	2.0m	\$J	45	45	5.0	200m ²	10 ²	10m ²	260 ²	30u	6.8k	3.5						PEO	T018	A ²
28#	BSV371	350m	400M ⁵	2.3m	\$J	12	12	5.0	500m ²	100n ²	5.0 ²	30m ²	40 ²	Δ									
29#	ZN4058	360m	2.9m	6S	30	30	6.0	30m	10u ²	5.0 ²	10m ²	100 ²	Δ								T092	B	
30#	ZN4059	360m	2.9m	6S	30	30	6.0	30m	10u ²	5.0 ²	1.0m ²	45 ²	Δ								T092	B	
31#	ZN4060	360m	40M ⁵	2.0m	\$S	30	30	6.0	30m	10u ²	5.0 ²	1.0m ²	1.0 ²								T092	B	
32#	ZN4061	360m	2.9m	6S	30	30	6.0	30m	10u ²	5.0 ²	1.0m ²	90 ²	Δ								T092	B	
33#	ZN4062	360m	2.9m	6S	30	30	6.0	30m	10u ²	5.0 ²	1.0m ²	180 ²	Δ								T092	B	
34#	ZN5394	360m	3.6m	6S	25	25	4.0	500m ²	10u ²	10 ²	2.0m ²	32 ²	Δ									T098	B
35#	ZN5395	360m	3.6m	6S	25	25	4.0	500m ²	10u ²	10 ²	2.0m ²	80 ²	Δ									T098	B
36#	ZN5396	360m	3.6m	6S	25	25	4.0	500m ²	10u ²	10 ²	2.0m ²	200 ²	Δ								T098	B	
37#	ZN5397	360m	3.6m	6S	40	40	4.0	500m ²	10u ²	10 ²	2.0m ²	32 ²	Δ								T098	B	
38#	ZN5366	360m	3.6m	6S	40	40	4.0	500m ²	10u ²	10 ²	2.0m ²	80 ²	Δ								T098	B	
39#	ZN5367	360m	3.6m	6S	40	40	4.0	500m ²	10u ²	10 ²	2.0m ²	200 ²	Δ								T098	B	
40#	LDS27	360m	2.9m	6J	20	15	10	30m	10n ²	50 ²	1.0m ²	60 ²	Δ								T0122	P	
41#	TPS6516	360m	2.8m	6J	40	40	4.0	100m ²	50n ²	10 ²	2.0m ²	50 ²	Δ								T0122	P	
42#	TPS6517	360m	2.8m	6J	40	40	4.0	100m ²	50n ²	10 ²	2.0m ²	90 ²	Δ								T0122	P	
43#	TPS6518	360m	2.8m	6J	40	40	4.0	100m ²	50n ²	10 ²	2.0m ²	150 ²	Δ								T0122	P	
44#	TPS6519	360m	2.8m	6J	25	25	4.0	100m ²	50n ²	10 ²	2.0m ²	250 ²	Δ								T0122	P	
45#	TPS6522	360m	2.8m	6J	25	25	4.0	100m ²	50n ²	10 ²	2.0m ²	200 ²	Δ								T0122	P	
46#	TPS6523	360m	2.8m	6J	25	25	4.0	100m ²	50n ²	10 ²	2.0m ²	300 ²	Δ								T0122	P	
47#	BC326	360m	12M ⁵	2.0m	\$J	60	60	6.0	50m ²	10n ²	5.0 ²	1.0m ²	150 ²	Δ				9Op ²	PL	T018	A ²		
48#	BC325	360m	15M ⁵	2.0m	\$J	60	60	6.0	50m ²	10n ²	5.0 ²	1.0m ²	325 ²	Δ				9Op ²	PL	T018	A ²		
49#	2N3962	360m	40M ⁵	2.0m	\$J	60	50	6.0	200m ²	0.1u ²	5.0 ²	1.0m ²	100 ²	Δ				9Op ²	PL	T018	A ²		
50#	2N3963	360m	40M ⁵	2.0m	\$J	80	80	6.0	200m ²	0.1u ²	5.0 ²	1.0m ²	100 ²	Δ				9Op ²	PL	T018	A ²		
51#	BFW21	360m	40M ⁵	2.0m	\$J	80	80	6.0	50m ²	0.1u ²	5.0 ²	1.0m ²	300 ²	Δ				9Op ²	PL	T018	A ²		
52#	BFW21	360m	40M ⁵	2.0m	\$J	60	60	6.0	50m ²	0.2u ²	5.0 ²	1.0m ²	200 ²	Δ				5Op	PL	T018	A ²		
53#	BFX37	360m	40M ⁵																				

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX. COLL. DISS. @25°C (W)	DERATE IN fab FREE W/C (Hz)	ABS MAX RATINGS @ 25°C				MAX. ICBO @MAX Vcb (A)	TYPICAL β PARAMETERS				Cob STRUCTURE	DWG # Y200 s/a	C E O A D TO200-D Ser.	
				M E A M X P	BVCBO VBCO VBCO	BVEBO VVEBO VVEBO	C I C Vcb (V)		Ie (A)	HFE (mhos)	COMMON Emitter hfe hie hre	X.0001 (F)				
1	AT3905t	360m	200M Δ	2.8m	\$S	40	40	5.0	200m	50n $\#$	100 β 1.0m β	50 Δ	400 μ A 8.0k Ω	5.0 Ω	4.5p Ω	PE10 X55 A
2	AT3905t	360m	200M Δ	2.8m	\$S	40	40	5.0	200m	50n $\#$	100 β 1.0m β	100 Δ	600 μ A 12k Ω	10 Ω	4.5p Ω	PE10 X55 A
3#	AT430	360m	200M Δ	2.0m	\$J	30	30	5.0	500m	200n β	100 β 1.50m β	30 Δ	100 μ A 30 Ω	8.0p Ω	PE	TO18 A
4#	AT431	360m	200M Δ	2.0m	\$J	45	45	5.0	500m	200n β	100 β 1.50m β	30 Δ	100 μ A 100 Ω	8.0p Ω	PE	TO18 A
5#	AT432	360m	200M Δ	2.0m	\$J	30	30	5.0	500m	200n β	100 β 1.50m β	100 Ω	100 μ A 100 Ω	8.0p Ω	PE	TO18 A
6#	AT433	360m	200M Δ	2.0m	\$J	45	45	5.0	500m	200n β	100 β 1.50m β	100 Ω	100 μ A 40 Ω	8.0p Ω	PE	TO18 A
7#	AT434	360m	200M Δ	2.0m	\$J	30	30	5.0	500m	200n β	100 β 1.50m β	30 Δ	100 μ A 30 Ω	8.0p Ω	PE	TO18 A
8#	AT435	360m	200M Δ	2.0m	\$J	45	45	5.0	500m	200n β	100 β 1.50m β	30 Δ	100 μ A 40 Ω	8.0p Ω	PE	TO18 A
9#	AT436	360m	200M Δ	2.0m	\$J	25	40	5.0	500m	200n β	100 β 250m β	40 Δ	100 μ A 100 Ω	8.0p Ω	PE	TO18 A
10#	AT437	360m	200M Δ	2.0	\$J	30	30	5.0	500m	200n β	100 β 50m β	100 Δ	100 μ A 100 Ω	8.0p Ω	PE	TO18 A
11#	AT438	360m	200M Δ	2.0	\$J	45	45	5.0	500m	200n β	100 β 50m β	100 Δ	100 μ A 100 Ω	8.0p Ω	PE	TO18 A
12#	BFV861	360m	200M Δ	500u	\$S	60	40	5.0	600m	0.02u β	100 β 1.0m β	50 Δ	80p Ω	PE	u26a B	
13#	BFV86A1	360m	200M Δ	500u	\$S	80	60	5.0	600m	0.01u β	100 β 1.0m β	100 Δ	80p Ω	PE	u26a B	
14#	BFV86B1	360m	200M Δ	500u	\$S	60	40	5.0	600m	0.02u β	100 β 1.0m β	25 Δ	80p Ω	PE	u26a B	
15#	BFV86C1	360m	200M Δ	500u	\$S	60	60	5.0	600m	0.01u β	100 β 1.0m β	40 Δ	80p Ω	DPE	u26a B	
16#	BSX361	360m	200M Δ	2.0m	\$J	40	40	5.0	500m	0.1u β	100 β 0.1m β	50 Δ	8.0p Ω	PE	X105 A	
17#	GET29041	360m	200M Δ	3.6m	\$J	60	40	5.0	350m	20n β	100 β 100u β	20 Δ	8.0p Ω	PE	X105 A	
18#	GET29051	360m	200M Δ	3.6m	\$J	60	40	5.0	350m	20n β	100 β 100u β	35 Δ	8.0p Ω	PE	X93a F	
19#	GET29061	360m	200M Δ	3.6m	\$J	60	40	5.0	350m	20n β	100 β 100u β	20 Δ	8.0p Ω	PE	X93a F	
20#	GET29071	360m	200M Δ	3.6m	\$J	60	40	5.0	350m	50n β	100 β 100u β	35 Δ	8.0p Ω	PE	X93a F	
21	LDA450	360m	200M Δ	2.9m	\$J	45	30	5.0	10n β	100 β 1.0m β	35 Δ	100 μ A 1.0m β	8.0p Ω	PE	u34 P	
22	LDA451	360m	200M Δ	2.9m	\$J	45	30	5.0	10n β	100 β 1.0m β	75 Δ	100 μ A 1.0m β	8.0p Ω	PE	u34 P	
23	LDA4521	360m	200M Δ	2.9m	\$J	45	30	5.0	300m	10n β	100 β 1.50m β	40 Δ	100 μ A 1.50m β	8.0p Ω	PE	u34 P
24	LDA4531	360m	200M Δ	2.9m	\$J	45	30	5.0	300m	10n β	100 β 1.50m β	100 Δ	100 μ A 1.50m β	8.0p Ω	PE	u34 P
25#	ME0404-1	360m	200M Δ	2.8m	\$J	40	30	* 5.0	50n β	100 β 1.0m β	20 Δ	100 μ A 50n β	10p Ω	PE	R110 C A	
26#	ME0404-2	360m	200M Δ	2.8m	\$J	40	30	* 5.0	50n β	100 β 1.0m β	40 Δ	100 μ A 50n β	10p Ω	PE	R110 C A	
27#	ME501Δ	360m	200M Δ	2.7m	\$J	25			12.500m	100n β	100 β 50m β	10 Δ	100 μ A 100 Ω	13p Ω	PE	TO106 A
28#	ME502	360m	200M Δ	2.9m	\$J	25	20	*	12.500m	10u β	100 β 50m β	20 Δ	100 μ A 50m β	13p Ω	PE	TO106 A
29#	ME503	360m	200M Δ	2.9m	\$J	30	30	5.0	300m	1.0u β	100 β 50m β	40 Δ	100 μ A 10 Ω	13p Ω	PE	PE1 TO106 A
30#	ME511	360m	200M Δ	2.9m	\$J	50			400m	1.0u β	100 β 50m β	10 Δ	100 μ A 100 Ω	13p Ω	PE	PE1 TO106 A
31#	ME512	360m	200M Δ	2.9m	\$J	50			400m	1.0u β	100 β 50m β	20 Δ	100 μ A 50m β	13p Ω	PE	PEAT TO106 A
32#	ME513	360m	200M Δ	2.8m	\$J	70	60	5.0	600m	100n β	100 β 50m β	40 Δ	100 μ A 50m β	13p Ω	PE	R110 C A
33#	PL40311	360m	200M Δ	2.4m	\$S	60	40	*	5.0	600m	20n β	100 β 1.0m β	25 Δ	80p Ω	PE	u51
34#	PL40321	360m	200M Δ	2.4m	\$S	60	60	*	5.0	600m	20n β	100 β 1.0m β	40 Δ	80p Ω	PE	u51
35#	PL40331	360m	200M Δ	2.4m	\$S	60	40	*	5.0	600m	20n β	100 β 1.0m β	50 Δ	80p Ω	PE	u51
36#	PL40341	360m	200M Δ	2.4m	\$S	60	60	*	5.0	600m	10n β	100 β 1.0m β	100 Δ	80p Ω	PE	u51
37	TIS1121	360m	200M Δ	2.8m	\$S	50	40	5.0	600m	20n β	100 β 100u β	35 Δ	80p Ω	PE	X55 A	
38#	TP4125	360m	200M Δ	2.8m	\$S	30	30	5	4.0	200m	50n β	100 β 2.0m β	50 Δ	4.5p Ω	PLG X55a A	
39	2N32481	360m	250M Δ	2.0m	\$J	15	12		5.0	200m	0.5u β	100 β 10m β	10 Δ	80p Ω	TO18 A	
40	2N3250f	360m	250M Δ	2.0m	\$J	50	40	5.0	200m	0.2u β	100 β 1.0m β	50 Δ	40u Ω	6.0k Ω	TO18 A	
41	2N3250A Δ	360m	250M Δ	2.0m	\$J	60	60	5.0	200m	0.2u β	100 β 1.0m β	60 Δ	40u Ω	6.0k Ω	EAΔ TO18 A	
42	JAN2N3250A Δ	360m	250M Δ	2.0m	\$S	60	60	5.0	200m	0.2u β	100 β 1.0m β	60 Δ	40u Ω	6.0k Ω	TO18 A	
43	ZN35451	360m	250M Δ	2.0m	\$J	20	20	5.0	200m	0.1u β	100 β 1.0m β	100 Δ	200 μ A 50m β	4.5p Ω	X55 A	
44	ZN5383	360m	250M Δ	2.0m	\$J	40								4.5p Ω	TO192 A	
45	TIS61	360m	250M Δ	2.9m	\$J	40	25	5.0	400m	0.1u β	100 β 1.0m β	15 Δ	100 μ A 1.0m β	8.0p Ω	PE	TO18 A
46#	TP4126	360m	250M Δ	2.8m	\$J	25	25	5.0	400m	50n β	100 β 2.0m β	120 Δ	4.5p Ω	PLG X55a A		
47	JAN2N2804	360m	300M Δ	2.0m	\$J	80	60	60	1.0m	30n β	100 β 1.0m β	40 Δ	5.0p Ω	TO46 A		
48	JAN2N2605	360m	300M Δ	2.0m	\$J	70	60	60	1.0m	30n β	100 β 1.0m β	40 Δ	5.0p Ω	TO46 A		
49	2N2491	360m	300M Δ	2.0m	\$J	15	12	5.0	200m	0.5u β	100 β 1.0m β	100 Δ	80p Ω	TO18 A		
50	2N3251	360m	300M Δ	2.0m	\$J	50	40	5.0	200m	0.2u β	100 β 1.0m β	200 Δ	100 μ A 100 Ω	6.0p Ω	EAΔ TO18 A	
51	2N3251A Δ	360m	300M Δ	2.0m	\$J	60	60	5.0	200m	0.2u β	100 β 1.0m β	200 Δ	100 μ A 12k Ω	6.0p Ω	TO18 A	
52	JAN2N3251AT	360m	300M Δ	2.0m	\$S	60	60	5.0	200m	20n β	100 β 1.0m β	20 Δ	100 μ A 100 Ω	6.0p Ω	TO18 A	
53	GET36381	360m	300M Δ	3.6m	\$J	25	25	4.0	350m	35n β	100 β 1.0m β	25 Δ	100 μ A 100 Ω	10p Ω	TO18 A	
54	GET3638A Δ	360m	300M Δ	3.6m	\$J	25	25	4.0	350m	35n β	100 β 1.0m β	100 Δ	100 μ A 100 Ω	10p Ω	TO18 A	
55	MD1T3251	360m														

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN FREE AIR (X P W/C)	ABS MAX RATINGS @25°C					MAX. I _{cbo} @MAX V _{cb}	TYPICAL 'h' PARAMETERS					Cob	STRUCTURE	DWG # C Y200 E O s/a A D TO200 D E Ser.
				M (Hz)	E (V)	BV _{cbo} (V)	BV _{ceo} (V)	BV _{beo} (V)		V _{cb} (V)	I _e (A)	h _{fe}	h _{oe} (mhos)	h _{ie} (S)	h _{re}		
1	OD400-78*	400m	300 Δ 2.3m	SS 25	25	6.0	20m	1.0m Δ	5.0 Δ	10u Δ	50 Δ	40u Δ	3.0p Δ	E*	L2d		
2	OD401-78*	400m	300 Δ 2.3m	SS 45	45	6.0	20m	500p Δ	5.0 Δ	10u Δ	100 Δ	40u Δ	2.0p Δ	E*	L2d		
3	OD402-78*	400m	450 Δ 2.3m	SS 25	25	6.0	20m	500p Δ	5.0 Δ	10u Δ	100 Δ	40u Δ	2.0p Δ	E*	L2d		
4	OD403-78*	400m	450 Δ 2.3m	SS 45	45	6.0	20m	500p Δ	5.0 Δ	10u Δ	100 Δ	40u Δ	2.0p Δ	E*	L2d		
5	OD404-78*	400m	450 Δ 2.3m	SS 45	45	6.0	20m	500p Δ	5.0 Δ	10u Δ	100 Δ	40u Δ	2.0p Δ	E*	L2d		
6	JAN2N228A	400m	200mA	2.2m	SS 50	40	30	100n	5.0 Δ	3.0m Δ	18 Δ	110p Δ	110p Δ	T05	A		
7	JAN2N329A	400m	250mA	2.2m	SS 50	35	30	100n	5.0 Δ	3.0m Δ	36 Δ	110p Δ	110p Δ	T05	A		
8	JAN2N12341	400m	300mA	2.9m	SS 110	110	110	100n Δ	2.0 Δ	10m Δ	10 Δ	2.0u Δ b	60 Δ	150p Δ	T05	A	
9	2N1234	400m	800mA	2.9m	SS 110	110	110	100n Δ	2.0 Δ	10m Δ	14 Δ	1.2ub	30	4.0	95p	A	T05
10	2N1232	400m	1.0M	2.9m	SS 60	60	60	100n Δ	2.0 Δ	1.0m Δ	14 Δ	1.2ub	30	4.0	95p	A	T05
11	2N1233	400m	1.0M	2.9m	SS 60	60	60	100n Δ	2.0 Δ	1.0m Δ	30 Δ	1.2ub	30	4.0	95p	A	T05
12	2N1439	400m	1.0M Δ	2.3m	SA 50	50	50	100mA	0.2u	6.0	1.0m Δ	35u	1.0k	5.0p	A	T05	
13	2N1440	400m	1.0M Δ	2.2m	SS 50	50	50	100mA	0.2u	6.0	1.0m Δ	35u	1.0k	5.0p	A	T05	
14	2N1441	400m	1.0M Δ	2.2m	SS 50	35	50	100mA	0.2u	6.0	1.0m Δ	35u	1.0k	5.0p	A	T05	
15	2N1442	400m	1.0M Δ	2.2m	SS 50	30	50	100mA	0.2u	6.0	1.0m Δ	35u	1.0k	5.0p	A	T05	
16	2N1443	400m	1.0M Δ	2.3m	SA 50	50	50	100mA	0.2u	6.0	1.0m Δ	35u	1.0k	5.0p	A	T05	
17	2N3977	400m	1.0M Δ	2.3m	SS 15	10	15	150n Δ	1.0n	5.0 Δ	40 Δ	14p Δ	14p Δ	A Δ			
18	2N3978	400m	1.0M Δ	2.3m	SS 25	20	25	100mA	1.0n	5.0 Δ	30 Δ	14p Δ	14p Δ	A Δ			
19	2N3979	400m	1.0M Δ	2.3m	SS 40	35	40	100mA	1.0n	5.0 Δ	20 Δ	14p Δ	14p Δ	A Δ			
20	2N1228	400m	1.2M	2.9m	SS 15	15	15	100n Δ	2.0 Δ	10m Δ	14 Δ	1.2ub	30	15	95p	A	T05
21	2N1229	400m	1.2M	2.9m	SS 15	15	15	100n Δ	2.0 Δ	10m Δ	30 Δ	1.2ub	30	15	95p	A	T05
22	2N1230	400m	1.2M	2.9m	SS 35	35	35	100n Δ	2.0 Δ	10m Δ	14 Δ	1.2ub	30	8.0	95p	A	T05
23	2N1231	400m	1.2M	2.9m	SS 35	35	35	100n Δ	2.0 Δ	10m Δ	30 Δ	1.2ub	30	8.0	95p	A	T05
24	2N3278	400m	2.0M Δ	2.3m	SS 50	40	20	100mA	1n Δ	5.0 Δ	10m Δ	14	9.0p	P Δ	T05		
25	2N1026A	400m	2.0M Δ	500mA	SS 35	35	100mA	0.2u	5.0 Δ	36	7.0p	E	T05				
26	2N3064	400m	2.0M	2.3m	SS 110	100	50	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	T046			
27	2N3288	400m	3.0M Δ	2.3m	SS 50	35	20	100mA	1n Δ	5.0 Δ	10m Δ	9.0p	P Δ	T05			
28	2N3062	400m	3.0M	2.3m	SS 90	80	40	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	T046			
29	2N3219	400m	3.0M Δ	2.3m	SS 40	35	40	100mA	0.1u Δ	6.0 Δ	1.0m Δ	14p Δ	E	T046			
30	2N4982	400m	3.0M Δ	2.2m	SS 70	70	70	100mA	0.1n	5.0 Δ	30 Δ	10p Δ	A Δ				
31	2N3065	400m	4.0M	2.3m	SS 110	100	50	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	T046			
32	2N3913	400m	4.0M Δ	2.3m	SS 60	50	50	200mA	5n Δ	5.0 Δ	40 Δ	8p Δ	A Δ	T018			
33	2N3298	400m	5.0M Δ	2.3m	SS 50	30	20	100mA	1n Δ	5.0 Δ	10m Δ	9.0p	P Δ	T05			
34	2N2946	400m	5.0M Δ	4.3m	SS 40	35	40	100mA	5n Δ	5.0 Δ	10m Δ	10p Δ	E	T046			
35	2N2946A	400m	5.0M Δ	2.3m	SS 40	35	40	100mA	5n Δ	5.0 Δ	10m Δ	10p Δ	E	A Δ			
36	JAN2N2946A	400m	5.0M Δ	2.2m	SA 40	35	40	100mA	5n Δ	5.0 Δ	10m Δ	10p Δ	E	T046			
37	2N3060	400m	5.0M	2.3m	SS 70	60	30	100mA	5n Δ	6.0 Δ	1.0m Δ	10p Δ	E	T046			
38	2N3063	400m	5.0M	2.3m	SS 90	80	40	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	T046			
39	2N3218	400m	5.0M Δ	2.3m	SS 25	20	25	100mA	1.0n	6.0 Δ	1.0m Δ	14p Δ	E	T046			
40	2N3527	400m	5.0M Δ	2.3m	SS 30	30	30	100mA	1n Δ	6.0 Δ	1.0m Δ	40 Δ	10p Δ	E	T046		
41	2N3677	400m	5.0M Δ	2.3m	SS 30	20	30	100mA	1.0n	6.0 Δ	1.0m Δ	10p Δ	E	A Δ			
42	2N49812	400m	5.0M Δ	2.2m	SS 50	50	50	100mA	1.0n	6.0 Δ	1.0m Δ	10p Δ	A Δ				
43	C9080	400m	5.0M	2.3m	SS 30	30	50	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	T05			
44	C9082	400m	5.0M	2.3m	SS 30	30	50	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	T018			
45	C9084	400m	5.0M	2.3m	SS 30	30	50	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	R135			
46	2N3840	400m	6.0M Δ	2.3m	SS 50	50	50	100mA	5n Δ	5.0 Δ	1.0m Δ	8p Δ	A Δ	T046			
47	2N3061	400m	8.0M	2.3m	SS 70	60	30	100mA	5n Δ	6.0 Δ	1.0m Δ	10p Δ	E	T046			
48	2N3914	400m	8.0M Δ	2.3m	SS 60	40	40	200mA	5n Δ	6.0 Δ	1.0m Δ	8p Δ	A Δ	T018			
49	C9081	400m	8.0M	2.3m	SS 30	30	50	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	T05			
50	C9083	400m	8.0M	2.3m	SS 30	30	50	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	T018			
51	C9085	400m	8.0M	2.3m	SS 30	30	50	100mA	0.1u Δ	6.0 Δ	1.0m Δ	10p Δ	E	R135			
52	2N2945	400m	10M Δ	4.3m	SS 25	20	25	100mA	20n	5.0 Δ	1.0m Δ	10p Δ	E	T046			
53	2N2945A	400m	10M Δ	2.3m	SS 25	20	25	100mA	20n	5.0 Δ	1.0m Δ	10p Δ	A Δ	T046			
54	JAN2N2945A	400m	10M Δ	2.3m	SS 25	20	25	100mA	20p	5.0 Δ	1.0m Δ	10p Δ	A Δ				
55	2N3058	400m	10M	2.3m	SS 60	60	60	100mA	1.0n	5.0 Δ	1.0m Δ	10p Δ	E	T046			
56	2N3059	400m	10M	2.3m	SS 10	10	10	100mA	1.0n	3.0 Δ	1.0m Δ	10p Δ	E	T046			
57	2N3217	400m	10M Δ	2.3m	SS 15	10	15	100mA	1.0n	6.0 Δ	1.0m Δ	14p Δ	E	T046			
58	2N4980	400m	10M Δ	2.2m	SS 30	30	30	100mA	1.0n	5.0 Δ	1.0m Δ	10p Δ	A Δ				
59	2N2844	400m	15M Δ	4.3m	SS 15	10	15	100mA	10n	5.0 Δ	1.0m Δ	200 Δ	10p Δ	E	T046		
60	2N2944A	400m	15M Δ	2.3m	SS 15	10	15	100mA	1.0n	5.0 Δ	1.0m Δ	10p Δ	A Δ				
61	2N3915	400m	15M Δ	2.3m	SS 60	30	30	200mA	5n Δ	5.0 Δ	1.0m Δ	90 Δ	8p Δ	A Δ			
62	2N4007	400m	15M Δ	2.3m	SS 20	15	20	100mA	30n	6.0 Δ	1.0m Δ	30 Δ	10p Δ	A Δ	T046		
63	2N4008	400m	15M Δ	2.3m	SS 35	30	35	100mA	30n	6.0 Δ	1.0m Δ	20 Δ	10p Δ	A Δ	T046		
64	# BCY90B	4															

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C	DERATE	MAX ABS MAX RATINGS @25°C						MAX Icbo @MAX (A)	TYPICAL h' PARAMETERS				(Q)	X.0001 (F)	Cob	STRUCTURE	DWG #	LC s/a	
				COLL. FREE AIR W/C (W)	IN (Hz)	E (V)	Bvcbo (V)	Bveo (V)	Bvebo (V)		Vcb (V)	le (A)	hfe (A)	hoe (A)	hie (A)	hre (A)					
1	2N2597	400m	80M ₃	4.3m	SJ	80	60	50	25n ₀	5.0 ₀	5.0m ₀	80	△	1.8k	4.0 ₀	PL	T046	A			
2	2N2598	400m	80M ₃	4.3m	SJ	125	80	70	25n ₀	5.0 ₀	5.0m ₀	20	△	1.2k	4.0 ₀	PL	T046	A			
3	2N2599	400m	80M ₃	4.3m	SJ	125	80	70	25n ₀	5.0 ₀	5.0m ₀	40	△	1.5k	4.0 ₀	PL	T046	A ₀			
4	2N2600	400m	80M ₃	4.3m	SJ	125	80	70	25n ₀	5.0 ₀	5.0m ₀	80	△	1.8k	4.0 ₀	PL	T046	A ₀			
5	2N3579	400m	180M ₂	2.2m	S ₃	60	60	30m	50n ₀	5.0 ₀	1.0m ₀	120	△	1.0u ₀ b	35	10	6.0 ₀	PL	T046	A ₀	
6	2N3580	400m	180M ₂	2.2m	S ₃	60	60	30m	50n ₀	5.0 ₀	1.0m ₀	240	△	1.0u ₀ b	35	10	6.0 ₀	PL	T046	A ₀	
7#	V761	400m	90M ₂	2.0m	S ₁	25	25	50	100n ₀	1.0 ₀	10m ₀	100	△	1.30u	1.2k	2.6	8.0 ₀	PE	T018	A	
8	2N722A	400m	96M ₂	2.6m	SJ	50	35	50	100n ₀	1.0 ₀	150m ₀	30	1#△	1.0u ₀ b	35	8.0 ₀	40p ₀	PL	T046	A ₀	
9	2N1131/46	400m	96M ₂	2.3m	SJ	50	35	50	600m	1.0 ₀	100	30	△	20	20p ₀	PE	T046				
10	2N1132/46	400m	96M ₂	2.3m	SJ	50	35	50	600m	1.0 ₀	100	30	△	20	20p ₀	PE	T046				
11	2N1132A46	400m	96M ₂	2.3m	SJ	60	40	50	600m	1.0 ₀	100	30	△	20	20p ₀	PE	T046				
12	2N1132B46	400m	96M ₂	2.3m	SJ	70	50	60	600m	1.0 ₀	100	30	△	20	20p ₀	PE	T046				
13	2N2590	400m	100M ₂	4.3m	SJ	100	60	70	25n ₀	5.0 ₀	5.0m ₀	40	△	35u	450	5p ₀	PL	T046	A ₀		
14	2N2591	400m	100M ₂	4.3m	SJ	100	60	70	25n ₀	5.0 ₀	5.0m ₀	70	△	55u	700	5p ₀	PL	T046	A ₀		
15	2N2592	400m	100M ₂	4.3m	SJ	100	60	70	25n ₀	5.0 ₀	5.0m ₀	115	△	80u	1.0k	5p ₀	PL	T046	A ₀		
16	2N2593	400m	100M ₂	4.3m	SJ	100	60	70	25n ₀	5.0 ₀	5.0m ₀	180	△	1.05u	1.4k	5p ₀	PL	T046	A ₀		
17	2N2604	400m	100M ₂	4.3m	SJ	60	45	60	10n ₀	5.0 ₀	1.0m ₀	60	△	1.0u ₀	30	10	4.0 ₀	PL	T046	A ₀	
18	2N2605	400m	100M ₂	4.3m	SJ	60	45	60	10n ₀	5.0 ₀	1.0m ₀	150	△	1.0u ₀	30	10	4.0 ₀	PL	T046	A ₀	
19	2N2927/46	400m	100M ₂	2.3m	SJ	25	25	40	500m	0.2u ₀	100	30	△	1.2m ₀	1.5k	26	20p ₀	PE	T046		
20	2N5117*	400m	100M ₂	2.3m	S ₅	45	45	70	10n ₀	5.0 ₀	1.0m ₀	100	△	800	1.17c	800p ₀	Ø	T018			
21	2N5118*	400m	100M ₂	2.3m	S ₅	45	45	70	10n ₀	5.0 ₀	1.0m ₀	100	△	800	1.17c	800p ₀	Ø	T018			
22	2N5119*	400m	100M ₂	2.3m	S ₅	45	45	70	10n ₀	5.0 ₀	1.0m ₀	100	△	800	1.17c	800p ₀	Ø	T018			
23	2N5123*	400m	100M ₂	2.3m	S ₅	45	45	70	10n ₀	5.0 ₀	1.0m ₀	100	△	800	1.17w	800p ₀	Ø	T018			
24	2N5124*	400m	100M ₂	2.3m	S ₅	45	45	70	10n ₀	5.0 ₀	1.0m ₀	100	△	800	1.17w	800p ₀	Ø	T018			
25	2N5125*	400m	100M ₂	2.3m	S ₅	45	45	70	10n ₀	5.0 ₀	1.0m ₀	100	△	800	1.17w	800p ₀	Ø	T018			
26#	AT390	400m	100M ₂	2.3m	SJ	40	40	50	1.0	200n	1.0 ₀	50m ₀	40	△	200	20p ₀	PE	T018	A ₀		
27#	AT391	400m	100M ₂	2.3m	SJ	60	60	50	1.0	200n	1.0 ₀	50m ₀	40	△	200	20p ₀	PE	T018	A ₀		
28#	AT392	400m	100M ₂	2.3m	SJ	80	80	50	1.0	200n	1.0 ₀	50m ₀	40	△	200	20p ₀	PE	T018	A ₀		
29#	AT393	400m	100M ₂	2.3m	SJ	40	40	50	1.0	200n	1.0 ₀	50m ₀	100	△	200	20p ₀	PE	T018	A ₀		
30#	AT394	400m	100M ₂	2.3m	SJ	60	60	50	1.0	200n	1.0 ₀	50m ₀	100	△	200	20p ₀	PE	T018	A ₀		
31#	AT395	400m	100M ₂	2.3m	SJ	80	80	50	1.0	200n	1.0 ₀	50m ₀	100	△	200	20p ₀	PE	T018	A ₀		
32#	AT396	400m	100M ₂	2.3m	SJ	40	40	50	1.0	200n	1.0 ₀	50m ₀	40	△	200	20p ₀	PE	T018	A ₀		
33#	AT397	400m	100M ₂	2.3m	SJ	60	60	50	1.0	200n	1.0 ₀	50m ₀	40	△	200	20p ₀	PE	T018	A ₀		
34#	AT398	400m	100M ₂	2.3m	SJ	80	80	50	1.0	200n	1.0 ₀	50m ₀	40	△	200	20p ₀	PE	T018	A ₀		
35#	BC192	400m	100M ₂	2.2m	S ₂	25	25	50	500m	1.0 ₀	50m ₀	60	△	12p ₀	PE	T018	A ₀				
36#	NKT2039	400m	100M ₂	2.3m	S ₂	45	40	50	500m	0.1u ₀	100	10m ₀	20	△	6.0 ₀	10p ₀	PE	T018	A ₀		
37	TQ54	400m	100M ₂	2.2m	S ₂	75	45	50	600m	10n ₀	5.0 ₀	1.0m ₀	55	△	900nb	27	1.2	10p ₀	PE	T018	A
38	TQ54A	400m	100M ₂	2.2m	S ₂	80	75	50	600m	10n ₀	5.0 ₀	1.0m ₀	55	△	900nb	27	1.2	10p ₀	PE	T018	A
39	TQ60	400m	100M ₂	2.2m	S ₂	40	30	50	600m	10n ₀	5.0 ₀	1.0m ₀	30	△	500nzb	35	2	10p ₀	PE	T018	A
40	TQ60A1	400m	100M ₂	2.2m	S ₂	60	60	50	600m	20n ₀	5.0 ₀	1.0m ₀	30	△	500nzb	35	2	10p ₀	PE	T018	A
41	TQ621	400m	100M ₂	2.2m	S ₂	40	30	50	600m	20n ₀	5.0 ₀	1.0m ₀	30	△	500nzb	35	2	10p ₀	PE	T018	A
42	TQ62A1	400m	100M ₂	2.2m	S ₂	60	60	50	600m	20n ₀	5.0 ₀	1.0m ₀	30	△	500nzb	35	2	10p ₀	PE	T018	A
43	TQ64T	400m	100M ₂	2.2m	S ₂	20	20	50	600m	100n ₀	5.0 ₀	1.0m ₀	20	△	500nzb	35	2	10p ₀	PE	T018	A
44	TQ64A1	400m	100M ₂	2.2m	S ₂	30	30	50	600m	100n ₀	5.0 ₀	1.0m ₀	35	△	500nzb	35	2	10p ₀	PE	T018	A
45	2N2800/46	400m	120M ₂	2.3m	S ₂	50	35	60	800m	100n ₀	100	10m ₀	30	△	25p ₀	PE	T046	A ₀			
46	2N2801/46	400m	120M ₂	2.3m	S ₂	70	50	60	800m	10n ₀	100	10m ₀	40	△	300u ₀	1.2k ₀	2	6p ₀	PE	T046	A ₀
47	2N3081/46	400m	150M ₂	2.3m	S ₂	120	120	45	100m	100	10m ₀	40	△	300u ₀	1.2k ₀	2	6p ₀	PE	T018	A ₀	
48	2N34971	400m	150M ₂	2.3m	S ₂	60	60	50	600m	10n ₀	100	10m ₀	100	△	8.0p ₀	EA					
49	2N51461	400m	150M ₂	2.3m	S ₂	40	40	50	15	100n ₀	2.0 ₀	10m ₀	70	△	830m	203	3.3	20p ₀	PE	L56	
50#	AT399	400m	150M ₂	2.3m	SJ	70	70	50	1.0	200n ₀	5.0 ₀	50m ₀	150	△	830m	203	3.3	20p ₀	PE	T018	A ₀
51#	T52906	400m	150M ₂	2.3m	S ₂	60	30	50	500m	20n ₀	100	10m ₀	75	△	12p ₀	PE	T018	A ₀			
52#	T52907	400m	200M ₂	2.3m	S ₂	60	30	50	500m	20n ₀	100	10m ₀	25	△	8p ₀	PE	T018	A ₀			
53	2N29061	400m	200M ₂	2.3m																	

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) I_{FB} & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DE RATE fab	ABS MAX RATINGS @25°C				MAX. icbo @MAX Vcb	TYPICAL 'h' PARAMETERS				Cob	STRUCTURE	OWG Y200 s/a TO200 Ser.	# C E D E			
				IN FREE W/C	M AM X P	BV _{cbo}	BV _{ceo}	BV _{ebo}	I _c	V _{cb}	I _e	h _{fe}	hoe	hie	hre	(mhos)	X.0001	(F)	
1	2NT259T	450m	40M ^Δ	3.0m	SJ	50	50	5.0	100m	200 ^μ	1.0 ^Δ	10m ^Δ	25 T ^Δ			10p ^Δ	T05	∅	
2	2N1255T	450m	50M ^Δ	3.0m	SS	30	30	5.0	100m	200 ^μ	1.0 ^Δ	10m ^Δ	40 T ^Δ			10p ^Δ	T05	A	
3	2N1257T	450m	50M ^Δ	3.0m	SS	40	40	5.0	100m	200 ^μ	1.0 ^Δ	10m ^Δ	40 T ^Δ			10p ^Δ	T05	A	
4	2NT258T	450m	50M ^Δ	3.0m	SS	30	30	5.0	100m	200 ^μ	1.0 ^Δ	10m ^Δ	75 T ^Δ			10p ^Δ	T05	A	
5	2N2393	450m	50M ^Δ	3.0m	SJ	50	35	5.0	300m	1.0 ^μ	5.0 ^Δ	1.0m ^Δ	15 Δ	1.0u ^Δ b	35 □	8.0 □	45p ^Δ	PL	u25
6	2N2394	450m	60M ^Δ	3.0m	SJ	50	35	5.0	300m	1.0 ^μ	5.0 ^Δ	1.0m ^Δ	25 Δ	1.0u ^Δ b	35 □	8.0 □	45p ^Δ	PL	u25
7	ZV435*	450m	170M ^Δ	2.6m	SJ	25	25	4.5	200 ^μ	10 ^Δ	10m ^Δ	130	1.0m ^Δ	12k	2.5	20p ^Δ	DPE	L17a	
8	ZN5811	500m	4.5m	TJ	35	25	5.0	750m	100 ^μ	2.0 ^Δ	12m ^Δ	60 T ^Δ			15p ^Δ	X55a	B		
9	ZN5813	600m	4.5m	TJ	35	25	5.0	750m	100 ^μ	2.0 ^Δ	12m ^Δ	150 T ^Δ			15p ^Δ	X55a	B		
10	ZN5815	500m	4.5m	TJ	50	40	5.0	750m	100 ^μ	2.0 ^Δ	2.0m ^Δ	60 T ^Δ			15p ^Δ	X55a	B		
11	ZN5817	500m	4.5m	TJ	50	40	5.0	750m	100 ^μ	2.0 ^Δ	2.0m ^Δ	100 T ^Δ			15p ^Δ	X55a	B		
12	ZN5819	500m	4.5m	TJ	50	40	5.0	750m	100 ^μ	2.0 ^Δ	2.0m ^Δ	150 T ^Δ			15p ^Δ	X55a	B		
13	ZN5821	500m	4.5m	TJ	70	60	5.0	750m	100 ^μ	2.0 ^Δ	2.0m ^Δ	60 T ^Δ			15p ^Δ	X55a	B		
14	ZN5823	500m	4.5m	TJ	70	60	5.0	750m	100 ^μ	2.0 ^Δ	2.0m ^Δ	100 T ^Δ			15p ^Δ	X55a	B		
15#	BFX30	500m	3.4m	SJ	65	65	5.0	600m #	0.7 ^μ	40 ^Δ	10m ^Δ	50 T ^Δ			12p ^Δ	PE	T05	AØ	
16	MD2904*	500m	200M ^Δ	2.9m	SS	50	40	5.0	600m	20 ^Δ	100	150m ^Δ	40 T ^Δ #			8.0p ^Δ	ANA	L17k	
17	ZN5110	500m	1.0M ^Δ	3.3m	SJ	40	40	10	1	75u	100	100m ^Δ	10 Δ			500p	T05	AØ	
18	ZN5111	600m	1.0M ^Δ	3.3m	SJ	60	60	10	1	75u	100	100m ^Δ	10 Δ			500p	T05	AØ	
19	ZN3910*	500m	4.0M ^Δ	2.9m	SS	60	50	50	200m	50n ^Δ	500	1.0m ^Δ	40 T ^Δ			8p ^Δ	T046	AØ	
20	ZN3911*	500m	8.0M ^Δ	2.9m	SS	60	40	40	200m	1.0 ^μ	500	1.0m ^Δ	60 T ^Δ			8p ^Δ	T046	AØ	
21	ZN3912*	500m	10M ^Δ	2.9m	SS	60	30	30	200m	5n ^Δ	500	1.0m ^Δ	90 T ^Δ			8p ^Δ	T046	AØ	
22	MM4052*	500m	12M ^Δ	2.8m	SJ	30	30	30	500m	500p ^Δ	1.0 ^Δ	10m ^Δ	20 Δ			10p ^Δ	T046	A	
23	MPS6562	500m	60M ^Δ	4.5m	TJ	25	25	4.0	600m	1.0 ^μ	1.0 ^Δ	10m ^Δ	35 T ^Δ			30p ^Δ	AN?	T092	A
24	MPS6563	500m	60M ^Δ	4.5m	TJ	20	20	4.0	600m	1.0 ^μ	1.0 ^Δ	10m ^Δ	35 T ^Δ			30p ^Δ	AN?	T092	A
25	D29E8	500m	80M ^Δ	4.5m	TJ	70	60	5.0	750m	100n ^Δ	2.0 ^Δ	2.0m ^Δ	40 T ^Δ			15p ^Δ	PE	T098	B
26	D29E9	500m	80M ^Δ	4.0m	SJ	70	60	5.0	750m	100n ^Δ	2.0 ^Δ	2.0m ^Δ	60 T ^Δ			15p ^Δ	PE	T098	B
27#	Z25A532	500m	90M ^Δ	4.0m	SJ	50	40	4.0	200m	1.0 ^μ	6.0 ^Δ	50m ^Δ	80 T ^Δ			15p ^Δ	PL	T039	
28	ZN3806*	500m	100M ^Δ	2.9m	SS	60	60	5.0	50m	0.1 ^μ	10 ^Δ	1.0m ^Δ	150 Δ	60u ^Δ	30k ^Δ	25 □	4p ^Δ	∅	L17k
29	ZN3807*	500m	100M ^Δ	2.9m	SS	60	60	5.0	50m	0.1 ^μ	10 ^Δ	1.0m ^Δ	300	40k ^Δ	25 □	4p ^Δ	∅	L17k	
30	ZN3808*	500m	100M ^Δ	2.9m	SS	60	60	5.0	50m	0.1 ^μ	10 ^Δ	1.0m ^Δ	300	40k ^Δ	25 □	4p ^Δ	∅	L17k	
31	ZN3809*	500m	100M ^Δ	2.9m	SS	60	50	50	50m	0.1 ^μ	10 ^Δ	1.0m ^Δ	300	40k ^Δ	25 □	4p ^Δ	∅	L17k	
32	ZN3810*	500m	100M ^Δ	2.9m	SS	60	50	50	50m	0.1 ^μ	10 ^Δ	1.0m ^Δ	300	40k ^Δ	25 □	4p ^Δ	∅	L17k	
33	ZN3810A*	500m	100M ^Δ	2.9m	SS	60	50	50	50m	0.1 ^μ	10 ^Δ	1.0m ^Δ	300	40k ^Δ	25 □	4p ^Δ	∅	L17h	
34	ZN3811*	500m	100M ^Δ	2.9m	SS	60	60	5.0	50m	0.1 ^μ	10 ^Δ	1.0m ^Δ	300	40k ^Δ	25 □	4p ^Δ	∅	L17k	
35	ZN3811A*	500m	100M ^Δ	2.9m	SS	60	60	5.0	50m	0.1 ^μ	10 ^Δ	1.0m ^Δ	300	40k ^Δ	25 □	4p ^Δ	∅	L17h	
36	ZN4028T	500m	100M ^Δ	2.9m	SS	60	60	5.0	1	0.5u ^Δ	5.0 ^Δ	10m ^Δ	30 T ^Δ			20p ^Δ	T018	AØ	
37	ZN4027T	500m	100M ^Δ	2.9m	TJ	80	80	5.0	1	0.5u ^Δ	5.0 ^Δ	10m ^Δ	30 T ^Δ			20p ^Δ	T018	AØ	
38#	BFX29	500m	100M ^Δ	3.4m	SJ	60	60	5.0	600m #	0.7 ^μ	10 ^Δ	1.0m ^Δ	50 T ^Δ			12p ^Δ	PE	T05	AØ
39#	ZD29E1	500m	100M ^Δ	4.0m	SJ	35	25	5.0	750m	100n ^Δ	2.0 ^Δ	2.0m ^Δ	60 T ^Δ			15p ^Δ	PE	T098	B
40	D29E4	500m	100M ^Δ	4.5m	TJ	60	40	5.0	750m	100n ^Δ	2.0 ^Δ	2.0m ^Δ	60 T ^Δ			6.5p	ANI	T092	A
41	MPSA55	500m	100M ^Δ	4.5m	TJ	60	40	4.0	500m	100n ^Δ	1.0 ^Δ	10m ^Δ	50 T ^Δ			6.5p	ANI	T092	A
42	MPSA56	500m	100M ^Δ	4.5m	TJ	80	80	4.0	500m	100n ^Δ	1.0 ^Δ	10m ^Δ	50 T ^Δ			15p ^Δ	PE	T018	AØ
43	ZN2837T	500m	120M ^Δ	2.9m	SS	50	35	5.0	800m	100 ^μ	10 ^Δ	10m ^Δ	20 Δ			25p ^Δ	T018	AØ	
44	ZN2838T	500m	120M ^Δ	2.9m	SS	50	35	5.0	800m	100 ^μ	10 ^Δ	10m ^Δ	20 Δ			25p ^Δ	PE	T018	AØ
45	D29E5	500m	120M ^Δ	4.5m	TJ	40	50	5.0	750m	100n ^Δ	2.0 ^Δ	2.0m ^Δ	100 T ^Δ			15p ^Δ	PE	T098	B
46#	D29E10	500m	120M ^Δ	4.0m	SJ	70	60	5.0	750m	100n ^Δ	2.0 ^Δ	2.0m ^Δ	100 T ^Δ			15p ^Δ	PE	T098	B
47#	BFX11*	500m	130M ^Δ	2.2m	SJ	45	45	4.5	750m	100n ^Δ	1.0 ^Δ	10m ^Δ	200 T ^Δ			8.0p ^Δ	PE	L2d	AØ
48#	D29E2	500m	135M ^Δ	4.0m	SJ	35	25	5.0	750m	100n ^Δ	1.0 ^Δ	10m ^Δ	150 T ^Δ			15p ^Δ	PE	T098	B
49	D29E6	500m	135M ^Δ	4.5m	TJ	50	40	5.0	750m	100n ^Δ	1.0 ^Δ	10m ^Δ	150 T ^Δ			15p ^Δ	PE	T098	B
50	ZN3765T	500m	150M ^Δ	2.9m	SS	60	60	5.0	1.5	100n ^Δ	1.0 ^Δ	500m ^Δ	35 T ^Δ			15p ^Δ	PE	T046	AØ
51	JAN2N3765T	500m	150M ^Δ	2.8m	SS	60	60	5.0	1.5	100n ^Δ	1.0 ^Δ	10m ^Δ	35 T ^Δ			20p ^Δ	PE	T018	AØ
52	ZN4028T	500m	150M ^Δ	2.9m	SS	60	60	5.0	1	0.5u ^Δ	5.0 ^Δ	10m ^Δ	75 T ^Δ			20p ^Δ	PE	T018	AØ
53	ZN4029T	500m	150M ^Δ	2.9m	SS	80	80	5.0	1	0.5u ^Δ	5.0 ^Δ	10m ^Δ	75 T ^Δ			15p ^Δ	PL	X59	F
54#	BFS96	500m	150M ^Δ	3.3m	SJ	60	30	5.0	1.0 #	100n ^Δ	100	150m ^Δ	40 T ^Δ #			15p ^Δ	PL	X59	F
55#	BFS97	500m	150M ^Δ	3.3m	SJ	60	40	5.0	1.0 #	100n ^Δ	100	150m ^Δ	100 T ^Δ #			15p ^Δ	PL	X59	F
56#	BFS98	500m	150M ^Δ	3.3m	SJ	80	60	5.0	1.0 #	100n ^Δ	100	150m ^Δ </td							

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX. COLL. DISS. (W)		2. DERATE fab FREE AIR W/C		ABS MAX RATINGS @ 25°C				MAX. ICBO Vcb		TYPICAL 'B' PARAMETERS				COMMON Emitter				Cob	STRUCTURE	DWG #	C Seri.		
		IN (Hz)	E W/C	M (V)	A (V)	B (V)	Vceo (V)	Bvebo (V)	Ic (A)	@MAX (A)	Vcb (V)	le (A)	hfe	hoe (mhos)	hie (Ω)	hre (mhos)	X.0001 (F)								
1#	ZSA509	600m	140M ³	+	35	30	5.0	50m	100n	2.00	50m ²	100	1				22p ²	EP	R67a	Y200	E O				
2	2N3081	600m	150M ³ Δ	3.4m	SJ	70	50	6.0	600m	0.1u ²	100	150m ²	30	1Δ			13p ² 6p ²	PE	T05	A					
3	2N3495t	600m	150M ³ Δ	3.4m	SJ	120	120	4.5	100m	10u ²	100	10m ²	40	Δ			300u ²	1.2k ²	2	2		T05	A		
4▼	TEPE1s	600m ⁴	150M ³	3.4m	SJ	30	25	4.0	600m ⁵	10u ²	20		80	1							T05	A			
5▼#	TS2904	600m	150M ³ Δ	3.4m	SJ	60	30	5.0	600m	20n ²	100	10m ²	35	1				12p ²	PE	T039	A				
6▼#	TS2905	600m	150M ³ Δ	3.4m	SJ	60	30	5.0	600m	20n ²	100	10m ²	75	1				12p ²	PE	T039	A				
7#	[BFX36+]	600m	180M ³ Δ	2.2m	SJ	60	60	6.0	200m	10n ²	5.00	1.0m ²	700	1Δ			50u ²	20k ²	10	2	6.0p ²	DPE ²	L2b	A	
8	2N29041	600m	200M ³ Δ	3.4m	SJ	60	40	5.0	600m	0.2u ²	100	1.0m ²	25	1Δ					8.0p ²	PE	T05	A			
9	JAN2N2904t	600m	200M ³ Δ	3.4m	SJ	60	40	5.0	600m	20n ²	100	1.0m ²	25	1Δ					8.0p ²	PE	T05	A			
10	2N2904A1	600m	200M ³ Δ	3.4m	SJ	60	60	5.0	600m	0.1u ²	100	1.0m ²	40	1Δ					5p ²	PE	T05	A			
11	JAN2N2904A1	600m	200M ³ Δ	3.4m	SJ	60	60	5.0	600m	10n ²	100	1.0m ²	40	Δ					8.0p ²	PE	T05	A			
12	2N2905t	600m	200M ³ Δ	3.4m	SJ	60	40	5.0	600m	0.2u ²	100	1.0m ²	50	1Δ					8p ²	PE	T05	A			
13	JAN2N2905t	600m	200M ³ Δ	3.4m	SJ	60	40	5.0	600m	20n ²	100	1.0m ²	50	1Δ					8p ²	PE	T05	A			
14	2N2905A1	600m	200M ³ Δ	3.4m	SJ	60	60	5.0	600m	10n ²	100	1.0m ²	100	1Δ					8.0p ²	PE	T05	A			
15	JAN2N2905At	600m	200M ³ Δ	3.4m	SJ	60	60	5.0	600m	10n ²	100	1.0m ²	100	1Δ					8.0p ²	PE	T05	A			
16	2N31331	600m	200M ³ Δ	3.4m	SJ	50	35	4.0	600m	0.5u ²	100	150m ²	40	1#Δ					9p ²	PE	T05	A			
17	2N31341	600m	200M ³ Δ	3.4m	SJ	50	35	4.0	600m	0.5u ²	100	150m ²	100	1#Δ					10p ²	PE	T05	A			
18	2N3494t	600m	200M ³ Δ	3.4m	SJ	80	80	4.5	100m	10u ²	100	10m ²	40	Δ					7p ²	PE	T05	A			
19	2N36711	600m	200M ³ Δ	3.4m	SJ	60	50	5.0	600m	20n ²	100	1.0m ²	55	1Δ					8.0p ²	PE	T039	Ø			
20#	BSV42	600m	200M ³	4.5m	SJ	70	70	5.0	600m	20n	100	150m ²	110	1					8.0p ²	PE	T039	Ø			
21#	BSV43A	600m	200M ³	4.5m	SJ	60	60	5.0	600m	20n	100	150m ²	80	1					8.0p ²	PE	T039	Ø			
22#	BSV43B	600m	200M ³	4.5m	SJ	60	60	5.0	500m	20n	100	150m ²	200	1					8.0p ²	PE	T039	Ø			
23#	BSV44A	600m	200M ³	4.5m	SJ	60	40	5.0	500m	20n	100	150m ²	80	1					8.0p ²	PE	T039	Ø			
24#	BSV44B	600m	200M ³	4.5m	SJ	60	40	5.0	500m	20n	100	150m ²	200	1					8.0p ²	PE	T039	Ø			
25#	BSV45A	600m	200M ³	4.5m	SJ	30	30	5.0	500m	20n	100	150m ²	80	1					8.0p ²	PE	T039	Ø			
26#	BSV45B	600m	200M ³	4.5m	SJ	30	30	5.0	500m	20n	100	150m ²	200	1					8.0p ²	PE	T039	Ø			
27▼	NN7500	600m	200M ³ Δ	4.8m	SJ	50	30	5.0	750m	100n ²	100	350m ²	50	1#Δ					12p ²	PL1	X55a	A			
28▼	NN7507	600m	200M ³ Δ	4.8m	SJ	50	30	5.0	750m	100n ²	100	350m ²	75	1#Δ					12p ²	PL1	X55a	A			
29▼	NN7502	600m	200M ³ Δ	4.8m	SJ	50	30	5.0	750m	100n ²	100	350m ²	125	1#Δ					12p ²	PL1	X55a	A			
30▼	NN7503	600m	200M ³ Δ	4.8m	SJ	60	40	5.0	750m	100n ²	100	350m ²	50	1#Δ					12p ²	PL1	X55a	A			
31▼	NN7504	600m	200M ³ Δ	4.8m	SJ	60	40	5.0	750m	100n ²	100	350m ²	75	1#Δ					12p ²	PL1	X55a	A			
32▼	NN7505	600m	200M ³ Δ	4.8m	SJ	60	40	5.0	750m	100n ²	100	350m ²	125	1#Δ					12p ²	PL1	X55a	A			
33#	TM1614	600m	200M ³ Δ	2.2m	SJ	60	50	5.0	600m	0.5u ²	100	150m ²	40	1#Δ					8p ²	PE	T05				
34#	TM1712	600m	200M ³ Δ	2.2m	SJ	60	40	5.0	600m	0.5u ²	100	150m ²	100	1#Δ					8p ²	PE	T05				
35	MD34671	600m	250M ³	3.4m	SJ	40	40	5.0	1.5	10u ²	2.00	1.0m ²	40	1#Δ					11p ²	IAN	L17k				
36	MD37621	600m	250M ³	3.4m	SJ	40	40	5.0	1.5	10u ²	2.00	1.0m ²	1.0	1#Δ					11p ²	IAN	L17k				
37	TS93	625m	5.0m	4.0m	SJ	40	40	5.0	400m	10u ²	2.00	50m ²	160	1					PET	X55	A				
38	HS5811	700m	6.3m	3.5	SJ	25		5.0	750m	100n ²	2.00	2.0m ²	80	1Δ					15p ²	PE	X103	A			
39	HS5813	700m	6.3m	3.5	SJ	25		5.0	750m	100n ²	2.00	2.0m ²	150	1Δ					15p ²	PE	X103	A			
40	HS5815	700m	6.3m	3.5	SJ	50	40	5.0	750m	100n ²	2.00	2.0m ²	60	1Δ					15p ²	PE	X103	A			
41	HS5817	700m	6.3m	3.5	SJ	50	40	5.0	750m	100n ²	2.00	2.0m ²	100	1Δ					15p ²	PE	X103	A			
42	HS5819	700m	6.3m	3.5	SJ	50	40	5.0	750m	100n ²	2.00	2.0m ²	150	1Δ					15p ²	PE	X103	A			
43	HS5821	700m	6.3m	3.5	SJ	70	60	5.0	750m	100n ²	2.00	2.0m ²	60	1Δ					15p ²	PE	X103	A			
44	HS5823	700m	6.3m	3.5	SJ	70	60	5.0	750m	100n ²	2.00	2.0m ²	100	1Δ					7.0p ²	Ø	T039	Ø			
45	2N38331	700m	40M ³ Δ	4.0m	SJ	180	180	5.0	100m	10n ²	100	1.0m ²	100	1Δ					7p ²	PE	T039	A			
46	2N4358	700m	40M ³ Δ	4.0m	SJ	240	240	5.0	100m	0.2u ²	100	1.0m ²	40	1#Δ					25u ²	12k ²					
47#	BC139	700m	40M ³ Δ	4.0m	SJ	40	40	5.0	100m	0.2u ²	100	1.0m ²	40	1#Δ					10p ²	Ø	T05	A			
48	2N3224	700m	6.0M ³ Δ	4.6m	SJ	100	100	6.0	100m	5.0u ²	5.00	1.0m ²	20	Δ					7.0p ²	Ø	T039	Ø			
49#	BEW44	700m	6.0M ³ Δ	4.0m	SJ	150	150	6.0	100m	0.1u ²	100	1.0m ²	40	1#Δ					5.0p ²	PE	T039	A			
50#	BFX91	700m	8.0M ³ Δ	4.0m	SJ	180	180	6.0	100m	0.1u ²	100	1.0m ²	170	1#Δ					5.0p ²	PE	T039	A			
51	2N3225	700m	8.0M ³ Δ	4.6m	SJ	100	100	6.0	100m	0.1u ²	100	1.0m ²	40	Δ					20p ²	Ø	T05	A			
52▼	D29E9J1	700m	80M ³ Δ	5.6m																					

4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX. COLL. DISS. @25°C (W)	RATE (Hz)	FREE AIR W/C	ABS MAX RATINGS @25°C					MAX. ICBO @MAX	TYPICAL 'H' PARAMETERS					Cob	STRUCTURE	DWG # Y200 s/a Ser	C E O A D D E
					IN ME V _{cbo}	ME V _{ceo}	ME V _{ebo}	I _c (A)	V _{cbo} (V)		I _e (A)	h _{fe}	COMMON Emitter						
1# BC361-6	800m	100M _s	4.5m	SJ	60	60	5.0	500m	100n _s	5.0 _s	50m ₂	40 T _A				10p	PE	T039	A _D
2# BC361-10	800m	100M _s	4.5m	SJ	60	60	5.0	500m	100n _s	5.0 _s	50m ₂	63 T _A				10p	PE	T039	A _D
3# BFX38	800m	100M _s	4.5m	SJ	55	55	5.0	1.0	50n _s	5.0 _s	100u ₂	65 T _A				15p	DPE	T05	0
4# BFX39	800m	100M _s	4.5m	SJ	55	55	5.0	1.0	50n _s	5.0 _s	100u ₂	65 T _A				15p	DPE	T05	0
5# BFX40	800m	100M _s	4.5m	SJ	75	75	5.0	1.0	50n _s	5.0 _s	100u ₂	125 T _A				15p	DPE	T05	0
6# BFX41	800m	100M _s	4.5m	SJ	75	75	5.0	1.0	50n _s	5.0 _s	100u ₂	125 T _A				15p	DPE	T05	0
7# BSX831	800m	100M _s	4.0m	SJ	90	80	5.0	1.0	10 _s	5.0 _s	150m ₂	70 T _A				25p	PE	T039	A _D
8# BSX40	800m	100M _s	4.5m	SJ	30	30	5.0	500m	25m ₂	10 _s	10m ₂	40 T _A				10p	PE	T039	A _D
9# 2N28001	800m	120M _s	4.5m	SJ	50	35	5.0	800m	10u _#	10 _s	10m ₂	20 T _A				25p	PE	T05	A _D
10# 2N2801T	800m	120M _s	4.5m	SJ	50	35	5.0	800m	10u _#	10 _s	10m ₂	30 T _A				25p	PE	T05	A _D
11# 2N3072T	800m	130M _s	4.5m	SJ	60	60	4.0	500m	0.1u _s	10 _s	10m ₂	25 T _A	1.2m ₂	26	0	10p	PE	T05	A _D
12# 2N3120T	800m	130M _s	4.5m	SJ	45	45	4.0	500m	0.1u _s	10 _s	10m ₂	25 T _A	1.2m ₂	26	0	10p	PE	T05	A _D
13# 2SA5031	800m	120M _s	5.3m	SJ	60	50	5.0	800m	50u _s	2.0 _s	150m ₂	30 T _A				18p	PE	T039	A _D
14# 2SA5041	800m	130M _s	5.3m	SJ	40	30	5.0	600m	50u _s	2.0 _s	150m ₂	30 T _A				18p	PE	T039	A _D
15# 2N4032T	800m	150M _s	4.5m	SJ	60	60	5.0	1	0.05u _s	5.0 _s	10m ₂	75 T _A				20p	PE	T05	A _D
16# 2N4033T	800m	150M _s	4.5m	SJ	80	80	5.0	1	0.05u _s	5.0 _s	10m ₂	75 T _A				20p	PE	T05	A _D
17# 2SA560	800m	150M _s	8.0m	SJ	80	60	5.0	800m	50u _s	2.0 _s	150m ₂	60 T _A				19p	PE	T039	A _D
18# BFX74A	800m	150M _s	4.5m	SJ	60	60	5.0	0.05u _s	10 _s	150m ₂	50 T _A				15p	PE	T05	A _D	
19# BSX41	800m	150M _s	4.5m	SJ	30	30	5.0	500m	25m ₂	10 _s	10m ₂	100 T _A				10p	PE	T039	A _D
20# 2SA5711	800m	200M _s	5.6m	SJ	60	45	5.0	1.0	100n _s	10 _s	50m ₂	40 T _A				25p	PE	T05	
21# BC116A	800m	200M _s	8.0m	SJ	45	40	5.0	1	0.05u _s	50n _s	100m ₂	10m ₂				6.0p	PE	T0105	A
22# BC126A	800m	200M _s	3.0m	SJ	40	40	5.0	600m	50n	10 _s	10m ₂	85 T _A				7.0p	PE	T0105	A
23# BC287	800m	200M _s	4.5m	SJ	60	60	5.0	1.0	500n _s	2.0 _s	500m ₂	20 T _A				1.3p	DPE	T05	
24# BCW45	800m	200M _s	4.5m	SJ	70	55	5.0	1.0	100n _s	1.0 _s	200m ₂	40 T _A				3.0p	PE	T039	A
25# V745	600m	240M _s	8.0m	SJ	50	40	5.0	100u	100u _s	10 _s	50m ₂	95 T _A				15p	PE	T039	A
26# BC231M	800m	250M _s	5.3m	SJ	40	30	5.0	400m	100n _s	5.0 _s	50m ₂	100 T _A *				6.0p	PE	T039	A _D
27# BF323	800m	250M _s	5.3m	SJ	30	25	3.0	600m	50u _s	10 _s	10m ₂	300 T _A *				6.0p	PE	T039	A _D
28# SE8541	800m	250M _s	4.5m	SJ	30	30	5.0	1.0	50n	1.0 _s	150m ₂	70 T _A *				20ps	DPL	T039	A
29# 2N5042	800m	500M _s	4.5m	SJ	40	40	5.0	1	0.05u _s	1.0 _s	150m ₂	40 T _A				35ps	EM	T039	A _D
30# 2SA257	5.0 ₀	80M _s	5.0 ₀	SJ	50	40	5.0	2.0	5.0u	2.0 _s	200m ₂	50 T _A				40p	EM	T05	0
31# 2SA258	5.0 ₀	80M _s	5.0 ₀	SJ	50	40	5.0	2.0	5.0u	2.0 _s	100m ₂	70 T _A				40p	EM	T05	0
32# 2SA527	5.0 ₀	80M _s	5.0 ₀	SJ	50	40	5.0	2.0	5.0u	2.0 _s	200m ₂	50 T _A				40p	EM	T05	0
33# 2SA528	5.0 ₀	80M _s	5.0 ₀	SJ	50	40	5.0	2.0	5.0u	2.0 _s	100m ₂	70 T _A				40p	EM	T05	0
34# BF440	225	250M _s	2.3m	SJ	40	40	4.0	25m	100n _s	10 _s	1.0m ₂	60 T _A				280ft	PE	X76	C
35# BF441	225	250M _s	2.3m	SJ	40	40	4.0	25m	100n _s	10 _s	1.0m ₂	30 T _A				280ft	PE	X76	G

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX COLL. (W)	2. DERATE: DISS. @25°C (Hz)	ABS MAX RATINGS @25°C					MAX. ICBO @MAX Vcb	TYPICAL h PARAMETERS					COMMON Emitter (mhos)	Cob	STRUCTURE	DWG # Y200 s/a T0200 Ser	C A D E				
				COLL. FREE AIR W/CO	IN FREE AIR W/CO	ME AM P	BVcbo (V)	BVceo (V)	BVebo (V)	Ic (A)	Vcb (V)	le (A)	hfe	hoe (Ω)	hie (Ω)	bre (Ω)	X.0001 (F)						
1	2N622	300m ^Δ	2.8m ^Δ	SJ	50	30	20	50m	100n	1.50	500u ^Δ	25 T					70p ^Δ	FAO	T05	A			
2	MM1755	250m ^Δ		SJ	60	30	50		0.1u ^Δ	100	150m ^Δ	40 TA					6p ^Δ		T046				
3	MM1756 ^Δ	250m ^Δ		SJ	75	40	60		0.1u ^Δ	100	150m ^Δ	40 TA					8p ^Δ		T046				
4	MM1757 ^Δ	250m ^Δ		SJ	60	30	50		0.1u ^Δ	100	150m ^Δ	100 TA					8p ^Δ		T046				
5	MM1758 ^Δ	300m ^Δ		SJ	75	40	60		0.1u ^Δ	100	150m ^Δ	100 TA					8p ^Δ		T046				
6	2N1247	30m ^Δ		SJ	6.0	6.0	2.0		5.0n	3.00	5.0m ^Δ	15 TA					12p		T05	A			
7	2N1248	30m ^Δ		SJ	11m ^Δ	8.0	6.0	1.0		1.0n	3.00	20u ^Δ	15 TA					70p		T05	A		
8	2N1249	30m ^Δ		SJ	250m ^Δ	6.0	2.0	5.0m ^Δ		3.0	20u ^Δ	38					50		70p				
9	MRD100*	50m ^Δ		SJ	700m ^Δ	#J	80	40	100n ^Δ									ANT		A43	B		
10	MRD150*	50m ^Δ		SJ	700m ^Δ	#J	40		100n ^Δ									ANT		A43	B		
11#	BC156A	50m ^Δ	50m ^Δ	SJ	15	50	50	50	50m	100n	1.00	500u ^Δ	85 Δ					1PE		u47a	D		
12#	BC156B	50m ^Δ	50m ^Δ	SJ	15	50	50	50	50m	100n	1.00	500u ^Δ	200 Δ					1PE		u47a	D		
13#	BC156C	50m ^Δ	50m ^Δ	SJ	15	50	50	50	50m	100n	1.00	500u ^Δ	470 Δ					1PE		u47a	D		
14#	BFY87	50m ^Δ	50m ^Δ	SJ	25	15	50		100n	1.00	500u ^Δ	40 Δ					1PE		u47a	D			
15#	BFY87A	50m ^Δ	50m ^Δ	SJ	25	15	50		100n	1.00	500u ^Δ	55 Δ					1PE		u47a	D			
16	A141	50m ^Δ	150M ^Δ	SJ	20	20	4.0	50m	100n	500	200u ^Δ	130					4.0p ^Δ		P045	B			
17	A142	50m ^Δ	150M ^Δ	SJ	20	20	4.0	50m	100n	500	200u ^Δ	220					4.0p ^Δ		P045	B			
18	A143	50m ^Δ	150M ^Δ	SJ	20	20	4.0	50m	100n	500	200u ^Δ	380					4.0p ^Δ		P045	B			
19	BC112	50m ^Δ	150M ^Δ	SJ	20	20	4.0	50m		500	200u ^Δ	80 TA					PE		u40a				
20	BC146	50m ^Δ	150M ^Δ	SJ	20	20	4.0	50m		500	200u ^Δ	220					4.0p ^Δ		P045	B			
21#	BF230	50m ^Δ	200M ^Δ	SJ	30	20	5.0	50m		100n	1.0m ^Δ	67					.95p ^Δ		PE	u47	D		
22#	BSW121	50m ^Δ	200M ^Δ	SJ	30	20	5.0	200m ^Δ	0.5u ^Δ	1.00	1.0m ^Δ	40 TA					6p ^Δ		PE	u47	D		
23#	BF229	50m ^Δ	260M ^Δ	SJ	30	20	5.0	30m	100n	1.00	1.0m ^Δ	115 T					.95p ^Δ		PL	u47a	D		
24#	BC197A	50m ^Δ	300M ^Δ	SJ	50	45	6.0	100m	5.0u ^Δ	5.00	2.0 ^Δ	125 Δ					2.5p ^Δ		PE	u47a	D		
25#	BC197B	50m ^Δ	300M ^Δ	SJ	50	45	6.0	100m	5.0u ^Δ	5.00	2.0 ^Δ	240 Δ					2.5p ^Δ		PE	u47a	D		
26#	BC198A	50m ^Δ	300M ^Δ	SJ	30	20	5.0	100m	5.0u ^Δ	5.00	2.0 ^Δ	125 Δ					2.5p ^Δ		PE	u47a	D		
27#	BC198B	50m ^Δ	300M ^Δ	SJ	30	20	5.0	100m	5.0u ^Δ	5.00	2.0 ^Δ	240 Δ					30m	5.0k	1.3	2.5p ^Δ			
28#	BC198C	50m ^Δ	300M ^Δ	SJ	30	20	5.0	100m	5.0u ^Δ	5.00	2.0 ^Δ	470 Δ					50m	7.5k	2.3	2.5p ^Δ			
29#	BC198B	50m ^Δ	300M ^Δ	SJ	30	20	5.0	100m	5.0u ^Δ	5.00	2.0 ^Δ	240 Δ					30m	5.0k	1.3	2.5p ^Δ			
30#	BC199C	50m ^Δ	300M ^Δ	SJ	30	20	5.0	100m	5.0u ^Δ	5.00	2.0 ^Δ	470 Δ					50m	7.5k	2.3	2.5p ^Δ			
31#	BSW111	50m ^Δ	400M ^Δ	SJ	25	15	5.0	200m ^Δ	1.0u ^Δ	1.00	1.0m ^Δ	50 TA					3p ^Δ		PE	u47	D		
32	2SC556	50m ^Δ	550M ^Δ	SJ	10		2.0	50m	1.0u ^Δ	1.00	1.0m ^Δ	130					1.5p		PL	u38			
33#	BF513E	60m ^Δ		SJ	1.7m ^Δ	40	40	6.0		50n	5.00	1.0m ^Δ	100 Δ					7p ^Δ		PL			
34#	BF513F	60m ^Δ		SJ	1.7m ^Δ	40	40	6.0		50n	5.00	1.0m ^Δ	100 Δ					7p ^Δ		PL			
35#	BF513G	60m ^Δ		SJ	1.7m ^Δ	40	40	6.0		50n	5.00	1.0m ^Δ	100 Δ					4p ^Δ		DE			
36#	BF515E	60m ^Δ		SJ	1.7m ^Δ	40	30	5.0		50n	1.00	1.0m ^Δ	55 Δ					4p ^Δ		DE			
37#	BF515F	60m ^Δ		SJ	1.7m ^Δ	40	30	5.0		50n	1.00	1.0m ^Δ	55 Δ					4p ^Δ		DE			
38#	BF515G	60m ^Δ		SJ	1.7m ^Δ	40	30	5.0		50n	1.00	1.0m ^Δ	55 Δ					4p ^Δ		DE			
39#	BF527E	60m ^Δ		SJ	1.7m ^Δ	20	20	5.0		15u	1.00	1.0m ^Δ	50 Δ					4p ^Δ		DE			
40#	BF527F	60m ^Δ		SJ	1.7m ^Δ	20	20	5.0		15u	1.00	1.0m ^Δ	50 Δ					4p ^Δ		FF			
41#	2SC250	60m ^Δ		SJ	20		2.0	25m	2.0u ^Δ	6.00	2.0m ^Δ	45					2.0p		PL	T044			
42#	2SC250	80m ^Δ		SJ	769u ^Δ	20		2.0	100m	70u ^Δ	70p	2.0m ^Δ	11				1.5p		PL	T09	A		
43	2N1267	65m ^Δ		SJ	45	45	5.0		0.1u	5.00	0.1m ^Δ	100 TA											
44	RT303H	70m ^Δ		SJ	30	25	5.0		10u ^Δ	1.00	50m ^Δ	40 TA						1.5p		PE	u24		
45	2N8211	75m ^Δ		SJ	1.2m ^Δ	30	25	25	400m														
46	2SC555	75m ^Δ	80M ^Δ	SJ	10		2.0	10m	1.0u	5.00	2.0m ^Δ	250					3.5k		2.5				
47	2N1268	80m ^Δ		SJ	769u ^Δ	20		2.0	100m	70u ^Δ	100	2.0m ^Δ	20										
48#	BFX75	80m ^Δ	230M ^Δ	SJ	30		5.0	30	30	2.0u ^Δ	1.0m ^Δ	280 T											
49#	BFX76	80m ^Δ	230M ^Δ	SJ	30		5.0	30	30	2.0u ^Δ	1.0m ^Δ	280 T											
50	2SC186	85m ^Δ	250M ^Δ	SJ	20	15	5.0	2.0	25m	2.0u ^Δ	6.00	2.5m ^Δ	40					4.0p		PL	T01		
51	2SC187 ^Δ	85m ^Δ	250M ^Δ	SJ	20	15	5.0	2.0	25m	2.0u ^Δ	6.00	2.5m ^Δ	50					4.0p		PL	T01		
52	D2661	90m ^Δ		SJ	1.2m ^Δ	30	40	15	4.5		400m ^Δ	1.00	10m ^Δ	20 TA					4.0p ^Δ		PE	u40	O
53	D2662	90m ^Δ		SJ	1.2m ^Δ	40	15	4.5	4.5		400m ^Δ	1.00	10m ^Δ	40 TA					4.0p ^Δ		PE	u40	O
54#	D26C1	90m ^Δ		SJ	1.2m ^Δ	25	25	5.0		25n ^Δ	5.00	10m ^Δ	30 TA#					8.0p ^Δ		PEA	u40b	O	
55#	D26C2	90m ^Δ		SJ	1.2m ^Δ	25	25	5.0		25n ^Δ	5.00	10m ^Δ	60 TA#					8.0p ^Δ		PEA	u40b	O	
56#	D26C3	90m ^Δ		SJ	1.2m ^Δ	25	25	5.0		25n ^Δ	5.00	10m ^Δ	140 TA#					8.0p ^Δ		PEA	u40b	O	
57#	D26C4	90m ^Δ		SJ	1.2m ^Δ	25	25	5.0		25n ^Δ	5.00	10m ^Δ	250 TA#					8.0p ^Δ		PEA	u40b	O	
58#	BC555	90m ^Δ		SJ	1.2m ^Δ	25	25	5.0		25n ^Δ	5.00	10m ^{Δ</sup}											

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX. COLL. DISS. @25°C (W)	2. DERATE IN FREE AIR (W/C)	3. ABS MAX RATINGS @ 25°C BV _{cbo} BV _{ceo} BV _{beo}	MAX. ICBO @MAX	TYPICAL "H" PARAMETERS						Cob	STRUCTURE	DWG #	C S/a T0200 Ser.		
		COLL. DISS. @25°C (W)	DERATE IN FREE AIR (W/C)	MAX. ICBO @MAX	BIAS			COMMON Emitter									
		IN FREE AIR (W/C)	MAX. ICBO @MAX	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}	(mhos)	(Ω)						
1#	BC1941	100m*	250m Δ	1.2m	40	25	5.0	800m	100 μ	100	1.0m \emptyset	25 T Δ	8 Op \emptyset	PE	U30b	D	
2#	2SC752	100m	300m Δ	1.0m	30	12	4.0	100m	500 μ	100	1.0m \emptyset	80	4.0p \emptyset	PE	R67a	B	
3#	2SC429	100m	380m Δ	1.0m	25	12	2.0	10m	1.0u \emptyset	5.0	1.0m \emptyset	27	2p \emptyset	PE	U23	C	
4#	2SC785	100m	400m Δ	1.0m	30	4.0	20m	50u \emptyset	6.0	1.0m \emptyset	25 T Δ *	65pt	PE	R67a	B		
5#	2SC430	100m	420m Δ	1.0m	25	12	2.0	10m	1.0u \emptyset	6.0	1.0m \emptyset	46	2p \emptyset	PE	U23	C	
6#	2SC763	100m	470m Δ	1.0m	25	12	3.0	20m	500 μ	6.0	1.0m \emptyset	70	1.5p	PE	T092	D	
7#	2SC784	100m	500m Δ	1.0m	30	4.0	20m	50u \emptyset	6.0	1.0m \emptyset	25 T Δ *	65pt	PE	R67a	B		
8#	2SC800	100m	600m Δ	1.0m	30	25	4.0	10m	1.0u \emptyset	6.0	2.0m \emptyset	80	50p	PE	U23	C	
9#	MT3001	100m	600m Δ	800u	30	12	* 3.0	20m	200 μ	100	8.0m \emptyset	50	1.4p	PE	U81	B	
10#	2SC535	100m	700m Δ		30	20	4.0	20m	50u \emptyset	6.0	1.0m \emptyset	35 T Δ	90p	PE	U23	C	
11#	2SC271	100m	800m Δ	800u	30	12	3.0	20m	1.0u \emptyset	6.0	2.0m \emptyset	70	1p \emptyset	PE	U23a	C	
12#	MT90011	100m	800m Δ	800u	30	40	4.5	200m	50n \emptyset	1.0	10m \emptyset	40 T Δ	4.0p \emptyset	PE	U81	B	
13#	MT9002*	100m	800m Δ	800u	30	30	4.5	200m	50n \emptyset	1.0	10m \emptyset	30 T Δ	4.0p \emptyset	PE	U81	B	
14#	MT90031	100m	800m Δ	800u	18	12	1.0	500m	5.0	1.0m \emptyset	25 T Δ	4.0p \emptyset	PE	U81	B		
15#	MT3002	100m	900m Δ	800u	30	12	* 3.0	200m	100 μ	1.0	8.0m \emptyset	50	1.3p	PE	U81	B	
16#	MT3011	100m	900m Δ	800u	20	12	* 3.0	20m	500 μ	1.0	8.0m \emptyset	50	1.4p	PL	U81	B	
17#	2SC289	100m	1.1G Δ	800u	25	12	* 3.0	10m	1.0u \emptyset	6.0	2.0m \emptyset	70	1p \emptyset	PE	U23	C	
18#	2SC272	100m	1.2G Δ	800u	25	12	* 3.0	20m	1.0u \emptyset	6.0	2.0m \emptyset	70	1p \emptyset	PE	U23	C	
19#	BC155A	105m	50m Δ	1.3m	50	5.0	5.0	50m	100 μ	1.0	500 μ	85 Δ		PE	U30b	D	
20#	BC155B	105m	50m Δ	1.3m	50	5.0	5.0	50m	100 μ	1.0	500 μ	200 Δ		PE	U30b	D	
21#	BC155C	105m	50m Δ	1.3m	50	5.0	5.0	50m	100 μ	1.0	500 μ	470 Δ		PE	U30b	D	
22#	BFY69	105m	50m Δ	1.3m	25	15	5.0	100m	100 μ	1.0	500 μ	40 Δ		PE	U30b	D	
23#	IBFY69A	105m	50m Δ	1.3m	25	15	5.0	100m	100 μ	1.0	500 μ	55 Δ		PE	U30b	D	
24	2N1270	110m Δ	769u	SS 20	2.0	100m	70u	100 μ	2.0m \emptyset	11		1.5p	D	T09	A \emptyset		
25#	BFS18	110m	200m Δ	1.1m	30	20	5.0	30m	100 μ	100	1.0m \emptyset	35 T Δ	1.0ps	PE	U56	A	
26#	BFS18R	110m	200m Δ	2.0m	30	20	5.0	30m	100 μ	100	1.0m \emptyset	35 T Δ	850ft	PE	U56	C	
27#	2SC170	110m	250m Δ	2.5m	20	5.0	50m	50u \emptyset	6.0	10m	60	5.0p	PL	T018			
28#	BFS19	110m	260m Δ	1.1m	30	20	5.0	30m	100 μ	100	1.0m \emptyset	65 T Δ	1.0ps	PE	U56	A	
29#	BFS19R	110m	260m Δ	2.0m	30	20	5.0	30m	100 μ	100	1.0m \emptyset	65 T Δ	850ft	PE	U56	C	
30#	BCW31	110m	300m Δ	1.1m	30	20	5.0	50m	100 μ	5.0	10u \emptyset	90	2.5ps	PE	U56	C	
31#	BCW31A	110m	300m Δ	1.1m	30	20	5.0	50m	100 μ	5.0	10u \emptyset	90	4.0ps \emptyset	PE	U56	A	
32#	BCW32	110m	300m Δ	1.1m	30	20	5.0	50m	100 μ	5.0	10u \emptyset	150	4.0ps \emptyset	PE	U56	C	
33#	BCW32R	110m	300m Δ	1.1m	30	20	5.0	50m	100 μ	5.0	10u \emptyset	150	2.5ps	PE	U56	A	
34#	BCW33	110m	300m Δ	1.1m	30	20	5.0	50m	100 μ	5.0	10u \emptyset	270	4.0ps \emptyset	PE	U56	A	
35#	BCW33R	110m	300m Δ	1.1m	30	20	5.0	50m	100 μ	5.0	10u \emptyset	270	2.5ps	PE	U56	C	
36#	BSF20	110m	450m Δ	1.1m	30	20	5.0	30m	100 μ	100	7.0m \emptyset	85	800fs	PE	U56	A	
37#	BFS20R	110m	450m Δ	2.0m	30	20	4.0	25m	100 μ	100	7.0m \emptyset	40 T Δ	350ft	PE	U56	C	
38#	BSV521	110m	500m Δ	1.1m	20	12	5.0	50m	100 μ	100	50m \emptyset	25 T Δ	4.0ps \emptyset	PE	U56	A	
39#	BSV521R	110m	500m Δ	1.1m	20	12	5.0	50m	100 μ	100	50m \emptyset	25 T Δ	4.0ps \emptyset	PE	U56	C	
40#	BFS17R	110m	1.0G Δ	1.1m	30	15	2.5	25m	10n	1.0	2.0m \emptyset	20 T Δ	1.5ps	PE	U56	A	
41#	BFS17	110m	1.3G Δ	1.1m	25	15	2.5	25m	10n	1.0	2.5m \emptyset	20 T Δ	1.5ps \emptyset	PE	U56	A	
42#	2SC29	115m	100m	909u	SS 40	25	2.0	4.0	25m	100 μ	100	10m \emptyset	85	4.0p	ME	T05	
43#	2SC929	120m	300m Δ		15	10	5.0	30m	1.0u \emptyset	6.0	1.0m \emptyset	100	1.6p	GD	T145	D	
44#	2SC930	120m	300m Δ		15	10	5.0	30m	1.0u \emptyset	6.0	1.0m \emptyset	80	1.6p	GD	T145	D	
45#	2SC7721	120m	350m Δ		15	10	5.0	30m	1.0u \emptyset	6.0	1.0m \emptyset	45	1.5p	PE	T145	D	
46#	2SC868	120m	550m Δ		15	10	5.0	30m	1.0u \emptyset	6.0	1.0m \emptyset	60	1.1p	PL	T145	D	
47#	2SC674	120m	750m Δ		15	10	5.0	30m	1.0u \emptyset	6.0	1.0m \emptyset	80	1.1p	PE	T145	D	
48#	2SC705	120m	800m Δ		15	10	5.0	30m	1.0u \emptyset	6.0	1.0m \emptyset	80	1.1p	PE	T145	D	
49	KD5000	125m	2.0m \emptyset	SS 20	10	2.0	15m	50m \emptyset	1.0	3.0m \emptyset	20 T Δ	200nb	50	2.0	X72a	V	
50#	2S005	125m	30 Δ	1.0m	40	1.0	20	100m	1.0u \emptyset	20	1.0m \emptyset	100	9.0 Δ	1.6p	GD	T05	A
51	2N1586	125m	5.0M Δ	2.0m	#\$ 15	10	2.0	100m	1.0u \emptyset	5.0	1.0m \emptyset	9.0 Δ	1.5u \emptyset b	12	30p \emptyset	OV9a	A
52	2N1587	125m	5.0M Δ	2.0m	#\$ 30	20	1.0	25m	1.0u \emptyset	5.0	1.0m \emptyset	9.0 Δ	1.5u \emptyset b	12	30p \emptyset	OV9a	A
53	2N1588	125m	5.0M Δ	2.0m	#\$ 60	40	1.0	25m	1.0u \emptyset	5.0	1.0m \emptyset	9.0 Δ	1.5u \emptyset b	12	30p \emptyset	OV9a	A
54	2N1589	125m	5.0M Δ	2.0m	#\$ 15	10	1.0	25m	1.0u \emptyset	5.0	1.0m \emptyset	25 Δ	1.5u \emptyset b	12	30p \emptyset	OV9a	A
55	2N1590	125m	5.0M Δ	2.0m	#\$ 60	20	1.0	25m	1.0u \emptyset	5.0	1.0m \emptyset	25 Δ	1.5u \emptyset b	12	30p \emptyset	OV9a	A
56	2N1591	125m	5.0M Δ	2.0m	#\$ 60	40	1.0	25m	1.0u \emptyset	5.0	1.0m \emptyset	25 Δ	1.5u \emptyset b	12	30p \emptyset	OV9a	A
57	2N1592	125m	5.0M Δ	2.0m	#\$ 15	10	1.0	25m	1.0u \emptyset	5.0	1.0m \emptyset	70	1.5u \emptyset b	12	30p \emptyset	OV9a	A
58	2N1593	125m	5.0M Δ	2.0m	#\$ 30	20	1.0	25m	1.0u \emptyset	5.0	1.0m \emptyset	70	1.5u \emptyset b	12	30p \emptyset	OV9a	A
59	2N1594	125m	5.0M Δ	2.0m	#\$ 60	40	1.0	25m	1.0u \emptyset	5.0	1.0m \emptyset	70	1.5u \emptyset b	12	30p \emptyset	OV9a	A
60	2N264	125m	10 M		45	10	1.0	20m	50m \emptyset	1.0	10m \emptyset	20 T Δ	G	OV1			
61	2N337	125m	20 M		50	30	1.0	20m	1.0u \emptyset	20</							

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C (W)	FAB FREE AIR XP	IN W/C	ME BVcbo BVceo BVbeo	MAX. Ic @MAX Vcb Vcb	TYPICAL h _E PARAMETERS			COMMON Emitter hoe hie hre	Cob	STRUCTURE	DWG # Y200 s/a	C A D T0200 Ser		
							DE RATE	ABS MAX RATINGS @25°C	BIAS							
1#	2SC640	150m		SJ	30	25	50	100m	10u	3.0Ω	50mΩ	300 f		PE u23a C		
2#	BFV16	150m		1.2m	SJ	100	30		100	10Ω	30mΩ	20 Δ		PL u34b P		
3#	BFV511	150m		1.2m	SJ	60	30	50	800m	50uΩ	10Ω	150mΩ	50 Δ		PE u34b P	
4#	BFV531	150m		1.2m	SJ	60	30	50	800m	50uΩ	10Ω	150mΩ	50 Δ		8pD PE u34b P	
5#	BFV80	150m		1.0m	SJ	30	30	50	30m	0.5uΩ	5Ω	10mΩ	100 Δ		8pD PE u34b P	
6#	BFV61	150m		1.0m	SJ	30	30	50	30m	0.5uΩ	5Ω	10mΩ	100 Δ		8pD PE u34b P	
7#	BFV62	150m		1.2m	SJ	60	50	60	50m	0.5uΩ	5Ω	10mΩ	100 Δ		8pD PE u34b P	
8#	PL1021	150m		1.0m	SJ	40	15	45		4uΩs	1.0Ω	10mΩ	20 Δ		4pD PE u50 C	
9#	PL1022	150m		1.0m	SJ	40	15	45		4uΩs	1.0Ω	10mΩ	40 Δ		4pD PE u50 C	
10#	PL1023	150m		1.0m	SJ	40	15	45		4uΩs	35Ω	10mΩ	40 Δ		4pD PE u50 C	
11#	PL1024	150m		1.0m	SJ	20	12	50		1.0uΩ	35Ω	10mΩ	20 Δ		5pD PE u50 C	
12#	PL1025	150m		1.0m	SJ	20	12	50		1.0uΩ	35Ω	10mΩ	40 Δ		5pD PE u50 C	
13#	PL1026	150m		1.0m	SJ	30	12	50		4uΩs	35Ω	10mΩ	30 Δ		4pD PE u50 C	
14#	PL1051	150m		1.0m	SJ	60	30	50		10nΩ	1.0Ω	10mΩ	25 Δ		8pD PE u50 C	
15#	PL1052	150m		1.0m	SJ	75	40	60		10nΩ	1.0Ω	10mΩ	25 Δ		8pD PE u50 C	
16#	PL1053	150m		1.0m	SJ	60	30	50		10nΩ	1.0Ω	10mΩ	50 Δ		8pD PE u50 C	
17#	PL1054	150m		1.0m	SJ	75	40	60		10nΩ	1.0Ω	10mΩ	50 Δ		8pD PE u50 C	
18#	PL1055	150m		1.0m	SJ	60	30	50		10nΩ	1.0Ω	10mΩ	12 Δ		8pD PE u50 C	
19#	PL1061	150m		1.0m	SJ	45	45	* 50			5.0Ω	10uΩ	40 Δ		8pD PL u50 C	
20#	PL1062	150m		1.0m	SJ	45	45	* 50			5.0Ω	10uΩ	100 Δ		8pD PL u50 C	
21#	PL1063	150m		1.0m	SJ	60	60	* 60			5.0Ω	10uΩ	100 Δ		6pD PL u50 C	
22#	PL1064	150m		1.0m	SJ	25	25	* 50			5.0Ω	10uΩ	180 f		8pD PL u50 C	
23#	PL1065	150m		1.0m	SJ	60	60	* 60			5.0Ω	10uΩ	40 Δ		6pD PL u50 C	
24#	PL1066	150m		1.0m	SJ	25	25	* 50			5.0Ω	10uΩ	40 Δ		8pD PL u50 C	
25#	PL1067	150m		1.0m	SJ	25	25	* 50			5.0Ω	10uΩ	100 Δ		8pD PL u50 C	
26#	PL1081	150m		1.0m	SJ	60	40	* 50			10Ω	150mΩ	20 Δ	#	PL u50 C	
27#	PL1082	150m		1.0m	SJ	60	40	* 50			10Ω	150mΩ	40 Δ	#	PL u50 C	
28#	PL1083	150m		1.0m	SJ	75	50	* 70			10Ω	150mΩ	100 Δ	#	PL u50 C	
29#	PL1084	150m		1.0m	SJ	75	50	* 70			10Ω	150mΩ	40 Δ	#	PL u50 C	
30#	PL1085	150m		1.0m	SJ	120	100	* 70			10Ω	150mΩ	40 Δ	#	PL u50 C	
31#	PL1111	150m		1.0m	SJ	30	15	30		1nΩ	1.0Ω	3.0mΩ	20 Δ		1.7pD PE u50 C	
32#	PL1112	150m		1.0m	SJ	30	15	30		1nΩ	1.0Ω	3.0mΩ	20 Δ		1.7pD PE u50 C	
33#	PL1113	150m		1.0m	SJ	30	13	30		1nΩ	1.0Ω	4.0mΩ	20 Δ		2.5pD PE u50 C	
34	JAN2N117	150m	1.0MΔ	1.2m	SJ	30		1.0		1.0u	5.0	1.0mΩ	90 Δ		20 □ OVS6 F	
35	JAN2N118	150m	2.0MΔ	1.2m	SJ	30		1.0		1.0u	5.0	1.0mΩ	18 Δ		15 □ OVS6 F	
36	JAN2N119	150m	2.0MΔ	1.2m	SJ	30		1.0		1.0u	5.0	1.0mΩ	37 Δ		15 □ OVS6 F	
37	JAN2N333	150m	2.5MΔ	1.0m	SJ	45	45	10			500nΩ	5.0	1.0mΩ	44 □		12 □ T05 A
38	JAN2N335	150m	2.5MΔ	1.0m	SJ	45	45	10			500nΩ	5.0	1.0mΩ	90 □		12 □ T05 A
39	JAN2N336	150m	2.5MΔ	1.0m	SJ	45	45	10			500nΩ	5.0	1.0mΩ	270 □		12 □ T05 A
40	2N3268	150m	2.5MΔ	1.0m	SJ	45	45	10	25m		500nΩ	5.0	1.0mΩ	40 □		12 □ T05 A
41	2N117	150m	4.0M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	15		4.0pD G OVS6 A
42	2N160	150m	4.0M	1.0m	S	40		1.0	25m		10uΩ	5.0	1.0mΩ	400nb	42	7.0p G OVS6 A
43	2N160A	150m	4.0M	1.0m	S	40		1.0	25m		10uΩ	5.0	1.0mΩ	400nb	42	7.0p G OVS6 A
44#	ZS001	150m	4.0MΔ	769u	SJ	45		1.0	25m		30nΩ	5.0	1.0mΩ	14		4.0p G T05 A
45#	ZS002	150m	4.0MΔ	769u	SJ	45		1.0	25m		30nΩ	5.0	1.0mΩ	25		4.0p G T05 A
46#	ZS004	150m	4.0MΔ	769u	SJ	45		1.0	25m		30nΩ	5.0	1.0mΩ	50		4.0p G T05 A
47	2N118	150m	5.0M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	29		4.0p G OVS6 A
48	2N161	150m	5.0M	1.0m	S	40		1.0	25m		10uΩ	5.0	1.0mΩ	30		4.0p G OVS6 A
49	2N161A	150m	5.0M	1.0m	S	40		1.0	25m		10uΩ	5.0	1.0mΩ	30		4.0p G OVS6 A
50	2N119	150m	6.0M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	63		4.0p G OVS6 A
51	2N163	150m	6.0M	1.0m	S	40		1.0	25m		10uΩ	5.0	1.0mΩ	78		4.0p G OVS6 A
52	2N163A	150m	6.0M	1.0m	S	40		1.0	25m		10uΩ	5.0	1.0mΩ	78		4.0p G OVS6 A
53	2N332	150m	6.0M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	15		4.0p G T05 A
54	2N120	150m	7.0M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	200		4.0p G OVS6 A
55	2N118A	150m	8.0M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	28 □		1.7pD GD T05 A
56	2N162	150m	8.0M	1.0m	SJ	40		1.0	25m		10uΩ	5.0	1.0mΩ	30		4.0p G OVS6 A
57	2N162A	150m	8.0M	1.0m	SJ	40		1.0	25m		10uΩ	5.0	1.0mΩ	30		4.0p G T05 A
58	2N333	150m	8.0M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	29		500nb 55 □ T05 A
59	T1492	150m	14.0M	1.4m	J	40	20	1.0	25m		2.0uΩ	5.0	1.0mΩ	30		500nb 55 □ T05 A
60	2N334	150m	10M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	54		500nb 55 □ T05 A
61#	ZS003	150m	10MΔ	769u	SJ	45		1.0	25m		30nΩ	5.0	1.0mΩ	25		4.0p G T05 A
62#	BCY87*	150m	10MΔ	1.0m	SJ	45	40	50	30m		5.0nΩ	10	0.5mΩ	100 Δ		3.5p PL0 L17u F
63#	BCY88*	150m	10MΔ	1.0m	SJ	45	40	50	30m		2.5nΩ	10	0.5mΩ	100 Δ		3.5p PL0 L17u F
64#	BCY89*	150m	10MΔ	1.0m	SJ	45	40	50	30m		0.1uΩ	10	0.5mΩ	100 Δ		3.5p PL0 L17u F
65	2N335	150m	11M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	63		300nb 55 □ T05 A
66	2N1149	150m	12M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	13		400nb 42 □ T05 A
67	2N336	150m	13M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	200		250nb 55 □ T05 A
68	2N1150	150m	13M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	24		400nb 42 □ T05 A
69	2N1151	150m	14M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	39		400nb 42 □ T05 A
70	2N1152	150m	15M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	48		400nb 42 □ T05 A
71	2N1309A	150m	2.5MΔ	1.5m	J	35	30	60	60		1.0uΩ	5.0	1.0mΩ	80 □		2.0p PL0 X16 C
72	2N1153	150m	16M	1.0m	SJ	45		1.0	25m		2.0uΩ	5.0	1.0mΩ	99		400nb 42 □ T05 A
73	2N1205	150m	17MΔ	SA	20	20	1.0			5.0Ω	10Ω	2.0mΩ	10 Δ		5.0p PL0 X16 C	
74	2N263	150m	20M	1.2m	SJ	45	30	1.0	20m		1.0uΩ	20	1.0mΩ	30 □		3.0p PL0 X16 C
75#	BFV370	150m	20MΔ	1.2m	SJ	30	30	1.0	100m		0.1uΩ	5.0	1.0mΩ	50 Δ		12p PL0 X16 C
76#	BFV380	150m	20MΔ	1.2m	SJ	45	45	1.0	18		0.1uΩ	5.0	1.0mΩ	50 Δ		12p PL0 X16 C
77	2N1276	150m	30M	1.2m	SJ	40	30	1.0	25m		1.0uΩ	5.0	1.0mΩ	14		370nb 44

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @ 25°C (W)	2 DERATE IN FREE AIR (Hz)	TABS MAX RATINGS @ 25°C						MAX. I _{cbo} @ MAX V _{cb}	TYPICAL 'N' PARAMETERS						Cob	STRUCTURE	DWG #	C Y200 s/a TO200 Ser.		
				COLL. DISS. @ 25°C (W)	IN FREE AIR (Hz)	M A P	BV _{cbo}	BV _{ceo}	BV _{beo}		I _c	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}					
1#	BFV10	150m	200M ^Δ	1.0m	\$J	50	30	5.0	800m	.05u	100	10m ^Δ	30	1Δ				12p ^Δ	PE	u345	P	
2#	BFV11	150m	200M ^Δ	1.0m	\$J	50	30	5.0	800m	.05u	100	10m ^Δ	70	1Δ				12p ^Δ	PE	u346	P	
3#	BFV40	150m	200M ^Δ	1.0m	\$J	25	18	5.0		.05u	100	10m ^Δ	20	1Δ				6p ^Δ	PEΔ	u346	P	
4#	BFV49 [†]	150m	200M ^Δ	1.2m	\$J	25	15	5.0	200m	.05u	100	10m ^Δ	30	1Δ								
5	BSX53 [†]	150m	200M ^Δ	1.3m	\$A								1.0 ^Δ	50m ^Δ	50	1Δ		5.0p	NPE	TO18		
6	BSX54 [†]	150m	200M ^Δ	1.3m	\$A								1.0 ^Δ	50m ^Δ	50	1Δ		5.0p	NPE	TO18		
7#	BSY95	150m	200M ^Δ	1.0m	\$J	20	15	5.0	100m	.05u	100	10m ^Δ	50	1Δ				6p ^Δ	PEΔ	TO18	A ²	
8#	2SC829	150m	230M ^Δ	1.5m	\$J	30	20	5.0	30m	.10u	10	1.0m ^Δ	40	1Δ				1.3p ^Δ	PE	TO92	B	
9	BF115 [†]	150m*	230M ^Δ	2.0m	\$J	50	30	5.0	30m	.10u	1.0m ^Δ	165	1Δ				650ft		TO72	J		
10#	2SC32	150m	250M ^Δ		\$J	45	20	3.0	50m	10u	100	5.0m	55				3.0p	PE	TO5			
11 [†] #	BCW60A [†]	150m*	250M ^Δ	1.2m	\$J	32	50	100m	20n ^Δ	5.0 ^Δ	2.0m ^Δ	200		18	2.7k	1.5	4.5p ^Δ	PEØ	u56a	A		
12 [†] #	BCW60B [†]	150m*	250M ^Δ	1.2m	\$J	32	50	100m	20n ^Δ	5.0 ^Δ	2.0m ^Δ	260		24	3.6	2.0	4.5p ^Δ	PEØ	u56a	A		
13 [†] #	BCW60C [†]	150m*	250M ^Δ	1.2m	\$J	32	50	100m	20n ^Δ	5.0 ^Δ	2.0m ^Δ	330		30	4.5	2.0	4.5p ^Δ	PEØ	u56a	A		
14 [†] #	BCW60D [†]	150m*	250M ^Δ	1.2m	\$J	32	50	100m	20n ^Δ	5.0 ^Δ	2.0m ^Δ	520		50	7.4	3.0	4.5p ^Δ	PEØ	u56a	A		
15#	BFV12	150m	250M ^Δ	1.0m	\$J	60	35	5.0	800m	.05u	100	1.0m ^Δ	40	1Δ				10p ^Δ	PE	u34b	P	
16#	BFV41	150m	250M ^Δ	1.0m	\$J	20	12	4.5	200m	.10u	350	10m ^Δ	30	1Δ				5p ^Δ	PEΔ	u34b	P	
17#	BFV45	150m	250M ^Δ	1.2m	\$J	35	15	5.0		.08u	1.0 ^Δ	10m ^Δ	30	1Δ				5p ^Δ	PEΔ	u34b	P	
18#	BFV54 [†]	150m	250M ^Δ	1.2m	\$J	60	30	5.0		.10u	150m ^Δ	30	1Δ				8p ^Δ	PE	u34b	P		
19#	BCW46	150m*	300M ^Δ	2.0m	\$J	80	60	6.0	100m	.10u	5.0 ^Δ	2.0m ^Δ	240	1Δ	30u	4.5k	2.0	2.5p ^Δ	PE	MM13	F	
20#	BCW47	150m*	300M ^Δ	2.0m	\$J	50	45	6.0	100m	.10u	5.0 ^Δ	2.0m ^Δ	240	1Δ	30u	4.5k	2.0	2.5p ^Δ	PE	MM13	F	
21#	BCW48	150m*	300M ^Δ	2.0m	\$J	30	20	5.0	100m	.10u	5.0 ^Δ	2.0m ^Δ	240	1Δ	30u	4.5k	2.0	2.5p ^Δ	PE	MM13	F	
22#	BCW49	150m*	300M ^Δ	2.0m	\$J	30	20	5.0	100m	.10u	5.0 ^Δ	2.0m ^Δ	240	1Δ	30u	4.5k	2.0	2.5p ^Δ	PEØ	MM13	F	
23#	BFV43†	150m	300M ^Δ	1.2m	\$J	30	12	4.0	200m	.05u	1.0 ^Δ	30m ^Δ	30	1Δ				5p ^Δ	PE	u34b	P	
24#	BFV44†	150m	300M ^Δ	1.2m	\$J	30	15	4.0	200m	.05u	1.0 ^Δ	30m ^Δ	30	1Δ				5p ^Δ	PE	u34b	P	
25#	BFV46†	150m	300M ^Δ	1.2m	\$J	35	15	5.0		.08u	1.0 ^Δ	100m ^Δ	30	1Δ				5p ^Δ	PE	u34b	P	
26#	2SC739	150m	350M ^Δ	1.5m	\$J	25	12	4.0	20m	.10u	6.0 ^Δ	1.0m ^Δ	60	1#				1.5p	PE1	TO92	D	
27	2N3493	150m	400M ^Δ	833m	\$J	12	8.0	5.0	25m	.5n ^Δ	.500	50m ^Δ	40	1Δ				7p ^Δ	R96d	G		
28#	2SC269†	150m	400M ^Δ	1.2m	\$J	25	20	5.0	150m	.10u	1.0 ^Δ	10m ^Δ	90	1				3.5p	PE	u23a	C	
29#	2SC738	150m	400M ^Δ	1.5m	\$J	25	12	4.0	20m	.10u	6.0 ^Δ	1.0m ^Δ	60	1#				1.5p	PL	TO92	D	
30#	BF252	150m	400M ^Δ	1.0m	\$J	40	40	4.0			100n ^Δ	1.0 ^Δ	20m ^Δ	30	1Δ				DPL		TO72	
31#	BFV421	150m	400M ^Δ	1.2m	\$J	35	15	4.5	200m	.40u	1.0 ^Δ	10m ^Δ	30	1Δ				4p ^Δ	PE	u34b	P	
32#	BFV47	150m	400M ^Δ	1.2m	\$J	30	12	5.0	200m	.40u	1.0 ^Δ	10m ^Δ	30	1Δ				4p ^Δ	PE	u34b	P	
33#	BSV53P†	150m	400M ^Δ	1.2m	\$J	35	12	5.0		.05u	1.0 ^Δ	10m ^Δ	40	1Δ				4.0p	PL	u17c	E	
34#	BSV54P†	150m	400M ^Δ	1.2m	\$J	40	30	4.0		.01u	1.0 ^Δ	4.0m ^Δ	57					4.0p	PL	u17c	E	
35	NPC167	150m	400M ^Δ	1.0m	\$S	40	30	4.0	25m	.10u	1.0 ^Δ	10m ^Δ	20	1Δ				1.3p	PLØ	TO72	J	
36#	PL40221	150m	400M ^Δ	1.0m	\$S	35	15	4.5	200m	.40u	1.0 ^Δ	10m ^Δ	20	1Δ				4p ^Δ	PE	u51		
37#	2SC291	150m	450M ^Δ		\$J	25	12	4.0	10m	100n	3.0 ^Δ	500u ^Δ	65					1.5p ^Δ	PE	u23a	C	
38#	2SC605	150m	480M ^Δ		\$J	30	30	4.0	20m	.20u	1.0 ^Δ	2.0m ^Δ	60	1				1p ^Δ	PL	u23a	C	
39#	2SC389	150m	500M ^Δ	1.2m	\$J	20	15	3.0	20m	.10u	5.0 ^Δ	4.0m ^Δ	50					1p ^Δ	PL	TO72		
40#	2SC857	150m	500M ^Δ		\$S	18	18	3.0	30m	.20u	1.0 ^Δ	4.0m ^Δ	50	1				1.1p	PL	u37		
41#	2SC927	150m	500M ^Δ		\$J	30	15	3.0	20m	.10u	6.0 ^Δ	1.0m ^Δ	80	1				1.0p	PL	TO104		
42#	2SC928	150m	500M ^Δ		\$J	30	15	3.0	20m	.10u	6.0 ^Δ	1.0m ^Δ	80	1				1.0p	PL	TO104		
43#	2SC1035	150m	500M ^Δ		\$J	30	15	3.0	20m	.10u	6.0 ^Δ	1.0m ^Δ	70	1				1.0p	PL	TO104		
44#	2SC1036	150m	500M ^Δ		\$J	30	15	3.0	20m	.10u	6.0 ^Δ	1.0m ^Δ	70	1				1.0p	PL	TO104		
45#	BF288	150m	500M ^Δ	1.0m	\$J	40	40	4.0	20m	.50n	7.0 ^Δ	6.0 ^Δ	65	1Δ				DPE		TO72		
46#	BF344	150m	500M ^Δ	1.0m	\$J	30	20	4.0	50m	.10u	1.0 ^Δ	1.0m ^Δ	90	1Δ				PE		TO18	C	
47#	BF345	150m	500M ^Δ	1.0m	\$J	30	20	4.0	50m	.10u	1.0 ^Δ	1.0m ^Δ	40	1Δ				3p ^Δ	PE	u34b	P	
48#	BFV271	150m	500M ^Δ	1.2m	\$J	15	6.0	4.0	50m	.10u	1.0 ^Δ	3.0m ^Δ	15	1Δ				3p ^Δ	PEØ	u34b	P	
49#	BFV281	150m	500M ^Δ	1.2m	\$J	15	6.0	4.0	50m	.10u	1.0 ^Δ	3.0m ^Δ	15	1Δ				1.7p	PEØ	u51		
50#	BFV80	150m	500M ^Δ	1.2m	\$J	25	12	3.0	50m	.50u	1.0 ^Δ	3.0m ^Δ	20	1Δ				1.7p	PEØ	u51		
51#	PL40221	150m	500M ^Δ	1.0m	\$S	40	15	4.5	200m	.40u	1.0 ^Δ	100m ^Δ	20	1Δ				4p ^Δ	PE	u51		
52#	PL40231	150m	500M ^Δ	1.0m	\$S	40	15	4.5	200m	.40u	1.0 ^Δ	100m ^Δ	20	1Δ				4p ^Δ	PE	u51		
53#	2SC506	150m	530M ^Δ	1.0m	\$J	35	35	4.0	20m	.10u	100	2.0m ^Δ	5.5				6p ^Δ	PLØ	TO72	C		
54#	2SC382	150m	550M ^Δ	1.4m	\$J	40	40	4.0	20m	.10u	50m	500n ^Δ	100	4.0m ^Δ	80			1.6p ^Δ	PLØ	R67a	B	
55#	2SC463H	150m	550M ^Δ		\$S	18	13	3.0	30m	.20u	3.0 ^Δ	2.0m ^Δ	5.5					90p	PL	TO		

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX. [W]	2. DE RATE [Hz]	3. MAX. [W/C]	4. ABS MAX RATINGS @ 25°C	5. TYPICAL h' PARAMETERS	6. DWG #							
		COLL. DISS. @ 25°C	IN fab	M A M AIR	E X P	BV _{cbo} BV _{ceo} BV _{beo}	I _c @ MAX V _{cb}	V _{cb} BIAS	COMMON Emitter h _{oe} (mhos)	Cob	STRUCTURE	Y200	E O	
						I _e h _{fe}	h _{ie} (fL)	h _{re} X.0001	[F]	s/a	A D	T0200	D E	
1	K5012	150m	1.4G	1.1m	SJ	25 12 2.5	50n ₀ 1.0 ₀ 3.0m ₀ 100 ₁			800 _f	D	T050	C	
2	K5503C	150m	1.5G ₀	1.2m	SJ	20 12 2.0	30n ₀ 6.0 ₀ 10m ₀ 15 _Δ			1p ₀	E _t	u35		
3#	2SC988	150m	3.0G ₀	1.2m	SJ	20 15 3.0	30m ₀ 50n ₀ 10 ₀ 10m ₀ 30 _Δ			7p ₀	PE	T072	G	
4#	2SC989	150m	3.0G ₀	1.2m	SJ	20 12 3.0	50m ₀ 1.0 ₀ 1.0m ₀ 30 _Δ			1.5p ₀	PE	X79	C ₀	
5#	2SC988A	150m	3.5G ₀	840m	SJ	20 15 3.0	30m ₀ 500n ₀ 10 ₀ 10m ₀ 30 _Δ			700 _f	PE	T072	G	
6#	2SC988B	150m	3.5G ₀	840m	SJ	20 15 3.0	30m ₀ 500n ₀ 10 ₀ 10m ₀ 30 _Δ			700 _f	PE	T072	G	
7#	2SC987	160m	4.5G ₀	1.2m	SJ	20 15 3.0	30m ₀ 50n ₀ 10 ₀ 10m ₀ 30 _Δ			5p ₀	PE	X80	G _J	
8	A495	160m	220m ₀	2.0m	SJ	30 20 5.0	30m ₀ 50 ₀ 10 ₀ 1.0m ₀ 67 ₁			1p ₀	PE ₀	MM10	C	
9	BF255 ₀	160m*	220m ₀	2.0m	SJ	30 20 5.0	30m ₀ 50 ₀ 10 ₀ 1.0m ₀ 67 ₁			1.0p ₁	PE ₀	X73	C	
10	NPC115	180m	270m ₀	1.1m	SJ	50 30 5.0	30m ₀ 50n ₀ 10 ₀ 1.0m ₀ 45 _Δ			50p ₁	PE ₀	T072	J	
11	BF254 ₀	180m*	280m ₀	2.0m	SJ	30 20 5.0	30m ₀ 50 ₀ 10 ₀ 1.0m ₀ 45 _Δ			1.0p ₁	PE ₀	X73	C	
12#	BSW131	180m	280m ₀ _Δ	2.0m	SJ	20 15 5.0	50m ₀ 35p ₀ 10m ₀ 40 _Δ			5.0p ₀	u32			
13	A494	180m	300m ₀	2.0m	SJ	30 20 5.0	30m ₀ 50n ₀ 10 ₀ 1.0m ₀ 115 ₁			1p ₁	PE ₀	MM10	C	
14	NPC189	180m	300m ₀	1.1m	SJ	30 30 5.0	50n ₀ 10 ₀ 1.0m ₀ 45 _Δ			5p ₁	PE	T072	J	
15	NPC187	180m	500m ₀	1.1m	SJ	40 30 5.0	25m ₀ 10 ₀ 1.0m ₀ 30 _Δ			4p ₁	PE	T072	J	
16#	2SC593	185m	150m ₀	1.1m	SJ	50 30 5.0	30m ₀ 1.0 ₀ 10 ₀ 1.0m ₀ 40 _Δ			2.0p ₀	PE ₀	T072	G ₀	
17	2N4433	185m	200m ₀	1.1m	SJ	50 30 5.0	30m ₀ 1.0 ₀ 1.0m ₀ 50 _Δ			1.5p ₀	PE ₀	T072	J	
18	2N1272	170m ₀	769m ₀	2.0	SJ	20 2.0 100m ₀	70u ₀ 100 ₀ 2.0m ₀ 50			1.5p ₀	D	T09	A ₀	
19	2NA259	175m	1.1m	SJ	40 30 2.5		10n ₀ 8.0 ₀ 2.0m ₀ 70 _Δ			550p ₀	∅	R115	G	
20#	BSX38	175m*	200m ₀ _Δ	1.7m	SJ	35 30 5.0	100m ₀ 0.5u ₀ 50 ₀ 10m ₀ 65 _Δ			5.0p ₀	PL	T018		
21	SE5022	175m	300m ₀ _Δ	1.1m	SJ	20 20 3.0		50n ₀ 5.0 ₀ 4.0m ₀ 40 _{1#}			500m ₀	DPL ₀	T072	∅
22	SE5023	175m	300m ₀ _Δ	1.1m	SJ	20 20 3.0		50n ₀ 5.0 ₀ 4.0m ₀ 40 _{1#}			500m ₀	DPL ₀	T072	∅
23	SE5024	175m	300m ₀ _Δ	1.2m	SJ	20 20 3.0		0.5u ₀ 5.0 ₀ 4.0m ₀ 40 _{1#}			5.0p ₀	DPL ₀	T072	G
24#	SE5040	175m	300m ₀ _Δ	1.1m	SJ	30 30 3.0		50n ₀ 10 ₀ 4.0m ₀ 80			140p ₀	DPL ₀	T072	J
25	SE5050	175m	300m ₀ _Δ	1.2m	SJ	20 20 3.0		0.5u ₀ 5.0 ₀ 4.0m ₀ 40 _{1#}			5p ₀	DLO ₀	T072	G
26	SE5051	175m	300m ₀ _Δ	1.2m	SJ	20 20 3.0		0.5u ₀ 5.0 ₀ 4.0m ₀ 40 _{1#}			5.0p ₀	DPL ₀	T072	G
27	SE6020	175m	375m ₀ _Δ	1.2m	SJ	20 20 3.0		0.5u ₀ 5.0 ₀ 4.0m ₀ 40 _{1#}			5.0p ₀	DPL ₀	T072	G
28	SE5021	175m	375m ₀ _Δ	1.2m	SJ	20 20 3.0		0.5u ₀ 5.0 ₀ 4.0m ₀ 40 _{1#}			40p ₀	DPL ₀	T072	G
29#	BF222	175m	400m ₀	1.1m	SJ	50 50 4.0	20m ₀ 1.0 ₀ 7.0 ₀ 2.0m ₀ 20 _Δ			40p ₁	DPL ₀	T072		
30	BF166	175m	500m ₀	1.2m	SJ	40 30 3.0		1.0u ₀ 120 2.5m ₀ 50 1#			50p ₀	PL	T014	
31	BT175	175m	500m ₀	1.2m	SJ	40 40 3.0		1.0u ₀ 120 2.5m ₀ 70 1#			13p ₀	DPL ₀	T072	
32	FT118	175m	500m ₀	1.2m	SJ	20 20 3.0		0.5u ₀ 100 ₀ 2.0m ₀ 80 ₁			17p ₀	DPL ₀	R96	J ₀
33	SE5052	175m	500m ₀	1.2m	SJ	20 20 3.0		0.5u ₀						G
34#	SE5055	175m	500m ₀	1.1m	SJ	20 20 3.0		50n ₀ 10 ₀ 2.0m ₀ 80			130p ₀	DPL ₀	T072	J
35#	BF161	175m	550m ₀	1.2m	SJ	50 30 3.0	20m ₀ 0.5u ₀ 120 4.0m ₀ 80 1#			1.2p ₀	PL ₀	T072	G	
36	BFX31	175m	550m ₀	1.0m	SJ	30 30 3.0		0.5u ₀ 240 1.5m ₀ 70 1#			4.0p ₀	DPL ₀	T072	G
37	BF155	175m	600m ₀	1.2m	SJ	40 40 3.0	20m ₀ 1.0u ₀ 120 2.5m ₀ 70 1#			40p ₀	DPL ₀	T072		
38	40242	180m	4.5	1.2m	SJ	45 45 4.5	50m ₀ 0.02u ₀ 6.0 ₀ 1.0m ₀ 80 ₁			50p ₀	PL	T0104	G	
39	40243	180m	4.5	1.2m	SJ	45 45 4.5	50m ₀ 0.02u ₀ 6.0 ₀ 1.0m ₀ 80 ₁			50p ₀	PL	T0104	G	
40	40244	180m	4.5	1.2m	SJ	45 45 4.5	50m ₀ 0.02u ₀ 6.0 ₀ 1.0m ₀ 65 ₁			60p ₀	PL	T0104	G	
41	40245	180m	4.5	1.2m	SJ	45 45 4.5	50m ₀ 0.02u ₀ 6.0 ₀ 1.0m ₀ 130 ₁			50p ₀	PL	T0104	G	
42	40246	180m	4.5	1.2m	SJ	45 45 4.5	50m ₀ 0.02u ₀ 6.0 ₀ 1.0m ₀ 55 ₁			60p ₀	PL	T0104	G	
43	2SC402A	180m	140m ₀	1.2m	SJ	50 50 4.0	100m ₀ 2.0u ₀ 3.0 ₀ 1.0m ₀ 60 ₁			2.8p ₀	EM	u37		
44	2SC403A	180m	140m ₀	1.2m	SJ	50 50 4.0	100m ₀ 2.0u ₀ 3.0 ₀ 1.0m ₀ 60 ₁			2.8p ₀	EM	u37		
45	2SC631	180m	140m ₀	2.5	SJ	25 25 6.0	100m ₀ 2.0u ₀ 3.0 ₀ 1.0m ₀ 350 ₁			4.5p ₀	EM	u37		
46	2SC632	180m	140m ₀	2.5	SJ	40 40 6.0	100m ₀ 2.0u ₀ 3.0 ₀ 1.0m ₀ 350 ₁			4.5p ₀	EM	u37		
47	2SC633	180m	140m ₀	2.5	SJ	25 25 6.0	100m ₀ 2.0u ₀ 3.0 ₀ 1.0m ₀ 90 ₁			4.5p ₀	EM	u37		
48	2SC634	180m	140m ₀	2.5	SJ	40 40 6.0	100m ₀ 2.0u ₀ 3.0 ₀ 1.0m ₀ 90 ₁			4.5p ₀	EM	u37		
49#	MT5003	180m	150m ₀ _Δ	1.4m	SJ	25 25 4.0	100m ₀ 5.0 ₀ 50m ₀ 30 _Δ			12p ₀	PL	u81	B	
50#	BC167 ₀	180m	300m ₀	2.2m	SJ	45 60 100m ₀	20n ₀ 5.0 ₀ 2.0m ₀ 330	30u ₀ 4.5k	2.0		PE ₀	T092		
51#	BC168 ₀	180m	300m ₀	2.2m	SJ	20 50 100m ₀	20n ₀ 5.0 ₀ 2.0m ₀ 330	30u ₀ 4.5k	2.0		PE ₀	T092		
52#	BC169 ₀	180m	300m ₀	2.2m	SJ	20 50 100m ₀	20m ₀ 5.0 ₀ 2.0m ₀ 330	30u ₀ 4.5k	2.0		600f ₀	PL	T0104	G
53	2N181	180m	400m ₀ _Δ	1.2m	SJ	45 3.0 50m ₀	0.02u ₀ 6.0 ₀ 1.0m ₀ 27 _Δ			600f ₀	PL	T0104	J	
54	2N182	180m	400m ₀ _Δ	1.2m	SJ	35 3.0 4.0m ₀	0.03u ₀ 6.0 ₀ 1.0m ₀ 27 _Δ			.32p ₀	T0104	J		
55#	AT345	180m	400m ₀ _Δ	1.2m	SJ	45 45 3.0	20m ₀ 100n ₀ 10 ₀ 2.0m ₀ 35 T# _Δ			600f ₀	PL	T0104	G	
56#	AT346	180m	400m ₀ _Δ	1.2m	SJ	45 45 3.0	20m ₀ 100n ₀ 10 ₀ 2.0m ₀ 35 T# _Δ			600f ₀	PL	T0104	G	
57#	AT355	180m	400m ₀ _Δ	1.2m	SJ	20 20 3.0	20m ₀ 100n ₀ 10 ₀ 2.0m ₀ 35 T# _Δ			600f ₀	PL	T0104	G	
58#	AT356	180m	400m ₀ _Δ	1.2m	SJ	20 20 3.0	20m ₀ 100n ₀ 10 ₀ 2.0m ₀ 35 T# _Δ			600f ₀	PL	T0104	G	
59#	2SC682	180m	550m ₀	20	SJ	20 20 3.0	30m ₀ 100u ₀ 10 ₀ 2.0m ₀ 5.5			.47p ₀	PE	T0104		
60#	2SC683													

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) f_{ab} & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DE RATE fab	ABS MAX RATINGS @ 25°C						MAX. Ic @MAX Vcb (A)	TYPICAL "H" PARAMETERS				Cob	STRUCTURE s/a TO200 Ser.	DWG # Y200 E0 AD DE						
				IN FREE AIR W/C	M A X P	BVbco (V)	BVceo (V)	BVbbo (A)	Ic 10nA 100nA 1.0mA 10mA 100mA 1.0A	BIAS Vcb (V)	le 1.0mΩ 1.0mΩ 1.0mΩ 1.0mΩ 1.0mΩ 1.0mΩ	hfe 4.5Ω 5.0Ω 5.0Ω 5.0Ω 5.0Ω 5.0Ω	COMMON Emitter hoe 1.0mΩ 1.0mΩ 1.0mΩ 1.0mΩ 1.0mΩ 1.0mΩ	hie 500Ω 500Ω 500Ω 500Ω 500Ω 500Ω	hre 150Ω 150Ω 150Ω 150Ω 150Ω 150Ω								
1	GI2926	200m	2.7m	+J	18	10nA	100nA	1.0mA	10mA	100mA	1.0A	10nA	2.0mΩ	4.7Ω	12pA	T018	A						
2	GI3392	200m	2.7m	+J	25	25	10nA	100nA	1.0mA	10mA	100mA	1.0A	10nA	4.5Ω	2.0mΩ	500Ω	10pA	T018	A				
3#	MD2974*	200m	1.6m	+J	45	45	6.0	30m	10nA	100nA	1.0mA	10mA	10nA	1.0mΩ	150Ω	5.0Ω	PL*	R148a					
4#	MD2975*	200m	1.6m	+J	45	45	6.0	30m	10nA	100nA	1.0mA	10mA	10nA	1.0mΩ	300Ω	5.0Ω	PL*	R148a					
5#	MD2978*	200m	1.6m	+J	60	60	6.0	30m	2.0nA	2.0mA	1.0mA	10mA	10nA	1.0mΩ	150Ω	5.0Ω	PL*	R148a					
6#	MD2979*	200m	1.6m	+J	60	60	6.0	30m	2.0nA	2.0mA	1.0mA	10mA	10nA	1.0mΩ	300Ω	5.0Ω	PL*	R148a					
7	MPS2923	200m	2.7m	#J	25	25	5.0	100mA	50uA	100nA	2.0mΩ	90Ω	10nA	1.0mΩ	2.0mΩ	4.7Ω	12pA	X206					
8	MPS2924	200m	2.7m	#J	25	25	5.0	100mA	50uA	100nA	2.0mΩ	150Ω	10nA	1.0mΩ	2.0mΩ	235Ω	12pA	X206					
9	MPS2925	200m	2.7m	#J	25	25	5.0	100mA	50uA	100nA	2.0mΩ	150Ω	10nA	1.0mΩ	2.0mΩ	235Ω	12pA	X206					
10	SA225330	200m	8.0m	+S	40	12	2.0	20m	500nA	5.0Ω	1.0mΩ	25Ω	10nA	1.0mΩ	10mΩ	25Ω	1.8	PL	L2				
11#	2SC466	200m	400mΩ	1.1m	+S	30	12	2.0	20m	600nA	6.0Ω	1.0mΩ	40Ω	10nA	2.0mΩ	125Ω	6.0Ω	PE0	R103a				
12#	PBC107	200m	150Ω	2.6m	#J	45	45	5.0	100mA	100nA	2.0mΩ	125Ω	60uA	1.0mΩ	15kΩ	2.0Ω	6.0pA	PE0	T098	B			
13#	PBC108	200m	150Ω	2.6m	#J	20	20	5.0	100mA	100nA	2.0mΩ	125Ω	100nA	2.0mΩ	240Ω	1.0Ω	6.0pA	PE0	T098	B			
14#	PBC109	200m	150Ω	2.6m	#J	20	20	5.0	100mA	100nA	2.0mΩ	125Ω	100nA	2.0mΩ	300Ω	1.0Ω	6.0pA	PE0	T098	B			
15	CS4021†	200m	350Ω	2.0m	+J	40	15	5.0	500nA	4.0Ω	3.0mΩ	60Ω	10nA	1.0mΩ	1.0mΩ	60Ω	1.0Ω	R57a	A				
16	2N470	200m	8.0mΩ	1.2m	SS	15	15	2.0	25m	500nA	5.0Ω	1.0mΩ	10Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
17	2N471	200m	8.0mΩ	1.2m	SS	30	30	2.0	25m	500nA	5.0Ω	1.0mΩ	10Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
18	2N471A	200m	8.0m	1.1m	SS	30	30	2.0	25m	2.0uA	5.0Ω	1.0mΩ	60Ω	1.2uA	2.0mΩ	70Ω	5.0	20pA	T05	A			
19	2N472	200m	8.0mΩ	1.2m	SS	45	45	2.0	25m	500nA	5.0Ω	1.0mΩ	10Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
20	2N472A	200m	8.0mΩ	1.2m	SS	45	45	2.0	25m	500nA	5.0Ω	1.0mΩ	60Ω	1.0mΩ	600Ω	70Ω	5.0	20pA	T05	A			
21	2N473	200m	8.0mΩ	1.2m	SS	15	15	2.0	25m	500nA	5.0Ω	1.0mΩ	10Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
22	2N474	200m	8.0mΩ	1.2m	SS	30	30	2.0	25m	500nA	5.0Ω	1.0mΩ	20Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
23	2N474A	200m	8.0mΩ	1.1m	SS	30	30	2.0	25m	500nA	5.0Ω	1.0mΩ	20Ω	1.2uA	2.0mΩ	70Ω	5.0	20pA	GD	T05	A		
24	2N475	200m	8.0mΩ	1.2m	SS	45	45	2.0	25m	500nA	5.0Ω	1.0mΩ	20Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
25	2N475A	200m	8.0mΩ	1.2m	SS	45	45	2.0	25m	500nA	5.0Ω	1.0mΩ	20Ω	1.0mΩ	600Ω	70Ω	5.0	20pA	GD	T05	A		
26	2N479A	200m	8.0mΩ	1.1m	SS	30	30	2.0	25m	500nA	5.0Ω	1.0mΩ	20Ω	1.2uA	2.0mΩ	70Ω	5.0	20pA	GD	T05	A		
27	2N480A	200m	8.0mΩ	1.1m	SS	45	45	2.0	25m	500nA	5.0Ω	1.0mΩ	20Ω	1.2uA	2.0mΩ	45Ω	1.0Ω	8.0pA	T05	A			
28	2N542A	200m	8.0mΩ	1.1m	SS	30	30	2.0	25m	500nA	5.0Ω	1.0mΩ	80Ω	1.0mΩ	80Ω	1.0Ω	8.0pA	G	T05	A			
29	2N543A	200m	8.0mΩ	1.1m	SS	45	45	2.0	25m	500nA	5.0Ω	1.0mΩ	140Ω	1.0mΩ	600Ω	50Ω	5.0	20pA	T05	A			
30	2N476	200m	12mΩ	1.2m	SS	15	15	2.0	25m	500nA	5.0Ω	1.0mΩ	30Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	10pA	T05	A			
31	2N477	200m	12mΩ	1.2m	SS	30	30	2.0	25m	500nA	5.0Ω	1.0mΩ	30Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	10pA	T05	A			
32	2N478	200m	20mΩ	1.2m	SS	15	15	2.0	25m	500nA	5.0Ω	1.0mΩ	40Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
33	2N479	200m	20mΩ	1.2m	SS	30	30	2.0	25m	500nA	5.0Ω	1.0mΩ	40Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
34	2N480	200m	20mΩ	1.2m	SS	45	45	2.0	25m	500nA	5.0Ω	1.0mΩ	40Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
35	2N1674	200m	20mΩ	1.2m	SS	45	45	2.0	25m	500nA	5.0Ω	1.0mΩ	50Ω	1.5uA	2.0mΩ	90Ω	1.0Ω	8.0pA	T05	A			
36#	BC114	200m	20mΩ	2.0m	+J	30	25	6.0	10pA	10pA	100Ω	1.0mΩ	200Ω	1.0Ω	200Ω	1.0Ω	4pA	DPL*	R57a				
37	EN930	200m	30mΩ	2.0m	+J	45	45	5.0	30m	50nA	5.0Ω	1.0mΩ	600Ω	1.0uA	1.0mΩ	1.0mΩ	600Ω	32Ω	6.0Ω	8.0pA	DPE0	T0106	A
38	LID929	200m	30mΩ	1.6m	+J	45	45	5.0	30m	20nA	5.0Ω	1.0mΩ	600Ω	1.0uA	1.0mΩ	1.0mΩ	600Ω	32Ω	6.0Ω	8.0pA	PL0	T0122	P
39	LID930	200m	30mΩ	1.6m	+J	45	45	5.0	30m	20nA	5.0Ω	1.0mΩ	150Ω	1.0uA	1.0mΩ	1.0mΩ	600Ω	32Ω	6.0Ω	8.0pA	PL0	T0122	P
40#	PL4061	200m	30mΩ	1.3m	SS	45	45	*5.0	30m	10nA	5.0Ω	1.0mΩ	40Ω	1.0uA	1.0mΩ	1.0mΩ	40Ω	8pA	PL0	U51			
41#	PL4062	200m	30mΩ	1.3m	SS	45	45	*5.0	30m	10nA	5.0Ω	1.0mΩ	100Ω	1.0uA	1.0mΩ	1.0mΩ	100Ω	8pA	PL0	U51			
42	TD101*	200m	30mΩ	1.6m	+J	60	30	5.0	500mA	10nA	5.0Ω	1.0mΩ	120Ω	1.0mA	1.0mΩ	1.0mΩ	200nΩ	32Ω	1.0Ω	8.0pA	PL*	L22	
43	TD102*	200m	30mΩ	1.6m	+J	60	30	5.0	500mA	10nA	5.0Ω	1.0mΩ	120Ω	1.0mA	1.0mΩ	1.0mΩ	200nΩ	32Ω	1.0Ω	8.0pA	PL*	L22	
44	TD201*	200m	30mΩ	1.6m	+J	60	30	5.0	500mA	10nA	5.0Ω	1.0mΩ	120Ω	1.0mA	1.0mΩ	1.0mΩ	200nΩ	32Ω	1.0Ω	8.0pA	PL*	L22	
45	TD202*	200m	30mΩ	1.6m	+J	60	30	5.0	500mA	10nA	5.0Ω	1.0mΩ	120Ω	1.0mA	1.0mΩ	1.0mΩ	200nΩ	32Ω	1.0Ω	8.0pA	PL*	L22	
46	2N541	200m	39mΩ	1.1m	SS	15	15	2.0	20m	500nA	6.0Ω	1.0mΩ	130Ω	1.5uA	1.0mΩ	1.0mΩ	45Ω	3.5pA	GD	T05	A		
47	2N542	200m	39mΩ	1.1m	SS	30	30	2.0	20m	500nA	6.0Ω	1.0mΩ	130Ω	1.5uA	1.0mΩ	1.0mΩ	45Ω	3.5pA	GD	T05	A		
48	2N543	200m	39mΩ	1.1m	SS	45	45	2.0	20m	500nA	6.0Ω	1.0mΩ	130Ω	1.5uA	1.0mΩ	1.0mΩ	45Ω	3.5pA	GD	T05	A		
49	2N3965	200m	40mΩ	2.0m	SS	30	25	6.0	50m	10pA	5.0Ω	1.0mΩ	120Ω	3.0uA	20kΩ	1.0Ω	3.0pA	PE	R57a	A			
50	2N4966	200m	40mΩ	2.0m	SS	40	40	6.0	30m	25nΩ	5.0Ω	1.0mΩ	950Ω	1.0uA	1.0mΩ	1.0mΩ	50Ω	3.5pA	PL0	T0106	A		
51	2N4968	200m	40mΩ	2.0m	SS	30	25	6.0	30m	50nA	5.0Ω	1.0mΩ	500Ω	1.0uA	1.0mΩ	1.0mΩ	500Ω	3.5pA	PL0	T0106	A		
52	2N5133	200m	40mΩ	2.0m	SS	20	18	3.0	50m	10pA	5.0Ω	1.0mΩ	50Ω	1.0uA	1.0mΩ	1.0mΩ	50Ω	3.5pA	PL0	T0106	A		
53	2N1210	200m	40mΩ	1.3m	SS	30	20	10m	10nA	10nA	1.0mΩ	1.0mΩ	10nA	1.0mΩ	1.0mΩ	1.0mΩ	10nA	1.0Ω	10pA	PL0	T0106	A	
54	JAN3127†	200m	40mΩ	2.0m	SS	30	20	10m	10nA	10nA	1.0mΩ	1.0mΩ	10nA	1.0mΩ	1.0mΩ	1.0mΩ	10nA	1.0Ω	10pA	PL0	T0106	A	
55	3N1210	200m	40mΩ	1.3m	SS	30	20	10m	10nA	10nA	1.0mΩ	1.0mΩ	10nA	1.0mΩ	1.0mΩ	1.0mΩ	10nA	1.0Ω	10pA	PL0	T0106	A	
56	A1109	200m	40mΩ	2.0m	SS	45	50	5.0	30m	10nA	5.0Ω	1.0mΩ	10Ω	1.0uA	1.0mΩ	1.0mΩ	10Ω	3.5pA	PL	T018	A		
57	A1341	200m	40mΩ	1.6m	SS	75	50	5.0	30m	10nA	5.0Ω	1.0mΩ	280Ω	1.0uA	1.0mΩ	1.0mΩ	280Ω	3.5pA	PL	T018	A		
58	BC132	200m	40mΩ	2.0m	SS	30	25	6.0	30m	10nA	5.0Ω	1.0mΩ	150Ω	1.0uA	1.0mΩ	1.0mΩ	150Ω	3.5pA	PL	R57a			
59	CS4003	200m	40mΩ	2.0m	SS	60	60	5.0	30m	10nA	5.0Ω	1.0mΩ	150Ω	1.0uA	1.0mΩ	1.0mΩ	150Ω	3.5pA	PL	R56a	A		
60	CS40																						

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX		TABS MAX RATINGS @ 25°C				MAX.		TYPICAL "N" PARAMETERS				Cob	STRUCTURE	DWG #	L C		
		COLL. @ 25°C	DE RATE IN	M E BV _{ceo}	BV _{ceo}	BV _{beo}	I _c	I _{cb} @ MAX	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}					
1#	ME4103	200m	90M _s	1.6	SJ	50	40	5.0	10n _Ø	5.00	1.0m _Ø	200 t	20u	TOK	3.5p _Ø	PEØ	R110c	A	
2	2N3854	200m	100M _s Δ 2.7m	SS	18	18	4.0	100m	500n	4.50	2.0 m _Ø	70 t _Ø				3.5p _Ø		R67	B
3	2N3854A	200m	100M _s Δ 2.7m	SS	30	30	4.0	100m	500n _Ø	4.50	2.0 m _Ø	70 t _Ø				3.5p _Ø		R67	B
4	2N5131	200m	100M _s Δ 2.0m	J	20	15	3.0	200m	50u _Ø	1.00	10m _Ø	25 Δ				6p _Ø		T0106	A
5#	2SC7131	200m	100M _s Δ 2.0m	J	30	25	4.0	100m	10u _Ø	6.00	10m _Ø	90 t _#				2.5p	PE	T092	D
9#	2SC780	200m	100M _s Δ 2.0m	J	70	70	2.0	20m	5.0u _Ø	100	2.0m _Ø	60				5.0p _Ø	PE	R67a	B
7	CS3854	200m	100M _s Δ 2.7m	J	18	18	4.0	100m	50u	4.50	2.0m _Ø	70 t				3.5p		R97a	
8	CS3854A	200m	100M _s Δ 2.7m	J	30	30	4.0	100m	50u _Ø	4.50	2.0m _Ø	70 t				3.5p		R9	
9#	ME1075	200m	100M _s Δ 1.6m	J	75	75	* 4.0	500n _Ø	100	10m _Ø	20 Δ				6.0p _Ø		PL	R110c	A
10#	2SC941	200m	120M _s	2.0m	J	35	30	4.0	20m	100n _Ø	120	2.0m _Ø	60 t			2.7p	PE	R67a	B
11	2N3845	200m	126M _s Δ 2.7m	S	30	30	4.0	100m	50u _Ø	4.50	2.0m _Ø	60 Δ				4p _Ø		T098	B
12	2N3845A	200m	126M _s Δ 2.7m	S	30	30	4.0	100m	50u _Ø	4.50	2.0m _Ø	120 t _Ø				4p _Ø		T098	B
13	CS3845	200m	126M _s Δ 2.7m	J	30	30	4.0	100m	50u	4.50	2.0m _Ø	60 t				4.0p		R97a	
14	2N3855	200m	130M _s Δ 2.7m	SS	18	18	4.0	100m	500n	4.50	2.0m _Ø	120 t _Ø				3.5p		R67	B
15	2N3855A	200m	130M _s Δ 2.7m	SS	30	30	4.0	100m	500n _Ø	4.50	2.0m _Ø	120 t _Ø				3.5p _Ø		R67	B
16	CS3855	200m	130M _s Δ 2.7m	J	30	30	4.0	100m	50u	4.50	2.0m _Ø	120 t _Ø				2.5p	PE	R97a	
17	CS3855A	200m	130M _s Δ 2.7m	J	30	30	4.0	100m	50u	4.50	2.0m _Ø	120 t _Ø				2.5p		R97a	
18	2N3858	200m	135M _s 2.6m	#J	30	30	4.0	100m	50u	4.50	2.0m _Ø	60 t				2.5p	PE	T098	B
19	2N3859	200m	135M _s 2.6m	#J	30	30	4.0	100m	50u	4.50	2.0m _Ø	100 t _Ø				2.5p	PE	T098	B
20	2N3860	200m	135M _s 2.6m	#J	30	30	4.0	100m	50u	4.50	2.0m _Ø	150 t _Ø				2.5p	PE	T098	B
21	CS3869	200m	135M _s 2.6m	J	30	30	4.0	100m	50u	4.50	2.0m _Ø	100 t				2.5p	PE	R97a	
22	CS3860	200m	135M _s 2.6m	J	30	30	4.0	100m	50u	4.50	2.0m _Ø	150 t _Ø				2.5p	PE	R97a	
23	2N3858	200m	140M _s Δ 2.7m	SS	18	18	4.0	100m	500n _Ø	4.50	2.0 m _Ø	200 t _Ø				3.5p		R67	B
24	2N3858A	200m	140M _s Δ 2.7m	SS	30	30	4.0	100m	500n _Ø	4.50	2.0 m _Ø	200 t _Ø				3.5p _Ø		R67	B
25#	2N4436	200m	150M _s 2.0m	J	60	30	5.0	500m	50n _Ø	100	150m _Ø	40 t _#				8.0p _Ø		R124	A
26#	2N4969	200m	150M _s 2.0m	S	50	30	5.0	500m	50n _Ø	100	150m _Ø	20 t _#				8.0p _Ø		T0106	A
27	2N5127	200m	150M _s 2.0m	J	20	12	3.0	100m	50u _Ø	100	2.0m _Ø	12 Δ				3.5p _Ø		T0106	A
28	2N5128	200m	150M _s 2.0m	J	15	12	3.0	500m	50n	100	50m _Ø	35 t _#				10p _Ø		T0105	A
29#	2SC369	200m	150M _s 2.0m	J	25	25	5	50	100m	100	100m _Ø	100 t _Ø	6.0u	80k	20	1.5p	PE	R67a	B
30#	ZSC369G/BL	200m	150M _s 2.0m	J	25	18	5	50	100m	100	100m _Ø	100 t _Ø	6.0u	80k	20	1.5p	PEØ	R67a	B
31#	ZSC369G/GR	200m	150M _s 2.0m	J	25	18	5	50	100m	100	100m _Ø	100 t _Ø	6.0u	80k	20	1.5p	PEØ	R67a	B
32#	2SC370	200m	150M _s 2.0m	J	30	25	4.0	100m	1.0u	6.00	1.0m	40				2.5p	PE	R67a	B
33#	2SC371	200m	150M _s 2.0m	J	30	25	4.0	100m	1.0u	6.00	1.0m	80				2.5p	PE	R67a	B
34#	2SC372	200m	150M _s 2.0m	J	30	25	4.0	100m	1.0u	6.00	1.0m	140				2.5p	PE	R67a	B
35#	2SC373	200m	150M _s 2.0m	J	30	25	4.0	100m	1.0u	6.00	1.0m	250				2.0p	PE	R67a	B
36#	2SC374	200m	150M _s 2.0m	J	30	25	4.0	100m	1.0u	6.00	1.0m	400				2.0p	PEØ	R67a	B
37#	2SC378	200m	150M _s 2.0m	J	35	30	4.0	30m	50u _Ø	120	2.0m _Ø	40 t _#				2.5p	PE	R67a	B
38#	2SC711	200m	150M _s 2.0m	J	30	25	4.0	50m	100n _Ø	6.00	1.0m _Ø	300 t				2.5p	PE	T092	D
39#	2SC711A	200m	150M _s 2.0m	J	50	45	4.0	50m	100n _Ø	6.00	1.0m _Ø	200 t				2.5p	PET	T092	D
40#	2SC712	200m	150M _s 2.0m	J	30	25	4.0	100m	1.0u	6.00	1.0m _Ø	150 t				2.5p	PE	T092	D
41#	2SC8681	200m	150M _s 2.0m	J	130	40	5.0	30m	100n _Ø	6.00	1.0m _Ø	35 t _#				2.5p	PE	T092	D
42#	2SC8691	200m	150M _s 2.0m	J	160	50	5.0	30m	100n _Ø	6.00	1.0m _Ø	35 t _#				2.5p	PE	T092	D
43#	2SC870	200m	150M _s 2.0m	J	30	25	4.0	30m	10u _Ø	6.00	1.0m _Ø	250 t _#	5.0u	75k	3.5	2.5p	PEØ	T092	D
44#	2SC871	200m	150M _s 2.0m	J	30	25	4.0	30m	10u _Ø	6.00	1.0m _Ø	350 t _#	5.0u	75k	3.5	2.5p	PEØ	T092	D
45#	ZSC903	200m	150M _s 2.0m	J	35	30	4.0	300m	1.0u	2.00	2.0m _Ø	100 t _#				8.0p	PET	T092	D
46#	ZSC904	200m	150M _s 2.0m	J	50	45	4.0	300m	1.0u	2.00	2.0m _Ø	100 t _#				8.0p	PET	T092	D
47#	ZSC905	200m	150M _s 2.0m	J	65	60	4.0	300m	1.0u	2.00	2.0m _Ø	100 t _#				8.0p _Ø	PET	X64	
48#	BC171	200m	150M _s Δ 2.0m	J	45	45	5.0	100m	15n	5.00	2.0m _Ø	275 t _#	24u	3.6k	1.8	6.0p _Ø	PE	X64	
49#	BC172	200m	150M _s Δ 2.0m	J	20	20	5.0	100m	15n	5.00	2.0m _Ø	380 *	36u	5.3k	2.5	6.0p _Ø	PE	X64	
50#	BC173	200m	150M _s Δ 1.3m	J	20	20	5.0	25m	1.0u	6.00	2.0m _Ø	455 *	45u	6.6k	2.5	6.0p _Ø	PE	X64	
51	ZSC174	200m	170M _s 1.3m	J	30	25	5.0	25m	1.0u	6.00	2.0m _Ø	90				1.5p	PL	R127	
52	ZSC556	200m	180M _s 2.1m	J	20	20	5.0	25m	2.0u	6.00	2.0m _Ø	80				1.0p _Ø	PM	T01	
53#	ZSC281H	200m	180M _s 2.1m	J	30	20	5.0	100m	1.0u	6.00	10m _Ø	90				7.0p	PM	T01	
54#	ZSC350	200m	180M _s 2.1m	J	30	20	5.0	100m	1.0u	6.00	10m _Ø	250 t _Ø				12p _Ø	PL	R67	B
55#	ZSC350H	200m	180M _s Δ 2.0m	J	30	20	5.0	100m	1.0u	6.00	2.0m _Ø	90				12p _Ø	PL	R67	B
56	ZN2921	200m	200M _s 2.6m	S	25	25	5.0	100m	500n	100	2.0m _Ø	35 Δ				7.0p	Ø	T01	
57	ZN2922	200m	200M _s 2.6m	S	25	25	5.0	100m	500n	100	2.0m _Ø	55 Δ				12p _Ø	PL	R67	B
58	ZN2923	200m	200M _s 2.6m	S	25	25	5.0	100m	500n	100	2.0m _Ø	90 Δ				12p _Ø	PL	R67	B
59	ZN2924	200m	200M _s 2.6m	S	25	25	5.0	100m	500n	100	2.0m _Ø	150 Δ							

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) tab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C	DE RATE	ABS MAX RATINGS @25°C								MAX. ICBO	TYPICAL 'H' PARAMETERS						DWG #	C	
				IN fab	M FREE	E AIR	BV _{cbo}	BV _{ceo}	BV _{ebo}	I _c	@MAX	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}	C O M M O N E M I T T E R	S T R U C T U R E		
1#	ZSC380	200m	250M _A	2.0m	SS	35	30	4.0	30m	500 _u	120	2.0m ₀	40	1A*				2.0p	PE	R67a	B
2#	ZSC398	200m	250M _A	1.6m	SS	20	20	3.0	20m	500 _u	50	4.0m ₀	20	1A				.5p ₁₂	PE	T072	G
3#	ZSC399	200m	250M _A	1.6m	SS	20	20	3.0	20m	500 _u	50	4.0m ₀	20	1A				.5p ₁₂	PE	T072	G
4	EN2222	200m	250M _A	2.0m	SS	60	30	*21	5.0	800m	50 _u	100	10m ₀	35	1A			8p	DPE	T0106	A
5	TD2219*	200m	250M _A	1.6m	SS	60	30	5.0	500m	10n ₀	100	150m ₀	100	1A				8.0p ₀	PLA	L2u	
6	SE4021	200m	260M _A	2.0m	SS	45	45	8.0	50m	2.0n ₀	100	1.0m ₀	1.0k				2.5p _s	DPE	T0106	A	
7	SE4022	200m	280M _A	5.0m	SS	30	30	8.0	50m	2.0n ₀	100	1.0m ₀	1.5k				2.5p _s	DPE	T0106	A	
8	EN7441	200m	282M _A	2.0m	SS	20	12	*2	5.0	200m	1.0u	250	1.0m ₀	20	1A			5p ₁₂	DPE	T0106	A
9	2N3289	200m	300M _A	1.1m	SS	30	15	3.0	50m	0.1u	100	10m ₀	10	1A			2p	Ø	T072	G	
10	ZN3290	200m	300M _A	1.1m	SS	30	15	3.0	50m	0.1u	100	2.0m ₀	10	1A							
11	ZN3605†	200m	300M _A	2.7m	SS	18	14	5.0	200m	500n	1.0	10m ₀	30	1A			6.0p ₂	R67	B		
12	ZN3606†	200m	300M _A	2.7m	SS	18	14	5.0	200m	500n	1.0	10m ₀	30	1A			6.0p ₂	R67	B		
13	ZN3607†	200m	300M _A	2.7m	SS	18	14	5.0	200m	500n	1.0	10m ₀	30	1A			6.0p ₂	R67	B		
14	ZN5126	200m	300M _A	2.0m	SS	20	20	3.0	30m	0.5u	10	4.0m ₀	15				1.6p _s	TO106	A		
15#	ZSC381	200m	300M _A	2.0m	SS	30	20	4.0	100m	500n ₀	100	2.0m ₀	90				2.0p	PE	R67a	B	
16#	ZSC458HT	200m	300M _A	1.3m	SS	40	15	5.0	200m	250	1.0	10m ₀	35	1A*			5p	PE	R926	A	
17	A1170	200m	300M _A	1.1m	SS	15	10	2.0		0.1u	100	3u ₀	10	1A			3p	PL	TO18	A	
18#	BF153	200m	300M _A	2.0m	SS	30	12	2.0		0.1u	6.0	3.0m ₀	20	1A			1.7p ₂	PE	R97a		
19	CS3605†	200m	300M _A	1.6m	SS	18	14	5.0	200m	500n	1.0	10m ₀	30	1A			6.0p ₂	DPL	R91a	A	
20	CS3606†	200m	300M _A	1.6m	SS	18	14	5.0	200m	500n	1.0	10m ₀	30	1A			6.0p ₂	DPL	R91a	A	
21	CS3607†	200m	300M _A	1.6m	SS	18	14	5.0	200m	500n	1.0	10m ₀	30	1A			6.0p ₂	DPL	R91a	A	
22	EN7081	200m	300M _A	2.0m	SS	40	15	5.0		0.5u	110	10m ₀	30	1A*			8p	DPE	T0106	A	
23	EN914†	200m	300M _A	2.0m	SS	40	15	5.0		0.1u	100	10m ₀	30	1A*			6p	DPE	T0106	A	
24	2N3287	200m	350M _A	1.1m	SS	40	20	3.0	50m	0.1u	100	2.0m ₀	15	1A			2p	Ø	T072	G	
25	2N3288	200m	350M _A	1.1m	SS	40	20	3.0	50m	0.1u	100	2.0m ₀	15	1A							
26	ZN3646†	200m	350M _A	2.0m	SS	40	15	5.0	200m	500n ₀	400	3.0m ₀	30	1A*			5.0p ₂	R110	A		
27	2N4134	200m	350M _A	1.1m	SS	30	30	3.0	30m	0.5u	50	4.0m ₀	200				1.2p ₂	Ø	T072	G	
28	EN3009†	200m	350M _A	2.0m	SS	40	15	4.0		50u ₀	400	3.0m ₀	30	1A*			5p	DPE	T0106	A	
29	EN3013†	200m	350M _A	2.0m	SS	40	15	5.0		30u ₀	400	3.0m ₀	30	1A*			5p	DPE	T0106	A	
30	EN3014†	200m	350M _A	2.0m	SS	40	15	5.0		30u ₀	400	3.0m ₀	30	1A*			5p	DPE	T0106	A	
31	MPS3646†	200m	350M _A	2.0m	SS	40	15	5.0	200m	5.5u	400	3.0m ₀	30	1A			5p	EA	T092	A	
32	SE1001	200m	350M _A	2.0m	SS	18	14	5.0	200m	500	100	10m ₀	110				3.5p	DPL	T0106		
33	SE1002	200m	350M _A	2.0m	SS	18	14	5.0	200m	500	100	10m ₀	145				3.5p	DPL	T0106		
34	SE3646†	200m	350M _A	2.0m	SS	40	15	5.0		50u ₀	110	10m ₀	30	1A*			3.3p	DPE	T0106	A	
35#	ZSC664	200m	360M _A	1.6m	SS	40	30	4.0		25m	1n ₀	100	7.0m ₀	39	1A			23p	PE	T072	G
36	ZN5684	200m	400M _A	2.0m	SS	30	15	4.0		100m	0.5u	100	15m ₀	20	#1A			3.5p	PE	R97a	
37	ZN5688	200m	400M _A	2.0m	SS	40	40	4.0	30m	50u ₀	100	4.0m ₀	30	1A			1.6p	PE	R110	A	
38	ZN3689	200m	400M _A	2.0m	SS	40	40	4.0	30m	50u ₀	100	4.0m ₀	30	1A			1.6p	PE	R110	A	
39	ZN3690	200m	400M _A	2.0m	SS	40	40	4.0	30m	50u ₀	100	4.0m ₀	30	1A			1.6p	PE	R110	A	
40	ZN4274†	200m	400M _A	2.0m	SS	30	12	4.5	100m	10u ₀	100	100m ₀	18	1A*			4ps	PL	T0110	A	
41	ZN4275†	200m	400M _A	2.0m	SS	40	15	4.5	100m	10u ₀	100	100m ₀	18	1A*			4ps	PL	T0110	A	
42#	ZN4294†	200m	400M _A	1.6m	SS	30	12	4.5	200m	400n ₀	100	10m ₀	30	1A			5.0p ₂	u29	B		
43#	ZSC464	200m	400M _A	1.1m	SS	30	12	2.0	20m	500n ₀	6.0	1.0m ₀	40				850f	PE	R103a		
44#	ZSC465	200m	400M _A	1.1m	SS	30	12	2.0	20m	500n ₀	6.0	1.0m ₀	40				850f	PE	R103a		
45#	ZSC752G†	200m	400M _A	2.0m	SS	40	15	5.0	200m	25u	1.0	10m ₀	20	1A*			4.0p	PE	R67a	B	
46#	ZSC980†	200m	400M _A			70	50	5.0	100m	10u	1.0	10m ₀	70	1A			3.0p	PE	R67a	B	
47#	ZSC980A/G	200m	400M _A			90	70	5.0	100m	500n ₀	1.0	10m ₀	40	1A			5.0p ₂	PE	R67a	B	
48#	BF196	200m	400M _A	2.5m	SS	40	30	4.0	25m	10	40	4.0m ₀	80	1			22p	PL	MM10	C	
49#	BFX18	200m	400M _A	1.1m	SS	35	35	4.0		50n ₀	120	3.0m ₀	20	1A				PL	T0118	G	
50#	BFX19	200m	400M _A	1.1m	SS	35	35	4.0		50n ₀	120	3.0m ₀	20	1A				PL	RO38		
51#	BFX20	200m	400M _A	1.1m	SS	35	35	4.0		50n ₀	120	3.0m ₀	20	1A				PL	TO118	G	
52#	BFX21	200m	400M _A	1.1m	SS	35	35	4.0		50n ₀	120	3.0m ₀	20	1A				PL	TO118	G	
53	[EN3011†]	200m	400M _A	2.0m	SS	30	30	5.0		4u	350	10m ₀	30	1A*			4p	DPE	T0106	A	
54	S15657	200m	400M _A	2.0m	SS	40	15	4.5	100m	10u	100	1.0m ₀	20	1A			4.0p	DPL	T0106	C	
55#	TP4274†	200m	400M _A	2.0m	SS	30	12	4.5	100m	10u	100	10m ₀	35	1A*			1.2p ₂	PL	X55a	A	
56#	TP4275†	200m	400M _A	2.0m	SS	40	15	4.5	100m	10u	100	10m ₀	35	1A*			1.2p ₂	PL	X55a	A	
57	ZN4135	200m	450M _A	2.0m	SS	30	12	1.0	50m	0.5u	100	8.0m ₀	12	1A			1.7p	TO106	A		
58#	ZN5757	200m	500M _A	1.6m	SS	40	15	5.0	200m	100n ₀	1.0	100m ₀	40	1A			4.0p	u29	B		
60#	ZSC384	200m	500M _A	2.0m	SS	20	18	2.0	50m	50u ₀	6.0	1.0m ₀	50	1*			1.2p	PE	R67a	B	

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	(1) MAX. COLL. DISS. @25°C		(2) DERATE		TABS MAX RATINGS @25°C				MAX. Icbo @MAX	TYPICAL 'h' PARAMETERS			Cob	STRUCTURE	DWG #	C E A D D E			
		IN [W]	COLL. DISS. @25°C	fab	FREE AIR X P	M A M I	E BV _{cbo} BV _{ceo} BV _{beo}	I _c [A]	V _{cbo} [V]	V _{ceo} [V]	I _c [A]	BIAS V _{cb} V _{cb}	COMMON Emitter h _{fe} (mhos)	h _{ie} (f)	h _{re}					
1	BF158	200m	800M ₅	2.0m	J	30	12	2.0	10n ₀	10 ₀	4.0m ₀	50 t#				.80p ₁	DPE ₀	R97 ₈		
2	BF159	200m	800M ₅	2.0m	J	40	20	2.0	10n ₀	10 ₀	4.0m ₀	50 t#				.80p ₁	DPE ₀	R97 ₈		
3	SE3005	200m	800M ₅ _A	2.0m	J	30	15	4.0	10n ₀	10 ₀	5.0m ₀	45 t#				.85p ₁₄	DPE	TO106		
4	SE3100	200m	800M ₅	1.8m	TA	30	30	3.0	200n	10 ₀	5.0m ₀	80 t								
5	SE5036	200m	800M ₅	1.3m	SJ	35	30	3.0	50n ₀	10 ₀	5.0m ₀	70 t								
6	2N3600	200m	850M ₅ _A	1.1m	S	30	15	3.0	01u ₀	6.0 ₀	2.0m ₀	200 t								
7	2N5179	200m	900M ₅ _A	1.1m	SJ	20	12	2.5	50m	20n ₀	6.0 ₀	2.0m ₀	25 Δ				1.0p ₀	Ø	T072	
8	2SC251	200m	900M ₅	1.6m	SJ	30	15	3.0	30	30	1.0u ₀	6.0 ₀	5.0m	50			1.0p	Ø	T072	
9	2SC251A	200m	900M ₅	1.6m	SJ	30	15	3.0	30	30	1.0u ₀	6.0 ₀	5.0m	50			1.0p	Ø	T072	
10	2SC252	200m	900M ₅	1.6m	SJ	30	15	3.0	30	30	1.0u ₀	6.0 ₀	5.0m	50			1.0p	PE	T072	
11	2SC253	200m	900M ₅	1.6m	SJ	30	15	3.0	30	30	1.0u ₀	6.0 ₀	5.0m	50			1.0p	PE	T072	
12	BFX73	200m	900M ₅	1.1m	SJ	30	15	3.0	50m	10n ₀	1.0 ₀	3.0 Δ	50 t#			1.0p	DPE ₀	T072		
13	BFY88	200m	900M ₅	1.3m	#	40	25	3.5	25m	.05u ₀	1.0 ₀	5.0m ₀	30 tΔ			.80p	PE	T018		
14	CS4001	200m	900M ₅	2.0m	J	30	12	2.0	50n ₀	10 ₀	8.0m ₀	50 t				1.3p	EQ	T0106		
15	ME3002	200m	900M ₅	1.6m	SJ	30	12	*	200m	10 ₀	8.0m ₀	50 t				1.3p	PE	R110c		
16	ME3011	200m	900M ₅	1.6m	SJ	30	12	*	100m	50n ₀	10 ₀	8.0m ₀	50 t#			1.4p	PL ₀	R110c		
17	SE3001	200m	900M ₅	2.0m	J	30	12	2.0	50u ₀	10 ₀	8.0m ₀	50 t				1.7p ₀	DPL ₁	T0106		
18	SE3002	200m	900M ₅	2.0m	J	30	12	2.0	50u ₀	10 ₀	8.0m ₀	50 t#				1.7p ₀	DPL ₁	T0106		
19	JAN2857	200m	1.0G ₅	1.1m	SJ	30	15	3.0	40m	10n ₀	6.0 ₀	2.0m ₀	50 Δ			1.0ps ₁₂	Ø	T072		
20	2N3572	200m	1.0G ₅	1.1m	SJ	25	13	3.0	50m	01u ₀	6.0 ₀	5.0m ₀	20 Δ				7p ₀	Ø	T072	
21	2N3681	200m	1.0G ₅	1.1m	SJ	10	7.0	2.0	25m	01u ₀	6.0 ₀	2.0m ₀	20 Δ				2.0p ₀	Ø	T072	
22	ZN3683	200m	1.0G ₅ _A	1.1m	SJ	30	12	2.0	30m	50n ₀	10 ₀	8.0m ₀	30 Δ				1.5ps ₁₂	Ø	T072	
23	ZN5031	200m	1.0G ₅ _A	1.1m	SJ	15	10	3.0	20m	10n ₀	6.0 ₀	1.0m ₀	25 tΔ				1.5ps ₁₂	Ø	T072	
24	ZN5032	200m	1.0G ₅ _A	1.1m	SJ	15	10	3.0	20m	10n ₀	6.0 ₀	1.0m ₀	25 tΔ				1.5ps ₁₂	Ø	T072	
25	2SC567	200m	1.0G ₅	1.6m	SJ	30	15	3.0	20m	10u ₀	6.0 ₀	2.0m ₀	40 Δ				1p ₀	PE	T072	
26	2SC611	200m	1.0G ₅	1.6m	SJ	20	15	Ø	30	20m	1.0u ₀	10 ₀	2.0m ₀	80				2p ₀	PE	T072
27	40294	200m	1.0G ₅	1.1m	SJ	30	15	2.5	40m	01u ₀	1.0 ₀	3.0m ₀	150 t ₁₂				1.0ps ₁₂	DPE ₀	T072	
28	A490	200m	1.0G ₅	1.1m	SJ	30	15	2.5	25m	10n ₀	10 ₀	15m ₀	20 tΔ				1.5ps	PE	T072	
29	BFY90Δ	200m	1.0G ₅	1.1m	SJ	30	15	2.5	25m	10n ₀	10 ₀	2.0m ₀	25 tΔ				800p ₁₂	PL ₀	T072	
30	BFY90Δ	200m	1.0G ₅	1.1m	SJ	30	15	2.5	20m	10n ₀	6.0 ₀	2.0m ₀	50 Δ				1.8p	PE	T018	
31	BFY90B	200m	1.0G ₅	1.1m	SJ	28	15	2.5	20m		1.0 ₀	3.0m ₀	20 tΔ				1.7p ₀	PE	T072	
32	K2109	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
33	K2110	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
34	K2111	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
35	K2112	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
36	K2113	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
37	K2114	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
38	K2115	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
39	K2116	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
40	K2117	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
41	K2118	200m	1.0G ₅	1.1m	SJ	30	15	2.5		10n ₀	1.0 ₀	3.0m ₀	30 Δ				1.0p ₀	Ø	T072	
42	K2119	200m	1.0G ₅	1.1m	SJ	30	12	2.0		300n ₀	1.0 ₀	3.0m ₀	20 Δ				1.0p ₀	Ø	T072	
43	K2120	200m	1.0G ₅	1.1m	SJ	30	12	2.0		300n ₀	1.0 ₀	3.0m ₀	20 Δ				1.0p ₀	Ø	T072	
44	K2121	200m	1.0G ₅	1.1m	SJ	30	12	2.0		300n ₀	1.0 ₀	3.0m ₀	20 Δ				1.0p ₀	Ø	T072	
45	K2122	200m	1.0G ₅	1.1m	SJ	30	12	2.0		300n ₀	1.0 ₀	3.0m ₀	20 Δ				1.0p ₀	Ø	T072	
46	K2123	200m	1.0G ₅	1.1m	SJ	30	12	2.0		300n ₀	1.0 ₀	3.0m ₀	20 Δ				1.0p ₀	Ø	T072	
47	K2124	200m	1.0G ₅	1.1m	SJ	30	12	2.0		300n ₀	1.0 ₀	3.0m ₀	20 Δ				1.0p ₀	Ø	T072	
48	K2125	200m	1.0G ₅	1.1m	SJ	30	12	2.0		300n ₀	1.0 ₀	3.0m ₀	20 Δ				1.0p ₀	Ø	T072	
49	ZTX325	200m	1.0G ₅	1.3m	SJ	30	15	2.5	25m	50n ₀	1.0 ₀	2.0m ₀	25 tΔ				800p ₁₂	PL ₀	X59	
50	ZTX326	200m	1.0G ₅ _A	1.3m	SJ	25	12	2.5	25m	50n ₀	1.0 ₀	2.0m ₀	25 tΔ				800p ₁₂	PL ₀	X59	
51	ZSC313	200m	1.1G ₅	1.2m	SJ	30	19	2.0	50m	50u ₀	1.0 ₀	10m ₀	40 t				1.0p	PE	R92b	
52	ZSC684	200m	1.1G ₅	1.1m	SJ	30	19	2.0	50m	50u ₀	1.0 ₀	10m ₀	40 t				1.1p	PE	T072	
53	ZSC717	200m	1.1G ₅	1.1m	SJ	30	19	2.0	50m	50u ₀	1.0 ₀	10m ₀	11			1.0p	PE	T072		
54	A485	200m	1.1G ₅	1.1m	SJ	30	15	2.5	25m	10n ₀	1.0 ₀	2.0m ₀	150 t ₁₂				1.5ps ₁₂	PE	T072	
55	2N2708	200m	1.2G ₅	1.1m	SJ	35	20	3.0	30m	01u ₀	15 ₀	2.0m ₀	180 t ₁₂				1ps ₁₂	Ø	T072	
56	2N3571	200m	1.2G ₅	1.1m	SJ	25	15	3.0	30m	01u ₀	10 ₀	5.0m ₀	20 Δ				76p ₀	Ø	T072	
57	2N3880	200m	1.2G ₅	1.1m	SJ	30	15	2.5	30m	05u										

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C	2 DERATE IN fab	ABS MAX RATINGS @ 25°C						MAX. Icbo @MAX	TYPICAL "H" PARAMETERS				COMMON Emitter (mhos)	Cob	STRUCTURE	DWG # Y200 s/a	L C E O A D D E				
				BV _{ceo}	BV _{ceo}	BV _{beo}	I _c	I _{cbo}	V _{cb}		I _e	h _{fe}	hoe	hie	hire								
(W)	(Hz)	W/C	(V)	(V)	(V)	(V)	(A)	(A)	(V)	(A)	(V)	(A)	(mhos)	(Ω)	X.0001	(F)							
1	K2115B	200m	1.7G _s	1.1m	5J	30	15	2.5	10n ₀	1.00	3.0m ₀	30	△		1.0p ₀		Ø	T072	G				
2	K2116B	200m	1.7G _s	1.1m	5J	30	15	2.5	10n ₀	1.00	3.0m ₀	30	△		1.0p ₀		Ø	T072	G				
3	K2117B	200m	1.7G _s	1.1m	5J	30	15	2.5	10n ₀	1.00	3.0m ₀	30	△		1.0p ₀		Ø	T072	G				
4	K2118B	200m	1.7G _s	1.1m	5J	30	15	2.5	10n ₀	1.00	3.0m ₀	30	△		1.0p ₀		Ø	T072	G				
5	K2119B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.0p ₀		Ø	T072	G				
6	K2120B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.0p ₀		Ø	T072	G				
7	K2121B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.0p ₀		Ø	T072	G				
8	K2122B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.0p ₀		Ø	T072	G				
9	K2123B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.0p ₀		Ø	T072	G				
10	K2124B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.0p ₀		Ø	T072	G				
11	K2125B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.0p ₀		Ø	T072	G				
12	K2126B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.0p ₀		Ø	T072	G				
13	K2127B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.0p ₀		Ø	T072	G				
14	K2615B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.5p ₀		Ø	T072	G				
15	K2616B	200m	1.7G _s	1.1m	5J	30	12	2.0	300n ₀	1.00	3.0m ₀	20	△		1.5p ₀		Ø	T072	G				
16	2N2857	200m	1.9G _s	1.1m	5S	30	15	2.5	40n ₀	1.00	6.0m ₀	2.0m ₀	50	△		1ps ₀	Ø	T072	G				
17	2N3839	200m	2.0G _s	1.1m	5S	30	15	2.5	40n ₀	1.00	3.0m ₀	30	△		1p ₀	Ø	T072	G					
18	MMT8015	200m	2.0G _s	2.0m	1J	15	10	3.0	20n ₀	1.00	1.0m ₀	25	△		500f ₀	Ø	u43	C					
19#	BF55	200m ₀	2.4G _s	1.8m ₀	5A	25	15	3.0	50m	20n ₀	6.00	5.0m ₀	20	△		600fs	PE	u51	G				
20	2N5B35	200m	2.5G _s	1.1m	5S	15	10	3.5	15m	10n ₀	6.00	10m ₀	25	△		800fs ₀	Δ	T072	AØ				
21#	BFW99	200m ₀	3.0G _s	1.4m	5J	12	3.5	20m	50n ₀	6.00	5.0m ₀	90	△		1.1ps	PE	T072	J					
22#	ZSC985	200m	3.2G _s	1.6m	5J	20	15	3.0	40m	500p ₀	5.00	15m ₀	30	△		1p ₀	PE	X80	GJ				
23	AT25	200m	3.5G _s	1.1m	5J	20	15	3.0	100m	20n ₀	10p ₀	10m ₀	75	△		50019 ₀	PE	T072	G				
24	AT26A	200m	3.5G _s	1.1m	5J	20	15	3.0	100m	20n ₀	10p ₀	10m ₀	75	△		5001s ₀	PE	T072	G				
25*	AT25B	200m	3.5G _s	1.1m	5J	20	15	3.0	100m	20n ₀	10p ₀	10m ₀	75	△		5001s ₀	PE	T072	G				
26*	AT101	200m	4.0G _s	1.1m	5J	20	15	3.0	30m	20n ₀	10p ₀	3.0m ₀	50	△		350fs ₀	PE	u77c	Y				
27*	AT101A	200m	4.0G _s	1.1m	5J	20	15	3.0	30m	20n ₀	10p ₀	3.0m ₀	50	△		350fs ₀	PE	u77c	Y				
28*	AT140	200m	4.0G _s	1.1m	5J	20	12	3.0	30m	10n ₀	10p ₀	3.0m ₀	50	△		200fs ₀	PE	u77d	A				
29*	AT141	200m	4.0G _s	1.1m	5J	20	12	3.0	30m	10n ₀	10p ₀	3.0m ₀	50	△		300fs ₀	PE	u77d	Y				
30#	DC5001X	200m	4.5G _s	880m	5J	20	15	3.0	30m	500n ₀	10p ₀	10m ₀	30	△		450f ₀	PL	MM16	R				
31#	ZSC987A	200m	4.5G _s	120m	5J	25	25	5.0	100m	100n ₀	10p ₀	10m ₀	100	△		500f ₀	PE	X80	GJ				
32	MPS5172	210m	120m	1.9m	1J	25	25	5.0	100m	100n ₀	10p ₀	10m ₀	100	△		10ps ₀	AN	T092	A				
33#	BSW191	215m*	300m ₀	1.7m	5J	35	30	5.0	100m	100n ₀	10p ₀	10m ₀	40	△		60p ₀	PE	T018	AØ				
34	2N5136	220m	40m ₀	2.2m	5J	30	20	3.0	500m	10n ₀	1.00	150m ₀	20	1#△		35ps	DPL	T0105	A				
35	EN870	220m	50m ₀	2.1m	5J	100	60	7.0	100n ₀	5.00	1.0m ₀	175	△		20p ₀	DPL	T0106	A					
36	2N4944	220m	60m ₀	2.2m	5J	80	40	6.0	500m	0.5μ ₀	1.00	150m ₀	40	1#△		25p ₀		T0106	A				
37	2N4945	220m	60m ₀	2.2m	5J	80	60	5.0	500m	0.5μ ₀	1.00	150m ₀	40	1#△		20p ₀		T0106	A				
38	2N4946	220m	60m ₀	2.2m	5J	80	40	5.0	500m	0.5μ ₀	1.00	150m ₀	100	△		25p ₀		T0106	A				
39	EN718A	220m	60m ₀	2.1m	5J	75	40	*2.0	50n ₀	5.00	1.0m ₀	25	△		50p ₀	DPL	T0106	A					
40	EN871	220m	60m ₀	2.1m	5J	100	60	7.0	100n ₀	5.00	1.0m ₀	400	△		500n ₀ b ₀	30	Ø	1.3	Ø	DPL	T0105	A	
41	EN956	220m	70m ₀	2.1m	5J	75	40	*2.0	50n ₀	5.00	1.0m ₀	50	△		500n ₀ b ₀	34	Ø	5.0	Ø	25p ₀	DPL	T0106	A
42#	BF195	220m	200m ₀	2.2m	5J	30	20	3.0	30m	10n ₀	1.00	1.0m ₀	67	△						850ft	PET	X64b	C
43#	BF255A	220m	200m ₀	2.2m	5J	30	20	3.0	30m	10n ₀	1.00	1.0m ₀	67	△						PEØ	PET	MM10	C
44#	BF333	220m	200m ₀	2.2m	5J	30	20	3.0	30m	10n ₀	1.00	1.0m ₀	67	△						PET	PET	X73	D
45#	BC167D	220m	250m ₀	2.2m	5J	45	45	5.0	100n ₀	700p ₀	5.00	2.0m ₀	25	△*						BC167D	PET	X73	D
46#	BC168D	220m	250m ₀	2.2m	5J	20	20	5.0	100m	1.0n ₀	5.00	2.0m ₀	125	△*						PET	PET	X73	D
47	BC237D	220m	250m ₀	2.2m	5J	45	45	5.0	100m	1.0n ₀	5.00	2.0m ₀	125	△*						PET	PET	X73	A
48	BC238D	220m	250m ₀	2.2m	5J	20	20	5.0	100m	1.0n ₀	5.00	2.0m ₀	125	△*						PET	PET	X73	A
49#	PL4051t	220m	250m ₀	1.5m	60	30	5.0	800m	10n ₀	1.00	1.0m ₀	12	△						8p ₀	PE	u51	C	
50#	PL4052t	220m	250m ₀	1.5m	75	40	6.0	800m	10n ₀	1.00	1.0m ₀	30	△						8p ₀	PE	u51	L	
51#	PL4053t	220m	250m ₀	1.5m	60	30	5.0	800m	10n ₀	1.00	1.0m ₀	25	△						8p ₀	PE	u51	C	
52#	PL4055t	220m	250m ₀	1.5m	75	60	30	5.0	800m	10n ₀	1.00	1.0m ₀	50	△					8p ₀	PE	u51	C	
53#	BF194	220m	260m ₀	2.2m	5J	30	20	3.0	30m	1.0n ₀	1.00	1.0m ₀	115	△					8p ₀	PE	MM10	C	
54#	BF254A	220m	260m ₀	2.2m	5J	30	20	3.0	30m	1.0n ₀	1.00	1.0m ₀	115	△					8p ₀	PE	MM10	C	
55#	BF332	220m	260m ₀	2.2m	5J	30	20	3.0	30m	1.0n ₀	1.00	1.0m ₀	115	△					8p ₀	PE			

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. (W)	1) MAX DISS. @25°C	2) DERATE fab (Hz)	T IN M E @25°C	ABS MAX RATINGS @25°C				MAX I _{cbo} @MAX V _{cbo}	TYPICAL 'H' PARAMETERS				Cob	STRUCTURE	DWG # Y200 s/a AD T0200 Ser.		
						BV _{cbo}	BV _{ceo}	BV _{beo}	I _c (A)		V _{cbo} (V)	I _e (A)	h _{fe}	COMMON Emitter h _{oe} (mhos)					
1#	ZSD227	250m	\$J	30	15	5.0	300m	100n	1.00	300m	120	1.00	100	1.00	PE	T092	B		
2#	BSW32	250m	\$J	2.0m	100	80	6.0	30m	1.0u	5.00	10m	40	1Δ		PL	T092			
3#	BSW70	250m	\$J	1.7m	100	60	5.0	50m	1.0u#	5.00	20m	50	1Δ		PE	T018	AØ		
4	CS2711	250m	\$J	2.0m	18	18	5.0	100m	50u	4.50	2.0m	30	Δ		12pØ	DPL	T0106		
5	CS2712	250m	\$J	2.0m	18	18	5.0	100m	50u	4.50	2.0m	80	Δ		4.5p	DPL	T0106		
6	CS2713	250m	\$J	2.0m	18	18	5.0	200m	50u	4.50	2.0m	30	Δ		DPL	T0106	A		
7	CS2714	250m	\$J	2.0m	18	18	5.0	200m	50u	4.50	2.0m	80	Δ		DPL	T0106	A		
8	CS2715	250m	\$J	2.0m	18	18	5.0	50m	50u	4.50	2.0m	30	Δ		5pØ	DPL	T0106		
9	CS2716	250m	\$J	2.0m	18	18	5.0	50m	50u	4.50	2.0m	80	Δ		5pØ	DPL	T0106		
10	CS2921	250m	\$J	2.0m	25	25	5.0	100m	50u	100	2.0m	35	Δ		12pØ	PL1	T0106		
11	CS2922	250m	\$J	2.0m	25	25	5.0	100m	50u	100	2.0m	55	Δ		12pØ	PL1	T0106		
12	CS2923	250m	\$J	2.0m	25	25	5.0	100m	50u	100	2.0m	90	Δ		12pØ	PL1	T0106		
13	CS2924	250m	\$J	2.0m	25	25	5.0	100m	50u	100	2.0m	150	Δ		12pØ	PL1	T0106		
14	CS2925	250m	\$J	2.0m	25	25	5.0	100m	50u	100	2.0m	235	Δ		12pØ	PL1	T0106		
15	CS3390	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	400	Δ		10pØ	PL1	T0106		
16	CS3391	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	250	Δ		10pØ	PL1	T0106		
17	CS3391A	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	250	Δ		10pØ	PL1	T0106		
18	CS3392	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	150	Δ		10pØ	PL1	T0106		
19	CS3393	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	90	Δ		10pØ	PL1	T0106		
20	CS3394	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	55	Δ		10pØ	PL1	T0106		
21	CS3395	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	150	* ^A		12pØ	DPL	R97a		
22	CS3386	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	90	* ^A		12pØ	DPL	R97a		
23	CS3397	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	55	* ^A		12pØ	DPL	R97a		
24	CS3398	250m	\$J	2.0m	25	25	5.0	100m	10uØ	4.50	2.0m	55	* ^A		12pØ	DPL	R97a		
25	CS3707	250m	\$J	2.0m	30	50	6.0	30m	10uØ	5.00	10m	100	Δ		DPL	T0106	A		
26	CS3708	250m	\$J	2.0m	30	30	6.0	30m	10uØ	5.00	10m	45	Δ		DPL	T0106	A		
27	CS3709	250m	\$J	2.0m	30	30	6.0	30m	10uØ	5.00	10m	45	Δ		DPL	T0106	A		
28	CS3710	250m	\$J	2.0m	30	30	6.0	30m	10uØ	5.00	10m	90	Δ		DPL	T0106	A		
29	CS3711	250m	\$J	2.0m	30	30	6.0	30m	10uØ	5.00	10m	180	Δ		DPL	T0106	A		
30	2N519	20M	1.9m	\$	50	20	50m	10u	1.50	5.0m	14			65p	A				
31	2N620	250m	30M	1.9m	\$	50	20	50m	10u	1.50	5.0m	25			65p	A			
32	2N621	250m	40M	1.9m	\$	50	20	50m	10u	1.50	5.0m	50			65p	A			
33	2N6217	250m	1.0M	2.0m	\$S	25	25	100m	10uØ	6.00	1.0m	25	Δ		80p	AØ	R8		
34	TIS108	250m	3.5M	2.0m	\$S	40	30	40	4.0	50m	50m	100	4.0m	25	Δ	400p	PL1	X55	C
35#	ZTX330	250m	30M	2.5m	\$A	30	30	5.0	500m	200	5.00	100	60	Δ		8.0p	PLØ	X59	F
36#	ZTX331	250m	30M	2.5m	\$A	45	45	5.0	500m	200	5.00	100	60	Δ		8.0p	PLØ	X59	F
37*	2N4286	250m	40M	2.0m	\$S	30	25	6.0	100m	50u	5.00	1.0m	60	Δ		10pØ	PL1	u29	TB
38*	2N4287	250m	40M	2.0m	\$S	45	45	7.0	100m	10n	5.00	1.0m	60	Δ		10pØ	PL1	u29	B
39*	ME4001	250m	40M	2.0m	\$S	30	25	*	8.0	50n	100	1.0m	60	Δ		3.0pM	PE	R110c	A
40	2N2981*	250m	50M	1.4m	\$J	100	60	7.0	500m	0.1uØ	5.00	1.0m	40	Δ		15pØ	*	L21	
41	2N2982*	250m	50M	1.4m	\$J	100	60	7.0	500m	0.1uØ	5.00	1.0m	40	Δ		15pØ	*	L21	
42#	BSV51	250m	50M	2.0m	\$J	100	80	*	7.0	200m	#100m	2.0	15m	30	Δ		PE1	MM11c	A
43	2N2972	250m	60M	1.4m	\$J	45	45	8.0	30m	10n	5.00	10u	60	1Δ		6.0pØ	*	L21	
44	2N2973	250m	60M	1.4m	\$J	45	45	8.0	30m	10n	5.00	10u	150	1Δ		6.0pØ	*	L21	
45	2N2974*	250m	60M	1.4m	\$J	45	45	8.0	30m	10n	5.00	10u	80	1Δ		6.0pØ	*	L21	
46	2N2975*	250m	60M	1.4m	\$J	45	45	8.0	30m	10n	5.00	10u	150	1Δ		6.0pØ	*	L21	
47	2N2976*	250m	60M	1.4m	\$J	45	45	8.0	30m	10n	5.00	10u	60	1Δ		6.0pØ	*	L21	
48	2N2977*	250m	60M	1.4m	\$J	45	45	8.0	30m	10n	5.00	10u	150	1Δ		6.0pØ	*	L21	
49	2N2978*	250m	60M	1.4m	\$J	60	60	8.0	30m	2.0n	5.00	10u	80	1Δ		6.0pØ	*	L21	
50	2N2979*	250m	60M	1.4m	\$J	60	60	8.0	30m	2.0n	5.00	10u	150	1Δ		6.0pØ	*	L21	
51	2N2980*	250m	60M	1.4m	\$J	100	60	7.0	500m	2.0n	5.00	10u	50	20u		15pØ	5.0kΩ		
52#	AT353	250m	60M	2.0m	\$J	45	45	6.0	30m	100n	100	1.0m	60	1#Δ		6.0pØ	PE1	MM11c	D
53#	AT354	250m	60M	2.0m	\$J	45	45	6.0	30m	100n	100	1.0m	200	1#Δ		6.0pØ	PE1	MM11c	D
54#	ME4002	250m	60M	2.0m	\$J	30	25	*	8.0	50n	100	1.0m	200	1Δ		3.0pM	PE	R110c	A
55#	ME4003	250m	60M	2.0m	\$J	30	25	*	8.0	50n	100	1.0m	300	1Δ		3.0pM	PE	R110c	A
56	2N3793	250m	100M	2.5m	\$S	40	20	5.0	500m	50u	100	1.0m	35	Δ		10pØ	u29		
57	2N3794	250m	100M	2.5m	\$S	40	20	5.0	500m	50u	100	1.0m	35	Δ		10pØ	PL1	MM12a	D
58#	AT329	250m	100M	2.5m	\$J	20	20	5.0	250m	50u	2.0	1.0m	60	1#Δ		6.0pØ	PE1	MM12a	D
59#	25C368	250m	150M	1.7m	\$J	25	25	5.0	100m	10u	100	1.0m	250	1Δ		1.5p	PE	TO18	B
60#	25C899	250m	150M	1.7m	\$J	50	25	5.0	30m	100n	3.00	500u	115	Δ		6.0pØ	PE	TO18	AØ
61	2N957	250m	200M	2.0m	\$J	40	20	5.0	100m	10uØ	5.00	1.0m	45	1#Δ		6.0pØ	*	L21	
62	2N3825	250m	200M	2.5m	\$S	30	15	4.0	100m	10uØ	6.00	2.0m	20	1Δ		3.5pØ	*	X20	
63#	2SC3954A	250m	200M	2.5m	\$J	20	12	5.0	400m	10uØ	1.00	1.0m	60	1Δ		4.0p	PE	TO18	AØ
64#	2SC7141	250m	200M	2.5m	\$J	70	40	5.0	200m	10uØ	6.00	2.0m	60	1#Δ		7.0p	PE1	TO92	D
65#	2SC9441	250m	200M	2.5m	\$J	60	40	8.0	100m	100n	100	2.0m	60	1#Δ		3.0pM	PE	TO92	B
66	MD2218AF*	250m	200M	1.5m	\$J	75	40	6.0	600m	15n#	100	150m	40	1#Δ		8.0pØ	(ANΔ	L17d	
67	MD2218F*	250m	200M	1.5m	\$J	60	30	5.0	600m	20n#	100	150m	40	1#Δ		8.0pØ	(ANΔ	L17d	
68#	ME1001	250m	200M	2.0m	\$J	45	45	*	4.0	50n	100	1.0m	40</td						

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX. COL. DISS. @25°C (W)	2. DE RATE IN fab (Hz)	3. ABS. MAX. RATINGS @25°C	TYPICAL 'h' PARAMETERS										Cob	STRUCTURE	DWG #	
					COLL. DISS. @25°C (W)	M E Vbcbo AIR X P W/C	A M BVceo AIR X P W/C	Ic BVbbo AIR X P W/C	MAX. Icb @MAX Vcb	BIAS	COMMON Emitter			Cob	STRUCTURE	DWG #		
Vcb	le	hfe	hoe	hie	hre	[mhos]	(Ω)	X.0001	[F]									
1	TIS64	250m	300M ^Δ	2.0m	\$J	30	12	3.0	30m	10u ⁰	100 ⁰	4.0m ⁰	20 ↑		2p ¹	PL	X55	
2	CS706†	250m	320M ^Δ	2.0m	\$J	25	20	3.0		0.5u ⁰	1.0 ⁰	10m ⁰	20 ↑#		6p ¹	D	R97a	
3#	2SC39A	250m	350M ^Δ	2.0m	\$J	25	15	3.0	50m	10u ⁰	100 ⁰	3.0m ⁰	120 ↑		3.0p	PL	X018	
4	CS2369†	250m	350M ^Δ	2.0m	\$J	40	15	4.5	500m	40u ⁰	100 ⁰	10m ⁰	3.5 ↑		4p ¹	DPL	R97a	
5#	BF335	250m	370M ^Δ	2.5m	\$J	40	30	4.0	25m	10u ⁰	100 ⁰	1.0m ⁰	35 ↑		300f	PEØ	MM10	
6	A496	250m	400M ^Δ	2.5m	\$J	40	30	4.0	25m	10u ⁰	100 ⁰	4.0m ⁰	27 ↑		2p ¹	PEØ	MM10	
7#	BF198	250m	400M ^Δ	2.5m	\$J	40	30	4.0	25m	100n ⁰					230f	PL	X76	
8#	BF240	250m*	400M ^Δ	2.3m	\$J	40	40	4.0	25m	100n ⁰					340f	PL	X64c	
9#	BF241	250m*	400M ^Δ	2.3m	\$J	40	40	4.0	25m	100n ⁰					340f	PL	X64c	
10#	ME9001†	1250m	400M ^Δ	2.0m	\$J	40	15	4.5		300n ⁰	1.0 ⁰	10m ⁰	40 ↑		4.0p ²	PE	R110c	
11#	ME9002†	250m	400M ^Δ	2.0m	\$J	30	12	4.5		300n ⁰	1.0 ⁰	10m ⁰	30 ↑		4.0p ²	PE	R110c	
12	TIS63	250m	400M ^Δ	2.0m	\$J	30	12	3.0	30m	10u ⁰	100 ⁰	4.0m ⁰	20 ↑		3.0p	PL	X55	
13#	BF134	250m	430M ^Δ	2.5m	\$J	40	30	4.0	25m	10u ⁰	100 ⁰	1.0m ⁰	65 ↑	2.8ub	60ub			
14#	BF176	250m	450M ^Δ	2.5m	\$J	40	40	4.0	25m	50n ⁰	100 ⁰	10m ⁰	65 ↑#		1.2p	DPE	R97	
15#	BF310	250m	450M ^Δ	2.5m	\$J	40	30	4.0	25m	60n ⁰	100 ⁰	4.0m ⁰	28 ↑		1.6p ¹	PL	X76	
16#	SE5015	250m	450M ^Δ	2.0m	\$J	20	20	3.0		50n ⁰	5.0 ⁰	4.0m ⁰	50 ↑#		370f	DPL	T092	
17#	2SC39	250m	500M ^Δ	2.0m	\$J	25	15	3.0	50m	10u ⁰	6.0 ⁰	1.0m	50 ↑		3.0p	ME	T018	
18#	BF306	250m	500M ^Δ	1.6m	\$J	45	50	5.0	50m	100 ⁰	7.0m ⁰	3.0m ⁰	39 ↑		2.3p	PL	T022	
19	MD2359AF*	250m	500M ^Δ	1.5m	\$J	40	15	5.0	500m	0.3u ⁰	1.0 ⁰	10m ⁰	40 ↑#		4p ²	ANA	T089	
20	MD2369BF*	250m	500M ^Δ	1.5m	\$J	40	15	5.0	500m	0.3u ⁰	1.0 ⁰	10m ⁰	40 ↑#		4p ²	ANA	T089	
21	MD2369F*	250m	500M ^Δ	1.5m	\$J	40	15	5.0	500m	0.3u ⁰	1.0 ⁰	10m ⁰	40 ↑#		4p ²	ANA	T089	
22#	SE5010	250m	500M ^Δ	2.0m	\$J	30	30	3.0		50n ⁰	5.0 ⁰	4.0m ⁰	75 ↑#		370f	DPL	T092	
23	TIS62	250m	500M ^Δ	2.0m	\$J	30	12	3.0	30m	10u ⁰	100 ⁰	4.0m ⁰	30 ↑		2p ¹	PL	X55	
24	A497	250m	550M ^Δ	2.5m	\$J	40	25	4.0	25m	10u ⁰	100 ⁰	7.0m ⁰	115 ↑		300ff	PET	MM10	
25#	BF199	250m	550M ^Δ	2.5m	\$J	40	25	4.0	25m	10u ⁰	100 ⁰	2.0m ⁰	50 ↑		330f	PE	X76	
26	2N4254	250m	600M ^Δ	2.0m	\$S	30	18	4.0	50m	10u ⁰	100 ⁰	2.0m ⁰	50 ↑		7ps	†	T092	
27	2N4255	250m	600M ^Δ	2.0m	\$S	30	18	4.0	50m	10u ⁰	100 ⁰	2.0m ⁰	30 ↑		7ps	†	T092	
28	2N4986	250m	600M ^Δ	2.0m	\$S	30	18	4.0	50m	10u ⁰	100 ⁰	2.0m ⁰	30 ↑		7p ²		X55	
29	2N4997	250m	600M ^Δ	2.0m	\$S	30	18	4.0	50m	10u ⁰	100 ⁰	2.0m ⁰	30 ↑		7p ²		X55	
30#	AT340	250m	600M ^Δ	1.4m	\$J	30	19	4.0	50m	50n ⁰	100 ⁰	1.0m	20 ↑#		1.5p ²	PE	T0104	
31#	AT344	250m	600M ^Δ	1.4m	\$J	30	19	4.0	50m	50n ⁰	100 ⁰	1.0m	20 ↑		1.5p ²	PE	T0104	
32	G13793	250m	600M ^Δ	2.5m	\$J	40	20	5.0		50u ⁰	100 ⁰	10m ⁰	120 ↑		10p ²	PL	T018	
33	MD918AF*	250m	600M ^Δ	1.5m	\$J	30	15	5.0	50m	0.1u ⁰	5.0 ⁰	1.0m ⁰	50 ↑		3p ²	ANA	T089	
34	MD918BF*	250m	800M ^Δ	1.5m	\$J	30	15	5.0	50m	0.1u ⁰	5.0 ⁰	1.0m ⁰	50 ↑		3p ²	ANA	T089	
35	MD918F*	250m	800M ^Δ	1.5m	\$J	30	15	5.0	50m	0.1u ⁰	5.0 ⁰	1.0m ⁰	50 ↑		3p ²	ANA	T089	
36#	ME9003†	250m	800M ^Δ	2.0m	\$J	18	12	4.0		1.0u ⁰	5.0 ⁰	10m ⁰	100 ↑		2.0p	PE	R110c	
37	TIS68	250m	600M ^Δ	2.0m	\$J	25	13	3.0	30m	30u ⁰	120 ⁰	10m ⁰	20 ↑#		1.7p ²	PL	X20	
38#	ZTX320	250m	600M ^Δ	2.5m	*A	30	15	3.0		200n	1.0 ⁰	3.0m ⁰	20 ↑		3.0p ²	PL	X59	
39#	ZTX321	250m	600M ^Δ	2.5m	*A	30	15	3.0		200n	1.0 ⁰	3.0m ⁰	20 ↑		3.0p ²	PL	X59	
40	TIS84	250m	650M ^Δ	2.0m	\$S	40	30	4.0	50m	50n ⁰	100 ⁰	4.0m ⁰	30 ↑		PEØ	PL	X55	
41	CS3662	250m	700M ^Δ	2.0m	\$J	30	12	3.0	25m	50u ⁰	100 ⁰	8.0m ⁰	20 ↑		1.7p ²	DPL	T0106	
42	CS3663	250m	700M ^Δ	2.0m	\$J	18	12	3.0	25m	50u ⁰	100 ⁰	8.0m ⁰	20 ↑		1.7p ²	DPL	T0106	
43#	BF329	250m	730M ^Δ	2.5m	\$J	40	30	4.0	50m	6.0 ⁰	10u ⁰	6.0 ⁰	1.0m	50 ↑		2.3p	PE	MM10
44#	2SC40	250m	750M ^Δ	2.0m	\$J	25	15	3.0	50m	10u ⁰	100 ⁰	3.0m ⁰	50 ↑		3.5p	PE	TO18	
45	PMT1767	250m	750M ^Δ	2.5m	\$J	25	15	5.0	200m	50u ⁰	3.0 ⁰	10m ⁰	5.0 ↑					
46#	BF330	250m	1.0G ^Δ	2.5m	\$J	40	25	4.0	25m	100 ⁰	100 ⁰	7.0m ⁰	38 ↑		2p ¹	PE	MM10	
47	2N42511	250m	1.3G ^Δ	1.4m	\$J	15	10	4.5	100m	1.0u ⁰	5.0 ⁰	10m ⁰	32 ↑		850f	PEØ	T046	
48	MT1061	250m	1.3G ^Δ	1.7m	\$J	30	14	4.0	80m	0.5u ⁰	5.0 ⁰	5.0m ⁰	45 ↑		850s	PEØ	T072	
49	MT1061A	250m	1.5G ^Δ	1.7m	\$J	30	14	4.0	80m	0.5u ⁰	5.0 ⁰	5.0m ⁰	75 ↑		1.2p ²	PE	T072	
50	MT1063	250m	1.5G ^Δ	1.7m	\$J	30	14	4.0	80m	0.5u ⁰	5.0 ⁰	5.0m ⁰	75 ↑		8p ¹	PEØ	T072	
51	A430	250m	1.6G ^Δ	1.4m	\$J	20	10	2.5	50m	50n ⁰	50n ⁰	25m ⁰	25 ↑		800n ¹	PEØ	T072	
52#	BTW30	250m	1.6G ^Δ	1.4m	\$J	20	10	2.5	50m	50n ⁰	50n ⁰	2.0m ⁰	25 ↑		1.5p ²	PE	GJ	
53#	2SC1090	250m	3.0G ^Δ	700m	\$J	20	12	3.0	50m	1.0u ⁰	5.0 ⁰	3.0m ⁰	30 ↑		1.2p	PEØ	X89	
54#	V658	250m	3.0G ^Δ	1.4m	\$J	20	12	3.0	50m	1.0u ⁰	5.0 ⁰	2.0m ⁰	100 ↑					
55	2N5761	250m	3.7G ^Δ	2.0m	\$S	20	15	3.0	30m	500n ⁰	100 ⁰	10m ⁰	30 ↑		500f	PL	X80a	
56#	BFY85*	260m	45	45	5.0	100m	0.1u ⁰											
58	BCY59	260m	50M ^Δ	2.0m	\$J	100	90	3.0	100m	10u ⁰	100 ⁰	2.0m ⁰	30 ↑		5.0p	PE	T018	
59#	BFY80	260m	50M ^Δ	2.0m	\$J	25	15	5.0	200m	50u ⁰	1.0 ⁰	10m ⁰	40 ↑					
60	BSY62	260m*	200M ^Δ	2.0m	\$J	75	75	3.0	50m	100u ⁰	100 ⁰	3.0m ⁰	5.0 △					
61	FT107A	260m	200M ^Δ	2.0m	\$J	60	60	8.0	50m	2.0n ⁰	100 ⁰	1.0m ⁰	335 ↑		24u	8.5k	7.0	2.5ps
62	FT107B	260m	260M ^Δ	2.														

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX COLL. DISS. (W)	2 DERATE @25°C	ABS MAX RATINGS @25°C					MAX. I _{cbo} @MAX V _{cbo}	TYPICAL h' PARAMETERS					Cob	STRUCTURE	DWG #	C		
				IN fab	M FREE	E AIR	A X P	B V _{cbo}	V _{ceo}	B V _{beo}	I _c	h _{fe}	COMMON Emitter	h _{oe}	h _{ie}	h _{re}	(mhos)	(Ω)	X.0001	(F)
1	2N4879*	300m ²	15M ²	1.7m	SS	55	55	7.0	10m	.1n ²	5.0 ²	1.0m ²	175 T ²				8ps	Q*	L2p	
2	2N4880*	300m ²	15M ²	1.7m	SS	45	45	7.0	10m	.1n ²	5.0 ²	1.0m ²	100 T ²				8ps	Q*	L2p	
3	2N2432 ²	300m ²	20M ²	2.0m	SS	30	30	15	100m	.01u ²	5.0 ²	1.0m ²	50 T ²				12p ²	△	T018	A ²
4	2N2432A ²	300m ²	20M ²	2.0m	SS	45	45	18	100m	.01u ²	5.0 ²	1.0m ²	50 T ²				12p ²	△	T018	A ²
5	2N1138	300m ²	20M ²	2.0m	SS	30	30	15	100m	.01u ²	5.0 ²	1.0m ²	50 T ²				12p ²	△	T046	A ²
6	2N4878*	300m ²	20M ²	1.7m	SS	60	60	7.0	10m	.1n ²	5.0 ²	1.0m ²	225 T ²				8ps	Q*	L2p	
7#	BFV89 ²	300m ²	20M ²	2.0m	SS	30	30	15	100m	.01u ²	5.0 ²	1.0m ²	50 T ²				12p ²	PE	u28a	B
8#	BFV89A ²	300m ²	20M ²	2.0m	SS	45	45	18	100m	.01u ²	5.0 ²	1.0m ²	50 T ²				12p ²	PE	u26a	B
9	2N754	300m ²	30M ²	3.0m	SS	60	60	3.0	50m	1.0u ²	5.0 ²	5.0m ²	20 T ²				10p ²	-	T018	A ²
10	2N755	300m ²	30M ²	3.0m	SS	100	80	3.0	50m	1.0u ²	5.0 ²	5.0m ²	20 T ²				10p ²	-	T018	A ²
11	2N839	300m ²	30M ²	3.0m	SS	45	45	2.0	50m	1.0u ²	5.0 ²	5.0m ²	20 T ²	1.2u ² b	80		15p ²	-	T018	A ²
12	2N840	300m ²	30M ²	3.0m	SS	45	45	2.0	50m	1.0u ²	5.0 ²	5.0m ²	20 T ²	1.2u ² b	80		15p ²	-	T018	A ²
13	2N842	300m ²	30M ²	2.0m	SS	45	45	2.0	50m	1.0u ²	5.0 ²	5.0m ²	20 T ²	350nb	40	20	6.0p	MEA	T018	A ²
14	2N2929	300m ²	30M ²	2.0m	SS	45	45	5.0	30m	1.0u ²	5.0 ²	5.0m ²	60 T ²	32 □	6.0 □	8.0p	PL	T018	A ²	
15	2N930	300m ²	30M ²	2.0m	SS	45	45	5.0	30m	1.0u ²	5.0 ²	5.0m ²	60 T ²	32 □	6.0 □	8.0p	PL	T018	A ²	
16	2N1390	300m ²	30M ²	2.0m	SS	20	20	2.0	50m	80u ²	5.0 ²	10m ²	15 T ²				7p ²	-	T05	A
17	2N2387	300m ²	30M ²	2.0m	SS	45	45	5.0	30m	1.0u ²	5.0 ²	1.0m ²	60 T ²	32 □	6.0 □	8.0p	PL	u25		
18	2N2388	300m ²	30M ²	2.0m	SS	45	45	5.0	30m	1.0u ²	5.0 ²	1.0m ²	60 T ²	32 □	6.0 □	8.0p	PL	u25		
19#	2S501	300m ²	30M ²	2.0m	SS	25	25	5.0	30m	1.0u ²	5.0 ²	10m ²	40 T ²				8.0p	PL	T018	
20#	2S502	300m ²	30M ²	2.0m	SS	25	25	5.0	30m	1.0u ²	5.0 ²	10m ²	100 T ²				8.0p	PL	T018	
21#	2S503 ¹	300m ²	30M ²	2.0m	SS	25	25	5.0	30m	1.0u ²	5.0 ²	10m ²	180 T ²				8.0p	PL	T018	
22	3N740	300m ²	30M ²	2.0m	SS	50	50	18	20m	.01u ²	5.0 ²	1.0m ²	50 T ²				8p ²	△	T072	GC ²
23	JAN3N74 ²	300m ²	30M ²	1.7m	SS	50	50	20	20m	.01u ²	5.0 ²	1.0m ²	50 T ²				8.0p	PL	T072	GC ²
24	3N750 ²	300m ²	30M ²	2.0m	SS	50	50	18	20m	.01u ²	5.0 ²	1.0m ²	50 T ²				8.0p	PL	T072	GC ²
25	JAN3N75 ²	300m ²	30M ²	1.7m	SS	50	50	20	20m	.01u ²	5.0 ²	1.0m ²	50 T ²				8.0p	PL	T072	GC ²
26	3N760 ²	300m ²	30M ²	2.0m	SS	50	50	18	20m	.01u ²	5.0 ²	1.0m ²	50 T ²				8.0p	PL	T072	GC ²
27	JAN3N76 ²	300m ²	30M ²	1.7m	SS	50	50	20	20m	.01u ²	5.0 ²	1.0m ²	50 T ²				8.0p	PL	T072	GC ²
28	3N770 ²	300m ²	30M ²	2.0m	SS	40	40	12	20m	.01u ²	5.0 ²	1.0m ²	50 T ²				8p ²	△	T072	GC ²
29	3N780 ²	300m ²	30M ²	2.0m	SS	40	40	12	20m	.01u ²	5.0 ²	1.0m ²	50 T ²				8p ²	△	T072	GC ²
30	3N790 ²	300m ²	30M ²	2.0m	SS	40	40	12	20m	.02u ²	5.0 ²	1.0m ²	50 T ²				10p ²	-	T072	GC ²
31#	BFV85D	300m ²	30M ²	500u	SS	45	45	5.0	30m	10n	5.0 ²	10u ²	60 □	1.0u ² b	32 □	6.0 □	8.0p	PL	u26a	B
32#	BFV85E	300m ²	30M ²	500u	SS	45	45	5.0	30m	10n	5.0 ²	10u ²	150 □	1.0u ² b	32 □	6.0 □	8.0p	PL	u26a	B
33	2N2639 ²	300m ²	31M ²	2.0m	SS	45	45	5.0	30m	10n	5.0 ²	1.0m ²	65 □	1.0u ² b	32 □	6.0 □	8.0p	PL	L2t	
34	2N2640 ²	300m ²	31M ²	2.0m	SS	45	45	5.0	30m	10n	5.0 ²	1.0m ²	65 □	1.0u ² b	32 □	6.0 □	8.0p	PL	L2t	
35	2N2641 ² *	300m ²	31M ²	2.0m	SS	45	45	5.0	30m	10n	5.0 ²	1.0m ²	65 □	1.0u ² b	32 □	6.0 □	8.0p	PL	L2t	
36	2N2642 ²	300m ²	31M ²	2.0m	SS	45	45	5.0	30m	10n	5.0 ²	1.0m ²	130 □	1.0u ² b	32 □	6.0 □	8.0p	PL	L2t	
37	2N2643 ²	300m ²	31M ²	2.0m	SS	45	45	5.0	30m	10n	5.0 ²	1.0m ²	130 □	1.0u ² b	32 □	6.0 □	8.0p	PL	L2t	
38	2N2644 ²	300m ²	31M ²	2.0m	SS	45	45	5.0	30m	10n	5.0 ²	1.0m ²	130 □	1.0u ² b	32 □	6.0 □	8.0p	PL	L2b	
39	JAN2N2639 ² *	300m ²	32M ²	2.0m	SS	45	45	5.0	30m	10n	5.0 ²	1.0m ²	65 □	1.0u ² b	32 □	6.0 □	8.0p	PL	L2b	
40	JAN2N2642 ²	300m ²	32M ²	2.0m	SS	45	45	5.0	30m	10n	5.0 ²	1.0m ²	130 □	1.0u ² b	32 □	6.0 □	8.0p	PL	L2b	
41	2N841	300m ²	40M ²	3.0m	SS	45	45	2.0	50m	1.0u ²	5.0 ²	1.0m ²	80 T ²	1.2u ² b	80	2.0	8.0	MET	T018	A ²
42	2N841/46	300m ²	40M ²	2.3m	SS	45	45	2.0	50m	1.0u ²	5.0 ²	1.0m ²	140 □	350nb	40	2.0	8.0	PL	T046	
43	2N843	300m ²	40M ²	2.0m	SS	45	45	2.0	50m	1.0u ²	5.0 ²	1.0m ²	140 □	350nb	40	2.0	8.0	PL	T046	
44	2N1389	300m ²	40M ²	2.0m	SS	50	50	1.5	50m	50u ²	1.0u ²	1.0m ²	100 T ²				12p ²	△	T018	A ²
45	JAN2N2432	300m ²	40M ²	1.7m	SS	30	30	100m	10n	1.0u ²	5.0 ²	1.0m ²	80 T ²				12p ²	△	T018	A ²
46	JAN2N2432A	300m ²	40M ²	1.7m	SS	45	45	100m	10n	1.0u ²	5.0 ²	1.0m ²	80 T ²				12p ²	△	T018	A ²
47	2N3566	300m ²	40M ²	3.0m	SS	40	30	5.0	200m	0.05u ²	1.0u ²	10m ²	150 T ²	50 T ²			25p ²	PE	R97	A
48	2N5135	300m ²	40M ²	2.9m	SS	30	25	4.0	200m	0.3u ²	1.0u ²	10m ²	50 T ²	50 T ²			25p ²	PE	T0105	A
49	2N5137	300m ²	40M ²	2.9m	SS	30	20	3.0	50m	1.0u ²	1.0m ²	150m ²	20 T ²				35p ²	-	T018	A ²
50	BC115	300m ²	40M ²	3.0m	SS	40	30	5.0	100m	1.0u ²	1.0m ²	100m ²	200 T ²							

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE IN fab FREE AIR W/C (Hz)	T ABS MAX RATINGS @25°C					MAX. I _{cbo} @MAX	TYPICAL h PARAMETERS					Cob	STRUCTURE	DWG # Y200 s/a TO200 Ser.	C E O A D D E			
				M A M X P (V)	B V _{cbo} (V)	B V _{ceo} (V)	B V _{beo} (V)	I _c (A)		V _{cb} (V)	I _e (A)	h _{fe}	h _{oe} (mhos)	h _{ie} (Ω)	h _{re}						
1	ZN3569	300m	60M ₃ Δ 3.0m	\$J	80	40	5.0	500m	50u ₀	1.00	150m ₀	40 T#Δ	20ps	20ps	T0105	A					
2	ZN3680*	300m	60M ₃ Δ 2.0m	\$S	60	50	6.0	30m	0.1u ₀	5.00	1.0m ₀	300 Δ	45u ₀	24k ₀	10 □	6p ₀	L2t				
3	ZN3907*	300m	60M ₃ Δ 2.0m	\$S	60	45	6.0	30m	10n ₀	5.00	1.0m ₀	120 Δ	1.0u ₀ b	32 □	32 □	6.0p ₀	L2t	*			
4	ZN3908*	300m	60M ₃ Δ 2.0m	\$S	60	60	6.0	30m	2.0n ₀	5.00	1.0m ₀	200 Δ	1.0u ₀ b	32 □	32 □	6.0p ₀	L2t	*			
5	A311	300m	60M ₃ Δ 2.0m	\$J	80	30	3.0	500m	50u ₀	100	10m ₀	20 Δ	100	100	100	4p ₀	PL	T05			
6#	BC395	300m	60M ₃ Δ 3.0m	\$J	80	70	5.0	500m	100	100	10m ₀	40 Δ	100	100	100	20p	PE	T05	A		
7#	BFV85F	300m	60M ₃ Δ 500u	\$J	60	60	6.0	50m	0.1u ₀	5.00	1.0m ₀	80 Δ	30u ₀	13 □	8 □	6p ₀	PL	u26a	B		
8#	BFV85G	300m	60M ₃ Δ 500u	\$J	60	60	6.0	50m	0.1u ₀	5.00	1.0m ₀	150 Δ	40u ₀	24 □	8 □	6p ₀	PL	u26a	B		
9#	BFY10	300m	60M ₃ Δ 2.0m	\$J	45	45	5.0	50m	2.0u ₀	5.0	5.0m	20 Δ	5.0m	5.0m	5.0m	3p ₀	ME	T05			
10#	BFY11	300m	60M ₃ Δ 2.0m	\$J	45	45	5.0	50m	2.0u ₀	5.0	5.0m	35 Δ	5.0m	5.0m	5.0m	3p ₀	ME	T05			
11#	BSX21	300m	60M ₃ Δ 2.0m	\$J	120	80	5.0	50m	40u ₀	3.00	4.0m ₀	40 Δ	10m	45	10m	3.6p	DM	T018			
12#	BSY10	300m	60M ₃ Δ 2.0m	\$J	45	45	5.0	50m	40u ₀	5.0	5.0m	40 Δ	10m	45	10m	3.6p	ME	T05			
13#	C424	300m	60M ₃ Δ 3.0m	\$J	40	30	5.0	50m	20u ₀	100	10m ₀	50 Δ	20u ₀	100	100	25p ₀	PL	R97			
14	CS4005	300m	60M ₃ Δ 3.0m	\$J	80	40	5.0	50m	50n ₀	1.00	150m ₀	80 T#	32u	100	17	13p	EA	T0105	A		
15	CS4006	300m	60M ₃ Δ 3.0m	\$J	80	60	5.0	50m	50n ₀	1.00	150m ₀	80 T#	32u	100	17	13p	EA	R97	A		
16	CS4007	300m	60M ₃ Δ 3.0m	\$J	80	40	5.0	50m	50n ₀	1.00	150m ₀	80 T#	32u	100	17	18p	EA	T0105	A		
17	EN1613	300m	60M ₃ Δ 3.0m	\$J	75	40	4.0	*□	7.0	30m	50n ₀	5.00	1.0m ₀	25 Δ	500n ₀ b	34 □	50 □	25p ₀	DPL	T0105	A
18	ZN2692	300m	66M ₃ Δ 2.0m	\$J	45	30	5.0	50m	0.1u ₀	1.00	10m	90 Δ	5.0m	5.0m	5.0m	5p ₀	PEA	T018	A ₀		
19	JAN2N7021	300m	70M ₃ Δ 1.7m	\$S	40	25	5.0	30m	100n ₀	5.00	10m ₀	20 T#Δ	500n ₀ b	34 □	5.0 □	6.0p ₀	DPL	T018	A ₀		
20	JAN2N7031	300m	70M ₃ Δ 1.7m	\$S	40	25	5.0	30m	100n ₀	5.00	10m ₀	20 T#Δ	500n ₀ b	34 □	5.0 □	6.0p ₀	DPL	T018	A ₀		
21#	ZS1011	300m	70M ₃ Δ 2.0m	\$J	25	25	5.0	50m	50u ₀	5.00	10m ₀	20 T#Δ	5.0m	5.0m	5.0m	6p ₀	DM	T018			
22	EN1711	300m	70M ₃ Δ 3.0m	\$J	75	40	4.0	*□	7.0	50n ₀	5.00	1.0m ₀	50 Δ	500n ₀ b	34 □	5.0 □	25p ₀	DPL	T0105	A	
23#	FT025	300m	70M ₃ Δ 2.5m	\$S	50	30	6.0	100m	100n ₀	150	6.0m ₀	20 Δ	70u	400	20p	20p	PL	T046			
24#	FT026	300m	70M ₃ Δ 2.5m	\$S	50	30	6.0	100m	100n ₀	150	6.0m ₀	45 Δ	70u	700	22p	22p	PL	T046			
25#	ZT202	300m	70M ₃ Δ 4.0m	#J	30	20	5.0	50m	1.0u ₀	6.00	1.0m ₀	30	2.5u	1.3k	1.1	8.0p ₀		T05			
26#	ZT203	300m	70M ₃ Δ 4.0m	#J	30	20	5.0	50m	1.0u ₀	6.00	1.0m ₀	50	2.5u	1.6k	1.1	8.0p ₀		T05			
27#	ZT204	300m	70M ₃ Δ 4.0m	#J	30	20	5.0	50m	1.0u ₀	6.00	1.0m ₀	100	2.5u	1.9k	1.1	8.0p ₀		T05			
28#	ZT402	300m	70M ₃ Δ 4.0m	#J	30	20	5.0	50m	1.0u ₀	6.00	1.0m ₀	30	2.5u	1.3k	1.1	8.0p ₀		T05			
30#	ZT404	300m	70M ₃ Δ 4.0m	#J	30	20	5.0	50m	1.0u ₀	6.00	1.0m ₀	100	2.5u	1.6k	1.1	8.0p ₀		T018			
31	ZN1388	300m	75M ₃ Δ 2.0m	\$J	45	45	∅	1.5	50m	50u ₀	5.00	10m ₀	15 T#Δ	4.0p	4.0p	PO		T05			
32	ZN2720*	300m	80M ₃ Δ 1.7m	\$S	80	60	6.0	40m	10n ₀	5.00	1.0m ₀	30	1.0u ₀ b	32 □	5.0 □	6.0p ₀		L2t			
33	ZN2721*	300m	80M ₃ Δ 1.7m	\$S	80	60	6.0	40m	10n ₀	5.00	1.0m ₀	30	1.0u ₀ b	32 □	5.0 □	6.0p ₀		L2t			
34	ZN3587*	300m	80M ₃ Δ 1.7m	\$S	60	45	5.0	500m	10n ₀	150	10m ₀	80 T#	8.0p ₀	8.0p ₀	8.0p ₀	PE	R67a	B			
35#	ZSC732	300m	80M ₃ Δ 3.0m	#J	35	30	5.0	100m	10u ₀	6.00	2.0m ₀	1.2k T#	7.0p	7.0p	7.0p	PE	R67a	B			
36#	ZSC733	300m	80M ₃ Δ 3.0m	#J	35	30	5.0	100m	10u ₀	6.00	2.0m ₀	70 T#	7.0p	7.0p	7.0p	PE	R67a	B			
37	A301	300m	80M ₃ Δ 2.0m	\$J	40	40	4.0	40m	50u ₀	100	3.0m ₀	200 Δ	3.0p	3.0p	3p ₀	PL	T018				
38	A310	300m	80M ₃ Δ 2.0m	\$J	135	30	3.0	50u ₀	100	10m ₀	20 Δ	4p ₀	4p ₀	4p ₀	PE	T05	A				
39#	BFW57	300m	80M ₃ Δ 3.0m	#J	80	60	6.0	500m	50u ₀	100	10m ₀	110	20u	400	10	7.0p	PE	MM10	A		
40#	BFW58	300m	80M ₃ Δ 3.0m	#J	80	60	6.0	500m	50u ₀	100	10m ₀	75	20u	400	10	7.0p	PE	MM10	A		
41#	BFW59	300m	80M ₃ Δ 3.0m	#J	40	35	6.0	500m	50u ₀	100	10m ₀	110	20u	400	10	7.0p	PE	MM10	A		
42#	BFW60	300m	80M ₃ Δ 3.0m	#J	40	35	6.0	500m	50u ₀	100	10m ₀	75	20u	400	10	7.0p	PE	MM10	A		
43	ZN2569*	300m	100M ₃ Δ 2.0m	4S	20	15	5.0	100m	0.1u ₀	100	10m ₀	100 Δ	1.0u ₀ b	32 □	6.0 □	6.0p ₀	PE	T018	A ₀		
44	ZN2570*	300m	100M ₃ Δ 2.0m	4S	20	15	5.0	100m	0.1u ₀	100	10m ₀	100 Δ	1.0u ₀ b	32 □	6.0 □	6.0p ₀	PE	T018	A ₀		
45	ZN2572*	300m	100M ₃ Δ 1.7m	4S	45	45	5.0	40m	1.0u ₀	100	10m ₀	100 Δ	1.0u ₀ b	32 □	6.0 □	6.0p ₀	PE	T05			
46	ZN29381	300m	100M ₃ Δ 2.0m	4S	25	13	5.0	500m	350	10m ₀	125 f	3.5p	3.5p	3.5p	PE	T052	A				
47#	ZSC587	300m	100M ₃ Δ 2.0m	4S	45	35	5.0	30m	0.1u ₀	100	2.0m ₀	300	2.0m	300	2.0m	6p ₀	PE	T018			
48#	ZSC587A	300m	100M ₃ Δ 2.0m	4S	45	35	5.0	30m	0.1u ₀	100	2.0m ₀	300	2.0m	300	2.0m	6p ₀	PE	T018			
49#	BC110	300m	100M ₃ Δ 2.0m	\$J	80	80	5.0	50m	10u ₀	1.00	1.0m ₀	35 Δ	4.0p	4.0p	4.0p	PE	X64	A			
50#	BC170A	300m	100M ₃ Δ 3.0m	\$J	20	20	5.0	100m	100n ₀	1.00	1.0m ₀	80 Δ	4.0p	4.0p	4.0p	PE	X64	A			
52#	BC170C	300m	100M ₃ Δ 3.0m	\$J	20	20	5.0	100m	100n ₀	1.00	1.0m ₀	200 Δ	4.0p	4.0p	4.0p	PE	X64	A			
53#	BCY42	300m	100M ₃ Δ 5.0m	\$J	40	25	5.0	100m	25n ₀	5.00	1.0m ₀	45 Δ	6p ₀	6p ₀	6p ₀	PE	T018	A ₀			
54#	BCY43	300m	100M ₃ Δ 5.0m	\$J	40	25	5.0	100m	25n ₀	5.00	1.0m ₀	75 Δ	6p ₀	6p ₀	6p ₀	PE	T018	A ₀			
55#	BSY79	300m	100M ₃ Δ 2.0m	\$J	120	50	5.0	30m	0.5u ₀	1.00	1.0m ₀	240 Δ	4.0p	4.0p	4.0p						

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX		DETAILED		ABS MAX RATINGS @ 25°C				MAX		TYPICAL h _E PARAMETERS				Cob	STRUCTURE	DWG #	LC			
		COLL. DISS. @ 25°C	IN FREE AIR (W)	fab	M A X P W/C	BVC _b V _{ceo} (Hz)	BVC _b V _{beo} (Hz)	I _c (A)	I _{cb} @ MAX V _{cb} (A)	V _{cb} (V)	I _e (A)	h _{fe}	COMMON Emitter (mhos)	h _{oe} (Ω)	h _{ie} (Ω)	h _{re} (Ω)	X.0001	(F)				
1# BC268	300m	150Ms	10u	#J	30	30	6.0	1	15ns	5.0	2.0m ₀	400	30u	4.0k	5.6		PE	T018				
2# BC269	300m	150Ms	10u	#J	30	30	6.0	1	15ns	5.0	2.0m ₀	500	40u	6.0k	7.0		PE	T018				
3# BC270	300m	150Ms	10u	#J	20	20	6.0	1	20us	5.0	2.0m ₀	400	30u	4.0k	5.6		PE	T018				
4# BCW36	300m	150Ms	2.4m	s	60	45	5.0	600m	10n	5.0	100m ₀	100	5.0u	40k	10	6Op	PE	T018				
5# BCY69	300m	150MsΔ	2.0m	sJ	20	20	5.0	100m	150n	5.0	2.0m ₀	750					PE	T018				
6# BFS29	300m	150Ms	2.4m	s	45	45	5.0	200m	20n	150	100m ₀	40					5Op	PE	J34			
7# BFS30	300m	150Ms	2.4m	s	45	45	5.0	200m	20n	150	100m ₀	60					5Op	PE	J34			
8# BFS31	300m	150Ms	2.0m	sJ	45	25	5.0	100m	50u	100	10m ₀	35					5Op	PE	T018			
9# BFY39	300m	150Ms	2.0m	sJ	45	25	5.0	100m	50u	100	10m ₀	35					5Op	PE	T018			
10# BFY39/I	300m	150Ms	2.0m	sJ	45	25	5.0	100m	0.5u	100	10m ₀	35	1.5	8.0u	3.2k	30		PL	T018	A		
11# BFY39/II	300m	150Ms	2.0m	sJ	45	25	5.0	100m	0.5u	100	10m ₀	20	1.5	8.0u	3.2k	30		PL	T018	A		
12# BFY39/III	300m	150Ms	2.0m	sJ	45	25	5.0	100m	0.5u	100	10m ₀	20	1.5	8.0u	3.2k	30		PL	T018	A		
13# SA2738	300m	150MsΔ	2.0m	sJ	50	30	6.0		2n	5.0	0.1m ₀	75	1.5				3Op	* [*]	L21			
14# SA2738*	300m	150MsΔ	2.0m	sJ	50	30	6.0		2n	5.0	0.1m ₀	75	1.5				3Op	* [*]	L21			
15# ZDT10	300m	150Ms	2.4m	sJ	10	10	5.0	50m	0.1u	50	6.0m ₀	20	1.5				8Op	PL	L2H			
16# ZDT11	300m	150Ms	2.4m	sJ	10	10	5.0	50m	0.1u	50	6.0m ₀	20	1.5				8Op	PL	L2H			
17# ZDT20	300m	150Ms	2.4m	sJ	35	35	5.0	50m	0.1u	6.0	2.0m ₀	20	1.5				8Op	PL	L2H			
18# ZDT21	300m	150Ms	2.4m	sJ	35	35	5.0	50m	0.1u	6.0	2.0m ₀	20	1.5				8Op	PL	L2H			
19# ZTX300	300m	150MsΔ	3.0m	sA	25	25	5.0	500m	200n	6.0	10m ₀	50	1.5				6Op	PL	X59	F		
20# ZTX301	300m	150Ms	3.0m	sA	35	35	5.0	500m	200n	6.0	10m ₀	50	1.5				6Op	PL	X59	F		
21# ZTX302	300m	150MsΔ	3.0m	sA	35	35	5.0	500m	200n	6.0	10m ₀	100	1.5				6Op	PL	X59	F		
22# ZTX303	300m	150MsΔ	3.0m	sA	45	45	5.0	500m	200n	6.0	10m ₀	50	1.5				6Op	PL	X59	F		
23# ZTX304	300m	150MsΔ	3.0m	sA	70	70	5.0	500m	200n	6.0	10m ₀	50	1.5				6Op	PL	X59	F		
24# 2SC248	300m	170Ms	2.0m	sJ	70	60	5.0	50m	1.0u	6.0	2.5m ₀	60					2.5Op	PL	T018			
25# 2SC318	300m	170Ms	2.0m	sJ	50	30	5.0	100m	20u	3.0	1.0m ₀	90	1				3Op	PE	T018			
26# 2SC318A	300m	170Ms	2.0m	sJ	50	30	5.0	100m	20u	3.0	1.0m ₀	90	1				4.5Op	D	T018			
27# BSY72	300m	170Ms	2.0m	sJ	25	18	5.0	30m	1.0u	1.0	1.0m ₀	80	1.5				6Op	PE	T018	A		
28# BSY74	300m	170Ms	2.0m	sJ	25	18	5.0	100m	1.0u	1.0	1.0m ₀	80	1.5				6Op	PE	T018	A		
29# BSY76	300m	170Ms	2.0m	sJ	40	32	7.0	250m	0.5u	1.0	1.0m ₀	80	1.5				5.0k	1.0	5.0p	PE	T018	A
30# BSY78	300m	170Ms	2.0m	sJ	80	64	7.0	250m	0.5u	1.0	1.0m ₀	80	1.5				5.0k	80	4.0p	PE	T018	A
31# 2SC856	300m	180Ms	1.5m		150	150	5.0		10m	6.0	10m ₀	30	1.5				1.0p	P	T01			
32# 2SC917	300m	180Ms	40	40	30	30	5.0	100m	100	10m ₀	80					1.0p	AN0	T092	A			
33# MPSH04	300m	180Ms	2.7m	1J	80	80	4.0	100m	50u	100	1.5m ₀	120	1.0	2.0u								
34# MPSH05	300m	180Ms	2.7m	1J	80	80	4.0	100m	50u	100	1.5m ₀	150	1.0	2.0u								
35# JAN2N706†	300m	200MsΔ	2.0m	sS	25	15	5.0		100n	1.0	10m ₀	30	1.5				6Op	PL	T018	A		
36# 2N706A1	300m	200MsΔ	2.0m	sJ	25	15	5.0		10u	1.0	10m ₀	20					3.5p	ME	T018	A		
37# 2N7831	300m	200MsΔ	2.0m	sJ	40	20	5.0	200m	25u	1.0	10m ₀	20	1.5				3.5p	PL	T018	A		
38# 2N7841	300m	200MsΔ	2.0m	sJ	30	15	5.0	200m	25u	1.0	10m ₀	25					3.5p	PL	T018	A		
39# 2N17081	300m	200MsΔ	2.0m	sJ	25	20	5.0	200m	25u	1.0	10m ₀	20					6Op	PE	T046	A		
40# ZN22051	300m	200Ms	2.0m	s	25	20	3.0	200m	25n	1.0	10m ₀	20					6Op	PE	T018	A		
41# ZN22061	300m	200Ms	6.6m	s	25	20	3.0	200m	25n	1.0	10m ₀	90					6Op	PE	T046	A		
42# 2SC478	300m	200Ms	1.7m	sJ	50	50	15	120m	1.0u	120	20m ₀	20					4.0p	PE	T018	A		
43# 2SC886	300m	200Ms	2.0m	sJ	55	30	5.0	200m	1.0u	50	5.0m ₀	70					3.5p	PE	T046	A		
44# BC174A	300m	200Ms	3.0m	sJ	64	50	100m	15n	5.0	2.0m ₀	125	1.5	18u	2.7k	1.5		4.0ps	PE	X64	A		
45# BC174B	300m	200Ms	3.0m	sJ	64	50	100m	15n	5.0	2.0m ₀	240	1.5	30u	4.5k	2.0		4.0ps	PE	X64	A		
46# BC190A	300m	200Ms	2.0m	sJ	70	64	5.0	100m	15n	5.0	2.0m ₀	125	1.5	18u	2.7k	1.5		4.5p	PE	T018	A	
47# BC190B	300m	200Ms	2.0m	sJ	70	64	5.0	100m	15n	5.0	2.0m ₀	240	1.5	30u	4.5k	2.0		4.5p	PE	T018	A	
48# BSF255%	300m	200Ms	3.0m	sJ	30	20	5.0	30m	10	1.0	1.0m ₀	67					850ft	PE	X93	C		
49# BFY37	300m	200MsΔ	2.0m	sJ	25	20	5.0	100m	10u	100	10m ₀	35	1.5				2.3p	PL	T018			
50# BSX24	300m	200Ms	2.0m	sJ	32	32	5.0	100m	0.5u	50	5.0m ₀	35	1.5				5Op	PE	T018	A		
51# BSX661	300m	200MsΔ	2.0m	sJ	30	20	5.0	100m	0.1u	50	10m ₀	40	1.5				5Op	PE	T018	A		
52# BSX671	300m	200MsΔ	2.0m	sJ	30	20	5.0	100m	0.1u	50	10m ₀	60	1.5				2.5p	DPE	T018	A		
53# BSX891	300m	200MsΔ	2.0m	sJ	25	15	6.0	500m	50u	1.0	10m ₀	100	1.5				6Op	PE	T018	A		
54# BSY261	300m	200MsΔ	2.0m	sJ	20	15	6.0	100m	25n	2.0	10m ₀	20	1.5				6Op	PL	T018	A		
55# BSY271	300m	200MsΔ	2.0m	sJ	20	15	6.0	100m	25n	2.0	10m ₀	40	1.5				6Op	PL	T018	A		
56# BSY95A	300m	200MsΔ	2.0m	sJ	35	25	4.0	50m	0.5u	1.0	10m ₀	40	1.5				6Op	PE	T018	A		
57# ME2001	300m	200MsΔ	2.0m	sJ	35	25	4.0	50m	1.0	100	100m ₀	100	1.5				5Op	DPL	R110c	A		
58# UP1706A	300m	200Ms	2.0m	#J	25	20	5.0	10u	1.0	100	20m ₀	20	1.5				3.5p	ME	T018	A		
60# ZT801	300m	200Ms	2.4m	sJ	25	25	4.0	500m	50u	6.0	1.0m ₀	55	5.3u	2.4k	1.5							
61# ZT811	300m	200Ms	2.4m	sJ	45	35	4.0	500m	50u	6.0	1.0m ₀	55	5.3u	2.4k	1.5			4.5p	PL	T018	A	
62# ZT821	300m	200Ms	2.4m	sJ	45	35	4.0	500m	50u	6.0												

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DE RATE fab FREE (Hz)	TABS MAX RATINGS @ 25°C					MAX. IC @MAX (A)	TYPICAL 'H' PARAMETERS						Cob	STRU CTURE	DWG Y200 s/a TO200 Ser.	# C E O A D O E	
				I	M	E	BV _{cbo}	BV _{ceo}	BV _{ebo}	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}					
1# BSX771	300m	250M ³	120m	SJ	40	20	5.0	100m	0.5u ⁴	500	10m ²	80	1				PL	TO18	A ⁵	
2# GI3641	300m	250M ³	3.0m	#J	60	30	5.0	0.5u ⁵	100	100	150m ²	40	1				PEA	R97d		
3# GI3643	300m	250M ³	3.0m	#J	60	30	5.0	0.5u ⁵	100	100	150m ²	40	1				PEA	R97d		
4# BF254%	300m	280M ³	3.0m	#J	30	20	5.0	30m	100n	100	1.0m ²	115	1				850ff	PET	X93	
5# JAN2N7441	300m	280M ³	2.0m	SJ	20	15	5.0	200m	500n	350	1.0m ²	40	1				5 Op ⁶	TO18	A ⁶	
6# BSX781	300m	285M ³	2.0m	SJ	40	20	5.0	100m	0.5u ⁶	500	10m ²	120	1				PL	TO18	A ⁶	
7# ZDT40*	300m	290M ³	2.0m	SJ	45	35	7.0	500m	#5u	6.0 ⁷	10m ²	200	T ⁸				8p ⁹	PL	L2d	
8# ZDT41*	300m	290M ³	2.0m	SJ	60	45	7.0	500m	#5u	6.0 ⁷	10m ²	170	T ⁸				8p ⁹	PL	L2d	
9# ZDT42*	300m	290M ³	2.0m	SJ	60	60	7.0	500m	#5u	8.0 ⁷	10m ²	180	T ⁸				8p ⁹	PL	L2d	
10# ZDT44*	300m	290M ³	2.0m	SJ	80	50	7.0	500m	#5u	8.0 ⁷	1.0m ²	180	T ⁸				8p ⁹	PL	L2d	
11# ZDT45*	300m	290M ³	2.0m	SJ	100	70	7.0	500m	#5u	8.0 ⁷	1.0m ²	60	1				4 Op ¹⁰	TO18	A ¹¹	
12# 2N988	300m	300M ³	6.7k	SJ	20	10	3.0	220m	500n ¹¹	1.0 ¹²	10m ²	20	1				3.5p ¹³	TO18	A ¹²	
13# 2N989	300m	300M ³	6.7k	SJ	20	10	3.0	220m	500n ¹¹	1.0 ¹²	10m ²	20	1				6 Op ¹⁴	TO46	A ¹³	
14# N1708A1	300m	300M ³	1.7m	SJ	40	15	5.0	500m	25n ¹⁵	1.0 ¹⁶	10m ²	30	1				3.5p ¹⁷	TO52	A ¹⁴	
15# 2N2611	300m	300M ³	2.0m	SJ	40	15	6.0	500m	1.0 ¹⁷	1.0 ¹⁸	200m ²	20	T ¹⁹				3.5p ¹⁷	TO52	A ¹⁵	
16# ZN3425*	300m	300M ³	1.7m	SJ	40	15	5.0	25n	1.0 ²⁰	10m ²	20	1				6 Op ²¹	L21			
17# 2S95AT	300m	300M ³	1.7m	SJ	20	15	5.0	200m	50n ²²	350	1.0m ²	30	1				6 Op ²²	PE	TO18	
18# ZSC383	300m	300M ³	3.0m	#J	75	40	3.0	50m	25u ²³	130	12m ²	20	1				2 Op ²⁴	PE	R67a	
19# ZSC388A	300m	300M ³	3.0m	#J	25	25	3.0	50m	2.5n ²⁵	120	12m ²	20	1				7.0p	PE	R67a	
20# ZSC735	300m	300M ³	3.0m	#J	35	30	5.0	400m	1.0u ²⁶	100m ²	40	1				3.5p ²⁷	PE	T052		
21# A4045	300m	300M ³	2.0m	SJ	16	5.0	5.0	500m	4.0u ²⁸	1.0 ²⁹	100m ²	20	T ³⁰				3.5p ²⁷	PE	T052	
22# 40519	300m	300M ³	2.0m	SJ	16	5.0	5.0	500m	25n	1.0 ³⁰	50m ²	20	1				3.0p	PE	T052	
23# 40637	300m	300M ³	2.0m	SJ	30	5.0	5.0	100m	1.0u ³¹	2.0m ²	415	T ³²				2.5p ³³	PE	R97b		
24# A134	300m	300M ³	3.0m	#J	90	50	8.0	100m	1.0u ³⁴	2.0m ²	650	70u	5.5k ³⁵	3.0			2.5p ³³	PE	R97b	
25# A135	300m	300M ³	3.0m	#J	90	50	8.0	100m	1.0u ³⁴	2.0m ²	900	100u	14k ³⁶	5.5			2.5p ³³	PE	R97b	
26# A136	300m	300M ³	3.0m	#J	90	50	8.0	100m	1.0u ³⁴	2.0m ²	900	100u	5.5k ³⁷	3.0			2.5p ³³	PE	R97b	
27# A137	300m	300M ³	3.0m	#J	45	30	5.0	100m	1.0u ³⁴	2.0m ²	415	50u	5.5k ³⁷	3.0			2.5p ³³	PE	R97b	
28# A138	300m	300M ³	3.0m	#J	45	30	5.0	100m	1.0u ³⁴	2.0m ²	650	70u	6.5k ³⁸	4.0			2.5p ³³	PE	R97b	
29# A139	300m	300M ³	3.0m	#J	45	30	5.0	100m	1.0u ³⁴	2.0m ²	900	100u	15k ³⁹	5.5			2.5p ³³	PE	R97b	
30# A157A	300m	300M ³	2.0m	SJ	50	45	5.0	100m	1.0u ³⁴	2.0m ²	900	100u	15k ³⁹	1.5			2.5p ³³	PE	T018	
31# A157B	300m	300M ³	2.0m	SJ	50	45	5.0	100m	1.0u ³⁴	2.0m ²	100	100	1.5k ⁴⁰	1.5			2.5p ³³	PE	MM12a	
32# A158B	300m	300M ³	2.0m	SJ	30	20	5.0	100m	1.0u ³⁴	2.0m ²	330	30u	4.5k ⁴¹	2.0			2.5p ³³	PE	TO18	
33# A158C	300m	300M ³	2.0m	SJ	30	20	5.0	100m	1.0u ³⁴	2.0m ²	330	30u	4.5k ⁴¹	2.0			2.5p ³³	PE	TO18	
34# A159B	300m	300M ³	2.0m	SJ	30	20	5.0	100m	1.0u ³⁴	2.0m ²	330	30u	4.5k ⁴¹	2.0			2.5p ³³	PE	TO18	
35# A159C	300m	300M ³	2.0m	SJ	30	20	5.0	100m	1.0u ³⁴	2.0m ²	600	60u	8.7k ⁴²	3.0			2.5p ³³	PE	TO18	
36# AT406	300m	300M ³	2.4m	SJ	50	30	5.0	500m	1.0 ⁴³	50m ²	100	T ⁴⁴				8 Op ⁴⁵	PE	MM12a		
37# AT407	300m	300M ³	2.4m	SJ	50	45	5.0	500m	200m ²	1.0 ⁴⁵	50m ²	100	T ⁴⁶				8 Op ⁴⁵	PE	MM12a	
38# BC107A	300m	300M ³	2.0m	SJ	45	45	5.0	100m	15n	5.0 ⁴⁷	2.0m ²	180	18u	2.7k ⁴⁸	1.5			3.7p	PE	R18
39# BC107B	300m	300M ³	2.0m	SJ	45	45	5.0	100m	15n	5.0 ⁴⁷	2.0m ²	290	30u	4.8k ⁴⁹	2.0			3.7p	PE	R18
40# BC108A	300m	300M ³	3.3m	SJ	20	20	5.0	100m	15n	5.0 ⁴⁷	2.0m ²	180	18u	2.7k ⁵⁰	1.5			3.7p	PE	R18
41# BC108B	300m	300M ³	2.0m	SJ	20	20	5.0	100m	15n	5.0 ⁴⁷	2.0m ²	290	30u	4.8k ⁵¹	2.0			3.7p	PE	R18
42# BC108C	300m	300M ³	2.0m	SJ	20	20	5.0	100m	15n	5.0 ⁴⁷	2.0m ²	520	60u	8.7k ⁵²	3.0			3.7p	PE	R18
43# BC109B	300m	300M ³	2.0m	SJ	20	20	5.0	100m	15n	5.0 ⁴⁷	2.0m ²	290	30u	4.8k ⁵³	2.0			3.7p	PE	R18
44# BC109C	300m	300M ³	3.0m	SJ	20	20	5.0	100m	15n	5.0 ⁴⁷	2.0m ²	520	60u	8.7k ⁵⁴	3.0			3.7p	PE	R18
45# BC173C	300m	300M ³	3.0m	#J	30	20	5.0	100m	15n	5.0 ⁵⁵	2.0m ²	450	60u	8.7k ⁵⁶	3.0			4.0p ⁵⁷	PE	X64
47# BC237%	300m	300M ³	3.0m	#J	50	45	6.0	100m	15u ⁵⁸	5.0 ⁵⁹	2.0m ²	125	18u	2.7k ⁶⁰	1.5			2.5p ⁶¹	PE	X93
48# BC237A	300m	300M ³	3.0m	#J	50	45	6.0	100m	15u ⁵⁸	5.0 ⁵⁹	2.0m ²	220	30u	4.8k ⁶²	2.0			2.5p ⁶¹	PE	X93
49# BC237B	300m	300M ³	3.0m	#J	50	45	6.0	100m	15u ⁵⁸	5.0 ⁵⁹	2.0m ²	330	30u	4.5k ⁶³	2.0			2.5p ⁶¹	PE	X93
50# BC238%	300m	300M ³	3.0m	#J	30	20	5.0	100m	15u ⁶⁴	5.0 ⁶⁵	2.0m ²	125	18u	2.7k ⁶⁶	1.5			2.5p ⁶¹	PE	X93
51# BC238A	300m	300M ³	3.0m	#J	30	20	5.0	100m	15u ⁶⁴	5.0 ⁶⁵	2.0m ²	220	30u	4.5k ⁶⁷	2.0			2.5p ⁶¹	PE	X93
52# BC238B	300m	300M ³	3.0m	#J	30	20	5.0	100m	15u ⁶⁴	5.0 ⁶⁵	2.0m ²	330	30u	4.5k ⁶⁸	2.0			2.5p ⁶¹	PE	X93
53# BC238C	300m	300M ³	3.0m	#J	30	20	5.0	100m	15u ⁶⁴	5.0 ⁶⁵	2.0m ²	600	60u	8.7k ⁶⁹	3.0			2.5p ⁶¹	PE	X93
54# BC239A	300m	300M ³	2.2m	SJ	20	20	5.0	50m	200p ⁷⁰	5.0 ⁷¹	2.0m ²	330	30u	4.5k ⁷²	2.0			1.5pt	DPL	R97
61# BFV83	300m	300M ³	588u	SJ	40	15	5.0	500m	1.0											

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1) MAX. COLL. DISS. @25°C	2) DERATE IN FREE AIR	ABS MAX RATINGS @25°C				MAX. ICBO @MAX	TYPICAL "H" PARAMETERS				Cob	STRUCTURE	DWG #	C E A D D E				
				fab	ME A M	BVcbo	BVceo	BVbeo	c	Vcb	le	hfe	hoe	hie	hre	(mhos)	(Ω)	X.0001	(F)	
1	ZN33391	300m	400MΔ	1.7m	\$J	40	40	4.0		25uØ	10Ø	4.0mØ	30	TΔ		1.6pØ	PL	T072	G	
2	2N51861	300m	400MΔ	1.7m	\$S	10	5.0	3.0	300m	5.0uØ	1.0Ø	10mØ	25	TΔ		3pØ		T052	AØ	
3	2N51871	300m	400MΔ	1.7m	\$S	25	10	5.0	500m	45uØ	1.0Ø	10mØ	30	TΔ		3.5pØ		T052	AØ	
4#	2SC3561	300m	400Ms	2.0m	\$J	30	15	5.0	200m	1.0uØ	1.0Ø	10mØ	60	T		4.5pØ	PE	T046	AØ	
5#	2SC979	300m	400Ms	5.0	\$J	70	50	5.0	100m	1.0uØ	1.0Ø	10mØ	70	T		3.0pØ	PE	T018	A	
6	BF154	300m	400Ms	3.0m	\$J	30	20	4.0		50uØ	1.0Ø	10mØ	50	1#		2.0pØ	DPL	R87		
7#	BFV871	300m	400MΔ	5.88u	\$J	40	40	4.5	500m	40uØ	1.0Ø	10mØ	20	1#Δ		4pØ	PE	U26a	B	
8#	BFY19	300m	400Ms	2.0m	\$J	30	20	3.0	100m	10uØ	9.0Ø	10mØ	10			4.0pØ	PLØ	T018		
9#	BFY79	300m	400MΔ	1.7m	\$J	30	30	4.0		25uØ	10Ø	4.0mØ	30	TΔ		1.6pØ	DPLØ	T072	G	
10#	BSV531	300m	400M	2.4m	s						1.0Ø	10mØ	40	TΔ		4 Ø		U34		
11#	BSV541	300m	400M	2.4m	s						1.0Ø	10mØ	20	TΔ		4.0pØ		U34		
12	OD101-71*	300m	400MΔ	1.7m	\$S	45	45	6.5	20m	200uØ	5.0Ø	10uØ	150	TΔ		2.0pØ		L2p		
13	OD102-71*	300m	400MΔ	1.7m	\$S	30	30	6.5	20m	200uØ	5.0Ø	10uØ	200	TΔ		2.0pØ		L2p		
14	OD103-71*	300m	400MΔ	1.7m	\$S	45	45	6.5	20m	200uØ	5.0Ø	10uØ	200	TΔ		2.0pØ		L2p		
15	OD104-71*	300m	400MΔ	1.7m	\$S	45	45	6.5	20m	200uØ	5.0Ø	10uØ	200	TΔ		4pØ	DPE	T0106		
16	S15658	300m	400Ms	3.0m	\$J	40	15	4.0		0.5uØ	10Ø	15mØ	70	1#		11pØ	DPEΔ	T0105	A	
17	SE60201	300m	400Ms	5.9m	\$J	60	60	6.5	1	10uØ	10Ø	10mØ	100	T		11pØ	DPEΔ	T05	A	
18	SE60211	300m	400Ms	5.9m	\$J	80	80	6.5	1	10uØ	10Ø	10mØ	120	T		4.5pØ	ME	T018	AØ	
19#	UPI705B	300m	400M	2.0m	#J	25	15	5.0		10uØ	1.0Ø	10mØ	40	T		4.0pØ	PL	X59	F	
20#	ZTX3121	300m	400MΔ	3.0m	*S	30	12	5.0	500m	#200uØ	1.0Ø	10mØ	40	TΔ		2.8pØ	ME	T018	AØ	
21	2N8351	300m	450Ms	2.0m	\$J	25	20	3.0	200m	50uØ	1.0Ø	10mØ	40	T		6pØ	PE	T018	C	
22#	2SC5957	300m	450Ms	2.4m	\$J	30	30	4.0	25m	60uØ	10	4.0pØ	28	TΔ		2.8pØ	ME	T018	AØ	
24	2N8341	300m	500Ms	2.0m	\$J	40	30	5.0	200m	50uØ	1.0Ø	10mØ	40	T		4pØ	PE	T046	A	
25	2N4494†	300m	500Ms	1.7m	\$S	15		4.5	200m	40uØ	35Ø	10mØ	40	1#Δ		4.0pØ	PE	T046	AØ	
26	JAN2N4494†	300m	500Ms	1.7m	\$J	40	15	4.5		30uØ	1.0Ø	10mØ	40	1#Δ		2.3pØ	ME	T018		
27#	2SC79	300m	500Ms	2.0m	\$J	15	15	3.0	50m	1.0uØ	6.0Ø	1.0m	50			4pØ	PE	U26a	B	
28#	BFV87A†	300m	500Ms	5.88u	\$J	40	40	4.5	500m	40uØ	1.0Ø	10mØ	40	1#Δ		4pØ	DPE	T0105	C	
29#	BFV87B†	300m	500Ms	5.88u	\$J	40	40	4.5	200m	30uØ	35Ø	10mØ	40	1#Δ		300fs	PL	X59	F	
30#	SE5029	300m	500Ms	2.7m	\$J	35	30	3.0	200m	10uØ	5.0mØ	10mØ	70			4.5pØ	ME	T018	AØ	
31#	SE5031	300m	500Ms	2.7m	TΔ	40	30	4.0		100uØ	10Ø	5.0mØ	80	T		300fs	DPE	T0105	C	
32#	ZTX3131	300m	500Ms	3.0m	*S	40	15	5.0	500m	#200uØ	1.0Ø	10mØ	40	TΔ		4.0pØ	PL	X59	F	
33#	ZTX3141	300m	500Ms	3.0m	*S	40	15	5.0	500m	#200uØ	1.0Ø	10mØ	40	T		4.0pØ	PL	X59	F	
34	ZN4104	300m	540MØ	2.0m	*S	60	60	10	50m	0.1uØ	5.0Ø	1.0mØ	14kØ	60uØ	42kØ	8	4.5pØ		T018	AØ
35#	2SC6011	300m	560Ms	2.0m	\$J	25	15	5.0	100m	10uØ	1.0Ø	10mØ	60	T		4pØ	PE	T018		
36	2N849	300m	560Ms	2.0m	\$J	25	15	5.0	50m	10uØ	1.0Ø	10mØ	40	1#Δ		5pØ	ME	u4		
37	2N850	300m	600Ms	2.0m	\$J	25	15	5.0	50m	10uØ	1.0Ø	10mØ	80	1#Δ		3pØ	ME	Δ		
38	2N30101	300m	600Ms	1.7m	\$J	15	6.0	4.0	50m	0.1uØ	40Ø	1.0mØ	15	TΔ		1.7pØ		T018	AØ	
39	2N3423*	300m	600Ms	1.7m	\$J	30	15	3.0	50m	0.1uØ	3.0Ø	1.0mØ	20	TΔ		1.7pØ	*	L2t		
40	ZN3424*	300m	600Ms	1.7m	\$J	30	15	3.0	50m	0.1uØ	3.0Ø	3.0mØ	20	T		2.5pØ	E	T018	AØ	
41	ZN3544	300m	600Ms	2.0m	*S	25	25	3.0	100m	10uØ	10Ø	10mØ	25	T		2.5pØ	PE	T018	AØ	
42	BSX44	300m	600Ms	2.0m		15		4.0	200m	#		20mØ	30	T		2.5pØ	PL	T018		
43	FT709†	300m	600Ms	1.7m	\$J	40	20	5.0		50uØ	10Ø	10mØ	600	1#Δ		3pØ	PE	T018	AØ	
44	G13794	300m	600Ms	3.0m	*J	30	15	3.0	50ms	1.0uØ	15		120	T		10pØ	PL	T072	G	
45#	HET709†	300m	600Ms	3.0m	*J	30	15	3.0		10uØ	1.0Ø	10mØ	40	1#Δ		3.0pØ	ANØ	L66a		
46	MD918*	300m	600Ms	1.9m	\$J	30	15	5.0	50m	10uØ	5.0Ø	1.0mØ	30	TΔ		3.0pØ	ANØ	L66a		
47	MD918A*	300m	600Ms	1.9m	\$J	30	15	5.0	50m	10uØ	5.0Ø	1.0mØ	30	TΔ		3.0pØ	ANØ	L66a		
48	MD918B*	300m	600Ms	1.9m	\$J	30	15	5.0	50m	10uØ	5.0Ø	1.0mØ	30	TΔ		3.0pØ	ANØ	L66a		
49	MM1941	300m	600Ms	2.0m	\$J	30	30	3.0	200m	10uØ	1.0Ø	10mØ	50	T		2.5pØ	E	T018	AØ	
50#	SE5030A	300m	600Ms	2.7m	*A	45	40	4.5	25m	50uØ	1.0Ø	10mØ	7.0	T		280fs	DPE	T0105	C	
51#	ZT7091	300m	600Ms	1.7m	\$J	15	6.0	4.0		0.5uØ	50Ø	10mØ	55	T		3pØ	PL	T018		
52#	ZT12475†	300m	600Ms	1.7m	\$J	15	6.0	4.0		0.5uØ	40Ø	20mØ	50	T		2.4pØ	PE	R64		
53	ZN7091	300m	800Ms	1.7m	\$J	15	6.0	4.0		0.5uØ	50Ø	10mØ	55	T		3.0pØ	PL	T018	AØ	
54	ZN709At	300m	800Ms	1.7m	\$J	15	6.0	4.0		5.0nØ	50Ø	10mØ	60	T		3.0pØ	PL	T018	AØ	
55	ZN2475†	300m	800Ms	1.7m	\$J	15	6.0	4.0		10uØ	40Ø	20mØ	50	T		2.4pØ	PE	H64		
56	ZN2615	300m	800Ms	1.7m	\$J	30	15	3.0		1nØ	1.0Ø	3.0mØ	20	T#Δ		2.8pØ	PLØ	T018	AØ	
57#	BSX27†	300m	800Ms	1.7m	\$J	15	6.0	4.0		10uØ	40Ø	10mØ	80	1#Δ		2.3pØ	DPE	T018	AØ	
58	ZN851	300m	900Ms	2.0m	\$J	20	12	5.0	200m	10uØ	35Ø	10mØ	40	T		5pØ	EA	T050	C	
59	ZN852	300m	900Ms	2.0m	\$J	20	12	5.0	200m	10uØ	35Ø	10mØ	80	T		5pØ	EA	T050	C	
60	ZN2616	300m	900Ms	1.7m	\$J	30	15	3.0	50m	0.1uØ	1.0Ø	3.0mØ	50	T		2.4pØ	PEØ	T046	AØ	
61	ZN27229	300m	900Ms	1.7m	\$J	30	15	3.0	50m	0.1uØ	1.0Ø	3.0mØ	50	T		2.4pØ	PEØ	T046	AØ	
62	ZN25008†	300m	900Ms	1.7m	\$J	20	20	4.5	100m	0.1uØ	5.0Ø	5.0mØ	45	TΔ		2.5pØ	PEØ	T046	AØ	
63#	BFY78	300m	900Ms	1.7m	\$J	25	12	3.0	50m	0.2uØ	1.0Ø	3.0mØ	50	T		2.4pØ	DPEØ	T018	AØ	
64	ZN2784†	300m	1.06G	1.7m	\$J	15	6.0	4.0		5nØ	5.0Ø	10mØ	120	T		3pØ	PE	T018	AØ	
65#	BFW98	300m	1.06G	1.7m	\$J	36	18	4.0		6.0nØ	1.0Ø	3.0mØ	35	T		2.5pØ	MT59e	GCØ		
66	K2101	300m	1.06G	1.7m	\$J	30	10	2.5		10nØ	1.0Ø	3.0mØ	30	T		1.0pØ	Ø	T050	C	
67	K2102	300m	1.06G	1.7m	\$J	30	10	2.5		10nØ	1.0Ø	3.0mØ	30	T		1.0pØ	Ø	T050	C	

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX COLL. DISS. @25°C (W)	DE RATE fab (Hz)	ABS MAX RATINGS @25°C				MAX. IC @MAX. (A)	TYPICAL TH PARAMETERS				Cob	STRUCTURE	DWG #	C E O A D D E		
				M E IN FREE AIR W/C	B V c b o (V)	B V c e o (V)	B V e b o (V)	I c (A)	V cb (V)	I e (A)	h fe (mhos)	COMMON EMITTER hoe (Ω)	h ie (Ω)	h re (Ω)	X.0001 (F)			
1	K2102B	300m	1.7G ¹	1.7m	\$J	30	10	2.5	10n ²	1.0 ³	3.0m ⁴	30	△	1.0p ⁵	Ø	T050	C	
2	K2103B	300m	1.7G ¹	1.7m	\$J	30	10	2.5	10n ²	1.0 ³	3.0m ⁴	30	△	1.0p ⁵	Ø	T050	C	
3	K2104B	300m	1.7G ¹	1.7m	\$J	30	10	2.5	10n ²	1.0 ³	3.0m ⁴	30	△	1.0p ⁵	Ø	T050	C	
4	K2105B	300m	1.7G ¹	1.7m	\$J	30	10	2.5	10n ²	1.0 ³	3.0m ⁴	30	△	1.0p ⁵	Ø	T050	C	
5	K2106B	300m	1.7G ¹	1.7m	\$J	30	10	2.5	10n ²	1.0 ³	3.0m ⁴	30	△	1.0p ⁵	Ø	T050	C	
6	K2107B	300m	1.7G ¹	1.7m	\$J	30	10	2.5	10n ²	1.0 ³	3.0m ⁴	30	△	1.0p ⁵	Ø	T050	C	
7	K2108B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	1.0p ⁵	Ø	T050	C	
8	K2526	300m ⁶	1.7G ¹	1.7m	\$J	20	10	2.0	30u ⁷	1.0 ³	3.0m ⁴	20	1△	1.5p ⁸	Ø	T072	G	
9	K2601B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	1.5p ⁵	Ø	T050	C	
10	K2602B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	1.5p ⁵	Ø	T050	C	
11	K2603B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	1.5p ⁵	Ø	T050	C	
12	K2604B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	1.5p ⁵	Ø	T050	C	
13	K2610B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	2.0p ⁹	Ø	T018	A ¹⁰	
14	K2611B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	2.0p ⁹	Ø	T018	A ¹⁰	
15	K2612B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	2.0p ⁹	Ø	T018	A ¹⁰	
16	K2613B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	2.0p ⁹	Ø	T018	A ¹⁰	
17	K2614B	300m	1.7G ¹	1.7m	\$J	20	10	2.0	100n ²	1.0 ³	3.0m ⁴	20	△	2.0p ⁹	Ø	T018	A ¹⁰	
18	K2N5762	300m	3.3G ¹¹	2.4m	\$S	20	15	3.0	40m	500n ¹²	10 ³	15m ¹³	30	△	800p ¹⁴	Ø	X80a	S
19	#2SC5985A	300m	3.7G ¹⁵	590m	\$J	20	15	3.0	40m	500n ¹²	10 ³	15m ¹³	30	1△	10 ¹⁶	PE	X80	GJ
20	2N5088	310m	3.6m	IS	35	30	3.0	50m	0.5u ¹⁷	5.0 ¹⁸	1.0m ¹⁹	350	△	4p ²⁰	Ø	T092	A	
21	2N5089	310m	3.6m	IS	30	25	3.0	50m	0.5u ¹⁷	5.0 ¹⁸	1.0m ¹⁹	450	△	4p ²⁰	Ø	T092	A	
22	CS5088	310m	3.6m	IS	35	30	3.0	50m	50n ²¹	5.0 ²²	1.0m ²³	350	△	4 Op ²⁴	Ø	T016	A	
23	CS5089	310m	3.6m	IS	30	25	3.0	50m	50n ²¹	5.0 ²²	1.0m ²³	450	△	4 Op ²⁴	Ø	T016	A	
24	MPS2711	310m	2.9m	IS	18	5.0								4p ²⁵	AN	T092		
25	MPS2712	310m	2.9m	TJ	18									4p ²⁶	AN	T092		
26	MPS2715	310m	2.9m	TJ	18									3.5p ²⁷	AN	T092		
27	MPS2716	310m	2.9m	TJ	18									3.5p ²⁷	AN	T092		
28	MPS3392	310m	2.9m	TJ	25									3.5p ²⁸	AN	T092		
29	MPS3393	310m	2.9m	TJ	25									3.5p ²⁸	AN	T092		
30	MPS3394	310m	2.9m	TJ	25									3.5p ²⁸	AN	T092		
31	MPS3395	310m	2.9m	TJ	25									3.5p ²⁸	AN	T092		
32	MPS3396	310m	2.9m	TJ	25									3.5p ²⁸	AN	T092		
33	MPS3397	310m	2.9m	TJ	25									3.5p ²⁸	AN	T092		
34	MPS3398	310m	2.9m	TJ	25									3.5p ²⁸	AN	T092		
35	MPS3397	310m	2.9m	TJ	30									3.5p ²⁸	AN	T092		
36	MPS3708	310m	2.9m	TJ	30									3.5p ²⁸	AN	T092		
37	MPS3709	310m	2.9m	TJ	30									3.5p ²⁸	AN	T092		
38	MPS3710	310m	2.9m	TJ	30									3.5p ²⁸	AN	T092		
39	MPS3711	310m	2.9m	TJ	30									3.5p ²⁸	AN	T092		
40	MPS56511	310m	2.8m	TJ	30	20	3.0	100m	0.5u ²⁹	10 ³⁰	10m ³¹	25	1△	2.5p ³²	EA	T092	A	
41	MPS56544	310m	2.9m	TJ	60									7p ³³	AN	T092		
42	MPS56545	310m	2.9m	TJ	60									4.0p ³⁴	Ø	T092	A	
43	MPS56567	310m	2.9m	TJ	40									7p ³⁵	AN	T092		
44	2N5209	310m	30M ³⁶	2.8m	IS	50	50	4.5	50m	50n ³⁷	5.0 ³⁸	1.0m ³⁹	150	△	4.0p ⁴⁰	Ø	T092	A
45	2N5210	310m	30M ³⁶	2.8m	IS	50	50	4.5	50m	50n ³⁷	5.0 ³⁸	1.0m ³⁹	250	△	Ø	AN	T092	A
46	HEP545	310m ⁴¹	30M ⁴²	2.8m	TJ	30	20	5	200m ⁴³	200ns ⁴⁴	20			10p ⁴⁵	Ø	T092	A	
47	HEP7315	310m ⁴¹	30M ⁴²	2.8m	TJ	20	20	5	25m ⁴⁶	500ns ⁴⁷	5.0			10p ⁴⁸	Ø	DPLØ	T016	A
48	SEA4172	310m	40M ⁴⁹	3.0m	TJ	20	20	5	100n	10 ⁵⁰	10m ⁵¹	50	△	10p ⁵²	DPLØ	T016	A	
49	2N5225	310m	50M ⁵³	2.8m	IS	25	25	4.0	500m	30u ⁵⁴	10 ⁵⁵	50m ⁵⁶	30	△	20p ⁵⁷	Ø	T092	A
50	MPSL01	310m	60M ⁵³	2.8m	TJ	140	120	5.0	600m	1.0u ⁵⁸	10 ⁵⁹	1.0m ⁶⁰	150	△	8.0p ⁶¹	AN	T092	A
51	MPS-A09	310m	80M ⁵³	2.8m	TJ	50	50	5.0	50m	1.0u ⁵⁸	5.0 ⁶²	1.0m ⁶³	100	△	5p ⁶⁴	AN	T092	A
52	2N5220	310m	100M ⁵³	2.8m	IS	15	15	5.0	500m	1.0u ⁵⁸	10 ⁶⁵	50m ⁶⁶	30	△	10p ⁶⁷	Ø	T092	A
53	2N5550	310m	100M ⁵³	2.8m	IS	160	140	6.0	600m	1.0u ⁵⁸	10 ⁶⁸	1.0m ⁶⁹	50	△	6.0p ⁷⁰	Ø	T092	A
54	2N5551	310m	100M ⁵³	2.8m	IS	180	160	6.0	600m	1.0u ⁵⁸	10 ⁷¹	1.0m ⁷²	50	△	6.0p ⁷³	Ø	T092	A
55	HEP7333	310m	100M ⁵³	2.8m	TJ	30	20	4.0	400ms ⁷⁴	500ns ⁷⁵	5.0			95	1			
56	HEP7337	310m	100M ⁵³	2.8m	TJ	30	25	6.0	100ms ⁷⁶	100ns ⁷⁷	5.0			600	1			
57	HEP7338	310m	100M ⁵³	2.8m	TJ	45	40	8.0	70ms ⁷⁸	50ns ⁷⁹	10			250	1			
58	MPS7304	310m	100M ⁵³	2.8m	TJ	50	30	5.0	600m	10u ⁸⁰	2.0 ⁸¹	50m ⁸²	100	1△	12p ⁸³	AN	T092	A
59	MPS7305	310m	100M ⁵³	2.8m	TJ	50	30	5.0	600m	10u ⁸⁰	2.0 ⁸¹	50m ⁸²	50	1△	12p ⁸³	AN	T092	A
60	MPS7306	310m	100M ⁵³	2.8m	TJ	40	20	5.0	600m	10u ⁸⁰	2.0 ⁸¹	50m ⁸²	30	1△	12p ⁸³	AN	T092	A
61	2N5219	310m	150M ⁸⁴	2.8m	IS	20	15	3.0	100m	1.0u ⁸⁵	10 ⁸⁶	2.0m ⁸⁷	35	△	4p ⁸⁸	Ø	T092	A
62	2N5223	310m	150M ⁸⁴	2.8m	IS	25	20	3.0	100m	1.0u ⁸⁵	10 ⁸⁹	2.0m ⁹⁰	50	△	4p ⁹¹	Ø	T092	A
63	HEP7335	310m ⁹²	150M ⁸⁴	2.8m	TJ	45	40	4.0	600ms ⁹³	600ns ⁹⁴	20			300	1			
64	HEP7336	310m ⁹²	150M ⁸⁴	2.8m	TJ	55	50	5.0	600ms ⁹³	600ns ⁹⁴	20			140	1			

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No	MAX RATINGs @ 25°C										MAX. ICBO	TYPICAL h PARAMETERs					Cob	STRUCTURE	DWG # C		
		COLL. DISS. @25°C (W)	DERATE IN fab	M IFREE X P	E BV _{CEO}	BV _{CEO}	I _C	@MAX	BIAS V _{CB}	I _E	h _{FE}	COMMON Emitter h _{OE}	h _{IE}	h _{RE}	(mhos)	(Ω)	X 0001 (F)					
1	MPSH30	310m	300M ^Δ	2.8m	TJ	20	20	3.0	50n ^Δ	5.0 ^Δ	4.0m ^Δ	20 TΔ	-	-	-	-	650fS ^Δ	AN ^Δ	T092	C		
2	MPSH31	310m	300M ^Δ	2.8m	TJ	20	20	3.0	50n ^Δ	5.0 ^Δ	4.0m ^Δ	20 TΔ	-	-	-	-	650fS ^Δ	AN ^Δ	T092	C		
3	MPSH37	310m	300M ^Δ	2.8m	TJ	40	30	5.0	500n	10 ^Δ	5.0m ^Δ	25 TΔ	-	-	-	-	700fS ^Δ	AN	T092	C		
4	MPS834 [†]	310m	350M ^Δ	2.8m	TJ	40	30	5.0	200m	50 ^Δ	1.0 ^Δ	10m ^Δ	25 TΔ#	-	-	-	4p ^Δ	AN	T092	A		
5	MPS6540	310m	350M ^Δ	2.8m	TJ	30	30	4.0	100 ^Δ	10 ^Δ	2.0m ^Δ	25 TΔ	-	-	-	-	65p ^Δ	EA	T092	A		
6	MPS6568	310m	375M ^Δ	2.8m	TJ	20	20	3.0	50n ^Δ	5.0 ^Δ	4.0m ^Δ	20 TΔ	-	-	-	-	600fS ^Δ	AN ^Δ	T092	A		
7	MPS6568A	310m	375M ^Δ	2.8m	TJ	20	20	3.0	50n ^Δ	5.0 ^Δ	4.0m ^Δ	20 TΔ	-	-	-	-	650fS ^Δ	AN ^Δ	T092	A		
8	MPS6514	310m	390M ^Δ	2.8m	TJ	40	25	4.0	100m	05u ^Δ	10 ^Δ	2.0m ^Δ	150 TΔ	-	-	-	-	3.5p ^Δ	EA	T092	A	
9	MPS6515	310m	390M ^Δ	2.8m	TJ	40	25	4.0	100m	05u ^Δ	10 ^Δ	2.0m ^Δ	250 TΔ	-	-	-	-	3.5p ^Δ	EA ^Δ	T092	A	
10	MPS6520	310m	390M ^Δ	2.8m	TJ	40	25	4.0	100m	05u ^Δ	10 ^Δ	2.0m ^Δ	200 TΔ	-	-	-	-	3.5p ^Δ	EA ^Δ	T092	A	
11	MPS6521	310m	390M ^Δ	2.8m	TJ	40	25	4.0	100m	05u ^Δ	10 ^Δ	2.0m ^Δ	300 TΔ	-	-	-	-	3.5p ^Δ	EA	T092	A	
12	MPS6530	310m	390M ^Δ	2.8m	TJ	60	40	5.0	600m	05u ^Δ	10 ^Δ	100m ^Δ	85 TΔ	-	-	-	-	3.5p ^Δ	EA	T092	A	
13	MPS6531	310m	390M ^Δ	2.8m	TJ	60	40	5.0	600m	05u ^Δ	10 ^Δ	100m ^Δ	150 TΔ	-	-	-	-	3.5p ^Δ	EA	T092	A	
14	MPS6532	310m	390M ^Δ	2.8m	TJ	50	30	5.0	600m	10u ^Δ	10 ^Δ	100m ^Δ	30 TΔ	-	-	-	-	3.5p ^Δ	EA	T092	A	
15	ZN5222	310m	450M ^Δ	2.8m	TS	20	15	2.0	50m	10u ^Δ	10 ^Δ	4.0m ^Δ	20 TΔ	-	-	-	-	1.3p ^Δ	-	T092	A	
16	ZN5330	310m	500M ^Δ	2.8m	TJ	120	100	5.0	600m	50n ^Δ	10 ^Δ	1.0m ^Δ	50 TΔ	40u ^Δ	60k ^Δ	-	-	4.0p ^Δ	TO106	A		
17	ZN5331	310m	500M ^Δ	2.8m	TJ	160	140	5.0	800m	50n ^Δ	10 ^Δ	1.0m ^Δ	60 TΔ	40u ^Δ	60k ^Δ	-	-	4.0p ^Δ	TO106	A		
18	ZN5332	310m	500M ^Δ	2.8m	TJ	160	140	5.0	600m	50n ^Δ	10 ^Δ	1.0m ^Δ	125 TΔ	40u ^Δ	60k ^Δ	-	-	4.0p ^Δ	TO106	A		
19	ZN5333	310m	500M ^Δ	2.8m	TJ	200	180	6.0	600m	10u ^Δ	10 ^Δ	1.0m ^Δ	50 TΔ	40u ^Δ	60k ^Δ	-	-	4.0p ^Δ	TO106	A		
20	MPS2369 [†]	310m	500M ^Δ	2.8m	TJ	40	15	4.5	500m	40u ^Δ	10 ^Δ	10m ^Δ	40 TΔ#	-	-	-	-	4p ^Δ	AN	T092	A	
21	HEP718 [†]	310m [†]	600M ^Δ	2.8m	TJ	30	20	4.0	100m [†]	40n [†]	15	80 TΔ	-	-	-	-	-	-	-	T092	A	
22	MPP500 [†]	310m	600M ^Δ	2.8m	TJ	40	40	4.0	100m [†]	50n ^Δ	10 ^Δ	4.0m ^Δ	30 TΔ	-	-	-	-	-	-	-	T092	A
23	MPS918	310m	600M ^Δ	2.8m	TJ	30	15	3.0	100m [†]	10n ^Δ	10 ^Δ	8.0m ^Δ	20 TΔ	-	-	-	-	1.7p ^Δ	AN ^Δ	T092	A	
24	MPS3563	310m	600M ^Δ	2.8m	TJ	30	12	2.0	100m [†]	50n ^Δ	10 ^Δ	8.0m ^Δ	20 TΔ#	-	-	-	-	1.7p ^Δ	AN ^Δ	T092	A	
25	MPS6546	310m	600M ^Δ	2.9m	TJ	35	30	3.0	100m [†]	-	-	-	-	-	-	-	3.5p ^Δ	-	T092	A		
26	MPS6547	310m	600M ^Δ	2.9m	TJ	35	30	3.0	100m [†]	-	-	-	-	-	-	-	4.5p ^Δ	AN	T092	A		
27	MPSH20	310m	620M ^Δ	2.8m	TJ	40	30	4.0	100m [†]	50n ^Δ	10 ^Δ	4.0m ^Δ	25 TΔ	-	-	-	-	500f ^Δ	EA	T092	C	
28	MPSH10	310m	650M ^Δ	2.8m	TJ	30	25	3.0	100m [†]	100 [†]	10 ^Δ	4.0m ^Δ	60 TΔ	-	-	-	-	700f ^Δ	E	T092	C	
29	MPSH11	310m	650M ^Δ	2.8m	TJ	30	25	3.0	100m [†]	100 [†]	10 ^Δ	4.0m ^Δ	60 TΔ	-	-	-	-	700f ^Δ	E	T092	C	
30	HEP719 [†]	310m [†]	700M ^Δ	2.8m	TJ	30	30	4.0	100m [†]	500n [†]	15	130 TΔ	-	-	-	-	-	-	-	T092	A	
31	MPS6507	310m	700M ^Δ	2.8m	TJ	30	30	3.0	100m [†]	05u [†]	10 ^Δ	2.0m ^Δ	25 TΔ	-	-	-	-	2.5p ^Δ	EA	T092	A	
32	MPS6542	310m	700M ^Δ	2.9m	TJ	30	30	3.0	100m [†]	-	-	-	-	-	-	-	1.5p ^Δ	AN	T092	A		
33	HEP56 [†]	310m [†]	750M ^Δ	2.8m	TJ	30	25	2.5	100m [†]	200n [†]	20	70 TΔ	-	-	-	-	-	-	-	T092	A	
34	MPS6543	310m	750M ^Δ	2.9m	TJ	35	30	3.0	100m [†]	-	-	-	-	-	-	-	1.0p ^Δ	AN	T092	A		
35	HEP720 [†]	310m [†]	800M ^Δ	2.8m	TJ	30	20	3.0	100m [†]	100n [†]	30	40 TΔ	-	-	-	-	-	-	-	T092	A	
36	ZSC631A	320m	140M ^Δ	3.0m	↑J	25	25	6.0	200m	200n ^Δ	3.0 ^Δ	1.0m ^Δ	129 TΔ	-	-	-	-	7Op ^Δ	ME	u37		
37	ZSC632A	320m	140M ^Δ	3.0m	↑J	50	50	6.0	200m	200n ^Δ	3.0 ^Δ	1.0m ^Δ	129 TΔ	-	-	-	-	7Op ^Δ	ME	u37		
38	ZSC633A	320m	140M ^Δ	3.0m	↑J	25	25	6.0	200m	200n ^Δ	3.0 ^Δ	1.0m ^Δ	65 TΔ	-	-	-	-	7Op ^Δ	ME	u37		
39	ZSC634A	320m	140M ^Δ	3.0m	↑J	50	50	6.0	200m	200n ^Δ	3.0 ^Δ	1.0m ^Δ	65 TΔ	-	-	-	-	7Op ^Δ	ME	u37		
40	ZN5027 [†]	320m	250M ^Δ	3.4m	TJ	30	30	5.0	350m	25us	10 ^Δ	150m ^Δ	50 TΔ#	-	-	-	-	8p ^Δ	DPL	TO105	C	
41	ZN5028 [†]	320m	250M ^Δ	3.4m	TJ	30	30	5.0	350m	25us	10 ^Δ	150m ^Δ	100 TΔ#	-	-	-	-	6Op ^Δ	DPL	TO105	C	
42	ZN5054 [†]	320m	300M ^Δ	3.3m	↑J	40	15	5.0	200m	25n ^Δ	1.0 ^Δ	10m ^Δ	30 TΔ	-	-	-	-	6Op ^Δ	DPL	TO105	C	
43	ZN5066AT	320m	300M ^Δ	3.3m	↑J	40	15	5.0	200m	25n ^Δ	1.0 ^Δ	10m ^Δ	30 TΔ	-	-	-	-	4p ^Δ	DPL	TO105	C	
44	ZN5232	330m	33M ^Δ	3.3m	↑S	70	50	5.0	100m [†]	05u [†]	5.0 ^Δ	2.0m ^Δ	250 TΔ	-	-	-	-	4p ^Δ	PE ^Δ	TO98	B	
45	ZN5232A	330m	33M ^Δ	3.3m	↑S	70	50	5.0	100m [†]	05u [†]	5.0 ^Δ	2.0m ^Δ	250 TΔ	-	-	-	-	4p ^Δ	PE ^Δ	TO98	B	
46	ZN5233	330m	33M ^Δ	3.3m	↑S	80	60	6.0	100m [†]	03u [†]	10 ^Δ	10m ^Δ	100 TΔ	-	-	-	-	4p ^Δ	PE ^Δ	TO98	B	
47	ZN5234	330m	33M ^Δ	3.3m	↑S	80	60	6.0	100m [†]	03u [†]	10 ^Δ	10m ^Δ	250 TΔ	-	-	-	-	4p ^Δ	PE ^Δ	TO98	B	
48	ZN5235	330m	33M ^Δ	3.3m	↑S	80	60	6.0	100m [†]	03u [†]	10 ^Δ	10m ^Δ	400 TΔ	-	-	-	-	4p ^Δ	PE ^Δ	TO98	B	
49	ZN5249	330m	33M ^Δ	3.3m	↑S	70	50	5.0	100m [†]	30n [†]	5.0 ^Δ	2.0m ^Δ	400 TΔ	-	-	-	-	4 Op ^Δ	TO98	B		
50	ZN5249A	330m	33M ^Δ	3.3m	↑S	70	50	5.0	100m [†]	30n [†]	5.0 ^Δ	2.0m ^Δ	400 TΔ	-	-	-	-	4p ^Δ	TO98	B		
51	ZN5309	330m	33M ^Δ	3.3m	↑S	70	50	5.0	100m [†]	01u [†]	5.0 ^Δ	01m ^Δ	66 TΔ	-	-	-	-	4p ^Δ	TO98	B		
52	ZN5310	330m	33M ^Δ	3.3m	↑S	70	50	5.0	100m [†]	01u [†]	5.0 ^Δ	01m ^Δ	110 TΔ	-	-	-	-	4p ^Δ	TO98	B		
53	ZN5311	330m	33M ^Δ																			

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX COLL. DISS. @25°C (W)	2 DERATE fab	TRANSISTOR RATING @ 25°C				MAX. ICBO @MAX	TYPICAL 'H' PARAMETERS					Cob	STRUCTURE	DWG # Y200 s/a TO200 Ser.	L C E O A D D E							
				IN FREE W/C	M A M X P	E BV _{cbo}	BV _{ceo}	BV _{ebo}	I _c	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}									
1#	ZSC205	350m	350M _s	2.3m	SJ	80	5.0	200m	0.2u ₀	6.0 ₀	1.0 _m	50				4.0 _p	PE	T018						
2#	ZSC230	350m	350M _s	2.3m	SJ	80	3.0	200m	0.2u ₀	6.0 ₀	1.0 _m	60				4.0 _p	PE	T018						
3#	ZSC237	350m	450M _s	2.3m	SJ	25		300m	0.5u ₀	6.0 ₀	1.0 _m	80				5.0 _p	PE	T018						
4#	ZSC239	350m	450M _s	2.3m	SJ	35		300m	0.5u ₀	6.0 ₀	1.0 _m	80												
5#	BSV351	350m	500M _s ^Δ	2.3m	SJ	40	15	15	5.0	500m [#]	40n ₀	1.0 ₀	10m ₀	40	Δ [†]			5.0 _p	PE	T018				
6#	BFS46	350m	600M _s ^Δ	2.3m	SJ	30	15	15	3.0	500m [#]	10n ₀	1.0 ₀	3.0m ₀	20	Δ [†]			4.0 _p [‡]	u53	F				
7#	BFS46A	350m	600M _s ^Δ	2.3m	SJ	30	15	15	3.0	500m [#]	10n ₀	1.0 ₀	3.0m ₀	20	Δ [†]			1.7p _‡	u53	F				
8#	BSV361	350m	600M _s ^Δ	2.3m	SJ	15	6.0	15	4.0	500m [#]	40n ₀	1.0 ₀	20m ₀	30	Δ [†]			3.0p _‡	u53	F				
9#	BFS11	350m	750M _s	3.0m	SJ	35	25	4.0	40	50m [#]	50n ₀	1.0 ₀	10m ₀	40	Δ [†]			3.0p _‡	PE	X76	C			
10#	BFS85	350m	1.0G _s ^Δ	2.3m	SJ	25	12	2.5	50m [#]	1.0u ₀	1.0 ₀	2.0m ₀	25	Δ [†]			800ft _‡	PLØ	U76	F				
11#	BFS88	350m	1.0G _s ^Δ	2.3m	SJ	30	15	2.5	50m [#]	1.0n ₀	1.0 ₀	2.0m ₀	25	Δ [†]			800ft _‡	PLØ	U76	F				
12	K2503	350m	1.8G _s	2.0m	SJ	25	10	2.0		1.0u ₀	1.0 ₀	8.0m ₀	20	Δ [†]			2p _‡		T050	C				
13	K2509	350m	1.8G _s	2.0m	SJ	30	10	2.0		1.0u ₀	1.0 ₀	8.0m ₀	20	Δ [†]			2p _‡		T050	C				
14	N5842	350m ₀	1.7G _s ^Δ	2.0m ₀	SS	20	10	3.0	100m	20n ₀	4.0 ₀	25m ₀	25	Δ [†]			1.5p _‡		T072	G				
15	N5841	350m ₀	2.0G _s ^Δ	2.0m ₀	SS	20	10	3.0	100m	20n ₀	4.0 ₀	25m ₀	25	Δ [†]			1.5p _‡		T072	G				
16	ZN2483	360m	2.1m	SJ	60	60	6.0	50m	0.1u ₀	5.0 ₀	1.0m ₀	80	Δ	30u _‡	40u _‡	13k _‡	8	6p _‡	Ø	T018	AØ			
17	ZN2484	360m	2.1m	SJ	60	60	6.0	50m	0.1u ₀	5.0 ₀	1.0m ₀	150	Δ	6p _‡	Ø	24k _‡	8	6p _‡	Ø	T018	AØ			
18	ZN3414	360m	2.6m	SJ	25	25	5.0	500m	t00n	4.5 ₀	2.0m ₀	75	Δ						R67	B				
19	ZN3415	360m	2.6m	SJ	25	25	5.0	500m	100n	4.5 ₀	2.0m ₀	180	Δ					R67	B					
20	ZN3416	360m	2.6m	SJ	50	50	5.0	500m	100n	4.5 ₀	2.0m ₀	75	Δ					R67	B					
21	ZN3417	360m	2.6m	SJ	50	50	5.0	500m	100n	4.5 ₀	2.0m ₀	100	Δ					R67	B					
22	ZN3707	360m	2.9m	SS	30	30	6.0	30m	1.0u ₀	5.0 ₀	1.0m ₀	100	Δ					10	T092	B				
23	ZN3708	360m	2.9m	SS	30	30	8.0	30m	1.0u ₀	5.0 ₀	1.0m ₀	45	Δ					10	T092	B				
24	ZN3709	360m	2.9m	SS	30	30	6.0	30m	1.0u ₀	5.0 ₀	1.0m ₀	45	Δ					10	T092	B				
25	ZN3710	360m	2.9m	SS	30	30	6.0	30m	1.0u ₀	5.0 ₀	1.0m ₀	80	Δ					10	T092	B				
26	ZN3711	360m	2.9m	SS	30	30	6.0	30m	1.0u ₀	5.0 ₀	1.0m ₀	180	Δ					10	T092	B				
27	ZN4259	360m	2.0m	SS	200	140	15	30m	1.0u ₀	10 ₀	1.0m ₀	200	1‡					5p _‡		T018	AØ			
28	ZN4424	360m	2.9m	SJ	40	40	5.0	500m	1.0u ₀	4.5 ₀	2.0m ₀	180	Δ								T098	B		
29	ZN5418	360m	3.6m	SS	25	25	4.0	500m	100n	1.0 ₀	2.0m ₀	25	Δ					8.0p _‡		T098	B			
30	ZN5419	360m	3.6m	SS	25	25	4.0	500m	100n	1.0 ₀	2.0m ₀	70	Δ					8.0p _‡		T098	B			
31	ZN5420	360m	3.6m	SS	25	25	4.0	500m	100n	1.0 ₀	2.0m ₀	150	Δ					8.0p _‡		T098	B			
32	ZN5824	360m	3.6m	SJ	50	40	5.0	100m	50n ₀	5.0 ₀	2.0m ₀	60	Δ					4.0p _‡	X55a	B				
33	ZN5825	360m	3.6m	SJ	50	40	5.0	100m	50n ₀	5.0 ₀	2.0m ₀	100	Δ					4.0p _‡	X55a	B				
34	ZN5826	360m	3.6m	SJ	50	40	5.0	100m	50n ₀	5.0 ₀	2.0m ₀	150	Δ					4.0p _‡	X55a	B				
35	ZN5827	360m	3.6m	SJ	50	40	5.0	100m	50n ₀	5.0 ₀	2.0m ₀	250	Δ					4.0p _‡	X55a	B				
36	ZN5827A	360m	3.6m	SJ	50	40	5.0	100m	50n ₀	5.0 ₀	2.0m ₀	250	Δ					4.0p _‡	Ø	X55a	B			
37	ZN5828	360m	3.6m	SJ	50	40	5.0	100m	50n ₀	5.0 ₀	2.0m ₀	400	Δ					4.0p _‡	X55a	B				
38	ZN5828A	360m	3.6m	SJ	50	40	5.0	100m	50n ₀	5.0 ₀	2.0m ₀	400	Δ					4.0p _‡	Ø	X55a	B			
39#	BF237	360m	2.9m	SS	45	30	4.0	30m	1.0u ₀	1.0 ₀	1.0m ₀	30	Δ					PL	X55					
40	BF238	360m	2.8m	SS	45	30	4.0	30m	1.0u ₀	1.0 ₀	1.0m ₀	70	Δ					PE	X56					
41	CS4424	360m	2.9m	SS	40	40	5.0	500m	1.0u ₀	4.5 ₀	2.0m ₀	180	Δ							T097a				
42#	LDS207 _‡	360m	2.9m	SJ	20	10	5.0	30m	100n ₀	5.0 ₀	1.0m ₀	75	1‡					PEΔ		T012P				
43#	TPS6112	360m	2.8m	SJ	40	30	4.0	100m	50n ₀	1.0 ₀	2.0m ₀	50	Δ [†]					3.5p _‡	PL	X55a	A			
44#	TPS613	360m	2.8m	SJ	40	30	4.0	100m	50n ₀	1.0 ₀	2.0m ₀	90	Δ [†]					3.5p _‡	PL	X55a	A			
45#	TPS614	360m	2.8m	SJ	40	25	4.0	100m	50n ₀	1.0 ₀	2.0m ₀	150	Δ [†]					3.5p _‡	PL	X55a	A			
45#	TPS615	360m	2.8m	SJ	40	25	4.0	100m	50n ₀	1.0 ₀	2.0m ₀	250	Δ [†]					3.5p _‡	PL	X55a	A			
47	MM2483	360m	12M _s ^Δ	2.1m	SJ	60	60	6.0	50m	0.1u ₀	5.0 ₀	1.0m ₀	80	Δ					50u _‡		T050	A		
48	2N2484A	360m	15M _s ^Δ	2.0m	SJ	60	60	6.0	50m	0.1u ₀	5.0 ₀	1.0m ₀	150	Δ					40u _‡		T018	AØ		
49	MM2484	360m	15M _s ^Δ	2.1m	SJ	60	60	6.0	50m	0.1u ₀	5.0 ₀	1.0m ₀	150	Δ					24k _‡	25	6p _‡	Ø	T018	AØ
50	A130	360m	20M _s ^Δ	2.0m	SJ	90	80	5.0	50m	5.0 ₀	5.0 ₀	1.0m ₀	150	Δ					24k _‡	8.0	6p _‡	Ø	T05	A
51	ZN3037 _†	360m	50M _s ^Δ	2.4m	SS	120	70	7.0	500m	0.1u ₀	1.0 ₀	1.0m ₀	30	Δ					100u _‡	700	1.5k _‡		T050	A
53	ZN3038 _†	360m	50M _s ^Δ	2.4m	SS	100	60	7.0	500m	0.1u ₀	1.0 ₀	1.0m ₀	60	Δ					200u _‡				T050	A
54#	BSX25	360m	50M _s	2.1m	SJ	40	25	5.0		0.5u ₀	1.0 ₀	5.0m ₀	30	Δ										
55#	BSY93	360m	50M _s ^Δ	2.0m	SJ	60	40	5.0	50m	20n ₀	2.0 ₀	1.0m ₀	350	Δ					90nb	25	5.0p _‡	PLØ	T018	B
56	TZ81	360m	50M _s	2.8m	SJ	60	30	5.0	50m	20n ₀	2.0 ₀													

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1) MAX. COLL. DISS. (W)	2) DERATE fab	IN FREE AIR W/C	TABS M E X P	MAX. RATING @ 25°C				MAX. ICBO @ MAX Vcb	TYPICAL H PARAMETERS						Cob	STRUCTURE	DWG # Y200 s/a TO200 Ser.	C E O D E		
						BV _{CB}	BV _{CE}	BV _{BE}	I _C		V _{CB}	I _E	H _{FE}	H _{OE}	H _{IE}	H _{RE}	(mhos)	(Ω)	X.0001	(F)		
1#	BFV88†	360m	200M _Δ	500u	SJ	50	40	5.0	800m	.01u	10 ₂	10m ₂	75 t#						1.1p _Z	PE	u26a	B
2	BFY26	360m	200M _Δ	2.1m	SJ	60	40	16.0	200m		9.0 ₂	10m ₂	60 t						5.5p _Z	PL	T018	
3#	BSX79†	360m	200M _Δ	1.3m	S _A						1.0 ₂	50m ₂	50 t						5.0p _Z	NPE	TO18	
4#	LDA404†	360m	200M _Δ	2.9m	SJ	60	30	5.0	300m		10 ₂	15m ₂	40 t#Δ						8.0p _Z	PE	u34	P
5	LDA405†	360m	200M _Δ	2.9m	SJ	60	30	5.0	300m		10 ₂	15m ₂	100 t#Δ						8.0p _Z	PE	u34	P
6#	LDS208†	360m	200M _Δ	2.9m	SJ	60	30	5.0	300m		10 ₂	10m ₂	70 t#Δ						8.0p _Z	PE	u34c	P
7#	LDS210†	360m	200M _Δ	2.9m	SJ	50	30	5.0	500m		1.0 ₂	150m ₂	30 t#Δ						6.0p _Z	PL	u34c	P
8#	ME6001	360m	200M _Δ	2.8m	SJ	40	30	*	5.0		50n ₂	1.0 ₂	1.0m ₂	20 t					1.0p _Z	PE	R110c	A
9#	ME6002	360m	200M _Δ	2.8m	SJ	40	30	*	5.0		50n ₂	1.0 ₂	1.0m ₂	40 t					1.0p _Z	PE	R110c	A
10	TIS44†	360m	200M _Δ	2.9m	SJ	25	20	5.0	50m		5.0u ₂	1.0 ₂	10m ₂	20 t#Δ					6.0p _Z	PE	TO92	
11	TIS97	360m	200M _Δ	2.8m	SS	60	40	6.0	200m		10u ₂	5.0 ₂	100u ₂	440	11u				4.0p _S	PE	X55	A
12	TIS98	360m	200M _Δ	2.8m	SS	80	60	6.0	200m		10u ₂	5.0 ₂	1.0m ₂	240	6.0u				4.0p _S	PE	X55	A
13	TIS99	360m	200M _Δ	2.8m	SS	80	65	6.0	200m		10u ₂	5.0 ₂	10m ₂	130	50u				4.0p _S	PE	X55	A
14	TIS106	360m	200M _Δ	2.8m	SS	80	65	6.0	200m		50n ₂	1.0 ₂	1.0m ₂	235	9.0u				4.0p _S	PE	X55	A
15	TIS107	360m	200M _Δ	2.8m	SS	60	40	6.0	200m		50n ₂	1.0 ₂	1.0m ₂	105	7.5u				4.0p _S	PE	X55	A
16	TIS110†	360m	200M _Δ	2.8m	SS	60	40	6.0	800m		100n ₂	1.0 ₂	1.0m ₂	20 t					6.5p _S	PL	X55	A
17	2N915	360m	250M _Δ	2.0m	SJ	70	50	5.0	50m		0.1u ₂	5.0 ₂	5.0m ₂	50 t					3.5p _Z	PE	TO18	A
18	2N2655	360m	250M _Δ	2.0m	SJ	25	15	5.0	200m		50u ₂	1.0 ₂	10m ₂	40 t					5.0p _Z	PE	TO18	A
19	2N2845†	360m	250M _Δ	2.0m	SJ	60	30	*	5.0		20u ₂	10 ₂	10m ₂	30 t#Δ					8.0p _Z	TO18	A	
20	2N2847†	360m	250M _Δ	2.0m	SJ	60	20	*	5.0		20u ₂	10 ₂	10m ₂	40 t#Δ					8.0p _Z	TO18	A	
21	2N3301†	360m	250M _Δ	2.0m	SJ	60	30		500m		0.1u ₂		100	110m ₂	50 t				8.0p _Z	TO18	A	
22	2N3302†	360m	250M _Δ	2.0m	SJ	60	30		500m		0.1u ₂		100	110m ₂	50 t				8.0p _Z	TO18	A	
23	2N3946†	360m	250M _Δ	2.0m	SJ	60	40		200m		0.1u ₂		100	1.0m ₂	50 t				4.0p _Z	EA	TO18	A
24	N4450†	360m	250M _Δ	2.0m	SJ	60	30		500m		10u ₂	100	1.0m ₂	50 t					8.0p _S	TO46		
25	2N4951†	360m	250M _Δ	2.9m	SS	60	30		500m		0.5u ₂		100	150m ₂	60 t#Δ				3.5p _Z	TO98	B	
26	2N4952†	360m	250M _Δ	2.9m	SS	60	30		500m		0.5u ₂		100	150m ₂	100 t#Δ				3.5p _Z	TO98	B	
27	2N4953†	360m	250M _Δ	2.9m	SS	60	30		500m		0.5u ₂		100	150m ₂	200 t#Δ				3.5p _Z	TO98	B	
28	2N4954†	360m	250M _Δ	2.9m	SS	60	30		500m		0.5u ₂		100	150m ₂	60 t#Δ				3.5p _Z	TO98	B	
29	2N53681	360m	250M _Δ	2.9m	SJ	60	30		500m		50n ₂	1.0 ₂	1.0m ₂	20 t					8.0p _S	X93	A	
30	2N53691	360m	250M _Δ	2.9m	SJ	60	30		500m		50n ₂	1.0 ₂	1.0m ₂	50 t					8.0p _S	X93	A	
31	2N53701	360m	250M _Δ	2.9m	SJ	60	30		500m		50n ₂	1.0 ₂	1.0m ₂	75 t					8.0p _S	X93	A	
32	2N5371†	360m	250M _Δ	2.9m	SJ	40	30		500m		50n ₂	1.0 ₂	1.0m ₂	20 t					8.0p _S	X93	A	
33	2N5380	360m	250M _Δ								1.0 ₂	10m ₂	50 t					4ps	X55	A		
34	AT52221†	360m	250M _Δ	2.8m	SS	60	30		500m		10n ₂	100	100u ₂	35 t					8.0p _Z	PET	u26a	A
35	AT539031†	360m	250M _Δ	2.8m	SS	60	40		500m		50n ₂	100	1.0m ₂	50 t					4.0p _Z	PET	u26a	A
36#	AT420	360m	250M _Δ	2.1m	SJ	50	30		500m		200n ₂	100	150m ₂	30 t					8.0p _Z	PE	TO18	A
37#	AT421	360m	250M _Δ	2.1m	SJ	50	30		500m		200n ₂	100	150m ₂	100 t					8.0p _Z	PE	TO18	A
38#	AT422	360m	250M _Δ	2.1m	SJ	50	45		500m		200n ₂	100	150m ₂	30 t					8.0p _Z	PE	TO18	A
39#	AT423	360m	250M _Δ	2.1m	SJ	50	45		500m		200n ₂	100	150m ₂	100 t					8.0p _Z	PE	TO18	A
40#	AT424	360m	250M _Δ	2.1m	SJ	50	30		500m		200n ₂	100	150m ₂	30 t					8.0p _Z	PE	TO18	A
41#	AT425	360m	250M _Δ	2.1m	SJ	50	45		500m		200n ₂	100	150m ₂	30 t					8.0p _Z	PE	TO18	A
42#	BFV85†	360m	250M _Δ	417u	SJ	60	30		800m		0.1u ₂		100	1.0m ₂	60 t				8.0p _Z	PE	u26a	B
43#	BFV85A†	360m	250M _Δ	417u	SJ	75	40		800m		0.1u ₂		100	1.0m ₂	360				8.0p _Z	PE	u26a	B
44#	BFV85B†	360m	250M _Δ	417u	SJ	60	30		800m		0.1u ₂		100	1.0m ₂	30 t				8.0p _Z	PE	u26a	B
45#	BFV88A†	360m	250M _Δ	500u	SJ	60	40		800m		25u ₂		100	10m ₂	30 t				8.0p _Z	PE	u26a	B
46#	BFV88B†	360m	250M _Δ	500u	SJ	60	40		800m		25u ₂		100	10m ₂	50 t				8.0p _Z	PE	u26a	B
47#	BFV88C†	360m	250M _Δ	500u	SJ	70	50		800m		0.1u ₂		5.0 ₂	10m ₂	40 t#Δ				3.5p _Z	PL	TO18	
48#	BFY27	360m	250M _Δ	2.0m	SJ	70	50		800m		0.1u ₂		100	1.0m ₂	40 t#Δ				8.0p _S	PE	TO18	A
49#	BSV85†	360m	250M _Δ	2.2m	SJ	50	30		1.0		10u ₂		100	150m ₂	80 t				8.0p _S	PE	TO18	A
50#	BSW411	360m	250M _Δ	2.1m	SJ	40	25		300m		50n ₂	100	1.0m ₂	30 t#Δ					8.0p _S	PE	TO18	A
51	CS53689†	360m	250M _Δ	2.9m	SJ	60	30		500m		50n ₂	100	1.0m ₂	20 t					8.0p _S	PE	TO106	A
52	CS53691†	360m	250M _Δ	2.9m	SJ	60	30		500m		50n ₂	100	1.0m ₂	75 t					8.0p _S	PE	TO106	A
53	CS5370†	360m	250M _Δ	2.9m	SJ	40	30		500m		50n ₂	100	1.0m ₂	20 t					8.0p _S	PE	TO106	A
54	GET2221†	360m	250M _Δ	3.6m	SJ	60	30		400m		10n ₂	100	10m ₂	20 t								

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C (W)	2 DE RATE fab	TABS MAX RATINGS @25°C				MAX. ICBO @MAX VCB	TYPICAL H ⁺ PARAMETERS			COMMON Emitter f(mhos)	Cob	STRUCTURE	DWG #	LC			
				IN FREE AIR W/C	M AM X P	E BV _{cbo} (V)	BV _{ceo} (V)	BV _{ebo} (V)	I _c (A)	V _{cb} (V)	I _e (A)	H _{FE}							
1	2N706CT	360m	320M ^Δ	2.0m	\$J	40	15	5.0	50m	1.0u ⁰	1.00	10m ²	20 Δ		5p ²	ND	T018 A		
2	2N913	360m	350M ^Δ	2.0m	\$J	25		5.0		0.5u	1.00	10m ²	75 ↑		6.0p	PLE	T018		
3	2N25011	360m	350M ^Δ	2.0m	\$J	40		6.0			1.00	10m ²	150 ↑		2.8p	PE	T018 A		
4	2N3009T	360m	350M ^Δ	2.0m	\$J	40	15	4.0	200m	50u ⁰	400	30m ²	30 ↑#Δ		5p ²		T052 A		
5	2N30131	360m	350M ^Δ	2.0m	\$J	40	15	5.0	200m	30u ⁰	400	30m ²	30 ↑#Δ		5p ²		T052 A		
6	JAN2N30131	360m	350M ^Δ	2.0m	\$J	40	20	5.0	300m	40u ⁰	400	30m ²	35 ↑#Δ		5.0p ²		T052 A		
7	2N30141T	360m	350M ^Δ	2.0m	\$J	40	20	5.0	200m	30u ⁰	400	30m ²	30 ↑#Δ		5p ²		T052 A		
8	2N3211	360m	350M ^Δ	2.1m	\$J	40	15	6.0	500m	1.0u ⁰	1.00	10m ²	50 Δ		4p ²	TO18			
9	2N3510T	360m	350M ^Δ	2.0m	\$S	40	10	6.0	500m	25u ⁰	100	15m ²	25 ↑	100u ⁰	4.5k ²	25 ↑	T052 A		
10	2N4420T	360m	350M ^Δ	2.8m	\$S	40	20	5.0	200m	500ns	400	30m ²	30 ↑#Δ		5.0p ²	X55	A		
11	2N4422T	360m	350M ^Δ	2.8m	\$S	40	15	5.0	200m	500ns	400	30m ²	30 ↑#Δ		5.0p ²	X55	A		
12#	2SC172A	360m	350M ^Δ	2.0m	\$J	40	20	5.0	50m	25u ⁰	600	10m ²		7.0p ²	PL	T018			
13#	BSV59T	360m	350M ^Δ	\$						1.0u ⁰	500m ²	50 ↑		10p	PE	T018 A			
14#	BSX88AT	360m	350M ^Δ	2.0m	\$J	40	20	5.5		3.0u ⁰	1.00	10m ²	50 ↑#Δ		3.0p	DPE	T018 A		
15#	C722T	360m	350M ^Δ	\$						1.0u ⁰	1.00	10m ²	120 ↑		3.0p	PE	T018 A		
16#	C742	360m	350M ^Δ	6.8m	\$J	30	30	5.0	200m	200u ⁰	500	10m ²	200 ↑	30u	1.0k	12	2.6p	PL	T039 A
17	GET2369T	360m	350M ^Δ	3.6m	\$J	40	15	5.0	200m	10u ⁰	1.00	10m ²	40 Δ		4.5p ²	PEA	T018		
18	GET3013T	360m	350M ^Δ	3.6m	\$J	40	15	5.0	200m	1u ⁰	400	30m ²	30 ↑		4.5p ²	PEA	T018		
19	GET3014T	360m	350M ^Δ	3.6m	\$J	40	20	5.0	200m	1u ⁰	400	30m ²	30 ↑		4.5p ²	PEA	T018		
20	GET3646T	360m	350M ^Δ	3.6m	\$J	40	15	5.0	200m	1u ⁰	400	30m ²	30 ↑		4.5p ²	PEA	T018		
21	TIS52	360m	350M ^Δ	2.9m	\$J	40	20	5.0	200m	5u ⁰	1.00	300m ²	25 ↑#Δ		5p ²	PE	T092		
22	TIS55	360m	350M ^Δ	2.9m	\$J	40	15	5.0	200m	5u ⁰	1.00	300m ²	15 ↑#Δ		5p ²	PE	T092		
23#	BFY74	360m	360M ^Δ	2.1m	\$J	60	45	5.0		0.1u ⁰	5.0p	5.0m ²	90	20u	800	3.0p	DPL	T018 A	
24#	BFY75	360m	360M ^Δ	2.1m	\$J	60	45	5.0		0.1u ⁰	5.0p	5.0m ²	130	30u	1.0k	3.0p	DPL	T018 A	
25#	BSX87T	360m	370M ^Δ	2.0m	\$J	40	15	6.0		25u ⁰	1.00	10m ²	55 ↑		4.5p	PE	T018		
26#	BF291A	360m	380M ^Δ	2.0m	\$J	50	40	5.0	100m	10n ⁰	100	10m ²	60 Δ		3.5p	DPE	T018		
27#	BF291B	360m	380M ^Δ	2.0m	\$J	50	40	5.0	100m	10n ⁰	100	10m ²	100 Δ		3.5p	DPE	T018		
28#	BF293A	360m	380M ^Δ	2.0m	\$J	50	45	5.0	100m	10u ⁰	100	10m ²	170 ↑		2.7p	PL	T018 A		
29#	BF293D	360m	380M ^Δ	2.0m	\$J	50	45	5.0	100m	10u ⁰	100	10m ²	100 ↑		2.7p	PL	T018 A		
30	2N921T	360m	400M ^Δ	6.3u	\$J	50	20		200m	10u ⁰	100	10m ²	4.0		4.0p	ME	T018 A		
31	2N922	360m	400M ^Δ	6.3u	\$J	50	20		200m	10u ⁰	100	10m ²	40		4.0p	ME	T018 A		
32	2N30111T	360m	400M ^Δ	2.0m	\$J	30	12	5.0	200m	40u ⁰	350	10m ²	30 ↑#Δ		4p ²	PE	T018 A		
33	2N4419T	360m	400M ^Δ	2.9m	\$S	30	12	4.5	200m	40u ⁰	100	10m ²	30 ↑#Δ		4p ²	1	X55 A		
34#	2SC67T	360m	400M ^Δ	\$		40	40	5.0	200m	1.0u ⁰	1.00	10m ²	80 ↑		3.5p	PE	T018 C		
35#	2SC68T	360m	400M ^Δ	\$		40	15	5.0	200m	1.0u ⁰	1.00	10m ²	100 ↑		4.0p	PE	T018 A		
36#	BF225	360m	400M ^Δ	2.9m	\$S	50	40	4.0		1.0u ⁰	4.0m ²	75 ↑		125u ⁰	2k ²	5 □	3.0p	DPE	T018 A
37#	BFW68T	360m	400M ^Δ	2.0m	\$J	50	40	5.0		0.1u ⁰	5.0p	5.0m ²	50 Δ		125u ⁰	2k ²	4.0p	PE	T018 A
38#	BSV89T	360m	400M ^Δ	\$						1.0u ⁰	1.00	10m ²	40		4.0p	TO18			
39#	BSV90T	360m	400M ^Δ	\$						1.0u ⁰	1.00	10m ²	40		4.0p	TO18			
40#	BSV91T	360m	400M ^Δ	\$						1.0u ⁰	1.00	10m ²	40		4.0p	DPE	T018 A		
41#	BSX88T	360m	400M ^Δ	2.0m	\$J	40	15	5.0		25n ⁰	1.00	10m ²	45 ↑#		4.0p	TO18 A			
42#	C10011	360m	400M ^Δ	\$						1.0u ⁰	1.00	10m ²	40		4.0p	TO18 A			
43	TIS47T	360m	400M ^Δ	2.9m	\$J	40	15	4.5	200m	40u ⁰	2.00	100m ²	20 Δ		4p ²	PE	T092		
44	TIS51T	360m	400M ^Δ	2.9m	\$J	30	12	5.0	200m	40u ⁰	1.00	100m ²	12 ↑#Δ		4p ²	PE	T092		
45#	ZT2358T	360m	400M ^Δ	\$		40		4.5			1.00	10m ²	20 ↑		PL	TO18			
46#	ZT2389T	360m	400M ^Δ	\$		40		4.5			1.00	10m ²	40 ↑		PL	TO18			
47#	ZT2369AT	360m	400M ^Δ	\$		40		4.5			1.00	10m ²	40 ↑		PL	TO18			
48#	ZSC300	360m	420M ^Δ	2.0m	\$J	25	15	5.0	100m	50u ⁰	100	10m ²	50 ↑#		3.5p	PE	T018 A		
49#	ZSC301	360m	420M ^Δ	2.0m	\$J	25	15	5.0	100m	0.1u ⁰	100	10m ²	50 ↑#		3.5p	PE	T018 A		
50#	ZSC302	360m	420M ^Δ	2.0m	\$J	50	20	5.0	100m	0.1u ⁰	100	10m ²	50 ↑#		3.5p	PE	T018 A		
51#	C720T	360m	420M ^Δ	\$						1.00	10m ²	50 ↑		4.5p ²	PE	T018 A			
52	2N3511T	360m	450M ^Δ	2.0m	\$S	40	15	6.0	500m	25n ⁰	1.00	150m ²	30 Δ		100u ⁰	4.5k ²	25 ↑	4p ²	TO52 A
53#	C740	360m	450M ^Δ	6.8m	\$J	30	30	5.0		200m	5.0p	1.0m ²	280 ↑	8.5	3.2	3.0p	PL	T018 A	
54	2N708T	360m	480M ^Δ	2.0m	\$S	40	15	5.0		25u ⁰	1.00	10m ²	30 ↑#Δ		6.0p ²	PL	T018 A		
55	2N914T	360m	480M ^Δ	2.0m	\$J	40	15	5.0		25u ⁰	1.00	10m ²	55 ↑#		4.5p	PE	R64		
56	2N914/46	360m	480M ^Δ	2.0m	\$J	40	15	5.0		25u ⁰	1.00	10m ²	30 ↑#		6.0p	PE	T046		
57	ZN743AT	360m	500M ^Δ	2.0m	\$J	40	15	5.0		1.0u ⁰	350	10m ²	20 ↑		3p ²	PE	T018 A		
58	ZT744AT	360m	500M ^Δ	2.0m	\$J	40	15	5.0		1.0u ⁰	350	10m ²	40 ↑		3p ²	PE	T018 A		
59	ZN834A	360m	500M ^Δ	2.0m	\$J	40	30	5.0	200m	50u ⁰	1.00	10m ²	25 ↑		4p ²	TO18 A			
60	ZN915A	360m	500M ^Δ	2.1m	\$J	70	50	5.0		2u ⁰	5.0p	5.0m ²	50 ↑		3p ²	TO18 A			
61	ZN916A	360m	500M ^Δ	2.1m	\$J	80	30	5.0		2u ⁰	5.0p	5.0m ²	50 ↑		3p ²	TO18 A			
62	ZN916B	360m	500M ^Δ	2.1m	\$J	80	30	5.0		2u ⁰	5.0p	5.0m ²	125u ⁰	2k ²	3p ²	TO18 A			
63	ZN2369AT	360m	500M ^Δ	2.0m	\$J	40	15	4.5	200m	10u ⁰	300u ¹	10m ^{2</}							

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX	2. DEGRADE	3. ABS MAX RATINGS @ 25°C	TYPICAL 'H' PARAMETERS						Cob	STRUCTURE	DWG #	C						
		COLL. DISS. @ 25°C	IN fab	M FREE	E AM	BV _{cbo}	BV _{ceo}	BV _{ebo}	I _c	I _{cb} @MAX	BIAS	COMMON Emitter								
(W)	(Hz)	W/C	(V)	(V)	(V)	(A)	(A)	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}							
1# 2SC918	375m	400M _S	\$J	20	20	3.0	30m	200n _Ø	10 _ø	4.0m _ø	20 T _Δ			450R2	DM	T0104				
2# BCY58	390m	150M _S _A	2.2m	\$J	32	32	7.0	200m	5.0 _ø	2.0 m _ø	330			PE	PE	T018 A _Ø				
3# BCY58A	390m	150M _S _A	2.2m	\$J	32	32	7.0	200m	5.0 _ø	2.0 m _ø	200			PE	PE	T018 A _Ø				
4# BCY58B	390m	150M _S _A	2.2m	\$J	32	32	7.0	200m	5.0 _ø	2.0 m _ø	260			PE	PE	T018 A _Ø				
5# BCY58C	390m	150M _S _A	2.2m	\$J	32	32	7.0	200m	5.0 _ø	2.0 m _ø	330			PE	PE	T018 A _Ø				
6# BCY58D	390m	150M _S _A	2.2m	\$J	32	32	7.0	200m	5.0 _ø	2.0 m _ø	520			PE	PE	T018 A _Ø				
7# BCY58A	390m	150M _S _A	2.2m	\$J	45	45	7.0	200m	5.0 _ø	2.0 m _ø	200			PE	PE	T018 A _Ø				
8# BCY59B	390m	150M _S _A	2.2m	\$J	45	45	7.0	200m	5.0 _ø	2.0 m _ø	260			PE	PE	T018 A _Ø				
9# BCY59C	390m	150M _S _A	2.2m	\$J	45	45	7.0	200m	5.0 _ø	2.0 m _ø	330			PE	PE	T018 A _Ø				
10# BCY59D	390m	150M _S _A	2.2m	\$J	45	45	7.0	200m	5.0 _ø	2.0 m _ø	520			PE	PE	T018 A _Ø				
11# 2N4074	400m _#	3.3m	\$S	40	40	8.0	300m	10n _Ø	12 _ø	10m _ø	400 T _Δ			6.0p _Ø	Ø	T098 B				
12# 2N5998	400m	—	4.0m	\$S	35	25	5.0	500m	30n _Ø	2.0 _ø	10m _ø	150 T _Δ			6.0p _Ø	Ø	T098 B			
13# 2N6008	400m	—	4.0m	\$S	35	25	5.0	500m	30n _Ø	2.0 _ø	10m _ø	250 T _Δ			6.0p _Ø	Ø	X28a B			
14# 2SC814	400m	—	4.0m	\$J	30	18	5.0	500m	200n _Ø	5.0 _ø	50m _ø	150 T			PE	X28a B	X28a B			
15# 2SC853	400m	—	4.0m	\$J	70	50	5.0	200m	100n _ø	1.0 _ø	50m _ø	80 T			PE	X28a B	X28a B			
16# 2SC881	400m	—	5.0	\$J	60	45	5.0	200m	100n _ø	1.0 _ø	300m _ø	120 T			PE	X28a B	X28a B			
17# 2SD228	400m	—	5.0	\$J	30	15	5.0	300m	50n _ø	5.0 _ø	50m _ø	50 T _Δ	660m	240	3.6	5.5p	DPE	T018		
18# BC282	400m	—	2.2m	\$J	60	30	5.0	600m	5.0 _ø	100 T _Δ				12p _Ø		T0122 P				
19# IMD1T3704	400m	—	5.0	\$A	50	30	5.0	200m	100n _Ø	2.0 _ø	50m _ø	100 T _Δ			10p _Ø		T046 A _Ø			
20# 2N5066 _Ø	400m	5.0M _S _A	2.3m	\$S	30	20	30	100m	1.0n _ø	100 T _Δ				8.0p	Ø	T018 A _Ø				
21# BF250	400m	20M _S	2.7m	\$A	15	15	3.0	600m	5.0 _ø	0.1m _ø	30 T _Δ			PLØ	PLØ	T046 A _Ø				
22# 2N929/48	400m	30M _S _A	3.0m	\$J	45	45	5.0	30m	10n _ø	5.0 _ø	10 m _ø	80 T			PLØ	PLØ	T046 A _Ø			
23# 2N930/46	400m	30M _S _A	3.0m	\$J	45	45	5.0	30m	10n _ø	5.0 _ø	1.0m _ø	150 T			PLØ	PLØ	T046 A _Ø			
24# 2N930A/46	400m	30M _S _A	3.0m	\$J	60	45	6.0	30m	2.0n _ø	5.0 _ø	1.0m _ø	150 T			PLØ	PLØ	T046 A _Ø			
25# 2N2514	400m	3.0M	2.3m	\$S	80	80	6.0	100m	5.0n _ø	5.0 _ø	1.0m _ø	15 T			1.0ub	28	6.0			
26# BFV98	400m	30M _S _A	2.6m	\$J	45	45	5.0	30	50n _ø	5.0 _ø	10u _ø	100 T _Δ	b	32 T _Δ	6.0	8.0p _Ø	Ø	L561		
27# BFV98N	400m	30M _S _A	2.6m	\$J	45	45	5.0	30	50n _ø	5.0 _ø	10u _ø	100 T _Δ	b	32 T _Δ	6.0	8.0p _Ø	Ø	L561		
28# 2N7119	400m	40M _S	3.75m	\$J	120	80	5.0	200m	2.0u _ø	10	5.0m _ø	25 T _Δ			500n _Ø	35 T _Δ	2.5 T _Δ	20p _Ø		T018 A _Ø
29# C400	400m	40M _S	2.7m	\$J	60	30	4.0	100m	10n _ø	100 T _Δ	40 T _Δ	14u	600	11	25p _Ø		T018 Ø			
30# 2N720	400m	50M _S	3.75m	\$J	120	80	5.0	200m	2.0u _ø	10	5.0m _ø	45 T _Δ			500n _Ø	35 T _Δ	2.5 T _Δ	20p _Ø		T018 A _Ø
31# 2N909	400m	50M _S _A	2.6m	\$J	60	30	5.0	200m	1.0u _ø	5.0 _ø	1.0m _ø	40 T _Δ			500n _Ø	35 T _Δ	2.5 T _Δ	20p _Ø		T018 A _Ø
32# 2N2350†	400m	50M _S _A	2.3m	\$J	60	40	5.0	1	0.1u _ø	5.0 _ø	1.0m _ø	100 T _Δ			20p _Ø		T046 A _Ø			
33# 2N2350A†	400m	50M _S _A	2.3m	\$J	60	40	5.0	1	0.1u _ø	5.0 _ø	1.0m _ø	100 T _Δ			20p _Ø		T046 A _Ø			
34# 2N2351†	400m	50M _S _A	2.3m	\$J	80	50	8.0	1	0.1u _ø	5.0 _ø	1.0m _ø	150 T _Δ			20p _Ø		T046 A _Ø			
35# 2N2351A†	400m	50M _S _A	2.3m	\$J	80	50	8.0	1	0.1u _ø	5.0 _ø	1.0m _ø	40 T _Δ			20p _Ø		T046 A _Ø			
36# 2N2352†	400m	50M _S _A	2.3m	\$J	80	40	5.0	1	0.1u _ø	5.0 _ø	1.0m _ø	20 T _Δ			20p _Ø		T046 A			
37# 2N2352A†	400m	50M _S _A	2.3m	\$J	80	40	5.0	1	0.1u _ø	5.0 _ø	1.0m _ø	20 T _Δ			20p _Ø		T046 A _Ø			
38# 2N2364†	400m	50M _S _A	2.3m	\$J	120	80	7.0	1	0.1u _ø	5.0 _ø	1.0m _ø	40 T _Δ			15p _Ø		T046 A _Ø			
39# 2N2364A†	400m	50M _S _A	2.3m	\$J	120	80	7.0	1	0.1u _ø	5.0 _ø	1.0m _ø	40 T _Δ			15p _Ø		T046 A _Ø			
40# 2N2520	400m	50M	4.3m	\$J	80	60	8.0	10	5.0n _ø	5.0 _ø	1.0m _ø	18 T _Δ			1.0ub	30	6.0	4.0p	PL	T046 A
41# 2N2521	400m	50M	4.3m	\$J	60	60	8.0	10	5.0n _ø	5.0 _ø	1.0m _ø	36 T _Δ			7.0 _ø	30	6.0	4.0p	PL	T046 A
42# 2N2522	400m	50M	4.3m	\$J	60	60	8.0	10	5.0n _ø	5.0 _ø	1.0m _ø	40 T _Δ			7.0 _ø	30	6.0	4.0p	PL	T046 A
43# 2N2909	400m	50M _S _A	2.3m	\$J	60	40	7.0	10	1.0u _ø	5.0 _ø	1.0m _ø	30 T _Δ			20p _Ø		T046 A _Ø			
44# 2N2515	400m	60 M	2.3m	\$S	80	60	6.0	100m	5.0n _ø	5.0 _ø	1.0m _ø	30 T _Δ			1.5k			220	PLØ	R92 A _Ø
45# 40234	400m _#	60M _S	3.3m	\$J	18	18	5.0	100m	5.0u _ø	100 T _Δ	2.0m _ø	80			20p _Ø		T046 A _Ø			
46# AT380	400m	60M _S	2.3m	\$J	60	40	6.0	10	200n _Ø	1.0 _ø	50m _ø	40 T _Δ			25p _Ø		T018 A _Ø			
47# AT381	400m	60M _S _A	2.3m	\$J	86	60	6.0	10	200n _Ø	1.0 _ø	50m _ø	40 T _Δ			25p _Ø		T018 A _Ø			
48# AT382	400m	60M _S _A	2.3m	\$J	100	80	6.0	10	200n _Ø	1.0 _ø	50m _ø	40 T _Δ			25p _Ø		T018 A _Ø			
49# AT383	400m	60M _S _A	2.3m	\$J	60	40	6.0	10	200n _Ø	1.0 _ø	50m _ø	100 T _Δ			25p _Ø		T018 A _Ø			
50# AT384	400m	60M _S _A	2.3m	\$J	80	60	6.0	10	200n _Ø	1.0 _ø	50m _ø	100 T _Δ			25p _Ø		T018 A _Ø			
51# AT385	400m	60M _S _A	2.3m	\$J	100	80	6.0	10	200n _Ø	1.0 _ø	50m _ø	100 T _Δ			25p _Ø		T018 A _Ø			
52# AT386	400m	60M _S _A	2.3m	\$J	80	40	6.0	10	200n _Ø	1.0 _ø	50m _ø	40 T _Δ			25p _Ø		T018 A _Ø			
53# AT387	400m	60M _S _A	2.3m	\$J	100	80	6.0	10	200n _Ø	1.0 _ø	50m _ø	40 T _Δ			25p _Ø		T018 A _Ø			
54# AT388	400m	60M _S _A	2.3m	\$J	100	80	6.0	10	200n _Ø	1.0 _ø	50m _ø	290 T _Δ			6.0p	PL	T018 A			
55# C441	400m	60M _S	2.3m	\$J	45	45	5.0	50	5.0 _ø	5.0 _ø	100 T _Δ			6.0p	PL	T018 A _Ø				
56# 2N7171	400m	64 M _A	2.6m	\$S	60	40	5.0	30m	1.0n _ø	1.0 _ø	150m _ø	20 T _Δ			35p _Ø	D	T018 A _Ø			
57# 2N3401	400m	70M _S	2.5m	\$J	30	20														

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX COLL. @25°C (W)	2 OPERATE IN FREE AIR @25°C (Hz)	3 ABS MAX RATINGS @25°C				MAX ICBO @MAX Vcb	TYPICAL h PARAMETERS				Cob	STRUCTURE	DWG # Y200 s/a	C E O A D				
				M	E	BVCBO	BVCEO	BVBBO	IC	Vcb	Ie	hFE	COMMON Emitter (mhos)	hoe	hie	hre				
1#	TM2711	400m	250M Δ	1.4m	3A	60	30	5.0	600m	0.05u Ω	100 μ A	150 Δ	100 Δ				8p Ω	PE	T018	
2▼	UPI4046-46	400m	250M Δ	4.5m	#J	60	35	6.0	500m	1.7u Ω	1.0	100m Ω	150 Δ				12p Ω	TO41	A \emptyset	
3▼	UPI4047-46	400m	250M Δ	4.5m	#J	70	40	6.0	500m	1.7u Ω	1.0	100m Ω	150 Δ				10p Ω	TO46	A \emptyset	
4	MM708	400m	300M Δ	15	8.0	4.0					10m Ω	15 Δ				3p Ω	ANΔ	T052		
5	QD100-78*	400m	300M Δ	2.3m	SS	25	15	6.5	20m	1.0n Ω	5.0 Ω	10u Ω	150 Δ	40u Ω			3.0p Ω	* L2d		
6#	2CA44*	400m	350M Δ	2.6m	SJ	50	35	4.0		25n Ω	5.0 Ω	5.0m Ω	80	30u Ω	1.0k		3.0p Ω	DPL \emptyset	L2b	
7	2N3647	400m	350M Δ	2.3m	SS	40	10	6.0	500m	25n Ω	1.0n Ω	100 μ A	150 Δ	100u Ω	4.5k	25	4p Ω	T05	A	
8▼	2N60001	400m	350M Δ	4.0m	#J	35	25	5.0	500m	10n Ω	1.0 Ω	1.0m	70 Δ	80u Ω	10k Ω		6.0p Ω	X55a	A	
9▼	2N60041	400m	350M Δ	4.0m	#J	50	40	5.0	500m	10n Ω	1.0 Ω	1.0m	70 Δ	80u Ω	10k Ω		6.0p Ω	X55a	A	
10▼#	BFV111	400m	350M Δ	SJ												5.0p Ω	PE	T018		
11#	BFV921	400m	350M Δ	2.6m	SJ	40	15	5.0	200m	50u Ω	1.0 Ω	30m Ω	30 Δ			5.0p Ω	PE	L56f		
12#	BFV92N1	400m	350M Δ	2.6m	SJ	40	15	5.0	200m	50u Ω	1.0 Ω	30m Ω	30 Δ			5.0p Ω	PE	L56f		
13#	C762	400m	350M Δ	SJ	25	40	5.0				200u Ω	1.0 Ω	50m Ω	110 Ω	400u	350	50	5.0p Ω	PL	T018
14	2N706B46	400m	400M Δ	3.3m	SJ	25	20	5.0				1.0 Ω	10m Ω	40 Ω			4.5p Ω	PE	T046	
15	QD101-78*	400m	400M Δ	2.3m	SS	45	45	6.5	20m	200p Ω	5.0 Ω	10u Ω	150 Δ	40u Ω			2.0p Ω	* L2d		
16	QD102-78*	400m	400M Δ	2.3m	SS	30	30	6.5	20m	200p Ω	5.0 Ω	10u Ω	200 Δ	40u Ω			2.0p Ω	* L2d		
17	QD103-78*	400m	400M Δ	2.3m	SS	45	45	6.5	20m	200p Ω	5.0 Ω	10u Ω	200 Δ	40u Ω			2.0p Ω	* L2d		
18	QD104-78*	400m	400M Δ	2.3m	SS	45	45	6.5	20m	200p Ω	5.0 Ω	10u Ω	200 Δ	40u Ω			2.0p Ω	* L2d		
19	2N834/461	400m	450M Δ	2.5m	SJ	40	30	5.0	200m	500n Ω	1.0 Ω	10 Ω	40 Ω			2.8p Ω	ME	T046		
20	2N835/461	400m	450M Δ	2.5m	SJ	25	20	3.0	200m	500n Ω	1.0 Ω	10 Ω	40 Ω			2.8p Ω	ME	T046		
21	2N3648	400m	450M Δ	2.3m	SS	40	15	6.0	500m	25n Ω	1.0 Ω	10m Ω	40 Ω			4.0p Ω	T046	A \emptyset		
22▼	2N80021	400m	450M Δ	4.0m	#J	35	25	5.0	500m	10n Ω	1.0 Ω	1.75 Ω	100u Ω	14.5k	25	6.0p Ω	X55a	A		
23▼	2N80061	400m	450M Δ	4.0m	#J	50	40	5.0	500m	10n Ω	1.0 Ω	1.75 Ω	100u Ω	15k Ω		6.0p Ω	X55a	A		
24	2N35081	400m	500M Δ	2.3m	SS	40	20	6.0	200m	20u Ω	1.0 Ω	10m Ω	40 Ω			4p Ω	T046	A \emptyset		
25	2N35091	400m	500M Δ	2.3m	SS	40	20	6.0	200m	20u Ω	1.0 Ω	10m Ω	100 Δ			4p Ω	T046	A \emptyset		
26	TIS86	400m	500M Δ	3.2m	SJ	30	30	4.0	50m	10u Ω	1.0 Ω	4.0m Ω	40 Δ			PE	X55	C		
27	TIS87	400m	500M Δ	3.2m	SJ	45	45	4.0	50m	10u Ω	1.0 Ω	12m Ω	30 Δ			PE	X55	C		
28	2N2369/46	400m	600M Δ	2.3m	SJ	40	15	4.5	500m	400p Ω	1.0 Ω	10m Ω				4.0p Ω	PE	T046		
29#	BFV97	400m	600M Δ	2.6m	SJ	30	15	3.0	50m	0.05u Ω	1.0 Ω	3.0m Ω	20 Δ			1.7p Ω	PE	L56f		
30#	BFV97N	400m	600M Δ	2.6m	SJ	30	15	3.0	50m	0.05u Ω	1.0 Ω	3.0m Ω	20 Δ			1.7p Ω	PE	L56g		
31▼	SE5037	400m	600M Δ	2.2m	SJ	45	40	4.0			50n Ω	1.0 Ω	10m Ω	100 Δ			850ff	DPE	T018	
32	TIS105	400m	600M Δ	3.2m	SS	45	45	4.0	50m	50n Ω	1.0 Ω	10m Ω	100 Δ			700fs	PE \emptyset	X55		
33	UCX2910*	400m	600M Δ	3.2m	SS	30	15	4.0			1p Ω	1.0 Ω	3.0m Ω	40 Δ			p Ω	PLA \emptyset	L2d	
34	2N917746	400m	800M Δ	2.2m	SJ	30	15	3.0			1.0n Ω	1.0 Ω	3.0m Ω	20 Δ			1.7p Ω	PL	T046	
35	2N709A461	400m	1.0G Δ	2.3m	SJ	15	6.0	4.0			5.0n Ω	5.0 Ω	10m Ω	60 Δ			3.0p Ω	PE	T046	
36	2N7284/461	400m	1.0G Δ	2.3m	SJ	15	6.0	4.0			5n Ω	5.0 Ω	10m Ω	120 Δ			3p Ω	PE	T046	
37	JAN2N3595	400m	1.0G Δ	2.2m	SJ	20	12	4.5			1.0u Ω	1.0 Ω	10m Ω	60 Δ			2.5p Ω	TO18	A \emptyset	
38	K2607	400m	1.0G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
39	K2608	400m	1.0G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
40	K2609	400m	1.0G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
41	2N709/461	400m	1.2G Δ	2.2m	SJ	15	6.0	4.0			50n Ω	50 Ω	10m Ω	55 Δ			3.0p Ω	TO46	A	
42	2N39591	400m	1.3G Δ	2.3m	SJ	20	12	4.5	30m		5n Ω	1.0 Ω	10m Ω	400 Ω			2.5p Ω	△	T018	
43	JAN2N3950	400m	1.3G Δ	2.2m	SJ	20	12	4.5	30m		1.0u Ω	1.0 Ω	10m Ω	60 Δ			2.5p Ω	A \emptyset		
44	K2607A	400m	1.4G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
45	K2608A	400m	1.4G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
46	K2607A	400m	1.4G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
47	K2608A	400m	1.4G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
48	K2609A	400m	1.4G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
49	2N39601	400m	1.6G Δ	2.3m	SS	20	12	4.5	30m		5n Ω	1.0 Ω	10m Ω	400 Ω			2.5p Ω	△	T018	
50	K2607B	400m	1.7G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
51	K2608B	400m	1.7G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
52	K2609B	400m	1.7G Δ	2.3m	SJ	20	10	2.0			100n Ω	1.0 Ω	3.0m Ω	20 Δ			2.0p Ω	TO46	A	
53▼	AT50	400m	3.5G Δ	2.2m	SJ	20	12	3.0	300m		100n Ω	1.0 Ω	15m Ω	75 Δ			500fs Ω	PE \emptyset	U77b	
54▼	AT51	400m	3.5G Δ	2.2m	SJ	20	12	3.0	300m		100n Ω	1.0 Ω	15m Ω	75 Δ			500fs Ω	PE \emptyset	U77b	
55▼	AT52	400m	3.5G Δ	2.2m	SJ	20	12	3.0	300m		100n Ω	1.0 Ω	15m Ω	75 Δ			500fs Ω	PE \emptyset	U77b	
56▼	AT201A	400m	4.0G Δ	2.2m	SJ	20														

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) I_{FB} & (3) TYPE No.

LINE No.	TYPE No.	TYPICAL "H" PARAMETERS										Cob	STRUCTURE	DWG #									
		COLL. DISS. @25°C (W)	DE RATE IN fab	M FREE AIR W/C	A M BV _{CEO}	B V _{CEO}	B V _{BE0}	I _C	MAX. ICBO @MAX	V _{CB}	I _E	H _{FE}	COMMON EMITTER										
1	TN641	500m	20M _Δ	2.8m	SJ	20	20	5.0	800m	100n	5.0 _Δ	1.0m _Δ	85 Δ	100n _b	28	2.0	8.0p _Δ	PE _Δ	T018	A _Δ			
2	40080	500m	27.7M _Δ	2.9m	SJ	30	30	5.0	250m	10u	1.0m _Δ	55	13u	2.5k	2.5	6.0p _Δ	DPL _Δ	T05	A _Δ				
3	2N337A	500m	30M	3.3m	SJ	45	35	2.5	20m	50u	20	1.0m _Δ	55				2.0p _Δ	T05	A _Δ				
4	2N1140	500m _s	35M _Δ	5.0m	SJ	40	40	5.0		15u	6.0 _Δ	1.0m _Δ	20 Δ				20p _Δ	R818	A _Δ				
5	2N719A	500m	40M _Δ	35.0m	SJ	120	60	7.0	1.0 #	10n _Δ	5.0	1.0m _Δ	15 Δ	500n _b	35 Δ	2.5 Δ	8.5p _Δ	TO18	A _Δ				
6	2N7301	500m	40M _Δ	3.3m	SJ	60	40	5.0	1	1.0u	10 _Δ	1.5m _Δ	40 1#				35p _Δ	PL	T018	A _Δ			
7	JAN2N912	500m	40M _Δ	4.5M	SJ	100	60	7.0		15n _Δ	5.0 _Δ	5.0 Δ	20 Δ				15p _Δ	TO18	A _Δ				
8	2N338A	500m	45M _Δ	3.3m	SJ	45	35	2.5	20m	50u	20	1.0m _Δ	99				2.0p _Δ	TO18	A _Δ				
9	2N929A	500m	45M _Δ	2.8m	SJ	60	45	6.0	30m	2.0n _Δ	5.0 _Δ	1.0m _Δ	60 Δ	1.0u _b	32 Δ	6.0 Δ	6.0p _Δ	TO18	A _Δ				
10	2N930A	500m	45M _Δ	2.8m	SJ	60	45	6.0	30m	2.0n _Δ	5.0 _Δ	1.0m _Δ	150 Δ	1.0u _b	32 Δ	6.0 Δ	6.0p _Δ	TO18	A _Δ				
11	2N930B	500m	45M _Δ	2.8m	SJ	60	45	6.0	30m	2.0n _Δ	5.0 _Δ	1.0m _Δ	150 Δ	1.0u _b	32 Δ	6.0 Δ	6.0p _Δ	TO18	A _Δ				
12	2N5601	500m	50M	4.0m	SJ	60	60	0	100m	10u	5.0	1.0m _Δ	20 Δ				8p _Δ	TO29	A _Δ				
13	2N7311	500m	50M _Δ	3.3m	SJ	60	40	5.0	1	1.0u	10 _Δ	1.5m _Δ	80 1#				35p _Δ	PL	T018	A _Δ			
14	2N756	500m	50M _Δ	2.8m	SJ	45	45	6.0	100m	200n	5.0 _Δ	1.0m _Δ	18			8.0p _Δ	ME	T018	A _Δ				
15	2N757	500m	50M _Δ	2.8m	SJ	45	45	6.0	100m	200n	5.0 _Δ	1.0m _Δ	30			8.0p _Δ	ME	T018	A _Δ				
16	2N758	500m	50M _Δ	2.8m	SJ	45	45	8.0	100m	200n	5.0 _Δ	1.0m _Δ	54			1.0u _b	80 Δ	T018	A _Δ				
17	2N758B	500m	50M _Δ	2.8m	SJ	60	60	8.0	100m	5.0n _Δ	5.0 _Δ	1.0m _Δ	18 Δ	1.0u _b	35 Δ	6.0 Δ	6.0p _Δ	TO18	A _Δ				
18	2N759	500m	50M _Δ	2.8m	SJ	45	45	8.0	100m	200n	5.0 _Δ	1.0m _Δ	63			1.0u _b	80 Δ	T018	A _Δ				
19	2N759B	500m	50M _Δ	2.8m	SJ	60	60	8.0	100m	5.0n _Δ	5.0 _Δ	1.0m _Δ	36 Δ	1.0u _b	35 Δ	6.0 Δ	6.0p _Δ	ME	T018	A _Δ			
20	2N760	500m	50M _Δ	2.8m	SJ	45	45	8.0	100m	200n	5.0 _Δ	1.0m _Δ	204			1.0u _b	80 Δ	T018	A _Δ				
21	2N760B	500m	50M _Δ	2.8m	SJ	60	60	8.0	100m	5.0n _Δ	5.0 _Δ	1.0m _Δ	76 Δ	1.0u _b	35 Δ	6.0 Δ	6.0p _Δ	TO18	A _Δ				
22	2N870	500m	50M _Δ	2.8m	SJ	100	60	7.0		10n _Δ	5.0 _Δ	1.0m _Δ	30 Δ	500n _b	30 Δ	1.2 Δ	15p _Δ	T018	A _Δ				
23	2N911	500m	50M _Δ	2.8m	SJ	100	60	7.0		25n _Δ	5.0 _Δ	1.0m _Δ	36 Δ	50u	1.0k		15p _Δ	T018	A _Δ				
24	JAN2N911	500m	50M _Δ	2.8m	SJ	100	60	7.0		15n _Δ	5.0 _Δ	1.0m _Δ	1.0k	1.7	1.7	1.5p _Δ	T018	A _Δ					
25	2N981	500m	50M _Δ	2.8m	SJ	80	80	8.0	100m	1.0u _Δ	5.0 _Δ	1.0m _Δ	38 Δ	1.0u _b	80 Δ	10 Δ	5.0p _Δ	* T018					
26	2N2223*	500m	50M _Δ	2.8m	SJ	100	60	7.0	500m	10n _Δ	5.0 _Δ	1.0m _Δ	40 Δ	500n _b	30 Δ	3.0 Δ	15p _Δ	* L2t					
27	2N2223A*	500m	50M _Δ	2.8m	SJ	100	60	7.0	500m	10n _Δ	5.0 _Δ	1.0m _Δ	40 Δ	500n _b	30 Δ	3.0 Δ	15p _Δ	* L2t					
28	2N2414	500m	50M _Δ	2.8m	SJ	60	28	5.0	500m	25n	1.0 _Δ	1.0m _Δ	50 Δ	1.0u _b	8.0 Δ	5.0 Δ	25p _Δ	* L2t					
29	2N2427	500m	50M _Δ	5.0M	SJ	40	40	4.0	50m	50u	3.0 _Δ	1.0m _Δ	75 Δ	500n _b	34 Δ	5.0 Δ	25p _Δ	T018	A _Δ				
30	2N2645	500m	50M _Δ	2.8m	SJ	75	50	7.0		10n _Δ	5.0 _Δ	1.0m _Δ	75 Δ				20p _Δ	T0104					
31	2N3241A	500m	50M _Δ	2.8m	SJ	80	80	8.0	100m	1.0u _Δ	5.0 _Δ	1.0m _Δ	38 Δ	1.0u _b	80 Δ	10 Δ	5.0p _Δ	* T018					
32	2N3242A	500m	50M _Δ	2.8m	SJ	100	60	7.0	500m	10n _Δ	5.0 _Δ	1.0m _Δ	40 Δ	500n _b	30 Δ	3.0 Δ	15p _Δ	* L2t					
33	2N4068	500m	50M _Δ	3.3m	SJ	150	150	5.0	200m	0.05u _Δ	100	30m _Δ	30 Δ				3.5ps	T0104					
34	2N5184	500m	50M _Δ	3.3m	SJ					120	5.0	50m	10 Δ				3.5ps	T0104	A _Δ				
35	40397	500m	50M _Δ	3.3m	SJ	25				7.5	200m	1.0u _Δ	120	10m _Δ	10 Δ			12p	R123				
36	40398	500m	50M _Δ	3.3m	SJ	25				7.5	200m	1.0u _Δ	120	10m _Δ	125 Δ			12p	R123				
37	40399	500m	50M _Δ	3.3m	SJ	18				7.0	200m	50u _Δ	120	10m _Δ	375			12p	R123				
38	40400	500m	50M _Δ	3.3m	SJ	18				7.0	200m	50u _Δ	120	10m _Δ	200			12p	R123				
39	# BCW25*	500m	50M	2.8m	SJ	60	50	5.0	500m	100n _Δ	5.0 _Δ	1.0m _Δ	25 Δ				15p _Δ	PL	L2				
40	# BCW26	500m	50M	2.8m	SJ	60	50	5.0	500m	100n _Δ	5.0 _Δ	1.0m _Δ	25 Δ				15p _Δ	PL	L2				
41	# BCW50	500m	50M	1.0m	SJ	120	120	5.0		200n	1.0 _Δ	10m _Δ	35 1				15p _Δ	PL	T018	A _Δ			
42	MD1T1893	500m	50M _Δ	1.0m	SJ	120	80	7.0		10n _Δ	10 _Δ	50m _Δ	2.5 Δ				15p _Δ	TO122	A _Δ				
43	TN80	500m	50M _Δ	2.6m	SJ	30	20	5.0		1.0n	1.0 _Δ	100u _Δ	75 Δ				10p _Δ	TO18	A _Δ				
44	2N718A	500m	60M _Δ	350m	SJ	75	32	7.0		10n _Δ	5.0 _Δ	1.0m _Δ	30 Δ	1.0u _b	34 Δ	30 Δ	25p _Δ	T018	A _Δ				
45	JAN2N18A	500m	60M _Δ	2.8m	SJ	75	30	7.0	500m	10n _Δ	5.0 _Δ	1.0m _Δ	30 Δ	1.0u _b	30 Δ	30 Δ	25p _Δ	T018	A _Δ				
46	JAN2N720A	500m	60M _Δ	2.8m	SJ	120	80	7.0	500m	10n _Δ	5.0 _Δ	1.0m _Δ	125 Δ				3.5p _Δ	T0104					
47	2N735A	500m	60M _Δ	2.8m	SJ	80	60	6.0	50m	5.0n _Δ	5.0 _Δ	1.0m _Δ	40 Δ				3.5p _Δ	T018	A _Δ				
48	2N739A	500m	60M _Δ	3.4m	SJ	125	80	8.0	50m	5.0n _Δ	5.0 _Δ	1.0m _Δ	40 Δ				6.0p _Δ	T018	A _Δ				
49	JAN2N757A	500m	60M _Δ	2.8m	SJ	75	60	6.0	100m	1.0u _Δ	5.0 _Δ	1.0m _Δ	18 Δ				1.0u _b	80 Δ	T018	A _Δ			
50	JAN2N759A	500m	60M _Δ	2.8m	SJ	75	60	8.0	100m	1.0u _Δ	5.0 _Δ	1.0m _Δ	36 Δ				1.0u _b	80 Δ	T018	A _Δ			
51	JAN2N760A	500m	60M _Δ	2.8m	SJ	75	60	8.0	100m	1.0u _Δ	5.0 _Δ	1.0m _Δ	76 Δ				1.0u _b	80 Δ	T018	A _Δ			
52	2N871	500m	60M _Δ	2.8m	SJ	100	60	7.0		10n _Δ	5.0 _Δ	1.0m _Δ	50 Δ				300n _b	30 Δ	1.5 Δ	15p _Δ	T018	A _Δ	
53	JAN2N910	500m	60M _Δ	2.8m	SJ	100	60	7.0		15n _Δ	5.0 _Δ	1.0m _Δ	80 Δ				100n _b	1.6k	3.0 Δ	15p _Δ	T018	A _Δ	
54	2N2060*	500m	60M _Δ	2.9m	SJ	100	60	7.0	500m	2n _Δ	5.0 _Δ	1.0m _Δ	100 Δ				16u _Δ	4k _Δ	4k _Δ	15p _Δ	L2t		
55	2N2060A*	500m	60M _Δ	3.4m	SJ	100	60	7.0	500m	2n _Δ	5.0 _Δ	1.0m											

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX. RATED ABS MAX RATINGS @ 25°C										TYPICAL h _{FE} PARAMETERS										Cob	STRUCTURE	DWG #	LC
		COLL. DISS. @25°C		IN fab		FREE AIR X		BV _{cbo} BV _{ceo}		BV _{ebo}		MAX. IC V _{cb}		BIAS		COMMON Emitter				Cob		STRUCTURE	DWG #	LC	
		(W)	(Hz)	(W/C)	(V)	(A)	(V)	(A)	(V)	(A)	(V)	V _{cb}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}	(mhos)	(Ω)	X.0001	(F)				
1	40354	500m	100M _Δ	3.3m	SJ	150	5.0	50m	100n _Δ	10 _Δ	10m _Δ	55 T	-	-	-	-	-	-	-	-	12.8ns	P115	AØ		
2 #	BFX70*	500m	100M _Δ	2.8m	SJ	100	6.0	7.0	500m	2.0n _Δ	5.0 _Δ	1.0m _Δ	80	9.0u	2.3k	-	-	-	-	-	12p	DPL*	L2b		
3 #	BFX71*	500m	100M _Δ	2.8m	SJ	100	6.0	7.0	500m	10n _Δ	5.0 _Δ	1.0m _Δ	125	200nb	27	900m	-	-	-	-	12p	DPL*	L2b		
4 #	BFX72*	500m	100M _Δ	2.8m	SJ	100	6.0	7.0	500m	10n _Δ	5.0 _Δ	1.0m _Δ	125	200nb	27	900m	-	-	-	-	12p	DPL*	L2b		
5 #	BFX99*	500m	100M _Δ	2.8m	SJ	100	6.0	7.0	500m	2.0n _Δ	5.0 _Δ	1.0m _Δ	50	16	4.0k _Δ	10	12	-	-	12p	Ø	L2b			
6 #	BSX70	500m	100M _Δ	2.8m	SJ	75	30	7.0	500m	10n _Δ	5.0 _Δ	1.0m _Δ	40	500n _Δ	34	3.0	-	-	-	25ps	PEØ	T018			
7 #	BSX71	500m	100M _Δ	2.8m	SJ	75	30	7.0	500m	10n _Δ	5.0 _Δ	1.0m _Δ	50	500n _Δ	34	5.0	-	-	-	25ps	PEØ	T018			
8 #	D33D21	500m	100M _Δ	4.0m	SJ	35	25	5.0	750m	2.0 _Δ	2.0m _Δ	60	1Δ	-	-	-	-	-	-	15ps	PEØ	T098			
9	D33D24	500m	100M _Δ	4.5m	IJ	50	40	5.0	750m	2.0 _Δ	2.0m _Δ	60	1Δ	-	-	-	-	-	-	15ps	PEØ	T098			
10 #	NKT10339	500m	100M _Δ	3.3m	SJ	45	30	5.0	500m	0.1u _Δ	10 _Δ	1.0m _Δ	50	-	-	-	-	-	-	10ps	-	T018			
11 #	NKT10439	500m	100M _Δ	3.3m	SJ	45	30	5.0	500m	0.1u _Δ	10 _Δ	1.0m _Δ	100	1Δ	-	-	-	-	-	10p	-	T018			
12	TN54	500m	100M _Δ	2.8m	SJ	75	45	5.0	800m	10n _Δ	5.0 _Δ	1.0m _Δ	145	-	-	-	-	-	-	8Op	PEØ	T018			
13	TN601	500m	100M _Δ	2.8m	SJ	40	30	5.0	800m	20n _Δ	5.0 _Δ	1.0m _Δ	140	100nb	27	3.2	-	-	-	8.0p	PEØ	T018			
14	TN621	500m	100M _Δ	2.8m	SJ	40	30	5.0	800m	20n _Δ	5.0 _Δ	1.0m _Δ	50	900nb	26	3.2	-	-	-	8.0p	PEØ	T018			
15	2N956	500m	110M _Δ	2.8m	SJ	75	50	5.0	100m	10n _Δ	5.0 _Δ	5.0m _Δ	50	500nb	34	5.0	-	-	-	25p	PEØ	T018			
16	2N2895	500m	120M _Δ	2.9m	IJ	120	65	7.0	1	2n _Δ	5.0 _Δ	5.0m _Δ	50	-	-	-	-	-	-	15p	PLØ	T018			
17	2N2896	500m	120M _Δ	2.9m	IJ	140	90	7.0	1	0.1u _Δ	5.0 _Δ	5.0m _Δ	50	-	-	-	-	-	-	15p	PLØ	T018			
18	2N2898	500m	120M _Δ	2.9m	IJ	120	65	10	1	2n _Δ	5.0 _Δ	5.0m _Δ	50	-	-	-	-	-	-	15p	PLØ	T046			
19	2N2899	500m	120M _Δ	2.9m	IJ	140	90	10	1	0.1u _Δ	5.0 _Δ	5.0m _Δ	50	-	-	-	-	-	-	15p	PLØ	T046			
20	2N4384	500m	120M _Δ	2.8m	IJ	40	30	5.0	800m	10n _Δ	5.0 _Δ	1.0m _Δ	10k _Δ	200nb	32	1Δ	-	-	-	8.0p	Ø	T018			
21	2N4386	500m	120M _Δ	2.8m	IJ	40	30	5.0	800m	10n _Δ	5.0 _Δ	1.0m _Δ	10k _Δ	200nb	32	1Δ	-	-	-	8.0p	Ø	T018			
22	D33D25	500m	120M _Δ	4.5m	IJ	50	40	5.0	750m	2.0 _Δ	2.0m _Δ	100	1Δ	-	-	-	-	-	-	15ps	PEØ	T098			
23 #	D33D30	500m	120M _Δ	4.0m	SJ	70	60	5.0	750m	10n _Δ	2.0 _Δ	2.0m _Δ	100	1Δ	-	-	-	-	-	15ps	PE	T098			
24	2N1613/46	500m	130M _Δ	4.5m	SJ	75	50	5.0	500m	10n _Δ	10 _Δ	150	100	12	1Δ	-	-	-	-	-	25p	PLØ	T046		
25	D33D22	500m	135M _Δ	4.0m	SJ	35	25	5.0	750m	10n _Δ	2.0 _Δ	2.0m _Δ	150	1Δ	-	-	-	-	-	15ps	PE	T098			
26	D33D26	500m	135M _Δ	4.5m	IJ	50	40	5.0	750m	2.0 _Δ	2.0m _Δ	150	1Δ	-	-	-	-	-	15ps	PEØ	T098				
27	2N2463	500m	150M _Δ	3.4m	IJ	100	60	8.0	-	2n _Δ	5.0 _Δ	5.0m _Δ	40	30u	800	-	-	-	-	5p	PL	T018			
28	2N2464	500m	150M _Δ	3.4m	IJ	100	60	8.0	-	2n _Δ	5.0 _Δ	5.0m _Δ	70	60u	1.2k	-	-	-	-	5p	PL	T018			
29	2N2465	500m	150M _Δ	3.4m	IJ	100	60	8.0	-	2n _Δ	5.0 _Δ	5.0m _Δ	120	90u	1.8k	-	-	-	-	5p	PL	T018			
30	2N2466	500m	150M _Δ	3.4m	IJ	100	60	8.0	-	2n _Δ	5.0 _Δ	5.0m _Δ	170	120u	2.4k	-	-	-	-	5p	PL	T018			
31 #	2SC27	500m	150M _Δ	4.0m	SJ	60	-	-	100m	0.1u _Δ	10 _Δ	1.0m _Δ	50	-	-	-	-	-	-	4Op	ME	T05			
32 #	2SC97	500m	150M _Δ	3.3m	SJ	60	35	2.0	500m	5.0u _Δ	20 _Δ	1.0m _Δ	30	-	-	-	-	-	-	5.0p	PE	T05			
33	D33D27	500m	150M _Δ	4.5m	IJ	50	40	5.0	750m	2.0 _Δ	2.0m _Δ	250	1Δ	-	-	-	-	-	-	15ps	PEØ	T098			
34	2N1711/46	500m	160M _Δ	4.5m	SJ	75	50	7.0	500m	10n _Δ	10 _Δ	150m _Δ	130	1	23u	4.4k	7.3	-	-	-	25p	PLØ	T046		
35 #	2SC249	500m	170M _Δ	2.0m	SJ	70	60	5.0	70m	1.0u _Δ	6.0 _Δ	2.5m	60	-	-	-	-	-	-	3.2p	PL	T05			
36 #	2SC875	500m	170M _Δ	2.0m	SJ	75	75	5.0	40	50m _Δ	1.0u _Δ	50m _Δ	100	1	-	-	-	-	-	5.0p	PL	T039			
37 #	2SC876	500m	170M _Δ	2.8m	SJ	50	50	4.0	500m	1.0u _Δ	6.0 _Δ	50m _Δ	100	1	-	-	-	-	-	5.0p	PL	T039			
38	JAN2N1493	500m	175M _Δ	2.8m	SJ	100	100	#4.5	500m	1.0u _Δ	6.0 _Δ	50m _Δ	100	1	-	-	-	-	-	5.0p	PL	R81A			
39	2N752	500m	200M _Δ	2.9m	SJ	85	45	8.0	100m	1.0u _Δ	10 _Δ	1.0m _Δ	40	Δ	-	-	-	-	-	5p	PL	T018			
40	2N1632	500m	200M _Δ	3.0m	IJ	25	12	3.0	-	50u _Δ	1.0 _Δ	1.0m _Δ	20	1Δ	-	-	-	-	-	5p	PL	T05			
41 #	2N58451	500m	200M _Δ	4.5m	IJ	50	40	*6.0	600m	500n _Δ	1.0 _Δ	1.0m _Δ	50	10m	50	1Δ	-	-	-	9.0ps	DPL	T092			
42	404581	500m	200M _Δ	3.3m	IJ	60	40	*8.0	1	0.1u _Δ	12 _Δ	1.0m _Δ	175	75m	600	12	1Δ	-	-	20ps	DPL	R123			
43 #	BFS59	500m	200M _Δ	3.3m	SJ	60	30	5.0	1.0#	100n _Δ	10 _Δ	1.0m _Δ	130	47u	450	15	1Δ	-	-	15p	PLT	X59			
44 #	BFS60	500m	200M _Δ	3.3m	SJ	60	40	5.0	1.0#	100n _Δ	10 _Δ	1.0m _Δ	130	47u	450	1.5	1Δ	-	-	15p	PLT	X59			
45 #	BFS61	500m	200M _Δ	3.3m	SJ	80	80	5.0	1.0#	100n _Δ	10 _Δ	1.0m _Δ	130	47u	450	1.5	1Δ	-	-	15p	PLT	X59			
46 #	BFW321	500m	200M _Δ	4.0m	IJ	50	30	5.0	700m	500n _Δ	10 _Δ	1.0m _Δ	40	250u	4.0k _Δ	6.0	1Δ	-	-	7Op	PEØ	T018			
47 #	BSW261	500m	200M _Δ	2.9m	IJ	60	40	5.0	1600m	20n _Δ	10 _Δ	1.0m _Δ	40	150m	40	1#Δ	-	-	-	8Op	PE	T018			
48	MD2218A*	500m	200M _Δ	2.9m	IJ	75	40	6.0	600m	15n _Δ	10 _Δ	1.0m _Δ	40	150m	40	1#Δ	-	-	-	8Op	PE	AN1			
49	MD2218A*	500m	200M _Δ	2.9m	IJ	60	60	4.0	500m	1.0u _Δ	10 _Δ	1.0m _Δ	50	10m	50	1Δ	-	-	-	6Op	PE	AN1			

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	3 1. MAX. COLL. DISS. @25°C (W)	2 DERATE IN fab FREE AIR X P (Hz)	T ABS M E BVcbo BVceo BVbeo (V)	MAX. RATING @ 25°C Ic @MAX Vcb (A)	MAX. Icbo Vcb (A)	TYPICAL h PARAMETERS			COMMON Emitter			Cob (F)	STRUCTURE Y200 s/a TO200 TO200 Ser.	DWG # E O X55a X55a A D A D E	
							Vcb (V)	Ie (A)	hfe (mhos)	hoe (Ω)	hie (Ω)	hre (Ω)				
1	MPSH07	500m	400M ^Δ	4.5m	1J	30	30	3.0	50n ^Δ	10 ²	3.0m ^Δ	20 t ^Δ	300ft ^Δ	AN ^Δ	T092 A	
2	2N60121	500m	420M ^Δ	4.0m	SJ	50	40	5.0	800m	10 ²	1.0m	155 Δ	10ps ^Δ	X55a	E O	
3	2N60161	500m	420M ^Δ	4.0m	SJ	70	60	5.0	800m	10 ²	1.0m	155 Δ	10ps ^Δ	X55a	A D	
4	MPSH32	500m	440M ^Δ	4.5m	1J	40	30	4.0	50n ^Δ	5.0 ²	4.0m ^Δ	35 t ^Δ	200fs	AN ^Δ	T092 C	
5	2N8551	500m ^Δ	500M ^Δ	2.9m ^Δ	SJ	30	15	4.5	100m	1.0 ²	1.0m ^Δ	40 t ^Δ	1.5ps ^Δ	PE	T072 G	
6	2SC4231	500m	500M ^Δ	2.9m ^Δ	SJ	40	15	5.0	300m	1.0 ²	5.0 ²	20m ^Δ	5.0p	PE	T039	
7	2SC4251	500m	500M ^Δ	2.8m ^Δ	SJ	20	15	5.0	300m	1.0 ²	5.0 ²	20m ^Δ	4.0p ^Δ	AN ^Δ	L66a	
8	MD2369*	500m	500M ^Δ	2.8m ^Δ	SJ	40	15	5.0	500m	3.0 ²	1.0m ^Δ	40 t ^Δ #	4.0p ^Δ	AN ^Δ	L66a	
9	MD2369A*	500m	500M ^Δ	2.8m ^Δ	SJ	40	15	5.0	500m	1.0 ²	1.0m ^Δ	40 t ^Δ #	4.0p ^Δ	AN ^Δ	L66a	
10	MD2369B*	500m	500M ^Δ	2.8m ^Δ	SJ	40	15	5.0	500m	3.0 ²	1.0m ^Δ	40 t ^Δ #	4.0p ^Δ	AN ^Δ	L66a	
11	MPSH08	500m	500M ^Δ	4.5m	1J	30	30	3.0	50n ^Δ	10 ²	3.0m ^Δ	20 t ^Δ	300ft ^Δ	AN ^Δ	T092 A	
12	SE5030B	500m	600M ^Δ	4.5m	1A	45	40	4.5	100n ^Δ	15 ²	7.0m ^Δ	80 t ^Δ	280fs	DPE	TO105 C	
13	MPSH24	500m	620M ^Δ	4.5m	1J	40	30	4.0	100m	1.0 ²	8.0m ^Δ	30 t ^Δ	250fs	E	T072 C	
14	2N5852	500m ^Δ	700M ^Δ	2.9m ^Δ	SJ	30	15	4.5	100m	1.0 ²	10m ^Δ	40 t ^Δ	1.5ps ^Δ	PE	T072 G	
15	MPSH34	500m	720M ^Δ	4.5m ^Δ	1J	45	45	4.0	100m	5.0 ²	7.0m ^Δ	40 t ^Δ	250fs	E	T092 C	
16	ZTX327	500m ^Δ	800M ^Δ	3.3m ^Δ	SJ	55	30	3.5	400m ^Δ	200Δ ^Δ	1.5p ^Δ	PL	X55	F		
17	JAN2N2060*	540m	60M ^Δ	8.3m ^Δ	SJ	100	60	7.0	2.0n ^Δ	5.0 ²	1.0m ^Δ	16u ^Δ	4.0k ^Δ	L2b		
18	2N3402	580m	4.4m	SJ	25	25	5.0	500m	100n ^Δ	2.0 ²	2.0m ^Δ	75 Δ	X28	B		
19	2N3403	560m	4.4m	SJ	25	25	5.0	500m	100n ^Δ	4.5 ²	2.0m ^Δ	180 Δ	X28	B		
20	2N3404	560m	4.4m	SJ	50	50	5.0	500m	100n ^Δ	4.5 ²	2.0m ^Δ	75 Δ	X28	B		
21	2N3405	560m	4.4m	SJ	50	50	5.0	500m	100n ^Δ	4.5 ²	2.0m ^Δ	100 Δ	X28	B		
22	2N4425	580m	4.5m	SJ	40	40	5.0	500m	1.0u ^Δ	14.5 ²	2.0m ^Δ	180 Δ	X28			
23	CS4425	580m	4.5m	SJ	40	40	5.0	500m	1.0u ^Δ	14.5 ²	2.0m ^Δ	180 Δ	R97a			
24	BSX721	575m	250M ^Δ	1.7m	SA	100	100	1.0	1.0u ^Δ	1.0 ²	150m ^Δ	20 Δ	8.0p	NPE	T05	
25	2N4270	580m ^Δ	3.3m	SJ	200	140	15	30m	1.0u ^Δ	10 ²	10m ^Δ	200 t ^Δ	5p ^Δ	ME	T05 A	
26	BC100t	590m*	10 Ms	SJ	350	300	70	150m	0.06u ^Δ	200	10m ^Δ	40 t ^Δ	100p ^Δ	TO5	A Ø	
27	2N5451	600m	7.7m	SJ	60	60	10	500m	25u	6.0 ²	500m ^Δ	15 t ^Δ	100p ^Δ	TO5	A Ø	
28	JAN2N545T	600m ^Δ	7.6m	SJ	60	60	10	500m	25u	6.0 ²	500m ^Δ	15 t ^Δ	100p ^Δ	TO5	A Ø	
29	2N546t	600m ^Δ	5.6m	SJ	30	30	6.0	800m	1.0u ^Δ	5.0 ²	5.0m ^Δ	12k	10p ^Δ	TO5	A Ø	
30	2N1564	600m	4.0m	SJ	80	60	5.0	500m	1.0u ^Δ	5.0 ²	5.0m ^Δ	1.2k	10p ^Δ	TO5	A Ø	
31	2N1555	600m	4.0m	SJ	80	60	5.0	500m	1.0u ^Δ	5.0 ²	5.0m ^Δ	40 Δ	1.5k	10p ^Δ	T05 A	
32	2N1566	600m	4.0m	SJ	80	60	5.0	500m	1.0u ^Δ	5.0 ²	5.0m ^Δ	80 Δ	10p ^Δ	T05 A		
33	2N1572	600m	4.0m	SJ	125	80	5.0	500m	1.0u ^Δ	5.0 ²	5.0m ^Δ	20 Δ	1.2k	10p ^Δ	T05 A	
34	2N1573	600m	4.0m	SJ	125	80	5.0	500m	1.0u ^Δ	5.0 ²	5.0m ^Δ	40 Δ	1.5k	10p ^Δ	T05 A	
35	2N1574	600m	4.0m	SJ	125	80	5.0	500m	1.0u ^Δ	5.0 ²	5.0m ^Δ	80 Δ	1.8k	10p ^Δ	T05 A	
36	2N1990	600m	4.8m	SJ	100	30	1	10u ^Δ	10 ²	30m ^Δ	20 t ^Δ #	10p ^Δ	TO5	A Ø		
37	2N1990S	600m	4.7m	SJ	100	30	1	10u ^Δ	10 ²	2.0m ^Δ	25 Δ	PL	T05 Ø			
38	#BSX12A	600m	25	15	4.0	1.0	1.0	1.0u ^Δ	5.0 ²	1.0m ^Δ	20 t ^Δ	PE	T039 A			
39	#SL301C*	600m	4.0m	SA	25	10	4.3	50m	5.0 ²	1.0m ^Δ	20 t ^Δ	L44a				
40	#SL301CE*	600m	4.0m	SA	25	10	4.3	50m	5.0 ²	1.0m ^Δ	20 t ^Δ	L44b				
41	T1481	600m	6.0m	SJ	80	70	1.0	60m	2.0u ^Δ	10	5.0m ^Δ	9.0 Δ	G	R147 A		
42	#DT16101	600m	5.0m	SJ	25	15	4.0	250m	8.0u	16.0 ²	200m ^Δ	10 t ^Δ	D	T05		
43	2N29587	600m	5.9m	SJ	100	80	10	3	1.0u ^Δ	1.0 ²	200m ^Δ	36 t ^Δ	D	A Ø		
44	2N28591	800m	1.0M ^Δ	5.9m	SJ	120	100	10	3	4.0 ²	1.0m ^Δ	20 t ^Δ	D	T05 A		
45	#DT10031	600m	1.0M ^Δ	6.2m	SA	200	200	50	300m	50u	8.0 ²	200m ^Δ	36 t ^Δ	G	T011 A	
46	T1495	600m	5.9m	SJ	70	65	10	80m	2.0u ^Δ	5.0 ²	3.0m ^Δ	10 t ^Δ	100p ^Δ	TO5	A Ø	
47	2N1615	600m	2.0M ^Δ	5.6m	SJ	100	100	8.0	200m	2.0u ^Δ	10 ²	5.0m ^Δ	25 t ^Δ	100p ^Δ	TO5	A Ø
48	2N2038	600ms	2.0M ^Δ	5.6m	SJ	45	45	4.0	500m	15u	6.0 ²	200m ^Δ	12 t ^Δ	100p ^Δ	TO5	A Ø
49	2N2039	600ms	2.0M ^Δ	5.6m	SJ	75	75	4.0	500m	15u	6.0 ²	200m ^Δ	12 t ^Δ	100p ^Δ	TO5	A Ø
50	2N2040	600ms	2.0M ^Δ	5.6m	SJ	45	45	4.0	500m	15u	6.0 ²	200m ^Δ	30 t ^Δ	100p ^Δ	TO5	A Ø
51	2N2041	600ms	2.0M ^Δ	5.6m	SJ	25	75	4.0	500m	15u	6.0 ²	200m ^Δ	30 t ^Δ	100p ^Δ	TO5	A Ø
52	2N5551	600ms	3.0M ^Δ	5.6m	SJ	60	60	6.0	200m	15u	6.0 ²	50m ^Δ	20 t ^Δ	100p ^Δ	TO5	A Ø
53	2N5552	600ms	3.0M ^Δ	5.6m	SJ	30	30	6.0	200m	15u	6.0 ²	50m ^Δ	20 t ^Δ	100p ^Δ	TO5	A Ø
54	2N1055	600ms	3.0M ^Δ	5.6m	SJ	100	100	6.0	200m	15u	6.0 ²	50m ^Δ	500 Δ	100p ^Δ	TO5	A Ø
55	2N547	600ms	4.0M ^Δ	5.6m	SJ	60	60	6.0	800m	15u	6.0 ²	500m ^Δ	20 t ^Δ	100p ^Δ	TO5	A Ø
56	2N548	600ms	4.0M ^Δ	5.6m	SJ	30	30	6.0	800m	15u	6.0 ²	500m ^Δ	20 t ^Δ	100p ^Δ	TO5	A Ø
57	2N549	600ms	4.0M ^Δ	5.6m	SJ	60	60	6.0	800m	15u	6.0 ²	500m ^Δ	20 t ^Δ	100p ^Δ	TO5	A Ø
58	2N550	600ms	4.0M ^Δ	5.6m	SJ	30	30	6.0	800m	15u	6.0 ²	200m ^Δ	20 t ^Δ	100p ^Δ	TO5	A Ø
59	2N1052	600m	4.0m	SJ	180	180	6.0	10u	10u ^Δ	6.0 ²	200m ^Δ	35 t ^Δ	50p	ME	T05 A	
60	2N1053	600m	4.0m	SJ	200	200	6.0	10u	10u ^Δ	6.0 ²	200m ^Δ	35 t ^Δ	50p	ME	T05 A	
61	2N7054	600m	4.0M ^Δ	5.6m	SJ	125	115	6.0	50u	20	100m	12 Δ	100p ^Δ	PL	T05 A	
62	2N1117	600ms	4.0M ^Δ	5.6m	SJ	60	60	6.0	800m	15u	6.0 ²	200m ^Δ	40 t ^Δ	120p ^Δ	TO5	A Ø
63	2N2198	600m	4.0M ^Δ	5.6m	SJ	80	80	7.0	200m	15u	6.0 ²	100m ^Δ	35 t ^Δ	100p ^Δ	PL	T05 A
64	#2ST711	600m	5.0m	833u	#A	40	40	8.0	2							

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1 MAX. 2 DERATE		TABS MAX RATINGS @25°C						MAX. TYPICAL 'H' PARAMETERS		Cob	STRUCTURE	DWG #				
		COLL. DIS. @25°C	IN FREE AIR (W)	M E AIR (Hz)	Bvcbo (V)	BVceo (V)	BVbeo (V)	Ic (A)	icbo @MAX (A)	Vcb (V)	BIAS le (mA)	COMMON Emitter hfe (mhos)	hoe (Ω)	hie (Ω)	hre (Ω)			
1	TRS401	600m	50MΔ 4.0m	SJ	400	400	5	5.0	2.0u	4.0	50m	30	1#Δ			40p	T05 A	
2	TRS425	600m	50MΔ 4.0m	SJ	425	425	5	5.0	3.0u	4.0	50m	22	1#Δ			40p	T05 A	
3	TRS450	600m	50MΔ 4.0m	SJ	450	450	5	5.0	2.0	4.0	50m	65	1#Δ			14p	T05 A	
4	TRS451	600m	50MΔ 4.0m	SJ	450	450	5	5.0	2.0u	4.0	50m	30	1#Δ			40p	T05 A	
5	TRS475	600m	50MΔ 4.0m	SJ	475	475	5	5.0	2.0u	4.0	50m	22	1#Δ			40p	T05 A	
6	TRS501	600m	50MΔ 4.0m	SJ	500	500	5	5.0	2.0u	4.0	50m	30	1#Δ			40p	T05 A	
7	TRS525	600m	50MΔ 4.0m	SJ	525	525	5	5.0	2.0u	4.0	50m	22	1#Δ			40p	T05 A	
8	TRS550	600m	50MΔ 4.0m	SJ	550	550	5	5.0	2.0u	4.0	50m	20	1#Δ			40p	T05 A	
9	TRS575	600m	50MΔ 4.0m	SJ	575	575	5	5.0	2.0u	4.0	50m	22	1#Δ			40p	T05 A	
10	TRS5601	600m	50MΔ 4.0m	SJ	600	600	5	5.0	2.0u	4.0	50m	30	1#Δ			40p	T05 A	
11	TRS650	600m	50MΔ 4.0m	SJ	650	650	5	5.0	10u	5.0	25m	25	1#Δ			14p	T05 A	
12	TRS701	600m	50MΔ 4.0m	SJ	700	700	5	5.0	10u	5.0	25m	25	1#Δ			14p	T05 A	
13	TRS750	600m	50MΔ 4.0m	SJ	750	750	5	5.0	10u	5.0	25m	25	1#Δ			14p	T05 A	
14	TRS801	600m	50MΔ 4.0m	SJ	800	800	5	5.0	10u	5.0	25m	25	1#Δ			14p	T05 A	
15	JAN2N6971	600m	50MΔ 4.0m	SJ	80	40	5	5.0	100u	100	150m	40	1#Δ			25p	AQ	
16	ZN1944	600m	60MΔ 4.0m	SJ	20	20	5	5.0	1.0u	2.0	1.0m	300	1			20p	ME T05 A	
17	ZN1945	600m	60MΔ 4.0m	SJ	30	30	5	5.0	1.0u	2.0	1.0m	300	1			20p	ME T05 A	
18	ZN1946	600m	60MΔ 4.0m	SJ	40	40	5	5.0	1.0u	2.0	1.0m	300	1			20p	ME T05 A	
19	ZN1947	600m	60MΔ 4.0m	SJ	20	20	5	5.0	1.0u	2.0	100m	650	1			20p	ME T05 A	
20	ZN1948	600m	60MΔ 4.0m	SJ	30	30	5	5.0	1.0u	2.0	100m	650	1			20p	ME T05 A	
21	ZN1949	600m	60MΔ 4.0m	SJ	40	40	5	5.0	1.0u	2.0	100m	650	1			20p	ME T05 A	
22	ZN1950	600m	60MΔ 4.0m	SJ	20	20	5	5.0	1.0u	2.0	100m	375	1			20p	ME T05 A	
23	ZN1951	600m	60MΔ 4.0m	SJ	30	30	5	5.0	1.0u	2.0	100m	375	1			20p	ME T05 A	
24	ZN1952	600m	60MΔ 4.0m	SJ	40	40	5	5.0	1.0u	2.0	100m	375	1			20p	ME T05 A	
25#	N2XA	600m	60M	2.0m		120	5	50	50m	1.0u	3.0	15.0m	40			ME	T05 A	
26	ZN6961	600m	64MΔ 4.0m	SS	60	40	5	5.0	1.0u	1.0	100	150m	20	#Δ		35p	D	
27	ZN1252†	600m	64MΔ 4.0m	SJ	30	20	5	5.0	10u	100	150m	35	1#Δ			45p	DA	
28	ZN3881	600m	70MΔ 3.3m	SS	60	35	5	1.0	1.0u	5.0	250m	50	Δ			25p	T05	
29	TRS100	600m	70M\$ 4.5m	SJ	150	135	5	1.0	1.0u	3.5	60m	40	1			15p	MEA	
30	TRS101	600m	70M\$ 4.5m	SJ	115	50	5	1.0	1.0u	5.0	60m	35	1			15p	MEA	
31	ZN8971	600m	80MΔ 4.0m	SS	80	40	5	5.0	1.0u	100	150m	40	1#Δ			35p	A	
32	ZN1253†	600m	80MΔ 4.0m	SJ	30	20	5	5.0	10u	100	150m	45	1#Δ			45p	DA	
33#	ZSC497	600m	80M\$ 5.0m	SJ	100	80	5	5.0	800m	1.0u	2.0	200m	70				30p	PL
34#	ZSC498	600m	80M\$ 5.0m	SJ	80	50	5	5.0	800m	1.0u	2.0	200m	70				30p	PL
35#	BFW29	600m	80M 4.0m	SJ	50	40	5	5.0	400m	1.0u	10	150m	70				25p	PE
36#	ZT696	600m	80M\$ 4.0m	SS	60	40	5	5.0	500m	1.0u	100	150m	40	1			20p	PL
37	ZN18381	600m	90MΔ 4.0m	SJ	45	20	5	5.0	500m	1.5u	100	100m	40	1#Δ			27p	T05 A
38	ZN18391	600m	90MΔ 4.0m	SJ	45	20	5	5.0	500m	1.5u	100	100m	12	1#Δ			27p	T05 A
39	ZN18401	600m	90MΔ 4.0m	SJ	25	15	5	5.0	500m	1.5u	100	100m	10	1#Δ			27p	T05 A
40#	BFX74	600m	80M\$ 3.4m	SJ	50	35	5	5.0	1.0u	100	5.0m	60	600nb	6.2	2.0	31p	DPL	
41#	BSY241	600m	90M\$ 5.0m	SJ	40	20	6	5.0	500m	1.0m	9.0	20m	30			23p	PEØ	
42	ZN1566A	600m	100MΔ 4.0m	SS	80	60	5	5.0	100m	5.0u	1.0m	60	Δ			6p	T05 A	
43	ZN1958T	600m	100MΔ 4.0m	SJ	60	40	5	5.0	500m	5.0u	100	150m	20	1#Δ			18p	T05 A
44	ZN1958AT	600m	100MΔ 4.0m	SJ	60	40	5	5.0	1	200	100	150m	20	1#Δ			14p	T05 A
45	ZN1959T	600m	100MΔ 4.0m	SJ	60	40	5	5.0	500m	5.0u	100	150m	40	1#Δ			14p	T05 A
46	ZN1959AT	600m	100MΔ 4.0m	SJ	60	40	5	5.0	1	200	100	150m	40	1#Δ			14p	T05 A
47	ZN2237†	600m	100MΔ 5.0m	SS	40	20	6	5.0	500m	0.5u	1.0	100m	40	1#Δ			35p	T05
48	ZN2380†	600m	100MΔ 4.0m	SJ	80	40	5	5.0	500m	4.0u	5.0	150m	20	1#Δ			14p	T05 A
49	ZN2380AT	600m	100MΔ 4.0m	SJ	80	40	5	5.0	500m	4.0u	5.0	150m	20	1#Δ			14p	T05 A
50#	ZSC509	600m	100M\$ 3.5m	SS	35	30	5	5.0	500m	100n	2.0	600m	100	1			1.1p	EP
51#	BFW37	600m	100M\$ 4.0m	SJ	130	50	5	5.0	200m	5n	150	60	50u	600			6.0p	PE T05 A
52#	ZT697	600m	100M\$ 4.0m	SS	60	40	5	5.0	500m	1.0u	100	150m	75	1			20p	PL
53#	ZSC983	600m	120M\$ 150M\$	SS	250	150	5	5.0	50m	100n	5.0	10m	80	1			5.5p	PL
54#	ZSC1166	600m	120M\$ 150M\$	SJ	70	50	5	5.0	200m	100n	1.0	50m	100	1			20p	PE
55#	A777	600m	120M\$ 4.5m	SJ	100	60	5	5.0	50m	4.0m*	100	150m	30	1#Δ			1.8p	PL T039 A
56#	A778	600m	120M\$ 4.5m	SJ	185	115	5	5.0	50m	4.0m*	100	150m	30	1#Δ			1.8p	PL T039 A
57#	A779	600m	120M\$ 4.5m	SJ	250	115	5	5.0	50m	4.0m*	100	150m	30	1#Δ			1.8p	PL T039 A
58#	BF177	600m	120M\$ 4.5m	SJ	85	60	5	5.0	50m	4m*	100	150m	20	1#Δ			2.5p	PL T05 A
59#	BF178	600m	120M\$ 4.5m	SJ	145	115	5	5.0	50m	4m*	100	150m	20	1#Δ			2.5p	PL T05 A
60#	BF179	600m	120M\$ 4.5m	SJ	225	115	5	5.0	50m	4m*	100	150m	20	1#Δ			2.5p	PL T05 A
61#	BFW36	600m	120M\$ 4.0m	SJ	180	80	5	5.0	400m	100u	2.0	200m	50	1			25p	PE T05 A
62	ZN1837†	600m	140M\$ 4.0m	SJ	80	30	5	5.0	500m	50u	100	150m	40	1#Δ			18p	T05 A
63	ZN1644	600m	150M\$ 4.0m	SJ	60	40	5	5.0	1.0u	10	150m	75	1			20p	PL T05 A	
64	ZN2086†	600m	150M\$ 4.0m	SJ	120	80	5	5.0	500m	2.0u	1.5	150m	20	1#Δ			12p	T05 A
65	ZN2087†	600m	150M\$ 4.0m	SJ	120	80	5	5.0	500m	2.0u	1.0	150m	40	1#Δ			12p	T05 A
66	ZN2309	600m	150M\$ 5.0m	SJ	30	50	5	5.0	5.0u	4.0	200u	50	1			25p	PLØ T05 A	
67	ZN2479†	600m	150M\$ 4.0m	SJ	80	40	5	5.0	500m	4.0u	1.5	150m	30	1#Δ			14p	PLØ T05 A
68#	ZSC188	600m	150M\$ 4.0m	SJ	40	25	5	5.0	500m	1.0u	6.0	10m	50			9.0p	PL T05	
69#	ZSC189†	600m	150M\$ 4.0m	SJ	60	40	5	5.0	500m	1.0u	100	150m	40	1#Δ			9.0p	PL T05
70	ZSC247	600m	175M\$ 6.7m	SJ	120	120	5	5.0	300m	100u	6.0	1.0m	50			3.0p	PL T05	
71#	ZSC500	600m	175M\$ 6.7m	SJ	60	50	5	5.0	20m	1.0u	300	3.0m	140					

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS.	DERATE @25°C	ABS MAX RATINGS @25°C				MAX. ICBO @MAX	TYPICAL h PARAMETERS			COMMON Emitter (mhos)	Cob	STRUCTURE	DWG Y200 s/a	LC AD	
				IN fab	FREE AIR (W)	M (Hz)	E W/C		V _{CEO}	V _{BE}	I _C (A)						
1# SL303BE*		600m	400M Δ 4.0m	SA	30	12	4.6	50m	1.0u Ω	5.0 Ω	100u Ω	10 T Δ			2.0p Ω	1.436	
2# SL303BT*		600m	400M Δ 4.0m	SA	30	12	4.6	50m	1.0u Ω	5.0 Ω	100u Ω	10 T Δ			2.0p Ω	1.438	
3# SL354BE*		600m	400M Δ 4.0m	SA	30	12	4.6	50m	1.0u Ω	5.0 Ω	100u Ω	10 T Δ			2.0p Ω	1.67	
4# SL354BF*		600m	400M Δ 4.0m	SA	30	12	4.6	50m	1.0u Ω	5.0 Ω	100u Ω	10 T Δ			2.0p Ω	1.67	
5# 2N3303T		500m	450M Δ 4.0m	SJ	25	12	4.0	1	30u Ω	50 Ω	300m Ω	60 T Δ			15p Ω	R83a	
6# 2SC998		500m	450M Δ	SJ	40	40	4.0	400m	2.0u Ω	5.0 Ω	50m Ω	50 T Δ			10p Ω	PE TO39	
7# 2N5236S		600m	500M Δ 3.4m	AJ	40	20	4.0	150m	1.0u Ω	5.0 Ω	50m Ω	30 T Δ			3p Ω	A	
8# 2SC991		600m	500M Δ	SJ	36	36	5	40	400m	1.0u Ω	3.0 Ω	100m Ω	30 T Δ			5.0p Ω	PE TO39
9# 2SC992		600m	500M Δ	SJ	36	36	5	40	600m	1.0u Ω	3.0 Ω	100m Ω	30 T Δ			6.0p Ω	PE TO39
10# 2SC994		600m	500M Δ	SJ	36	15	3.0	100m	1.0u Ω	3.0 Ω	100m Ω	70 T Δ			3.8p Ω	A	
11# S15659		600m	500M Δ 3.4m	AJ	40	20	4.0		0.5u Ω	5.0 Ω	50m Ω	70 T Δ			4.0p Ω	DPE TO5	
12# 2N5065†		600m	550M Δ 3.4m	SJ	25	15	4.0	500m	100u Ω	5.0 Ω	300m Ω	50 T Δ			15p Ω	# R83a	
13# BFY63		600m	750M Δ 3.4m	SJ	30	15	4.0		50n Ω	5.0 Ω	50m Ω	70 T Δ			2.8p Ω	DPE TO5	
14# 2N3137		600m	800M Δ 3.4m	SJ	40	20	4.0	150m	0.5u Ω	100 Ω	50m Ω	70 T Δ			3.5p Ω	PE TO5	
15# 2FW19		600m	800M Δ 3.4m	SJ	40	20	4.0	300m	0.1u Ω	5.0 Ω	50m Ω	70 T Δ			1.3p Ω	PE TO33	
16# 2SC823		600m	TO5 Δ	SJ	30	19	3.0	60m	1.0u Ω	100 Ω	15m Ω	100 T Δ			3.0p Ω	EP R115a G	
17# 2SC1164		600m	14G Δ	SJ	40	35	2.0	300m	100u Ω	100 Ω	15m Ω	15 T Δ					
18# T1592		825m	5.0m	SJ	40	40	5.0	400m	1.0u Ω	2.0 Ω	50m Ω	160 T Δ				PE T155 A	
19# T15100		825m	80M Δ	SS	180	180	5.0	100m	50n Ω	100 Ω	1.0m Ω	40 T Δ			2.8p Ω	PE X55 A	
20# T15101		825m	80M Δ	SS	150	150	5.0	100m	50n Ω	100 Ω	1.0m Ω	45 T Δ			2.8p Ω	PE X55 A	
21# 2N5961		825m	100M Δ 5.0m	SS	60	60	8.0	50m	2.0n Ω	5.0 Ω	10m Ω	150 T Δ			4.0ps Ω	Ø TO92 A	
22# 2N5962		825m	100M Δ 5.0m	SS	45	45	8.0	50m	2.0n Ω	5.0 Ω	10m Ω	160 T Δ			4.0ps Ω	Ø TO92 A	
23# 2N5963		825m	150M Δ 5.0m	SS	30	30	8.0	50m	2.0n Ω	5.0 Ω	10m Ω	170 T Δ			4.0ps Ω	Ø TO92 A	
24# BFY65		630m	50M Δ 4.3m	SJ	100	90	7.0	50m	1.0u Ω	100 Ω	2.0m Ω	30 T Δ			PL	TO5	
25# 2SC216		650m	4.3m	SJ	50	50	5.0	300m	1.0u Ω	1.0 Ω	50m Ω	50 T Δ			PLA	TO5	
26# 2SC217		650m	4.3m	SJ	25	25	5.0	300m	1.0u Ω	1.0 Ω	50m Ω	50 T Δ			PLA	TO5	
27# 2SC218		650m	4.3m	SJ	80	80	5.0	300m	1.0u Ω	1.0 Ω	50m Ω	50 T Δ			PLA	TO5	
28# 2SC226		650m	4.3m	SJ	50	50	5.0	700m	1.0u Ω	1.0 Ω	100m Ω	50 T Δ			PEA	TO5	
29# 2SC227		650m	4.3m	SJ	25	25	5.0	700m	1.0u Ω	1.0 Ω	100m Ω	50 T Δ			PEA	TO5	
30# 2SC228		650m	4.3m	SJ	80	80	5.0	700m	1.0u Ω	1.0 Ω	100m Ω	50 T Δ			PEA	TO5	
31# 2SC231		650m	4.3m	SJ	50	50	5.0	700m	1.0u Ω	1.0 Ω	150m Ω	40 T Δ			EMA	TO5	
32# 2SC232		650m	4.3m	SJ	25	25	5.0	700m	1.0u Ω	1.0 Ω	150m Ω	40 T Δ			EMA	TO5	
33# 2SC233		650m	4.3m	SJ	80	80	5.0	700m	1.0u Ω	1.0 Ω	150m Ω	40 T Δ			EMA	TO5	
34# 2SC210		650m	150M Δ 4.3m	SJ	50	1	5.0	500m	1.0u Ω	100 Ω	20m	50 T Δ			15p Ω	PL TO5	
35# 2SC211		650m	150M Δ 4.3m	SJ	25	1	5.0	500m	1.0u Ω	100 Ω	20m	50 T Δ			15p Ω	PL TO5	
36# 2SC212		650m	150M Δ 4.3m	SJ	80	1	5.0	500m	1.0u Ω	100 Ω	20m	50 T Δ			15p Ω	PL TO5	
37# 2SC220		650m	150M Δ 4.3m	SJ	50	1	5.0	700m	1.0u Ω	100 Ω	20m	50 T Δ			15p Ω	PE TO5	
38# 2SC221		650m	150M Δ 4.3m	SJ	25	1	5.0	700m	1.0u Ω	100 Ω	20m	50 T Δ			15p Ω	PE TO5	
39# 2SC222		650m	150M Δ 4.3m	SJ	80	1	5.0	700m	1.0u Ω	100 Ω	20m	50 T Δ			15p Ω	PE TO5	
40# 2SC200		650m	350M Δ 4.3m	SJ	40	1	5.0	300m	0.2u Ω	1.0 Ω	1.0 Ω	60 T Δ			4.0p Ω	PE TO5	
41# 2SC201		650m	350M Δ 4.3m	SJ	20	1	3.0	300m	1.0u Ω	1.0 Ω	1.0 Ω	60 T Δ			4.0p Ω	PE TO5	
42# 2SC202		650m	350M Δ 4.3m	SJ	80	1	5.0	300m	0.2u Ω	1.0 Ω	1.0 Ω	60 T Δ			4.0p Ω	PE TO5	
43# 2SC824		650m	10G Δ 222u	SJ	50	25	3.0	120m	1.0u Ω	100 Ω	30m Ω	100 T Δ			3p Ω	PE TO33	
44# BF117		680m	80M Δ 4.5m	SJ	140	140	5.0	100m	1.0u Ω	100 Ω	30m Ω	25 T Δ			2.0p Ω	PE TO39 A	
45# 2BF137		680m	95M Δ 4.5m	SJ	160	160	5.0	100m	1.0u Ω	100 Ω	30m Ω	25 T Δ			2.0p Ω	PE TO39 A	
46# HS5810		700m	6.3m	TJ	35	25	5.0	750m	100n Ω	2.0 Ω	2.0m Ω	60 T Δ			15ps Ω	PE X103 A	
47# HS5812		700m	6.3m	TJ	35	25	5.0	750m	100n Ω	2.0 Ω	2.0m Ω	60 T Δ			15ps Ω	PE X103 A	
48# HS5814		700m	6.3m	TJ	50	40	5.0	750m	100n Ω	2.0 Ω	2.0m Ω	60 T Δ			15ps Ω	PE X103 A	
49# HS5816		700m	6.3m	TJ	50	40	5.0	750m	100n Ω	2.0 Ω	2.0m Ω	60 T Δ			15ps Ω	PE X103 A	
50# HS5818		700m	6.3m	TJ	50	40	5.0	750m	100n Ω	2.0 Ω	2.0m Ω	60 T Δ			15ps Ω	PE X103 A	
51# HS5820		700m	6.3m	TJ	70	60	5.0	750m	100n Ω	2.0 Ω	2.0m Ω	60 T Δ			15ps Ω	PE X103 A	
52# 2N5822		700m	6.3m	TJ	70	60	5.0	750m	100n Ω	2.0 Ω	2.0m Ω	100 T Δ			15ps Ω	PE X103 A	
53# 2N5964		700m	1.0M Δ 6.3m	TJ	160	150	5.0	600m	50n Ω	50 Ω	1.0m Ω	50 T Δ	40u Ω	6.0k Ω	TO105 A		
54# 2N5965		700m	1.0M Δ 6.3m	TJ	200	180	5.0	600m	50n Ω	50 Ω	1.0m Ω	50 T Δ	40u Ω	6.0k Ω	TO105 A		
55# D33D271		700m	20M Δ 4.8m	SJ	200	200	4.0	100m	5.0u Ω	100 Ω	360 T Δ	100 u	1.0k	80	6.0p Ω	DPE TO5	
56# 2SC826		700m	20 M Δ 4.8m	SJ	100	60	6.0	500m	1.0u Ω	100 Ω	50m Ω	100 T Δ			10p Ω	D TO5 A	
57# 2SC8271		700m	20 M Δ 4.8m	SJ	100	60	6.0	500m	1.0u Ω	100 Ω	50m Ω	100 T Δ			25p Ω	DPE TO5	
58# 2C144		700m*	40M Δ 4.0m	SJ	60	40	5.0	1	75n Ω	100 Ω	5.0m Ω	35 T Δ			PLA	TO5	
59# BFY67A		700m*	60M Δ 4.5m	SJ	60	25	5.0	1	75n Ω	100 Ω	5.0m Ω	30 T Δ			PLA	TO5	
60# BFY67C		700m*	60M Δ 4.5m	SJ	50	25	5.0	1	75n Ω	100 Ω	5.0m Ω	30 T Δ			PLA	TO5	
61# BFY68A		700m*	70M<math														

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C (W)	DE RATE fab (Hz)	TABS MAX RATINGS @25°C					MAX. I _{cbo} @MAX V _{cbo}	TYPICAL "h" PARAMETERS					Cob	STRU C TURE	DWG #	C Y200 s/a TO200 Ser.				
				M E FREE A W/C	B V _{cbo}	B V _{ceo}	B V _{beo}	I _c	V _{cbo}	I _{bias}	COMMON Emitter	V _{ce}	I _e	h _{fe}	h _{oe}	h _{ie}	h _{re}					
1# BC141-10*	750m	50M ^Δ 5.0m	SJ	100	60	7.0	1.0	100n ^Δ	1.00	1.0	20	1					25p ^Δ	PEA	T039	A ^Δ		
2# BC141-16*	750m	50M ^Δ 5.0m	SJ	100	60	7.0	1.0	100n ^Δ	1.00	1.0	30	1					25p ^Δ	PEA	T039	A ^Δ		
3# 2SC116T	750m	60M ^Δ 5.0m	SJ	75	50	5.0	200m	5.0m	2.00	200m ^Δ	8.0	1Δ								T039		
4# 2SC116T	750m	70M ^Δ 5.0m	SJ	50	50	5.0	200m	1.00 ^Δ	5.00	10m ^Δ	3.5	1Δ					20p	EM	T05			
5# 2SC154H	750m	80M ^Δ 6.8m	SJ	120	70	5.0	100m	100 ^Δ	6.00	10m ^Δ	35	1Δ					15p ^Δ		T039			
6# 2N5856	750m	100M ^Δ 6.8m	SJ	60	60	5.0	1.0	100n ^Δ	1.00	10m ^Δ	50	1Δ#					15p ^Δ		T0105	A		
7# 2N5856	750m	100M ^Δ 6.8m	SJ	80	80	5.0	1.0	100n ^Δ	1.00	10m ^Δ	50	1Δ#					7Op	ME	T05			
8# 2SC150	750m	100M ^Δ 6.8m	TS	20	50	5.0	100m	1.00 ^Δ	6.0	10m ^Δ	50	1Δ							T039			
9# 2SC154C	750m	120M ^Δ	200	200	6.0	100m	100m ^Δ	10 ^Δ	25m ^Δ	30	1Δ											
10# 2ZT68	750m	120M ^Δ 4.3m	SJ	100	80	5.0	500m	50 ^Δ	6.00	10m ^Δ	35	1Δ					8Op	PE	T05			
11# 2SC151	750m	130M ^Δ	40	50	5.0	100m	1.00 ^Δ	6.0	10m ^Δ	50	1Δ					7Op	ME	T05				
12# 2SC150T	750m	150M ^Δ	50	25	5.0	100m	1.00 ^Δ	6.00	10m ^Δ	7.0	1Δ					7Op	EM	T05				
13# 2SC152	750m	160M ^Δ	60	50	5.0	100m	1.00 ^Δ	6.0	10m ^Δ	50	1Δ					3Op	D	T05				
14# 2SC805	750m	160M ^Δ 5.0m	SJ	100	100	5.0	200m	200 ^Δ	5.00	3m ^Δ	100 ^Δ					3Op	PE	T05				
15# 2SC352	750m	170M ^Δ	50	30	5.0	100m	200 ^Δ	3.00	10m ^Δ	90	1Δ					4.5p ^Δ	D	T05				
16# 2SC352A	750m	170M ^Δ 15.0m	SJ	50	30	5.0	100m	200 ^Δ	3.00	10m ^Δ	90	1Δ					3.0p	PE	T05			
17# 2SC353	750m	170M ^Δ 5.0m	SJ	100	60	5.0	100m	200 ^Δ	3.00	10m ^Δ	90	1Δ					4.5p ^Δ	D	T05			
18# 2SC353A	750m	170M ^Δ 5.0m	SJ	100	60	5.0	100m	200 ^Δ	3.00	10m ^Δ	90	1Δ					2Op	PE	T05			
19# 2ZC470	750m	170M ^Δ	150	130	5.0	100m	1.00 ^Δ	5.00	3.0m ^Δ	60	1Δ					4Op	PE	T05				
20# 2SC331	750m	200M ^Δ	60	25	5.0	200m	100 ^Δ	10 ^Δ	10m ^Δ	35	1Δ					10p	PE	T05	A ^Δ			
21# 2SC456	750m	200M ^Δ 6.3m	SJ	50	50	1.5	600m ^Δ	1.00 ^Δ	6.00	80m ^Δ	20	1Δ					7p ^Δ	PE	T05			
22# 2SC501	750m	200M ^Δ 5.0m	SJ	60	30	5.0	300m	100 ^Δ	100	10m ^Δ	80	1Δ					5Op	DPL	T039	A		
23# 2SC507	750m	200M ^Δ	170	120	5.0	80m	1.00 ^Δ	5.00	10m ^Δ	70	1Δ					4Op	PE	T05				
24# 2SC589	750m	200M ^Δ	165	150	5.0	80m	200 ^Δ	200	3.0m ^Δ	40	1Δ					3.5p	PE	T05	A ^Δ			
25# 2SC594	750m	200M ^Δ	60	30	5.0	200m	100 ^Δ	100	10m ^Δ	60	1Δ					6Op	D	T05				
26# 2SC708	750m	200M ^Δ	60	80	4.0	1	—	—	4.00	50m ^Δ	35	1Δ					4Op	PE	T05			
27# 2SC708A	750m	200M ^Δ	90	50	4.0	1	—	—	4.00	50m ^Δ	35	1Δ					7Op	PE	T039			
28# 2ZCT54	750m	220M ^Δ 5.0m	SJ	120	70	5.0	100m	—	100	10m	11	1Δ					4Op	PE	T05			
29# 2SC32	750m	250M ^Δ	SJ	60	25	5.0	200m	100 ^Δ	100	10m	60	1Δ					3.5p	EM	T05			
30# 2SC584	750m	250M ^Δ 6.3m	SJ	135	120	5.0	50m	100 ^Δ	10	10m	65	1Δ					2.5p	PE	T05	A ^Δ		
31# 2SC526	750m	250M ^Δ 5.0m	SJ	165	150	5.0	55m	200 ^Δ	20	45m	20	1Δ					3.8p	PE	T039	A		
32# 2SC652	750m	800M ^Δ 5.9m	SJ	40	20	3.0	300m	100 ^Δ	100	100m ^Δ	20	1Δ#					3.5p	PE	T05			
33# 2SC556	750m	850M ^Δ 6.3m	SJ	40	20	2.0	400m	25u ^Δ	150	50m	45	1Δ					10p	PE	T05			
34# 2SC651	750m	1.1G ^Δ	SJ	25	22	4.0	300m	100n ^Δ	100	100m ^Δ	80	1Δ					1p ^Δ	PE	X72	U		
35# KD2541	750m	1.2G ^Δ	4.3m	SJ	25	12	2.0	40m	15u ^Δ	10	8.0m ^Δ	20	1Δ					1p ^Δ	PE	X72	U	
36# AT220	750m	4.0G ^Δ	4.2	30	20	1.5	300m	20m ^Δ	100	15m ^Δ	20	1Δ					500f ^Δ	PE	u77e	GA		
37# AT220	800m	4.0G ^Δ	4.2	30	20	1.5	300m	20m ^Δ	100	15m ^Δ	20	1Δ							R81e	A ^Δ		
38# 2N1943	800m	4.5m	SJ	60	60	8.0	500m	10u ^Δ	6.00	1.0m ^Δ	12	1Δ							R81e	A ^Δ		
39# 2NS189	800m	4.5m	SJ	60	55	0.5	2.0	100u	1.00	1.0	15	1Δ							R81e	A ^Δ		
40# 2TS262T	800m	5.7m	SJ	75	50	5.0	2.0	100u	1.00	500m ^Δ	40	1Δ					500	PL	R81e	A ^Δ		
41# 2SC10721	800m	800m	SJ	120	100	5.0	2.0	100u	1.00	500m ^Δ	35	1Δ							R101e	A ^Δ		
42# 2SC1072A	800m	800m	SJ	120	100	5.0	2.0	100u	1.00	500m ^Δ	35	1Δ							R101e	A ^Δ		
43# 111T21	800m	5.6m	SJ	90	40	7.0	1.0	100u ^Δ	1.00	10m ^Δ	30	1Δ					1.5k	15	6Op	PL	T05	A
44# BC132	800m	800m	SJ	100	100	5.0	150m	100m ^Δ	100	30m ^Δ	130	1	5.3u					14p	PL	T05		
45# BSV41	800m	4.5m	SJ	120	120	5.0	600m ^Δ	100 ^Δ	50m	35	1Δ								10p ^Δ	PEA	T039	A
46# BSV691	800m	4.6m	SJ	45	40	6.0	1.0	250 ^Δ	1.00	500m ^Δ	50	1Δ					14p	PL	T039	A		
47# IC428	800m	4.5m	SJ	40	30	5.0	—	50u	1.00	10m ^Δ	150	1					14p	PE	T039	A		
48# C744	800m	8.0m	SJ	60	60	5.0	—	100u	1.00	50m ^Δ	175	1					7Op	PE	T05	A ^Δ		
49# BC213	800m	800m	SJ	70	40	7.0	1.0	100u ^Δ	1.00	300m ^Δ	40	1Δ										
50# DT15101	800m	1.0M ^Δ	SJ	80	40	8.0	750m	10u ^Δ	6.00	200m ^Δ	30	1Δ#					500	PL	T05	A ^Δ		
51# DT15121	800m	1.0M ^Δ 4.5m	SJ	80	60	6.0	1	100u ^Δ	100	100m ^Δ	30	1Δ										
52# DT15201	800m	2.0M ^Δ	SJ	30	20	8.0	300m	4.0u ^Δ	6.00	300m ^Δ	25	1										
53# DT15221	800m	2.0M ^Δ	SJ	30	20	8.0	300m	4.0u ^Δ	6.00	300m ^Δ	120	1										
54# JAN2N497	800m	1.5M ^Δ	SJ	60	60	8.0	—	100u	1.00	50m ^Δ	10	1Δ										
55# JAN2N498	800m	1.5M ^Δ 4.5m	SJ	100	100	8.0	—	100u	1.00	50m ^Δ	10	1Δ										
56# JAN2N656	800m	1.5M ^Δ 4.5m	SJ	60	60	8.0	—	100u	1.00	50m ^Δ	40	1Δ										
57# JAN2N857	800m	1.5M ^Δ 4.5m	SJ	100	100	8.0	—	100u	1.00	50m ^Δ	40	1Δ										
58# JAN2N3439T	800m	1.5M ^Δ 4.5m	SJ	150	350	7.0	1.0	500u	1.00	20m ^Δ	40	1Δ					10	1Δ				
59# JAN2N3440T	800m	1.5M ^Δ 4.5m	SJ	300	250	7.0	1.0	500u	1.00	20m ^Δ	40	1Δ					12p ^Δ					

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	MAX RATINGs @ 25°C										TYPICAL H PARAMETERS						Cob	STRUCTURE	DWG #	LC s/a
		COLL. DISS. @ 25°C	IN FREE AIR	M A X P	E V c b o	B V c e o	B V e b o	Ic @ MAX	Icbo Vcb	Vcb	BIAS	COMMON Emitter	hfe	hoe	hie	hre	X.0001				
		(W)	(Hz)	W/C	(V)	(V)	(V)	(A)	(V)	(A)	(V)	(mhos)	(Ω)	(Ω)	(Ω)	(F)					
1#	AT366	800m	45MΔ	4.5m	SJ	80	60	8.0	3.0	1.0u	2.0p	1.0	30	A			120p	PL	T018	A	
2#	AT367	800m	45MΔ	4.5m	SJ	100	80	8.0	3.0	1.0u	2.0p	1.0	30	A			120p	PL	T018	A	
3#	AT368	800m	45MΔ	4.5m	SJ	120	100	8.0	3.0	1.0u	2.0p	1.0	30	A			120p	PL	T018	A	
4	2N697A1	800m	50MΔ	4.5m	SJ	60	35	5.0	1.0	100n	5.0p	1.0m	25	Δ	500nzb	30	5.0	35p	T05	A	
5	2N699A	800m	50MΔ	5.2m	SJ	120	80	5.0	1.0	500n	5.0p	1.0m	35	Δ	500nzb	30	2.5	20p	T05	A	
6	2N1889	800m	50MΔ	4.5m	SJ	100	60	7.0	1.0	10n	5.0p	1.0m	30	Δ	500nzb	30	1.2	15p	T05	A	
7	2N1893	800m	50MΔ	4.5m	SJ	120	80	7.0	500m	10n	5.0p	1.0m	30	Δ	500nzb	30	1.2	15p	T05	A	
8	2N1974	800m	50MΔ	4.5m	SJ	100	60	7.0	500m	25n	5.0p	1.0m	36	Δ	500nzb	1.0k	1.0k	15p	T05	A	
9	2N2049	800m	50MΔ	4.5m	SJ	75	50	7.0	500m	10n	5.0p	1.0m	75	Δ	500nzb	34	5.0	25p	T05	A	
10	2N2182	800m	50MΔ	4.5m	SJ	60	40	5.0	1	0.1u	10p	1.0m	25	Δ			20p		T05	A	
11	2N2192A1	800m	50MΔ	4.5m	SJ	60	40	5.0	1.0	10n	10p	1.0m	25	Δ			20p		T05	A	
12	2N2192B1	800m	50MΔ	4.5m	SJ	60	40	5.0	1	0.1u	10p	1.0m	75	Δ			20p		T05	A	
13	2N2193	800m	50MΔ	4.5m	SJ	80	50	8.0	1	0.1u	10p	1.0m	30	Δ			20p		T05	A	
14	2N2193A1	800m	50MΔ	4.5m	SJ	80	50	8.0	1	0.1u	10p	1.0m	30	Δ			20p		T05	A	
15	2N2193B1	800m	50MΔ	4.5m	SJ	80	50	8.0	1	0.1u	10p	1.0m	30	Δ			20p		T05	A	
16	2N2194	800m	50MΔ	4.5m	SJ	60	40	5.0	1	0.1u	10p	1.0m	15	Δ			15p		T05	A	
17	2N2194A1	800m	50MΔ	4.5m	SJ	60	40	5.0	1	0.1u	10p	1.0m	75	Δ			20p		T05	A	
18	2N2194B1	800m	50MΔ	4.5m	SJ	60	40	5.0	1	0.1u	10p	1.0m	15	Δ			20p		T05	A	
19	2N2243	800m	50MΔ	4.5m	SJ	120	80	7.0	1	0.1u	10p	1.0m	30	Δ			15p		T05	A	
20	2N2243A	800m	50MΔ	4.5m	SJ	120	80	7.0	1	0.1u	10p	1.0m	30	Δ			15p		T05	A	
21	2N2443	800m	50MΔ	4.5m	SJ	120	100	7.0	1	0.1u	5.0p	1.0m	30	Δ	50u	1.0k	1.0k	15p	T05	A	
22	2N2888	800m	50MΔ	4.5m	SJ	60	40	7.0	1	0.1u	10p	1.0m	30	Δ			20p		T05	A	
23	2N2890	800m	50MΔ	5.0m	SJ	100	80	5.0	1	10n	6.0p	1.0m	30	Δ			120p		T05	A	
24	2N2891	800m	50MΔ	5.0m	SJ	100	80	5.0	1	10n	6.0p	1.0m	30	Δ			120p		T05	A	
25	2N3036	800m	50MΔ	4.5m	SJ	120	80	5.0	1.2	0.1u	10p	1.0m	40	Δ	120u	900	1.0k	15p	T05	A	
26*	2N4895	800m	50MΔ	4.5m	SJ	120	60	6.0	5.0	1.0ms	2.0p	2.0	40	Δ			80p		T039	C	
27*	2N4897	800m	50MΔ	4.5m	SJ	150	80	6.0	5.0	1.0ms	2.0p	2.0	40	Δ			80p		T039	C	
28*	2SC516	800m	50M	5.2m	SJ	100	60	5.0	1.5	500n	2.0p	200m	60	Δ			25p	D	T05	A	
29*	2SC516A	800m	50M	5.2m	SJ	140	100	5.0	1.5	500n	2.0p	200m	60	Δ			25p	D	T05	A	
30*	WFV33	800m	50MΔ	4.5m	SJ	120	80	7.0	1	0.1u	100p	1.5m	40	#	11u	2.8k	3.5	15p	PL	T05	A
31#	BFY84	800m	50MΔ	4.5m	SJ	100	60	6.0	1	0.5u	10p	1.0m	20	Δ			PE	T05	A		
32#	BFY85	800m	50MΔ	4.5m	SJ	100	60	6.0	1	0.5u	10p	1.0m	50	Δ			PE	T05	A		
33#	BFY86	800m	50MΔ	4.5m	SJ	40	35	6.0	1	0.5u	10p	1.0m	50	Δ			PE	T05	A		
34#	BFY511	800m	50MΔ	4.5m	SJ	60	60	6.0	1.0	500n	6.0p	1.0m	60	Δ	35u	220	700m	PE	T05	D	
35#	BFY521	800m	50MΔ	4.5m	SJ	40	40	6.0	10	500n	6.0p	1.0m	120	Δ	70u	400	1.3	120p	PL	T05	A
36#	BFY53	800m	50MΔ	4.5m	SJ	30	20	6.0	10	6.0	150p	1.0m	30	Δ			12p		PL	T05	A
37*	BFY601	800m	50MΔ	4.6m	SJ	45	40	5.0	3.0	100p	2.0p	2.0	50	Δ			75p	PE	T039	A	
38#	BSY45	800m	50M	4.5m	SJ	40	35	5.0	1	100p	1.5m	80	1#			15p	PL	T05	A		
39#	BSY461	800m	50M	4.5m	SJ	70	60	5.0	1	100p	1.5m	80	1#			20p	PE	T05	A		
40#	BSY91	800m	50MΔ	4.5m	SJ	40	25	5.0	1	50n	1.0p	1.5m	30	Δ			25p	PL	T05	A	
41#	BSY92	800m	50MΔ	4.5m	SJ	60	40	5.0	1	20n	2.0p	1.0m	50	Δ			25p	PL	T05	A	
42	TN79	800m	50MΔ	4.7m	SJ	30	20	5.0	1	10n	1.0p	1.0m	75	Δ			10p	PE	T05	A	
43#	BF157B	800m	54M	4.5m	SJ	175	175	5.0	1	100u	10p	1.0m	60	Δ			6.0p	PL	T039	A	
44	2N1420A	800m	60MΔ	4.5m	SJ	60	40	5.0	1	#	0.1u	10p	1.0m	35	Δ			25p	Δ	T05	A
45	2N1613	800m	60MΔ	4.5m	SJ	75	50	5.0	1	0.1u	5.0p	1.0m	30	Δ	500nzb	34	3.0	25p	PLA	T05	A
46	JAN2N1613	800m	60MΔ	4.5m	SJ	75	30	7.0	500m	10n	5.0p	1.0m	100	Δ	1.0u	8.0	3.0	25p	PL	T05	A
47	2N1890	800m	60MΔ	4.5m	SJ	100	60	7.0	500m	10n	5.0p	1.0m	50	Δ	300nzb	30	1.5	15p	PL	T05	A
48	JAN2N1893	800m	60MΔ	4.5m	SJ	120	80	7.0	500m	10n	5.0p	1.0m	100	Δ	500nzb	8.0	1.5	15p	PL	T05	A
49	2N1973	800m	60MΔ	4.5m	SJ	100	60	7.0	500m	25n	5.0p	1.0m	75	Δ	1000u	1.8k	1.8k	15p	PL	T05	A
50	2N2297	800m	60MΔ	4.5m	SJ	80	35	7.0	1	0.1u	10p	1.0m	40	#	40	1#	120p		T05	A	
51	ZN31081	800m	60MΔ	5.3m	SJ	100	60	7.0	1	0.1u	10p	1.0m	20	Δ			20p		T05	A	
52	ZN31101	800m	60MΔ	4.5m	SJ	80	40	7.0	1	0.1u	10p	1.0m	20	Δ			25p		T05	A	
53	ZN3122	800m	60MΔ	4.5m	SJ	50	30	5.0	500m	2.0p	5.0p	300m	25	1#	#		25p		T05	A	
54#	2SC5100T	800m	60M	5.3m	SJ	140	100	5.0	1.5	1.0u	2.0p	200m	30	Δ			25p	DPL	T039	A	
56#	2SC5110T	800m	60M	5.3m	SJ	120	80	5.0	1.5	1.0u	2.0p	200m	50	Δ			25p	DPL	T039	A	
57#	2SC512ZT	800m	60M	5.3m	SJ	100	60	5.0	1.5	1.0u	2.0p	200m	50	Δ			25p	DPL	T039	A	
58#	2SC512ZT	800m	60M	5.3m	SJ	100	60	5.0	1.5	1.0u	2.0p	200m	50	Δ			25p	DPL	T039	A	
60#	2SC51301	800m	60M	5.3m	SJ	70	40	5.0	1.5	1.0u	2.0p	200m	50	Δ			25p	DPL	T039	A	
61#	2SC513R1	800m	60M	5.3m	SJ	70	40	5.0	1.5	1.0u	2.0p	200m	30	Δ			25p	DPL	T039	A	
62#	AT470	800m	60MΔ	4.5m	SJ	60	40	6.0	1.0	200n	1.0p	60m	40	Δ			25p	PE	T039	A	
63#	AT471	800m	60MΔ	4.5m	SJ	80	60	6.0	1.0	200n	1.0p	60m	40	Δ			25p	PE	T039	A	
64#	AT472	800m	60MΔ	4.5m	SJ	100	80	6.0	1.0	200n	1.0p	60m	40	Δ			25p	PE	T039	A	
65#	AT473	800m	60MΔ	4.5m	SJ	60	40</td														

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1) MAX COLL. DISS. @25°C (W)	2) DERATE IN AIR (Hz)	3) ABS MAX RATINGS @25°C				MAX. I _{cbo} @MAX	TYPICAL h PARAMETERS				Cob	STRUCTURE	DWG #	C						
				FREE (V)	AIR (V)	P (V)	I _c (A)		V _{cb}	I _e	h _{fe}	COMMON Emitter (mhos)										
1#	BSW662A1	800m	BOM3	4.5m	SJ	100	100	6.0	1.0	100u	5.00	1.0	15	TΔ	35pS	PE	T05	A0				
2	BSW662B1	800m	BOM1	4.5m	SJ	100	100	6.0	1.0	100u	5.00	1.0	30	Δ	35pS	PE	T039	A0				
3#	BSW672A1	800m	BOM3	4.5m	SJ	120	120	6.0	1.0	100u	5.00	1.0	15	TΔ	35pS	PE	T05	A0				
4	BSW672B1	800m	BOM1	4.5m	SJ	120	120	6.0	1.0	100u	5.00	1.0	30	Δ	35pS	PE	T039	A0				
5#	BSW682A1	800m	BOM3	4.5m	SJ	150	150	6.0	1.0	100u	5.00	1.0	15	TΔ	35pS	PE	T05	A0				
6	BSW682B1	800m	BOM1	4.5m	SJ	120	60	6.0	1.0	100u	5.00	1.0	30	Δ	35pS	PE	T039	A0				
7#	C4261	800m	BOM3	4.5m	SJ	50	30	5.0	—	100n	5.00	1.0	60	—	8.0u	1.8k	2.1	12p	DPE	T05	A0	
8	FT34C1	800m	80M5	4.5m	SJ	150	80	6.0	—	10u	2.00	2.0	85	TΔ	80p	DPE	T05	A0				
9	FT34D1	800m	80M4	4.5m	SJ	120	60	6.0	—	10u	2.00	2.0	210	TΔ	80p	DPE	T05	A0				
10#	BFX69A	800m	84M5	4.5m	SJ	80	40	7.0	—	0.1u	5.00	1.0	70	—	8.0u	1.8k	2.1	13p	DPL	T05	A0	
11#	BC310	800m	86M5	4.5m	SJ	70	70	5.0	1.0	50n	100	10m	110	t	12p	PE	T05	A				
12	BF174	800m	86M6	4.5m	SJ	150	150	6.0	—	0.1u	100	25m	20	Δ	2.6p	DPL	T05	A				
13#	BFY56T	800m	86M5	4.5m	SJ	80	45	5.0	—	0.5u	100	10m	40	↑	12p	DPE	T05	A0				
14#	BFY56A	800m	86M6	4.5m	SJ	80	55	7.0	—	0.5u	100	15m	70	TΔ	12p	PE	T039	A0				
15#	C784	800m	88M5	8.0m	SJ	120	120	5.0	—	100u	100	25m	70	TΔ	6.0p	PL	T039	A				
16	2N2440	800m	90M5	4.5m	SJ	120	80	7.0	500m	1.0	100	5.0m	70	Δ	500n	1.6b	30	2.5	15p	Δ	T05	A0
17#	ZSC108A	800m	90M1	1.87	SJ	90	55	5.0	800m	1.0	2.00	200m	80	↑	20p	PE	T039	A				
18#	ZSC109A	800m	90M3	1.56	SJ	50	40	5.0	800m	1.0	2.00	200m	80	↑	20p	PE	T039	A				
19#	#BFR20	800m	90M5	2.8m	S	35	75	7.0	—	10n	1.00	150m	90	TΔ	13p	PE	T039	A				
20#	#BFR21	800m	90M5	2.8m	SJ	70	120	7.0	—	10n	1.00	150m	40	Δ	13p	PE	T039	A				
21	ZN1893A	800m	100M3	4.5m	SJ	140	80	7.0	500m	10n	5.00	1.0	30	Δ	8.0p	Δ	T05	A0				
22	2N2330	800m	100M5	5.3m	SJ	30	20	5.0	500m	0.1u	1.00	10m	50	Δ	10p	Δ	T05	A0				
23	ZN3019	800m	100M5	4.5m	SJ	140	80	7.0	1	0.1u	5.00	1.0	80	Δ	12p	Δ	T05	A0				
24	JAN2N3019	800m	100M5	4.5m	SJ	140	80	7.0	1.0	10n	5.00	1.0	80	Δ	5.5p	DPL	T039	A				
25#	ZSC995	800m	100M5	9.3	SJ	300	300	5.0	100m	100n	100	50m	80	↑	15p	Δ	T05	A				
26#	AT479	800m	100M	4.4m	SJ	80	70	6.0	1.0	200n	1.00	50m	40	TΔ	15p	PE	T039	A				
27#	BC286	800m	100M5	4.5m	SJ	70	60	5.0	1.0	20n	2.00	500m	20	Δ	12p	DPE	T05	A				
28#	BC323	800m	100M5	4.5m	S	100	100	5.0	5.0	100u	1.00	500m	150	↑	8.0p	Δ	T039	A				
29#	BC324	800m	100M5	4.5m	SJ	85	55	5.0	1.0	1.0	5.0m	20	↑	25p	PE	T039	A					
30#	BC340-6	800m	100M5	4.5m	SJ	40	40	5.0	500m	100n	5.00	50m	40	Δ	10p	PE	T039	A0				
31#	BC340-T0	800m	100M5	4.5m	SJ	40	40	5.0	500m	100n	5.00	50m	63	Δ	10p	PE	T039	A0				
32#	BC340-16	800m	100M5	4.5m	SJ	40	40	5.0	500m	100n	5.00	50m	100	Δ	10p	PE	T039	A0				
33#	BC341-6	800m	100M5	4.5m	SJ	60	60	5.0	500m	100n	5.00	50m	40	Δ	10p	PE	T039	A0				
34#	BC341-10	800m	100M5	4.5m	SJ	60	60	5.0	500m	100n	5.00	50m	63	Δ	10p	PE	T039	A0				
35#	BF108	800m	100M5	4.5m	SJ	135	135	5.0	30	1.0u	100	30m	50	↑	3p	PL	T05	A0				
36#	BF305	800m	100M5	4.5m	SJ	160	150	5.0	50m	1.0	100	15m	30	Δ	20p	PE	T039	A				
37#	#BFR19	800m	100M5	2.8m	S	35	75	7.0	—	10n	1.00	500m	30	Δ	8.5u	2.2k	2.4	12p	PE	T039	A	
38#	BSX22	800m	100M5	5.3m	SJ	40	32	5.0	1.5	2.00	500m	35	Δ	20p	PE	T05	A					
39#	BSX23	800m	100M5	5.3m	SJ	90	65	5.0	1.5	2.00	500m	35	Δ	20p	PE	T05	A					
40#	BSY51T	800m	100M5	4.5m	SJ	60	25	5.0	500m	100n	100	150m	40	Δ	10p	PE	T039	A0				
41#	BSY52T	800m	100M5	4.5m	SJ	60	25	5.0	500m	100n	100	150m	100	Δ	10p	PE	T039	A0				
42#	BSY53T	800m	100M5	4.5m	SJ	75	30	7.0	750m	10n	100	150m	40	Δ	10p	PE	T039	A0				
43#	BSY54T	800m	100M5	4.5m	SJ	75	30	7.0	750m	10n	100	150m	100	Δ	10p	PE	T039	A0				
44#	BSY55T	800m	100M5	4.5m	SJ	120	80	7.0	500m	10n	100	150m	40	Δ	10p	PE	T039	A0				
45#	BSY56T	800m	100M5	4.5m	SJ	120	80	7.0	500m	10n	100	150m	100	Δ	10p	PE	T039	A0				
46#	BSY87	800m	100M5	4.5m	SJ	100	60	7.0	500m	10n	100	150m	40	Δ	10p	PE	T039	A0				
47#	BSY88	800m	100M5	4.5m	SJ	100	60	7.0	500m	10n	100	150m	100	Δ	10p	PE	T039	A0				
48#	BSY90	800m	100M5	4.5m	SJ	60	25	5.0	500m	10n	100	150m	100	Δ	10p	PE	T039	A0				
49#	CP4091	800m	100M5	4.5m	SJ	60	60	5.0	1	10u	100	10	130	TΔ	15	Δ	DPE	T05	A0			
50	RT1116T	800m	100M	5.2m	SJ	120	40	7.0	—	20n	1.00	150m	30	Δ	13p	PE	T05	Ø				
51#	SFT187	800m	100M5	4.5m	SJ	135	135	3.0	—	10u	100	30m	50	↑	3.0p	Ø	T05	Ø				
52	TN53	800m	100M5	4.5m	SJ	75	45	3.0	800m	10n	5.00	1.0m	55	—	200n	1.6b	35	1.2	8.0p	PE	T05	A
53	TN59T	800m	100M5	4.5m	SJ	40	30	5.0	800m	20n	5.00	1.0m	140	—	8.0p	Ø	T05	A				
54	TN611	800m	100M5	4.5m	SJ	40	30	5.0	800m	20n	5.00	1.0m	50	—	8.0p	Ø	T05	A				
55#	BF119	800m	110M5	5.2m	SJ	160	90	100m	50n	100	30m	25	Δ	3.5p	PE	T039	A0					
56#	BF257	800m	110M5	5.2m	SJ	160	90	100m	50n	100	30m	25	Δ	3.5p	PE	T05	A					
57#	BF258	800m	110M5	5.2m	SJ	250	250	5.0	100m	50n	100	30m	25	Δ	5.5p	PE	T05	A				
58#	BF259	800m	110M5	5.2m	SJ	300	300	5.0	100m	50n	100	30m	25	Δ	8.0p	Ø	T05	A				
59	ZN4383	800m	120M5	4.7m	SJ	40	30	5.0	800m	10n	5.00	1.0m	10k	—	200n	1.6b	32	3.2	8.0p	Ø	T05	A
60	ZN4385	800m	120M5	4.7m	SJ	40	30	5.0	800m	10n	5.00	1.0m	10k	—	200n	1.6b	32	3.2	8.0p	Ø	T05	A
61#	2SC309T	800m	120M5	4.5m	SJ	120	80	5.0	500m	1.0u	100	150m	65	TΔ	10p	PLA	T05	A0				
62#	ZSC310T	800m	120M5	4.5m	SJ	140	100	5.0	500m	1.0u	100	150m	65	TΔ	10p	PLA	T05	A0				
63#	ZSC768	800m	120M5	5.0m	SJ	250	150	5.0	50m	1.0u	100	150m	100	↑	4.0p	PL	T05	A				
64#	BF118	800m	120M5	5.0m	SJ	250	240	5.0	100m	50n	100	30m	25	Δ	2.0p	PL	T05	A				
65#	BFW45	800m	120M5	4.5m	SJ	165	130	5.0	50m	10u	200	50m	20	Δ	4.0p	PL	T039	A0				
66#	MA8001	800m	130M5	4.7m	SJ	40	30	5.0	800m	10n	100	150m	30	TΔ	10p	PE	T05	A0				
67#	MA8002	800m	130M5	4.7m	SJ	80	60	7.0	800m	10n	100	150m	100	TΔ	10p	PE						

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	1. MAX. COLL. (W)		2. DERATE DISS. @ 25°C		ABS MAX RATINGS @ 25°C				MAX. IC @ MAX		TYPICAL 'H' PARAMETERS				Cob	STRUCTURE	DWG #	C S/a TO200 Ser.	
		COLL. IN W/C	COLL. FREE AIR W/C	IN M A P	DISS. fab	IN M A P	DISS. fab	BV _{CEO}	BV _{CEO}	BV _{CEO}	IC	V _{CB}	I _E	h _{FE}	COMMON Emitter (mhos)	X.0001 (F)				
1	2N2224	800m	250M ^Δ	5.3m	SJ	65	40	5.0	500m	10n ^Δ	100 ^Δ	100μ ^Δ	35 Δ#			8Op ^Δ	T05	A ^Δ		
2	2N2537 ^t	800m	250M ^Δ	4.5m	SJ	60	30	5.0	800m	25u ^Δ	100 ^Δ	1.0m ^Δ	20 Δ ^Δ			8Op ^Δ	T05	A ^Δ		
3	2N2538 ^t	800m	250M ^Δ	4.5m	SJ	60	30	5.0	800m	25u ^Δ	100 ^Δ	1.0m ^Δ	30 Δ ^Δ			8Op ^Δ	T05	A ^Δ		
4	2N2787 ^t	800m	250M ^Δ	5.2m	SJ	75	35	5.0	800m	10n ^Δ	200 ^Δ	20m ^Δ	30 Δ	200n ^{Δb}	35 Δ	8Op ^Δ	T05	A ^Δ		
5	2N2788 ^t	800m	250M ^Δ	5.2m	SJ	75	35	5.0	800m	10n ^Δ	200 ^Δ	20m ^Δ	75 Δ	200n ^{Δb}	35 Δ	8Op ^Δ	T05	A ^Δ		
6	2N2789 ^t	800m	250M ^Δ	5.2m	SJ	75	35	5.0	800m	10n ^Δ	200 ^Δ	20m ^Δ	150 Δ	200n ^{Δb}	35 Δ	8Op ^Δ	T05	A ^Δ		
7	2N2846 ^t	800m	250M ^Δ	4.5m	SJ	60	30	* 5.0		20u ^Δ	100 ^Δ	150m ^Δ	30 Δ#			8Op ^Δ	T05	A ^Δ		
8	2N2848 ^t	800m	250M ^Δ	4.5m	SJ	60	20	* 5.0		20u ^Δ	100 ^Δ	150m ^Δ	40 Δ#			8Op ^Δ	T05	A ^Δ		
9	2N3015 ^t	800m	250M ^Δ	4.5m	SJ	60	30	* 5.0		20u ^Δ	100 ^Δ	150m ^Δ	30 Δ#			8Op ^Δ	T05	A ^Δ		
10	2N3299 ^t	800m	250M ^Δ	4.5m	SJ	60	30	5.0	500m	0.1u ^Δ	100 ^Δ	10m ^Δ	20 Δ			8Op ^Δ	T05	A ^Δ		
11	2N3300 ^t	800m	250M ^Δ	4.5m	SJ	60	30	5.0	500m	0.1u ^Δ	100 ^Δ	10m ^Δ	35 Δ			8Op ^Δ	T05	A ^Δ		
12	2N3326 ^t	800m	250M ^Δ	5.3m	SJ	60	45	5.0	800m	0.1u ^Δ	100 ^Δ	10m ^Δ	35 Δ			8Op ^Δ	T05	A ^Δ		
13	2N3512 ^t	800m	250M ^Δ	4.5m	SJ	60	35	5.0		100 ^Δ	500m ^Δ	10 Δ#			10p ^Δ	T05	A ^Δ			
14	2N3678 ^t	800m	250M ^Δ	4.5m	SJ	75	55	6.0	800m	0.1u ^Δ	100 ^Δ	150m ^Δ	40 Δ#			8Op ^Δ	T05	A ^Δ		
15	2N4045 ^t	800m	250M ^Δ	4.5m	SJ	50	30	6.0	500m	1.7u ^Δ	100 ^Δ	100m ^Δ	150 Δ#			12p ^Δ	T05	A ^Δ		
16	2N4047 ^t	800m	250M ^Δ	4.5m	SJ	80	50	6.0	500m	1.7u ^Δ	100 ^Δ	100m ^Δ	150 Δ#			10p ^Δ	T05	A ^Δ		
17	2N4960 ^t	800m	250M ^Δ	4.5m	SJ	60	60	6.5	1	0.1u ^Δ	100 ^Δ	1.0m ^Δ	60 Δ			15p ^Δ	T039	A ^Δ		
18	2N4962 ^t	800m	250M ^Δ	2.9m	SJ	60	60	6.5	1	0.1u ^Δ	100 ^Δ	1.0m ^Δ	60 Δ			15p ^Δ	T018	A ^Δ		
19	# 2SC97 ^t	800m	250M ^Δ	5.3m	SJ	60	30	5.0	1	1.0u ^Δ	100 ^Δ	150m ^Δ	60 Δ#			20p ^Δ	PE	T05		
20	# 2SC502	800m	250M ^Δ	6.7m	SJ	60	60	5.5	5.0	1	1.0u ^Δ	5.0	200m ^Δ	30 Δ		13p	PE	T039		
21	# BFC322	800m	250M ^Δ	5.3m	SJ	30	25	3.0	600m		100 ^Δ	10m ^Δ	300 Δ*			6.0p	PE	T039		
22	# BFX17	800m	250M ^Δ	4.5m	SJ	60	40	6.0	10	2.0u ^Δ	100 ^Δ	100m ^Δ	35 Δ			12p ^Δ	PE	T05		
23	# BFX96	800m	250M ^Δ	4.5m	SJ	60	30	5.0	800m	0.1u ^Δ	100 ^Δ	150m ^Δ	40 Δ#			8Op ^Δ	PE	T05		
24	# BFX95A	800m	250M ^Δ	4.5m	SJ	60	30	5.0		10n ^Δ	100 ^Δ	150m ^Δ	40 Δ			8Op	PE	T039		
25	# BIX97	800m	250M ^Δ	4.5m	SJ	60	30	5.0	800m	0.1u ^Δ	100 ^Δ	150m ^Δ	100 Δ#			8Op ^Δ	PE	T05		
26	# BFX97A	800m	250M ^Δ	4.5m	SJ	60	30	5.0		10n ^Δ	100 ^Δ	150m ^Δ	100 Δ			8Op ^Δ	PE	T039		
27	P74816	800m	250M ^Δ	5.3m	SJ	60	30	4.0		1.0u ^Δ	100 ^Δ	10m ^Δ	40 Δ			8Op ^Δ	PE	T05		
28	UP12217	800m	250M ^Δ	5.3m	SJ	65	30	5.0	800m	14m ^Δ	100 ^Δ	1.0m ^Δ	18 Δ			8Op	PE	T05		
29	UP12218	800m	250M ^Δ	5.3m	SJ	65	30	5.0	800m	14m ^Δ	100 ^Δ	1.0m ^Δ	30 Δ			8Op	PE	T05		
30	UP14046	800m	250M ^Δ	4.5m	SJ	60	35	6.0	500m	1.7u ^Δ	100 ^Δ	100m ^Δ	150 Δ			2.0p	PE	A ^Δ		
31	# UP14047	800m	250M ^Δ	4.5m	SJ	70	40	6.0	500m	1.7u ^Δ	100 ^Δ	100m ^Δ	150 Δ			10p	PE	A ^Δ		
32	# ZT6001	800m	250M ^Δ	4.5m	SJ	24	20	5.0	10	1.0u ^Δ	100 ^Δ	150m ^Δ	50 Δ			12p ^Δ	PL	T05		
33	2N2219A ^t	800m	300M ^Δ	5.3m	SJ	75	40	6.0	800m	0.1u ^Δ	100 ^Δ	1.0m ^Δ	40 Δ	35u ^Δ	8.0k ^Δ	8.0p	Ø	T05		
34	2N3722 ^t	800m	300M ^Δ	4.5m	SJ	80	60	6.0	500m	50u ^Δ	100 ^Δ	10m ^Δ	25 Δ#			10p ^Δ	Ø	T05		
35	2N3723 ^t	800m	300M ^Δ	4.5m	SJ	100	80	6.0	500m	50u ^Δ	100 ^Δ	10m ^Δ	25 Δ#			9p ^Δ	Ø	T05		
36	2N3724 ^t	800m	300M ^Δ	4.5m	SJ	50	30	6.0	500m	1.7u ^Δ	100 ^Δ	100m ^Δ	60 Δ#			12p ^Δ	Ø	T05		
37	# 2N3725 ^t	800m	300M ^Δ	4.5m	SJ	80	50	6.0	500m	1.7u ^Δ	100 ^Δ	100m ^Δ	60 Δ#			10p ^Δ	Ø	T05		
38	# 2N5145 ^t	800m	300M ^Δ	4.5m	SJ	50	30	6.0	500m	1.7u ^Δ	100 ^Δ	10m ^Δ	30 Δ#			12p ^Δ	Δ	T039		
39	# BC232M	800m	300M ^Δ	5.3m	SJ	40	30	5.0	400m	2.0u ^Δ	2.0p	50m ^Δ	100 Δ#			6.0p	PE	T039		
40	# C651	800m	300M ^Δ	4.5m	SJ	55	35	5.0		5.0u ^Δ	100 ^Δ	100m ^Δ	70 Δ			7.0p	PE	T039		
41	SE8010	800m	300M ^Δ	4.5m	SJ	100	60	* 6.0	500m	20n ^Δ	100 ^Δ	1.0m ^Δ	40 Δ#			9Op ^Δ	DPE	T039		
42	# BSX301	800m	330M ^Δ	4.5m	SJ	60	30	5.0	200n ^Δ	100 ^Δ	100 ^Δ	63 Δ#			5.0p	DPE	T05			
43	# 2SC97A ^t	800m	350M ^Δ	5.3m	SJ	80	45	5.0	1	50u ^Δ	100 ^Δ	10m ^Δ	40 Δ#			10p ^Δ	PE	T033		
44	# 2SC319	800m	350M ^Δ	5.3m	SJ	40	20	4.0	300m	1.0u ^Δ	100 ^Δ	100m ^Δ	20 Δ#			10p ^Δ	PE	T033		
45	# 2SC781	800m	350M ^Δ	5.3m	SJ	75	40	5.0	1	1.0u ^Δ	100 ^Δ	80 Δ			11p	PE	T05			
46	# BFR101 ^t	800m	350M ^Δ	5.3m	SJ					100 ^Δ	150m ^Δ	60 Δ			5.0p	PE	T039			
47	# BFY72	800m	350M ^Δ	3.4m	SJ	50	28	5.0		20n ^Δ	100 ^Δ	10m ^Δ	90	55u	480	1.3		4.0p	PE	T05
48	# 2N2217A	800m	400M ^Δ	5.6m	SJ	75	40	6.0		0.1u ^Δ	100 ^Δ	150m ^Δ	40 Δ#			4.0p	PE	A ^Δ		
49	2N2883	800m	400M ^Δ	4.5m	SJ	40	20	4.0	300m	50u ^Δ	100 ^Δ	100m ^Δ	20 Δ#			10p	PE	T05		
50	2N2884	800m	400M ^Δ	4.5m	SJ	40	20	4.0	300m	50u ^Δ	100 ^Δ	100m ^Δ	20 Δ#			10p	PE	T05		
51	2N5188 ^t	800m	400M ^Δ	4.5m	SJ	60	25	5.0	1	50u ^Δ	100 ^Δ	150m ^Δ	25 Δ#			14.8p	PE	T039		
52	# 2SC138	800m	400M ^Δ	5.3m	SJ	60	30	5.0	500m	1.0u ^Δ	100 ^Δ	10m ^Δ	30 Δ			4.0p	PE	T033		
53	# 2SC138A	800m	400M ^Δ	5.3m	SJ	60	35	5.0	500m	1.0u ^Δ	100 ^Δ	10m ^Δ	30 Δ			4.0p	PE	T033		
54	# 2SC139	800m	400M ^Δ	5.3m	SJ	60	30	5.0	500m	1.0u ^Δ	100 ^Δ	10m ^Δ	30 Δ			4.0p	PE	T033		
55	# 2SC320	800m	400M ^Δ	5.3m	SJ	40	20	4.0	500m	1.0u ^Δ	100 ^Δ	100m ^Δ	20 Δ#			10p ^Δ	PE	T033		
56	# 2SC596	800m	400M ^Δ	5.3m	SJ	60	30	5.0	500m	1.0u ^Δ	100 ^Δ	100m ^Δ	30 Δ			6.0p	PE	T033		
57	# BSV95 ^t	800m	400M ^Δ	5.3m	SJ															

5. SILICON NPN - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION
(2) fab & (3) TYPE No.

LINE No.	TYPE No.	COLL. DISS. @25°C (W)	DERATE fab	ABS MAX RATINGS @25°C						MAX ic @MAX	TYPICAL h' PARAMETERS						Cob	STRU TURE	DWG # Y200 s/a TO200 Ser.	L C E O A D D E	
				IN FREE AIR W/C	M AM X P	E BVcbo BVceo BVbeo	Ic	Vcb	le		hfe	hoe	hie	hre	(mhos)	(Ω)	X.0001				
1	2N342B	1.0	6.0M	7.6m	\$J	85	85	2.0	80m	1.0uΩ	10Ω	5.0m	21	2.0uΩ/b	30 Ω	3.0 Ω	20pΩ	G	TO11	A	
2	2N343B	1.0	6.0M	7.6m	\$J	65	65	2.0	60m	1.0uΩ	10Ω	5.0m	59	2.0uΩ/b	30 Ω	3.0 Ω	20pΩ	G	TO11	A	
3#	2SC8021	1.0	180M ₅	6.6m	\$J	60	35	4.0	500m	5.0uΩ	4.0Ω	150mΩ	30 t				5.0pΩ	PL	T05		
4	BFT140RS	1.0	180M ₅	5.5m	\$S	135		3.0		1.0uΩ	10Ω	10mΩ	40 t					PL	ZA29	Ø	
5	BF155RS	1.0	180M ₅	5.5m	\$S	155				1.0uΩ	10Ω	10mΩ	40 t					PL	ZA29	Ø	
6	2N3833	1.0	1.0G ₅ A	6.6m	\$S	25	15	1.0	100m	20ns	12Ω	30mΩ	20 t#						X60	S	
7	2N3834	1.0	1.0G ₅ A	6.6m	\$S	25	15	1.0	100m	20ns	12Ω	30mΩ	20 t#						1.7pS		
8	2N3835	1.0	1.0G ₅ A	6.6m	\$S	25	15	1.0	100m	20ns	12Ω	30mΩ	20 t#						1.7pS	X60	
9	KD4002	1.0	#	1.2G ₅ A	6.6m ₅	\$J	40	25	2.5	120m	1.0uΩ	6.0Ω	50mΩ	20 tΔ						3.5pΩ	X72
10	KD4001	1.0	#	1.5G ₅ A	6.6m ₅	\$J	40	25	2.5	120m	1.0uΩ	6.0Ω	50mΩ	20 tΔ						3.5pΩ	X72
11	KD4501	1.0	1.5G	5.5m	\$J	30	12	2.5	120m	300nΩ	10	50mΩ	30 tΔ						3.5pΩ	X72	
12	KD4502	1.0	1.5G	5.5m	\$J	25	12	2.5	120m	300nΩ	10	50mΩ	30 tΔ						3.5pΩ	X72	
13	2N717AT	1.8	200M ₅			75		7.0										PL	TO18		
14	2N339A	3.0	10M ₅ A		▼S	60	60	3.0		1.0uΩ	10Ω	1.0m	53	2.0uΩ	30	3.0			TO11	A	
15	2N340A	3.0	10M ₅ A		▼S	85	85	3.0		1.0uΩ	10Ω	1.0m	53	2.0uΩ	30	3.0			TO11	A	
16	2N341A	3.0	10M ₅ A		▼S	125		3.0		1.0uΩ	10Ω	1.0m	53	2.0uΩ	30	3.0			TO11	A	
17	2N1206	3.0	20M	2.8m	\$J	60	60	3.0		1.0uΩ	10Ω	5.0m	35	2.0uΩ	30	3.0			TO5	A	
18	2N1207	3.0	20M	2.8m	\$J	125	125	3.0		1.0uΩ	10Ω	5.0m	35	2.0uΩ	30	3.0			TO5	A	
19#	2SC614	7.5	200M ₅		\$J	80		4.0	1.5	1.0u	10Ω	250mΩ	80 t					12p	PE	TO39	
20#	2SC615	7.5	200M ₅		\$J	30		4.0	1.5	1.0u	10Ω	250mΩ	80 t					12p	PE	TO39	
21	2N3832T	200	800M ₅ A	1.1	\$S	15	6.0	4.0	35m	10ns	50Ω	2.0mΩ	125 t/Δ							T072	G
22▼	2N2854-1		850M ₅	30K ₅ A		66m	\$S	60	40	5.0	3.0	100ns	1.0Ω	1.0Ω	100 t/Δ			125pΩ	PE	T05	A

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

6. SILICON FIELD EFFECT TRANSISTORS - P CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	MAX. V _p				ABS MAX RATINGS@25°C				MAX. Id(ON)@ V _{gs} =0 & V _{ds} =0	MAX. I _{ss} @ V _{gs} >V _p V _{ds} >V _p	PARAMETERS @25°C				MAX. C _{is}	MAX. IN FREE AIR TEMP	DERATE	STRUCTURE	DWG # Y200 E0 s/a TO200 D E Ser.	
		V _{dss}	V _{gss}	I _d	I _g	V _{gs}	V _{ds}	g _f (mhos)	Y _{os}			MIN	MAX	mhos	(f)						
1	MEM517B	5.0Δ	30	25	0.5n	1.0m	10m	60n	0.0	10	10m	30m	4.0%	1.2mΔ	1.6k	3.0pt	4.0m	125S	Δ*	T05	
2#	ML111B	6.5t	* 40	40		2.0t	10	25		20	25m	75m	3.0%	6.0pt	2.0m	200S	Δ*	A15b	T072		
3	2N3573	6.0mt	* 10	25		6.5t		25	50m	50m	40n	40n	2.0	5.0pt	2.0m	200S	Δ*	DG	T072		
4	2N3698	7.5mt	1.1	20		30	25m	50m	25mΔ	10n	0.0	20	25m	75m	3.0%	5.0pt	2.0m	200S	Δ*	DG	T072
5	2N3277	12.0mt	5.0t	10	25	2.5	50m	10m		40n	0.0	10	10m	2.0u	4.5pt	2.0m	200S	Δ*	DG	T033	
6	2N3574	18.0mt	2.0t	10		2.5	1.0m	380u	600p	0.0	10	200u	600u	10u%	6.0pt	2.0m	200S	Δ*	DG	T072	
7	2N3697	18mt	1.8	20		30	60m	50m	80mΔ	10n	0.0	20	50m	1.0m	6.0%	5.0pt	2.0m	200S	Δ*	DG	T072
8	2N3328	20mt	6.0t	10		20	1.0m	1.0m	1.0n	0.0	10	10m	1.0m	1.8m	15u	4.5pt	2.0m	200S	Δ*	L21c	T072
9	2N3333	20mt	1.6t	10	20	2.0	1.0m	1.0m	1.0n	0.0	10	60m	1.8m	15u	3.0pt	2.0m	200S	Δ*	L21c	T072	
10	2N3334	20mt	1.6t	10	20	2.0	1.0m	1.0m	1.0n	0.0	10	80m	1.8m	15u	3.0pt	2.0m	200S	Δ*	L21c	T072	
11	2N3350	20mt	1.6t	10	20	2.0	1.0m	1.0m	1.0n	0.0	10	60m	1.8m	15u	3.0pt	2.0m	200S	Δ*	L21c	T072	
12	2N3360	20mt	1.6t	10	20	2.0	1.0m	1.0m	1.0n	0.0	10	60m	1.8m	15u	3.0pt	2.0m	200S	Δ*	L21c	T072	
13	2N3278	22.0mt	8.0t	10	25	2.5	90m	10m		40n	0.0	10	15m	10u	100k	4.5pt	2.0m	200S	Δ*	T033	DG
14	2N3575	40mt	4.0t	10		25	1.5m	50m	1.5mΔ	10n	0.0	20	75m	1.2m	150%	6.0pt	2.0m	200S	Δ*	T072	DG
15	2N3696	45mt	3.2	20		30	1.5m	50m	1.5mΔ	10n	0.0	20	75m	1.2m	150%	5.0pt	2.0m	200S	Δ*	T072	DG
16	2N3113	50m	4.0	5.0		20	10m	10m	180uΔ	50p	0.0	5.0	50u	120u		2.0pt	2.0m	200S	Δ*	T018	
17	UC420	7.5mt	2.5	20		30Δ	2.5m	2.5mΔ	0.1n	0.0	20	1.0m		70k	8.0p	2.0m	100J	PE	T072	DG	
18	MEM550C	85m	6.0t	* 25	25	25m	100u	10n	10n	10	10	500u	250Δ	4.0pΔ	1.1m	100J	*	L54			
19	MEM55T	85m	6.0t	* 25	25	25m	100u	10n	10n	10	10	500u	250Δ	4.0pΔ	1.1m	100J	*	L54			
20	2SJ11	100m	5.0	10		20	10m	900u	1.0n	0.0	10	100u	600uΔ	2.0p*	1.50	PE	T017				
21	2SJ12	100m	5.0	10		20	10m	90m	1.0n	0.0	10	10mΔ	6mΔ	2.0p*	1.50	PE	T017				
22	3N178	100m	5.5Δ	10*	75	75Δ	20m	1.0m	3.0m#	100u	0.0	10	1.0m	750	3.5p	2.0m	200S	Δ*	T072	DM	
23	3N179	100m	6.0Δ	10*	60	60Δ	20m	1.0m	3.0m#	100u	0.0	10	1.0m	750	4.5p	2.0m	200S	Δ*	T072	DM	
24	3N180	100m	6.0Δ	10*	40	40Δ	20m	1.0m	3.0m#	100u	0.0	10	1.0m	750	5.0p	2.0m	200S	Δ*	T072	DM	
25#	3SJ111	100m	6.5Δ	* 30	30	10m		100n		10	10	300u	1.0k	5.0p	1.0m	150S	PL*	T072	DU		
26	MEM300	100m	5.5Δ	10*	75	75Δ	20m	100u	500p	10n	0.0	10	500u	750	3.5p	2.0m	200S	Δ*	T072	DM	
27	MEM301	100m	6.0Δ	10*	60	60Δ	20m	100u	1.0n	10	10	500u	750	4.5p	2.0m	200S	Δ*	T072	DM		
28	MEM302	100m	6.0Δ	10*	40	40Δ	20m	100u	1.0n	10	10	500u	750	5.0p	2.0m	200S	Δ*	T072	DM		
29	MEM556	100m	6.0Δ	* 80	80	20m	100u	1.0u	1.0n	15	20	800u	950uΔ	700t	500f	1.0m	125J		T072	DM	
30	MEM556C	100m	6.0Δ	* 70	70	20m	100u	1.0n	1.0n	15	20	950uΔ	700f	500f	1.0m	100		T072	DM		
31	2N3695	112mt	4.5	20		30	3.7m	50m	3.7mΔ	100u	0.0	20	1.0m	17m	350%	5.0pt	2.0m	200S	Δ*	T072	DG
32	MEM550*	112m	6.0Δ	* 30	25	25m	100u	5.0m*	1.0n	10	10	500u	18k	1.1pt*	890u	125J	*	L53			
33	MEM551*	112m	6.0t	* 30	40	25m		10n	4.0p	10	10	500u	250Δ	1.1pΔ*	1.1m	125J	*	L54			
34	SD5010*	112m	5.5t	* 30	25	25m	100u	5.0*	1.0n	10	10	500u	250Δ	1.1p*	1.1m	125J	*	L53			
35	SD5011*	112m	5.5t	* 30	40	40	25m	100u	5.0*	3.0p	10	10	500u	250Δ	1.1p*	1.1m	125J	*	L54		
36	SD5012*	112m	4.5t	* 65	65	50	25m	100u	5.0*	1.0n	10	10	1.2m	400Δ	1.1p*	1.1m	125J	*	L63		
37	SD5013*	112m	4.5t	* 65	65	25m	100u	5.0*	3.0p	10	10	1.2m	400Δ	1.1p*	1.1m	125J	*	L54			
38	SD5014*	112m	6.0t	* 100	50	25m	100u	5.0*	1.0n	10	10	500u	850Δ	1.1p*	1.1m	125J	*	L53			
39	SD5015*	112m	6.0t	* 100	80	25m	100u	5.0*	3.0p	15	15	500u	850Δ	1.1p*	1.1m	125J	*	L54			
40	2N3377	150m	5.0	5.0		30	100m	50m	6m%Δ3.0n	0.0	10	80m	2.3m	1.5k	2.0p	1.0m	200S	Δ*	L22		
41	2N3379	150m	5.0	5.0		30	100m	50m	6m%Δ3.0n	0.0	10	1.5m	2.3m	75k	2.0p	1.0m	200S	Δ*	u22		
42	2N3381	150m	9.5	5.0		30	100m	50m	20m%Δ3.0n	0.0	10	1.5m	3m	60k	2.0p	1.0m	200S	Δ*	u22		
43	2N3383	150m	5.0	5.0		30	100m	50m	30m%	15n	0.0	10	4.5m	3m	30k	5.0p	1.0m	200S	Δ*	u22	
44	2N3385	150m	5.0	5.0		30	100m	50m	30m%	15n	0.0	10	7.5m	13m	18kt	5.0pΔ	1.0m	200S	Δ*	u22	
45	2N3387	150m	9.5	5.0		30	100m	50m	50m%Δ15n	0.0	10	7.5m	15m	15kt	7.0p	1.0m	200S	Δ*	u22		
46	3N151*	162m	6.0Δ	10*	30	30Δ	25m	3.0m	2.0p	10	10	500u	3.0n	120u	1.2p	1.5m	TSOS	*	L53		
47	MEM511C	175m	6.0Δ	* 25	25	50m	100u	1.0n	1.0n	10	10	1.0m	1.0m	10k	4.0pt	2.3m	100J	T072	DM		
48	MEM520C	175m	6.0t	* 25	25	50m	100u	1.0n	1.0n	10	10	1.0m	1.0m	150Δ	4.0pΔ	2.3m	100J	T072	DM		
49	UC410	180mt	4.0	20		30Δ				6.0mΔ	10p	0	20	2.2m	500	8.0p	2.0m	200J	PE	T072	DG
50	2N4342	200m	5.5t	10Δ	25Δ	25Δ	50m	12m	10n	0.0	10	2.0m	6.0m	75u	700t	2.0p	2.0m	125J	*	R124	D8
51	2N4343	200m	10t	10Δ	25Δ	25Δ	50m	30mΔ	10n	0.0	10	4.0m	8.0m	100u	350t	2.0p	2.0m	125J	*	R124	D8
52	2N4360	200m	10t	10Δ	20Δ	20Δ	50m	30mΔ	10n	0.0	10	2.0m	8.0m	100u	700t	2.0p	2.0m	125J	*	R124	D8
53	2N5033	200m	2.5t	10Δ	20	20	50m	3.5mΔ	10n	0.0	10	1.0m	5.0m	20u%	1.3kt	2.5p	2.0m	125J	*	R124	D8
54	2N5265	200m	3.0t	15	60	60	20m	10m	1.6m	2.0n	0	15	90m	12.7m	75u	7.0p	1.3m	200S	Δ*	T072	DH
55	2N5266	200m	3.0t	15	60	60	20m	10m	1.6m	2.0n	0	15	10m	3.0m	75u	7.0p	1.3m	200S	Δ*	T072	DH
56	2N5267	200m	6.0t	15	60	60	20m	10m	3.0m	2.0n	0	15	1.5m	3.5m	75u	7.0p	1.3m	200S	Δ*	T072	DH
57	2N5268	200m	6.0t	15	60	60	20m	10m	3.0m	2.0n	0	15	2.0m	4.0m	75u	7.0p	1.3m	200S	Δ*	T072	DH
58	2N5269	200m	8.0t	15	60	60	20m	10m	8.0m	2.0n	0	15	2.2m	4.5m	75u	7.0p	1.3m	200S	Δ*	T072	DH
59	2N5270	200m	8.0t	15	60	60Δ	20m	10m	14mΔ	2.0n											

6. SILICON FIELD EFFECT TRANSISTORS - P CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	MAX. ABS MAX RATINGS @ 25°C				MAX. ID(ON)@ VGS=0 & VDS=0 (W)	MAX. IGSS@ VGS>VDP & VDS>VP (A)	PARAMETERS @ 25°C				DERATE	DWG #	C					
		Vp (V)	6Vdss (V)	BVgss (V)	Id (A)			TEST COND	COMMON SOURCE gds (mhos)	IDS (A)	MAX. Cis (F)								
1	JAN2N3329	300m	5.0 ¹	15	20	10m 3.0m	10n	10	1.0m	2.0m	200 ¹	20p#	2.0m	200S	#1				
2	2N3330	300m	6.0 ¹	15	20	10m 6.0m	10n	20 ¹	10	1.5m	3.0m	400 ¹	20p#	2.0m	200S	T072			
3	JAN2N3330	300m	6.0 ¹	15	20	10m 6.0m	10n	10 ¹	10	1.5m	3.0m	400 ¹	20p#	2.0m	200S	#1			
4	2N3331	300m	8.0 ¹	15	20	10m 15m	10n	50 ¹	10	2.0m	4.0m	100u ¹	60k	20p#	2.0m	200S	T072		
5	JAN2N3331	300m	8.0 ¹	15	20	10m 15m	10n	10 ¹	10	2.0m	4.0m	100u ¹	600	20p#	2.0m	200S	#1		
6	2N3332	300m	6.0 ¹	15	20	10m 6.0m	10n	10 ¹	10	1.0m	2.2m	20u ¹	20p#	2.0m	200S	T072			
7	JAN2N3332	300m	6.0 ¹	15	20	10m 6.0m	10n	10 ¹	10	1.0m	2.2m	200 ¹	20p#	2.0m	200S	#1			
8	2N3376	300m	5.0 ¹	5.0 ¹	30	100m 50m	50m 6m ¹	43.0n	0.0	10	0.80m	2.3m ¹	1.5k ¹	3.0p#	2.0m	200S	T072		
9	JAN2N3376	300m	5.0 ¹	5.0 ¹	30	100m 50m	50m 6m ¹	43.0n	0.0	10	1.5m	2.3m ¹	7.5k ¹	3.0p#	2.0m	200S	T072		
10	2N3380	300m	9.5 ¹	5.0 ¹	30	100m 50m	50m 20m ¹	43.0n	0.0	10	1.5m	3m ¹	60k ¹	3.0p#	2.0m	200S	T072		
11	2N3382	300m	5.0 ¹	5.0 ¹	30	100m 50m	30m ¹	15n	0.0	10	4.5m	13m ¹	30k ¹	6.0p#	2.0m	200S	T072		
12	2N3384	300m	5.0 ¹	5.0 ¹	30	100m 50m	30m ¹	15n	0.0	10	7.5m	13m ¹	18k ¹	6.0p#	2.0m	200S	T072		
13	2N3385	300m	8.5 ¹	5.0 ¹	30	100m 50m	50m ¹	15n	0.0	10	7.5m	15m ¹	1.5k ¹	6.0p#	2.0m	200S	T072		
14	2N3578	300m	4.0 ¹	5.0 ¹	20	50m	50m 4.5m	5n	0.0	5	1.2m	3.5m	15u ¹	65p#	2.0m	200S	T018		
15	2N3909	300m	18.0 ¹	10 ¹	20	10m 15m	10n	90 ¹	10	1.0m	5.0m	100u ¹	32p#	2.0m	200S	PL			
16	2N3909A	300m	8.0 ¹	10 ¹	20	10m 15m	10n	90 ¹	10	2.2m	5.0m	100u ¹	9p#	2.0m	200S	#1			
17	2N3993	300m	— ¹	25 ¹	25	10m 10m	10n	0.0	10	6.0m	12m ¹	18p#	2.0m	200S	T072				
18	2N3993A	300m	— ¹	25 ¹	25	10m 10m	1.2n	0.0	10	7.0m	12m ¹	12p#	2.0m	200S	#1				
19	2N3994	300m	— ¹	25 ¹	25	10m 2.0m	0.0	0	10	4.0m	12m ¹	16p#	2.0m	200S	T072				
20	2N3994A	300m	— ¹	25 ¹	25	10m 2.0m	1.2n	0.0	10	5.0m	10m ¹	30k	12p#	2.0m	200S	#1			
21	2N4088	300m	8.0 ¹	10 ¹	30	20	10m 8.0m	10n	10 ¹	10	1.0m	1.6m	60u	10p#	1.7m	200C	S		
22	2N4089	300m	5.0 ¹	10 ¹	30	20	10m 2.5m	10n	10 ¹	10	50m	90m	20u	10p#	1.7m	200C	S		
23	2N4090	300m	3.0 ¹	10 ¹	30	20	30m	10p	10 ¹	10	600	600	600	600	600	200S	T072		
24	2N4352†	300m	5.0 ¹	10 ¹	30	30	30m	10p	10 ¹	10	12m	1.0n	1.0n	1.0n	1.0n	1.0n	T018		
25	2N4381	300m	5.0 ¹	15 ¹	25	25	50m	1.0n	0.0	15	2.0m	6.0m	75u ¹	70k	20p#	2.0m	175J	T018	
26	2N4382	300m	9.0 ¹	15 ¹	25	25	50m	1.2m	1.0n	15	4.0m	8.0m	100u ¹	35k	20p#	2.0m	175J	T018	
27	2N5020	300m	1.5 ¹	15 ¹	25	25	50m	1.2m	1.0n	15	1.0m	3.5m	1.0k ¹	25p#	2.0m	175J	T018		
28	2N5021	300m	2.5 ¹	15 ¹	25	25	50m	3.5m	1.0n	0.0	15	1.5m	5.0m	20u	1.3k ¹	25p#	2.0m	175J	T018
29	2N5471	300m	4.0 ¹	15	40	120u ¹	500p	0.0	15	90u	225u	1.0u*	5.0p#	2.0m	200S	PL			
30	2N5472	300m	4.0 ¹	15	40	25m ¹	50n	0.0	15	12m	30m ¹	5p#	2.0m	200S	#1				
31	2N5473	300m	6.0 ¹	15	40	5.5m ¹	50n	0.0	15	16m	40m ¹	5p#	2.0m	200S	#1				
32	2N5474	300m	7.0 ¹	15	40	1m ¹	50n	0.0	15	20m	50m ¹	5p#	2.0m	200S	#1				
33	2N5475	300m	8.0 ¹	15	40	2.5m ¹	10n	0.0	10	26m	65m ¹	5p#	2.0m	200S	#1				
34	2N5476	300m	9.0 ¹	15	40	2.5m ¹	10n	0.0	15	65m ¹	10u*	40p#	2.0m	200S	T072				
35	3N890	300m	4.0 ¹	5.0 ¹	30	50m	2.5m	5.0n	0.0	5	4.5m	1.3m ¹	60k ¹	5.0p%	1.7m	125J	*1		
36	3N155†	300m	3.2 ¹	10 ¹	35	50	5.0m	1.0n	0.0	10	1.0n	1.0n ¹	30k ¹	5.0p%	1.7m	125J	T072		
37	3N155AT	300m	3.2 ¹	10 ¹	35	50	30m	1.0n	0.0	10	1.0n	1.0n ¹	60k ¹	5.0p%	1.7m	125J	*1		
38	3N156†	300m	5.0 ¹	10 ¹	35	50	5.0m	1.0n	0.0	10	1.0n	1.0n ¹	30k ¹	5.0p%	1.7m	125J	T072		
39	3N156AT	300m	5.0 ¹	10 ¹	35	50	5.0m	1.0n	0.0	10	1.0n	1.0n ¹	10p#	1.7m	125J	*1			
40	3N157†	300m	3.2 ¹	15 ¹	25	30m	0.1n	0.0	15	1.0	4.0	60u	5.0p#	1.7m	125J	T072			
41	3N157A	300m	3.2 ¹	15 ¹	25	30m	0.1n	0.0	15	1.0	4.0	60u	5.0p#	1.7m	125J	T072			
42	3N158	300m	5.0 ¹	15 ¹	25	30m	0.1n	0.0	15	1.0	4.0	60u	5.0p#	1.7m	125J	T072			
43	3N158A	300m	5.0 ¹	15 ¹	25	30m	0.1n	0.0	15	1.0	4.0	60u	5.0p#	1.7m	125J	T072			
44	3N165▼	300m	5.0 ¹	15 ¹	40	30m	0.1n	0.0	10	10p	100 ¹	150u ¹	300p#	2.4m	200S	L18c			
45	3N166†	300m	5.0 ¹	15 ¹	40	30m	0.1n	0.0	10	10p	100 ¹	150u ¹	300p#	2.4m	200S	L18c			
46	3N181†	300m	4.0 ¹	10 ¹	30	100m 100u	500p	0.0	10	10m	50m	100u	40p#	2.4m	200S	*1			
47	3N182†	300m	5.0 ¹	10 ¹	30	100m 100u	2.5n	0.0	10	10m	50m	60u	25p#	2.4m	200S	T072			
48	3N183†	300m	6.0 ¹	10 ¹	25	25m ¹	100m 100u	10n	0.0	10	10m	50m	75u ¹	30p%	2.4m	200S	T072		
49	3N184†	300m	3.0 ¹	10 ¹	35	35m ¹	10m 1.0m	1.0n	0.0	10	10m	100u ¹	150p#	2.4m	200S	T072			
50	3N185†	300m	3.0 ¹	10 ¹	30	30m ¹	10m 1.0m	1.5m ¹	0.0	10	10m	100u ¹	150p#	2.4m	200S	T072			
51	3N186†	300m	3.5 ¹	10 ¹	25	25m ¹	10m 1.0m	10m ¹	0.0	10	10m	100u ¹	200p#	2.4m	200S	T072			
52	3N188▼	300m	5.0 ¹	40 ¹	40	50m	1.0m	200p	0.0	10	1.5m	4.0m	300u ¹	300u ¹	4.5p#	2.4m	200S	L58b	
53	3N189†	300m	5.0 ¹	40 ¹	40	50m	1.0m	200p	0.0	10	1.5m	4.0m	300u ¹	300u ¹	4.5p#	2.4m	200S	L58b	
54	3N190†	300m	5.0 ¹	40 ¹	40	50m	1.0m	200p	0.0	10	1.5m	4.0m	300u ¹	300u ¹	4.5p#	2.4m	200S	L58b	
55	3N191†	300m	5.0 ¹	40 ¹	40	50m	1.0m	200p	0.0	10	1.5m	4.0m	300u ¹	300u ¹	4.5p#	2.4m	200S	L58b	
56	FP4339	300m	1.8 ¹	15 ¹	40	50m 1.5m	3.0n	0.0	15	80m	2.4m	1.7k	7.0p#	2.0m	125J	DPL			
57	FP4340	300m	3.0 ¹	15 ¹	40	50m 3.6m	13.0n	0.0	15	1.3m	3.0m	1.5k	7.0p#	2.0m	125J	DPL			
58	FT3909	300m	8.0 ¹	10 ¹	20	20	10m 15m	10n	0.0	10	1.0m	5.0m	100u	32p#	2.0m	125J	DPL		
59	MEM1001	300m	3.0 ¹	35 ¹	35	50m 100u	120n	0.0	10	102	15	1.5m	4.0m	300u ¹	300u ¹	4.5p#	2.4m	200S	*1
60	MEM1011	300m	3.0 ¹	30 ¹	30	50m 100u	50n	0.0	10	102	15	1.5m	4.0m	300u ¹	300u ¹	4.5p#	2.4m	200S	*1
61	MEM1021	300m	3.5 ^{1</}																

6. SILICON FIELD EFFECT TRANSISTORS - P CHANNEL

IN ORDER OF (1) DISSIPATION

(2) TYPE No.

LINE No.	TYPE No.	MAX. DISS @ 25°C				ABS MAX RATINGS @ 25°C				MAX. I _{d(ON)} @ V _{gs} =0 & V _{ds} >V _p & V _{ds} =0	PARAMETERS @ 25°C				DE RATE	STRUCTURE	DWG #	LC		
		V _p (V)	BV _{dss} (V)	BV _{gss} (V)	I _d (A)	I _g (A)	I _{ds} (A)	V _{gs} =0 & V _{ds} >V _p & V _{ds} =0	TEST COND	COMMON SOURCE	r _(DS) on (mhos)	MAX C _i s	IN FREE AIR TEMP	MAX W/C [°C]						
1 M164		375m	5.0Δ	*	30	30	30m	10p	10p	15	1.0m	4.5m	300 %	2.9p#	3.0m	150J	* T072 DM			
2 UC1764		375m	5.0Δ	*	30	30	50	10m	3.0m#	10p	15	1.0m	4.0m	300u	300kΔ	3.0p#	3.0m	2005 * T072 DS		
3 3N1491		400m	6.0Δ	20*			200m	10m	16m#						25k†	3.0p#	2.6m	175J * T072 DM		
4 3N1501		400m	6.0Δ	20*			200m	10m	16m#						25k†	3.0p#	2.6m	175J * T072 DM		
5 2N2386		500m	8.0	12			20Δ		10m		10n	0.0	10	1.0m		30uΔ	50p#	3.3m	2005 T05 DAØ	
6 2N2386A		500m					20				10n	0.0	10	2.2m	5.0m	10uΔ	10p#	3.3m	2005 # T05 DAØ	
7 2N2497		500m	5.0	15			20Δ		10m	3.0m	10n	1p	10	1.0m	2.0m	20u%	1.0k	32p#	3.3m	300S R82 DAØ
8 JAN2N2497		500m	5.0†	15			20Δ		10m	3.0m	10n	1p	10	1.0m	2.0m	20u	1.0k	32p#	3.3m	2005 Ø# T05 DAØ
9 2N2498		500m	6.0	15			20Δ		10m	6.0m	10n	2p	10	1.5m	3.0m	40u	800	32p#	3.3m	300S R82 DAØ
10 JAN2N2498		500m	6.0†	15			20		10m	6.0m	10n	5p	10	1.5m	3.0m	40u	800	32p#	3.3m	2005 Ø# T05 DAØ
11 2N2499		500m	8.0	15			20Δ		10m	15m	10n	5p	10	2.0m	4.0m	100u%	60k	32p#	3.3m	300S R82 DAØ
12 JAN2N2499		500m	8.0†	15			20		10m	15m	10n	10	2.0m	4.0m	100u	600	32p#	3.3m	2005 Ø# T05 DAØ	
13 2N2500		500m	6.0	15			20Δ		10m	6.0m	10n	1p	10	1.0m	2.2m	20u%	800	32p#	3.3m	300S R82 DAØ
14 JAN2N2500		500m	6.0†	15			20		10m	6.0m	10n	10	1.0m	2.2m	20u	800	32p#	3.3m	2005 Ø# T05 DAØ	
15 2N5114†		500m	10†	15			30		90m	50n						0.88%	25p#	3.0m	2005 Ø# T018 DAØ	
16 2N5115†		500m	6.0†	15			30		25m	50n						10%	25p#	3.0m	2005 Ø# T018 DAØ	
17 2N5116†		500m	4.0†	15			30		200m	10m						15%	25p#	3.0m	2005 Ø# T018 DAØ	
18 M106		500m	6.0Δ	*	30	30	50m	100u	10m	100p	10	10	2.0n			120 1	500m‡	6.7m	L15†	
19 M107		500m	6.0Δ	*	30	30	50m	100u	10m	100p	10	10	2.0n			120 1	500m‡	6.7m	125J *	
20 M108		500m	8.0Δ	*	30	30	50m	100u	10m	10p	10	10	2.0n			120 1	500m‡	6.7m	125J *	
21 2N4066†		600m	6.0Δ	15	30	25	200m		50m		15	15	1.5m			300u%	50k	7.0p#	4.0m 175J L18a	
22 2N4067†		600m	6.0Δ	15*	30	25	200m		50m		15	15	2.5m			300u%	25k†	7.0p#	4.0m 175J L18a	
23 3N1471		600m	6.0Δ	20*			200m		10m	8.0m#						50k†	2.0p#	4.0m 175J L18a		
24 3N1481		600m	6.0Δ	20*			200m		10m	8.0m#						50k†	2.0p#	4.0m 175J L18a		
25# FI0049†		600m	6.0Δ	*	30	25	200m		50m#		15	20	2.0m			128k	5p#	4.0m 175J DPL L18a		
26 MEM400†		600m	4.0Δ	10*	30	30	100m	100u	500p		15	20	2.0m			40	25p#	4.0m 200S *△ T033 DM		
27 MEM401†		600m	5.0Δ	10*	30	30	100m	100u	2.5n		10	10	12mΔ			60	25p#	4.0m 200S *△ T033 DM		
28 MEM402†		600m	6.0Δ	10*	25	25	100m	100u	10n		10	10	12mΔ			75	30p#	4.0m 200S *△ T033 DM		
29 MEM517		600m	5.0Δ	*	30	25	250m	1.0m	60m*	1.0n	10	10	12mΔ			1.0k	10p#	1.70J 125J *		
30 MEM517A		600m	5.0Δ	*	30	25	250m	1.0m	60m*	1.0n	10	10	12mΔ			1.0k	10p#	1.70J 125J *		
31 MFE3020†		600m	6.0Δ	15*	25	25	200m		10n	10p	15	15	500u			500 %	7.0p#	4.0m 175J L18a		
32 MFE3021†		600m	6.0Δ	15*	25	25	200m		10n	10p	15	15	500u			250 %	7.0p#	4.0m 175J L18a		
33 UC807		600m	12	15			20		125m#	2.0n	0.0	15	2.5m			400 1	30p*	PE T072		
34 2N5018†		1.8 Δ	10†	15†	30	30			10m	10m#	2.0n					67k†	45p#	10m 200S L18		
35 2N5019†		1.8 Δ	5.0†	15†	30	30			10m	5.0m#	2.0n					15k†	45p#	10m 200S L18		
36 3N162†		2.0 Δ	5.0Δ	10*	30	25	250m		25m							100	20p#	20m 150S * T033 DM		
37 MEM515		2.0	3.0Δ	10*	30	35	700m	1.0m	10n	500p	1.0n	10	12m			15	50p#	1.75J 100J *△ T033 DM		
38 MEM517C		45	5.0†	*	25	25	250m	100u	50n		10	10	12mΔ			45	15pΔ	600m 100J * L75 DM		

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	MAX. RATINGS@25°C										PARAMETERS @25°C										DWG # Y200 s/a	C E O A D
		V _p DISS (W)	V _{dss} @ 25°C	BV _{dss}	BV _{gss}	I _d @ ID=0	I _g	I _{d(on)} @ V _{gs} =0.8 V _{ds} >V _p & V _{ds} =0	I _{gs(s)} @ V _{gs} >V _p V _{ds} >V _p	TEST COND	COMMON SOURCE	r(DS) on	MAX. C _{is}	IN FREE AIR TEMP	STRUCTURE								
		(V)	(V)	(V)	(V)	(A)	(A)	(A)	(V)	(mhos)	Y _{os}	(Ω)	(F)										
1	C6690	10	10 ^Δ	30 ^Δ	45 ^Δ	10m	1.0n ^Δ	1.0n ^Δ				50k	5.0p ^Δ	200J	E#	T018	DD						
2	C6691	10	10 ^Δ	25 ^Δ	25 ^Δ	10m	1.0n ^Δ	1.0n ^Δ				50k	5.0p ^Δ	200J	E#	T018	DD						
3	C6692	6.0	10 ^Δ	25 ^Δ	25 ^Δ	10m	1.0n ^Δ	1.0n ^Δ				90k	5.0p ^Δ	200J	E#	T018	DD						
4	HSC39321 [▼]	2.7		50		10m	250p		1.5m		35u	1.8p#	125J	E#	L21e								
5	HSC3954 [▼]	4.5		50		5.0m	100p	1.0m	35u		35u	4.0p#*	125J	E#	L21e								
6	NF550 [▼]	4.5 [†]	20	20		15m	350p	2.0m	7.0m			5.0p#*	125A		L74								
7	UC755	6.0	20	30		15m	1.0n	0.0	2.0m	* 50u	6.0p#	PLØ	TO18										
8	UC756	10	20	30		15m	1.0n	0.0	2.0m	* 50u	6.0p#	PLØ	TO18										
9	ZN3687	25m [†]	1.1	20	50	50m	50m	10n	1.5m	50u%	4.0p#	2.0m	200S	Ø	T072	DH							
10	2N3687A	25m [†]	1.2 [†]	20	50	500u	50m	500u	100p	0.0	20	500u	4.0p#	2.0m	200S	#*	T072	DH					
11	2N3686	60m [†]	1.8	20	50	1.2m	50m	1.2m	1.0m	2.0m	10u%	4.0p#	2.0m	200S	Ø	T072	DH						
12	2N3688A	60m [†]	2.0 [†]	20	50	1.2m	50m	1.2m	1.0m	2.0m	1.0u	4.0p#	2.0m	200S	#*	T072	DH						
13	FF102 [†]	75m	6.0	10 ^Δ	15 ^Δ	15 ^Δ	50m	5.0m	1.0n	0.0	800u	8.0p†	1.7m	200J	E#	R150	DH						
14	FF108 [†]	75m	6.0	10 ^Δ	15 ^Δ	15 ^Δ	50m	5.0m	1.0n	0.0	800u	8.0p†	1.7m	200J	E#	R150a	DH						
15#	3SK29	80m	5.0 [†]	10 ^Δ	20 [†]	30	10m	1.0m*	1.0p	0.0	10	4.0p#	1.0m	160	* Ø	T072	DH						
16#	IC91	87m	15	10	25 ^Δ	25 ^Δ	50m	7.0m			10u	200k	3.0p#*	120m	200A	Ø	TO18	DD					
17#	2SK11	100m	6.0	10	20 [†]	20 [†]	10m	6.5m	1.0n	0.0	10	70m	3.5m		3.5p†	80m	150J	PEAD [†]	TO17	DG			
18#	2SK12	100m	4.5	10	20 [†]	20 [†]	10m	5.0m	1.0n	0.0	10	80m	3.2m		3.5p†	80m	150J	PEAD [†]	TO17	DG			
19#	2SK13	100m	4.5	10	12		10m	5.0m	1.0n	0.0	10	80m	3.2m		3.5p†	80m	150J	Ø	TO17	DG			
20#	2SK16H	100m	4.5	15	20	10m	7.0m	1.0n	6.0m			9.0p	1.0m	125J	PE	u23a	DH						
21#	2SK37	100m	4.0	5.0	15 ^Δ	20 ^Δ	20m	10m	6.0m	10n	5.0	1.5m	100u										
22	3SK14	100m	5.0	10			10m	5.0m	5.0	0.0	10	10u			5.0p	150J	* Ø	TO18					
23#	3SK20H	100m			20		10m	5.0m	5.0	0.0	10	60m	4.5m		5.0p	150J	* Ø	TO18					
24#	3SK21H	100m			20		10m	5.0m	5.0	0.0	10	500u	2.5m		5.0p	150J	* Ø	TO18					
25#	MTF101	100m	10	20	30		20m	500p	0.0	20	500u	2.0k%	800u	125S	#								
26#	MTF102	100m	1.5	20	40		10m	100p	0.0	20	1.0m	1.5k%	800u	125S	#								
27#	MTF103	100m	4.0	20	40		4.5m	100p	0.0	20	1.5m	1.0k%	800u	125S	#								
28#	MTF104	100m	10	20	50		20m	100p	0.0	20	2.0m	500%	800u	125S	#								
29#	NKT80111	100m	6.0	10	20		10m	6.0m	10n	0.0	10	70m	3.5m		4.5k	3.5p	80m	150	#	TO17	DG		
30#	NKT80112	100m	4.5	10	20		10m	5.0m	10n	0.0	10	80m	3.2m		4.5k	3.5p	80m	150	#	TO17	DG		
31#	NKT80113	100m	4.5	10	12		10m	5.0m	10n	0.0	10	80m	3.2m		4.5k	3.5p	80m	150	#	TO17	DG		
32	SDS5050 [*]	112m	5.51	*	25	25	25m	100u	10n	1.0n	10	10	500u	250	1.5p†	1.1m	125J	Ø	L53				
33	SDS5051 [*]	112m	5.51	*	25	40	25m	100u	10n	1.0n	10	10	500u	250	1.5p†	1.1m	125J	Ø	L54				
34	2N4038	120m			25	50	20m	100u				6.0	1.5m	2.5m	20k	2.5p†	150m	175S	*	TO17	DR		
35	2N4039	120m			25	50	20m	1.5m				6.0	1.2m	2.5m	20k	2.5p†	150m	175S	*	TO17	DR		
36	2N3685	150m [†]	3.2	20	50	3.0m	50m	3.0m	10n	0.0	20	1.5m	2.5m	25u%	4.0p#	2.0m	200S	Ø	T072	DH			
37	2N3685A	150m [†]	3.51	20	50	3.0m	50m	3.0m	100p	0.0	20	1.5m	2.5m	2.5u	4.0p#	2.0m	200S	#*	T072	DH			
38#	2SK33	150m	8.0 [†]	10 ^Δ	20 [†]	20 [†]	10m	20m	100n	0.0	10	7.0m ^Δ	3.5p	1.5m	125J	#Ø	T092	DD					
39#	2SK34	150m	6.01	10 ^Δ	30 ^Δ	35	10m	50m	25m%	10p			10u	350%	5.0p#	1.2m	150S	Ø	T072	DW ³			
40#	3N138	150m [†]			35	10	50m	50m	25m%	10p				100%	7.0p#	2.0m	125S	Ø	T072	DW ³			
41	3N139	150m	6.01	15 ^Δ	35	10	50m	50m	25m%	10p				100%	7.0p#	1.2m	150S	Ø	T072	DW ³			
42#	5288SY [*]	150m			35	10	50m	50m	25m%	10p				100%	7.0p#	1.2m	150S	Ø	T072	DW ³			
43#	BFS67P [*]	150m	6.0	15	50	50	10m	10m	100p	0.0	15	1.5m	6.5m	20u	6.0p	2.0m	125S	Ø	T072	EE			
44#	BFS68P [*]	150m	8.0	15	30	50	10m	25m	500p	0.0	15	3.5m	6.5m	35u	6.0p	2.0m	125S	Ø	T072	EE			
45#	BFS38PT [*]	150m [†]	10 [†]	15	25	25	150m	10m	50m#	2500p			250%	18p#	1.2m	150S	Ø	T072	DW ³				
46#	BSV39P [*]	150m [†]	6.01	15	25	25	10m	100m%	500p					70	1.8p#	1.2m	150S	Ø	T072	EE			
47#	BSV81	150m			35	10	50m	50m	25m%	10p				100%	7.0p#	1.2m	150S	Ø	T072	DW ³			
48	MEM554	150m	4.01	20 [†]	20	20		30m ^Δ	10n	4.0	15	8.0m	12m ^Δ		7.0p#	1.2m	125J	Ø	TO72	DX			
49	MEM554C	150m	4.01	20 [†]	20	10		30m ^Δ	10n	4.0	15	8.0m	12m ^Δ		7.0p#	1.2m	125J	Ø	TO72	DX			
50	MEM557	150m	4.01	15 ^Δ	20	10		30m ^Δ	10n	10%	15	8.0m	10m ^Δ		30k [†]	1.2m	150J	Ø	TO72	DW			
51	MEM571C	150m	4.01	15 ^Δ	20	15		30m ^Δ	10n	10%	15	8.0m	10m ^Δ		200	6.0p#	1.2m	150S	Ø	TO72	DX		
52#	MKT10	150m	2.5%	10 ^Δ	30 ^Δ	10m	20m ^Δ	100p	0.0	10	1.0	4.0 ^Δ	50u	4.0p#*	1.5m	125J	#Ø	TO92	DA				
53#	PL1091	150m			50			10m	10m	10n	0.0	15	1.5m%	6.5m%		6.0p#	1.5m	175S	Ø	TO72	EE		
54#	PL1093	150m			50			10m	10m	10n	0.0	15	3.5m%	6.5m%		6.0p#	1.5m	175S	Ø	TO72	EE		
55#	SFT601	150m	5.0	20	40	50	10m	25m	10n	0.0	15	20	35m	4m ^Δ		250k [†]	1.0m	175S	PL*	TO72	DN		
56#	SFT602	150m	5.0	20	40	50	10m	5.0m	10n ^Δ	0.0	15	20	35m	4m ^Δ			1.0m	175S	PL*	TO72	DN		
57	SFT60																						

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION

(2) TYPE No.

LINE No.	TYPE No.	MAX. ABS MAX RATINGS@25°C				PARAMETERS @25°C				DERATE		DWG Y200 s/a	#C E D A D D E									
		DISS (W)	V _p (V)	V _{DSS} (V)	BV _{GSS} (V)	I _d (A)	I _g (A)	I _{d(on)} @ V _{gs} =0 & V _{ds} =0 (A)	I _{gs} @ V _{gs} =0 & V _{ds} =0 (A)	TEST COND. V _{gs} (V)	COMMON SOURCE gfs (mhos)	r _(DS) on (Ω)	MAX Cis	IN FREE AIR TEMP W/C (*C)	STRUCTURE							
1	MPF107	200m	8.01	15	25	25	30m	20m	1.0n	0.0	15	4.0m	8.0m	75u%	5.0p#	2.0m	125J	∅	T072	DH		
2	MPF111	200m	10†	10Δ	20	20	-	10m	20m△	100n	0.0	10	500u	3.0m△	20u*	4.5p#*	2.0m	125J	∅	T092	DD	
3	MPF112	200m	10†	10Δ	25	25	-	10m	25m△	100n	0.0	10	1.0m	7.5m	-	8.0p#*	2.0m	125J	∅	T092	DD	
4	NF501	200m	8.01	15	15	15Δ	-	1.0m	30	%	50n	0.0	10	4.5 Δ	1	180 t	3.0 p#	2.0m	125J	#∅	T072	DH
5	NF522	200m	8.01	15	20	20Δ	-	1.0m	10m	0.0	15	500u	2.0m△	-	4.0p#*	2.0m	125J	#∅	T072	DH		
6	NF523	200m	8.01	15	20	20Δ	-	1.0m	2.0m	10n	0.0	15	400u	2.0m△	-	4.0p#*	2.0m	125J	#∅	T072	DH	
7	NF532	200m	8.01	15	20	20Δ	-	1.0m	10m	8.0n	0.0	15	500u	2.0m△	-	4.0p#*	2.0m	125J	#∅	T018	DB∅	
8	NF533	200m	8.01	15	20	20Δ	-	1.0m	2.0m	18.0n	0.0	15	400u	1.2m△	-	4.0p#*	2.0m	125J	#∅	T018	DB∅	
9	NPC108	200m	6.0	15Δ	25Δ	25	-	10m	25m△	1.0n	0.0	15	4.0m	8.0m	100	5.0p#	2.0m	125S	PE10	R110	DB	
10	NPC108A	200m	5.0	15Δ	25Δ	25	-	10m	25m△	2.0n	0.0	15	4.0m	8.0m	100	5.0p#	2.0m	125S	PE10	R110	DB	
11#	SES3819	200m	7.5	15	25	25	-	10m	20m	2.0n	0.0	15	2.0	6.5	50m	8.0p*	2.0	-	∅	T098	DA	
12#	S1231N	200m	70%	5.0	-	-	-	150u	1.0n	0.0	10	140u	500u	-	6.0p*	1.1	200J	PL	T018	DB∅		
13#	S1232N	200m	1.0	5.0	-	-	-	300u	1.0n	0.0	10	280u	800u	-	6.0p*	1.1	200J	PL	T018	DB∅		
14#	S1233N	200m	1.4	5.0	-	-	-	600u	1.0n	0.0	10	400u	1.0m	-	6.0p*	1.1	200J	PL	T018	DB∅		
15#	S1234N	200m	2.0	5.0	-	-	-	1.5m	1.0n	0.0	10	1650u	1.5m	-	6.0p*	1.1	200J	PL	T018	DB∅		
16#	S1235N	200m	3.5%	5.0	-	-	-	3.0m	1.0n	0.0	10	1900u	2.0m	-	6.0p*	1.1	200J	PL	T018	DB∅		
17#	S1236N	200m	5.0	5.0	-	-	-	6.0m	1.0n	0.0	10	1.3m	3.0m	-	6.0p*	1.1	200J	PL	T018	DB∅		
18#	U183	200m	8.0	15	-	-	-	10m	20m	2.0n	0.0	15	1.6m	8.0%	50u%	8.0p#	2.0m	150S	#∅	T072	DH	
19	3NT7751	225m	2.0Δ	10†	30	35	50m	5.0n	200p	-	-	-	-	-	-	200 t	5.0p#	1.8m	200S	*∅	T072	DR
20	3NT1761	225m	2.5Δ	10*	25	30	50m	10n	200p	-	-	-	-	-	-	300 t	5.0p#	1.8m	200S	*∅	T072	DR
21	3NT1771	225m	3.5Δ	10*	20	20	50m	25p	200p	-	-	-	-	-	-	500 t	7.0p#	1.8m	200S	*∅	T072	DR
22	M116	225m	5.0Δ	*	30	30	50m	100u	100p	-	-	-	-	-	-	100 t	7.0p#	2.2m	125J	*∅	T072	DM
23	M117	225m	5.0Δ	*	30	30	50m	100u	1.0p	-	-	-	-	-	-	100 t	7.0p#	2.2m	125J	*∅	T022	DR
24	MEM200†	225m	1.6Δ	10*	35	35	50m	100u	-	-	-	-	-	-	-	200 t	5.0p#	1.5m	200S	*∅	T022	DR
25	MEM201†	225m	2.5Δ	10†	30	30	50m	100u	-	-	-	-	-	-	-	300 t	5.0p#	1.5m	200S	*∅	T022	DR
26	MEM202†	225m	3.5Δ	10†	20	20	50m	100u	-	-	-	-	-	-	-	500 t	7.0p#	1.5m	200S	*∅	T022	DR
27	MEM557C	225m	4.0†	15Δ	20	5.0	-	30m	100p	100p	15	6.0m	8.0m△	-	150 t	4.0p#	2.2m	125J	*∅	T072	DW	
28	MEM562†	225m	4.0	4.0*	-	-	-	10n	10p	2.0p	10	60m	-	-	-	150 t	5.0p#	2.2m	125J	*∅	T072	DR
29	MEM563†	225m	4.0	4.0*	-	-	-	10n	10p	2.0p	10	2.0m	-	-	-	150 t	8.0p#	2.2m	125J	*∅	T072	DX
30	MEM564C	225m	4.0†	20Δ	20	15	-	30m	10n	4.0	15	8.0m	12m△	-	-	-	-	-	-	-	-	
31	MMT3823	228m	8.01	15Δ	30	30	10m	20m△	1.0n	0.0	15	3.0m	8.0m	25u*	4.0p#*	2.0m	135J	*∅	T043	DD		
32#	35K37	230m	3.01	10†	20†	8.0	25m	10m*	1.0n	5.0p	10	7.0m	9.5m△	400u	4.0p#*	2.2m	150S	*∅	T072	DX		
33	N23921†	250m	3.0†	-	10	50	50	10m	250p	1.0n	0.0	10	1.5	7.5	35u	1.8p	1.7m	200S	∅	L21		
34	N23922†	250m	3.0†	10	50	50	1.3m	100p	400p	0.0	10	300u	900u	10u	1.8p	1.7m	200S	∅	L21			
35	N23934†	250m	3.0†	10	50	50	1.3m	100p	400p	0.0	10	300u	900u	10u	1.8p	1.7m	200S	∅	L21			
36	N23935†	250m	3.0†	10	50	50	1.3m	100p	400p	0.0	10	300u	900u	10u	1.8p	1.7m	200S	∅	L21			
37	N23954†	250mΔ	4.5†	20Δ	50	50	50m	5.0m	10n	0.0	20	1.0m	3.0m	35u	4.0p#	2.9m	200S	∅	L61a			
38	N23954A†	250mΔ	4.5†	20Δ	50	50	50m	5.0m	10n	0.0	20	1.0m	3.0m	35u	4p#	2.9m	200S	∅	L61a			
39	N23955†	250mΔ	4.5†	20Δ	50	50	50m	5.0m	10n	0.0	20	1.0m	3.0m	35u	4.0p#	2.9m	200S	∅	L61a			
40	N23955A†	250mΔ	4.5†	20Δ	50	50	50m	5.0m	10n	0.0	20	1.0m	3.0m	35u	4.0p#	2.9m	200S	∅	L61a			
41	N23956†	250mΔ	4.5†	20Δ	50	50	50m	5.0m	10n	0.0	20	1.0m	3.0m	35u	4.0p#	2.9m	200S	∅	L61a			
42	N23957†	250mΔ	4.5†	20Δ	50	50	50m	5.0m	10n	0.0	20	1.0m	3.0m	35u	4.0p#	2.9m	200S	∅	L61a			
43	N23958†	250mΔ	4.5†	20Δ	50	50	50m	5.0m	10n	0.0	20	1.0m	3.0m	35u	4.0p#	2.9m	200S	∅	L61a			
44	N25045†	250m	4.5†	15	50	50	30m	8.0m	25p	0.0	15	1.5m	6.0m	25u	8.0p#	1.7m	200S	∅	L21			
45	N25046†	250m	4.5†	15	50	50	30m	8.0m	25p	0.0	15	1.5m	6.0m	25u	8.0p#	1.7m	200S	∅	L21			
46	N25047†	250m	4.5†	15	50	50	30m	8.0m	25p	0.0	15	1.5m	6.0m	25u	8.0p#	1.7m	200S	∅	L21			
47	N25196†	250m	4.0†	20Δ	50	50	50m	7.0m	25p	0.0	20	1.0m	4.0m	50u%	6.0p#	2.0m	200S	∅	L61			
48	N25197†	250m	4.0†	20Δ	50	50	50m	7.0m	25p	0.0	20	1.0m	4.0m	50u%	6.0p#	2.0m	200S	∅	L61			
49	N25198†	250m	4.0†	20Δ	50	50	50m	7.0m	25p	0.0	20	1.0m	4.0m	50u%	6.0p#	2.0m	200S	∅	L61			
50	N25199†	250m	4.0†	20Δ	50	50	50m	7.0m	25p	0.0	20	1.0m	4.0m	50u%	6.0p#	2.0m	200S	∅	L61			
51	N25452	250m†	4.5†	20Δ	50Δ	50Δ	50m	5.0m△	100p	0.0	20	1.0m	3.0m	3.0u	4.0p#	2.8m	200J	∅	L58			
52	N25453	250m†	4.5†	20Δ	50Δ	50Δ	50m	5.0m△	100p	0.0	20	1.0m	3.0m	3.0u	4.0p#	2.8m	200J	∅	L58			
53	N25454	250m†	4.5†	20Δ	50Δ	50Δ	50m	5.0m△	100p	0.0	20	1.0m	3.0m	3.0u	4.0p#	2.8m	200J	∅	L58			
54	N25515†	250m	4.0†	20	40	40	50m	7.5m	250p	0.0	20	1.0m	4.0m	10u%	2.5p#	2.0m	150S	∅	L61			
55	N25516†	250m	4.0†	20Δ	40	40	50m	7.5m	250p	0.0	20	1.0m	4.0m	10u%	2.5p#	2.0m	150S	∅	L61			
56	N25517†	250m	4.0†	20Δ	40	40	50m	7.5m	250p	0.0	20	1.0m	4.0m	10u%	2.5p#	2.0m	150S	∅	L61			
57	N25518†	250m	4.0†	20Δ	40	40	50m	7.5m	250p	0.0	20	1.0m	4.0m	10u%	2.5p#	2.0m	150S	∅	L61			
58	N25519†	250m	4.0†	20Δ	40	40	50m	7.5m	250p	0.0	20	1.0m	4.0m	10u%	2.5p#	2.0m	150S	∅	L61			
59	N25520†	250m	4.0†	20Δ	40	40	50m	7.5m	250p	0.0	20	1.0m	4.0m	10u%	2.5p#	2.0m	150S	∅	L6			

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	MAX. DISS @ 25°C (W)						ABS MAX RATINGS@25°C						MAX. Id(ON)@ Vgs=0& Vds>Vp &Vds=0 (A)	MAX. Igss@ Vgs>Vp &Vds=0 (A)	PARAMETERS @25°C		OPERATE		DWG #	C
		Vp (V)	BVdss (V)	BVgss (V)	Id (A)	Ig (A)	Vds (V)	Vgs (V)	Vds (V)	TEST COND	COMMON SOURCE (mhos)	r(DS) on	MAX. Cis (f)	IN FREE AIR TEMP W/C	STRUCTURE	s/a TO200 Ser.	Y200 D				
1	ZN3369	300m	6.5	20	40Δ	10m	2.5m	5.0n	0.0	30	60m	2.5m	30u	20p%	2.4m	150C	T018	DB			
2	ZN3370	300m	3.2	20	40Δ	10m	6.0m	5.0n	0.0	30	30m	2.5m	15u	20p%	2.4m	150C	T018	DB			
3	ZN3436	300m	9.8	20	50Δ	10m	15m	50n	0.0	20	2.5m	10m	35u	18p%	1.7m	200C	T018	DB			
4	ZN3437	300m	4.8	20	50Δ	10m	4.0m	50n	0.0	20	1.5m	6.0m	20u	18p%	1.7m	200C	T018	DB			
5	ZN3438	300m	2.3	20	50Δ	10m	1.0m	50n	0.0	20	80m	4.5m	5.0u	18p%	1.7m	200C	T018	DB			
6	ZN3452	300m	9.8	20	50Δ	10m	4.0m	10n	0.0	30	20m	1.2m	15u	6.0p%	1.7m	200C	T018	DB			
7	ZN3453	300m	4.8	20	50Δ	10m	1.0m	10n	0.0	30	15m	90m	5.0u	6.0p%	1.7m	200C	T072	DH			
8	ZN3454	300m	2.3	20	50Δ	10m	2.5m	10n	0.0	30	10m	6.0m	3.0u	6.0p%	1.7m	200C	T072	DH			
9	ZN3455	300m	10	20	50Δ	10m	4.0m	0.4n	0.0	30	40m	1.2m	15u	5.0p%	1.7m	200C	T072	DH			
10	ZN3456	300m	4.8	20	50Δ	10m	1.0m	0.4n	0.0	30	30m	90m	5.0u	5.0p%	1.7m	200C	T072	DH			
11	ZN3457	300m	2.3	20	50Δ	10m	2.5m	0.4n	0.0	30	15m	60m	3.0u	5.0p%	1.7m	200C	T072	DH			
12	ZN3458	300m	8.0†	20	50Δ	10m	15m	250p	0.0	20	2.5m	10m	18p	1.7m	200S	T018	DB				
13	ZN3459	300m	4.0†	20	50Δ	10m	4.0m	250p	0.0	20	1.5m	6.0m	18p	1.7m	200S	∅					
14	ZN3460	300m	2.0†	20	50Δ	10m	1.0m	250p	0.0	20	800u	4.5m	18p	1.7m	200S	∅					
15	ZN3631	300m	6.0†	10	20†	20m	10m	0.0	10	1.4m	2.8m	120u	7.5p%	2.0m	200S	* T018	DB				
16	ZN3821	300m	4.0†	15	50	50	10m	2.5m	100p	0.0	15	1.5m	4.5m†	10u*	6.0p#	2.0m	200S PE	T072	DH		
17	JAN2N3821	300m	4.0†	15	50	50	10m	2.5m	100p	0.0	15	1.5m	4.5m†	10u*	8.0p#	2.0m	200S	∅			
18	ZN3822	300m	6.0†	15	50	50	10m	10m	100p	0.0	15	3.0m	6.5†	20u*	6.0p#	2.0m	200S PE	T072	DH		
19	JAN2N3822	300m	6.0†	15	50	50	10m	10m	100p	0.0	15	3.0m	6.5†	20u*	8.0p#	2.0m	200S	∅			
20	ZN3823	300m	8.0	15	15Δ	30	30Δ	20m	50n	0.0	15	3.5m	6.5m	200u	6.0p#	2.0m	200S	T072	DH		
21	JAN2N3823	300m	8.0†	15	30	30	10m	20m	500p	0.0	15	3.5m	6.5†	35u*	8.0p#	2.0m	200S	T072	DH		
22	ZN3824	300m	Δ	Δ	50	50Δ	10m	10m	100p	1	20	1.6m	2.4m	35u	6.0p#	2.0m	200S	∅			
23	ZN3966†	300m	Δ	30	30Δ	10m	2.0m	100p	1	20	1.6m	2.4m	35u	6.0p#	1.7m	200S	T072	DH			
24	ZN3967	300m	5.0†	20Δ	30	30	10m	10m	0.0	20	1.6m	2.4m	35u	5.0p#	1.7m	200S	T072	DH			
25	ZN3967A	300m	5.0†	20Δ	30	30	10m	10m	0.0	20	1.6m	2.4m	35u	5.0p#	1.7m	200S	T072	DH			
26	ZN3968	300m	3.0†	20Δ	30	30	10m	5.0m	10n	0.0	20	1.4m	2.0m	15u	5.0p#	1.7m	200S	T072	DH		
27	ZN3968A	300m	3.0†	20Δ	30	30	10m	5.0m	10n	0.0	20	1.4m	2.0m	15u	5.0p#	1.7m	200S	T072	DH		
28	ZN3969	300m	1.7†	20Δ	30	30	10m	2.0m	10n	0.0	20	95m	1.4m	5.0u	5.0p#	1.7m	200S	T072	DH		
29	ZN3969A	300m	1.7†	20Δ	30	30	10m	2.0m	10n	0.0	20	95m	1.5m	5.0u	5.0p#	1.7m	200S	T072	DH		
30	ZN4117	300m	1.8	10Δ	40	40	50m	50m	0.09Δ	0.1n	10	70m	210m	3.0u	3.0p#	2.0m	175S	T072	DH		
31	ZN4117A	300m	1.8†	10Δ	40	40	50m	50m	90Δ	1.0p	10	70u	210u	3.0u	3.0p#	2.0m	175S	T072	DH		
32	ZN4118	300m	3.0	10Δ	40	40	50m	50m	24Δ	0.1n	10	80m	250m	5.0u	3.0p#	2.0m	175S	T072	DH		
33	ZN4118A	300m	3.0†	10Δ	40	40	50m	50m	240u	1.0p	10	80u	250u	5.0u	3.0p#	2.0m	175S	T072	DH		
34	ZN4119	300m	6.0	10Δ	40	40	50m	50m	60Δ	0.1n	10	100m	330m	10u	3.0p#	2.0m	175S	T072	DH		
35	ZN4119A	300m	6.0†	10Δ	40	40	50m	50m	600n	1.0p	10	100u	330u	10u	3.0p#	2.0m	175S	T072	DH		
36	ZN4119B	300m	8.0†	20Δ	50	50	10m	11m	1.0n	0.0	20	3.5m	7.0m	35u	1.7m	200S	∅ T018	DB			
37	ZN4220	300m	4.0†	15Δ	30	30	15m	10m	3.0m	100p	0.0	15	1.0m	4.0m	10u	6.0p#	2.0m	200S	∅ T072	DJ	
38	ZN4220A	300m	4.0†	15Δ	30	30	15m	10m	3.0m	100p	0.0	15	1.0m	4.0m	10u	6.0p#	2.0m	200S	∅ T072	DJ	
39	ZN4221	300m	6.0†	15Δ	30	30	15m	10m	6.0m	100p	0.0	15	2.0m	5.0m	20u	6.0p#	2.0m	200S	T072	DH	
40	ZN4221A	300m	6.0†	15Δ	30	30	15m	10m	6.0m	100p	0.0	15	2.0m	5.0m	20u	6.0p#	2.0m	200S	∅ T072	DJ	
41	ZN4222	300m	8.0†	15Δ	30	30	15m	10m	15m	100p	0.0	15	2.5m	6.0m	40u	6.0p#	2.0m	200S	T072	DH	
42	ZN4222A	300m	8.0†	15Δ	30	30	15m	10m	15m	100p	0.0	15	2.5m	6.0m	40u	6.0p#	2.0m	200S	∅ T072	DJ	
43	ZN4223	300m	8.0†	15Δ	30	30	20m	10m	18% 25n	0.0	15	3.0m	7.0m	1.0	2.0m	175J	∅ T072	DJ			
44	ZN4224	300m	8.0†	15Δ	30	30	20m	10m	20% 50n	0.0	15	1.0m	1.0n	50u	6.0p#	2.0m	175J	R97b			
45	ZN4302	300m	4.0	20	30Δ	30Δ	10m	5.0m	1.0n	0.0	20	1.0m	1.0n	50u	25p#	2.5m	125J	R97b			
46	ZN4303	300m	6.0	20	30Δ	30Δ	10m	10m	1.0n	0.0	20	2.0m	5.0m	50u	6.0p#	2.5m	125J	R97b			
47	ZN4304	300m	10	20	30Δ	30Δ	10m	15m	1.0n	0.0	20	1.0m	1.0n	50u	6.0p#	2.5m	125J	R97b			
48	ZN4338	300m	1.0†	15Δ	50Δ	50	50m	60m	0.0	15	60m	1.8m	50u	2.5kt	7.0p#	10m	200S	T018	DB		
49	ZN4339	300m	1.8†	15Δ	50Δ	50	50m	1.5m	10n	0.0	15	80m	2.4m	15u	1.7k†	7.0p#	2.0m	200S	T018	DB	
50	ZN4340	300m	3.0†	15Δ	50Δ	50	50m	3.6m	10n	0.0	15	1.3m	3.0m	30u	1.5kt	7.0p#	2.0m	200S	T018	DB	
51	ZN4341	300m	6.0†	15Δ	50Δ	50	50m	8.0m	10n	0.0	15	2.0m	4.0m	60u	80kt	7.0p#	2.0m	200S	∅ T072	DR	
52	ZN4351†	300m	5.0Δ	10*	30	30	30m	10m	10n	0.0	15	4.5m	7.5m	50u	4.0p#	1.7m	200S	∅ T072	DR		
53	ZN4416	300m	8.0†	15Δ	30	30	10m	15m	100p	0.0	15	4.5m	7.5m	60u	4.0p#	1.7m	200S	∅ T072	DR		
54	ZN4416A	300m	6.0†	15Δ	35	35	10m	15m	100p	0.0	15	4.5m	7.5m	60u	4.0p#	1.7m	200S	∅ T072	DR		
55	JAN2N4416A	300m	6.0†	15	35	35	10m	15m	15% 25n	0.0	15	4.5m	7.5m	50u	4.0p#	1.7m	200S	∅ T072	DR		
56	ZN4867	300m	2.0†	20Δ	40	40	50m	50m	1.2m	25n	0.0	20	70m	2.0m	1.5u	25p#	1.7m	175S	∅ T072	DH	
57	ZN4867A	300m	2.0†	20	40	40	50m	50m	1.2m	25n	0.0	20	70m	2.0m	1.5u	25p#	1.7m	175S	∅ T072	DH	
58	ZN4868	300m	3.0†	20Δ	40	40	50m	50m	3.0m	25n	0.0	20	1.0m	3.0m	4.0u	25p#	1.7m	175S	∅ T072	DH	
59	ZN4868A	300m	3.0†	20	40	40	50m	50m	3.0m	25n	0.0	20	1.0m	3.0m	4.0u	25p#	1.7m	175S	∅ T072	DH	
60	ZN4869	300m	5.0†	20Δ	40	40	50m	50m	7.5m	25n	0.0	20	1.3m	4.0m	10u	25p#	1.7m	175S	∅ T072	DH	
61	ZN4869A	300m	5.0†</td																		

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION

(2) TYPE No.

LINE No.	Z	TYPE No.	MAX. DISS @ 25°C	MAX. V _{dss} @25°C	MAX. BV _{gs}	ABS MAX RATINGS @ 25°C						MAX. Id(ON) @ V _{ds} = 0	MAX. V _{gs} > V _p V _{ds} > V _p & V _{ds} > 0	PARAMETERS @ 25°C						DWG #	C S/a TO200	
						V _p	V _{dss}	V _{gs}	I _d	I _g	V _{gs} = 0	V _{gs} > V _p	V _{ds}	g _f s (mhos)	Y _{os}	r(DS) (Ω)	MAX. C _{is}	IN FREE AIR W/C	MAX. STRUC- TURE			
1		CM603	300m	1.5	15Δ	5.0Δ	15Δ	100m	100m	100m	100mΔ	3.0n	0.0	10	20m [†]	60m	30Δ	6.5pt	2.3m	200J	E#	T018 DD
2		CM640	300m	2.2	15Δ	20Δ	20Δ	100m	100m	100m	500μ% 400p	0.0	10	5.0m [†]	10m [†]	10m [†]	250%	5.0pt	2.3m	200J	E#	T018 DD
3		CM641	300m	2.2	15Δ	20Δ	20Δ	100m	100m	100m	3.0m% 400p	0.0	10	10m [†]	10m [†]	10m [†]	100%	5.0pt	2.3m	200J	E#	T018 DD
4		CM642	300m	3.0	15Δ	20Δ	20Δ	100m	100m	100m	10m% 400p	0.0	10	20m [†]	10m [†]	10m [†]	50%	5.0pt	2.3m	200J	E#	T018 DD
5		CM643	300m	5.0	15Δ	20Δ	20Δ	100m	100m	100m	50m% 400p	0.0	10	30m [†]	10m [†]	10m [†]	35%	5.0pt	2.3m	200J	E#	T018 DD
6		CM644	300m	3.0	15Δ	30Δ	30Δ	100m	100m	100m	10m% 400p	0.0	10	20m [†]	10m [†]	10m [†]	50%	5.0pt	2.3m	200J	E#	T018 DD
7		CM645	300m	5.0	15Δ	30Δ	30Δ	100m	100m	100m	15m% 400p	0.0	10	20m [†]	10m [†]	10m [†]	40%	5.0pt	2.3m	200J	E#	T018 DD
8		CM646	300m	7.0	15Δ	30Δ	30Δ	100m	100m	100m	30m% 400p	0.0	10	30m [†]	10m [†]	10m [†]	30%	5.0pt	2.3m	200J	E#	T018 DD
9		CM647	300m	10	15Δ	30Δ	30Δ	100m	100m	100m	50m% 400p	0.0	10	30m [†]	10m [†]	10m [†]	25%	5.0pt	2.3m	200J	E#	T018 DD
10		FE4302	300m	4.0 [†]	20	30	30	10m	5.0m	1.0n	0.0	20	1.0m	50u%	5.0pt	2.5m	145J	DPL	T018 DB			
11		FE4303	300m	6.0 [†]	20	30	30	10m	10m	1.0n	0.0	20	2.0m	50u%	6.0pt	2.5m	145J	DPL	T016 DB			
12		FE4304	300m	1.0 [†]	20	30	30	10m	15m	1.0n	0.0	20	1.0m	80u%	6.0pt	2.5m	145J	DPL	T016 DB			
13		FE409*	300m	5.0	25Δ	30Δ	30Δ	50m	35m% 1.0n	5.0n	15	8.0m	25m		6.5pt	1.7m	200J	E#	R135a DB			
14		FF411*	300m	5.0	25Δ	30Δ	30Δ	50m	35m% 1.0n	5.0n	15	8.0m	25m		6.5pt	1.7m	200J	E#	R135b DB			
15		FF600*	300m	5.0	10Δ	15Δ	15Δ	50m	25m% 3.0n	10n	10	8.0m			3.5pt	1.7m	200J	E#	R150 DH			
16		FF677*	300m	5.0	10Δ	15Δ	15Δ	50m	25m% 3.0n	10n	10	8.0m			3.5pt	1.7m	200J	E#	R150a DH			
17		FT0654A	300m	8.0 [†]	20	50	50	50m	40mΔ	10n	0.0	20	4.5m%	9m%	52u	15kt	2.0m	175J	DPL	T018 DB		
18		FT0654B	300m	8.0 [†]	20	50	50	50m	40mΔ	10n	0.0	20	4.5m%	9m%	52u	15kt	2.0m	175J	DPL	T018 DB		
19		FT0654C	300m	4.0 [†]	20	50	50	50m	12mΔ	10n	0.0	20	3.5m%	8m%	22k [†]	20p#	2.0m	175J	DPL	T018 DB		
20		FT0654D	300m	4.0 [†]	20	50	50	50m	12mΔ	10n	0.0	20	3.5m%	8m%	22k [†]	20p#	2.0m	175J	DPL	T018 DB		
21		FT0654E	300m	2.5 [†]	20	50	50	50m	4.0mΔ	10n	0.0	20	2.0m%	5m%	24u	30kt	2.0m	175J	DPL	T018 DB		
22	▼	HPEP2005S	300m	20	30	10m	10m	50p											175J		T072 DJ	
23		JH2101	300m	5.0 [†]	20	50	50	10m	250p	0.0	20	2.0m	7.0m	10u	20p#	1.7m	200S	#*	L58			
24		JH2102	300m	5.0 [†]	20	50	50	10m	250p	0.0	20	2.0m	7.0m	10u	20p#	1.7m	200S	#*	L58			
25		JH2103	300m	5.0 [†]	20	50	50	10m	250p	0.0	20	2.0m	7.0m	10u	20p#	1.7m	200S	#*	L58			
26		JH2104	300m	5.0 [†]	20	50	50	10m	250p	0.0	20	2.0m	7.0m	10u	20p#	1.7m	200S	#*	L58			
27		JH2105	300m	5.0 [†]	20	50	50	10m	250p	0.0	20	2.0m	7.0m	10u	20p#	1.7m	200S	#*	L58			
28		JH2106	300m	5.0 [†]	20	50	50	10m	250p	0.0	20	2.0m	7.0m	10u	20p#	1.7m	200S	#*	L58			
29		M100	300m	5.0	10	20	50														T018 DA	
30		M101	300m	8.0	10	20	50														T018 DA	
31		MD1F3458	300m	8.0 [†]	20	50	50Δ	10m	15m	5.0n	0.0	20	2.5m	10m	18p#	150A					T0122 GP	
32		MD1F3459	300m	4.0 [†]	20	50	50Δ	10m	4.0m	5.0n	0.0	20	1.5m	6.0m	20u	18p#	150A				T0122 GP	
33		MD1F3460	300m	2.0 [†]	20	50	50Δ	10m	5.0n	0.0	20	800u	4.5m	50u		150A					T0122 GP	
34		MD1F3823	300m	8.0	15	30Δ	30Δ	10m	20n%	5.0n	0.0	15	3.2m%	3.2m%	35u*	6.0p#	150A				T0122 GP	
35		MD1F4416	300m	6.0 [†]	15	30Δ	30Δ	10m	15m	500u	0.0	15	4.5m	7.5m	50u	4.0p#	150A				T0122 GP	
36		MFE2093	300m	2.5 [†]	15	50	50	3.0m	70m	10n	0.0	15	25m	50m	1.5u	2.5k	2.0m	175				
37		MFE2094	300m	4.5 [†]	15	50	50	3.0m	1.4m	100p	0.0	15	350u	700u	30u	1.6k	5.0p	2.0m	175		T072 DJ	
38		MFE2095	300m	5.5 [†]	15	50	50	3.0m	1.4m	100p	0.0	15	400u	800u	10u	1.3k	6.0p	2.0m	175		T072 DJ	
39		MFE3006	300m	3.0 [†]	15	15s	25Δ	35	30m	18m	1.0n	0.0	15	8.0m%	18m%	6.0p#	1.7m	175J	*Ø	T072 DX		
40		MFE3007	300m	3.0 [†]	15s	25	35	30m	20m	1.0n	0.0	15	10m	18m%	5.5p#	1.7m	175J	*Ø	T072 DX			
41		MFE3008	300m	3.0 [†]	15s	25	35	30m	20m	1.0n	0.0	15	8.0m	18m%	6.0p#	1.7m	175J	*Ø	T072 DX			
42		MMF1V	300m	8.0 [†]	15	30	30	20m	10m	0.5n	0.0	15	1.5m	6.5m	50u	4.0p#	2.4m	150J	#Ø	T072 DH		
43		MMF2V	300m	8.0 [†]	15	30	30	20m	10m	0.5n	0.0	15	1.5m	6.5m	50u	4.0p#	2.4m	150J	#Ø	T072 DH		
44		MMF3V	300m	8.0 [†]	15	30	30	20m	10m	0.5n	0.0	15	1.5m	6.5m	50u	4.0p#	2.4m	150J	#Ø	T072 DH		
45		MMF4V	300m	8.0 [†]	15	30	30	20m	10m	0.5n	0.0	15	1.5m	6.5m	50u	4.0p#	2.4m	150J	#Ø	T072 DH		
46		MMF5V	300m	8.0 [†]	15Δ	30	30	20m	10m	0.5n	0.0	15	1.5m	6.5m	50u	4.0p#	2.4m	150J	#Ø	T072 DH		
47		MMF6V	300m	8.0 [†]	15Δ	30	30	20m	10m	0.5n	0.0	15	1.5m	6.5m	50u	4.0p#	2.4m	150J	#Ø	T072 DH		
48		NF500	300m	8.0 [†]	15	25	25Δ	1.0m	30%	10n	0.0	15	4.5Δ	1.0m	180t	2.5*	2.4m	150J	#Ø	T072 DH		
49		NF506	300m	5.0 [†]	25	50	50	10m	15m	1.0n	0.0	15	2.5m	7.0m	50u%	4.0p#	2.4m	200	PE	T018 DB		
50		NF520	300m	8.0 [†]	15	30	30Δ	1.0m	10m	1.0n	0.0	15	500u	2.0mΔ	1.2mΔ	4.0p#	2.4m	150J	#Ø	T072 DH		
51		NF521	300m	8.0 [†]	15	30	30Δ	1.0m	2.0m	1.0n	0.0	15	400u	1.2mΔ		4.0p#	2.4m	150J	#Ø	T018 DB		
52		NF530	300m	8.0 [†]	15	30	30Δ	1.0m	8.0n	0.0	15	500u	2.0mΔ		4.0p#	2.4m	150J	#Ø	T018 DB			
53		NF531	300m	8.0 [†]	15	30	30Δ	1.0m	2.0m	8.0n	0.0	15	400u	1.2mΔ		4.0p#	2.4m	150J	#Ø	T018 DB		
54		NF4302	300m	4.0 [†]	20	30	30	10m	5.0m	1.0n	0.0	20	700u%		50u%	6.0p#	3.0m	125J		T018 DB		
55		NF4303	300m	6.0	20	30	30	10m	10m	1.0n	0.0	20	1.4m%	50u%	6.0p#	3.0m	125J		T018 DB			
56		NF4304	300m	10	20	30	30	10m	15m	1.0n	0.0	20	2.0m%	50u%	6.0p#	3.0m	125J		T018 DB			

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	DEVICE	MAX. DISS @ 25°C (W)				ABS MAX RATINGS@25°C				MAX. ID(ON)@ VGS=0& VDS>VP & VDSS=0				TEST COND				PARAMETERS @25°C				DERate		STRUC- TURE	DWG #	L C s/a
			Vp (V)	BVDSS (V)	BVGSS (V)	Id (A)	Ig (A)	Vgs>Vp & Vdss=0	Vds>Vp & Vdss=0	gfs (mhos)	Yos (mhos)	(DS)	Cis on (mhos)	MAX. FREE AIR TEMP W/C [°C]	IN MAX TEMP W/C [°C]	MAX. TEMP W/C [°C]	IN MAX TEMP W/C [°C]	MAX. TEMP W/C [°C]	IN MAX TEMP W/C [°C]	MAX. TEMP W/C [°C]	IN MAX TEMP W/C [°C]	MAX. TEMP W/C [°C]					
1	UC703	300m	6.0	20	40	50m	10m	500u	0.0	20	500u	5.0m	20k	6.0p	1.7m	200	1.7m	200	1.7m	200	1.7m	200	T072	DH			
2	UC705	300m	8.0	20	40	50m	10m	1.0n	0.0	20	2.0m	2.0m	12p	1.7m	200	1.7m	200	1.7m	200	1.7m	200	T072	DH				
3	UC714	300m	8.0	20	30	50m	20m	100p	0.0	20	2.0m	6.5m	8.0p	1.7m	200	1.7m	200	1.7m	200	1.7m	200	T072	DH				
4	UC734	300m	8.0	15	30 Δ	30	10m	20m Δ	5.0n	0.0	15	3.5m	6.5m	4.0p	200J	200J	200J	200J	200J	200J	200J	200J	T072	DH			
5	UC734E	300m	8.0	15	30 Δ	30	10m	20m Δ	5.0n	0.0	15	3.5m	6.5m	4.0p	200J	200J	200J	200J	200J	200J	200J	200J	T0106	DB			
6*	UT100	300m	6.0	10	25	10m	30m	100p	10 Δ	10	6.0m	10m	200u	5.0p	1.7m	150A	150A	150A	150A	150A	150A	150A	150A	U77	EE		
7*	UT101	300m	6.0	10	25	10m	30m	100p	10 Δ	10	6.0m	10m	200u	5.0p	1.7m	150A	150A	150A	150A	150A	150A	150A	150A	U77	EE		
8	2N5457	310m	6.0	15	25	10m	5m Δ	1.0n	0.0	15	2.0m	6.0m	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD		
9	2N5458	310m	7.0	15	25	10m	10m	1.0n	0.0	15	3.0m	6.0m	5.0u	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD		
10	2N5459	310m	8.0 Δ	15	25	10m	20m Δ	1.0n	0.0	15	2.0m	6.0m	5.0u	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD		
11	2N5484	310m	3.0 Δ	25	10m	10m	1.0n	0.0	15	3.0m	6.0m	5.0u	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD			
12	2N5485	310m	4.0 Δ	25	10m	20m	1.0n	0.0	15	3.5m	7.0m	6.0u	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD			
13	2N5486	310m	7.5 Δ	15	25	10m	20m	1.0n	0.0	15	4.0m	8.0m	7.5u	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD		
14	2N5555	310m	1.0 Δ	0.0	25	25	40m	15m	1.0n				15k%	5.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD	
15	2N5638 Δ	310m			30 Δ			50m Δ	1.0n				30 %	10p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD	
16	2N5639 Δ	310m			30 Δ			25m Δ	1.0n				60 %	10p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD	
17	2N5640 Δ	310m			30 Δ			2.0m Δ	1.0n				100 %	10p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD	
18	2N5653 Δ	310m			30 Δ			40m Δ	1.0n				50 %	10p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD	
19	2N5654 Δ	310m			30 Δ				15m Δ	1.0n				100 %	10p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD
20	2N5668	310m	4.0 Δ	15	25	10m	5m Δ	2.0n	0.0	15	1.5m	6.5m	20u	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD	
21	2N5669	310m	6.0	15	25	10m	10m	2.0n	0.0	15	2.0m	6.5m	50u	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD	
22	2N5670	310m	8.0 Δ	15	25	10m	20m Δ	2.0n	0.0	15	3.0m	7.5m	75u	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	150S	7.0p	2.8m	T092	DD	
23	FE5457	310m	6.0	15	25	25	10m	5.0m Δ	1.0n	0.0	15	1.0m	5.0m Δ	50u	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	T0106	DB
24	FE5458	310m	7.0	15	25	25	10m	9.0m Δ	1.0n	0.0	15	1.5m	5.5m Δ	50u	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	T0106	DB
25	FE5459	310m	8.0 Δ	15	25	25	10m	16m Δ	1.0n	0.0	15	2.0m	6.0m Δ	50u	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	T0106	DB
26	FE5484	310m	3.0 Δ	15	25	10m	10m	1.0n	0.0	15	3.0m	6.0m	50u	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	T0106	DB	
27	FE5485	310m	4.0 Δ	15	25	10m	20m	1.0n	0.0	15	3.5m	7.0m	60u	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	T0106	DB	
28	FE5486	310m	7.5 Δ	15	25	10m	20m	1.0n	0.0	15	4.0m	8.0m	7.5u	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	135J	7.0p	2.8m	T0106	DB	
29*	HEPF0021	310m			25	30m							3.5k														150J
30	HSC4391 Δ	310m	10	20	40	40	50m	150m Δ	100p																	3.1m	125J
31	HSC4392 Δ	310m	5.0	20	40	40	50m	75m Δ	100p																	3.1m	125J
32	HSC4393 Δ	310m	3.0	20	40	40	50m	30m Δ	100p																	3.1m	125J
33	HSC4416	310m	6.0	15	30	30	10m	15m	100p	0.0	15	4.5m	7.5m Δ	50u	4.0p	3.1m	125J	4.0p	3.1m	125J	4.0p	3.1m	125J	4.0p	3.1m	T0106	DB
34	HSC4476A	310m	6.0	15	35	35	10m	15m	100p	0.0	15	4.5m	7.5m Δ	50u	4.0p	3.1m	125J	4.0p	3.1m	125J	4.0p	3.1m	125J	4.0p	3.1m	T0106	DB
35	HSC5163	310m	8.0	15	25	25	50m	10m	100p	0.0	15	2.0m	9.0m	200u	500	3.1m	125J	500	3.1m	125J	500	3.1m	125J	500	3.1m	T0106	DB
36	HSC5167	310m	6.0	15	25	25	50m	10m	100p	0.0	15	1.0m	5.0m	50u	7.0p	3.1m	125J	50u	3.1m	125J	50u	3.1m	125J	50u	3.1m	T0106	DB
37	HSC5457A	310m	6.0	15	50	50	50m	10m	100p	0.0	15	1.0m	5.0m	50u	7.0p	3.1m	125J	50u	3.1m	125J	50u	3.1m	125J	50u	3.1m	T0106	DB
38	HSC5458	310m	7.0	15	25	25	50m	10m	100p	0.0	15	1.5m	5.5m	50u	7.0p	3.1m	125J	50u	3.1m	125J	50u	3.1m	125J	50u	3.1m	T0106	DB
39	HSC5458A	310m	7.0	15	50	50	50m	10m	100p	0.0	15	1.5m	5.5m	50u	7.0p	3.1m	125J	50u	3.1m	125J	50u	3.1m	125J	50u	3.1m	T0106	DB
40	HSC5459	310m	8.0	15	25	25	50m	10m	100p	0.0	15	1.5m	5.5m	50u	7.0p	3.1m	125J	50u	3.1m	125J	50u	3.1m	125J	50u	3.1m	T0106	DB
41	HSC5459A	310m	8.0	15	50	50	50m	10m	100p	0.0	15	1.5m	5.5m	50u	7.0p	3.1m	125J	50u	3.1m	125J	50u	3.1m	125J	50u	3.1m	T0106	DB
42	HSC5484	310m	3.0	20	25	10m	5m Δ	100p	0.0	15	2.0m	6.0m	50u	7.0p	3.1m	125J	50u	3.1m	125J	50u	3.1m	125J	50u	3.1m	T0106	DB	
43	HSC5486	310m	4.0	20	25	10m	5m Δ	100p	0.0	15	3.0m	6.0m	50u	7.0p	3.1m	125J	50u	3.1m	125J	50u	3.1m	125J	50u	3.1m	T0106	DB	
44	HSC5486A	310m	4.0	20	25	10m	5m Δ	100p	0.0	15	3.0m	6.0m	50u	7.0p	3.1m												

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	2 TYPE No.	1 MAX. DEVICE DISS @25°C	MAX. V _d @25°C	MAX. BV _{ds}	ABS MAX. RATING@25°C	MAX. Id(ON)@ V _d =0	MAX. I _g	TEST COND.	PARAMETERS @25°C			DE RATE	STRUCTURE	DWG #	LC S/a TO200 Ser.				
									V _{gs} =0 & V _{ds} >V _p	V _{gs} >V _p & V _{ds} =0	C _{iss} (mhos)	Y _{os}	I _{DSS}	C _{is}	IN FREE AIR W/C	MAX TEMP			
1#	BF245	360m	8.0 [†]	15	30	30		10m	25m	5.0n	0.0	15	3.0 % 8.5 %		4.0p*	2.9m	150S PE		
2#	BF246	360m	8.0 [†]	15	25			10m	300m	5.0n	0.0	15	8.0 % 23 Δ		12p*	2.9m	150S PE		
3#	BF247	360m	8.0 [†]	15	25			10m	300m	5.0n	0.0	15	8.0 % 23 Δ		12p*	2.9m	150S PE		
4	FE3819	360m	8.0 [†]	15	25	25		10m	20m	2.0n	0.0	15	2.0m 6.5m	50u%	8.0p*	2.8m	150J DPL		
5	FE5245	360m	6.0 [†]	15	30			50m	15m	1.0n	0.0	15	4.5m 7.5m	50u%	4.5p*	2.8m	150J DPL		
6	FE5246	360m	4.0 [†]	15	30			50m	7.0m	1.0n	0.0	15	3.0m 6.0m	50u%	4.5p*	2.8m	150J DPL		
7	FE5247	360m	8.0 [†]	15	30			50m	24m	1.0n	0.0	15	4.5m 8.0m	70u%	4.5p*	2.8m	150J DPL		
8	LDF603	360m	8.0 [†]	15 ^Δ	20	20	30m	10m	8.0m	500p	0.0	15	1.0m 4.0m	150u%	5.0p*	2.9m	150J		
9	LDF604	360m	8.0 [†]	15 ^Δ	20	20	30m	10m	12m	500p	0.0	15	2.5m 5.5m	150u%	5.0p*	2.9m	150J		
10	LDF605	360m	8.0 [†]	15 ^Δ	20	20	30m	10m	20m	500p	0.0	15	3.0m 7.0m	150u%	5.0p*	2.9m	150J		
11	LDF6911	360m	10 [†]	20 ^Δ	30	30		50m	50n	0.0	20			0.3k	16p	2.9m	150J		
12	LDF6921	360m	5.0 [†]	20 ^Δ	30	30		50m	50n	0.0	20			0.6k	16p	2.9m	150J		
13#	NKT80211	360m	50	50	10			10m	15m	TON	0.0	5.0	20m	70m	40k	23p	1.8m	200	
14#	NKT80212	360m	70	50	10			10m	30m	10n	0.0	5.0	40m	1.1m	40k	23p	1.8m	200	
15#	NKT80213	360m	10	50	10			10m	60m	10n	0.0	5.0	60m	1.5m	40k	23p	1.8m	200	
16#	NKT80214	360m	1.5	50	10			10m	15m	10n	0.0	5.0	90m	2.2m	40k	23p	1.8m	200	
17#	NKT80215	360m	2.5	50	10			10m	3.0m	10n	0.0	5.0	1.3m 3.0m		40k	23p	1.8m	200	
18#	NKT80216	360m	3.5	50	10			10m	6.0m	10n	0.0	5.0	1.8m 4.2m		40k	23p	1.8m	200	
19	NPC211N	360m	50% 5.0	5.0	8.0 ^Δ	200u	90u	150u	10n	0.0	5.0	200m	70m		25p		200J		
20	NPC212N	360m	70% 5.0	5.0	8.0 ^Δ	200u	180u	300u	10n	0.0	5.0	400m	1.1m		25p		200J		
21	NPC213N	360m	1.0% 5.0	5.0	8.0 ^Δ	200u	400u	600u	10n	0.0	5.0	600m	1.5		25p		200J		
22	NPC214N	360m	1.5% 5.0	5.0	8.0 ^Δ	200u	900u	1.5m	10n	0.0	5.0	900m	2.2		25p		200J		
23	NPC215N	360m	2.5% 5.0	5.0	8.0 ^Δ	200u	1.8m	3.0m	10n	0.0	5.0	1.3m 3.0m		25p		200J			
24	NPC216N	360m	3.5% 5.0	5.0	8.0 ^Δ	200u	4.0m	5.0m	10n	0.0	5.0	1.8m 4.2m		25p		200J			
25#	S1211N	360m	50% 5.0	5.0	8.0 ^Δ			150u	10n	0.0	5.0	200u	700u		23p*	2.0	200J PL		
26#	S1212N	360m	70% 5.0	5.0	8.0 ^Δ			300u	10n	0.0	5.0	400u	1.1m		23p*	2.0	200J PL		
27#	S1213N	360m	1.0% 5.0	5.0	8.0 ^Δ			600u	10n	0.0	5.0	800u	1.5m		23p*	2.0	200J PL		
28#	S1214N	360m	1.5% 5.0	5.0	8.0 ^Δ			1.5m	10n	0.0	5.0	900u	2.2m		23p*	2.0	200J PL		
29#	S1215N	360m	2.5% 5.0	5.0	8.0 ^Δ			3.0m	10n	0.0	5.0	1.3m 3.0m		23p*	2.0	200J PL			
30#	S1216N	360m	3.5% 5.0	5.0	8.0 ^Δ			6.0m	10n	0.0	5.0	1.8m 4.2m		23p*	2.0	200J PL			
31	TIS54	360m	8.0	15	30	30		10m	20m ^Δ	5.0n	0.0	15	3.5m 6.5m	50u	8.0p	2.9m	150J PE		
32	TIS41	360m	10	30	30			50m	50m ^Δ	4.0n	0.0	15	7.0m		18p# 70.1	2.4m 2.9m	200S PE		
33	TIS42	360m	25	25				10m	10m ^Δ	5.0n	0.0						150J PE		
34	TIS58	360m	5.0 [†]	15	25	25			8.0m	4.0m	0.0	15	1.3m 4.0m	20u%	6.0p*	2.8m	150S PET		
35	TIS59	360m	9.0 [†]	15	25	25			25m	4.0m	0.0	15	2.3m 5.0m	50u%	6.0p*	2.8m	150S PET		
36	TIS68 [▼]	360m	5.0 [†]	15	25 ^Δ			30m	8.0m	2.0n	0.0	15	1.0m 6.0m	35u%	8.0p*	35m	150S PE		
37	TIS69 [▼]	360m	5.0 [†]	15	25 ^Δ			30m	8.0m	2.0n	0.0	15	1.0m 6.0m	35u%	8.0p*	35m	150S PE		
38	TIS70 [▼]	360m	5.0 [†]	15	25 ^Δ			30m	8.0m	2.0n	0.0	15	1.0m 6.0m	35u%	8.0p*	35m	150S PE		
39	TIS73 [†]	360m	10 [†]	30 ^Δ	30 ^Δ			50m	50m ^Δ	2.0n	0.0				18p# 350u	150S PE			
40	TIS74 [†]	360m	6.0 [†]	15	30 ^Δ	30 ^Δ		50m	20m ^Δ	32.0n	0.0				0.4k%	35m	150S PE		
41	TIS151	360m	4.0 [†]	15	30 ^Δ	30 ^Δ		50m	8m ^Δ	32.0n	0.0				0.6k%	35m	150S PE		
42	TIS78	360m	10 [†]	30	300 ^Δ			10m	10m ^Δ	2.0n	0.0	30	750u	3.0m ^Δ	100u* 1.5k	18p# 2.0m	2.0m	150J P	
43	TIS79	360m	12 [†]	30	200 ^Δ			10m	10m ^Δ	2.0n	0.0	30	750u	3.0m ^Δ	100u* 2.0k%	18p# 2.0m	2.0m	150J DD	
44	UC588	360m	6.0 [†]	15	30			10m	15m ^Δ	1.0n	0.0	15	4.5m	7.5m	50u	4.0p*	2.8m	200	
45	ZN5902 [▼]	367m	4.5 [†]	10 ^Δ	40	40			500u	5.0p	0.0	10	70u	250u	5.0u%	3.0p*	3.0m	150S L54B	
46	ZN5903 [▼]	367m	4.5 [†]	10 ^Δ	40	40			500u	5.0p	0.0	10	70u	250u	5.0u%	3.0p*	3.0m	150S L54B	
47	ZN5904 [▼]	367m	4.5 [†]	10 ^Δ	40	40			500u	5.0p	0.0	10	70u	250u	5.0u%	3.0p*	3.0m	150S L54B	
48	ZN5905 [▼]	367m	4.5 [†]	10 ^Δ	40	40			500u	2.0p	0.0	10	70u	250u	5.0u%	3.0p*	3.0m	150S L54B	
49	ZN5906 [▼]	367m	4.5 [†]	10 ^Δ	40	40			500u	2.0p	0.0	10	70u	250u	5.0u%	3.0p*	3.0m	150S L54B	
50	ZN5907 [▼]	367m	4.5 [†]	10 ^Δ	40	40			500u	2.0p	0.0	10	70u	250u	5.0u%	3.0p*	3.0m	150S L54B	
51	ZN5908 [▼]	367m	4.5 [†]	10 ^Δ	40	40			500u	2.0p	0.0	10	70u	250u	5.0u%	3.0p*	3.0m	150S L54B	
52	ZN5909 [▼]	367m	4.5 [†]	10 ^Δ	40	40			500u	2.0p	0.0	10	70u	250u	5.0u%	3.0p*	3.0m	150S L54B	
53 [†]	ZN5911 [▼]	367m	5.0 [†]	10 ^Δ	25	25			100p	40m	100p	0.0	10	5.0m	10m	100u	5.0p*	3.0m	150S L54B
54 [†]	ZN5912 [▼]	367m	5.0 [†]	10 ^Δ	25	25			100p	40m	100p	0.0	10	5.0m	10m	100u	5.0p*	3.0m	150S L54B
55	40468A	375m	—	20	10	25m			50m	25m ^Δ	1.0n	0.0	15	7.5m ^Δ		10p# 2.5m	2.5m	175J * DPE* TO72 DS	
56	40559A	375m	—	20	10	25m			50m	25m ^Δ	1.0n	0.0	12	6.0m ^Δ	9.0m ^Δ	5.5p# 2.5m	2.5m	175J * DPE* TO72 DS	
57	FT57	375m	—	20	10	25m			26m	0.0	0.0				2.7p# 2.5m	2.5m	175J * DPE* TO72 DS		
58	ZN3084	400m	10 [†]	15	30	15			50m	3.0m	1.0n	0.0	15	40m	2.0m	50u%	14p	2.3m	200C
59	ZN3085	400m	10 [†]	15	30	15			50m	3.0m	1.0n	0.0	15	40m	2.0m	50u%	14p	2.3m	200C
60	ZN3086	400m	10 [†]	15	40	15			50m	3.0m	1.0n	0.0	15	40m	2.0m	50u%	14p	2.3m	200C
61	ZN3087	400m	10 [†]	15	40	15			50m	3.0m	1.0n	0.0	15	40m	2.0m	50u%	14p	2.3m	200C
62	ZN3088	400m	5.0 [†]	15	15	10			50m	2.0m	1.0n	0.0	15	30m	2.0m	50u%	14p	2.3m	200C
63	ZN3089A	400m																	

7. SILICON FIELD EFFECT TRANSISTORS - N CHANNEL

IN ORDER OF (1) DISSIPATION
(2) TYPE No.

LINE No.	TYPE No.	MAX DISS @ 25°C (W)	MAX V _p @ 25°C (V)	MAX BVdss @ 25°C (V)	MAX BVgs @ 25°C (V)	MAX RATINGS @ 25°C		MAX Igss@ V _{gs} =0 & V _{ds} =0 (A)	TEST COND	PARAMETERS @ 25°C			DERATE	STRUCTURE	DWG #	LC S/a TO200 Ser.					
						MAX Id = 0 (A)	MAX Ig (A)			MAX V _{gs} > V _p & V _{ds} > V _{gs} (V)	MAX V _{gs} = 0 & V _{ds} = 0 (V)	MAX V _{ds} (mhos)	COMMON SOURCE	R(DS) on	MAX Cis	IN FREE AIR TEMP. W/C (°C)					
1	FM1108*	500m	6.0†	15	35	35Δ	100u	10n	100p	0.0	15	1.0m	6.0m	50u%	5.0p#	2.8m	200J	#2	L74		
2	FM1109*	500m	6.0†	15	35	35Δ	100u	10n	100p	0.0	15	1.0m	6.0m	50u%	5.0p#	2.8m	200J	#2	L74		
3	FM1110*	500m	10†	15	25	35Δ	100u	10n	1.0n	0.0	15	500u	6.0m		5.0p#	2.8m	200J	#2	L74		
4	FM1111*	500m	10†	15	25	35Δ	100u	10n	1.0n	0.0	15	500u	6.0m		5.0p#	2.8m	200J	#2	L74		
5	FM1200*	500m	2.0†	15	35	35Δ	100u	2.5m	200p	0.0	15	800u	4.5m	35u%	8.0p#	2.8m	200J	#2	L74		
6	FM1201*	500m	2.0†	15	35	35Δ	100u	2.5m	200p	0.0	15	800u	4.5m	35u%	8.0p#	2.8m	200J	#2	L74		
7	FM1202*	500m	2.0†	15	25	25Δ	100u	2.5m	200p	0.0	15	800u	4.5m	35u%	8.0p#	2.8m	200J	#2	L74		
8	FM1203*	500m	2.0†	15	35	35Δ	100u	2.5m	200p	0.0	15	800u	4.5m	35u%	8.0p#	2.8m	200J	#2	L74		
9	FM1204*	500m	2.0†	15	35	35Δ	100u	2.5m	200p	0.0	15	800u	4.5m	35u%	8.0p#	2.8m	200J	#2	L74		
10	FM1205*	500m	7.0†	15	35	35Δ	100u	20n	200p	0.0	15	3.0m	10m	50u%	8.0p#	2.8m	200J	#2	L74		
11	FM1206*	500m	7.0†	15	35	35Δ	100u	20n	200p	0.0	15	3.0m	10m	50u%	8.0p#	2.8m	200J	#2	L74		
12	FM1207*	500m	7.0†	15	35	35Δ	100u	20n	200p	0.0	15	3.0m	10m	50u%	8.0p#	2.8m	200J	#2	L74		
13	FM1208*	500m	7.0†	15	35	35Δ	100u	20n	200p	0.0	15	3.0m	10m	50u%	8.0p#	2.8m	200J	#2	L74		
14	FM1209*	500m	7.0†	15	35	35Δ	100u	20n	200p	0.0	15	3.0m	10m	50u%	8.0p#	2.8m	200J	#2	L74		
15	FM1210*	500m	7.0†	15	25	25Δ	100u	20n	1.0n	0.0	15	800u	10m		8.0p#	2.8m	200J	#2	L74		
16	FM1211*	500m	7.0†	15	25	25Δ	100u	20n	1.0n	0.0	15	800u	10m		8.0p#	2.8m	200J	#2	L74		
17	FM3954*	500m	4.5†	20	50	50Δ	100u	5.0m	100p	0.0	20	1.0m	4.0m	35u%	4.0p#	2.8m	200J	#2	L74		
18	FM3954A*	500m	4.5†	20	50	50Δ	100u	5.0m	100p	0.0	20	1.0m	4.0m	35u%	4.0p#	2.8m	200J	#2	L74		
19	FM3955*	500m	4.5†	20	50	50Δ	100u	5.0m	100p	0.0	20	1.0m	4.0m	35u%	4.0p#	2.8m	200J	#2	L74		
20	FM3955A*	500m	4.5†	20	50	50Δ	100u	5.0m	100p	0.0	20	1.0m	4.0m	35u%	4.0p#	2.8m	200J	#2	L74		
21	FM3956*	500m	4.5†	20	50	50Δ	100u	5.0m	100p	0.0	20	1.0m	4.0m	35u%	4.0p#	2.8m	200J	#2	L74		
22	FM3957*	500m	4.5†	20	50	50Δ	100u	5.0m	100p	0.0	20	1.0m	4.0m	35u%	4.0p#	2.8m	200J	#2	L74		
23	FM3958*	500m	4.5†	20	50	50Δ	100u	5.0m	100p	0.0	20	1.0m	4.0m	35u%	4.0p#	2.8m	200J	#2	L74		
24	HEPF2007s	500m	—	25	—	—	30m	—	—	—	30	1.0k	—	—	—	—	—	175J	u80		
25	MDF4391	500m	10	20	40Δ	—	50m	150m	5.0n	—	—	—	—	—	—	30†	14p#	150A	L212 GP		
26	MDF4392	500m	5.0	20	40Δ	—	50m	75m	5.0n	—	—	—	—	—	—	60†	14p#	150A	L212 GP		
27	MDF4393	500m	3.0	20	40Δ	—	50m	30m	5.0n	—	—	—	—	—	—	100†	14p#	150A	L212 GP		
28	MPF120	500m	4.0†	15	25	—	30m	—	18m	20n	4.0	15	8.0m	18m		70p#	5.0m	175J	u80 EE		
29	MPF121	500m	4.0†	15	25	—	30m	—	30m	20n	4.0	15	10m	20m		8.0p#	5.0m	175J	u80 EE		
30	MPF122	500m	4.0†	15	25	—	30m	—	20m	20n	4.0	15	8.0m	18m		7.0p#	5.0m	175J	u80 EE		
31	NF510	500m	10†	20	30	30Δ	10m	50m	10n	0.0	10	20	20Δ		50†	15	* 4.0m	150J	T018 DB		
32	UC250	500m	10	20	30	—	—	—	—	—	20	—	—	—	—	—	—	—	T018 DB		
33	UC2139	500m	6.0	15	30	—	—	—	—	—	—	—	—	—	—	—	—	—	L21b		
34	UC2149	500m	6.0	20	30	—	—	—	—	—	—	—	—	—	—	—	—	—	L21b		
35	2N4881	800m	15†	50Δ	300	100	10m	2.0m	2.0n	0.0	50	35m%	1m%	10u	5.0kt	15p#	4.6m	200S	Ø	T05 DBØ	
36	2N4882	800m	15†	50Δ	300	100	10m	7.5m	2.0n	0.0	50	60m%	1.5m%	20u	3.0kt	15p#	4.6m	200S	Ø	T05 DBØ	
37	2N4883	800m	10†	50Δ	200	100	10m	2.0m	1.0n	0.0	50	35m%	1m%	10u	5.0kt	15p#	4.6m	200S	Ø	T05 DBØ	
38	2N4884	800m	10†	50Δ	200	100	10m	7.5m	1.0n	0.0	50	60m%	1.5m%	20u	3.0kt	15p#	4.6m	200S	Ø	T05 DBØ	
39	2N4885	800m	10†	50Δ	125	75	10m	2.0m	1.0n	0.0	50	35m%	1m%	10u	5.0kt	15p#	4.6m	200S	Ø	T05 DBØ	
40	2N4886	800m	10†	50Δ	125	75	10m	7.5m	1.0n	0.0	50	60m%	1.5m%	20u	3.0kt	15p#	4.6m	200S	Ø	T05 DBØ	
41	2N5277	800m	7.0†	30	150	—	10m	12m	5.0n	0.0	30	2.0m	5.0m	25u	—	25p#	4.6m	200S	Ø	T05 DBØ	
42	2N5278	800m	7.0†	30	150	—	10m	25	5.0n	0.0	30	3.0m	6.0m	60u	—	25p#	4.6m	200S	Ø	T05 DBØ	
43	3N1691	800m	1.5Δ	10*	25	35Δ	30m	—	10n	10p	—	—	—	—	—	200	5.0p#	4.5m	200S	Ø	T072 DRØ
44	3N1701	800m	2.0Δ	20	35	35Δ	30m	—	10n	10p	—	—	—	—	—	200	5.0p#	4.5m	200S	Ø	T072 DRØ
45	3N1711	800m	3.0Δ	10*	25	35Δ	30m	—	10n	10p	—	—	—	—	—	200	5.0p#	4.5m	200S	Ø	T072 DRØ
46*	U221	800m	8.0	20	50	—	25m	110m	1.0n	0.0	20	15m	40m		—	28p#	4.6m	200J	#2	T05 DBØ	
47*	U222	800m	10	20	50	—	25m	250m	1.0n	0.0	20	20m	50m		—	28p#	4.6m	200J	#2	T05 DBØ	
48	U1715	800m	15†	50	200	—	50m	50m	5.0n	0.0	—	—	—	—	—	40kt	15p#	4.5m	200J	#2	T05 DBØ
49	2N3970†	18	10	20Δ	40	40	50m	150m	—	—	—	—	—	—	—	30kt	25p#	10m	200S	Ø	T018 Ø
50	2N3971†	18	5.0	20Δ	40	40	50m	75m	—	—	—	—	—	—	—	60kt	25p#	10m	200S	Ø	T018 Ø
51	2N3972†	18	3.0	20Δ	40	40	50m	30m	—	—	—	—	—	—	—	100kt	15p#	10m	200S	Ø	T018 Ø
52	2N4091†	18	10†	20Δ	50	50	10m	30m	—	—	—	—	—	—	—	15p#	10m	200S	Ø	T018 Ø	
53	2N4091A†	18	7.0†	20Δ	40	40Δ	10m	30m	40p	—	—	—	—	—	—	30	16p#	10m	200S	Ø	T018 Ø
54	2N4092	18	7.0	20Δ	40	40Δ	10m	15m	—	—	—	—	—	—	—	16p#	10m	200S	Ø	T018 Ø	
55	2N4092A†	18	7.0†	20Δ	50	50	10m	15m	40p	—	—	—	—	—	—	50	16p#	10m	200S	Ø	T018 Ø
56	2N4093	18	5.0	20Δ	40	40Δ	10m	8.0m	—	—	—	—	—	—	—	80	16p#	10m	200S	Ø	T018 Ø
57	2N4093A†	18	5.0†	20Δ	50	50	10m	8.0m	40p	—	—	—	—	—	—	0.02K	32p#	10m	200C	Ø	T018 Ø
58	2N4094†	18	—	—	40Δ	40	10m	75m	—	—	—	—	—	—	—	0.04K	32p#	10m	200C	Ø	T018 Ø
59	2N4095†	18	—	—	40Δ	40	10m	20m	—	—	—	—	—	—	—	0.03K	14p#	200S	Ø	T018 Ø	
60	2N4391†	18	1.0	20	40	40	50m	150m	—												

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE- MENT (W/C)	MAX Pc FREE AIR @ 25°C (W)	ABSOLUTE MAX RATINGS @25°C						MAX. ICBO @ 25°C (A)	HFE	fae	MAX. SAT. RES. (Hz) (s)	tr	STRU- TURE s/a	DWG # T200	C E D E		
				A	E	Ic	Ib	BV _{cbo}	BV _{ceo}										
1#	2N671	10	10	#J 2.0		40	40	40	250u	1.50	1.0	40	250	700Kt	350m	A	T026	A	
2#	2SA4161	6.0	6.0	#J 700m	50m	70	1.5	60	600u	1.00	600m	40	100	90M _t	200n	AD	T03		
3#	2SB2821	30	30	#J 6.0	1.0	80	40	60	100u	1.00	6.0	15	30	250Kt	15u	A	T03		
4#	2SB2831	30	30	#J 6.0	1.0	60	20	48	100u	1.02	6.0	35	80	250Kt	15u	A	T03		
5#	2SB2841	30	30	#J 6.0	1.0	60	20	48	100u	1.02	6.0	20	45	250Kt	15u	A	T03		
6#	2SB2851	30	30	#J 6.0	1.0	80	40	60	100u	1.02	6.0	20	65	250Kt	15u	A	T03		
7#	2SB337	12	12		1.0	40	10	30	1.0m	2.00	1.0	50	165	300Kt		A	T03		
8#	2SB361	12	12	5.0	1.0	80	1.0	80	10m	2.00	1.0	50	280	50Kt		D	T03		
9#	2SB367	4.0	4.0		1.0	25	12	25	100m	1.50	50	45	170	500Kt		A	T066		
10#	2SB367H	4.0	4.0		1.0	30	12	25	70m	1.50	50	50	80	500Kt		A	T066		
11#	2SB368	4.0	4.0		1.0	45	12	45	100m	1.50	50	45	170	500Kt		A	T066		
12#	2SB368H	4.0	4.0		1.0	30	12	35	70m	1.50	50	50	80	500Kt		A	T066		
13#	2SB468	10	10		10	200	1.5	90		1.50	4.0	14	130		2.5u	D	T03		
14#	2SB471	12	12		1.0	60	10	45	50m	2.00	1.0	50	165	300Kt		A	T03		
15#	2SB472	12	12		1.0	60	10	45	50m	2.00	1.0	50	165	300Kt		A	T03		
16#	#ADY30	150	150	50	#	45		30			15	50			10m	A	T036	C	
17#	#ADY31	85	85	160	#	60		40			150	15			2.0m	A			
18#	#ADY32	35	35	160	#	80		50			150	15			2.0m	A			
19#	#ASZ16	30	*	10	#	60		32		80	35	80	250Kt					C	
20#	HEP200S	90	90	#J 3.0	s	30	105	30	6.0ms	30	40	60	600Kt					C	
21#	HEP230S	90	90	#J 5.0	s	30	105	30	3.0ms	30	40	60	600Kt					C	
22#	HEP231S	150	150	#J 1.5	s	30	105	30	6.0ms	30	40	60	500Kt					A	
23#	HEP232S	90	90	#J 7.0	s	70	105	70	80u	2.0	60	60	600Kt					C	
24#	HEP233S	170	170	#J 1.5	s	65	65	65	20m	65	55	55	500Kt					A	
25#	HEP234S	56	56	#J 5.0	s	200	2.05	200	400u	10	60	60	1.0M _t					C	
26#	HEP235S	56	56	#J 10	s	320	2.05	320	400u	10	60	60	1.0M _t					C	
27#	HEP236S	160	160	#J 2.5	s	110	2.05	80	200u	2.0	60	60	210Kt					A	
28#	HEP237S	170	170	#J 3.0	s	75	4.05	60	900u	25	80	80	270Kt					A	
29#	HEP238S	20	20	#J 3.0	s	60	2.05	40	125u	30	120	120	200Kt					A	
30#	HEP239S	20	20	#J 3.0	s	100	2.05	60	125u	30	120	120	200Kt					A	
31#	HEP236	77	77	#J 7.0	s	60	2.05	35	1.0ms	35	70	70	600Kt					C	
32#	HEP624S	77	77	#J 7.0	s	60	2.05	35	1.0ms	35	120	120	600Kt					C	
33#	HEP625S	90	90	#J 10	s	100	5.05	75	20ms	90	40	40	5.0Kt					C	
34#	HEP626S	85	85	#J 2.0	s	80	5.05	50	0.5s	10ms	80	60	1.0M _t					C	
35#	HEP627S	85	85	#J 10	s	80	5.05	80	20ms	80	40	40	700Kt					C	
36#	HEP628S	77	77	#J 7.0	s	60	5.05	20	35	10ms	35	45	600Kt					C	
37#	HEP642S	57	57	#J 3.0	s	30	2.05	25	0.5s	10ms	30	95	95	350Kt					C
38#	HEP643S	57	57	#J 3.0	s	30	2.05	25	0.5s	10ms	30	160	160	350Kt					C
39#	HEP644S	85	85	#J 10	s	160	5.05	160	3.0ms	160	40	40	50Kt					C	
40#	HEP60015	85	85	#J 2.5	s	90	1.55	80	0.5s	200u	2.0	70	850Kt					C	
41	JAN2N2079At	0	150	#S 15	Ø	40	80	40	6.5	4.0m	2.00	50	35	70	5 Ok _d		T036	C	
42	JAN2N2557	14m	11	#J 15	50	60	20	40	70u	500	1.0	20	60		250m	MT28	A		
43	JAN2N2559	14m	11	#J 1.0		100	20	60	70u	500	1.0	20	60		250m	X9c	A		
44#	AC28-01	22m	1.0	#J 1.0		32	10	16	200u	0.0	1.0	45	165	1.5M _t					
45#	AC128K	22m	1.0	#J 1.0		32	16	16	10u	300m	90	1.0	1.0M _t	600m			X9c	A	
46#	AC176K	22m	1.1	#J 1.0		500m	32	10	18	50u	0.0	300m	50	100	3.0M _t				
47	2N4106	25m	1.6	#J 1.0		25	10	25	25u	10	50m	70	350			A	T01	A	
48#	AC193	25m	1.0	#C 1.0		25	10	25	14u	140m	200	2.0	3.0M _t				A	T01	A
49#	ACT93	25m	1.0	#C 1.0		25	10	25	14u	140m	200	2.0	3.0M _t				A	T01	A
50#	2SB325	30m	1.8	#J 600m		120	50	100	20u	2.00	50m	20	250				A	R57	
51#	AC180K	33m	2.5	#J 1.0		32	10	24	20u	1.00	600m	50	250	1.0M _t			A	R57	
52#	2SB16A	40m	1.8	#J 600m		20			20u	2.00	50m	20	50				A	R57	
53#	2SB17A	40m	1.8	#J 600m		40			20u	2.00	50m	20	50				A	R57	
54#	2SB18A	40m	1.8	#J 600m		80			20u	2.00	50m	20	50				A	R57	
55#	2N2564/5	66m	50	#J 3.0	1.0	40	10	30	650u	1.0	3.0	20	60	7.0k			A	T05	A
56#	2N2565/5	66m	50	#J 3.0	1.0	60	10	40	650u	1.0	3.0	20	60	7.0k			A	T05	A
57#	2N2566/5	66m	50	#J 3.0	1.0	80	10	50	650u	1.0	3.0	20	60	7.0k			A	T05	A
58#	2N2567/5	66m	50	#J 3.0	1.0	100	10	60	550u	1.0	3.0	20	60	7.0k			A	T05	A
59#	2N3461	66m	5.0	#C 3.0	1.0	60	1.5	30	3.0m	1.00	500m	90	150	10k _d			A	T05	A
60#	2SB473	68m	4.3	#J 1.0		32	6.0	1.5	15u	0.0	500m _d	40	180				A	MD9d	
61#	TF78730	68m	2.7	#J 600m		32	10	24	30m	700	50m	30	150	700Kt		6.0u	A	A	
62#	TF787/60	68m	2.7	#J 600m		64	16	45	30m	700	50m	30	150	700Kt		6.0u	A	A	
63#	2N11721	67m	1.0	#J 1.5	Ø	25	40	20	30	20m	2.00	10	30	90		.60	T037	A	
64#	2N2282	67m	1.0	#J 3.0		60			30	0.5m _d	1.0	50	30	75	2.5M _t		DA	T037	A
65#	2N2283	67m	1.0	#J 3.0		100			60	0.5m _d	1.0	50	30	75	2.5M _t		DA	T037	A
66#	2N2284	67m	1.0	#J 3.0		200			100	0.5m _d	1.0	50	30	75	2.5M _t		DA	T037	A
67#	2N2467	67m	1.0	#J 3.0		60	1.5	60	10m	1.00	50	30	90				R50		
68#	2N2468	67m	1.0	#J 3.0		100	1.5	100	10m	1.00	50	30	90				R50		
69#	2N2469	67m	1.0	#J 3.0		200	1.5	200	15m	1.00	50	30	90				R50		
70#	2N1017/13	80m	1.0	#J 1.5		30	15	15	5.0m	2.00	500m	11	600k	20			A	T013	F
71	2N1073	80m	1.0	#J 10		40	1.5	40	40s	2.00	50m	20	60				#	MD273	C
72	2N1073A	80m	1.0	#J 10		80	1.5	80	20m	2.00	50m	20	60				#	MD273	C

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/C)	MAX Po FREE AIR @ 25°C (W)	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. ICBO @ 25°C (A)	hFE	MIN. IC (V)	MAX. IC (A)	f _{ce} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG # Y200 s/a TO200 Ser.	C E O A D E C D
					I _c (A)	I _b (A)	BV _{cbo} (V)	BV _{ebo} (V)	BV _{ceo} (V)										
1# OC26	125m ³	13 Ø	#J 3.5	500m	32	10	35	20mØ	1.0	1.0	20	60	150k ¹		A	T03	CØ		
2# 2SB130	133m	6.0 Ø	#J 1.5	45	32	10	18	10mØ	1.0	1.5	20 Ø	60			A	MD11			
3# AD152	133m	6.0 Ø	#J 1.0		12	30	30u	1.0	300m	50	150	11k			A	MD17			
4# AD155	133m	6.0 Ø	#J 1.0		32	12	20	30u	1.0	300m	40		11k		A	MD17			
5# AD164	133m	6.0 Ø	#J 1.0		25	10	20	30u	1.0	500m	80	330	11k		A	MD17			
6# OC30	133mØ	3.6 Ø	#J 1.4	250m	32	10	16	12uØ	7.0	100m	35 Ø	300k ¹			A	MD11			
7# OC30A	133m	4.0 Ø	#J 1.4	250m	32	10	16	40uØ	1.0	1.4	12	65	180m		A	MD11			
8# OC30B	133m	4.0 Ø	#J 1.4	250m	60	10	32	40uØ	1.0	1.4	12	65	180m		A	MD11			
9# 2SB493	139m	9.0 Ø	#J 5.0	40	10	20	1.0m	0.0	130 Ø	40		300k ¹		A	TO8	A			
10 2N3212	143m	14 Ø	#J 5.0	2.0	100	2.0	80	1.0m#	2.0	3.0	30	90	600k ³	100m	3.0u	D	TO37	AØ	
11 2N3213	143m	14 Ø	#J 5.0	2.0	80	2.0	60	1.0m#	2.0	3.0	30	90	600k ³	100m	3.0u	D	TO37	AØ	
12 2N3214	143m	14 Ø	#J 5.0	2.0	60	2.0	40	1.0m#	2.0	3.0	30	90	800k ³	100m	3.0u	D	TO37	AØ	
13 2N3215	143m	14 Ø	#J 5.0	2.0	40	2.0	30	1.0m#	2.0	3.0	25	100	600k ³	100m	3.0u	D	TO37	AØ	
14# 2SC831	154m	23 Ø	#J 20	50	4.0	25	5.0uØ	100	1.0	15	200	300M ⁵			PE	TO60			
15 2N3731	167m [#]	5.0 Ø	#C 10 #	4.0 #	320	1	20	320 Ø	200uØ	3.0	6.0	15		250m		A	TO3	CØ	
16 2N4346	167m [#]	5.0 Ø	#C 10	4.0	2.0	60							130m			A	TO3	CØ	
17# 2SB445	167m	10 Ø	#J 1.5	15 Ø	40	1.0	40	5	200uØ	2.0	1.0	40	200	1.5M ⁵		D	MD10a		
18# 2SB446	167m	10 Ø	#J 1.5	15 Ø	60	1.0	50	5	100uØ	2.0	1.0	40	200	1.5M ⁵		D	MD10a		
19 40612	167m	12 Ø	#A5.0	1.0		5.0			3.0u	2.0	1.0	30	150			A	TO3	CØ	
20 40623	167m	12 Ø	#A5.0	1.0	5.0				500uØ	2.0	1.0	50	170			A	TO3	CØ	
21 40626	167m	12 Ø	#A5.0	1.0	5.0				500uØ	2.0	1.0	50	170			A	TO3	CØ	
22# AUY10	182m [#]	4.5 Ø	#J 70	700m	50m	70	60	2.0mØ	10	600mΔ	40		120M ⁵		AD4	TO3			
23# 2SB180A	185m	12 Ø	#J 500m	500mØ	40	12	30	50	500uØ	1.5	500m	25	* 150	13k		A	TO8		
24# 2SB181A	185m	12 Ø	#J 500m	500mØ	60	12	40	50	200uØ	1.5	500m	25 *	150	13k		A	TO8		
25# 2SB338	185m	12 Ø	#J 70	1.0	60	10	30	1.0mØ	1.5	4.0	50	Ø	250k ¹	40m	A	MD24			
26# 2SB339	185m	12 Ø	#J 10	1.0	80	50	35	250uØ	1.0	8.0	35	Ø	250k ¹	70m	A	MD24			
27# 2SB340	185m	12 Ø	#J 10	1.0	100	50	40	250uØ	1.0	8.0	35	Ø	250k ¹	50m	A	MD24			
28# 2SB341	185m	12 Ø	#J 10	1.0	120	50	50	250uØ	1.0	8.0	35	Ø	250k ¹	50m	A	MD24			
29# 2SB362	185m	12 Ø	#J 7.0	1.0	100	1.0	40	500uØ	1.5	500m	25	150	50k	180m	A	MD24			
30# 2SB466	185m	12 Ø	#J 500m	500mØ	40	12	30	50	200uØ	1.5	500m	25	150	13k		A	MD10a		
31# 2SB467	185m	12 Ø	#J 500m	500mØ	60	12	40	50	200uØ	1.5	500m	25	150	13k		A	MD10a		
32 2N1658/13	200m	15 Ø	#J 1.0		80	50	35	200m	1.5	500m	25	30	90	10k	A	ZA22			
33 2N1659/13	200m	15 Ø	#J 1.0		60	40	35	200m	1.5	500m	25	30	90	10k	A	ZA22			
34 2N2659	200m	15 Ø	#J 3.0	1.0	50	20	30	125uØ	5.0	500m	30	90	280k ¹	400m	A	R122			
35 2N2660	200m	15 Ø	#J 3.0	1.0	70	20	40	125uØ	5.0	500m	30	90	280k ¹	400m	A	R122			
36 2N2661	200m	15 Ø	#J 3.0	1.0	90	20	50	125uØ	5.0	500m	30	90	280k ¹	400m	A	R122			
37 2N2662	200m	15 Ø	#J 3.0	1.0	50	20	30	125uØ	5.0	500m	30	90	280k ¹	400m	A	R122			
38 2N2663	200m	15 Ø	#J 3.0	1.0	70	20	40	125uØ	5.0	500m	30	90	280k ¹	400m	A	R122			
39 2N2664	200m	15 Ø	#J 3.0	1.0	90	20	50	125uØ	5.0	500m	30	90	280k ¹	400m	A	R122			
40 2N2665	200m	15 Ø	#J 3.0	1.0	50	20	30	125uØ	5.0	500m	30	90	300k ¹	400m	A	R122			
41 2N2666	200m	15 Ø	#J 3.0	1.0	70	20	40	125uØ	5.0	500m	30	90	300k ¹	400m	A	R122			
42 2N2667	200m	15 Ø	#J 3.0	1.0	90	20	50	125uØ	5.0	500m	30	90	300k ¹	400m	A	R122			
43 2N2668	200m	15 Ø	#J 3.0	1.0	50	20	30	125uØ	5.0	500m	30	90	300k ¹	400m	A	MT27			
44 2N2669	200m	15 Ø	#J 3.0	1.0	70	20	40	125uØ	5.0	500m	30	90	300k ¹	400m	A	MT27			
45 2N2670	200m	15 Ø	#J 3.0	1.0	90	20	50	125uØ	5.0	500m	30	90	300k ¹	400m	A	MT27			
46# 2SB448	200m	13 Ø	#J 1.0	200m	32	10	35	1.0m#	1.5	200uØ	1.0	30	110	10k		A	MD11		
47# 2SB474	200m	12 Ø	#J 2.0		35	6.0	35	200uØ	5.0	50	20	100	300k ¹		A	TO3	CØ		
48# AD136	200m*	9.0 Ø	#J 10		40	10	22								A	AD	TO8		
49# AUY18	200m*	9.0 Ø	#J 8.0		64	20	35								A	AD	TO8		
50# AUY35	200m	15	#J 10	3.0	70	2.0	25	10mØ	1.0	5.0	35	260	2.5M ⁵		D	TO8			
51# AUY36	200m	15	#J 10	3.0	70	2.0	25	10mØ	1.0	5.0	100		3.0M ⁵		D	TO8			
52# AD162	222m	6 Ø	#J 3.0	100m	32	10	20	200u	1.0	50m	74	300	1.5M ⁵		A	MD17	C		
53 2N2835	250m	16 Ø	#J 1.0	20	32	10	32	5	1.0	1.0	30	100	450k ¹		A	MD17	A		
54# AD148	250m*	11 Ø	#J 2.0	400m	32	10	32	5	1.0	1.0	30	100	450k ¹		A	MD23			
55# AD262	250m	10 Ø	#J 4.0	2.0	35	10	20		100uØ	2.0	1.5	30		450k ³		A	MD17		
56# AD263	250m	10 Ø	#J 4.0	2.0	60	10	40	100uØ	2.0	1.5	20		450k ³		A	MD17			
57 2N1038-1	263m	1.0	#J 3.0	1.0	40	20	30	650u	5.0	50	10	20	60	7.0k		A	MT27	AØ	
58 2N1038-2	263m	1.0	#J 3.0	1.0	60	20	40	650u	5.0	50	10	20	60	7.0k		A	MT28	AØ	
59 2N1039-1	263m	1.0	#J 3.0	1.0	60	20	40	650u	5.0	50	10	20	60	7.0k		A	MT27	AØ	
60 2N1039-2	263m	1.0	#J 3.0	1.0	60	20	40	650u	5.0	50	10	20	60	7.0k		A	MT28	AØ	
61 2N1040-1	263m	1.0	#J 3.0	1.0	80	20	50	650u	5.0	50	10	20	60	7.0k		A	MT27	AØ	
62 2N1040-2	263m	1.0	#J 3.0	1.0	80	20	50	650u	5.0	50	10	20	60	7.0k		A	MT28	AØ	
63 2N1041-1	263m	1.0	#J 3.0	1.0	100	20	60	650u	5.0	50	10	20	60	7.0k		A	MT27	AØ	
64 2N1041-2	263m	1.0	#J 3.0	1.0	100	20	60	650u	5.0	50	10	20	60	7.0k		A	MT28	AØ	
65 2N1042	263m	1.0	#J 3.0	1.0	40	20	60	650u	5.0	50	10	20	60	7.0k		A	AD	ZA1	
66 2N1042-2	263m	1.0	#J 3.0	1.0	40	20	30	650u	5.0	50	10	20	60	8.5k		A	R122		
67 2N1043	263m	1.0	#J 3.0	1.0	60	20	40	6											

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE NO.

LINE No.	TYPE No.	1 MIN. DERATE J TO C	MAX PC FREE AIR @ 25°C	MAX Ic (W)	MAX T (°C)	ABSOLUTE MAX. RATINGS @ 25°C				MAX Icbo @ 25°C	MAX Vcb @ 25°C	Vceo	HFE			fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #	LC s/a	EO AD		
						X	M	P		Ic (A)	Ib (A)	BVcbo (V)	BVbeo (V)	(V)	Ic (A)	Vceo (V)	(A)	MIN	MAX					
1	2N1333	270m	20 Ø	#J 3.0		100			80 Ø			500m	30		8.0K					A	T013	FØ		
2	KM7007	270m	20 Ø	#J 3.0		30			30 Ø			500m	25		6.0K	300m						MS7	CØ	
3	KM7008	270m	20 Ø	#J 3.0		80			60 Ø			500m	21		6.0K	300m						MS7	CØ	
4	KM7009	270m	20 Ø	#J 3.0		80			80 Ø			500m	21		6.0K	300m						MS7	CØ	
5	KM7010	270m	20 Ø	#J 3.0		100			80 Ø			500m	21		6.0K	300m						MS7	CØ	
6	LT11	270m	20 Ø	#J 3.0		100			80 Ø			500m	21		8.0K					A	ZA24			
7	LT12	270m	20 Ø	#J 3.0		150			100 Ø			500m	21		8.0K					A	ZA24			
8	LT13	270m	20 Ø	#J 3.0		150			120			500m	21		8.0K					A	ZA24			
9	LT14	270m	20 Ø	#J 3.0		175			150			500m	21		8.0K					A	ZA24			
10	LT15	270m	20 Ø	#J 3.0		200			150 Ø			500m	21		8.0K					A	ZA24			
11	JAN2N158	283m Ø	17 Ø	#J 2.0 Ø		60	30	60 Ø	1.0m	2.0 Ø	1.0	13	40	4.0KΔ	750m						MM3	FØ		
12#	2SB449	300m	22 Ø	#J 3.5		500m	50	20	50 Ø	3.0m	0.0	3.0 Δ	20	85	10k					A	T03	CØ		
13	2N3730	303m Ø	10 Ø	#J 3.0		500m	200	50	200 Ø	200u	4.0 Ø	50m	10	200	1.0MΔ	880m					A	T03	CØ	
14	2N141/13	333m	20	#J 1.0		500m	60	30	30	2.0m	2.0 Ø	500m	25		4.0				A	T013	FØ			
15	2N143/13	333m	20	#J 1.0		60	30	30	5.0m	6.0 Ø	250m	10		6.0				A	T013	FØ				
16	2N155	333m Ø	1.5	#J 3.0		500m	30	15	15	1.0m	2.0 Ø	500m	32 Ø		180k	850m				A	T03	CØ		
17	2N156	333m		#J 3.0		50	30	15	30	1.0m	2.0 Ø	500m	25		32 Ø	4.0KΔ	75			A	T013	F		
18	2N158	333m		#J 3.0		50	60	30	60	1.0m	2.0 Ø	500m	21		32 Ø	4.0KΔ	75			A	T013	F		
19	2N158A	333m		#J 3.0		50	80	30	60	1.0m	2.0 Ø	500m	21		32 Ø	4.0KΔ	75			A	T013	F		
20	2N242	333m	25 Ø	#J 2.0		45	45	45	5.0m	1.0m	2.0 Ø	500m	30 Ø	100	4.0	50K	800m			A	T03	CØ		
21	2N255	333m Ø		#J 3.0		50	15	15	15	5.0m	2.0 Ø	500m	30 Ø	100	125k				A	T03	CØ			
22	2N255A	333m Ø		#J 3.0		50	15	15	15	5.0m	2.0 Ø	500m	30 Ø	100	125k				A	T03	CØ			
23	2N256	333m Ø		#J 3.0		50	30	30	30	1.0m	2.0 Ø	500m	30 Ø	100	125k				A	T03	CØ			
24	2N256A	333m Ø		#J 3.0		50	30	30	30	5.0m	2.0 Ø	500m	30 Ø	100	125k				A	T03	CØ			
25	2N298	333m	20 Ø	#J 2.0		30	15	60	1.0m	2.0 Ø	1.0	20			4.0k				A	T03	CØ			
26	2N1320	333m	20 Ø	#J 3.0		35	15	30	1.5m	2.0 Ø	500m	40		1.0				A	T010	FØ				
27	2N1322	333m	20 Ø	#J 3.0		60	15	60	1.5m	2.0 Ø	500m	40		1.0				A	T010	FØ				
28	2N1324	333m	20 Ø	#J 3.0		80	15	80	2.0m	2.0 Ø	500m	40		1.0				A	T010	F				
29	2N1326	333m	23	#J 3.0		100	15	75	2.0m	2.0 Ø	500m	30	90		1.0				A	T013	F			
30	2N1437	333m	23 Ø	#J 3.0		500m	100	15	80	2.0m	2.0 Ø	500m	20		150k	750m				A	T010	F		
31	2N1438	333m	23	#J 3.0		500m	100	30	90 Ø	2.0m	2.0 Ø	500m	20		4.0KΔ	110				A	T010	F		
32	2N1465	333m	20	#J 3.0		500m	120	15	100 Ø	2.5m	2.0 Ø	500m	20			750m				A	T013	F		
33	2N1466	333m	20	#J 3.0		500m	120	15	100 Ø	2.5m	2.0 Ø	500m	20			750m				A	T010	F		
34	2N1504/10	333m		#J 3.0		50	80	30	60	1.0m	2.0 Ø	500m	21		150k	75			A	T010	FØ			
35	KL8503	333m	1.7	#A 3.0		2.0	60	30	40	2.0m	2.0 Ø	500m	40	100	14k	266m			A	T08	A			
36	KL8504	333m	1.7	#A 3.0		2.0	60	30	40	2.0m	2.0 Ø	500m	75	200	12k	266m			A	T08	A			
37	KL8505	333m	1.7	#A 3.0		2.0	100	30	65	2.0m	2.0 Ø	500m	40	100	14k	266m			A	T08	A			
38	KL8506	333m	1.7	#A 3.0		2.0	100	30	65	2.0m	2.0 Ø	500m	75	200	12k	266m			A	T08	A			
39	LT5021	333m		#J 3.0		50	30	15	30	1.5m	2.0 Ø	500m	20		100k	1.0			A	T010	FØ			
40	LT5023	333m		#J 3.0		50	30	15	30	1.5m	2.0 Ø	500m	40		100k	1.0			A	T013	FØ			
41	LT5024	333m		#J 3.0		50	30	15	30	1.5m	2.0 Ø	500m	40		100k	1.0			A	T010	FØ			
42	LT5026	333m		#J 3.0		50	30	15	30	1.5m	2.0 Ø	500m	60		100k	1.0			A	T013	FØ			
43	LT5027	333m		#J 3.0		50	30	15	30	1.5m	2.0 Ø	500m	60		100k	1.0			A	T010	FØ			
44	LT5029	333m		#J 3.0		50	60	15	60	1.5m	2.0 Ø	500m	40		100k	1.0			A	T010	FØ			
45	LT5030	333m		#J 3.0		50	60	15	60	1.5m	2.0 Ø	500m	40		100k	1.0			A	T010	FØ			
46	LT5032	333m		#J 3.0		50	60	15	60	1.5m	2.0 Ø	500m	60		100k	1.0			A	T010	FØ			
47	LT5033	333m		#J 3.0		50	60	15	60	1.5m	2.0 Ø	500m	60		100k	1.0			A	T010	FØ			
48	LT5035	333m		#J 3.0		50	100	15	90	2.0m	2.0 Ø	500m	20		100k	1.0			A	T013	FØ			
49	LT5036	333m		#J 3.0		50	100	15	90	2.0m	2.0 Ø	500m	20		100k	1.0			A	T010	FØ			
50	LT5037	333m		#J 3.0		50	100	15	90	2.0m	2.0 Ø	500m	40		100k	1.0			A	T013	FØ			
51	LT5040	333m		#J 3.0		60	100	15	90	2.0m	2.0 Ø	500m	40		100k	1.0			A	T013	FØ			
52	LT5041	333m		#J 3.0		50	100	15	90	2.0m	2.0 Ø	500m	60		100k	1.0			A	T010	FØ			
53	LT5043	333m		#J 3.0		50	120	15	100	2.5m	2.0 Ø	500m	20		100k	1.0			A	T010	FØ			
54	LT5044	333m		#J 3.0		50	120	15	100	2.5m	2.0 Ø	500m	20		100k	1.0			A	T010	FØ			
55	LT5046	333m Ø		#J 3.0		50	120	15	100	2.5m	2.0 Ø	500m	40		100k	1.0			A	T013	FØ			
56	LT5047	333m Ø		#J 3.0		50	120	15	100	2.5m	2.0 Ø	500m	40		100k	1.0			A	T010	FØ			
57	LT5049	333m		#J 3.0		50	120	15	100	2.5m	2.0 Ø	500m	60		100k	1.0			A	T013	FØ			
58	LT5050	333m		#J 3.0		50	120	15	100	2.5m	2.0 Ø	500m	60		100k	1.0			A	T010	FØ			
59	LT5152	333m		#J 3.0		30	15	30	1.5m	2.0 Ø	500m	20		100k	1.0			A	T013	FØ				
60	LT5153	333m		#J 3.0		60	15	60	1.5m	2.0 Ø	500m	20		100k	1.0			A	T013	FØ				
61#	OC22	333m Ø*	15 Ø	#J 1.0		200m	47	12	32	100 Ø	2.0 Ø	1.0	50	150 Ø	2.5M				A	T03	CØ			
62	OC23	333m Ø*	16 Ø	#J 1.0		200m	55	12	24	30u Ø	2.0 Ø	1.0	50	150 Ø	2.5M				A	A	T03	CØ		
63#	OC24	333m Ø																						

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE (W/C)	MAX P _{cm} FREE AIR @ 25°C	A E X M P	ABSOLUTE MAX. RATINGS @25°C				MAX. I _{cbo} @ MAX V _{cb} @25°C	hFE	BIAS V _{cb}	MIN	MAX	f _{ce}	MAX. SAT. RES. (Ω)	tr	STRU CTURE	DWG # Y200 s/a TO200 Ser.	C EO AD DE
					I _c (A)	I _b (A)	BV _{cbo} (V)	BV _{ebo} (V)	BV _{ceo} (V)	(A)	(V)	(A)	(V)	(A)	(Hz)				
1	ZN1202	455m ²	34 Ø	#J 3.0 Ø	500m	80	28	60	2.0m	2.0Ø	500m	40	120	200k ²	600m	A	MT36	F	
2	ZN1203	455m ²	34 Ø	#J 3.5 Ø	500m	120	28	70	2.0m	2.0Ø	2.0	25	75	200k ²	300m	A	MT36	F	
3	ZN1261	455m ²	34 Ø	#J 3.5 Ø	500m	80	28	45	2.0m	2.0Ø	2.0	20	50	200k ²	300m	A	MT36	F	
4	ZN1262	455m ²	34 Ø	#J 3.5 Ø	500m	80	28	45	2.0m	2.0Ø	2.0	30	75	200k ²	300m	A	MT36	F	
5	ZN1263	455m ²	34 Ø	#J 3.5 Ø	500m	80	28	45	2.0m	2.0Ø	2.0	45	113	200k ²	300m	A	MT36	F	
6	ZN1501	455m ²	34 Ø	#J 3.5 Ø	500m	60	28	40	2.0m	2.0Ø	2.0	25	100	200k ²	300m	A	MT36	F	
7	ZN1502	455m ²	34 Ø	#J 3.5 Ø	500m	40	28	40	2.0m	2.0Ø	2.0	25	100	200k ²	300m	A	MT36	F	
8	CA2D2	455m ²	10 Ø	#J 3.5 Ø	500m	20	12	—	4.0m	2.0Ø	2.0	20	20	200k ²	300m	D	MT36	F	
9	ZN234A	500mØ	—	#J 3.0 Ø	—	15	—	30	—	—	—	—	—	—	—	—	TO3	CØ	
10	ZN235A	500m	25 Ø	#J 3.0 Ø	150m	50	15	40	1.0mØ	—	500m	40	—	—	—	—	A	TO3	CØ
11	ZN235B	500m	25 Ø	#J 3.0 Ø	150m	50	15	40	1.0mØ	—	500m	60	—	—	—	—	A	TO3	CØ
12	ZN236A	500mØ	—	#J 3.0 Ø	15	—	50	—	1.0mØ	—	—	75	40	—	—	—	TO3	CØ	
13	ZN236B	500mØ	—	#J 3.0 Ø	15	—	50	—	1.0mØ	—	—	60	—	—	—	—	TO3	CØ	
14	ZN297A	500mØ	35	#J 4.0 Ø	1.0	60	40	40	3.0mØ	2.0	5.0	40	100	12k	.50	5.0u	AΔ	TO3	CØ
15	ZN389	500mØ	—	#J 3.0 Ø	15	—	40	—	2.0mØ	—	—	50	40	—	—	—	TO3	CØ	
16	ZN400	500mØ	—	#J 3.0 Ø	15	—	50	—	2.0mØ	—	—	50	—	—	—	—	TO3	CØ	
17	ZN401	500mØ	—	#J 3.0 Ø	15	—	40	—	1.0mØ	—	—	50	40	—	—	—	TO3	CØ	
18	ZN4181	500mØ	—	#J 5.0 Ø	1.50	—	100	—	1.5mØ	2.0Ø	4.0	40	50	400k	.50	15u	TO3	CØ	
19	ZN419	500mØ	25 Ø	#J 3.0 Ø	150m	55	—	45	1.0mØ	1.5Ø	2.2	9.0	44	300k	1.5	—	TO3	CØ	
20	ZN4201	500mØ	—	#J 5.0 Ø	1.50	65	—	45	1.5mØ	2.0Ø	4.0	40	50	400k	.50	15u	TO3	CØ	
21	ZN420A1	500mØ	—	#J 5.0 Ø	1.50	90	—	70	5.0mØ	2.0Ø	4.0	40	50	400k	.50	15u	TO3	CØ	
22	ZN463T	500m	—	#J 5.0 Ø	1.10	60	50	60	300uØ	2.0Ø	2.0	20	80	4.0kΔ	80m	4.6u	AΔ	TO32	AØ
23	ZN553	500m	35	#J 4.0 Ø	1.0	80	40	40	2.0m	2.0Ø	5.0	40	80	—	—	15u	MD1	—	
24	ZN637	500mØ	—	#J 5.0 Ø	1.50	—	40	—	1.0mØ	5.0Ø	3.0	30	60	—	—	—	TO3	CØ	
25	ZN637AT	500mØ	—	#J 5.0 Ø	1.50	—	—	70	5.0mØ	5.0Ø	3.0	30	60	—	—	15u	TO3	CØ	
26	ZN637B1	500mØ	—	#J 5.0 Ø	1.50	—	80	—	5.0mØ	5.0Ø	3.0	30	60	—	—	15u	TO3	CØ	
27	ZN6381	500mØ	—	#J 5.0 Ø	1.50	—	40	—	1.0mØ	5.0Ø	3.0	30	40	—	—	15u	TO3	CØ	
28	ZN638AT	500mØ	—	#J 5.0 Ø	1.50	—	70	—	5.0mØ	5.0Ø	3.0	20	40	—	—	15u	TO3	CØ	
29	ZN638B1	500mØ	—	#J 5.0 Ø	1.50	—	80	—	5.0mØ	5.0Ø	3.0	20	40	—	—	15u	TO3	CØ	
30	ZN6391	500mØ	—	#J 5.0 Ø	1.50	—	40	—	1.0mØ	5.0Ø	3.0	15	30	—	—	15u	TO3	CØ	
31	ZN639AT	500mØ	—	#J 5.0 Ø	1.50	—	70	—	5.0mØ	5.0Ø	3.0	15	30	—	—	15u	TO3	CØ	
32	ZN639B1	500mØ	—	#J 5.0 Ø	1.50	—	80	—	5.0mØ	5.0Ø	3.0	15	30	—	—	15u	TO3	CØ	
33	ZN663	500mØ	—	#J 4.0 Ø	1.0	80	40	40	20m	12Ø	500m	25	60	50kΔ	300m	—	TO3	CØ	
34	ZN665	500m	35	#J 5.0 Ø	1.0	80	40	40	2.0m	2.0Ø	5.0	40	80	20kΔ	30	5.0u	AΔ	TO3	CØ
35	JAN2NB65	500m	35 Ø	#S 5.0 Ø	1.0	80	40	40	10m	2.0Ø	500m	40	80	20kΔ	300m	—	TO3	CØ	
36	ZN1138	500mØ	—	#J 5.0 Ø	1.50	—	40	—	—	5.0Ø	3.0	100	20	—	—	—	TO3	CØ	
37	ZN1138A	500mØ	—	#J 5.0 Ø	1.50	—	70	—	—	5.0Ø	3.0	100	200	—	—	—	TO3	CØ	
38	ZN1138B	500mØ	—	#J 5.0 Ø	1.50	—	80	—	—	5.0Ø	3.0	100	200	—	—	—	TO3	CØ	
39	ZN1971	500mØ	38 Ø	#J 4.0 Ø	1.0	80	40	40	20m	12Ø	500m	25	60	50kΔ	300m	—	TO3	CØ	
40	ZN2061	500m	75	—	3.0	—	20	60	15 Ø	10m	2.0Ø	2.0	10	—	—	—	A	TO3	CØ
41	ZN2062	500m	75	—	3.0	—	20	60	15 Ø	10m	2.0Ø	2.0	20	—	—	—	A	TO3	CØ
42	ZN2063	500m	75	—	3.0	—	40	20	30 Ø	20m	2.0Ø	2.0	10	—	—	—	A	TO3	CØ
43	ZN2064	500m	75	—	3.0	—	40	20	30 Ø	20m	2.0Ø	2.0	20	—	—	—	A	TO3	CØ
44	ZN2065	500m	75	—	3.0	—	80	30	60 Ø	20m	2.0Ø	2.0	10	—	—	—	A	TO3	CØ
45	ZN2066	500m	75	—	3.0	—	80	30	60 Ø	20m	2.0Ø	2.0	20	—	—	—	A	TO3	CØ
46	ZN2266	500m	50 Ø	#J 5.0	700m	100	28	55	2.0mØ	2.0Ø	2.0	25	75	200k	150m	8.0u	A	MT36	A
47	ZN2267	500m	50 Ø	#J 5.0	700m	120	28	55	2.0mØ	2.0Ø	2.0	25	75	200k	150m	8.0u	A	MT36	A
48	ZN2268	500m	50 Ø	#J 5.0	700m	100	28	55	2.0mØ	2.0Ø	2.0	25	75	200k	150m	8.0u	A	MT36	A
49	ZN2269	500m	50 Ø	#J 5.0	700m	120	28	55	2.0mØ	2.0Ø	2.0	25	75	200k	150m	8.0u	A	MT36	A
50	ZN2836	500m	30	#C 3.5	50	55	20	55	5.5 Ø	0.0	1.0	30	100	500k	—	—	TO3	CØ	
51	ZN3154	500m	38 Ø	#C 3.0	2.0	40	30	25	100uØ	2.0Ø	500m	60	180	15kΔ	500m	10u	A	MS7	CØ
52	ZN3155	500m	38 Ø	#C 3.0	2.0	60	30	40	100uØ	2.0Ø	500m	60	180	15kΔ	500m	10u	A	MS7	CØ
53	ZN3156	500m	38 Ø	#C 3.0	2.0	80	30	55	100uØ	2.0Ø	500m	60	180	15kΔ	500m	10u	A	MS7	CØ
54	ZN3157	500m	38 Ø	#C 3.0	2.0	100	30	65	100uØ	2.0Ø	500m	60	180	15kΔ	500m	10u	A	MS7	CØ
55	ZN3158	500m	38 Ø	#C 3.0	2.0	40	30	25	100uØ	2.0Ø	500m	30	75	10kΔ	470m	10u	A	MS7	CØ
56	ZN3159	500m	38 Ø	#C 3.0	2.0	60	30	40	100uØ	2.0Ø	500m	30	75	10kΔ	470m	10u	A	MS7	CØ
57	ZN3160	500m	38 Ø	#C 3.0	2.0	80	30	55	100uØ	2.0Ø	500m	30	75	10kΔ	470m	10u	A	MS7	CØ
58	ZN3161	500m	38 Ø	#C 3.0	2.0	100	30	65	100uØ	2.0Ø	500m	30	75	10kΔ	470m	10u	A	MS7	CØ
59	ZN4241	500m	37 Ø	#C 5.0	32	20	20	45u	1.0	300m	60	300	50	500k	70m	A	TO3	CØ	
60	# 2SB426	500m	30 Ø	#J 7.0	32	12	32	5	160uØ	1.5Ø	1.0	34	80	400k	—	A	TO3	CØ	
61	# AD149	500mØ	22 Ø	#J 3.5	—	—	20	30	—	1.0Ø	1.0	30	100	500k	—	A	MD17	CØ	
62	# ADY27*	500m	27	#J 3.5	—	—	32	30	—	1.0Ø	1.0	50	100*	450k	—	A	TO3	CØ	
63	# AU101	500m	10 Ø	#J 10	2.0	120	10	120	10m	12Ø	5.0	40	30	400k	100m	2.6u	D	TO3	CØ
64	# AU102	500m	10 Ø	#J 10	2.0	40	10	40	10m	12Ø	5.0	40	40	1.5M1	15	A	TO3	CØ	
65	B1085	500mØ	40 Ø	#J 10	1.50	120	1.5	120	2.0mØ	10Ø									

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE NO.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX PC	M T	ABSOLUTE MAX. RATINGS @25°C						MAX. V _{ceo} @25°C	MAX. I _{CEO} @ MAX V _{ceo} @25°C	HFE	fae	MAX SAT. RES.	tr	STRUCTURE	DWG #	C	
					AIR @ 25°C	X M P	I _c	I _b	BV _{ceo}	BV _{beo}										
1	2N1011	666m	45	Ø	#J50 Ø	10	80	40	40	20m	120	30	30	75	50kΔ	500m	5.0u	A	T03	CØ
2	JAN2N1011	666m	50	Ø	#S50 Ø	80	40	40	10m	200	30	30	75	50kΔ	500m	5.0u	A	T03	CØ	
3	2N1120	666m	45	Ø	#J15 Ø	10	80	40	70 Ø	15m	2.0	10	20	50	3.0kΔ	100m		AΔ	T041	CØ
4	2N1666	666mØ*	30	Ø	#J60	10	80	40	60	100uØ	1.0	60	15	30	250k1		20u	AΔ	M03	
5	2N1667	666mØ*	30	Ø	#J60	2.0	32	100uØ		60		90	Ø	200k1			AΔ	M03		
6	2N1668	666mØ*	30	Ø	#J60	2.0	32	100uØ		60		50	Ø	200k1			AΔ	M03		
7	2N1669	666mØ*	30	Ø	#J60	2.0	32	100uØ		60		70	Ø	200k1			AΔ	M03		
8	2N1905	666m	50	Ø	#J10	3.0	80	1.0	40	500uØ	2.0	10	50	150	75k	1.0	100n	D	T03	CØ
9	2N1906	666m	50	Ø	#J10	3.0	100	1.0	40	500uØ	2.0	50	75	200	75k	100m	D	T03	CØ	
10	2N2147	666m	12	Ø	#J5.0	1.0	75	1.5	50	1.0mØ	2.0	10	100	150	Ø 4.0M3		D	T03	CØ	
11	2N2148	666m	12	Ø	#J5.0	1.0	60	1.0	40	1.0mØ	2.0	10	40	80	Ø 4.0M3		D	T03	CØ	
12	2N2869	666m#	30	Ø	#J10	3.0	60	10	50	2.0	10	50	165	4.0k	250m		A	T03	CØ	
13	2N2869/2N30	666m#	30	Ø	#J10	3.0	60	10	50	2.0	10	50	165	4.0k	250m		A	T03	CØ	
14	2N2870	666m#	30	Ø	#J10	3.0	80	10	50	2.0	1.0	50	165	4.0k	100m		A	T03	CØ	
15	2N2870/2N30	666m#	30	Ø	#J10	3.0	80	10	50	2.0	1.0	50	165	4.0k	100m		A	T03	CØ	
16#	2SB41	666m	44	Ø	#J1.2	40	12	32 Ø	2.0mØ	1.5		35	160	5.0k			A	T03		
17#	2SB42	666m	44	Ø	#J1.2	60	12	50 Ø	2.0mØ	1.5		35	160	5.0k			A	T03		
18#	2SB151	666m	50	Ø	#J5.0	5.0 Ø	80	60	60	500uØ	1.5	30	75	5.0k		200m	A	T03		
19#	2SB152	666m	50	Ø	#J5.0	5.0 Ø	100	60	80 Ø	500uØ	1.5	30	75	5.0k		200m	A	T03		
20#	2SB295	666mØ*	40	Ø	#J5.0	100	40	65	5	3.0m	1.0	30	120	4.5k		200m	A	T03		
21#	2SB309	666m	43	Ø	#J8.0	75	1.0	220	220	1.0		30	125	17k		110m	D	T03		
22#	2SB310	666m	43	Ø	#J8.0	140	1.0	220	220	1.0		30	125	17k		110m	D	T03		
23#	2SB318	666m	50	Ø	#J5.0	5.0 Ø	60	1.0	40	1.0mØ	2.0	10	40	200	2.0M3		D	T03		
24#	2SB319	666m	50	Ø	#J5.0	5.0 Ø	100	1.0	60	1.0mØ	2.0	10	40	200	3.0M3		D	T03		
25#	2SB320	666m	50	Ø	#J10	10	20	60	50	1.0mØ	2.0	10	40	200	2.0M3	100m	1.6u	D	T03	
26#	2SB432	666m	50	Ø	#J5.0	5.0 Ø	150	20	100	1.0mØ	2.0	50	40	170	3.0M3	100m	D	T03		
27	40022	666m*	12	Ø	#J5.0	1.0	32	50	32	1.0m	2.0	10	38	70	Ø 300k		A	T03	CØ	
28	40050	666m*	12	Ø	#J5.0	1.0	40	50	40	500uØ	2.0	10	50	90	500k		A	T03	CØ	
29	40051	666m*	12	Ø	#J5.0	1.0	50	50	50	500uØ	2.0	10	50	90	500k		A	T03	CØ	
30	40254	666m*	12	Ø	#J5.0	1.0	32	50	32	3.0m	2.0	10	30	70	Ø 300k		A	T03	CØ	
31	40421	666m*	12	Ø	#J5.0	1.0	75	1.5	50	1.0mØ	2.0	10	62	175	2.0M3		D	T03	A	
32	40439	666m*	5.0	Ø	#J10	40	200	20	20	200uØ						250m	750nL	D	T03	CØ
33	40440	666m*	5.0	Ø	#J10	40	200	20	200	200uØ						120m	1.2uF	D	T03	CØ
34	40462	666m*	12	Ø	#J5.0	1.0	40	1	50	500uØ	2.0	10	50	90	Ø 600k	200m	A	T03	CØ	
35#	AD130	666m*	30	Ø	#J3.0	500m	32	10	30	1.0	1.0	10	20	100	350k		A	T03		
36#	AD131	666m*	30	Ø	#J3.0	500m	64	20	45	1.0	1.0	10	20	100	350k		A	T03		
37#	AD132	666m*	30	Ø	#J3.0	500m	80	20	60	1.0	1.0	10	20	100	350k		AΔ	T03		
38#	AD133	666m*	30	Ø	#J15	2.0	50	10	32	500	5.0	20	60	300k		25uØ	AΔ	T041		
39#	AD140	666m†	35	Ø	#J3.0	500m	55	10	55	100uØ	1.0	10	30	100	4.5k			A	T03	
40#	AD142	666m†	30	Ø	#J10	3.0	80	10	80	100uØ	2.0	10	30	170	450k		A	T03		
41#	AD143	666m	30	Ø	#J10	3.0	40	10	40	100uØ	2.0	10	30	170	450k		A	T03		
42#	AD143R	666m	30	Ø	#J10	3.0	32	10	25	160uØ	2.0	10	30	170	450k		A	T03		
43#	AD150	666mØ	3.5	Ø	#J500m	32	10	30	1.0	1.0	1.0	30	100	450k			A	T03		
44#	AD163	666m	30	Ø	#J3.0	100	20	80	150uØ	1.0	1.0	10	13	60	350k			A	T03	
45#	AL100	666m	30	Ø	#J10	3.0	130	2.0	130	100uØ	2.0	1.0	40	250	4.0M3		D	T03		
46#	AL102	666m	30	Ø	#J6.0	1.0	130	2.0	130	100uØ	2.0	1.0	40	250	4.0M3		D	T03		
47#	AL103	666m	30	Ø	#J6.0	1.0	100	1.5	130	100uØ	2.0	1.0	40	250	3.0M3		D	T03		
48#	ASZ151	666mØ	30	Ø	#J6.0	1.0	80	40	60	100uØ	1.0	1.0	20	55	250k		20u	A	T03	CØ
49#	AT1138	666m	44	Ø	#J10	1.0	40	20	35	2.0mØ	1.0	1.0	66	200	300k	1.0	A	T03	CØ	
50#	AT1138A	666m	44	Ø	#J10	1.0	60	20	25	2.0mØ	1.0	1.0	66	200	300k	1.0	A	T03	CØ	
51#	AT1138B	666m	44	Ø	#J10	1.0	80	20	55	2.0mØ	1.0	1.0	66	200	300k	1.0	A	T03	CØ	
52#	AT1833	666m	44	Ø	#J10	1.0	40	20	35	2.0mØ	1.0	1.0	45	95	400k	1.0	A	T03	CØ	
53#	AT1834	666m	44	Ø	#J10	1.0	40	20	35	2.0mØ	1.0	1.0	75	165	400k	1.0	A	T03	CØ	
54#	AU1031	666m	10	Ø	#J10	2.5	155	4.0	155	#10m	1.0	10	15	15	15M5		1.7u	AD	T03	
55#	AU104	666m	15	Ø	#J12	2.5	185	4.0	165	#10m	1.0	12	14	14	15M5		1.8u	AD	T03	
56#	AU106	666m	50	Ø	#J10	4.0	320	20	320	200uØ	1.0	1.0	15	80	2.0M3		D	T03		
57#	AU107	666m	30	Ø	#J10	1.0	200	2.0	200	200uØ	2.0	1.0	35	120	2.0M3		D	T03		
58#	AU108	666m	30	Ø	#J10	1.0	100	2.0	100	200uØ	2.0	1.0	35	200	200		D	T03		
59#	#AU108F	666m	30	Ø	#J10	1.0	100	2.0	100	200uØ	2.0	1.0	120	250			D	T03		
60#	AU110	666m	30	Ø	#J10	3.0	160	2.0	160	100uØ	2.0	1.0	20	90			D	T03		
61#	AU111	666m	5.0	Ø	#J10	4.0	320	2.0	320	200uØ	2.0	1.0	130	80	2.0M3		D	T03		
62#	AU112	666m	5.0	Ø	#J10	4.0	320	2.0	320	200uØ	2.0	1.0	130	80	2.0M3		D	T03		
63#	AU113	666m	5.0	Ø	#J10	4.0	250	3.0	250	200uØ	2.0	1.0	15	80			D	T03		
64#	AUY19	666m*	30	Ø	#J3.0	64	20	45	1.0m	1.0	1.0	20	100	350k	10uØ	AΔ	T041			
65#	AUY20	666m*	30	Ø	#J3.0	80	20	60	1.0m	1.0	1.0	20	100	350k	10uØ	AΔ	T041			
66#	AUY21	666m*	30	Ø	#J10	65	20	45	1.0m	1.0	1.0	13	60	300k	12uØ	AΔ	T041			
67#	AUY21A	666m	3																	

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX P _c FREE AIR @ 25°C (W)	M T A E X M P	ABSOLUTE MAX. RATINGS @25°C						MAX. ICBO @ MAX V _{CB} /V _{CE} @25°C [A]	BIAS V _{CB} /V _{CE} [V]	IC [A]	HFE			f _{EE} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG # Y200 s/a TO200 Ser.	LC E O A D E				
					I _c (A)	I _b (A)	BV _{CB} (V)	BV _{BE} (V)	BV _{CE} (V)	MIN			MAX													
1#	2SB129	667m	#J 6.0		80	40	40			22m	1.0	6.0	30	80						A	T03					
2#	ASZ171	667mØ	#J 6.0	1.0	60	20	48	.10mØ	1.0	1.0	25	Ø 75	250k							A	T03					
3#	ASZ181	667m	#J 6.0	1.0	80	40	60	.10mØ	1.0	1.0	30	Ø 110	250k							A	T03					
4#	AUY37	667m	30 #	10	3.0	100	40	55	.10mØ	2.0	1.0	30	110	450k						A	T03					
5	LT5088	667m	#J 6.0	.70	30	15	30	3.0m	2.0	1.0	40		100k	1.0							T013	FØ				
6	LT5089	667m	#J 6.0	.70	30	15	30	3.0m	2.0	1.0	40		100k	1.0							T010	FØ				
7	LT5091	667m	#J 6.0	.70	30	15	30	3.0m	2.0	1.0	80		100k	1.0							T013	FØ				
8	LT5092	667m	#J 6.0	.70	30	15	30	3.0m	2.0	1.0	80		100k	1.0							T010	FØ				
9	LT5094	667m	#J 6.0	.70	30	15	30	3.0m	2.0	1.0	160		100k	1.0							T013	FØ				
10	LT5095	667m	#J 6.0	.70	30	15	30	3.0m	2.0	1.0	160		100k	1.0							T010	FØ				
11	LT5097	667m	#J 6.0	.70	60	15	60	3.0m	2.0	1.0	40		100k	1.0							T013	FØ				
12	LT5098	667m	#J 6.0	.70	60	15	60	3.0m	2.0	1.0	40		100k	1.0							T010	FØ				
13	LT5100	667m	#J 6.0	.70	60	15	60	3.0m	2.0	1.0	80		100k	1.0							T013	FØ				
14	LT5101	667m	#J 6.0	.70	60	15	60	3.0m	2.0	1.0	80		100k	1.0							T010	FØ				
15	LT5103	667m	#J 6.0	.70	60	15	60	3.0m	2.0	1.0	160		100k	1.0							T013	FØ				
16	LT5104	667m	#J 6.0	.70	60	15	60	3.0m	2.0	1.0	160		100k	1.0							T010	FØ				
17	LT5106	667m	#J 6.0	.70	80	15	75	3.5m	2.0	1.0	40		100k	1.0							T013	FØ				
18	LT5107	667m	#J 6.0	.70	80	15	75	3.5m	2.0	1.0	40		100k	1.0							T010	FØ				
19	LT5109	667m	#J 6.0	.70	80	15	75	3.5m	2.0	1.0	80		100k	1.0							T013	FØ				
20	LT5110	667m	#J 6.0	.70	80	15	75	3.5m	2.0	1.0	80		100k	1.0							T010	FØ				
21	LT5112	667m	#J 6.0	.70	80	15	75	3.5m	2.0	1.0	160		100k	1.0							T013	FØ				
22	LT5113	667m	#J 6.0	.70	80	15	75	3.5m	2.0	1.0	160		100k	1.0							T010	FØ				
23	LT5115	667m	#J 6.0	.70	100	15	90	4.0m	2.0	1.0	40		100k	1.0							T013	FØ				
24	LT5116	667m	#J 6.0	.70	100	15	90	4.0m	2.0	1.0	40		100k	1.0							T010	FØ				
25	LT5118	667m	#J 6.0	.70	100	15	90	4.0m	2.0	1.0	80		100k	1.0							T013	FØ				
26	LT5119	667m	#J 6.0	.70	100	15	90	4.0m	2.0	1.0	80		100k	1.0							T010	FØ				
27	LT5121	667m	#J 6.0	.70	100	15	90	4.0m	2.0	1.0	160		100k	1.0							T013	FØ				
28	LT5122	667m	#J 6.0	.70	100	15	90	4.0m	2.0	1.0	160		100k	1.0							T010	FØ				
29	2N53241	670m	56 Ø	#J 10	3.0	250	4.0	150		2.0	5.0	20	60	2.0M _Δ	50m	15uZ						T03	CØ			
30	2N53251	670m	56 Ø	#J 10	3.0	325	4.0	200		2.0	5.0	20	60	2.0M _Δ	50m	15uZ						T03	CØ			
31	MP3730	670m	56 Ø	#J 5.0		200	2.0	200 Ø	400uØ	4.0	50m	10	200	1.0M _Δ	10							E	T03	CØ		
32	MP3731	670m	56 Ø	#J 10		320	2.0	320 Ø	400 Ø	3.0	6.0	15		1.0M _Δ	833m								T03	CØ		
33	2N4561	714m	50 Ø	#J 5.0	3.0	40	20	40	2.0m	1.5Ø	5.0	10	30	Ø 30		200m	26u	A								
34	2N4571	714m	50 Ø	#J 5.0	3.0	60	20	60	2.0m	1.5Ø	5.0	10	30	Ø 30		200m	26u	A								
35	2N458	714m	50 Ø	#J 5.0	3.0	80	20	80	2.0m	1.5Ø	5.0	10	30	Ø 30		200m	26u	A								
36	# 2S8447	714m	45 Ø	#J 6.0	6.0	220	3.0		500uØ	1.0Ø	6.0	15	50	1.5M ₁	50m								D	T03	CØ	
37	# 2S8311	770m	50 Ø	#J 10		180	1.0		220uØ	1.0Ø	1.0	30	125	17k	110m								O	T03		
38	# NKT4011	770m	1.3	#J 10	2.0	90	40	60	150uØ	1.0Ø	1.0	25	75	430k	140m	10u								M17d	CØ	
39	# NKT4021	770m	1.3	#J 10	2.0	60	20	32	150uØ	1.0Ø	1.0	60	180	430k	140m	16u								M17d	CØ	
40	# NKT4031	770m	1.3	#J 10	2.0	80	40	32	150uØ	1.0Ø	1.0	50	150	430k	420m	16u								M17d	CØ	
41	# NKT4041	770m	1.3	#J 10	2.0	60	20	32	150uØ	1.0Ø	1.0	50	150	430k	420m	16u								M17d	CØ	
42	# NKT405	770m	1.3	#J 5.0	1.0	60	20	32	150uØ	1.0Ø	1.0	100	200	430k	420m								M17d	CØ		
43	# NKT4061	770m	1.3	#J 10	2.0	80	20	32	150uØ	1.0Ø	1.0	30	50	430k	420m	15u								M17d	CØ	
44	2N378	833m	50 Ø	#J 5.0	20				500u	2.0	2.0	15	40	5.0k	50m	25u		A							T03	CØ
45	2N379	833m	50 Ø	#J 5.0	40				500u	2.0	2.0	20	70	5.0k	50m	25u		A							T03	CØ
46	2N380	833m	50 Ø	#J 5.0					500u	2.0	2.0	20	70	8.0k	500m	25u		A							T03	CØ
47	2N4591	833m	50 Ø	#J 5.0	105				500uØ	2.0	2.0	20	70	8.0k	500m	25u		A							T03	CØ
48	2N1136	833mØ		#J 6.0	80				1.0mØ	5.0	3.0	50	100	33	5.0u											
49	2N1136A	833mØ		#J 6.0	90				1.0mØ	5.0	3.0	50	100	33	5.0u											
50	2N1136B	833mØ		#J 6.0	100				1.0mØ	5.0	3.0	50	100	33	5.0u											
51	2N1137	833mØ		#J 6.0	60				1.0mØ	5.0	3.0	75	150	33	5.0u											
52	2N1137A	833mØ		#J 6.0	90				1.0mØ	5.0	3.0	75	150	33	5.0u											
53	2N1137B	833mØ		#J 6.0	100				1.0mØ	5.0	3.0	75	150	33	5.0u											
54	2N11591	833mØ	20 Ø	#J 5.0	1.0	80	20	60	8.0m	2.0	5.0	20	50	10k	10u											
55	2N11601	833mØ	20 Ø	#J 7.0	1.0	32	10	16	100uØ	1.4Ø	30m	20	80	4.5k												
56	2N1314	833m	125	#J 3.5					2.0m	2.0	500m	30	60	12k	250m											
57	2N2137	833m	62 Ø	#J 3.0	3.0	Ø 30	15	20	2.0m	2.0	500m	30	60	12k	250m											
58	2N2137A	833m	62 Ø	#J 3.0	3.0	Ø 30	15	20	2.0m	2.0	500m	30	60	12k	250m											
59	2N2138	833m	62 Ø	#J 3.0	45	25	30	2.0m	2.0	50																

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C	MAX PC FREE (W/C)	M A E	ABSOLUTE MAX. RATINGS @ 25°C						MAX. ICBO @ MAX VCB @ 25°C	RFE	fae	MAX. SAT. RES.	tr	STRUCTURE	DWG #	L C s/a TO200	E O A D E			
					IC (A)	IB (A)	BVcbo (V)	BVbeo (V)	BVceo (V)	IC (A)							(Hz)	(Ω)	(s)			
1	ZN28341	1.0	85	♦C	20	50	140	2.0	100	10m	2.0	10	25	100	10M ² Δ	150m	4.0u	A	TO3	CØ		
2	JAN2N28341	1.0	85	♦J	20	60	160	2.0	100	10m	2.0	10	25	# 100	10M ² Δ	150m	4.0u		MD6e	CØ		
3	ZN29121	1.0	75	♦A	25	3.0	15	1.5	60	10m#	2.0	50	200	800	10M ² Δ	20m	2.0u		R74	AØ		
4#	ZSB131	1.0	65	♦J	15	1.5	40	12	32	2.0m	1.50	1.0	35	160	5.0k			A	TO3			
5#	ZSB131A	1.0	65	♦J	80	40	12	32	2.0m	1.50	1.0	40	160	5.0k	20		A	TO3				
6#	ZSB132	1.0	65	♦J	1.5	1.5	60	12	50	2.0m	1.50	1.0	35	* 160	5.0k			A	TO3			
7#	ZSB132A	1.0	65	♦J	8.0	60	12	50	2.0m	1.50	1.0	40	160	5.0k	20		A	TO3				
8#	ZSB483	1.0	60	♦J	15	80	40	60	2.0	5.0m	1.5	10	40	100	2.5k	30m		A	TO3			
9#	ZSB484	1.0	60	♦J	15	100	40	75	2.0	5.0m	1.5	10	40	100	2.5k	30m		A	TO3			
10#	ZSB485	1.0	60	♦J	15	140	40	85	2.0	5.0m	1.5	10	40	100	2.5k	30m		A	TO3			
11	ZN451	1.0	75	♦J	12	12	500m	60	28	3.0m	2.0	5.0	30	120	16k			3.0u	TO15	GB		
12	ZN461	1.0	75	♦J	12	500m	80	28	5.0m	2.0	5.0	20	80	12k			6.0u	TO15	GB			
13	ZN47	1.0	75	♦J	12	1.5	40	28	25	3.0m	2.0	5.0	30	120	500kΔ	80m		TO15	GBØ			
14	ZN48	1.0	75	♦J	12	1.5	60	28	30	2.0m	2.0	5.0	20	80	300kΔ	20		A	TO3			
15	B102000	1.0	#	45	7.0																	
16	B102001	1.0	#	45	7.0																	
17	B102002	1.0	#	45	7.0																	
18	B102003	1.0	#	45	7.0																	
19	B103000	1.0	#	45	7.0																	
20	B103001	1.0	#	45	7.0																	
21	B103002	1.0	#	45	7.0																	
22	B103003	1.0	#	45	7.0																	
23	B103004	1.0	#	45	7.0																	
24#	CTP1544	1.0	1.7	*	♦J	25	60	30	30	60	2.0m	2.0	3.0	40	200	12		A	TO3			
25#	CTP1562	1.0	1.7	*	♦J	25	40	30	20	18m	2.0	2.5	25	125	1	4.0k	40m		A	TO3		
26	DTG6110A	1.0	▼	85	♦J	15	5.0	2.8	70	20m#	2.0	1.0	50	300	* 850k ⁵	30m	4.4u	DA	TO3	CØ		
27	DTG6001	1.0	▼	85	♦J	15	5.0	1.4	50	20m#	2.0	5.0	50	115	850k ⁵	30m	4.4u	DA	TO3	CØ		
28	DTG6011	1.0	▼	85	♦J	15	5.0	1.4	50	20m#	2.0	5.0	50	115	850k ⁵	30m	4.4u	DA	TO3	CØ		
29	DTG6021	1.0	▼	85	♦J	15	5.0	1.4	70	20m#	2.0	5.0	50	115	850k ⁵	30m	4.4u	DA	TO3	CØ		
30	DTG6031	1.0	▼	85	♦J	15	5.0	1.4	80	20m#	2.0	5.0	50	115	850k ⁵	30m	4.4u	DA	TO3	CØ		
31	DTG603MT	1.0	▼	85	♦J	15	2.5	1.4	50	20m#	2.0	5.0	50	250	850k ⁵	30m	13u	A	TO3	CØ		
32	DTG2400M1	1.0	▼	85	♦J	25	5.0	75	1.5	140	# 10m#	2.0	10	25	125			30m	10u ²	ADE	TO3	CØ
33	MP6001	1.0	▼	85	♦J	25	5.0	75	1.5	50	200u	2.0	5.0	50	200u	50		30m	10u ²	ADE	TO3	CØ
34	MP6011	1.0	▼	85	♦J	25	5.0	75	1.5	80	200u	2.0	5.0	50	200u	50		30m	10u ²	ADE	TO3	CØ
35	MP6021	1.0	▼	85	♦J	25	5.0	90	1.5	70	200u	2.0	5.0	50	200u	50		30m	10u ²	ADE	TO3	CØ
36	MP6031	1.0	▼	85	♦J	25	5.0	90	1.5	80	200u	2.0	5.0	50	200u	50		30m	10u ²	ADE	TO3	CØ
37	MPT612	1.0	85	♦J	20	70	20	50					10	25	100	18M ⁵	03			TO3	CØ	
38	MPI612A	1.0	85	♦J	20	110	20	75					10	25	100	18M ⁵	03			TO3	CØ	
39	MPI612B	1.0	85	♦J	20	13	20	100					10	25	100	18M ⁵	03			TO3	CØ	
40	MPI613	1.0	85	♦J	7.0	20	100	50	75	5.0m	2.0	1.0	40	10	70	Ø			A	TO3	CØ	
41	MP2060	1.0	85	♦J	7.0	20	40	20	25	1.0m	2.0	3.0	30	200	600k ⁵				A	TO3	CØ	
42	MP2061	1.0	85	♦J	7.0	20	60	20	35	1.0m	2.0	3.0	30	200	600k ⁵				A	TO3	CØ	
43	MP2062	1.0	85	♦J	7.0	2.0	75	20	50	1.0m	2.0	3.0	30	200	600k ⁵				A	TO3	CØ	
44	MP2063	1.0	85	♦J	7.0	2.0	90	20	60	1.0m	2.0	3.0	30	200	600k ⁵				A	TO3	CØ	
45#	ZG220	1.1	ØJ	♦J	10	5.0	40	30	2.0m	1.50	10	10	12	Ø200k	0.5	11u	A	MD4				
46#	ZG221	1.1	ØJ	♦J	10	5.0	60	30	2.0m	1.50	10	10	12	Ø200k	0.5	11u	A	MD4				
47#	ZG222	1.1	ØJ	♦J	10	5.0	80	30	2.0m	1.50	10	10	12	Ø200k	0.5	11u	A	MD4				
48	ZN176	1.2	90	ØJ	♦J	3.0	40	30	3.0m	2.0	500m ²	25	90	7.0k	800m				A	TO3	CØ	
49	ZN178	1.2	40	ØJ	♦J	3.0	30	20	30	3.0m	2.0	500m	15	45	6.0k	800m				A	TO3	CØ
50	ZN250A	1.2	90	ØJ	♦J	7.0	2.0	40	20	500u	2.0	3.0	25	100	160k ² Δ	230m			A	TO3	CØ	
51	ZN251A	1.2	90	ØJ	♦J	7.0	2.0	60	20	35	500u	2.0	3.0	25	100	160k ² Δ	230m			A	TO3	CØ
52	ZN350	1.2	10	ØJ	♦J	3.0	50	40	3.0m	2.0	700m	20	60	6.0k	800m				A	TO3	CØ	
53	ZN350A	1.2	10	ØJ	♦J	3.0	50	40	3.0m	2.0	700m	20	60	6.0k	800m	5.0u			A	TO3	CØ	
54	ZN351	1.2	10	ØJ	♦J	3.0	50	40	3.0m	2.0	700m	25	90	6.0k	800m				A	TO3	CØ	
55	ZN351A	1.2	10	ØJ	♦J	3.0	80	40	3.0m	2.0	700m	25	90	6.0k	800m	5.0u			A	TO3	CØ	
56	ZN375	1.2	90	ØJ	♦J	3.0	80	40	3.0m	2.0	700m	35	90	10k	800m	10u			A	TO3	CØ	
57	ZN376	1.2	90	ØJ	♦J	3.0	50	40	3.0m	2.0	700m	35	120	6.0k	800m	5.0u			A	TO3	CØ	
58	ZN376A	1.2	90	ØJ	♦J	3.0	50	40	3.0m	2.0	700m	35	120	6.0k	800m	5.0u			A	TO3	CØ	
59	ZN456A	1.2	90	ØJ	♦J	7.0	3.0	40	20	30	1.50	5.0	30	90	200k ⁵	100m			A	TO3	CØ	
60	ZN456B	1.2	90	ØJ	♦J	7.0	3.0	40	30	30	1.50	5.0	30	90	200k ⁵ Δ	10			A	TO3	CØ	
61	ZN457A	1.2	90	ØJ	♦J	7.0	3.0	60	20	40	2.0m	1.50	5.0	30	90	200k ⁵	100m			A	TO3	CØ
62	ZN457B	1.2	90	ØJ	♦J	7.0	3.0	60	30	40	50m ²	1.50	5.0	30	90	200k ⁵ Δ	10			A	TO3	CØ
63	ZN458A	1.2	90	ØJ	♦J	7.0	3.0	80	30	45	50m ²	1.50	5.0	30	90	200k ⁵ Δ	10			A	TO3	CØ
64	ZN458B	1.2	90	ØJ	♦J	7.0	3.0	105	25	60	500m ²	2.0	2.0	20	70	50k ² Δ	800m			A	TO3	CØ
65	ZN459A	1.2	106	J	5.0	15	15	15	16	10m	2.0	500m ²	20	40	6.0k							

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	DERATE J to C	MAX FREE (W/C)	MAX Pc	M T	ABSOLUTE MAX. RATINGS @ 25°C						MAX I _{bo} @ 25°C	MAX V _{cb0} V _{cb0}	MAX V _{be0} V _{be0}	MAX I _c (A)	HFE			fae (Hz)	MAX. SAT. RES. (Q)	tr (s)	STRU TURE	DWG Y200 s/a	#C TO200 Ser								
						A IR @ 25°C	E X P	I _b (A)	BV _{cb0} (V)	BV _{be0} (V)	BV _{ce0} (V)					MIN	MAX															
1	2N1295	1.2	90 Ø	#J 30	500m	80	15	80 Ø	2.0m	2.0	500m	40	150k	1.0	10	60m	15u	10k	100kt	1.0	A	T03	CØ									
2	2N13581	1.2	30 Ø	#J 15 Ø	4.0	80	60	40	8.0m	2.0	1.2	40	80	10k	500m	10u	10u	10k	10u	10u	△	T03	CØ									
3	2N1359	1.2	90 Ø	#J 30		50	25	40 Ø	3.0m	4.0	1.0 Ø	35	90	8.5k	400m	8.0u	8.0u	10k	10u	10u	△	T03	CØ									
4	2N1360	1.2	90 Ø	#J 30		50	25	40 Ø	3.0m	4.0	1.0 Ø	60	140	8.5k	400m	8.0u	8.0u	10k	10u	10u	△	T03	CØ									
5	2N1362	1.2	90 Ø	#J 30		100	50	75	3.0m	4.0	1.0 Ø	35	90	400m	8.0u	8.0u	10k	500m	10u	10u	10k	10u	10u	△	T03	CØ						
6	2N1363	1.2	90 Ø	#J 30		100	50	75	3.0m	4.0	1.0 Ø	60	140	8.5k	400m	8.0u	8.0u	10k	10u	10u	△	T03	CØ									
7	2N1364	1.2	90 Ø	#J 30		120	60	100 Ø	3.0m	4.0	1.0 Ø	35	90	10k	500m	10u	10u	100	400m	8.0u	8.0u	10k	10u	10u	△	T03	CØ					
8	2N1365	1.2	90 Ø	#J 30		120	60	100 Ø	3.0m	4.0	1.0 Ø	40	100	8.5k	400m	8.0u	8.0u	10k	500m	10u	10u	100	60m	10u	△	T03	CØ					
9	2N1412	1.2	87 Ø	#J 15 Ø	4.0	100	60	65	6.0m	2.0	5.0	25	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	△	T03	CØ		
10	2N1529	1.2	125	#J 50		40	20	20	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
11	2N1530	1.2	125	#J 50		60	30	30	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
12	2N1531	1.2	125	#J 50		80	40	40	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
13	2N1532	1.2	125	#J 50		100	50	50	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
14	2N1533	1.2	125	#J 50		120	60	60	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
15	2N1534	1.2	125	#J 50		140	20	20	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
16	2N1535	1.2	125	#J 50		60	30	30	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
17	2N1536	1.2	125	#J 50		80	40	40	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
18	2N1537	1.2	125	#J 50		100	50	50	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
19	2N1538	1.2	125	#J 50		120	60	60	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
20	2N1539	1.2	125	#J 50		140	20	20	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
21	2N1539A	1.2	90 Ø	#J 50		40	20	20	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
22	2N1540	1.2	125	#J 50		60	30	30	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
23	2N1540A	1.2	90 Ø	#J 50		60	30	30	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
24	2N1541	1.2	125	#J 50		80	40	40	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
25	2N1541A	1.2	90 Ø	#J 50		80	40	40	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
26	2N1542	1.2	125	#J 50		100	50	50	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
27	2N1542A	1.2	90 Ø	#J 50		100	50	50	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
28	2N1543	1.2	125	#J 50		120	60	60	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
29	2N1544	1.2	90 Ø	#J 50		40	20	20	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
30	2N1544A	1.2	90 Ø	#J 50		40	20	20	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
31	2N1545	1.2	90 Ø	#J 50		60	30	30	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
32	2N1545A	1.2	90 Ø	#J 50		60	30	30	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
33	2N1546	1.2	90 Ø	#J 50		80	40	40	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
34	2N1546A	1.2	90 Ø	#J 50		80	40	40	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
35	2N1547	1.2	90 Ø	#J 50		100	50	50	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
36	2N1547A	1.2	90 Ø	#J 50		100	50	50	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
37	2N1548	1.2	90 Ø	#J 15		120	60	60	2.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
38	2N1549	1.2	90 Ø	#J 15		40	20	20	3.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
39	2N1549A	1.2	90 Ø	#J 15		40	20	20	3.0m	2.0	3.0	20	40	2.0k	200m	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	T03	CØ
40	JAN2N1548A1	1.2	90 Ø	#J 15	5.0	40	20	20	3.0m	2.0	3.0	20	40	2.0k																		

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE (W/C)	MAX P _c FREE J to C (W)	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C				MAX. MAX V _{ceo} @ 25°C (V)	HFE I _{cbo} @ MAX V _{ce} @ 25°C (A)	BIAS I _c (A)	MIN (Hz)	MAX (Hz)	fae	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE Y200 s/a TO200 D E Ser.	DWG # L C E O A D D E		
					I _c	I _b	B _{Vcbo}	B _{Vbea}												
1#	ADZ12	1.2 #	45	#J	20	4.0	80	50	60	8.0m	2.0#	1.2	40	120	∅	100K	AD	ZAA		
2	B1113000	1.2	70	#J	25	2.5	110	20	70	100m ^Δ	2.0#	2.0	60	300		100m	DΔ	TO3		
3	B1113001	1.2	70	#J	25	2.5	130	2.0	80	100m ^Δ	2.0#	2.0	60	300		100m	DΔ	TO3		
4	B1113002	1.2	70	#J	25	2.5	160	2.0	100	100m ^Δ	2.0#	2.0	60	300		100m	DΔ	TO3		
5	B1113003†	1.2	70	#J	25	2.5	130	2.0	80	50m ^Δ	2.0#	1.0	30	100		30m	DΔ	TO3		
6	B1113004†	1.2	70	#J	25	2.5	160	2.0	90	50m ^Δ	2.0#	1.0	30	100		30m	DΔ	TO3		
7	B113005†	1.2	70	#J	25	2.5	170	2.0	100	50m ^Δ	2.0#	1.0	30	100		30m	30u	DΔ	TO3	
8	CQT940A	1.2	90	#J	15	15.0	100	20	85	∅	2.0#	1.0	20			90m	A	TO3		
9	CQT940B	1.2	90	#J	15	15.0	80	60	60	∅	2.0#	7.0	30			90m	A	TO3		
10	CQT940BA	1.2	90	#J	15	15.0	80	60	60	∅	2.0#	1.0	50	250K ^Δ	200m	60m	A	TO3		
11	COT1110	1.2	90	#J	5.0	4.0	10	30	2.0m [∅]	2.0#	1.0	50	250	250K ^Δ	200m	A	TO3			
12	COT1110A	1.2	90	#J	5.0	4.0	10	30	2.0m [∅]	2.0#	1.0	50	250	250K ^Δ	200m	A	TO3			
13	COT1111	1.2	90	#J	5.0	6.0	10	50	2.0m [∅]	2.0#	1.0	50	250	250K ^Δ	200m	A	TO3			
14	COT1111A	1.2	90	#J	5.0	6.0	10	50	2.0m [∅]	2.0#	1.0	50	250	250K ^Δ	200m	A	TO3			
15	COT1112	1.2	90	#J	10	6.5	65	65	2.0m [∅]	2.0#	1.0	75	300	190m	190m	A	TO3			
16	CTP1500	1.2	90	#J	15	5.0	100	30	80	∅	2.0#	5.0	30	75	70m	AΔ	TO3			
17	CTP1503	1.2	90	#J	15	5.0	80	30	70	∅	2.0#	5.0	30	75	70m	AΔ	TO3			
18	CTP1504	1.2	90	#J	15	5.0	60	30	50	∅	2.0#	5.0	30	75	70m	AΔ	TO3			
19	CTP1508	1.2	90	#J	15	5.0	40	30	40	∅	2.0#	5.0	30	75	70m	AΔ	TO3			
20	CTP3500	1.2	90	#J	15	5.0	100	30	80	∅	2.0#	5.0	30	75	70m	AΔ	TO41			
21	CTP3503	1.2	90	#J	15	5.0	80	30	70	∅	2.0#	5.0	30	75	70m	AΔ	TO41			
22	CTP3504	1.2	90	#J	15	5.0	50	30	50	∅	2.0#	5.0	30	75	70m	AΔ	TO41			
23	CTP3508	1.2	90	#J	15	5.0	40	30	40	∅	2.0#	5.0	30	75	70m	AΔ	TO41			
24	CTP3544	1.2	90	#J	25	5.0	60	30	40	∅	2.0#	15m	25	125	5.0K ^Δ	40m	AΔ	TO41		
25	CTP3545	1.2	90	#J	25	5.0	80	30	60	∅	2.0#	15m	25	125	5.0K ^Δ	40m	AΔ	TO41		
26	CTP3552	1.2	90	#J	25	5.0	40	30	30	∅	2.0#	10m	25	75	5.0K ^Δ	40m	AΔ	TO41		
27	CTP3553	1.2	90	#J	25	5.0	100	30	75	∅	2.0#	10m	25	75	5.0K ^Δ	40m	AΔ	TO41		
28	DTG1110	1.2	70	#J	7.0	11.0	2.0	65	2.0m	2.0#	1.0	74	250	320K ^Δ	6.0u	DΔ	TO3			
29	DTG1110B	1.2	70	#J	25	5.0	20	40	∅	2.0#	1.0	65	300	850K ^Δ	100m	DΔ	TO3			
30	DTG11010†	1.2	106	#J	15	3.0	1.0	325	#	15m#	2.0#	1.0	450K ^Δ	160m	160m	6.0u	A	TO3		
31	DTG1110T	1.2	106	#J	15	3.0	1.0	200	#	15m#	2.0#	1.0	74	250	320K ^Δ	41m	A	TO3		
32	DTG1200	1.2	106	#J	15	3.0	120	2.0	100m ^Δ	500	8.0	22				A	TO3			
33	MP110	1.2	106	#J	7.0	2.0	65	#	2.0m [∅]	2.0#	1.0	65	300	500K ^Δ	100m	ADE	TO3			
34	MP110B	1.2	106	#J	25	5.0	90	2.0	40	200u [∅]	2.0#	1.0	65	300	500K ^Δ	100m	ADE	TO3		
35	MP525	1.2	106	#J	10	5.0	60	2.0	30	200u [∅]	2.0#	1.0	25	200	210K ^Δ	24m	9.0u [∅]	TO3		
36	MP2000A1	1.2	106	#J	25	5.0	60	2.0	30	200u [∅]	2.0#	1.0	25	200	210K ^Δ	24m	9.0u [∅]	ADE		
37	MP2100A1	1.2	106	#J	25	5.0	20	60	200u [∅]	2.0#	1.0	25	200	210K ^Δ	24m	9.0u [∅]	ADE			
38	MP2200A1	1.2	106	#J	25	5.0	20	80	200u [∅]	2.0#	1.0	25	200	210K ^Δ	24m	9.0u [∅]	ADE			
39	MP2300A1	1.2	106	#J	25	5.0	80	30	60	200u [∅]	2.0#	1.0	25	200	210K ^Δ	24m	9.0u [∅]	ADE		
40	MP2400A1	1.2	106	#J	25	5.0	20	120	200u [∅]	2.0#	1.0	25	200	210K ^Δ	24m	9.0u [∅]	ADE			
41#	SFT264	1.2	87	#C	15	3.0	30	15	15	8.0m	2.0#	5.0	25	100	300K ^Δ	600m	A	TO36		
42#	SFT265	1.2	87	#C	15	2.5	40	20	40	8.0m	2.0#	5.0	25	45	300K ^Δ	60m	A	TO36		
43#	SFT266	1.2	87	#C	15	2.5	60	40	50	8.0m	2.0#	5.0	25	45	300K ^Δ	60m	A	TO36		
44#	SFT267	1.2	87	#S	15	2.5	80	60	60	8.0m	2.0#	5.0	25	45	300K ^Δ	60m	A	TO36		
45	T13027	1.2	s	2.0	#C	7.0	3.0	45	20	40	1.0m [∅]	2.0#	3.0	40	250	#	A	TO3		
46	T13028	1.2	s	2.0	#C	7.0	3.0	60	20	40	1.0m [∅]	2.0#	3.0	40	250	#	A	TO3		
47	T13029	1.2	s	2.0	#C	7.0	3.0	80	20	55	1.0m [∅]	2.0#	3.0	40	250	#	A	TO3		
48	T13030	1.2	s	2.0	#C	7.0	3.0	100	20	60	1.0m [∅]	2.0#	3.0	40	250	#	A	TO3		
49	T13031	1.2	s	2.0	#C	7.0	3.0	120	20	65	1.0m [∅]	2.0#	3.0	40	250	#	A	TO3		
50	2N392	1.3		#J	5.0	1.0	50	40	40	8.0m	2.0#	1.0	200	6.0k	17	A	TO3			
51	2N1168	1.3		#J	5.0	1.0	50	20	30	8.0m	2.0#	1.0	70	110	10k	.08	A	TO3		
52	2N1291	1.3		#J	3.0	5.0	35	15	30	1.5m	2.0#	5.0	30	90	150K ^Δ	1.0	A	TO3		
53	2N1293	1.3		#J	3.0	5.0	60	15	45	2.0m	2.0#	5.0	30	90	150K ^Δ	1.0	A	TO3		
54	2N1297	1.3		#J	3.0	5.0	100	15	80	4.0m	2.0#	5.0	30	90	150K ^Δ	1.0	A	TO3		
55	2N15181	1.3		#J	50	25	40	50	30	40	4.0m	4.0#	15	15	40	4.0K	.03	20u	A	TO36
56	2N15191	1.3		#J	50	25	40	80	30	60	4.0m	4.0#	15	15	40	4.0K	.03	20u	A	TO36
57	2N15201	1.3		#J	50	35	60	50	30	40	4.0m	4.0#	15	17	35	4.0K	.02	25u	A	TO36
58	2N15211	1.3		#J	50	35	60	80	30	60	4.0m	4.0#	15	17	35	4.0K	.02	25u	A	TO36
59	2N15221	1.3		#J	50	50	80	50	30	40	4.0m	4.0#	15	22	45	4.0K	.01	30u	A	TO36
60	2N15231	1.3		#J	50	50	80	80	30	60	4.0m	4.0#	15	22	45	4.0K	.01	30u	A	TO36
61	2N1529A	1.3		#J	5.0	5.0	40	20	30	2.0m	2.0#	3.0	20	40	5.0K ^Δ	50				
62	2N1530A	1.3		#J	5.0	5.0	60	30	45	2.0m	2.0#	3.0	20	40	5.0K ^Δ	50				
63	2N1531A	1.3		#J	5.0	5.0	80	40	60	2.0m	2.0#	3.0	20	40	5.0K ^Δ	50				
64	2N1532A	1.3		#J	5.0	5.0	100	50	75	2.0m	2.0#	3.0	20	40	5.0K ^Δ	50				
65	2N1534A	1.3		#J	5.0	5.0	40	20	30	2.0m	2.0#	3.0	35	70	5.0K ^Δ	40				
66	2N1535A	1.3		#J	5.0	5.0	60	30	45	2.0m	2.0#	3.0</td								

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.-	TYPE No.	1 MIN. DERATE- J to C	MAX Pc M T	ABSOLUTE MAX. RATINGS @ 25°C				MAX. ICBO @ MAX Vcb/Vcb	BIAS IC	hFE		MAX. SAT. RES. (Ω)	tr	STRU- CTURE	DWG #	C E O A D E	
				FREE AIR @ 25°C	X M P	(W/C) (W)	(A)			(A)	(V)	(A)					
1	2N5439†	1.4	120 Ø	#J 60	12	110	2.5	90	10m#	2.00	25	40	120	12u	T03	CØ	
2	2N5440†	1.4	120 Ø	#J 60	12	140	2.5	120	10m#	2.00	25	40	120	12u	T03	CØ	
3	2N5692†	1.4	120 Ø	#J 40	12	50 †	2.5†	30	10m#	2.00	25	20	65	20u			
4	2N5893†	1.4	120 Ø	#J 40	12	80 †	2.5†	60	10m#	2.00	25	20	65	20u			
5	2N5694†	1.4	120 Ø	#J 40	12	100 †	2.5†	80	10m#	2.00	25	20	85	20u			
6	2N5895†	1.4	120 Ø	#J 40	12	120 †	2.5†	100	10m#	2.00	25	20	85	20u			
7	2N5686†	1.4	120 Ø	#J 40	12	140 †	2.5†	120	10m#	2.00	25	20	65	20u			
8#	2SB410	1.5	40 Ø	#J 15	12	135	5.0	135 5	250u	1.50	1.0	60 Ø	65	3.0M\$	DΔ	T03	
8#	2SB411	1.5	40 Ø	#J 11	200	5.0	200 \$	250u	1.50	1.0	60 Ø	65	2.5M\$	DΔ	T03		
10	2N2733	1.6	140 Ø	#J 65	10	80	30	60	5.0m	2.00	65	15	340k	10m	10u	A	MT23
11	2N2734	1.6	140 Ø	#J 65	10	60	30	45	5.0m	2.00	65	15	340k	10m	10u	A	MT23
12	2N2735	1.6	140 Ø	#J 65	10	40	20	30	5.0m	2.00	65	15	340k	10m	10u	A	MT23
13	2N2736	1.6	140 Ø	#J 65	10	80	30	60	5.0m	2.00	65	15	340k	10m	10u	A	MT22
14	2N2737	1.6	140 Ø	#J 65	10	80	30	45	5.0m	2.00	65	15	340k	10m	10u	A	MT22
15	2N2738	1.6	140 Ø	#J 65	10	40	20	30	5.0m	2.00	65	15	340k	10m	10u	A	MT22
16#	ADY26	1.6	100 Ø	#J 30	5.0	80	40	60	4.0m	0.0	25 Δ	15	25 Ø	25uØ	A	ZA4	
17	SDT1960	1.6	140	#J 65	10	80	30	60	5.0m	2.00	65	20	340k	7.0m	10u	A	MT23
18	SDT1961	1.6	140	#J 65	10	60	30	45	5.0m	2.00	65	20	340k	7.0m	10u	A	MT23
19	SDT1962	1.6	140	#J 65	10	40	20	30	5.0m	2.00	65	20	340k	7.0m	10u	A	MT23
20#	2G210	2.0 Ø	#J 6.0	2.0	60	20	60	1.0mØ	1.50	5.0	25	90	400k	10	A	M66	
21	2N173	2.0	50	#J 15 Ø	4.0	60	40	45	4.0m	2.0	50	35	70	10k	0.8	AΔ	T036
22	2N174	2.0	50	#J 15 Ø	4.0	80	60	40	8.0m	2.0	50	50	10k	0.8	AΔ	T036	
23	2N174A	2.0	50	#J 15 Ø	4.0	80	60	40	15m	2.0Ø	1.2	40	80	15k	0.6	AΔ	T036
24#	JAN2N174A	2.0	75 Ø	#J 15 Ø	4.0	80	60	40	15m	2.0Ø	1.2	40	80	100kΔ	60m		MT56
25	2N277	2.0	50	#J 15 Ø	4.0	40	20	25	8.0m	2.0	50	35	70	10k	0.8	AΔ	T036
26	2N278	2.0	50	#J 15 Ø	4.0	50	30	30	4.0m	2.0	50	35	70	10k	0.8	AΔ	T036
27	2N441	2.0	150 Ø	#J 15 Ø	4.0	40	20	25	8.0m	2.0	50	20	40	10k	15u	AΔ	T036
28	2N442	2.0	150 Ø	#J 15 Ø	4.0	50	30	30	4.0m	2.0	50	20	40	10k	15u	AΔ	T036
29	2N443	2.0	150 Ø	#J 15 Ø	4.0	60	40	45	4.0m	2.0	50	20	40	10k	90m	AΔ	T036
30*	JAN2N4568	2.0	150	#J 7.0	40	30	30	7.0m	1.50	5.0	30	120		100m		T03	
31*	JAN2N4578	2.0	150	#J 7.0	40	80	35	40	7.0m	1.50	5.0	30	120		100m		T03
32*	JAN2N4588	2.0	150	#J 7.0	40	800	40	45	7.0m	1.50	5.0	30	120		100m		T03
33	2N511	2.0	150	#J 25	5.0	40	30	30	15m	2.0Ø	10	20	60	260k	50m	AΔ	M64
34	2N511A	2.0 Ø	#J 25	5.0	60	30	40	15m	2.0Ø	10	20	60	260k	50m	AΔ	M64	
35	2N511B	2.0 Ø	#J 25	5.0	80	30	45	15m	2.0Ø	10	20	60	260k	50m	AΔ	M64	
36	2N512	2.0 Ø	#J 25	5.0	40	30	30	15m	2.0Ø	15	20	60	280k	70m	AΔ	M64	
37	2N512A	2.0 Ø	#J 25	5.0	60	30	40	15m	2.0Ø	15	20	60	280k	70m	AΔ	M64	
38	2N512B	2.0 Ø	#J 25	5.0	80	30	45	15m	2.0Ø	15	20	60	280k	70m	AΔ	M64	
39	2N513	2.0 Ø	#J 25	5.0	40	30	30	15m	2.0Ø	20	20	60	300k	75m	AΔ	M64	
40	2N513A	2.0 Ø	#J 25	5.0	60	30	40	15m	2.0Ø	20	20	60	300k	75m	AΔ	M64	
41	2N513B	2.0 Ø	#J 25	5.0	80	30	45	15m	2.0Ø	20	20	60	300k	75m	AΔ	M64	
42	2N514	2.0 Ø	#J 25	5.0	40	30	30	15m	2.0Ø	25	20	60	430k	800m	AΔ	M64	
43	2N514A	2.0 Ø	#J 25	5.0	60	30	40	15m	2.0Ø	25	20	60	430k	800m	AΔ	M64	
44	2N514B	2.0 Ø	#J 25	5.0	80	30	45	15m	2.0Ø	25	20	60	430k	800m	AΔ	M64	
45*	JAN2N1021A	2.0	150	#J 7.0	100	50	50	7.0m	1.50	5.0	30	120		100m		T03	
46*	JAN2N1022A	2.0	150	#J 7.0	120	60	55	7.0m	1.50	5.0	30	120		100m		T03	
47	JAN2N1358	2.0	150	#S 15 Ø	4.0	80	40	40	4.0m	2.0Ø	5.0	25	50	5.0kΔ	60m		T036
48	2N138A1	2.0 Ø	#S 15 Ø	4.0	100	60	60	4.0m	2.0Ø	5.0	25	50	5.0kØ	60m		T036	
49	2N1907	2.0 Ø	#J 20	3.0	100	1.5	40	10m	1.50	15	20	20M\$	70m	AΔ	T03		
50	2N1908	2.0 Ø	#J 20	3.0	130	1.5	50	10m	1.50	15	20	20M\$	70m	AΔ	T03		
51	2N1980	2.0	170	#J 15	50	20	30	6.0m	2.0Ø	5.0	50	100	3.0kΔ	100m	A	T036	
52	2N1981	2.0	170 Ø	#J 15	70	20	40	6.0m	2.0Ø	5.0	50	100	3.0kΔ	100m	A	T036	
53	2N1982	2.0	170 Ø	#J 15	90	20	50	6.0m	2.0Ø	5.0	50	100	3.0kΔ	100m	A	T036	
54	2N2075	2.0	170 Ø	#J 15	80	40	65	4.0m	2.0	50	20	40	10k	60m	9.0u		
55	2N2075A	2.0	170 Ø	#J 15	80	40	65	4.0m	2.0	50	20	40	10k	60m	9.0u		
56	2N2076	2.0	170 Ø	#J 15	70	35	55	4.0m	2.0	50	20	40	10k	60m	9.0u		
57	2N2076A	2.0	170 Ø	#J 15	70	35	55	4.0m	2.0	50	20	40	10k	60m	9.0u		
58	2N2077	2.0	170 Ø	#J 15	50	25	45	4.0m	2.0	50	20	40	10k	60m	9.0u		
59	2N2077A	2.0	170 Ø	#J 15	50	25	45	4.0m	2.0	50	20	40	10k	60m	9.0u		
60	2N2078	2.0	170 Ø	#J 15	40	20	25	4.0m	2.0	50	20	40	10k	60m	9.0u		
61	2N2078A	2.0	170 Ø	#J 15	40	20	25	4.0m	2.0	50	20	40	10k	60m	9.0u		
62	2N2079	2.0	170 Ø	#J 15	80	40	65	4.0m	2.0	50	35	70	10k	60m	6.0u		
63	2N2079A	2.0	170 Ø	#J 15	80	40	65	4.0m	2.0	50	35	70	10k	60m	6.0u		
64	2N2080	2.0	170 Ø	#J 15	70	35	55	4.0m	2.0	50	35	70	10k	60m	6.0u		
65	2N2080A	2.0	170 Ø	#J 15	70	35	55	4.0m	2.0	50	35	70	10k	60m	6.0u		
66	2N2081	2.0	170 Ø	#J 15	50	25	45	4.0m	2.0	50	35	70	10k	80m	6.0u		
67	2N2081A	2.0	170 Ø	#J 15	50	25	45	4.0m	2.0	50	35	70	10k	80m	6.0u		
68	2N2082	2.0	170 Ø	#J 15	40	20	25	4.0m	2.0	50	35	70	10k	80m	6.0u		
69	2N2082A	2.0	170 Ø	#J 15	40	20	25	4.0m	2.0	50	35	70	10k	80m	6.0u		
70*	2N152	2.0	170 Ø	#J 30	30 Ø	45	25	30	4.0m	2.0	50	50	100	2.0kΔ	20m		MT85
71	2N152A	2.0	170 Ø	#J 30	30 Ø	45	25	30	4.0m	2.0	50	50	100	2.0k	20m		MT85
72*	2N153	2.0	170 Ø	#J 30	30 Ø	45	25	30	4.0m	2.0	50	50	100	2.0kΔ	20m		MT85
73	2N153A	2.0	170 Ø	#J 30	30 Ø	60	30	45	4.0m	2.0	50	50	100	2.0			

8. GERMANIUM PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX Pc M T	ABSOLUTE MAX. RATINGS @ 25°C				MAX. ICBO @ MAX Vcb @ 25°C	HFE	fae	MAX. SAT. RES. (Ω)	tr	STRUCTURE	DWG # Y200 s/a T0200	C E O A D D E				
				AIR @ 25°C	X M (W/C)	P (W)	Ic (A)	Ib (A)	BVcbo (V)	BVbeo (V)	Vcb (A)	BIAS Vcb (V)	Ic (A)	MIN	MAX	(Hz)	(S)		
1	2N4277†	2.0	170 Ø	#J	60	10	30	20	20	4.0m	2.0Ø	15	80	180	# 2.0kΩ	20uØ	T03 CØ		
2	2N4278†	2.0	170 Ø	#J	60	10	45	25	30	4.0m	2.0Ø	15	60	120	# 2.0kΩ	20uØ	T03 CØ		
3	2N4279†	2.0	170 Ø	#J	60	10	45	25	30	4.0m	2.0Ø	15	80	180	# 2.0kΩ	20uØ	T03 CØ		
4	2N4280†	2.0	170 Ø	#J	60	10	60	30	45	4.0m	2.0Ø	15	60	120	# 2.0kΩ	20uØ	T03 CØ		
5	2N4281†	2.0	170 Ø	#J	60	10	60	30	45	4.0m	2.0Ø	15	80	180	# 2.0kΩ	20uØ	T03 CØ		
6	2N4282†	2.0	170 Ø	#J	60	10	75	40	60	4.0m	2.0Ø	15	60	120	# 2.0kΩ	20uØ	T03 CØ		
7	2N4283†	2.0	170 Ø	#J	60	10	75	40	60	4.0m	2.0Ø	15	80	180	# 2.0kΩ	20uØ	T03 CØ		
8#	2SB407	2.0	30 Ø	#J	7.0		30	10	30	500u	1.5Ø	1.0	80	Ø	350ks	A	T03 CØ		
9	MP500	2.0	170 Ø	#J	60		45	25	30	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
10	MP500A	2.0	170 Ø	#J	60		45	25	30	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
11	MP501	2.0	170 Ø	#J	60		60	30	45	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
12	MP501A	2.0	170 Ø	#J	60		60	30	45	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
13	MP502	2.0	170 Ø	#J	60		75	40	60	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
14	MP502A	2.0	170 Ø	#J	60		75	40	60	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
15	MP504	2.0	170 Ø	#J	60		45	25	30	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
16	MP504A	2.0	170 Ø	#J	60		45	25	30	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
17	MP505	2.0	170 Ø	#J	60		60	30	45	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
18	MP505A	2.0	170 Ø	#J	60		60	30	45	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
19	MP506	2.0	170 Ø	#J	60		75	40	60	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
20	MP506A	2.0	170 Ø	#J	60		75	40	60	200uØ	2.0Ø	50	12	20	Ø 2.0kΩ	9.0m	A	T036 CØ	
21	SDT1860	2.0	170		65	10	80	30	60	5.0m	2.0Ø	65	20	340ks	7.0m	10u	T036		
22	SDT1861	2.0	170		65	10	60	30	45	5.0m	2.0Ø	65	20	340k	7.0m	10u	T036		
23	SDT1862	2.0	170		65	10	40	20	30	5.0m	2.0Ø	65	20	340k	7.0m	10u	T036		
24+	2N4078	2.2	# 7.5 Ø	#J	1.0		32	10	20	20uØ	0.0	500m	75	300	1.0MΩ 400m	M66 AØ			
25	2N574	2.5	187 Ø	#J	10	2.0	60	28	55	7.0m	2.0Ø	10	9.0	22	100ks	20m	20u A	MT7	
26	JAN2N574	2.5	187 Ø	#J	10		60	28	55	7.0m	2.0Ø	10	9.0	22	20m			MT7	
27	2N574A	2.5	187 Ø	#J	10	2.0	80	28	60	20m	2.0Ø	10	9.0	22	100ks	20m	20u A	MT7	
28	2N575	2.5	187 Ø	#J	25	3.8	60	28	50	7.0m	2.0Ø	25	10	150ks	20m	15u AΔ	MT7		
29	JAN2N575	2.5	187 Ø	#J	25	3.8	60	28	50	7.0m	2.0Ø	100m	19	42	200ks	20m	10u AΔ	MT7	
30	2N575A	2.5	187 Ø	#J	25	3.8	80	28	55	20m	2.0Ø	25	10	150ks	20m	15u AΔ	MT7		
31	JAN2N575A	2.5	187 Ø	#J	25	3.8	80	28	55	20m	2.0Ø	10	19	42	200ks	20m	10u AΔ	MT7	
32	2N1157	2.5	187 Ø	#J	40	8.0	60	28	45	7.0m	2.0Ø	40	10	200ks	20m	10u AΔ	MT7		
33	2N1157A	2.5	187 Ø	#J	40	6.0	80	28	50	20m	2.0Ø	40	10	200ks	20m	10u AΔ	MT7		
34	JAN2N1157A	2.5	187 Ø	#J	40		80	28	50	20m	2.0Ø	10	38	84	200ks	20m	10u AΔ	MT7	
35#	AD139	2.5	187 Ø	#J	13		20	32	10	32	25uØ	0.0	1.0	33	110	10k		A	MD11
36	DA3F3	2.5	187 Ø	#J	2.5		60	65	35	2.0Ø	0.0	10	25						MT7
37	MP800	3.0	250 Ø	#J	150		20	60	12mØ	2.0Ø	150		15					X71 A	
38	MP801	3.0	250 Ø	#J	150		20	45	12mØ	2.0Ø	150		15					X71 A	
39	MP900†	3.0	250 Ø	#J	150		80	2.0	60	10m	2.0Ø	70	20					X71 A	
40	MP901†	3.0	250 Ø	#J	150		110	2.0	80	10m	2.0Ø	70	20					X71 A	
41	MP902†	3.0	250 Ø	#J	150		140	2.0	120	10m	2.0Ø	70	20					X71 A	

9. GERMANIUM NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE NO.

LINE No.	TYPE No.	MIN. DERATE J to C (W/C)	MAX PC M FREE AIR @ 25°C (W)	T	ABSOLUTE MAX. RATINGS @ 25°C						MAX. HFE	f _{ee}	MAX. SAT. RES. (Ω)	tr	STRUCTURE	DWG #	C
					A	E	I _c	I _b	BV _{ceo}	BV _{beo}							
1	2N95	2.5	1.5		25											X4	F0
2	2N142/13	4.0	80		60	30	30		2.0m	4.0	25	11		6.0		TO13	F0
3# AC181K		2.5 Ø	#J 1.0		32	10	24	s	20uØ	1.0Ø	600m	50		1.0MΩΔ		* X9b	
4# AC194	2.5mØ	1.0 #	#C 1.0		25	10	25	Ø	25uØ	400mΔ	200 Ø	5.0M				A	T01
5# AC194K	2.5mØ	1.0 #	#C 1.0		25	10	25	Ø	25uØ	400mΔ	200 Ø	5.0M				A	T01
6# 2N4105	25m	1.6 Ø	#S 1.0		25	10	25	Ø	25uØ	10	5.0mA	70	350			T01	A
7# 2N102/13	80m	1.0	#J 1.5		30	15	30		2.0m	1.5Ø	500m	11		2.0		A	T013
8# 2N144/13	80m	1.0	#J 800m		60	30	60		6.0m	4.5Ø	250m	11		6.0		A	T013
9# JAN2N326	116m	7.0 Ø	#J 2.0		35	15	35	Ø	500u	1.0Ø	1.0	15	60	150kΩΔ	1.2	T03	C0
10# AD185	117m	6.0	#J 1.0		25	10	20		30uØ	1.0Ø	500m	60	185 Ø	20k		A	MD17
11# 2N326	125mØ	7.0 Ø	#J 2.0		35	15	35		300u	1.0Ø	1.0	15	60	150kΩΔ	1.2	A	MD9
12# AD181	222m	4.0	#J 1.0		32	10	20		500u	1.0Ø	500m	80	320	3.0MΩ		A	MD17c
13# 2N1218	270m	20	#C 3.0		45	15	45	s	100u	1.5Ø	1.0	30	120	7.0kΩΔ	10	1.5u	A
14# 2N1292	333mØ	25 Ø	#J 3.0		35	15	30		1.0	2.0Ø	500m	30		10		T03	C0
15# 2N1294	333mØ	25 Ø	#J 3.0		60	15	45	Ø	2.0Ø	500m	30				T03	C0	
16# 2N1296	333mØ	25 Ø	#J 3.0		80	15	60	Ø	3.0	2.0Ø	500m	30		10		T03	C0
17# 2N1298	333mØ	25 Ø	#J 3.0		100	15	80	Ø	4.0	2.0Ø	500m	30		10		T03	C0
18# 2N1321	333mØ	25 Ø	#J 3.0		35	15	30		1.0	2.0Ø	500m	30		10		T010	F0
19# 2N1323	333mØ	25 Ø	#J 3.0		60	15	45	Ø	2.0	2.0Ø	500m	30		10		T010	F0
20# 2N1325	333mØ	25 Ø	#J 3.0		80	15	60	Ø	3.0	2.0Ø	500m	30		10		T010	F0
21# 2N1327	333m	25 Ø	#J 3.0		100	15	80	Ø	4.0	2.0Ø	500m	30		10		T010	F0
22# 2N1329	333m	25 Ø	#J 3.0		35	15	30		1.0	2.0Ø	500m	30		10		T013	F0
23# 2N1330	333m	25 Ø	#J 3.0		60	15	45	Ø	2.0	2.0Ø	500m	30		10		T013	F0
24# 2N1332	333m	25 Ø	#J 3.0		80	15	60	Ø	3.0	2.0Ø	500m	30		10		T013	F0
25# 2N1334	333m	25 Ø	#J 3.0		100	15	80	Ø	4.0	2.0Ø	500m	30		10		T013	F0
26# 2N5887	670m	57 Ø	#J 5.0	2.0	20	20	20	Ø	15 Δ	2.0Ø	500m	15	350	7.0		T066	C0
27# 2N5888	670m	57 Ø	#J 5.0	2.0	30	20	30	Ø	25 Δ	2.0Ø	500m	15	350	7.0		T066	C0
28# 2N5889	670m	57 Ø	#J 5.0	2.0	30	20	30	Ø	25 Δ	2.0Ø	500m	30	70	7.0		T066	C0
29# 2N5890	670m	57 Ø	#J 5.0	2.0	45	20	45	Ø	35 Δ	2.0Ø	500m	30	70	7.0		T066	C0
30# 2N5891	670m	57 Ø	#J 5.0	2.0	60	20	60	Ø	45 Δ	2.0Ø	500m	30	70	7.0		T066	C0
31# 2N5892	670m	57 Ø	#J 5.0	2.0	75	20	75	Ø	60 Δ	2.0Ø	500m	30	70	7.0		T066	C0
32# 2N5893	670m	57 Ø	#J 5.0	2.0	30	20	30	Ø	25 Δ	2.0Ø	500m	60	120	7.0		T066	C0
33# 2N5894	670m	57 Ø	#J 5.0	2.0	45	20	45	Ø	35 Δ	2.0Ø	500m	60	120	7.0		T066	C0
34# 2N5895	670m	57 Ø	#J 5.0	2.0	60	20	60	Ø	45 Δ	2.0Ø	500m	60	120	7.0		T066	C0
35# 2N5896	670m	57 Ø	#J 5.0	2.0	75	20	75	Ø	60 Δ	2.0Ø	500m	60	120	7.0		T066	C0
36# 2N5897	670m	57 Ø	#J 5.0	2.0	30	20	30	Ø	25 Δ	2.0Ø	500m	100	200	7.0		T066	C0
37# 2N5898	670m	57 Ø	#J 5.0	2.0	45	20	45	Ø	35 Δ	2.0Ø	500m	100	200	7.0		T066	C0
38# 2N5899	670m	57 Ø	#J 5.0	2.0	60	20	60	Ø	45 Δ	2.0Ø	500m	100	200	7.0		T066	C0
39# 2N5900	670m	57 Ø	#J 5.0	2.0	75	20	75	Ø	60 Δ	2.0Ø	500m	100	200	7.0		T066	C0
40# 2N5901	670m	57 Ø	#J 5.0	2.0	30	20	30	Ø	25 Δ	2.0Ø	500m	175	350	7.0		T066	C0
41# 2N4077	2.2 #	7.5 Ø	#J 1.0		32	10	20		25uØ	0.0	500m	75	300	1.0MΩΔ	600m	MD6	A0

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE NO.

LINE No.	TYPE No.	I _{MIN} DERATE (W/ ^o C)	MAX P _c FREE J to C (W)	M T A E X M P	ABSOLUTE MAX RATINGS @25°C						MAX. ICBO @ MAX V _{ce} @25°C	HFE	fae	MAX. SAT. RES. (Ω)	tr	STRUCTURE	DWG # Y200 s/a TO200 Ser.	LC E O A D E	
					I _c (A)	I _b (A)	V _{bcbo} (V)	V _{bebo} (V)	V _{cebo} (V)	I _c vs V _{cb} (A)									
1▼# 25A483		20 □	\$J 1.0	1.0 □	150	50	150	100u	100	100m	30	250	9.0M ⁵			DM	T066	C	
2# 25A565		350	\$J 50	50	50	40	50	50m	3.0□	10	40	200			PE	T01			
3# 25A566		60 □	\$J 70	70	120	40	100		4.0□	50	35	200	200M ⁵			PE	T066	A	
4# 25A597		6.0 □	\$J 1.0		50	40	40		1.0u	3.0□	150m	10	250	400K ⁵			EM	T039	C
5▼# 25A663		60 □	\$J 7.0		100	50	80	1.0m ⁵	5.0□	1.0	30	200	6.0M ⁵			EM	T039		
6▼ HEP763		1.0 □	\$J 400m ⁵		40	5.5	3.5s	20 s	1.0u ⁵	25		15		250M ⁵					
7▼ HEP2425		6.0 □	\$J 3.0 s		60	5	70s	40 s	500u	40		60	□	8.0M ⁵			T05	A	
8▼ HEP2466		30 □	\$J 3.0 s		60	5	50s	40 s	500u	40		60	□	8.0M ⁵			X58b	B	
9▼ HEP2485		150 □	\$J 10 s		70	5	70s	50 s	2.0s	40		60	□	6.0M ⁵			T03	C ⁵	
10▼ HEP7005		40 □	\$J 5.0 s		40	5	50s	40 s	100u	25		70	□	8.0M ⁵			X58b	B	
11▼ HEP7028		25 □	\$J 3.0 s		80	5	50s	80 s	100u	60		80	□	8.0M ⁵			T066	C ⁵	
12▼ HEP7058		87 □	\$J 5.0 s		40	5	50s	40 s	1.0m ⁵	40		250	□	4.0M ⁵			T03	C ⁵	
13▼ HEP7085		1.8 □	\$J 800m ⁵		60	5	50s	60 s	3.0n	30		85	□	275M ⁵			T05	A	
14▼ HEP7108		3.0 □	\$J 100m ⁵		95	5	4.5s	80 s	5.0n	15		25	□	200M ⁵			T05	A	
15 TRSP3254S		1.0 □	\$J 40		40	350	50	325	0.2m	10	20	30		30M			MD14		
16 TRSP3255S		2.0 □	\$J 40		350	50	325	0.2m	10	20	30		30M			T05			
17 TRSP3504S		1.0 □	\$J 40		375	50	350	0.2m	10	20	30		30M			MD14			
18 TRSP3505S		2.0 □	\$J 40		375	50	350	0.2m	10	20	30		30M			T05			
19 TRSP3754S		1.0 □	\$J 40		400	50	375	0.2m	10	20	30		30M			MD14			
20 TRSP3755S		2.0 □	\$J 40		400	50	375	0.2m	10	20	30		30M			T039	A ⁵		
21 2N50231	2.2m	1.0 □	\$S 500m		30	50	3.0	1.0u ⁵	1.0□	500m	40	100	200M ⁵	1.7					
22 2N5091	2.6m ⁵	2.0 □	\$A 10	500m	350	60	300	500u	150	100m	20	200	20M ⁵	120		T05	A ⁵		
23 2N5093	2.6m ⁵	2.0 □	\$A 10	500m	400	60	350	500u	150	100m	20	200	20M ⁵	120		T05	A ⁵		
24 2N5094	2.6m ⁵	2.0 □	\$A 10	500m	450	60	400	500u	150	100m	20	200	20M ⁵	120		T05	A ⁵		
25 2N5096	2.6m ⁵	2.0 □	\$A 10	500m	500	60	450	500u	150	100m	20	200	20M ⁵	120		T05	A ⁵		
26 JAN2N34671	2.8m	1.0 □	\$S 1.0		40	50	40	100u	1.0□	500m	40	120	175M ⁵	1.2	30n	T05	A ⁵		
27 JAN2N34681	2.8m	1.0 □	\$S 1.0		50	50	50	100u	1.0□	500m	25	75	150M ⁵	1.2	30n	T05	A ⁵		
28 JAN2N36351	2.8m	1.0 □	\$J 1.0		140	50	140	100u	1.0□	50m	100	300	# 200M ⁵	400n ⁵		T05	A ⁵		
29 JAN2N36361	2.8m	1.0 □	\$J 1.0		175	50	175	100u	1.0□	50m	50	150	# 150M ⁵	400n ⁵		T05	A ⁵		
30 JAN2N36371	2.8m	1.0 □	\$J 1.0		175	50	175	100u	1.0□	50m	100	300	# 200M ⁵	400n ⁵		T05	A ⁵		
31 2N40361	2.8m	5.0 □	\$J 1.0	500m	90	70	65	100u	1.0□	150m	40	140	60M ⁵	4.3	70n	T05			
32 2N5160	2.8m	5.0 □	\$J 1.0	400m	60	40	40	1.0u ⁵	5.0□	50m	10	20	500M ⁵	5Cm		T05	A ⁵		
33 2N5281	2.8m ⁵	2.0 □	\$A 1.0	500m	175	50	150	1.0u ⁵	1.0□	1.0m	20	200	20M ⁵	5Cm		T05	A ⁵		
34 2N5282	2.8m ⁵	2.0 □	\$A 1.0	500m	325	50	300	1.0u ⁵	1.0□	1.0m	20	200	20M ⁵	5Cm		T05	A ⁵		
35 40406	2.8m	1.0 □	\$J 700m		200	60	40	1.0u ⁵	1.0□	100u	30	200	100M ⁵			D	T05	A ⁵	
36 2N34671	5.6m	1.0 □	\$S 1.0		40	50	40	100u	1.0□	500m	40	120	# 175M ⁵	30n		T05	A ⁵		
37 2N34681	5.6m	1.0 □	\$S 1.0		50	50	50	100u	1.0□	500m	25	75	# 150M ⁵	30n		T05	A ⁵		
38 2N4037	5.6m	1.0 □	\$S 1.0	500m	60	70	40	250u	1.0□	50m	50	250	60M ⁵	930m		T05	A ⁵		
39 2N4234	5.6m	1.0 □	\$J 1.0	200m	40	70	40	100u	1.0□	250m	30	150	# 3.0M ⁵			T05	A ⁵		
40 2N4235	5.6m	1.0 □	\$J 1.0	200m	60	70	60	100u	1.0□	250m	30	150	# 3.0M ⁵			T05	A ⁵		
41 2N4236	5.6m	1.0 □	\$J 1.0	200m	80	70	80	100u	1.0□	250m	30	150	# 3.0M ⁵			T05	A ⁵		
42 2N4314	5.6m	1.0 □	\$S 1.0	500m	90	70	65	250u	1.0□	150m	50	250	200M ⁵	9.3		T05	A ⁵		
43 40537	5.6m ⁵	1.0 □	\$J 700m		200	50	55	100u*	4.0□	50	30	300	# 100M ⁵	22		DPE	T05	A ⁵	
44 40538	5.6m ⁵	1.0 □	\$J 700m		200	50	55	100u*	4.0□	500	15	90	# 100M ⁵	4.0		DPE	T05	A ⁵	
45 MM4001	5.6m ⁵	1.0 □	\$J 500m		150	40	150*	1.0u ⁵	1.0□	100m	10	20	# EA	EA		EA	T039	A ⁵	
46 MM4002	5.6m ⁵	1.0 □	\$J 500m		200	40	200	* 5.0u ⁵	1.0□	10m	20	20	# EA	EA		EA	T039	A ⁵	
47 MM4003	5.6m ⁵	1.0 □	\$J 500m		250	40	250	* 5.0u ⁵	1.0□	10m	20	20	# EA	EA		EA	T039	A ⁵	
48 JAN2N37631	5.7m	1.0 □	\$J 1.5		60	50	60	100u	1.0□	100n	10	35	150M ⁵	10	35n	T05	A ⁵		
49 2N5679	5.7m	1.0 □	\$J 1.0	500m	100	1	40*	100	1.0u	2.0□	10	40	150	30M ⁵	20	T05	A ⁵		
50 2N5680	5.7m	1.0 □	\$J 1.0	500m	120	1	40*	120	1.0u	2.0□	10	40	150	30M ⁵	20	DPE	T039	A ⁵	
51▼ SA0403	5.7m ⁵	1.0 □	\$J 2.0		50	1	80	10u ⁵	1.0□	10u ⁵	10	50	50	60M ⁵	10	DPE	T039	A ⁵	
52▼ SA0403A	5.7m ⁵	1.0 □	\$J 2.0		50	1	80	10u ⁵	1.0□	10u ⁵	10	70	300	# 60M ⁵		DPE	T039	A ⁵	
53 2N5147	5.9m	1.0 □	\$J 2.0		10	100	5.5	80	1.0m ⁵	1.0□	10	30	90	50M ⁵		T039	A ⁵		
54 2N5149	5.9m	1.0 □	\$J 2.0		10	100	5.5	80	1.0m ⁵	1.0□	10	70	120	60M ⁵		T039	A ⁵		
55 2N5151	5.9m	1.0 □	\$J 5.0		2.5	100	5.5	80	1.0m ⁵	1.0□	2.5	30	90	60M ⁵		T039	A ⁵		
56 2N5153	5.9m	1.0 □	\$J 5.0		2.5	100	5.5	80	1.0m ⁵	1.0□	2.5	70	200	70M ⁵		T039	A ⁵		
57 TRSP2254	6.6m ⁵	1.0 □	\$A 400m		50m	225	50	225	3.0u ⁵	100	25m	25	# 50	200M ⁵	200p	DMA	T05		
58 TRSP2254S	6.6m ⁵	1.0 □	\$A 400m		50m	250	50	225	3.0u ⁵	100	25m	25	# 50	200M ⁵	200p	DMA	T05		
59 TRSP2504	6.6m ⁵	1.0 □	\$A 400m		50m	250	50	250	3.0u ⁵	100	25m	25	# 50	200M ⁵	200p	DMA	T05		
60 TRSP2504S	6.6m ⁵	1.0 □	\$A 400m		275	50	250	3.0u ⁵	100	25m	25	# 50	200M ⁵	200p	DMA	T05			
61 TRSP2754	6.6m ⁵	1.0 □	\$A 400m		50m	275	50	275	3.0u ⁵	100	25m	25	# 50	200M ⁵	200p	DMA	T05		
62 TRSP2754S	6.6m ⁵	1.0 □	\$A 400m		50m	300	50	275	3.0u ⁵	100	25m	25	# 50	200M ⁵	200p	DMA	T05		
63 TRSP3014	6.6m ⁵	1.0 □	\$A 400m		50m														

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE- J to C	MAX P _c FREE AIR @ 25°C	M T A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX ICBO @ MAX V _{ce} @ 25°C	HFE BIAS V _{cb} (A)	MIN IC (V)	MAX IC (A)	fae	MAX. SAT. RES. (Ω)	tr	STRUCTURE	DWG # Y200 s/a T0200	C E A D E
					(W)	(W)	(A)	(A)	(V)										
1	2N37831	22m	1.0	SJ 1.5	60	5.0	60	100#	1.50	1.0	20	80	150M _Δ	10	40n	T05	A		
2	2N50221	25m	1.0 Ø	SJ 500m	50	5.0	50	100#	1.00	500m	25	100	170M _Δ	800m	30n	T05	A		
3	2N32441	28m	1.0	SJ 1.0	40	5.0	40	50#	1.00	500m	50	150#	176M _Δ	35n	T05	A			
4	2N32451	28m	1.0	SJ 1.0	50	5.0	50	50#	1.00	500m	30	90	90#	150M _Δ	40n	T05	A		
5	2N36341	28m	1.0	SJ 1.0	140	5.0	140	100#	1.00	50m	50	150	150M _Δ	40	400n	T05	A		
6	JAN2N36341†	28m	1.0	SJ 1.0	140	5.0	140	100#	1.00	50m	50	150	150M _Δ	40	400n	T05	A		
7	2N36351	28m	1.0	SJ 1.0	140	5.0	140	100#	1.00	50m	100	300	200K _Δ	40	400n	T05	A		
8	2N36361	28m	1.0	SJ 1.0	175	5.0	175	100#	1.00	50m	50	150	150M _Δ	40	400m	T05	A		
9	2N36371	28m	1.0	SJ 1.0	175	5.0	175	100#	1.00	50m	100	300	200K _Δ	40	400m	T05	A		
10	2N3743	28m	1.0	SJ 50m	300	5.0	300	300#	1.00	30m	25	250	30M _Δ	500	40n	T05	A		
11	2N44041	28m	5.0 Ø	SJ 500m	80	5.0	80	25n#	5.00	150m	40	120	200M _Δ	25n	T05	A			
12	2N44051	28m	5.0 Ø	SJ 500m	80	5.0	80	25n#	5.00	150m	100	300	200M _Δ	25n	T05	A			
13	2N44051	28m	5.0 Ø	SJ 1.5	80	5.0	80	25n#	5.00	500m	30	120	120#	150M _Δ	60n	T05	A		
14	2N44071	28m	5.0 Ø	SJ 1.5	80	5.0	80	25n#	5.00	500m	80	240	150M _Δ	60n	T05	A			
15	2N48901	28m	1.0	SJ 500m	60	5.0	40	25n#	1.00	150m	50	100M _Δ	9.3	50n	T05	A			
16	2N4929	28m	1.0	SJ 500m	150	4.0	150	500#	1.00	10m	20	100M _Δ	25n	T05	A				
17	2N4930	28m	1.0	SJ 500m	200	4.0	200	1.0u#	1.00	10m	20	20M _Δ	25n	T05	A				
18	2N4931	28m	1.0	SJ 500m	250	4.0	250	1.0u#	1.00	10m	20	20M _Δ	25n	T05	A				
19	2N5583	28m	5.0 Ø	SJ 500m	30	3.0	30	50n#	2.00	100m	25	100	1.0G _Δ	8.0	40n	T05	A		
20	40319	28m	1.0	SJ 700m	200m	2.5	40	25n#	4.00	50m	35	200	100M _Δ	50n	PE	T05	A		
21	40362	28m	5.0 Ø	SJ 700m	200m	4.0	70	10m	4.00	50m	35	200	100M _Δ	50n	PE	T05	A		
22	40834	28m	1.0	SJ 700m	200m	70	10	10u*	4.00	150m	50	250	27	PL	T05	A			
23#	BC1601	28m	3.2	SJ 1.0	100m	40	50	40	100n#	1.00	100m	40	250	50M _Δ	1.0	500n	E	A	
24#	BC1611	28m	3.2	SJ 1.0	100m	60	50	60	100n#	1.00	100m	40	250	50M _Δ	1.0	500n	E	A	
25#	BSV151	28m	3.2 Ø	SJ 1.0	200m	30	40	100n#	1.00	100m	40	250	50M _Δ	2.0	500n	PE	A		
26#	BSV161	28m	3.2 Ø	SJ 1.0	200m	50	60	80	100n#	1.00	100m	40	250	50M _Δ	2.0	500n	PE	A	
27	MM37261	28m	1.0	SJ 1.5	50	5.0	50	100#	2.00	500m	30	120	200M _Δ	1.2	50n	EA	A		
28	MM4019	28m	5.0 Ø	SJ 1.0	60	4.0	40	100u#	5.00	250m	10	750M _Δ	40n	40M _Δ	2.0	50n	AN	A	
29	MM46451	28m	5.0 Ø	SJ 2.5	200	5.0	200	10u#	1.00	10m	20	40M _Δ	2.4	50n	AN	A			
30	MM46461†	28m	5.0 Ø	SJ 2.5	300	5.0	300	10u#	1.00	10m	20	40M _Δ	3.0	50n	AN	A			
31	MM46471	28m	5.0 Ø	SJ 2.5	400	5.0	400	10u#	1.00	10m	20	30M _Δ	3.0	50n	AN	A			
32	2N37191	34m	6.0 Ø	SJ 3.0	500m	40	4.0	40	100n#	5.00	100m	40	250	60M _Δ	100n	T05	A		
33	2N37201	34m	6.0 Ø	SJ 3.0	500m	60	4.0	60	100n#	5.00	100m	40	250	60M _Δ	100n	T05	A		
34	2N38671	34m	1.0	SJ 3.0	40	4.0	40	150u#	3.00	2.5	25	60M _Δ	1.0	65n	T05	A			
35	2N38681	34m	1.0	SJ 3.0	60	4.0	60	150u#	3.00	2.5	20	60M _Δ	1.0	65n	T05	A			
36	SA0419	34m	6.0 Ø	SJ 1.0	500m	60	1.0	50	1.5M _Δ	1.00	250m	20	150	1.0M _Δ	DME	T05	A		
37	2N5675	40m	10	SJ 2.0	500m	125	1.0	100	100n#	5.00	500m	50	150	50M _Δ	90n	T05	A		
38	2N58651	40m	1.2	SJ 1.0	500m	70	5.0	50	200n#	1.00	150m	40	200	100M _Δ	2.5	DPE	MD28a	A	
39	40394	40m	7.0	SJ 1.0	500m	60	7.0	40	250n#	1.00	10m	15	180	60M _Δ	60M _Δ	T05	A		
40#	BC304	40m	6.0 Ø	SJ 1.0	500m	60	7.0	45	20n	1.00	150m	40	240	75M _Δ	PL	T05	A		
41	SDT3501	40m	7.0	SJ 1.0	60	6.0	40	100n#	5.00	500m	30	150	50M _Δ	PL	T05	A			
42	SDT3502	40m	7.0	SJ 1.0	60	6.0	60	100n#	5.00	500m	30	150	50M _Δ	PL	T05	A			
43	SDT3503	40m	7.0	SJ 1.0	80	6.0	80	100n#	5.00	500m	30	150	50M _Δ	PL	T05	A			
44	SDT3504	40m	7.0	SJ 2.0	100	6.0	100	100n#	5.00	500m	30	150	50M _Δ	PL	T05	A			
45	SDT3505	40m	7.0	SJ 2.0	100	6.0	40	100n#	5.00	500m	30	150	50M _Δ	PL	T05	A			
46	SDT3506	40m	7.0	SJ 2.0	100	6.0	60	100n#	5.00	500m	50	150	50M _Δ	PL	T05	A			
47	SDT3507	40m	7.0	SJ 2.0	100	6.0	80	100n#	5.00	500m	50	150	50M _Δ	PL	T05	A			
48	SDT3508	40m	7.0	SJ 2.0	100	6.0	100	100n#	5.00	500m	50	150	50M _Δ	PL	T05	A			
49	SDT3550	40m	7.0	SJ 2.0	100	6.0	60	1.0m#	1.00	250m	30	100	10M _Δ	PL	T05	A			
50	SDT3551	40m	7.0	SJ 2.0	100	6.0	80	1.0m#	1.00	250m	30	100	10M _Δ	PL	T05	A			
51	SDT3552	40m	7.0	SJ 2.0	100	6.0	40	1.0m#	1.00	250m	20	100	10M _Δ	PL	T05	A			
52	SDT3553	40m	7.0	SJ 2.0	100	6.0	60	100u#	1.00	500m	20	100	10M _Δ	PL	T05	A			
53	SDT3554	40m	7.0	SJ 2.0	100	6.0	80	100u#	1.00	500m	20	100	10M _Δ	PL	T05	A			
54	SDT3775	40m	7.0	SJ 2.0	100	6.0	40	100u#	1.00	500m	20	100	10M _Δ	PL	T05	A			
55	SDT3776	40m	7.0	SJ 2.0	60	6.0	60	75u	2.0	2.0	20	60	10M _Δ	PL	T05	A			
56	SDT3777	40m	7.0	SJ 2.0	60	6.0	80	75u	2.0	2.0	20	60	10M _Δ	PL	T05	A			
57	SDT3778	40m	7.0	SJ 2.0	40	6.0	40	75u	2.0	2.0	20	60	10M _Δ	PL	T05	A			
58	SE8542	40m	10	SJ 1.0	30	5.0	30	50n#	1.00	150m	40	540	# 540M _Δ	DPL	T05	A			
59	MM5005	45m	1.5	SJ 2.0	80	5.0	60	200n#	2.50	150m	50	250	30M _Δ	3.3	ANA	T05	A		
60	MM5006	45m	1.5	SJ 2.0	100	5.0	80	200n#	2.50	200m	50	250	30M _Δ	3.3	ANA	T05	A		
61	MM5007	45m	1.5	SJ 2.0	120	5.0	100	200n#	2.50	250m	50	250	30M _Δ	3.3	ANA	X81	A		
62	MPSU55	45m	1.0	SJ 1.0	60	4.0	60	100n#	5.00	50m	100	180	125M _Δ	2.4	AN	X81	A		
63	MPSU56	45m	1.0	SJ 1.0	80	4.0	80	100n#	5.00	50m	100	180	125M _Δ	2.4	AN	X81	A		
64	2N2881	50m	8.5 Ø	SJ 2.0	1.0	60	10	60	4.00	500m	20	60	60M _Δ	50u	T05	A			
65	2N2882	50m	8.5 Ø	SJ 3.0	15	40	10	40	75u#	2.00	1.0	20	60	1.0M _Δ	300m	T05	A		
66	2N3202	50m	8.7 Ø	SJ 3.0	15	40	10	40	75u#	2.00	1.0	20	60	1.0M _Δ	300m	T05	A		
67	2N3203	50m	8.7 Ø	SJ 3.0	15	60	10	60	75u#	2.00	1.0	20	60	1.0M _Δ </					

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX Po FREE AIR @ 25°C	M T X M P	ABSOLUTE MAX RATINGS @ 25°C						MAX Icbo @ 25°C	HFE	fae	MAX. SAT. RES.	tr	STRUCTURE	DWG #	L C	
					A	E	Ic	lb	BVcbo	BVbeo	BVceo	BIAS	MIN	MAX	(Hz)	[Ω]	(s)		
1	MJ8T011	57m	10 Ø	SJ 5.0	1.0		80	5.0	80	100	2.0	2.0	25	180	#	30MΩΔ	T038	A	
2	2N3660	66m	5.0 Ø	SJ 1.5			40	5.0	30	100nØ	100	500m	25	100		25MΩΔ	T05	AØ	
3	2N3661	66m	5.0 Ø	SJ 1.5			60	5.0	50	100nØ	100	500m	25	100		25MΩΔ	T05	AØ	
4#	2SA547	66m	10 Ø	SJ 1.0			70	5.0	60	3.0uØ	3.0	1.0	25			80MΩ	PE	T037 AØ	
5#	2SA547A	66m	10 Ø	SJ 1.0			90	5.0	80	3.0uØ	3.0	1.0	25			80MΩ	PE	T037 AØ	
6	TRSP15X5	66m	2.0	SJ 1.0	500m	175	12	150		100n	100	30m	900	40k		25MΩΔ	MD14		
7	TRSP20X5	66m	2.0	SJ 1.0	500m	250	12	250	100n	100	30m	900	40k		25MΩΔ	MD14			
8	TRSP25X5	66m	2.0	SJ 1.0	500m	300	12	300	100n	100	30m	900	40k		25MΩΔ	MD14			
9	TRSP30X5	66m	2.0	SJ 1.0	500m	300	12	300	100n	100	30m	900	40k		25MΩΔ	MD14			
10	2NT084	67m	10 Ø	SJ 2.0	0.20		60	5.0	50	10m	10	.50	20	60		25Kt	3.0		
11#	2SA6231	70m	7.0 Ø	♦J 1.5			35	5.0	40	1.0 Ø	4.0	500m	35	#	300	#	70MΩ	X51b	P
12#	2SA6241	70m	7.0 Ø	♦J 1.5			50	5.0	40	1.0 Ø	4.0	500m	35	#	300	#	70MΩ	X51b	P
13#	2SA6451	70m	7.0 Ø	♦J 800m			70	5.0	60	1.0 Ø	4.0	300m	35	#	300	#	70MΩ	X51b	P
14#	2SA6461	70m	7.0 Ø	♦J 800m			90	5.0	80	1.0 Ø	4.0	300m	20	#	300	#	70MΩ	X51b	P
15#	2SA6471	70m	7.0 Ø	♦J 800m			110	5.0	100	1.0 Ø	4.0	300m	20	#	300	#	70MΩ	X51b	P
16#	2SA606	72m Ø	9.0 Ø	SJ 700m			100	5.0	80	3.0uØ	5.0	200m	30	#	100	#	PE	T05	AØ
17#	D41D1t	72m	1.2	SS 1.0			50	5.0	30	100n	2.0	100m	50	150		150MΩ	1.0	50nØ	
18#	D41D2t	72m	1.2	SS 1.0			50	5.0	30	100n	2.0	100m	120	300		150MΩ	1.0	50nØ	
19#	D41D4t	72m	1.2	SS 1.0			50	5.0	45	100n	2.0	100m	50	150		150MΩ	1.0	50nØ	
20#	D41D5t	72m	1.2	SS 1.0			50	5.0	45	100n	2.0	100m	120	360		150MΩ	1.0	50nØ	
21#	D41D7t	72m	1.2	SS 1.0			50	5.0	60	100n	2.0	100m	50	150		150MΩ	2.0	50nØ	
22#	D41D8t	72m	1.2	SS 1.0			50	5.0	60	100n	2.0	100m	120	360		150MΩ	2.0	50nØ	
23#	MPSU51	72m	1.0	TJ 2.0			40	5.0	30	100n	1.0	10m	55	#		50MΩΔ	AN	AØ	
24#	MPSU51A	72m	1.0	TJ 2.0			50	5.0	40	100n	1.0	10m	55	#		50MΩΔ	AN	AØ	
25	ST750041	76m#	11 Ø#	SJ 2.0			80	8.0	80	10uØ	100	1.0	30	120	#	20MΩΔ	PL	T05	
26	ST750051	76m#	11 Ø#	SJ 2.0			100	8.0	100	10uØ	100	1.0	30	120	#	20MΩΔ	PL	T05	
27	ST750061	76m#	11 Ø#	SJ 2.0			120	8.0	120	10uØ	100	1.0	30	120	#	20MΩΔ	PL	T05	
28#	BD136A	100m	6.5 ØØ	♦J 500m	100m		45	5.0	45	100nØ	1.0	150m	40	250		50MΩΔ	1.2	PE	
29#	BD136B	100m	6.5 ØØ	♦J 500m	100m		45	5.0	45	100nØ	2.0	150m	40	250		75MΩ	1.0	PE	
30#	BD138Δ	100m	6.5 ØØ	♦J 500m	100m		60	5.0	60	100n	1.0	150m	40	250		50MΩΔ	1.2	PE	
31#	BD138Δ	100m	6.5 ØØ	♦J 500m			60	5.0	60	100nØ	2.0	150m	40	160		75MΩ	1.0	PE	
32#	BD140Δ	100m	6.5 ØØ	♦J 500m			50	5.0	80	100nØ	2.0	150m	40	160		75MΩ	1.0	PE	
33#	D43C11	100m	2.1	SJ 3.0			50	5.0	30	10uØ	1.0	200m	25	40MΩ		500m	50nØ	1	
34#	D43C21	100m	2.1	SJ 3.0			50	5.0	30	10uØ	1.0	200m	40	120		40MΩ	500m	50nØ	
35#	D43C31	100m	2.1	SJ 3.0			50	5.0	30	10uØ	1.0	200m	40	120		40MΩ	500m	50nØ	
36#	D43C41	100m	2.1	SJ 3.0			50	5.0	45	10uØ	1.0	200m	25	40MΩ		500m	50nØ	1	
37#	D43C51	100m	2.1	SJ 3.0			50	5.0	45	10uØ	1.0	200m	40	120		40MΩ	500m	50nØ	
38#	D43C61	100m	2.1	SJ 3.0			50	5.0	45	10uØ	1.0	200m	40	120		40MΩ	500m	50nØ	
39#	D43C71	100m	2.1	SJ 3.0			50	5.0	45	10uØ	1.0	200m	25	40MΩ		500m	50nØ	1	
40#	D43C81	100m	2.1	SJ 3.0			50	5.0	45	10uØ	1.0	200m	40	120		40MΩ	500m	50nØ	
41	SDT3575	100m	17	2.0	1.0		40	6.0	40	100u	1.0	250m	30	150		10M	T066		
42	SDT3576	100m	17	2.0	1.0		60	6.0	60	100u	1.0	250m	30	150		10M	T066		
43	SDT3577	100m	17	2.0	1.0		80	6.0	80	100u	1.0	250m	30	150		10M	T066		
44	SDT3578	100m	17	2.0	1.0		40	5.0	30	100n	1.0	500m	25	100		40M	PL	T066	
45	SDT3579	100m	17	2.0	1.0		60	5.0	50	100n	1.0	500m	25	100		40M	PL	T066	
46	2N4387	114m	20 Ø	SJ 2.0	300m		40	5.0	40	10uØ	100	500m	25	100		25MΩΔ	3.0		
47	2N4388	114m	20 Ø	SJ 2.0	300m		60	5.0	60	10uØ	100	500m	25	100		25MΩΔ	3.0		
48	2N5161	114m	20 Ø	S 1.5			60	4.0	40	100u	5.0	250m	10			TO60	AØ		
49	2N5597	114m	20	SJ 2.0	1.0		80	5.5	60	10uØ	5.0	1.0	70	200	#	60MΩΔ	TO66	CØ	
50	2N5599	114m	20	SJ 2.0	1.0		100	5.5	80	10uØ	5.0	1.0	30	90	#	50MΩΔ	TO66	CØ	
51	2N5601	114m	20	SJ 2.0	1.0		100	5.5	80	10uØ	5.0	1.0	70	200	#	60MΩΔ	TO66	CØ	
52	2N5603	114m	20	SJ 2.0	1.0		120	5.5	100	10uØ	5.0	1.0	30	90	#	50MΩΔ	TO66	CØ	
53#	2SA613	119m	15 Ø#	SJ 2.0	500m		60	7.0	40	10uØ	5.0	1.0	30	100	#	50MΩΔ	PE	TO66	
54#	2SA614	119m	15 Ø#	SJ 2.0	500m		80	7.0	60	10uØ	5.0	1.0	30	100	#	50MΩΔ	PE	TO66	
55	2N5100	133m	10 Ø	S A 1.0	500m		450	6.0	400	5.0uØ	150	100m	20	200		20MΩΔ	120	MD14 AØ	
56	TRSP2008	133m	20 Ø	S 1.0	200m		600	6.0	200	5	100	1.0	30	300		25M	TO66		
57	TRSP3006	133m	20 Ø	S 1.0	300m		600	6.0	300	5	100	1.0	30	300		25M	TO66		
58	TRSP4005	133m	20 Ø	S 1.0	500m		400	6.0	400	5	100u	1.0	30	300		25M	TO66		
59	TRSP4016S	133m	20 Ø	S 1.0	500m		450	6.0	400	5	100u	1.0	30	300		2.5M	TO66		
60	TRSP4298	133m	20 Ø	SJ 1.0	500m		350	4.0	250	5	100u	1.0	30	50		20MΩΔ	TO66		
61	TRSP4297	133m	20 Ø	SJ 1.0	500m		350	4.0	250	5	100u	1.0	30	75		20MΩΔ	TO66		
62	TRSP4298	133m	20 Ø	SJ 1.0	500m		500	4.0	350	5	100u	1.0	30	75		20MΩΔ	TO66		
63	TRSP4299	133m	20 Ø	SJ 1.0	500m		500	4.0	350	5	100u	1.0	30	75		20MΩΔ	TO66		
64	TRSP4505	133m	20 Ø	S 1.0	500m		450	6.0	450	5	100u	1.0	30	300		25M	TO66		
65	TRSP5005	133m	20 Ø	S 1.0	500m		500	6.0	500	5	100u	1.0	30	300		25M	TO66		
66	TRSP6006	133m	20 Ø	S 1.0	600m		600	6.0	600	5	100u	1.0	30	300		25M	TO66		
67	TRSP7008	133m	20 Ø	S 1.0	700m		600	6.0	700	5	100u	1.0	30	300		25M	TO66		
68	TRSP8006	133m	20 Ø	S 1.0	800m		800	6.0	800	5	100u	1.0	30	300		25M	TO66		
69	2N2875	138m	20 Ø	SC 2.0	200m		60	5.0	50	10uØ	5.0	1.5	15	60	#	25MΔ	3.0	PL MT21	
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10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX P _c AIR @ 25°C (W/C)	M T FREE E X M P	ABSOLUTE MAX. RATINGS @ 25°C						MAX. ICBO @ MAX V _{ceo} @ 25°C (A)	hFE	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #	
					I _c (A)	I _b (A)	V _{bcbo} (V)	V _{bebo} (V)	V _{ceo} (V)	BIAIS (V)	I _c (A)	MIN	MAX	(Hz)	(s)			
1	SDT3713	160m	28	5.0	1.0	60	60	60	75u	2.0	2.0	20	60	10M			T066	
2	SDT3714	160m	28	5.0	1.0	80	60	80	75u	2.0	2.0	20	60	10M			T066	
3	SDT3715	160m	28	5.0	1.0	40	60	40	75u	2.0	2.0	20	60	10M			T066	
4	SDT3716	160m	28	5.0	1.0	40	60	40	1.0m	3.0	1.0	12	36	10M			T066	
5	SDT3717	160m	28	5.0	1.0	60	60	60	1.0m	3.0	1.0	12	36	10M			T066	
6	SDT3718	160m	28	5.0	1.0	80	60	80	1.0m	3.0	1.0	12	36	10M			T066	
7	SDT3719	160m	28	5.0	1.0	100	60	100	1.0m	3.0	1.0	12	36	10M			T066	
8	SDT3720	160m	28	5.0	1.0	40	60	40	1.0m	3.0	1.0	40	36	10M			T066	
9	SDT3721	160m	28	5.0	1.0	40	60	40	1.0m	3.0	2.0	10	30	10M			T066	
10	SDT3722	160m	28	5.0	1.0	60	60	60	1.0m	3.0	2.0	10	30	10M			T066	
11	SDT3723	160m	28	5.0	1.0	80	60	80	1.0m	3.0	2.0	10	30	10M			T066	
12	SDT3724	160m	28	5.0	1.0	100	60	100	1.0m	3.0	2.0	10	30	10M			T066	
13	SDT3725	160m	28	5.0	1.0	40	60	40	1.0m	3.0	2.0	40	10M				T066	
14	SDT3726	160m	28	5.0	1.0	40	50	40	100u	2.0	2.5	25	100	10M			T066	
15	SDT3727	160m	28	5.0	1.0	60	50	60	100u	2.0	2.5	25	100	10M			T066	
16	SDT3728	160m	28	5.0	1.0	80	50	80	100u	2.0	2.5	25	100	10M			T066	
17	SDT3729	160m	28	5.0	1.0	40	60	40	1.0m	3.0	3.0	10	30	10M			T066	
18	SDT3730	160m	28	5.0	1.0	60	60	60	1.0m	3.0	3.0	10	30	10M			T066	
19	SDT3731	160m	28	5.0	1.0	80	60	80	1.0m	3.0	3.0	10	30	10M			T066	
20	SDT3732	160m	28	5.0	1.0	100	60	100	1.0m	3.0	3.0	10	30	10M			T066	
21	SDT3733	160m	28	5.0	1.0	40	60	40	1.0m	3.0	3.0	40	10M				T066	
22	SGO403	160m	24	Ø#	SJ 2.0	1.0	5.5t	80	Ø*	10u\$	5.0	1.0	30	90	# 50M _Δ	DPL	T059	
23	SGO403A	160m	24	Ø#	SJ 2.0	1.0	5.5t	80	Ø*	10u\$	5.0	1.0	70	300	# 50M _Δ	DPL	T059	
24	2N3021†	165m	25	Ø	SJ 3.0	500m	30	4.0	30	200u#	1.0	20	60	60M _Δ	500m	100nØ	T03	
25	2N3022†	165m	25	Ø	SJ 3.0	500m	45	4.0	45	200u#	1.0	20	60	60M _Δ	500m	100nØ	T03	
26	2N3023†	165m	25	Ø	SJ 3.0	500m	60	4.0	60	200u#	1.0	20	60	60M _Δ	500m	100nØ	T03	
27	2N3024†	165m	25	Ø	SJ 3.0	500m	30	4.0	30	200u#	1.0	50	180	60M _Δ	330m	100nØ	T03	
28	2N3025†	165m	25	Ø	SJ 3.0	500m	45	4.0	45	200u#	1.0	50	180	60M _Δ	330m	100nØ	T03	
29	2N3026†	165m	25	Ø	SJ 3.0	500m	60	4.0	60	200u#	1.0	50	180	60M _Δ	330m	100nØ	T03	
30	MM4021	166m	29	Ø	SJ 2.5	36	4.0	18	100uØ	5.0	500m	15					MT75a	
31	SOT3509	166m	30	Ø	SJ 2.0	1.0	40	60	40	100n	5.0	500m	30				PL	T066
32	SOT3510	166m	30	Ø	SJ 2.0	1.0	60	60	60	100n	5.0	500m	30				PL	T066
33	SOT3511	166m	30	Ø	SJ 2.0	1.0	80	60	80	100n	5.0	500m	30				PL	T066
34	SDT3512	166m	30	Ø	SJ 2.0	1.0	100	60	100	100n	5.0	500m	30				PL	T066
35	SDT3513	166m	30	Ø	SJ 2.0	1.0	40	60	40	100n	5.0	500m	50	150			PL	T066
36	SDT3514	166m	30	Ø	SJ 2.0	1.0	60	60	60	100n	5.0	500m	50	150			PL	T066
37	SDT3515	166m	30	Ø	SJ 2.0	1.0	80	60	80	100n	5.0	500m	50	150			PL	T066
38	SDT3516	166m	30	Ø	SJ 2.0	1.0	100	60	100	100n	5.0	500m	50	150			PL	T066
39	BD132	167mØ	11	Ø	SJ 3.0	500m#	45	4.0	45	5.0uØ	2.0	120	500m	40	60M _Δ	800m	PE	T0126
40	2N4999	200m#	30	Ø	SJ 2.0	1.0	100	5.5	80	10m#	5.0	1.0	30	90	# 50M _Δ		T059	
41	2N5001	200m#	30	Ø	SJ 2.0	1.0	100	5.5	80	10m#	5.0	1.0	70	200	# 60M _Δ		T059	
42	2N5739	200m#	20	Ø	SJ 10	2.0	60	1	5.0t	60	500uØ	5.0	50	20	80	10M _Δ	500m	T066
43	2N5740	200m#	20	Ø	SJ 10	2.0	100	1	5.0t	100	500uØ	5.0	50	20	80	10M _Δ	500m	T066
44	ZSB434	200m	1.5	Ø	SJ 3.0	3.0	50	50	50	200uØ	5.0	2.5	15	25	Ø 3.0M _Δ	400m	ID	X75
45	ZSB435	200m	1.5	Ø	SJ 3.0	3.0	35	50	35	200uØ	5.0	1.0	20	55	Ø 3.0M _Δ	1.0	ID	X75
46	MJE370	200m	25	Ø	SJ 3.0	2.0	30	4.0	30	100u	1.0	10	25	#				X58
47	SDT3801	200m	35	Ø	SJ 10	4.0	60	60	60	1.0m	2.0	1.0	25	90				T066
48	SDT3802	200m	35	Ø	SJ 10	4.0	80	60	80	1.0m	2.0	1.0	25	90				T066
49	SDT3803	200m	35	Ø	SJ 10	4.0	60	60	60	1.0m	2.0	1.0	50	180				T066
50	SDT3804	200m	35	Ø	SJ 10	4.0	80	60	80	1.0m	2.0	1.0	50	180				T066
51	SDT3805	200m	35	Ø	SJ 10	2.0	40	5.0	40	100u	5.0	5.0	20	80				T066
52	SDT3806	200m	35	Ø	SJ 10	2.0	80	50	80	100u	5.0	5.0	20	80				T066
53	SDT3807	200m	35	Ø	SJ 10	2.0	40	5.0	40	100u	5.0	5.0	20	80				T066
54	ST400021	200m#	300	Ø	SJ 60	80	80	80	*	100uØ	100	20	20	120	# 20M _Δ	500nØ	PL	T063
55	ST400031	200m#	300	Ø	SJ 60	100	80	100	*	100uØ	100	20	20	120	# 20M _Δ	500nØ	PL	T063
56	ST400041†	200m#	300	Ø	SJ 60	120	80	120	*	100uØ	100	20	20	120	# 20M _Δ	500nØ	PL	T063
57	MP8511	222m	30	Ø	SJ 1.2	60	7.0	60	1.0m	5.0Ø	200m	50	120					X95
58	MP8512	222m	30	Ø	SJ 1.2	60	7.0	60	1.0m	5.0Ø	200m	50	120					X95
59	MP8513	222m	30	Ø	SJ 1.2	60	7.0	60	1.0m	5.0Ø	200m	50	120					X95
60	MP8521	222m	30	Ø	SJ 1.2	35	7.0	35	1.0m	5.0Ø	200m	20	60					X95
61	MP8522	222m	30	Ø	SJ 1.2	35	7.0	35	1.0m	5.0Ø	200m	50	120					X95
62	MP8523	222m	30	Ø	SJ 1.2	35	7.0	35	1.0m	5.0Ø	200m	100	100					X95
63	MP8611	222m	5.0	Ø	SJ 1.5	60	7.0	60	1.0m	5.0Ø	500m	50	120					T066
64	MP8612	222m	5.0	Ø	SJ 1.5	35	7.0	35	1.0m	5.0Ø	500m	50	120					T066
65	MP8613	222m	5.0	Ø	SJ 1.5	35	7.0	35	1.0m	5.0Ø	500m	100	100					T066
66	MP8621	222m	5.0	Ø	SJ 1.5	35	7.0	35	1.0m	5.0Ø	500m	20	60					T066
67	MP8622	222m	5.0	Ø	SJ 1.5	35	7.0	35	1.0m	5.0Ø	500m	50	120					T066
68	MP8623	222m	5.0	Ø	SJ 1.5	35	7.0	35	1.0m	5.0Ø	500m	100	100					X58
69	2N3199	227m	40	Ø	SJ 3.0	1.5	40	10	40	75u#	2.0	1.0	20	60				X58
70	2N3200	227m	40	Ø	SJ 3.0	1.5	60	10	60	75u#	2.0	1.0	20	60				X58
71	2N3201	227m	40	Ø	SJ 3.0	1.5	80	10	80	75u#	2.0							

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN DERATE J to C	MAX P _c FREE AIR @ 25°C	M T	ABSOLUTE MAX. RATINGS @ 25°C				MAX. ICBO @ MAX V _{cb} @ 25°C	hFE			fae	MAX. SAT. RES. (f _t)	tr	STRUCTURE	DWG #	L C
					A	E	I _c	I _b		BIAS V _{cb}	MIN	MAX					s/a	T TO 200 D E
(W/C)	(W)	(A)	(A)	(V)	(V)	(V)	(V)	(A)	(A)	(V)	(A)	(A)	(Hz)	(s)				
1▼	2N6025	288m	36	S	4.0	2.0	80	5.0	60	100mΔ	4.00	1.5	30	120 #		X75a	TØ	
2▼	2N6026	288m	36	S	4.0	2.0	80	5.0	60	100mΔ	4.00	1.5	30	120 #		X75a	DØ	
3▼	SD1445	288m	1.8	S	4.0	2.0	80	5.0	40	1.0m#	4.00	1.5	25	125		DME1	Y220a D	
4▼	SDJ445	288m	1.8	S	4.0	2.0	50	5.0	45	1.0m#	4.00	2.0	20	100			550m	
5▼	SDK445	288m	1.8	S	4.0	2.0	50	5.0	45	1.0m#	4.00	2.5	20	100			480m	
6▼	SDL445	288m	1.8	S	4.0	2.0	50	5.0	55	1.0m#	4.00	2.5	20	100			480m	
7▼	SDM445	288m	1.8	S	4.0	2.0	50	5.0	45	1.0m#	4.00	200m	40	200			10	
8▼	SDN445	288m	1.8	S	4.0	2.0	50	5.0	60	1.0m#	4.00	300m	40	200			10	
9▼	SDO445	288m	1.8	S	4.0	2.0	50	5.0	80	1.0m#	4.00	500m	40	200			10	
10▼	SDP445	288m	1.8	S	4.0	2.0	40	50	100	1.0m#	4.00	500m	40	200			10	
11#	BOY67	300m	2.0	S	5.0	1.0	100	4.0	80	50Δ	4.00	2.0	20	80	30M	PE	T0111 G	
12#	BOY68	300m	2.0	S	5.0	1.0	100	4.0	80	50Δ	4.00	2.0	20	80	30M	PE	T0111 A	
13	SDT3125	300m	52	S	10	2.0	40	6.0	40	10u	5.0	5.0	20	80	40M	PL	T0111 G	
14	SDT3126	300m	52	S	10	2.0	100	6.0	100	10u	5.0	5.0	20	80	40M	PL	T0111 G	
15	SDT3127	300m	52	S	10	2.0	80	6.0	80	10u	5.0	5.0	20	80	40M	PL	T0111 G	
16	SDT3128	300m	52	S	10	2.0	100	6.0	100	10u	5.0	5.0	20	80	40M	PL	T0111 G	
17	SDT3129	300m	52	S	10	2.0	120	6.0	120	10u	5.0	5.0	20	80	40M	PL	T0111 G	
18	SDT3750	300m	52	S	5.0	1.0	40	6.0	40	1.0m	5.0	1.0	25	180	60M	PL	T03	
19	SDT3751	300m	52	S	5.0	1.0	60	6.0	60	1.0m	5.0	1.0	25	180	60M	PL	T03	
20	SDT3752	300m	52	S	5.0	1.0	60	6.0	40	1.0m	5.0	1.0	12	36	10M	PL	T03	
21	SDT3753	300m	52	S	5.0	1.0	60	6.0	60	1.0m	5.0	1.0	12	36	10M	PL	T03	
22	SDT3754	300m	52	S	5.0	1.0	80	6.0	80	1.0m	5.0	1.0	12	36	10M	PL	T03	
23	SDT3755	300m	52	S	5.0	1.0	100	6.0	100	1.0m	5.0	1.0	12	36	10M	PL	T03	
24	SDT3756	300m	52	S	5.0	1.0	40	6.0	40	1.0m	5.0	1.0	40	10M	PL	T03		
25	SDT3757	300m	52	S	5.0	2.0	40	6.0	40	1.0m	5.0	2.0	10	30	10M	PL	T03	
26	SDT3758	300m	52	S	5.0	2.0	60	6.0	60	1.0m	5.0	2.0	10	30	10M	PL	T03	
27	SDT3759	300m	52	S	5.0	2.0	80	6.0	80	1.0m	5.0	2.0	10	30	10M	PL	T03	
28	SDT3760	300m	52	S	5.0	2.0	100	6.0	100	1.0m	5.0	2.0	10	30	10M	PL	T03	
29	SDT3761	300m	52	S	5.0	2.0	40	6.0	40	1.0m	5.0	2.0	10	30	10M	PL	T03	
30	SDT3762	300m	52	S	5.0	2.0	40	6.0	40	1.0m	5.0	2.0	10	30	10M	PL	T03	
31	SDT3763	300m	52	S	5.0	2.0	60	6.0	60	1.0m	5.0	2.0	10	30	10M	PL	T03	
32	SDT3764	300m	52	S	5.0	2.0	80	6.0	80	1.0m	5.0	2.0	10	30	10M	PL	T03	
33	SDT3765	300m	52	S	5.0	2.0	100	6.0	100	1.0m	5.0	2.0	10	30	10M	PL	T03	
34	SDT3766	300m	52	S	5.0	2.0	40	6.0	40	1.0m	5.0	2.0	10	30	10M	PL	T03	
35	2N5003	303m#	50	S	5.0	2.0	100	5.5	80	1.0m#	5.00	2.5	30	90 #	60MΔ	T059	A	
36	2N5005	303m#	50	S	5.0	2.0	100	5.5	80	1.0m#	5.00	2.5	70	200 #	70MΔ	T059	A	
37	2N5384	303m#	20	S	5.0	1.0	100	6.0	100	10u\$	4.00	2.0	20	80 #	30MΔ	T0111 G		
38	2N5385	303m#	20	S	5.0	1.0	100	6.0	80	10u\$	4.00	2.0	20	80 #	30MΔ	T0111 A		
39	2N5408T	303m#	30	S	5.0	2.0	80	6.0	80	10m#	5.00	2.0	20	60	40MΔ 1.0	500n	T0111 A	
40	2N5409T	303m#	30	S	5.0	2.0	100	6.0	100	10m#	5.00	2.0	20	60	40MΔ 1.0	500n	T0111 A	
41	2N5410T	303m#	30	S	5.0	2.0	80	6.0	80	10m#	5.00	2.0	40	120	40MΔ 800m	500n	T0111 A	
42	2N5411T	303m#	30	S	5.0	2.0	100	6.0	100	10m#	5.00	2.0	40	120	40MΔ 800m	500n	T0111 A	
43	SDT33011	303m	2.0	S	5.0	2.0	40	6.0	40	10m#	5.00	2.0	40	120 #	40MΔ	500n	PE T0111	
44	SDT33021	303m	2.0	S	5.0	2.0	60	6.0	60	10m#	5.00	2.0	40	120 #	40MΔ	500n	PE T0111	
45	SDT33031	303m	2.0	S	5.0	2.0	80	6.0	80	10m#	5.00	2.0	40	120 #	40MΔ	500n	PE T0111	
46	SDT33041	303m	2.0	S	5.0	2.0	100	6.0	100	10m#	5.00	2.0	40	120 #	40MΔ	500n	PE T0111	
47	SDT33051	303m	2.0	S	5.0	2.0	40	6.0	40	10u#	5.00	2.0	20	60	40MΔ	500n	PE T0111	
48	SDT33061	303m	2.0	S	5.0	2.0	60	6.0	60	10u#	5.00	2.0	20	60	40MΔ	500n	PE T0111	
49	SDT33071	303m	2.0	S	5.0	2.0	80	6.0	80	10u#	5.00	2.0	20	60	40MΔ	500n	PE T0111	
50	SDT3308T	303m	2.0	S	5.0	2.0	100	6.0	100	10u#	5.00	2.0	20	60	40MΔ	500n	PE T0111	
51	SDT33091	303m	2.0	S	5.0	2.0	120	6.0	120	10u#	5.00	2.0	20	60	40MΔ	500n	PE T0111	
52	ST72011	303m#	30	S	5.0	2.0	40	7.0	40	10u#	2.00	1.5	30	200	30MΔ	PE T0111		
53	ST72012	303m#	30	S	5.0	2.0	60	7.0	60	10u#	2.00	1.5	30	200	30MΔ	PE T0111		
54	ST72013	303m#	30	S	5.0	2.0	80	7.0	80	10u#	2.00	1.5	30	200	30MΔ	PE T0111		
55	ST72014	303m#	30	S	5.0	2.0	100	7.0	100	2.0u#	2.00	1.5	30	200	30MΔ	PE T0111		
56	2N5193	320m	4.0	S	4.0	1.0	40	5.0	40	100u	2.00	1.5	25	100	2.0MΔ 350m	X58 BØ		
57	2N5194	320m	4.0	S	4.0	1.0	60	5.0	60	100u	2.00	1.5	25	100	2.0MΔ 350m	X58 BØ		
58	2N5195	320m	4.0	S	4.0	1.0	80	5.0	80	100u	2.00	1.5	20	80	2.0MΔ 350m	X58 BØ		
59	MJE371	320m	4.0	S	3.0	2.0	40	4.0	40	100u	1.00	1.0	40	#	3.0kΔ	X104 D		
60	MJE2370	320m	4.0	S	3.0	1.0	40	5.0	40	200us	4.00	200m	40	#	3.0MΔ	X104 D		
61	MJE2371	320m	4.0	S	3.0	1.0	60	5.0	60	200us	4.00	200m	40	#	3.0MΔ	X104 D		
62	MJE3740	320m	4.0	S	4.0	2.0	60	5.0	60	100u	1.00	250m	30	100	4.0MΔ	△ X104 D		
63	MJE3741	320m	4.0	S	4.0	2.0	80	5.0	80	100u	1.00	250m	30	100	4.0MΔ	△ X104 D		
64	TIP321	320m	2.0	S	3.0	1.0	40	5.0	40	500uΔ	4.0	1.0	20	100	3.0kΔ	170nØ		
65	TIP32A1	320m	2.0	S	3.0	1.0	60	5.0	60	500uΔ	4.0	1.0	20	100	3.0kΔ	170nØ		
66	TIP32B	322m	2.0	S	3.0	1.0	80	5.0	80	500uΔ	4.0	1.0	20	100	3.0kΔ	170nØ		
67	TIP32C	322m	2.0	S	3.0	1.0	100	5.0	100	500u	4.00	1.0	20	100	3.0kΔ	170nØ		
68	2N5613	330m#	50	S	5.0	2.0	80	5.5	60	1.0m#	5.00	2.5	70	200 #	70MΔ	T03 CØ		
69	2N5615	330m#	50	S	5.0	2.0	100	5.5	80	1.0m#	5.00	2.5	70	200 #	60MΔ	T03 CØ		
70	2N5617	330m#	50	S	5.0	2.0	100	5.5	80	1.0m#	5.00	2						

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C	MAX P _c FREE AIR @ 25°C (W/C)	MATERIAL (W)	ABSOLUTE MAX. RATINGS @ 25°C						MAX. ICBO @ 25°C (A)	hFE	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #		
					A	E	I _c	I _b	BV _{cbo}	BV _{ebo}	BV _{ceo}								
1	2N3178	454m	85 Ø	SC 5.0	2.0	100	10	100	10m#	3.0	2.0	10	30	1.0MΔ	500m		MT10	AØ	
2	2N3179	454m	85 Ø	SC 5.0	2.0	40	10	40	10m#	3.0	2.0	10	30	1.0MΔ	500m		TO53	AØ	
3	2N3180	454m	85 Ø	SC 5.0	2.0	60	10	60	10m#	3.0	2.0	10	30	1.0MΔ	500m		TO53	AØ	
4	2N3181	454m	85 Ø	SC 5.0	2.0	80	10	80	10m#	3.0	2.0	10	30	1.0MΔ	500m		TO53	AØ	
5	2N3182	454m	85 Ø	SC 5.0	2.0	100	10	100	10m#	3.0	2.0	10	30	1.0MΔ	500m		TO53	AØ	
6	2N3187	454m	85 Ø	SC 5.0	2.0	40	10	40	10m#	3.0	2.0	10	30	1.0MΔ	300m		MT10	AØ	
7	2N3188	454m	85 Ø	SC 5.0	2.0	60	10	60	10m#	3.0	2.0	10	30	1.0MΔ	300m		MT10	AØ	
8	2N3189	454m	85 Ø	SC 5.0	2.0	80	10	80	10m#	3.0	2.0	10	30	1.0MΔ	300m		MT10	AØ	
9	2N3190	454m	85 Ø	SC 5.0	2.0	100	10	100	10m#	3.0	2.0	10	30	1.0MΔ	300m		MT10	AØ	
10	2N3191	454m	85 Ø	SC 5.0	2.0	40	10	40	10m#	3.0	2.0	10	30	1.0MΔ	300m		TO53	AØ	
11	2N3192	454m	85 Ø	SC 5.0	2.0	60	10	60	10m#	3.0	2.0	10	30	1.0MΔ	300m		TO53	AØ	
12	2N3193	454m	85 Ø	SC 5.0	2.0	80	10	80	10m#	3.0	2.0	10	30	1.0MΔ	300m		TO53	AØ	
13	2N3194	454m	85 Ø	SC 5.0	2.0	100	10	100	10m#	3.0	2.0	10	30	1.0MΔ	300m		TO53	AØ	
14	SOT3825	454m	78	10	2.0	40	5.0	40	100u	5.0	5.0	20	80	10M			TO3	AØ	
15	SDT3826	454m	78	10	2.0	80	5.0	80	100u	5.0	5.0	20	80	10M			TO3	AØ	
16	SDT3827	454m	78	10	2.0	40	5.0	40	100u	5.0	5.0	40	10M				TO3	AØ	
17#	2SA626	480m	60 Ø	8J 7.0	2.0	80	5.0	60	2.0mØ	2.0	3.0	20	60	10M			EM	CØ	
18#	2SA627	480m	60 Ø	8J 7.0	2.0	100	5.0	70	2.0mØ	2.0	3.0	20	50	10M			EM	CØ	
19	MJE2490	480m	60 Ø	8J 3.0	1.0	40	5.0	40	200u	4.0	1.0	20	100	3.0MΔ			△ X104	D	
20	MJE2491	480m	60 Ø	8J 3.0	1.0	60	5.0	60	200u	4.0	1.0	20	100	3.0MΔ			△ X104	D	
21	2N4901	500m	87 Ø	8J 5.0	1.0	40	5.0	40	100u#	2.0	1.0	20	80	4.0MΔ			TO3	CØ	
22	2N4902	500m	87 Ø	8J 5.0	1.0	60	5.0	60	100u#	2.0	1.0	20	80	4.0MΔ			TO3	CØ	
23	2N4903	500m	87 Ø	8J 5.0	1.0	80	5.0	80	100u#	2.0	1.0	20	80	4.0MΔ			TO3	CØ	
24	2N4904	500m	87 Ø	8J 5.0	1.0	40	5.0	40	100u#	2.0	2.5	25	100	4.0MΔ			TO3	CØ	
25	2N4905	500m	87 Ø	8J 5.0	1.0	60	5.0	60	100u#	2.0	2.5	25	100	4.0MΔ			TO3	CØ	
26	2N4906	500m	87 Ø	8J 5.0	1.0	80	5.0	80	100u#	2.0	2.5	25	100	4.0MΔ			TO3	CØ	
27	2N53121	500m\$	50 Ø	8J 10	2.5	80	6.0	80	10u#	5.0	10	30	90	30MΔ	500n		TO61	A	
28	2N53141	500m\$	50 Ø	8J 10	2.5	100	6.0	100	10u#	5.0	10	30	90	30MΔ	500n		TO61	A	
29	2N53161	500m\$	50 Ø	8J 10	2.0	80	6.0	80	10u#	5.0	10	30	90	30MΔ	200n		TO61	A	
30	2N53181	500m\$	50 Ø	8J 10	2.0	100	6.0	100	10u#	5.0	10	30	90	30MΔ	200n		TO61	A	
31	2N5386	500m	3.5	8J 12	4.0	100	6.0	80	10u\$	4.0	6.0	20	80	30MΔ			TO61	AØ	
32	2N5677†	500m\$	50 Ø	8J 10	2.0	125	6.0	100	1.0uØ	5.0	5.0	30	90	20MΔ			TO61	AØ	
33	2N5737†	500m\$	50 Ø	8J 10	2.0	60	5.0	60	500uØ	5.0	5.0	20	80	10MΔ	500m		TO3	CØ	
34	2N5738	500m\$	50 Ø	8J 10	2.0	100	5.0	100	500uØ	5.0	5.0	20	80	10MΔ	500m		TO3	CØ	
35	2N5867†	500m	87 Ø	8J 3.0	1.0	60	5.0	60	100u	4.0	1.5	20	100	4.0MΔ	500m	700nØ	TO3	CØ	
36	2N5888†	500m	87 Ø	8J 3.0	1.0	80	5.0	80	100u	4.0	1.5	20	100	4.0MΔ	500m	700nØ	TO3	CØ	
37#	BDY68	500m	3.5	8J 12	4.0	100	4.0	80	50uΔ	4.0	6.0	20	80	30MΔ			PE	T061	A
38	MJ490	500m	50 Ø	8J 4.0	1.0	40	5.0	40	1.0m	2.0	1.0	30	200	4.0MΔ	400m		TO3	CØ	
39	MJ491	500m	50 Ø	8J 4.0	1.0	60	5.0	60	1.0m	2.0	1.0	30	200	4.0MΔ	400m		TO3	CØ	
40	MM4023	500m	87 Ø	8J 6.0	3.0	36	4.0	18	500uØ	5.0	500m	15					MT75a	R	
41	SDT3101†	500m	3.0	8J 20	5.0	40	6.0	40	10m#	5.0	10	30	90	30MΔ			500n	PE	
42	SDT3102†	500m	3.0	8J 20	5.0	50	6.0	60	0.1m#	5.0	10	30	90	30MΔ			500n	PE	
43	SDT3103†	500m	3.0	8J 20	5.0	80	6.0	80	10m#	5.0	10	30	90	30MΔ			500n	PE	
44	SDT3104†	500m	3.0	8J 20	5.0	100	6.0	100	10m#	5.0	10	30	90	30MΔ			500n	PE	
45	SDT3105†	500m	3.0	8J 10	4.0	40	8.0	40	10m#	5.0	5.0	30	90	30MΔ			200n	PE	
46	SDT3106†	500m	3.0	8J 10	4.0	60	6.0	60	10m#	5.0	5.0	30	90	30MΔ			200n	PE	
47	SDT3107†	500m	3.0	8J 10	4.0	80	6.0	80	10m#	5.0	5.0	30	90	30MΔ			200n	PE	
48	SDT3108†	500m	3.0	8J 10	4.0	100	6.0	100	10m#	5.0	5.0	30	90	30MΔ			200n	PE	
49	SDT3109†	500m	3.0	8J 10	4.0	120	8.0	120	10m#	5.0	5.0	30	90	30MΔ	200n		TO61	A	
50	ST72015	500m\$	50 Ø	10	10	60	7.0	60	1.0uØ	2.0	3.0	30	200	30MΔ			PE	T061	A
51	ST72016	500m\$	50 Ø	10	10	80	7.0	80	2.0uØ	2.0	3.0	30	200	30MΔ			PE	T061	A
52	ST72017	500m\$	50 Ø	10	10	100	7.0	100	2.0uØ	2.0	3.0	30	200	30MΔ			PE	T061	A
53▼	SCC421	511m	100 Ø	9A	10	4.0	5.0	60	1.0m#	4.0	3.0	20	100		333m		DME	CØ	
54	TIP42	520m	2.0	8J 6.0	3.0	40	5.0	40	700u	4.0	3.0	15	75	3.0MΔ			X75b	BØ	
55	TIP42A	520m	2.0	8J 6.0	3.0	60	5.0	60	700u	4.0	3.0	15	75	3.0MΔ			X75b	BØ	
56	TIP42B	520m	2.0	8J 6.0	3.0	80	5.0	80	700u	4.0	3.0	15	75	3.0MΔ			X75b	BØ	
57	TIP42C	520m	2.0	8J 6.0	3.0	100	5.0	100	700u	4.0	3.0	15	75	3.0MΔ			X75b	BØ	
58	MJE105	522m	65 Ø	8J 5.0	2.5	50	4.0	50	100u	2.0	2.0	25	100				X58a	B	
59	SDT3875	552m	96	20	4.0	40	5.0	40	100u	5.0	10	20	80	10M			TO3	A	
60	SDT3876	552m	96	20	4.0	80	5.0	80	100u	5.0	10	20	80	10M			TO3	A	
61	SDT3877	552m	96	20	4.0	100	5.0	100	100u	5.0	10	40	10M				TO3	CØ	
62	2N56711	572m	100 Ø	8J 5.0	1.5	60	1.5	60	250u#	4.0	2.5	20	100	4.0MΔ	250m	700mØ	TO3	CØ	
63	2N5721	572m	100 Ø	8J 5.0	1.5	80	1.5	80	250u#	4.0	2.5	20	100	4.0MΔ	250m	700mØ	TO3	CØ	
64	TIP34B	625m	3.5	8J 10	3.0	80	5.0	80	700u	4.0	1.0	30	80	3.0MΔ			X86	BØ	
65	TIP34C	625m	3.5	8J 10	3.0	100	5.0	100	700u	4.0	1.0	30	80	3.0MΔ			X86	BØ	
66	MJE2010	640m	80 Ø	8J 5.0	3.0	40	5.0	40	400u	4.0	1.0	25	125	3.0MΔ			△ X104	D	
67	MJE2011	640m	80 Ø	8J 5.0	3.0	50	5.0	60	400u	4.0	1.0	25	125	3.0MΔ			△ X104	D	
68	TIP341	641m	3.5	8J 10	3.0	40	5.0	40	700u	4.0	1.0	25	125	3.0MΔ			X86		

10. SILICON PNP - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C	MAX Pc (W/C)	M T	ABSOLUTE MAX. RATINGS @ 25°C					MAX. Icbo @ @ 25°C	hFE	fae	MAX. SAT. RES. (Hz)	tr	STRUCTURE	DWG s/a T0200	L C E O A D E			
					A	E	Ic	Ib	BV _{cbo}	BV _{ebo}	BV _{ceo}	BIAS V _{cbo}	V _{cbo}	Ic	MIN	MAX				
1	2N5879T	19.15m	160	SJ	12	4.0	80	5.0	60	500u	4.0	6.0	20	100	4.0M _Δ	142m	700n _Δ	T03 C ₀		
2	2N5880T	9.15m	160	SJ	12	4.0	80	5.0	80	500u	4.0	6.0	20	100	4.0M _Δ	142m	700n _Δ	T03 C ₀		
3	2N5678T	1.0 s	100	SJ	20	2.0	125	6.0	100	2.0u	5.0	10	25	75 #	20M _Δ	500n _Δ	T063 A ₀			
4▼	2N5958T	1.0 s	100	SJ	20	2.0	100	8.0	100	500u	10	10	30	120	20M _Δ	100m	500n _Δ	T061 A		
5▼	2N5960T	1.0 s	100	SJ	20	2.0	100	8.0	100	600u	10	10	30	120	20M _Δ	100m	500n _Δ	T061 A ₀		
6	SDT3601	1.0	175		60	10	40	5.0	40	10u	10	40	10	40	25M		PL			
7	SDT3602	1.0	175		60	10	60	5.0	60	10u	10	40	10	40	25M		PL			
8	SDT3603	1.0	175		60	10	80	5.0	80	10u	10	40	10	40	25M		PL			
9	SDT3604	1.0	175		60	10	100	5.0	100	10u	10	40	10	40	25M		PL			
10	ST10007T	1.0 #	150	#s	SJ	30			80	8.0	80	*	100	10	30	120 #	20M _Δ	500n _Δ	PL T063	
11	ST10008T	1.0 #	150	#s	SJ	30			100	8.0	100	*	100	10	30	120 #	20M _Δ	500n _Δ	PL T063	
12	ST10009T	1.0 #	150	#s	SJ	30			120	8.0	120	*	100	10	30	120 #	20M _Δ	500n _Δ	PL T063	
13	ST72018	1.0 s	100	SJ	20				40	7.0	40	0.1mg	5.0	10	20	200	10M _Δ		PE T063	
14	ST72019	1.0 s	100	SJ	20				60	7.0	60	0.1mg	5.0	10	20	200	10M _Δ		PE T063	
15	ST72020	1.0 s	100	SJ	20				80	7.0	80	0.1mg	5.0	10	20	200	10M _Δ		PE T063	
16	ST72021	1.0 s	100	SJ	20				100	7.0	100	0.1mg	5.0	10	20	200	10M _Δ		PE T063	
17	2N4338T	1.1	200	SJ	SJ	30	7.5		40	4.1	5.0	40	1.0m	4.0	15	60 #	4.0M _Δ	400n _Δ	MD6f C ₀	
18	2N4399T	1.1	200	SJ	SJ	30	7.5		60	4.1	5.0	60	1.0m	4.0	15	60 #	4.0M _Δ	400n _Δ	MD6f C ₀	
19	2N5745T	1.1	200	SJ	SJ	20	7.5		80	1	5.0	80	1.0m	2.0	10	15	60 #	2.0M _Δ	1.0u	
20	2N5883T	1.1	200	SJ	SJ	20	6.0		60	1	5.0	60	1.0m	4.0	10	20	100	4.0M _Δ	66m 700n _Δ	T03 C ₀
21	2N5884T	1.1	200	SJ	SJ	20	6.0		80	1	5.0	80	1.0m	4.0	10	20	100	4.0M _Δ	66m 700n _Δ	TO3 C ₀
22	MJ4502	1.1	200	SJ	SJ	30	7.5		100	4.0	90	1.0m	2.0	7.5	25	100 #	2.0M _Δ		MD6d C ₀	
23	ST29045	1.1	150	SJ	SJ	30	8.0		70	10	40	500u	10	15	30	150	10M	130m	PE T03	
24	ST29046	1.1	150	SJ	SJ	30	8.0		90	10	60	500u	10	15	30	150	10M	130m	PE T03	
25	ST29047	1.1	150	SJ	SJ	30	8.0		110	10	80	500u	10	15	30	150	10M	130m	PE T03	
26	ST29048	1.1	150	SJ	SJ	20	6.0		70	10	40	500u	10	15	30	150	10M	130m	PE T03	
27	ST29049	1.1	150	SJ	SJ	20	6.0		90	10	60	500u	10	10	30	150	10M	130m	PE T03	
28	ST28050	1.1	150	SJ	SJ	20	6.0		110	10	80	500u	10	10	30	150	10M	130m	PE T03	
29▼	2N5967T	1.2 \$	125	SJ	SJ	40	5.0		100	1	8.0	100	500u	10	10	30	120	20M _Δ	80m 500n _Δ	T063 A
30▼	2N5969T	1.2 \$	125	SJ	SJ	40	5.0		100	1	8.0	100	500u	10	10	30	120	20M _Δ	80m 500n _Δ	T063 A ₀
31	SDT3901	1.2	220			60	10		40	5.0	40	10u	10	40	10	40	25M		T0114	
32	SDT3902	1.2	220			60	10		60	5.0	60	10u	10	40	10	40	25M		T0114	
33	SDT3903	1.2	220			60	10		80	5.0	80	10u	10	40	10	40	25M		T0114	
34	SDT3904	1.2	220			60	10		80	5.0	80	10u	10	40	10	40	25M		T0114	
35▼	2N60611	1.5 \$	150	SJ	SJ	60	10		100	8.0	100	500u	10	20	20	120	20M _Δ	55m 500n _Δ	T063 A	
36▼	2N60631	1.5 \$	150	SJ	SJ	60	10		100	8.0	100	500u	10	20	20	120	20M _Δ	55m 500n _Δ	T063 A ₀	
37	2N5683	1.7	300	SJ	SJ	50	15		60	5.0	60	2.0m	2.0	25	15	80 #	2.0M _Δ			
38	2N5684	1.7	300	SJ	SJ	50	15		80	5.0	80	2.0m	2.0	25	15	80 #	2.0M _Δ			
39	ET1550	2.0	150	SJ	#	7.0	3.0		40	5.0	40	1.0mg	2.0	3.0	40	250		400m	TO3 C ₀	
40	ET1551	2.0	150	SJ	#	7.0	3.0		60	5.0	60	1.0m	2.0	3.0	40	250		400m	PE T03	
41	ST29051	2.3	85	SJ	SJ	10	4.0		70	10	40	500u	10	5.0	30	150	10M	130m	PE T03	
42	ST29052	2.3	85	SJ	SJ	10	4.0		90	10	60	500u	10	5.0	30	150	10M	130m	PE T03	
43	ST29053	2.3	85	SJ	SJ	10	4.0		110	10	80	500u	10	5.0	30	150	10M	130m	PE T03	
44#	2SB5602	6.2	20	SJ	SJ	3.0	4.0		100	10	80	100u	5.0	500m	40	240	1.0M _Δ		D D TO66 C	
45#	2SB5603	6.2	20	SJ	SJ	3.0	4.0		70	10	50	100u	5.0	500m	40	240	1.0M _Δ		D D TO66 C	
46	2N3774T	50 \$	5.0	SJ	1.0	500m	40	8.0	40	500u	#	2.0	200	20	60 #	1.0M _Δ	3.0u	TO5 A ₀		
47	2N3775T	50 \$	5.0	SJ	1.0	500m	60	8.0	60	500u	#	2.0	200	20	60 #	1.0M _Δ	3.0u	TO5 A ₀		
48	2N3776T	50 \$	5.0	SJ	1.0	500m	80	8.0	80	500u	#	2.0	200	20	60 #	1.0M _Δ	3.0u	TO5 A ₀		
49	2N3777T	50 \$	5.0	SJ	1.0	500m	100	8.0	100	500u	#	2.0	200m	20	60 #	1.0M _Δ	3.0u	TO5 A ₀		
50	2N3778T	50 \$	5.0	SJ	1.0	500m	40	8.0	40	500u	#	2.0	200m	10	40 #	1.0M _Δ	3.0u	TO5 A ₀		
51	2N3779T	50 \$	5.0	SJ	1.0	500m	60	8.0	60	500u	#	2.0	200m	10	40 #	1.0M _Δ	3.0u	TO5 A ₀		
52	2N3780T	50 \$	5.0	SJ	1.0	500m	80	8.0	80	500u	#	2.0	200m	20	60 #	1.0M _Δ	3.0u	TO5 A ₀		
53	2N3781T	50 \$	5.0	SJ	1.0	500m	100	8.0	100	500u	#	2.0	200m	10	40 #	1.0M _Δ	3.0u	TO5 A ₀		
54	2N3782T	50 \$	5.0	SJ	1.0	40	8.0	40	500u	#	3.0	1.0	10	40 #	1.0M _Δ	3.0u	TO5 A ₀			
55	2N5404T	50 \$	1.0	SJ	5.0	2.0	80	6.0	80	10u	#	5.0	2.0	20	60	40M _Δ	1.0 500n	TO5 A ₀		
56	2N5405T	50 \$	1.0	SJ	5.0	2.0	100	6.0	100	10u	#	5.0	2.0	20	60	40M _Δ	1.0 500n	TO5 A ₀		
57	2N5406T	50 \$	1.0	SJ	5.0	2.0	80	6.0	80	10u	#	5.0	2.0	40	120	40M _Δ	800m 500n	TO5 A ₀		
58	2N5407T	50 \$	1.0	SJ	5.0	2.0	100	6.0	100	10u	#	5.0	2.0	40	120	40M _Δ	800m 500n	TO5 A ₀		
59	RS1875	50 \$	3.5	S	400m	5.5	40	5.5	55	5	10n	5.0	1.0m	20	250	1.2G ₆	3.0	TO39 A ₀		
60	STP30P	75 \$	2.0	S	500m	100m	300	5.0	300	3.0m	100	20m	20	250	20M _Δ	200	300m	MD14		
61	STP40P	75 \$	2.0	S	500m	100m	400	5.0	400	3.0m	100	20m	20	250	20M _Δ	200	300m	MD14		
62	STP50P	75 \$	2.0	S	500m	100m	500	5.0	500	4.0m	100	20m	20	250	20M _Δ	200	300m	MD14		
63	STP60P	150 \$	1.0	S	500m	100m	600	5.0	600	4.0m	100	20m	20	250	20M _Δ	200	30			

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX P _C FREE AIR @ 25°C (W/C)	M A E X M P	ABSOLUTE MAX. RATINGS @ 25°C					MAX. ICBO @ 25°C	BIAS V _{CB} /V _{CB}	hFE	MIN	MAX	fae	MAX. SAT. RES. (Ω)	tr	STRUCTURE	DWG # Y200 s/a TO200 Ser.	C E O A D E
					I _C (A)	I _B (A)	BV _{CEO} (V)	BV _{CEO} (V)	BV _{CEO} (V)											
1	ZN2239	1.0	#J 500m		60	50	50	100μ	10	200m	50	2.5M ₁							T037	A ₀
2#	ZSC291	1.0	J 3.0		70	50	40	3.0μ	2.0	1.0	40	90M ₁							PE	T05
3#	ZSC292	1.0	J 3.0		100	50	60	3.0μ	2.0	100m	70	90M ₁							PE	T05
4#	ZSC293	1.0	J 3.0		130	50	80	3.0μ	2.0	100m	70	90M ₁							PE	T05
5#	ZSC517	10	J 2.0		60	40	60	10μ	5.0	500	10	140							PE	T037
6#	ZSC571	6.0	J 1.5		36	4.0	18	5.0μ	1.3	100m	30	250M ₁							PE	T039
7#	ZSC572	10	J 3.0		36	4.0	18	5.0μ	1.3	200m	30	250M ₁							PE	T060
8#	ZSC573	20	J 4.0		36	4.0	18	10μ	1.3	400m	40	250M ₁							PE	T060
9#	ZSC608T	1.0	1.5 #		75	4.0	60	5.0m	4.0	10	10								MD25	
10#	ZSC609T	1.0	1.5 #		75	4.0	60	5.0m	4.0	10	10								SD25	
11#	ZSC664	50		1.5	100	50	50		5.0	1.0	35	200	300k						TO3	
12#	ZSC680	8.0		2.0	200	60	120		100	20	60	240							TO66	
13#	ZSC880A	8.0		2.0	200	60	140		100	20	45	180							TO66	
14#	ZSC681	50		6.0	200	50	70	15m									20u#	TO3		
15#	ZSC681A	50		6.0	250	50	80										20u#	TO3		
16#	ZSC885	3.0		1.0	300	3.0	300		100	0.5	30	150	20M ₁						TD	T03
17#	ZSC685A	6.5		1.0	300	4.0	300		100	0.5	30	160	25M ₁						TD	T066
18#	ZSC756	10	J 4.0	800m	130	6.0	40	3.0μ	2.0	100m	80	450m							EM	T05
19#	ZSC782	50	J 1.5		400	5.0	300	50μ	1.0	300m	30	200	10M ₁						DM	T03
20#	ZSC795	190	J 100m	10m	250	6.0	200	10μ	1.0	10m	70							D	MD17	
21#	ZSC806	125	J 10	1.0	650	10		5.0m	3.0	2.0	30		5.5k ₁	600m					D	T03
22#	ZSC808A	125	J 5.0		630	10		100μ	3.0	2.0	12	92	3.0M ₁	750m					DM	T03
23#	ZSC807	125	J 10	1.0	500	10	220	5.0m	3.0	100	50	5.5k ₁	1.0					D	T03	
24#	ZSC807A	125	J 5.0		195	8.0		100μ	3.0	100m	30							DM	T03	
25#	ZSC821	1.7	J 800m		40	4.0	20	1.0μ	1.3	100m	20			350M ₁				PE	T039	
26#	ZSC822	2.5	J 800m		40	4.0	20	1.0μ	1.3	100m	20			400M ₁				PE	T039	
27#	ZSC830	2.5	J 3.0		50	4.0	50	4.0	1.0	35	200	20M ₁						TD	T066	
28#	ZSC833	25	J 2.0		450	6.0	300	1.0m	1.0	10	40	80	20M ₁					ME	T066	
29#	ZSC898	80		7	150	5.0	100	1.0m	5.0	1.0	25	200						TD	T03	
30#	ZSC931	10	J 3.0		50	4.0	50	5.0m	2.0	1.0	70		120M ₁					ME	X101	
31#	ZSC932	10	J 3.0		30	4.0	20	5.0m	2.0	1.0	70		120M ₁					ME	X101	
32#	ZSC935	12	J 1.0		1.0k	5.0	500	1.0m	1.0	100m	30	120						TD	T03	
33#	ZSC936	2.5	J 2.5	2.5	300	5.0	300	5.0m	2.0	1.0	30	120						TD	T03	
34#	ZSC937	22	J 2.5	2.5	215	1.2k	500	5.0m	2.0	300m	80	120						TD	T03	
35#	ZSC996	1.2	J 100m		300	5.0	300	100μ	1.0	50m	80		100M ₁					DPL	T037	
36#	ZSC1001	5.0	J 500m		36	4.0	18	10μ	2.0	100m	10	250	800M ₁					PE	T05	
37#	ZSC1002	10	J 1.0		36	4.0	18	20μ	2.0	200m	10	250	700M ₁					PE	T060	
38#	ZSC1003	20	J 2.0		36	4.0	18	50μ	2.0	400	20	250	600k ₁					PE	T060	
39#	ZSC1024	2.5	J 3.0		60	4.0	50	1.0m	2.0	1.0	70						ME	T066		
40#	ZSC1025	25	J 3.0		120	4.0	80	1.0m	4.0	200m	80						ME	T066		
41#	ZSC1034	125	J 1.0		1.0k	13		100μ	3.0	750m	4.0	40	5.0M ₁	6.7				DM	MD40	
42#	ZSC1077	50	J 5.0		65	4.0	65	1.0μ	1.0	10	20	40	150M ₁					PE	MT83c	
43#	ZSC1085	125	J 4.0		1.0k	14		2.0μ	3.0	2.0	60						DM	MD40a		
44#	ZSC1105	7.0	J 100m		300	5.0	300	100μ	1.0	50m	40	200						ME	T066	
45#	ZSC1120	10	J 1.5	1.5	35	4.0	20	5.0μ	3.0	500m	20		700M ₁					PE	MT83	
46#	ZSC1121	20	J 3.0	3.0	35	4.0	20	25μ	5.0	1.0	20		500M ₁					PE	MT83	
47#	ZSC1122	30	J 4.5	4.5	35	4.0	20	50μ	5.0	1.5	20		400M ₁					PE	MT83	
48#	ZSC1170	50	J 3.5	1.2k	50	5.0	500	10μ	1.0	3.0	50		4.0M ₁					ME	T03	
49#	ZSC1170A	50	J 3.5	1.4k	50	5.0	500	10μ	1.0	3.0	50		4.0M ₁					ME	T03	
50#	ZSC1172	50	J 5.0	1.5k	50	5.0	600	10μ	1.0	2.0	10	50	5.0M ₁					DM	T03	
51#	ZSD24	6.0	J 100m		300	2.0	1300	1.5μ	1.0	50m	60		25M ₁					TD	T066	
52#	ZSD28	18	J 3.0	1.0	70	40		20μ	1.0	100m	32	276						D	MD17	
53#	ZSD29	18	J 3.0	1.0	70	60		20μ	1.0	100m	32	276						D	MD17	
54#	ZSD49	18	J 3.0	1.0	100	10	60	20μ	1.0	100m	25	100	2.0M ₁	600M ₁				D	MD17	
55#	ZSD51	50	J 5.0	1.5	100	6.0	50	5.0m	2.0	2.0	30	120	10k ₁	500m				ME	T03	
56#	ZSD55	30	J 3.0	1.0	220	18	80	5.0m	2.0	100m	15	150	100M ₁					ME	MD17	
57#	ZSD67	50	J 5.0		120	5.0	120	5.0m	1.0	100m	15	150	100M ₁					ME	MD17	
58#	ZSD68	50	J 5.0		75	5.0	75	5.0m	1.0	100m	10	100	100M ₁					ME	T03	
59#	ZSD88	83	J 5.0		300	8.0	80	100μ	3.0	2.0	34	517	10M ₁	400m				DM	T03	
60#	ZSD88A	125	J 10	2.0	300	8.0		100μ	3.0	2.0	34	517	12M ₁	400m				DM	T03	
61#	ZSD102	25	J 3.0	1.0	100	10	80	100μ	5.0	500m	30	300	1.5M ₁					D	T066	
62#	ZOT02	85	J 3.0		100	10	80	10m	12	2.0	40	120	10k ₁	500m				PE	T03	
63#	ZOT47	85	J 3.0		100	10	80	10m	12	2.0	20	10	1.0	1.0			PE	T03		
64#	ZDT111A	62	J 10		60	5.0	60	1.0m	5.0	500m	40	100	1.0	100M ₁				PEΔ	T03	
65#	ZLY471	40	J 2.0		100	8.0	75	50μ	1.0	1.0	30	100	1.0	1.0	1.0u ₂	DM	T03			
66#	ZLY47AT1	40	J 3.0	1.2k	100	8.0	75	50μ	1.0	1.0	30	100	1.0	1.0	1.0u ₂	DM	T066			
67#	ZLY481	40	J 3.0	1.2k	100	8.0	75	50μ	1.0	1.0	60	200	1.0	1.0	1.0u ₂	DM	T03			
68#	ZLY48AT1	40	J 3.0	1.2k	100	8.0	75	50μ	1.0	1.0	60	200	1.0	1.0	1.0u ₂	DM	T066			
69#	ZLY491	40	J 3.0	1.2k	250	8.0	150	50μ	1.0	1.0	30	100	1.0	1.0	1.0u ₂	DM	T03			

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE- J to C	MAX FREE (W/C)	Pc (W)	M T 25°C	ABSOLUTE MAX. RATINGS @25°C	MAX. @25°C	HFE	MAX. BIAS			fae	MAX SAT. RES.	tr	STRU- TURE	DWG #	C S/o TO200 Ser.				
									A E AIR @ 25°C	Ic (A)	Ib (A)	BV _{ceo} (V)	BV _{beo} (V)	I _{bo} @ 25°C (A)	V _{cb} (V)	Ic (A)	MIN	MAX	(Hz)	(Ω)	(s)
1	ST91087		30	25	5	50	2.0	170	10	120	20u	10	20	30	120	10M	320m	PE	T059		
2	PP3006	1.0m	115	2	5	15		80		60	4.00	5.0	20	4.00	5.0	20		DM	T03		
3	PP3007	1.0m	115	2	5	15		100		80	4.00	5.0	20	4.00	5.0	20		DM	T03		
4	PP3008	1.0m	115	2	5	15		120		100	4.00	5.0	20	4.00	5.0	20		DM	T03		
5#	BSX481	2.0m	10	*	SJ	600m		50	5.0	25	120n Ω	1.00	100m Ω	42	400M Ω	42	400M Ω	DPE	T018		
6#	BSX481	2.0m	10	*	SJ	600m		60	5.0	40	70n Ω	1.00	100m Ω					DPE	T018		
7	A210	4.0m Ω	3.5	2	SJ	150m		40	2.0	25	20u Ω	5.00	50m	25	1.2G Ω			PE	T039		
8	A211	4.0m Ω	3.5	2	SJ	150m		40	2.0	25	20u Ω	5.00	50m	25	1.1G Ω			PE	T039		
9	TRS140MP	4.5m	10	*	SJ	400m		140	6.0	140	3.0u Ω	4.00	50m	30	#	50M Δ			T05		
10	TRS160MP	4.5m	10	*	SJ	400m		160	6.0	160	3.0u Ω	4.00	50m	30	#	50M Δ			T05		
11	TRS180MP	4.5m	10	*	SJ	400m		180	6.0	180	3.0u Ω	4.00	50m	30	#	50M Δ			T05		
12	TRS200MP	4.5m	10	*	SJ	400m		200	6.0	200	2.0u Ω	4.00	50m	20	#	50M Δ			T05		
13	TRS225MP	4.5m	10	*	SJ	400m		225	6.0	225	3.0u Ω	4.00	50m	22	#	50M Δ			T05		
14	TRS250MP	4.5m	10	*	SJ	400m		250	6.0	250	2.0u Ω	4.00	50m	20	#	50M Δ			T05		
15	TRS275MP	4.5m	10	*	SJ	400m		275	6.0	275	3.0u Ω	4.00	50m	22	#	50M Δ			T05		
16	TRS301MP	4.5m	10	*	SJ	400m		300	6.0	300	2.0u Ω	4.00	50m	30	#	50M Δ			T05		
17	TRS325MP	4.5m	10	*	SJ	400m		325	6.0	325	3.0u Ω	4.00	50m	22	#	50M Δ			T05		
18	TRS350MP	4.5m	10	*	SJ	400m		350	6.0	350	2.0u Ω	4.00	50m	20	#	50M Δ			T05		
19	TRS375MP	4.5m	10	*	SJ	400m		375	6.0	375	3.0u Ω	4.00	50m	22	#	50M Δ			T05		
20	TRS401MP	4.5m	10	*	SJ	400m		400	6.0	400	2.0u Ω	4.00	50m	30	#	50M Δ			T05		
21	TRS425MP	4.5m	10	*	SJ	400m		425	6.0	425	3.0u Ω	4.00	50m	22	#	50M Δ			T05		
22	TRS451MP	4.5m	10	*	SJ	400m		450	6.0	450	2.0u Ω	4.00	50m	30	#	50M Δ			T05		
23	TRS475MP	4.5m	10	*	SJ	400m		475	6.0	475	2.0u Ω	4.00	50m	22	#	50M Δ			T05		
24	TRS501MP	4.5m	10	*	SJ	400m		500	6.0	500	10m Ω	4.00	25m	30	#	50M Δ			T05		
25	TRS525MP	4.5m	10	*	SJ	400m		525	6.0	525	10m Ω	4.00	25m	22	#	50M Δ			T05		
26	TRS550MP	4.5m	10	*	SJ	400m		550	6.0	550	10m Ω	4.00	25m	20	#	50M Δ			T05		
27	TRS575MP	4.5m	10	*	SJ	400m		575	6.0	575	10m Ω	4.00	25m	22	#	50M Δ			T05		
28	TRS601MP	4.5m	10	*	SJ	400m		600	6.0	600	10u Ω	4.00	25m	30	#	50M Δ			T05		
29+	A203	5.0m Ω	3.5	2	SJ	400m		40	2.0	20	20u Δ	5.00	100m	10	200	700M Δ	50	PE	T039		
30	2N2726	5.5m	10	*	SJ	500m		200	10	200	1.0u Ω	100	200	60	#	15M Δ			A Δ		
31	2N2727	5.5m	10	*	SJ	500m		200	10	200	1.0u Ω	100	200	110	#	15M Δ			T05		
32#	2SC776	5.5m	1.0	*	SJ	1.0		75	4.0	75	10u Ω	100	100m Ω	5.0	#	200M Δ		PE	T039		
33#	ZT2102	5.5m	1.0	*	SJ	1.0		120	6.0	65	1.0u	100	150m	40	#	15M Δ		PL Δ	T05		
34	2N2405	5.7m	1.0	*	SJ	1.0		120	7.0	90	10n Ω	100	150m	60	200	#	40M Δ			A Δ	
35	2N2987	5.7m	1.0	*	SJ	1.0		200m	95	70	30n Ω	5.00	200m	25	75	#	30M Δ			T05	
36	2N2988	5.7m	1.0	*	SJ	1.0		200m	155	70	100	30n Ω	5.00	200m	25	75	#	30M Δ			T05
37	2N2989	5.7m	1.0	*	SJ	1.0		200m	95	70	30n Ω	5.00	200m	60	120	#	30M Δ			T05	
38	2N2990	5.7m	1.0	*	SJ	1.0		200m	155	70	100	30n Ω	5.00	200m	60	120	#	30M Δ			T05
39	2N3418†	5.7m Ω	1.0	*	SJ	3.0		10	85	80	500n $\#$	2.00	10	20	60	#	40M Δ	300n Ω		T05	
40	2N3419†	5.7m Ω	1.0	*	SJ	3.0		125	8.0	80	500n $\#$	2.00	10	20	60	#	40M Δ	300n Ω		T05	
41	2N3420†	5.7m Ω	1.0	*	SJ	3.0		10	85	80	500n $\#$	2.00	10	40	120	#	40M Δ	300n Ω		T05	
42	2N3421†	5.7m Ω	1.0	*	SJ	3.0		125	8.0	80	500n $\#$	2.00	10	40	120	#	40M Δ	300n Ω		T05	
43	2N3439†	5.7m Ω	1.0	*	SJ	10		500m	450	7.0	350	200 Ω	2.00	10	40	160	#	15M Δ	10		T05
44	2N3440†	5.7m Ω	1.0	*	SJ	10		500m	300	7.0	250	200 Ω	2.00	10	40	160	#	15M Δ	10		T05
45	2N3444†	5.7m Ω	1.0	*	SJ	1.0		80	5.0	50	500n $\#$	1.00	500m Ω	20	60	#	15M Δ	35n Ω		T05	
46	2N3498	5.7m Ω	1.0	*	SJ	500m		100	6.0	100	50n Ω	100	150m	40	120	#	150M Δ			T05	
47	2N3499	5.7m Ω	1.0	*	SJ	500m		100	6.0	100	50n Ω	100	150m	100	300	#	150M Δ			T05	
48	2N3500	5.7m Ω	1.0	*	SJ	300m		150	6.0	150	50n Ω	100	150m	40	120	#	150M Δ			T05	
49	2N3501	5.7m Ω	1.0	*	SJ	300m		150	6.0	150	50n Ω	100	150m	100	300	#	150M Δ			T05	
50	2N3506†	5.7m Ω	1.0	*	SJ	3.0		60	5.0	40	1.0m $\#$	2.00	1.5	40	200	#	160M Δ	1.0	30n Ω	T05	
51	2N3507†	5.7m Ω	1.0	*	SJ	3.0		80	5.0	50	1.0m $\#$	2.00	1.5	30	150	#	160M Δ	1.0	30n Ω	T05	
52	2N3724At	5.7m	1.0	*	SJ	1.2		50	6.0	30	500n $\#$	1.00	100m	60	150	#	300M Δ	30		T05	
53	2N3725At	5.7m	1.0	*	SJ	1.2		80	6.0	50	500n $\#$	1.00	100m	60	150	#	300M Δ	30		T05	
54	JAN2N3735†	5.7m Ω	1.0	*	SJ	1.5		75	5.0	50	*250n $\#$	1.00	10m	35	#	250M Δ	20	40n Ω	T05		
55	2N1518†	5.7m	1.0	*	SJ	2.0		60	5.0	35	100u Ω	1.00	10	15	400M Δ	16	AN	T05			
56	2N52621	5.7m	1.0	*	SJ	2.0		75	5.0	50	1.0u Ω	1.00	500m	40	150	#	350M Δ	2.0		T05	
57	2N5681	5.7m	1.0	*	SJ	1.0		500m	120	4.0	100	1.0u Ω	2.00	250m	40	150	#	30M Δ	2.0		T05
58	2N5682	5.7m	1.0	*	SJ	1.0		500m	120	4.0	175	100n Ω	1.00	10m	35	#	200			T05	
59	MM1812	5.7m	1.0	*	SJ	100m		175	5.0	175	50n Ω	100	150m	100	300	#	150M Δ	16	AN	T05	
60	MM2258	5.7m	1.0	*	SJ	500m		120	5.0	50	50n Ω	100	150m	100	300	#	150M Δ	16	AN	T05	
61	MM2259	5.7m	1.0	*	SJ	300m		175	5.0	175	50n Ω	100	150m	20	100	#	150M Δ				

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX P _c (W)	M T AIR @ 25°C	ABSOLUTE MAX. RATINGS @ 25°C						MAX ICBO @ 25°C	hFE	fae	MAX. SAT. RES.	tr (s)	STRUCTURE	DWG # Y200 s/a TO200	C E O A D D E	
					A	E	I _c (A)	I _b (A)	BV _{CEO} (V)	BV _{CEO} (V)	BV _{CEO} (V)								
1	TRL5504	6.6mΩ	1.0	SS 3.0	1.0	550	4.0	550	10m	100	500m	15	35	20M5Δ	400n	DM	T05		
2	TRL6014	6.6mΩ	1.0	SS 3.0	1.0	600	4.0	600	10m	100	500m	15	35	20M5Δ	400n	DM	T05		
3	TRL6504	6.6mΩ	1.0	SS 3.0	1.0	650	4.0	650	10u	100	500m	15	35	20M5Δ	400n	DM	T05		
4	TRL7014	6.6mΩ	1.0	SS 3.0	1.0	700	4.0	700	10u	100	500m	15	35	20M5Δ	400n	DM	T05		
5	TRL7504	6.6mΩ	1.0	SS 3.0	1.0	750	4.0	750	10u	100	500m	15	35	20M5Δ	400n	DM	T05		
6	TRL8014	6.6mΩ	1.0	SS 3.0	1.0	800	4.0	800	10u	100	500m	15	35	20M5Δ	400n	DM	T05		
7	TRM2014	6.6mΩ	1.0	SS 3.0	1.0	200	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400m	DM	T05		
8	TRM2254S	6.6mΩ	1.0	SS 3.0	1.0	250	6.0	225	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
9	TRM2504	6.6mΩ	1.0	SS 3.0	1.0	250	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
10	TRM2504S	6.6mΩ	1.0	SS 3.0	1.0	275	6.0	250	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
11	TRM2754S	6.6mΩ	1.0	SS 3.0	1.0	300	6.0	275	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
12	TRM3014	6.6mΩ	1.0	SS 3.0	1.0	300	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
13	TRM3014S	6.6mΩ	1.0	SS 3.0	1.0	325	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
14	TRM3504	6.6mΩ	1.0	SS 3.0	1.0	350	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
15	TRM3514S	6.6mΩ	1.0	SS 3.0	1.0	375	6.0	350	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
16	TRM4014	6.6mΩ	1.0	SS 3.0	1.0	400	6.0	400	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
17	TRM4014S	6.6mΩ	1.0	SS 3.0	1.0	425	6.0	400	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
18	TRM4504	6.6mΩ	1.0	SS 3.0	1.0	450	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
19	TRM5014	6.6mΩ	1.0	SS 3.0	1.0	500	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
20	TRM5014S	6.6mΩ	1.0	SS 3.0	1.0	525	6.0	500	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
21	TRM5504	6.6mΩ	1.0	SS 3.0	1.0	550	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
22	TRM6014	6.6mΩ	1.0	SS 3.0	1.0	600	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
23	TRM6504	6.6mΩ	1.0	SS 3.0	1.0	650	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
24	TRM7014	6.6mΩ	1.0	SS 3.0	1.0	700	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
25	TRM7504	6.6mΩ	1.0	SS 3.0	1.0	750	6.0	300	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
26	TRM8014	6.6mΩ	1.0	SS 3.0	1.0	800	6.0	800	3.0u	100	1.0	10	15	20M5Δ	400n	DM	T05		
27	TRS301LC	6.6mΩ	1.0	SJ 400m	3.0	300	5.0	300	10u	100	20m	40	65	20M5Δ	D		T05		
28	TRS401LC	6.6mΩ	1.0	SJ 400m	4.0	400	5.0	400	10u	100	20m	30	65	20M5Δ	D		T05		
29	ZN2983	6.7m	1.0	SJ 3.0	1.0	155	8.0	80	10u	100	5.0	1.0	20	60	#	80M5	600m		AØ
30	ZN2984	6.7m	1.0	SJ 3.0	1.0	185	8.0	120	10u	100	5.0	1.0	20	60	#	60M5	600m		AØ
31	ZN2985	6.7m	1.0	SJ 3.0	1.0	155	8.0	80	10u	100	5.0	1.0	40	120	#	60M5	600m		AØ
32	ZN2986	6.7m	1.0	SJ 3.0	1.0	185	8.0	120	10u	100	5.0	1.0	40	120	#	60M5	600m		AØ
33	TRL314S	6.7mØ	1.0	SJ 3.0	1.0	375	4.0	350	0.1m	100	50	15	35	20M5Δ	40u	DM	T05		
34	ZN3469	6.9m	1.2	SC 5.0	500m	35	5.0	25	100n	1.0	500m	100	350	#	20M5Δ	500m		AØ	
35	NS90011	6.9m	1.2	SC 5.0	500m	100	8.0	80	200n	5.0	1.0	30	350	#	20M5Δ	600m	250u	PL	
36*	5552-4T	7.0m	1.2	SA 10	120	7.0	80	200n	5.0	1.0	70							MT20	
37	ZNC214	7.1m	1.2	SJ 5.0	1.0	175	8.0	130	500n	5.0	5.0	30	90	#	20M5Δ	500n		T05	
38*	ZSC730	7.1mØ	1.2	SJ 400m	4.0	30	3.0	40	5	100	100	1.0m	50	#	500M5			PE	
39*	ZSC51	7.6m	1.0	SJ 300m	6.0	50	4.0	5	100n	6.0	1.0m	50						ME R56	
40*	ZSC611	7.6m	1.2	SJ 300m	30	50	20	9	1.0n	6.0	1.0m	50						ME R56	
41	ZN343A	8.0m	1.0	SJ 60m	60	1.0	60	1.0	1.0n	10	5.0	28	90	1	350			TO11	
42	ZN2106	8.0mØ	1.0	SJ 500m	60	80	60	5	200n	10	200	12	35	#				T05	
43	ZN2107	8.0m	1.0	SJ 500m	60	80	60	5	100n	1.0	200m	30	90	#				AØ	
44	ZN2108	8.0m	1.0	SJ 500m	60	80	60	5	100n	1.0	200m	75	200	#				AØ	
45	ZN4073	8.6mØ	1.5	SJ 150m	40	40	20		100n	2.0	25m	10						300M5Δ	
46	JAN2N341BT	10ms	1.0	SA 3.0	20	85	8.0	60	500n	2.0	1.0	20	60	#	40M5Δ	300n	22	T05	
47	JAN2N3419t	10ms	1.0	SA 3.0	125	8.0	80	80	500n	2.0	1.0	20	60	#	40M5Δ	300n	22	T05	
48	JAN2N3420t	10ms	1.0	SA 3.0	85	8.0	60	60	500n	2.0	1.0	40	120	#	40M5Δ	300n	22	T05	
49	JAN2N3421t	10ms	1.0	SA 3.0	125	8.0	80	80	500n	2.0	1.0	40	120	#	40M5Δ	300n	22	T05	
50	ZN5079	10m	1.8	ØS 1.0	200m	60	5.0	30	10n	1.0	150m	100	300		400M5Δ	1.0		TO18	
51	ZN5080	10m	1.8	ØS 1.0	200m	60	5.0	30	10n	1.0	150m	200	500		500M5Δ	1.0		TO18	
52*	ZSC213	10m	1.5	SJ 600m	50				100n	1.0	20m	50	50		150M5			PL	
53*	ZSC214	10m	1.5	SJ 800m	25				100p	1.0	20m	50	50		150M5			PL	
54*	ZSC215	10m	1.5	SJ 600m	80				100p	1.0	20m	50	50		150M5			PL	
55*	ZSC223	10m	1.5	SJ 1.0	50				100p	1.0	20m	50	20		150M5			PE	
56*	ZSC224	10m	1.5	SJ 1.0	25				100p	1.0	20m	50	20		150M5			PE	
57*	ZSC225	10m	1.5	SJ 1.0	80				100p	1.0	20m	50	20		150M5			PE	
58*	ZSC229	10m	1.5	SJ 1.0	80	5.0	80	5	100p	1.0	100m	100	50		3.5	45n		TO8	
59*	AT301	10m	1.7	ØS 200m	20	3.0	15	20n	5.0	1.0	35m	20	50		3.5G5			Y77e Y GA	
60*	AT320	10m	1.7	ØS 100m	20	3.0	15	20n	5.0	1.0	35m	20	50		3.5G5			Y77e Y GA	
61	KD4025	10m	1.0	ØS 100m	20	2.0	10		300n	6.0	5m	20			1.263			Ø X72 V	
62	ST910541	10m#	15	ØS 5.0	125	10	80	*	20u	2.0	2.0	30	120	#	10M5Δ	500n	Ø	T05	
63	ST91055†	10m#	15	ØS 5.0	145	10	100	*	20u	2.0	2.0	30	120	#	10M5Δ	500n	Ø	T05	
64	ST91056†	10m#	15	ØS 5.0	170	10	120	*	20u	2.0	2.0	30	120	#	10M5Δ	500n	Ø	T05	
65	ZN2991	11m	2.0	SC 1.0	200m	95	7.0	60	30n	5.0	200m	25	75	#	30M5Δ			MT13 AØ	
66	ZN2992	11m	2.0	SC 1.0	200m	155	7.0	100	30n	5.0	200m	25	75	#	30M5Δ			MT13 AØ	
67	ZN2993	11m	2.0	SC 1.0	200m	95	7.0	80	30n	5.0	200m	60	120	#	30M5Δ			MT13 AØ	
68	ZN2994	11m	2.0	SC 1.0	200m	155	7.0	100	30n	5.0									

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	I _{MIN} DERATE J to C (W/C)	MAX P _{DM} FREE AIR @ 25°C (W)	T C A E X M P	ABSOLUTE MAX. RATINGS @25°C				MAX. I _{cbo} @ MAX V _{cb} @25°C	hFE			f _{ae} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	DWG # Y200 s/a TO200 Ser.	L C E O A D D E		
					I _c (A)	I _b (A)	BV _{cbo} (V)	BV _{ebo} (V)	BV _{ceo} (V)	BIAS V _{cb}	MIN	MAX							
1	TRM7015	13mØ	2.0	SS 3.0	1.0	700	6.0	700	3.0u	100	1.0	10	15	Ø 20MΩΔ	400n	DM	MD14		
2	TRM7505	13mØ	2.0	SS 3.0	1.0	750	6.0	750	3.0u	100	1.0	10	15	Ø 20MΩΔ	400n	DM	MD14		
3	TRM8015	13mØ	2.0	SS 3.0	1.0	800	6.0	800	3.0u	100	1.0	10	15	Ø 20MΩΔ	400n	DM	MD14		
4	USA55191/331	13m	2.3	SJ	600m		60	5.0	40	1.0uØ	4.0Ø	250m	19	#	50MΩΔ	150nØ			
5	USA55191/341	13m	2.3	SJ	600m		120	5.0	80	1.0uØ	100	150m	40	#	50MΩΔ	27	300nØ		
6#	2N3869	16m	2.5 Ø	SJ	500m	100m	40	4.0	20	1.0uØ	5.0Ø	30m	20	150	# 400MΩΔ	15	T05	A	
7	2N4296t	16m	2.0 Ø	SS 1.0	250m	350	4.0	250	100u	100	50	50	50	Ø 20MΩΔ	7.0uØ	T066	CØ		
8	2N4297t	16m	2.0 Ø	SS 1.0	250m	350	4.0	250	100u	100	50	75	75	Ø 20MΩΔ	7.0uØ	T066	CØ		
9	2N4298t	16m	2.0 Ø	SS 1.0	250m	500	4.0	350	100u	100	50	25	75	Ø 20MΩΔ	7.0uØ	T066	CØ		
10	2N4299t	16m	2.0 Ø	SS 1.0	250m	500	4.0	350	100u	100	50	50	150	Ø 20MΩΔ	7.0uØ	T066	CØ		
11	2N5421	16m	3.0 Ø	SC	500m	250m	36	4.0	18	1.0uØ	5.0Ø	100m	10	60	300MΩ	2.0	T039	AØ	
12#	2SC854	16m	2.5 Ø	SJ	300m		40	2.0	20	1.0uØ	5.0Ø	100m	10	200	800MΩ	PE	T05		
13#	BSX45	16m	3.0 Ø	SJ	1.0		80	7.0	40	1.0uØ	1.0Ø	150m	40	120	60MΩ	PEΔ	T05		
14#	BSX46	16m	3.0 Ø	SJ	1.0		100	7.0	60	10u	1.0Ø	150m	40	120	60MΩ	PEΔ	T05		
15#	BSY341	16m	2.6	SJ	600m	200m	60	5.0	40	70nØ	1.0Ø	100m	25	42 Ø	400MΩ	2.0	30nØ	DPE	
16#	BSY581	16m	2.6	SJ	600m	200m	50	5.0	25	120n	1.0Ø	100m	17	42 Ø	400MΩ	3.0	35nØ	DPE	
17	PT5547	16m	3.0	S	5.0	2.0	140	8.0	120	1.0m	2.0Ø	1.0	40	120	80M	400m	350nØ	PL	T0111 G
18#	BF109	17m	2.5	SJ	0.1	135	2.0	135							1.0M		ME	T05	
19#	XB433	17m	3.0 Ø	SJ	800m	200m	36	4.0	18						900MΩ		PE	T0131	
20#	XB434	17m	3.0 Ø	SJ	800m	200m	55	4.0	30						900MΩ		PE	T0131	
21#	XB473	17m	3.0 Ø	SJ	800m	200m	55	4.0	30						900MΩ		PE	T0117	
22#	XB474	17m	3.0 Ø	SJ	800m	200m	55	4.0	30						900MΩ		PE	T0117	
23	2N1505	20m	3.0 Ø	SJ	500m	200m	50	3.0	40	50uØ	2.8Ø	100m	7.0	100	# 250M*	13	PL	T05 A	
24	2N1506	20m	3.0 Ø	SJ	500m	200m	60	4.0	40	10uØ	2.8Ø	100m	10	100	# 250M*	10	PL	T05 A	
25	2N2961	20m	3.0 Ø	SC	250m	50m	60	5.0	60	100uØ	1.0Ø	20	150	200MΩ	3.3	PL	T05 AØ		
26	2N3917	20m Ø	2.0 Ø	SJ	2.0	1.0	80	5.0	40	1.0m	4.0Ø	1.0	30	120	# 50MΩΔ	T03	CØ		
27	2N3918	20m Ø	2.0 Ø	SJ	2.0	1.0	80	5.0	40	1.0m	4.0Ø	1.0	100	300	# 80MΩΔ	T03	Ø		
28	2N4133	20m	3.0 Ø	SJ	600m	100m	90	5.0	80	10uØ	5.0Ø	200m	10	80	# 200MΩ	T05 AØ			
29	2N4427	20m	3.5 Ø	SJ	400m	400m	40	2.0	20	20uØ	5.0Ø	100m	10	200	500MΩ	5.0	T039 AØ		
30	2N5010	20m	2.0	SS 500m	250m	500	5.0	500	5	6.0uØ	1.0Ø	25m	30	180	20MΩΔ	56	T05 AØ		
31	2N5011	20m	2.0	SS 500m	250m	600	5.0	600	5	6.0uØ	1.0Ø	25m	30	180	20MΩΔ	60	T05 AØ		
32	2N5012	20m	2.0	SS 500m	250m	700	5.0	700	5	6.0uØ	1.0Ø	25m	30	180	20MΩΔ	64	T05 AØ		
33	2N6013	20m	2.0 Ø	SS 500m	250m	800	5.0	800	5	12uØ	1.0Ø	20m	30	180	20MΩΔ	80	T05 AØ		
34	2N5014	20m	2.0 Ø	SS 500m	250m	900	5.0	900	5	12uØ	1.0Ø	20m	30	180	20MΩΔ	80	T05 AØ		
35	2N5015	20m	2.0 Ø	SS 500m	250m	1.0k	5.0	10k	12uØ	1.0Ø	20m	30	180	20MΩΔ	90	T05 AØ			
36	2N5108	20m	3.5 Ø	SS 400m		55	3.0	55	1.0uØ						1.2GΩΔ	T039 AØ			
37	2N5108A	20m	3.5 Ø	SS 400m		55	3.0	55	1.0uØ						1.2GΩΔ	T039 AØ			
38	2N5109	20m	3.5 Ø	SS 400m	400m	40	3.0	20	20mΔ	150	50m	40	120	1.2GΩΔ	T039 AØ				
39	2N5470	20m	3.5 Ø	SS 200m		55	3.5	55	1.0m						1.2GΩΔ	X82 A			
40	2N5528s	20m Ø	3.5 Ø	SJ	10	4.0	60	3.0	40	1.0m	5.0Ø	3.0	40	200	# 200MΩΔ	3.7	T059 AØ		
41	2N5529s	20m Ø	3.5 Ø	SJ	10	4.0	60	3.0	40	1.0m	5.0Ø	3.0	40	200	# 200MΩΔ	3.7	T061 AØ		
42	2N5530s	20m Ø	3.5 Ø	SJ	10	4.0	60	3.0	40	1.0m	5.0Ø	3.0	40	200	# 200MΩΔ	3.7	T061 A		
43	2N5532s	20m Ø	3.5 Ø	SJ	10	4.0	90	3.0	75	1.0m	5.0Ø	3.0	30	150	# 200MΩΔ	3.7	T059 AØ		
44	2N5533s	20m Ø	3.5 Ø	SJ	10	4.0	90	3.0	75	1.0m	5.0Ø	3.0	30	150	# 200MΩΔ	3.7	T061 AØ		
45	2N5534s	20m Ø	3.5 Ø	SJ	10	4.0	90	3.0	75	1.0m	5.0Ø	3.0	30	150	# 200MΩΔ	3.7	T061 A		
46	2N5644	20m	3.5 Ø	SS 250m		36	4.0	18	100uØ	5.0Ø	100m	15	15	400MΩ		M72h R			
47	2N5897	20m	3.5 Ø	SS 500m		40	1	3.0	18	1.0m	5.0Ø	120	40m	30	1.0GΩΔ	2.0m	T038 AØ		
48	2N6710	20m	3.5 Ø	SS 500m		40	1	3.0	20	100uØ	5.0Ø	50m	25	300	400MΩ		T039 AØ		
49	2N5943	20m	1.0	SS 400m		40	3.5	30	100uØ	150	50m	25	300	1.0GΩΔ		T039 AØ			
50#	2SC855	20m	3.0 Ø	SJ	400m		40	2.0	20	1.0uØ	5.0Ø	100m	10	200	800MΩ	100	DPL	T05 A	
51#	2SC1012A	20m Ø	2.5 Ø	SJ	60m	10m	250	5.0	250	1.0uØ	200	40m	20	100MΩ	9.3	DPL	M99 A		
52	40389	20m Ø	3.5 Ø	SJ	700m		60	5.0	40	250nØ	100	150m	50	250	# 100MΩΔ	20			
53	40409	20m Ø	3.0 Ø	SJ	700m	200m	40	9.0	90	1.0u*	4.0Ø	150m	50	250	100MΩ	9.3	D	M99	
54	404591	20m Ø	1.0	SJ	1.0		80	8.0	40	10nØ	1.0Ø	100m	100	300	200MΩ	1.0	50n	DPE R119	
55	40608	20m Ø	3.5 Ø	SJ	400m		40	2.0	40	100uØ	1.0Ø	150m	50m	35	120	700MΩ	20	PE	X84 A
56	40825	20m Ø	3.5 Ø	SJ	1.0		7.0	45	45	250n	100	150m	100	300	300				
57	40628	20m Ø	3.5 Ø	SJ	1.0		7.0	55	55	250n	100	150m	100	300	300				
58	B3747	20m Ø	1.5 Ø	SJ	800m		25											M72	
59	B3748	20m Ø	1.5 Ø	SJ	800m		25											M72	
60#	BFW16A	20m	1.5	SJ	150m		40	25	1.0uØ										
61#	BFW17A	20m	1.5	SJ	150m		40	25	1.0uØ										
62#	BLY38	20m	1.0	SJ		36	4.0	18	100uØ	5.0Ø	500mØ	50	Ø	1.3GΩ	500m		PL	R70 Ø	
63	MM1500	20m	3.5 Ø	SS 200m		30	4.0	15	100uØ	5.0Ø	500m	30	55	Ø 1.5GΩ	500m				
64	MM1501	20m	3.5 Ø	SS 200m		30	4.0	15	100uØ	5.0Ø	500m	30	55	Ø 1.0GΩ	500m				
65	MM8000	20m	3.5 Ø	SS 400m		40	3.5	30	20uØ	150	50m	30	55	Ø 550MΩΔ					
66	MM8001	20m	3.5 Ø	SS 400m		40	3.5	30	20uØ	150	50m	30	55	Ø 700MΩΔ					
67	MM8008	20m	3.5 Ø	SS 100m		35	3.0	30	100uØ	1.0Ø	100m	30	55	Ø 1.1GΩ	3.0				

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	I _{MIN.} DERATE J to C	MAX P _c FREE AIR @ 25°C (W/C)	M T	ABSOLUTE MAX. RATINGS @ 25°C						MAX. I _{cbo} @ MAX V _{cbo} @ 25°C (A)	hFE	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG # Y200 s/a TO200 Ser.	C E A D E				
					A	E	I _c	I _b	BV _{cbo}	BV _{ebo}	BV _{ceo}											
1 #	BF179C	22m	1.7	S	50m	10m	50	250	280	50	50n	280	100m	10	100	#	120M ¹	DPL	T05	A ¹		
2	PT1558	22m	4.0	S	500m	200m	80	50	45	50n	280	100m	10	100	#	250M ¹ * 4.0	PL	T05	A ⁰			
3	2N1506A	23m	3.5	S	500m	200m	80	50	80	50n	280	100m	10	100	#	250M ¹ * 4.0	PL	T05	A ⁰			
4	2N3308	23m	3.5	S	500m	100m	50	30	50	100u	200	75	50	300M ¹ Δ	2.0				T039	A ⁰		
5	2N3659	23m	4.0	S	500m	250m	220	50	170	10n	500	10m	20	100		50M ¹ Δ			T05	A ⁰		
6 #	ZSC844	23m	3.5	S	400m		40	20	17	1.0u	500	100m	10	200		800M ¹			PL	T05	0	
7 #	ZSC845	23m	3.5	S	400m		55	3.5	30	1.0u	500	100m	10	200		800M ¹			PL	T05	0	
8 #	PT6669	23m	4.0	S	200m		55	3.5	30	1.0m	500	200m	20	75		100M ¹ Δ			PE	X95		
9 #	MP8131	24m ²	3.0	S	1.2		20	4.0	20	1.0m	5.0	200m	60	120		100M ¹ Δ			PE	X95		
10 #	MP8132	24m ²	3.0	S	1.2		20	4.0	20	1.0m	5.0	200m	60	120		100M ¹ Δ			PE	X95		
11 #	MP8133	24m ²	3.0	S	1.2		20	4.0	20	1.0m	5.0	200m	100	175		100M ¹ Δ			PE	X95		
12 #	MP8134	24m ²	3.0	S	1.2		20	4.0	20	1.0m	5.0	200m	175	250		100M ¹ Δ			PE	X95		
13 #	MP8135	24m ²	3.0	S	1.2		20	4.0	20	1.0m	5.0	200m	250			100M ¹ Δ			PE	X95		
14 #	MP8136	24m ²	3.0	S	1.2		20	4.0	20	1.0m	5.0	200m	30	280		100M ¹ Δ			PE	X95		
15 #	ZSC777	25m	2.0	S	1.0		75	4.0	75	1.0u	100	100m	50	160M ¹					MD32	0		
16 #	3TX620	25m	4.0	J	500m	100m	36	3.5	18	100u	50	50m	10	200		800M ¹			PL	M759	0	
17 #	3TX630	25m	4.0	J	500m	100m	60	4.0	30	100u	50	50m	10	200		700M ¹			PL	M759	0	
18 #	3TX650	25m	4.0	J	500m	100m	55	4.0	30	100u	50	50m	10	200		1.2G			PL	M759	0	
19 #	3TX820	25m	4.0	J	500m	100m	36	3.5	18	100u	50	50m	10	200		800M ¹			PL	M759	0	
20 #	3TX830	25m	4.0	J	500m	100m	60	4.0	30	100u	50	50m	10	200		700M ¹			PL	M759	0	
21 #	3TX850	25m	4.0	J	500m	100m	55	4.0	30	100u	50	50m	10	200		1.2G			PL	M759	0	
22	40347V1	25m ²	4.4	S	1.5	500m	60	7.0	40	1.0u*	4.0	450m	20	80		2.2			D	MM9	A ⁰	
23	40348V1	25m ²	4.4	S	1.5	500m	90	7.0	65	1.0u*	4.0	300m	30	100		2.5			D	MM9	A ⁰	
24	40349V1	25m ²	4.4	S	1.5	500m	160	7.0	140	1.0u*	4.0	150m	25	100		3.3			D	MM9	A ⁰	
25 #	BFS50	25m	3.0	S	400m		40	3.5	20	20u	50	120m	10	#		600M ¹ Δ			PE	T039	A ⁰	
26 #	BFX49	25m	2.5	S	250m	700m	#	65	4.0	36	5.0	100m	10	25	Ø	1.3G ¹ 5.0			PL	M722	R	
27	S3006	25m	5.0	S	400m		40	3.5	30	20u	50	50m	10	200		1.4G ¹				M786	R	
28	2N5092	26m ²	2.0	S	1.0	500m	400	60	350	500n	100	100m	15	250		50M ¹ Δ	20			T05	A ⁰	
29	2N5093	26m ²	2.0	S	1.0	500m	500	60	400	500n	100	100m	15	250		50M ¹ Δ	20			T05	A ⁰	
30	2N5097	26m ²	2.0	S	1.0	500m	600	60	450	500n	100	100m	15	250		50M ¹ Δ	20			T05	A ⁰	
31	2N5098	26m ²	2.0	S	1.0	500m	700	60	500	500n	100	100m	15	250		50M ¹ Δ	20			T05	A ⁰	
32	2N5099	26m ²	2.0	S	1.0	500m	800	60	550	500n	100	100m	15	250		50M ¹ Δ	20			T05	A ⁰	
33	MST5404	26m	1.0	S	400m	200m	650	50	540	10u	100	100m	20			50M ¹ Δ	60			DM	T05	
34	MST6804	26m	1.0	S	400m	200m	500	50	680	10u	100	100m	20			250M ¹ *			PL	T05	A ⁰	
35	PT1544	26m	4.0	S	500m	200m	150	4.0	50	50u	100u	100m	20			250M ¹ *			PL	T05	A ⁰	
36	PT1545	26m	4.0	S	500m	200m	50	4.0	50u	100u	100m	20			250M ¹ *			PL	T05	A ⁰		
37	TRS1004	26m	1.0	S	400m	50m	100	60	100u	3.0u	4.0	50m	30			50k ¹ 30			DM	T05	A ⁰	
38	TRS1204	26m	1.0	S	400m	50m	120	60	120u	3.0u	4.0	50m	30			50k ¹ 30			DM	T05	A ⁰	
39	TRS1404	26m	1.0	S	400m	50m	140	60	140u	3.0u	4.0	50m	30			50k ¹ 30			DM	T05	A ⁰	
40	TRS1604	26m	1.0	S	400m	50m	160	60	160u	3.0u	4.0	50m	30			50k ¹ 30			DM	T05	A ⁰	
41	TRS1804	26m	1.0	S	400m	50m	180	60	180u	3.0u	4.0	50m	30			50k ¹ 30			DM	T05	A ⁰	
42	TRS2004	26m	1.0	S	400m	50m	200	60	200u	2.0u	4.0	50m	20			50k ¹ 30			DM	T05	A ⁰	
43	TRS2254	26m	1.0	S	400m	50m	225	60	225u	2.0u	4.0	50m	22			50k ¹ 30			DM	T05	A ⁰	
44	TRS2504	26m	1.0	S	400m	50m	250	60	250u	2.0u	4.0	50m	20			50k ¹ 30			DM	T05	A ⁰	
45	TRS2754	26m	1.0	S	400m	50m	275	60	275u	2.0u	4.0	50m	22			50k ¹ 30			DM	T05	A ⁰	
46	TRS2804S	26m	1.0	S	400m		340	50	280	2.0u	4.0	800	200m	25		45 Ø	50M ¹ Δ 30			DM	T05	A ⁰
47	TRS3014	26m					300	60	300	2.0u	4.0	50m	30	#		50M ¹ Δ 30			DM	T05	A ⁰	
48	TRS3204S	26m					385	50	320	2.0u	4.0	800	200m	25		45 Ø	50M ¹ Δ 30			DM	T05	A ⁰
49	TRS3254	26m	1.0	S	400m	50m	325	60	325	3.0u	4.0	50m	22			50k ¹ 30			DM	T05	A ⁰	
50	TRS3504	26m	1.0	S	400m		350	60	350	2.0u	4.0	50m	20	#		50M ¹ 38			DM	T05	A	
51	TRS3604S	26m					420	50	380	2.0u	4.0	800	200m	25		45 Ø	50M ¹ Δ 30			DM	T05	A ⁰
52	TRS3754	26m	1.0	S	400m	50m	375	60	375	3.0u	4.0	50m	22			50k ¹ 30			DM	T05	A ⁰	
53	TRS4004	26m	1.0	S	400m	50m	400	60	400	2.0u	4.0	50m	30	#		65 Ø	50M ¹ 30			DM	T05	A
54	TRS4014	26m	1.0	S	400m	50m	400	60	425	3.0u	4.0	50m	22			50k ¹ 30			DM	T05	A ⁰	
55	TRS4145S	26m	1.0	S	400m	50m	480	50	480	10u	100	100m	20			30 Ø	50M ¹ 60			DM	T05	A ⁰
56	TRS4254	26m	1.0	S	400m	50m	425	60	425	3.0u	4.0	50m	22			50k ¹ 30			DM	T05	A ⁰	
57	TRS4404S	26m					530	50	440	10u	100	100m	20			30 Ø	50M ¹ Δ 60			DM	T05	A ⁰
58	TRS4504	26m					450	60	450	2.0u	4.0	400	30	#		50M ¹ 30			DM	T05	A ⁰	
59	TRS4754	26m	1.0	S	400m	50m	475	60	475	2.0u	4.0	400	20			50k ¹ 30			DM	T05	A ^{0</sup}	

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE. J to C	MAX. PC	M T	ABSOLUTE MAX. RATINGS @ 25°C						MAX. ICBO @ @ 25°C	hFE	fae	MAX. SAT. RES.	tr	STRUCTURE	DWG #	LC s/a		
					A	E	Ic	Ib	BVcbo	BVceo										
1	2N3686	28m	5.0	SC	1.0	120	8.0	80	50m	100	150m	100	300	60M Δ	165	△	T05	A Δ		
2	2N3742	28m	1.0	SC	50m	300	7.0	300	200m	100	30m	20	200	30M Δ			T05	A Δ		
3	JAN2N3742	28m	1.0	SC	50m	300	7.0	300	500m	100	30m	30	120	40M Δ			T039	A Δ		
4	JAN2N3743	28m	1.0	SC	50m	300	5.0	300	500m	100	30m	50	200	40M Δ			T039	A Δ		
5	2N3865	28m	5.0	SC	400m	55	3.5	30	100u Δ	5.0	50m	10	200	500M Δ			T039	A Δ		
6	JAN2N3866	28m	1.0	SC	400m	60	3.5	30	20u Δ	5.0	50m	15	200	500k	10		T039	A Δ		
7	2N3945	28m	5.0	SC	1.0	70	8.0	50	100u Δ	100	150m	40	150	60M Δ	3.3		T05	A Δ		
8	2N3948	28m	5.0	SC	400m	38	3.5	20	100n Δ	5.0	50m	15	200	700M Δ			T039	A Δ		
9	2N4429	28m	5.0	SC	425m	55	3.5	35	1.0m Δ	5.0	50m	20	200	700M Δ			MT59j	R		
10	2N4924	28m	1.0	SC	200m	100	5.0	100	100n Δ	100	150m	40	200	100M Δ			T039	A Δ		
11	2N4925	28m	1.0	SC	200m	150	5.0	150	100n Δ	100	150m	40	200	100M Δ			T039	A Δ		
12	2N4926	28m	5.0	SC	50m	200	7.0	200	100n Δ	100	30m	20	200	30M Δ			T039	A Δ		
13	JAN2N4926	28m	1.0	SC	50m	200	7.0	200	500m	100	30m	30	120	40M Δ			T039	A Δ		
14	2N4927	28m	5.0	SC	50m	250	7.0	250	100n Δ	100	30m	20	200	30M Δ			T039	A Δ		
15	JAN2N4927	28m	1.0	SC	50m	250	7.0	250	500m	100	30m	30	120	40M Δ			T039	A Δ		
16	JAN2N4930	28m	1.0	SC	50m	200	5.0	200	500m	100	30m	30	50	200	# 40M Δ			T039	A Δ	
17	JAN2N4931	28m	1.0	SC	50m	250	5.0	250	500m	100	30m	30	50	200	# 40M Δ			T039	A Δ	
18	2N4976	28m	5.0	SC	400m	55	3.5	30	5.0m Δ	5.0	50m	20	250	10M Δ			MT66			
19	2N5279	28m	1.0	SC	1.0	500m	400	7.0	300	20u Δ	100	200m	40	150	15M Δ			T05	A Δ	
20	2N5422	28m	5.0	SC	1.0	500m	36	4.0	18	100u Δ	5.0	500m	10	60	300M Δ	1.0		T039	A Δ	
21	2N5481	28m	5.0	SC	200m	50m	1.30 Δ	30	2.0m	5.0	50m	20	250				MT74	R		
22	2N5527 Δ	28m	5.0	SC	5.0	1.0	60	3.0	40	1.0m	5.0	3.0	40	200	# 200M Δ	3.7		R81j	A Δ	
23	2N5531 Δ	28m	5.0	SC	5.0	1.0	90	3.0	75	1.0m	5.0	3.0	30	150	# 200M Δ	3.7		R81j	A Δ	
24	2N5535 Δ	28m	5.0	SC	20	8.0	60	3.0	50	1.0m	5.0	10	30	150	# 150M Δ	6.2		T061	A Δ	
25	2N5536 Δ	28m	5.0	SC	20	8.0	60	3.0	50	1.0m	5.0	10	30	150	# 150M Δ	6.2		T061	A Δ	
26	2N5537 Δ	28m	5.0	SC	20	8.0	90	3.0	75	1.0m	5.0	10	30	150	# 6.2			T061	A Δ	
27	2N5538 Δ	28m	5.0	SC	20	8.0	90	3.0	75	1.0m	5.0	10	30	150	# 6.2			T061	A Δ	
28	2N5687	28m	5.0	SC	500m	40	3.0	20	1.0m Δ	120	50m	15						T039	A Δ	
29	2N5698	28m	5.0	SC	500m	40	3.0	18	1.0m Δ	120	40m	30						T0131	R	
30	2N5766	28m	5.0	SC	200m	55	3.5	35	3.0m Δ	5.0	50m	20	1					MT77	Z	
31	2N5859 Δ	28m	1.0	SC	20	80	6.0	40	250u Δ	100	1.0	15	100	250M Δ	700m	30n Δ		T039	A Δ	
32	2N5860 Δ	28m	1.0	SC	20	90	7.0	45	250u Δ	100	1.0	15	80	250M Δ	700m	15n Δ		T039	A Δ	
33	2N5861 Δ	28m	1.0	SC	20	100	6.0	50	300u Δ	100	500m	25	100	200M Δ	1.0	15n Δ		T039	A Δ	
34	2N5913	28m	3.5	SC	330m	38	3.5	14	300u Δ								X82a	A		
35	2N5920	28m	3.5	SC	250m	50	3.5	14	1.0m Δ								MT75d	R		
36	2N5922	28m	5.0	SC	425m	55	3.5	35	4.0m Δ								PE	T039		
37	2SC890	28m	4.3	SC	400m	40	3.0	20	1.0u Δ	100	100m	20	#	600M Δ			PE	T05		
38	2SC908	28m	5.0	SC	600m	40	3.0	40	50u Δ	100	100m	5.0		800M Δ			DPL	T05		
39	40082	28m	5.0	SC	1.5				2.5						27M*			T039	A Δ	
40	40309	28m	1.0	SC	700m	200m			2.5	18	250u Δ	4.0	120	#			DA	T05	A Δ	
41	40311	28m	1.0	SC	700m	200m			2.5	30	250u Δ	4.0	50m	70	350		DPL	T05	A Δ	
42	40314	28m	1.0	SC	700m	200m			2.5	40	250u Δ	4.0	50m	70	350		DPL	T05	A Δ	
43	40315	28m	1.0	SC	700m	200m			2.5	35	250u Δ	4.0	50m	70	350		DPL	T05	A Δ	
44	40317	28m	1.0	SC	700m	200m			2.5	40	250u Δ	4.0	10m	40	200		DPL	T05	A Δ	
45	40320	28m	1.0	SC	700m	200m			2.5	40	250u Δ	4.0	10m	40	200		DPL	T05	A Δ	
46	40323	28m	1.0	SC	700m	200m			2.5	18	250u Δ	4.0	5m	70	350		DPL	T05	A Δ	
47	40360	28m	5.0	SC	700m	200m			4.0	70	10m Δ	4.0	10m	40	200	100M Δ		DPL	T05	A Δ
48	40361	28m	5.0	SC	700m	200m			4.0	70	10m Δ	4.0	10m	70	350	100M Δ		DPL	T05	A Δ
49	40366	28m	1.0	SC	1.0	120	7.0	65	2.0m	100	150m	40	120	#			DA	T05	A Δ	
50	40387	28m	1.0	SC	1.5	1.0	100	12	55	4.0m Δ	4.0	200m	35	100		7.0		DA	T05	A Δ
51	40385	28m	1.0	SC	1.0	450	7.0	350	20u Δ	100	20m	40	160				DA	T05	A Δ	
52	40407	28m	1.0	SC	700m	200m			4.0	50	250u Δ	100	1.0m	40	200	100M Δ		D	T05	A Δ
53	40408	28m	1.0	SC	700m	200m			4.0	90	1.0u Δ	4.0	10m	40	200	100M Δ	9.3	D	T05	A Δ
54	40578	28m	5.0	SC	400m	55	3.5	35	100u Δ								T039	A Δ		
55	40561	28m	5.0	SC	1.5				2.5						27M*			DPL	T039	A Δ
56	40611	28m	1.0	SA	700m	200m			2.5	25	500n Δ	4.0	50m	70	500		DPL	T05	A Δ	
57	40616	28m	1.0	SA	700m	200m			2.5	32	500n Δ	4.0	50m	70	500		DPL	T05	A Δ	
58	40635	28m	1.0	SA	700m	200m			7.0		100u Δ	4.0	150m	50	250		PL	T05	A Δ	
59	BC140t	28m	3.7	SC	1.0	100m	80	7.0	40	100u Δ	1.0	100m	63	250	* 50M Δ		PL	T039	A Δ	
60	BC141t	28m	3.7	SC	1.0	100m	100	7.0	60	100u Δ	1.0	100m	63	250	* 50M Δ		PL	T039	A Δ	
61	BFX33	28m	2.9	SC	400m	55	3.5	30	100u Δ	15	80m	25	150	800M Δ		PE	T039	A Δ		
62	BFX55	28m	3.7	SC	400m	60	3.5	40	50u Δ	2.0	200m	40	160	500M Δ	8.0	PE	T039	A Δ		
63	BFY44	28m	5.0	SC	200m	80	4.0	60	50u Δ	5.0	200m	35	210M Δ	200m		PE	T039	A Δ		
64	BFY70	28m	5.0	SC	200m	60	4.0	40	50u Δ	5.0	200m	35	210M Δ	200m		PE	T039	A Δ		
65	BSW29	28m	1.0																	

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX P _c FREE AIR @ 25°C (W/C)	M T X M P	ABSOLUTE MAX. RATINGS @ 25°C						MAX RFE			fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #	
					I _c (A)	I _b (A)	BV _{ceo} (V)	BV _{beo} (V)	BV _{ceo} (V)	I _{cbo} @ MAX V _{cb} (A)	V _{cb} (V)	I _c (A)	MIN	MAX					
1 # A209		30m	3.5 Δ	\$J	200m	40	3.5	25	10uΩ	5.0	50mΩ	25	30	1.2GΩ	PE	MT71	R		
2 # BLY76		32m	4.0	\$J	300m	65	4.0	36	5.0	250m	30mΩ	15	30	900MΩ	PE	X63a	A		
3 # 2N1067†		33m	5.0 Δ	\$A	500m	200m	60	12	30	500u	4.0	200m	15	75	1.5MΩ	D	T08	A	
4 # 2N5058		33m	1.0	\$S	150m	300	7.0	300	50nΩ	250	30m	35	150	30MΩ	D	T05	A		
5 # 2N5059		33m	1.0	\$S	150m	250	6.0	250	50nΩ	250	30m	30	150	30MΩ	D	T05	A		
6 # 2N5715		33m	6.0 Δ	\$S	200m	80m	50	1	35	500u	5.0	50m	20	200	3.5GΩ	D	T05	A	
7 # 2SC6031		33m	5.0 Δ	\$J	1.5	60	4.0	38	1.0uΩ	4.0	400m	20	300	90MΩ	PL	T05	V		
8 # 2SC976		33m	5.0 Δ	\$A	400m	55	3.5	35	1.0uΩ	2.8	20m	10	# 180	1.3GΩ	PE	MT83	D		
9 # 40250V1		33m	5.8	\$J	4.0	2.0	50	50	1.0mΩ	4.0	1.5	25	100	80n	MD30	MD30	D		
10 # 40321		33m	1.0	\$J	1.0	500m	5.0	300	1.0uΩ	1.0	20m	25	200	DPL	T05	A			
11 # 40326		33m	1.0	\$J	700m	20	2.5	25	250nΩ	4.0	10m	40	200	DPL	T05	A			
12 # 40327		33m	1.0	\$J	1.0	500m	5.0	100u	1.0	20m	40	250	DPL	T05	A				
13 # 40372		33m	5.8	\$J	4.0	2.0	90	7.0	55	1.0	500m	25	100	# 800MΩ	DA	MD30	C		
14 # 40373		33m	5.8	\$J	3.0	2.0	160	7.0	140	4.0	500m	20	80	2.0	MD30	MD30	D		
15 # 40374		33m	5.8	\$J	2.0	2.0	250	6.0	175	10mΔ	1.0	100m	40	15MΩ	DA	MD30	D		
16 # 40375		33m	5.8	\$J	7.0	5.0	120	7.0	5.0	5.0mΩ	5.0	500m	50	200	60MΩ	E	MD30	D	
17 # BFX51		33m	6.0 Δ	\$S	1.0	80	4.0	80	* 80	1.0uΩ	1.0	100m	15	40	180MΩ	PL	T05	Ø	
18 # SFT443		33m	6.0 Δ	\$S	1.0	80	4.0	80	* 80	1.0uΩ	1.0	100m	15	40	180MΩ	PL	T05	Ø	
19 # ZT90		33m	1.0	\$J	1.0	#	60	6.0	60	100n	1.0	200m	60	200	# 300MΩ	PL	T05	A	
20 # ZT91		33m	1.0	\$J	1.0	#	120	6.0	100	1.0uΩ	1.0	200m	40	120	# 250MΩ	PL	T05	A	
21 # ZT92		33m	1.0	\$J	1.0	#	120	6.0	100	1.0uΩ	1.0	200m	65	200	# 250MΩ	PL	T05	A	
22 # ZT93		33m	1.0	\$J	1.0	#	120	6.0	80	100n	1.0	150m	40	120	# 300MΩ	PL	T05	A	
23 # ZT94		33m	1.0	\$J	1.0	#	60	6.0	45	1.0uΩ	1.0	10m	20	#	300MΩ	PL	T05	A	
24 # ZT95		33m	1.0	\$J	1.0	#	60	6.0	60	100n	1.0	350m	30	200	# 300MΩ	PL	T05	A	
25 # ZT3440		33m	1.0 Δ	\$J	1.0	500m	300	7.0	250	20uΩ	1.0	20m	40	160	20MΩ	ØΔ	T05	D	
26 # 2N53341		34m	6.0 Δ	\$J	3.0	500m	60	8.0	60	5.0u	2.0	1.0	30	150	# 40MΩ	50n	T039	A	
27 # 2N53351		34m	6.0 Δ	\$J	3.0	500m	80	8.0	80	5.0u	2.0	1.0	30	150	# 40MΩ	50n	T039	A	
28 # 2N53361		34m	6.0 Δ	\$J	5.0	1.0	80	8.0	80	10u	2.0	2.0	30	120	30MΩ	100n	T039	A	
29 # 2N53371		34m	6.0 Δ	\$J	5.0	1.0	80	8.0	80	10u	2.0	2.0	60	240	30MΩ	100n	T039	A	
30 # 2N53381		34m	6.0 Δ	\$J	5.0	1.0	100	6.0	100	10u	2.0	2.0	30	120	30MΩ	100n	T039	A	
31 # 2N53391		34m	6.0 Δ	\$J	5.0	1.0	100	8.0	100	10u	2.0	2.0	60	240	30MΩ	100n	T039	A	
32 # PT6618		34m	6.0 Δ	\$A	400m	55	3.5	30	1.0mΩ	1.0	100m	15	150	MT75d	R	MT75d	R		
33 # 2N5923		35m	6.0 Δ	\$S	750m	55	1	35	10mΩ	1.0	100m	15	150	MT75d	R	MT75d	R		
34 # 2N26571		40m	1.2	\$J	5.0	500m	80	7.0	60	100n	2.0	1.0	40	120	# 20MΩ	80n	T05	A	
35 # 2N26681		40m	1.2	\$J	5.0	500m	100	7.0	80	100n	2.0	1.0	40	120	# 20MΩ	80n	T05	A	
36 # 2N2949		40m	6.0 Δ	\$C	700m	100m	60	3.0	60	100n	2.0	4.0m	5.0	100	# 100MΩ	R70	A		
37 # 2N2950		40m	6.0 Δ	\$C	700m	100m	60	3.0	60	100n	2.0	4.0m	5.0	100	# 100MΩ	MT30	A		
38 # 2N3296		40m	6.0 Δ	\$J	700m	100m	60	3.0	40	100n	2.0	4.0m	5.0	100	# 100MΩ	MT30	A		
39 # 2N3553		40m	7.0	\$C	350m	100m	65	1	40	1.0mΩ	5.0	250m	15	150	350MΩ	TD39	A		
40 # JAN2N3553		40m	1.0	\$J	1.0	65	4.0	40	100n	1.0	150m	15	150	# 50MΩ	TD39	A			
41 # 2N3593		40m	1.0	\$C	500m	250m	200	10	200	1.0uΩ	8.0	200m	30	90	# 15MΩ	MT20	A		
42 # 2N3594		40m	1.0	\$C	500m	250m	200	10	200	1.0uΩ	8.0	200m	75	150	# 15MΩ	MT20	A		
43 # 2N3850†		40m	3.0 Δ	\$C	5.0	500m	100	5.0	80	100n	1.0	100	150	150	# 20MΩ	TD59	A		
44 # 2N3851†		40m	3.0 Δ	\$C	5.0	500m	100	5.0	80	100n	1.0	100	150	150	# 20MΩ	TD59	A		
45 # 2N3852†		40m	3.0 Δ	\$C	5.0	500m	60	5.0	40	100n	1.0	100	150	150	# 20MΩ	TD59	A		
46 # 2N3853†		40m	3.0 Δ	\$C	5.0	500m	60	5.0	40	100n	1.0	100	150	150	# 20MΩ	TD59	A		
47 # 2N3916		40m	5.0	\$J	150m	150	5.0	150	1.0mΩ	1.0	150m	40	200	# 50MΩ	MD28	A			
48 # 2N3924		40m	7.0	\$S	500m	36	4.0	18	100u	1.0	100u	20	200	# 250MΩ	TD39	A			
49 # 2N4349†		40m	7.0	\$J	2.0	65	5.0	50	100n	1.0	100	20	200	350MΩ	500m	130n	PE		
50 # 2N4350		40m	7.0	\$J	350m	100m	65	4.0	40	100n	1.0	350m	10	200	300MΩ	2.9	T05	A	
51 # 2N4862		40m	4.0	\$J	2.0	500m	140	8.0	120	100n	1.0	500m	50	150	# 50MΩ	TD46	A		
52 # 2N4863		40m	4.0 Δ	\$J	2.0	500m	140	8.0	120	100n	1.0	500m	50	150	# 50MΩ	T05	A		
53 # 2N5090		40m	50	\$J	400m	400m	55	3.5	30	20u	5.0	50m	10	200	500MΩ	T060	A		
54 # 2N5102		40m	7.0	\$S	3.3	1.0	90	4.0	50	4.0	500m	10	100	150MΩ	T060	A			
55 # 2N5252		40m	1.0	\$S	1.0	250m	300	6.0	300	10u	1.0	100m	40	120	30MΩ	TD39	A		
56 # 2N5253		40m	1.0	\$S	1.0	250m	300	6.0	300	10u	1.0	100m	80	250	30MΩ	TD39	A		
57 # 2N5916		40m	4.0 Δ	\$S	200m	55	1	35	1.0mΩ	1.0	50m	20	150	1.0GΩ	MM14	R			
58 # 2N8517†		40m	4.0 Δ	\$S	200m	55	1	35	1.0mΩ	1.0	50m	20	150	1.0GΩ	PL	T05	A		
59 # 2SC354		40m	7.0	\$J	1.5	40	4.0	35	1.0uΩ	4.0	500m	10	100	180MΩ	PL	T05	A		
60 # 2SC541		40m	7.0	\$J	1.0	50	4.0	35	5.0uΩ	4.0	100m	25	150	450MΩ	PL	T05	A		
61 # 2SC547		40m	6.0 Δ	\$J	1.0	65	4.0	40	100n	1.0	100m	10	150	3.0MΩ	PE	T039	A		
62 # 2SC548		40m	6.0 Δ	\$J	1.0	500m	36	4.0	18	100u	1.0	100m	10	150	55MΩ	PE	T039	A	
63 # 2SC597		40m	6.0 Δ	\$J	1.0	65	4.0	40	100u	1.0	100m	10	150	400MΩ	PE	R816	A		
64 # 2SC665		40m	50 Δ	\$J	5.0	1.5	125	5.0	75	50u	1.0	100m	10	35	200KΩ	300m	ME	T03	A
65 # 2SC909		40m	7.0	\$J	500m	40	3.0	40	6	50u	1.0	100m	10	#	200MΩ	PE	TD39	A	
66 # 2SC1017		40m	4.0	\$J	1.0	75	4.0	35	10u	1.0	100m	10	#	200MΩ	PE	X51b	P		
67 # 2SC1018		40m	4.0 Δ	\$J	1.0	75	4.0	35	10u	1.0	100m	10	#	200MΩ	PE	T039	Ø		
68 # 3TC613		40m	7.0	\$J	1.0	500m	100m	5.0	50	100u	5.0	100m	10	150	500MΩ	PL	T039	A	
69 # 3TX601		40m	7.0	\$J	1.0	200m	36	4.0	18	1.0m	5.0	100m	10	160	300MΩ	PL	T039	A	
70 # 3TX614		4																	

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MAX Pc DERATE FREE J to C	MAX Pc M T AIR @ 25°C	MAX Pc M T X M P	ABSOLUTE MAX. RATINGS @ 25°C						MAX. I _{co} @ MAX V _{cb} @ 25°C	hFE	fae	MAX. SAT. RES. @ 25°C	tr	STRUCTURE	DWG #	C s/a TO200 Ser.	
					I _c	I _b	BV _{ceo}	BV _{beo}	BV _{ceo}	(A)									
(W/C)	(W)				(A)	(A)	(V)	(V)	(V)										
1	MST70B	40m	2.0	SJ	1.0	400m	700	50	700	120	100	60m	30	20M ₁	34	DM	T05		
2	S715+	40m	7.0	SJ	800m	55	3.5	30	40uA	40uA	40uA	800m ₁	5.0	PE	T039	A			
3	SD1181	40m	5.0	SJ	500m	55	3.5	30	20uA	20uA	20uA	800m ₁	1.2G ₁	PE	T060	A			
4	SDT182	40m	5.0	SJ	500m	55	3.5	30	20uA	20uA	20uA	800m ₁	1.2G ₁	PE	MT59	R			
5	SD1183	40m	5.0	SJ	500m	55	3.5	30	20uA	20uA	20uA	800m ₁	1.2G ₁	PE	MT66	R			
6	SDT4455	40m ₁	4.0	SJ	5.0	80	8.0	40	1.0uA	5.0uA	5.0uA	1.0	100	#	PL	T05	A ₁		
7	SDT4456	40m ₁	4.0	SJ	5.0	100	8.0	80	1.0uA	5.0uA	5.0uA	1.0	100	#	PL	T05	A ₁		
8	SDT4483	40m ₁	4.0	SJ	5.0	60	5.0	40	1.0uA	5.0uA	5.0uA	1.0	20	#	PL	T05	A ₁		
9	SDT4921	40m	7.0	SJ	5.0	1.0	225	8.0	200	1.0uA	5.0uA	5.0uA	1.0	20	#	PL	T05	A ₁	
10	SDT4922	40m	7.0	SJ	5.0	1.0	250	8.0	225	1.0uA	5.0uA	5.0uA	1.0	20	#	PL	T05	A ₁	
11	SDT4923	40m	7.0	SJ	5.0	1.0	275	8.0	250	1.0uA	5.0uA	5.0uA	1.0	20	#	PL	T05	A ₁	
12	SDT4924	40m	7.0	SJ	5.0	1.0	300	8.0	275	1.0uA	5.0uA	5.0uA	1.0	20	#	PL	T05	A ₁	
13	SDT4925	40m	7.0	SJ	5.0	1.0	325	8.0	300	1.0uA	5.0uA	5.0uA	1.0	20	#	PL	T05	A ₁	
14	SDT5001	40m ₁	4.0	SJ	2.0	500m	60	8.0	100uA	2.0mA	500m	50	150	#	PL	T046	A		
15	SDT5002	40m ₁	4.0	SJ	2.0	500m	80	8.0	100uA	2.0mA	500m	50	150	#	PL	T046	A		
16	SDT5003	40m ₁	4.0	SJ	2.0	500m	100	8.0	100uA	2.0mA	500m	50	150	#	PL	T046	A		
17	SDT5004	40m ₁	4.0	SJ	2.0	500m	140	8.0	100uA	2.0mA	500m	50	150	#	PL	T046	A		
18	SDT5005	40m ₁	4.0	SJ	2.0	500m	180	8.0	100uA	2.0mA	500m	50	150	#	PL	T046	A		
19	SDT5006	40m ₁	4.0	SJ	2.0	500m	60	8.0	100uA	2.0mA	500m	30	#	PL	T046	A			
20	SDT5007	40m ₁	4.0	SJ	2.0	500m	80	8.0	100uA	2.0mA	500m	30	#	PL	T046	A			
21	SDT5008	40m ₁	4.0	SJ	2.0	500m	100	8.0	100uA	2.0mA	500m	30	#	PL	T046	A			
22	SDT5009	40m ₁	4.0	SJ	2.0	500m	140	8.0	100uA	2.0mA	500m	30	#	PL	T046	A			
23	SDT5010	40m ₁	4.0	SJ	2.0	500m	180	8.0	100uA	2.0mA	500m	30	#	PL	T046	A			
24	SDT5011	40m ₁	4.0	SJ	2.0	500m	60	8.0	100uA	2.0mA	500m	120	#	PL	T046	A			
25	SDT5012	40m ₁	4.0	SJ	2.0	500m	80	8.0	100uA	2.0mA	500m	120	#	PL	T046	A			
26	SDT5013	40m ₁	4.0	SJ	2.0	500m	100	8.0	100uA	2.0mA	500m	120	#	PL	T046	A			
27	SDT5014	40m ₁	4.0	SJ	2.0	500m	140	8.0	100uA	2.0mA	500m	120	#	PL	T046	A			
28	SDT5015	40m ₁	4.0	SJ	2.0	500m	180	8.0	100uA	2.0mA	500m	120	#	PL	T046	A			
29	SDT5051	40m ₁	4.0	SJ	2.0	500m	175	8.0	100uA	2.0mA	500m	50	150	#	PL	T046	A		
30	SDT5052	40m ₁	4.0	SJ	2.0	500m	200	8.0	100uA	2.0mA	500m	50	150	#	PL	T046	A		
31	SDT5053	40m ₁	4.0	SJ	2.0	500m	225	8.0	100uA	2.0mA	500m	50	150	#	PL	T046	A		
32	SDT5054	40m ₁	4.0	SJ	2.0	500m	175	8.0	100uA	2.0mA	500m	30	150	#	PL	T046	A		
33	SDT5055	40m ₁	4.0	SJ	2.0	500m	200	8.0	100uA	2.0mA	500m	30	150	#	PL	T046	A		
34	SDT5056	40m ₁	4.0	SJ	2.0	500m	225	8.0	100uA	2.0mA	500m	30	150	#	PL	T046	A		
35	SDT5051	40m ₁	4.0	SJ	2.0	500m	60	8.0	100uA	2.0mA	500m	50	150	#	PL	T05	A		
36	SDT5052	40m ₁	4.0	SJ	2.0	500m	80	8.0	100uA	2.0mA	500m	50	150	#	PL	T05	A		
37	SDT5053	40m ₁	4.0	SJ	2.0	500m	100	8.0	100uA	2.0mA	500m	50	150	#	PL	T05	A		
38	SDT5054	40m ₁	4.0	SJ	2.0	500m	140	8.0	100uA	2.0mA	500m	50	150	#	PL	T05	A		
39	SDT5055	40m ₁	4.0	SJ	2.0	500m	180	8.0	100uA	2.0mA	500m	50	150	#	PL	T05	A		
40	SDT5056	40m ₁	4.0	SJ	2.0	500m	60	8.0	100uA	2.0mA	500m	30	#	PL	T05	A			
41	SDT5057	40m ₁	4.0	SJ	2.0	500m	80	8.0	100uA	2.0mA	500m	30	#	PL	T05	A			
42	SDT5058	40m ₁	4.0	SJ	2.0	500m	100	8.0	100uA	2.0mA	500m	30	#	PL	T05	A			
43	SDT5509	40m ₁	4.0	SJ	2.0	500m	140	8.0	100uA	2.0mA	500m	30	#	PL	T05	A			
44	SDT5510	40m ₁	4.0	SJ	2.0	500m	180	8.0	100uA	2.0mA	500m	30	#	PL	T05	A			
45	SDT5511	40m ₁	4.0	SJ	2.0	500m	60	8.0	100uA	2.0mA	500m	120	#	PL	T05	A			
46	SDT5512	40m ₁	4.0	SJ	2.0	500m	80	8.0	100uA	2.0mA	500m	120	#	PL	T05	A			
47	SDT5513	40m ₁	4.0	SJ	2.0	500m	100	8.0	100uA	2.0mA	500m	120	#	PL	T05	A			
48	SDT5514	40m ₁	4.0	SJ	2.0	500m	140	8.0	100uA	2.0mA	500m	120	#	PL	T05	A			
49	SDT5515	40m ₁	4.0	SJ	2.0	500m	180	8.0	100uA	2.0mA	500m	120	#	PL	T05	A			
50	SDT5551	40m ₁	4.0	SJ	2.0	500m	175	8.0	100uA	2.0mA	500m	50	150	#	PL	T05	A		
51	SDT5552	40m ₁	4.0	SJ	2.0	500m	200	8.0	100uA	2.0mA	500m	50	150	#	PL	T05	A		
52	SDT5553	40m ₁	4.0	SJ	2.0	500m	225	8.0	100uA	2.0mA	500m	50	150	#	PL	T05	A		
53	SDT5554	40m ₁	4.0	SJ	2.0	500m	175	8.0	100uA	2.0mA	500m	30	150	#	PL	T05	A		
54	SDT5555	40m ₁	4.0	SJ	2.0	500m	200	8.0	100uA	2.0mA	500m	30	150	#	PL	T05	A		
55	SDT5556	40m ₁	4.0	SJ	2.0	500m	225	8.0	100uA	2.0mA	500m	30	150	#	PL	T05	A		
56	SDT6101	40m	7.0	SJ	5.0	2.0	65	4.0	30	10uA	5.0uA	5.0uA	10	5.0	2.0	450M	PL	T05	A
57	SDT6102	40m	7.0	SJ	5.0	2.0	65	4.0	40	10uA	5.0uA	5.0uA	10	5.0	2.0	450M	PL	T05	A
58	SDT6103	40m	7.0	SJ	5.0	2.0	65	4.0	50	10uA	5.0uA	5.0uA	10	5.0	2.0	450M	PL	T05	A
59	SDT9001	40m	4.0	SJ	5.0	500m	50	50	30	1.0uA	2.0mA	1.0uA	20	#	10M ₁	DPL	T039	A ₁	
60	SDT9002	40m	4.0	SJ	5.0	500m	70	50	50	1.0uA	2.0mA	1.0uA	20	#	10M ₁	DPL	T039	A ₁	
61	SDT9003	40m	4.0	SJ	5.0	500m	90	50	70	1.0uA	2.0mA	1.0uA	20	#	10M ₁	DPL	T039	A ₁	
62	SDT9004	40m	4.0	SJ	5.0	500m	50	50	30	1.0uA	2.0mA	1.0uA	30	#	10M ₁	DPL	T039	A ₁	
63	SDT9005	40m	4.0	SJ	5.0	500m	70	50	50	1.0uA	2.0mA	1.0uA	30	#	10M ₁	DPL	T039	A ₁	
64	SDT9006	40m	4.0	SJ	5.0	500m	90	50	70	1.0uA	2.0mA	1.0uA	30	#	10M ₁	DPL	T039	A ₁	
65	SDT9007	40m	4.0	SJ	5.0	500m	50	50	30	1.0uA	2.0mA	1.0uA	50	#	10M ₁	DPL	T039	A ₁	
66	SDT9008	40m	4.0	SJ	5.0	500m	70	50	50	1.0uA	2.0mA	1.0uA	50	#	10M ₁	DPL	T039	A ₁	
67	SDT9009	40m	4.0	SJ	5.0	500m	90	50	70	1.0uA	2.0mA								

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MAX P _o	MIN. DERATE J to C	FREE AIR @ 25°C	M T X M P	ABSOLUTE MAX. RATINGS @ 25°C						MAX. ICBO @ MAX V _{ceo} @ 25°C (A)	BIAS V _{cb} (V)	hFE	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #	C E O	
						IC (W/C)	I _b (W)	BV _{cbo} (V)	BV _{ebo} (V)	BV _{ceo} (V)											
1	MPSU10	45m	1.0	\$J 1.0		300	8.0	300	200m	150	1.0m	25		60M _Δ	75		AN	X81	A ₀		
2	2N2033	50m _Δ	5.0 _Δ	\$J 3.0	1.0	80	10	60	25u	4.0 _Δ	.50	20	60	1.5k _Δ	80	1.8u	DA	T05	A ₀		
3	2N2034	50m _Δ	5.0 _Δ	\$J 3.0	1.0	80	10	60	25u	4.0 _Δ	1.0	20	60	1.5 _Δ	300m	1.8u	DA	T05	A ₀		
4	JAN2N2631	50m	8.8 _Δ	\$J 1.5		80	4.0	60	100 _Δ	100 _Δ	300m	30	150	#	150M _Δ	670m		R81			
5	2N2876	50m	18 _Δ	\$J 2.5		80	4.0	60	100 _Δ	2.0 _Δ	1.0	20	60	200M _Δ			PL	T060	A		
6	2N2911	50m _Δ	5.0 _Δ	\$C 3.0	1.0	150	10	125						1.0M _Δ				T05	A ₀		
7	2N3262T	50m	1.0	\$J 1.5		100	4.0	80	100n	4.0 _Δ	500m	40		150M _Δ	600m	20m _Δ	PLD	T039	A ₀		
8	2N3619	50m	7.5 _Δ	\$J 2.5		500m	75	4.0	40	25u _Δ	5.0 _Δ	1.0	40	#	200M _Δ			R50			
9	2N3620	50m	7.5 _Δ	\$J 5.0		10	75	4.0	40	25u _Δ	5.0 _Δ	1.0	40	#	200M _Δ			MT27			
10	2N3623	50m	7.5 _Δ	\$J 2.5		500m	75	4.0	40	1.0u _Δ	5.0 _Δ	1.0	40	#	200M _Δ			R50			
11	2N3624	50m	7.5 _Δ	\$J 5.0	1.0	75	4.0	40	1.0u _Δ	5.0 _Δ	1.0	40	#	200M _Δ			MT27				
12	2N3627	50m	7.5 _Δ	\$J 2.5		500m	100	4.0	50	1.0u _Δ	5.0 _Δ	1.0	40	#	200M _Δ			R50			
13	2N3628	50m	7.5 _Δ	\$J 5.0	1.0	100	4.0	50	1.0u _Δ	5.0 _Δ	1.0	40	#	200M _Δ			MT27				
14	2N36751	50m	8.8 _Δ	\$C 3.0	1.0	90	7.0	55	5.0#	1.0 _Δ	1.0	12	60	1.0M _Δ	800m	5.0u		T05			
15	2N36761	50m	8.8 _Δ	\$C 3.0	1.0	90	7.0	90	5.0#	1.0 _Δ	1.0	12	60	1.0M _Δ	800m	5.0u		T05			
16	2N3928T	50m _Δ	5.0 _Δ	\$J 3.0		500m	80	1	40 _Δ	1.0#		100	1.5		300	#	200M _Δ	30m _Δ			
17	2N4054	50m	4.0 _Δ	\$C 100m		300	7.0	300	100u	1.0 _Δ	50m	30	90	15M _Δ	67		X51	L			
18	2N4055	50m	4.0 _Δ	\$C 100m		250	7.0	250	100u	1.0 _Δ	50m	30	90	15M _Δ	67		X51	L			
19	2N4056	50m	4.0 _Δ	\$C 100m		200	7.0	200	100u	1.0 _Δ	50m	30	90	15M _Δ	67		X51	L			
20	2N4057	50m _Δ	4.0 _Δ	\$C 100m		150	7.0	150	100u	1.0 _Δ	50m	30	90	15M _Δ	67		X51	L			
21	2N4132	50m	7.5 _Δ	\$J 600m	100m	90	5.0	80	1.0u _Δ	5.0 _Δ	200m	10	80	#	200M _Δ			T037	A ₀		
22	2N4150T	50m _Δ	5.0 _Δ	\$J 5.0	2.0	100	5.0	80	100n _Δ	5.0 _Δ	50	40	120	#	15M _Δ	200n		T05	A ₀		
23	JAN2N4150T	50m	1.5	\$A 10		100	7.0	70	100n _Δ	5.0 _Δ	50	40	120	#	15M _Δ	500n _Δ		R114			
24	2N4225T	50m		\$J 3.0	5.0	80	6.0	40	1.0m _Δ	5.0 _Δ	1.0	40	150		150M _Δ	3.3		R114			
25	2N4226T	50m		\$J 3.0	5.0	100	6.0	60	1.0m _Δ	5.0 _Δ	1.0	40	150		150M _Δ	3.3		R114			
26	2N5237T	50m _Δ	5.0 _Δ	\$J 5.0	2.0	150	5.0	120	10u _Δ	5.0 _Δ	50	40	120	#	50M _Δ	500n		T05	A ₀		
27	JAN2N5237T	50m _Δ	1.5	\$A 10		150	7.0	120	100n _Δ	5.0 _Δ	50	40	120	#	15M _Δ	500n _Δ		T05	A		
28	2N5238T	50m _Δ	5.0 _Δ	\$J 5.0	2.0	200	5.0	170	10u _Δ	5.0 _Δ	50	40	120	#	50M _Δ	500n		T05	A ₀		
29	JAN2N5238T	50m	1.5	\$A 10		200	7.0	170	100n _Δ	5.0 _Δ	50	40	120	#	15M _Δ	500n _Δ		T05	A		
30	ZN5327T	50m _Δ	5.0 _Δ	\$J 5.0	2.0	100	5.0	80	2.0 _Δ	1.0	100	300		100M _Δ	500n _Δ		T05	A			
31	ZSC582	50m	4.0	\$J 100m		300	3.0	300	5	100m	10	50m	30	150				ME	T066		
32	ZSC778	50m	2.5	\$J 2.0		80	4.0	80	10m _Δ	1.0 _Δ	100m	50		150M _Δ			PE	M032			
33	ZSC911	50m	2.0	\$J 500m		40	3.0	40	50m _Δ	1.0 _Δ	100m	50		800M _Δ			PE	X636	GE		
34	ZSC973	50m	7.0 _Δ	\$J 500m		40	3.0	40	50u _Δ	1.0 _Δ	100	100	5.0	#	1.2G _Δ			PE1	M183	V2	
35	ZSD136	50m	4.0 _Δ	\$J 100m		200	3.0	200	10m _Δ	1.0 _Δ	100	50m	30	250	25M _Δ			D	M026		
36	ZSD137	50m _Δ	4.0 _Δ	\$J 100m		300	3.0	300	10m _Δ	1.0 _Δ	100	50m	30	250	25M _Δ			D	M226		
37	ZSD156	50m _Δ	4.0 _Δ	\$J 100m		200	3.0	200	10m _Δ	1.0 _Δ	100	50m	20	250	* 20M _Δ	100		D	T066		
38	ZSD157	50m _Δ	4.0 _Δ	\$J 100m		300	3.0	300	10m _Δ	1.0 _Δ	100	50m	20	250	* 20M _Δ	100		D	T066		
39	40347	50m	1.0	\$J 1.5		500m	60	7.0	40	1.0u _Δ	4.0 _Δ	450m	20	80	2.2				D	T05	A ₀
40	40348	50m	1.0	\$J 1.5		500m	90	7.0	65	1.0u _Δ	4.0 _Δ	300m	30	100	2.5			D	T05	A ₀	
41	40349	50m	1.0	\$J 1.5		500m	160	7.0	140	1.0u _Δ	4.0 _Δ	150m	25	100	3.3			D	T05	A ₀	
42	B3465	50m	5.0	\$J 3.0		100	6.0	60	100n _Δ	5.0 _Δ	1.0	40		200M _Δ	500m		D	T05	A ₀		
43	B3466	50m	5.0	\$J 3.0		100	6.0	60	100n _Δ	5.0 _Δ	1.0	20		200M _Δ	500m			MT27			
44	B3531	50m	4.0 _Δ	\$C 5.0		80	8.0	40	1.0m _Δ	5.0 _Δ	1.0	20		30M _Δ	500m			PE	T05		
45	B3532	50m	4.0 _Δ	\$C 5.0		100	8.0	80	1.0m _Δ	5.0 _Δ	1.0	20		30M _Δ	500m			PE	T05		
46	B3533	50m	4.0 _Δ	\$C 5.0		80	8.0	80	1.0m _Δ	5.0 _Δ	1.0	20		30M _Δ	500m			PE	T05		
47	B3534	50m	4.0 _Δ	\$C 6.0		100	8.0	80	1.0m _Δ	5.0 _Δ	1.0	20		30M _Δ	500m			PE	T05		
48	B3535	50m	4.0 _Δ	\$C 5.0		80	8.0	40	1.0m _Δ	5.0 _Δ	1.0	20		30M _Δ	500m			PE	T05		
49	B3536	50m	4.0 _Δ	\$C 5.0		100	8.0	80	1.0m _Δ	5.0 _Δ	1.0	20		30M _Δ	500m			PE	T05		
50	B3537	50m	4.0 _Δ	\$C 5.0		60	5.0	40	1.0m _Δ	5.0 _Δ	1.0	20		40M _Δ	500m			PE	T05		
51	B3594	50m	5.0	\$C 10		60	5.0	40	1.0m _Δ	5.0 _Δ	1.0	20		30M _Δ	100m			PE	T05		
52	B3595	50m	5.0 _Δ	\$C 10		80	5.0	60	1.0m _Δ	5.0 _Δ	1.0	20		30M _Δ	100m			PE	T05		
53	B3596	50m	5.0 _Δ	\$C 10		100	5.0	80	1.0m _Δ	5.0 _Δ	1.0	20		30M _Δ	100m			PE	T05		
54	B3597	50m	5.0 _Δ	\$C 10		60	5.0	40	1.0m _Δ	5.0 _Δ	1.0	20		15M _Δ	1.2			PE	T05		
55	B3598	50m	5.0 _Δ	\$C 10		80	5.0	60	1.0m _Δ	5.0 _Δ	1.0	20		15M _Δ	1.2			PE	T05		
56	B3599	50m	5.0 _Δ	\$C 10		100	5.0	80	1.0u _Δ	5.0 _Δ	1.0	20		15M _Δ	1.2			PE	T05		
57	B3601	50m	5.0 _Δ	\$C 10		60	5.0	40	1.0u _Δ	5.0 _Δ	1.0	20		15M _Δ	1.2			PE	T05		
58	B3601T	50m	5.0 _Δ	\$C 10		80	5.0	60	1.0u _Δ	5.0 _Δ	1.0	20									

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE- MENT (W/C)	MAX Pc FREE J to C (W)	MAX Pc AIR @ 25°C (W)	Ic (A)	Ib (A)	BVcbo (V)	BVabo (V)	BVceo (V)	ABSOLUTE MAX. RATINGS @ 25°C			MAX. Icbo @ 25°C (A)	MAX. Vcb/Vcb @ 25°C (V)	Ic (A)	HFE			MAX. SAT. RES.	tr (s)	STRUCTURE	DWG #	LC Ser.				
										A	E	C				MIN.	MAX.	f _{ee}									
1	SDT3426	50m	1.0	5.0	2.0	60	6.0	60	0.1m	5.00	2.0	20	60	40M _Δ	80	50u	PEΔ	T05									
2	SDT3427	50m	1.0	5.0	2.0	80	6.0	80	0.1m	5.00	2.0	20	60	40M _Δ	60	50u	PEΔ	T05									
3	SDT3428	50m	1.0	5.0	2.0	100	6.0	100	0.1m	5.00	2.0	20	60	40M _Δ	60	50u	PEΔ	T05									
4	SDT3429	50m	1.0	5.0	2.0	120	6.0	120	0.1m	5.00	2.0	20	60	40M _Δ	60	50u	PEΔ	T05									
5	SDT4301	50m	8.7	2.0	500m	40	10	40	150u	4.0	500m	20	60	4.0M	80	4.0M	ME	T05									
6	SDT4302	50m	8.7	2.0	500m	60	10	60	150u	4.0	500m	20	60	4.0M	80	4.0M	ME	T05									
7	SDT4303	50m	8.7	2.0	500m	80	10	80	150u	4.0	500m	20	60	4.0M	80	4.0M	ME	T05									
8	SDT4304	50m	8.7	2.0	500m	40	10	40	150u	4.0	500m	40	120	4.0M	80	4.0M	ME	T05									
9	SDT4305	50m	8.7	2.0	500m	80	10	60	150u	4.0	500m	40	120	4.0M	80	4.0M	ME	T05									
10	SDT4306	50m	8.7	2.0	500m	80	10	80	150u	4.0	500m	40	120	4.0M	80	4.0M	ME	T05									
11	SDT4307	50m	8.7	2.0	500m	40	10	40	150u	4.0	10	20	60	4.0M	80	4.0M	ME	T05									
12	SDT4308	50m	8.7	2.0	500m	60	10	60	150u	4.0	10	20	60	4.0M	80	4.0M	ME	T05									
13	SDT4309	50m	8.7	2.0	500m	80	10	80	150u	4.0	10	20	60	4.0M	80	4.0M	ME	T05									
14	SDT4310	50m	8.7	2.0	500m	40	10	40	150u	4.0	10	40	120	4.0M	80	4.0M	ME	T05									
15	SDT4311	50m	8.7	2.0	500m	60	10	60	150u	4.0	10	40	120	4.0M	80	4.0M	ME	T05									
16	SDT4312	50m	8.7	2.0	500m	80	10	80	150u	4.0	10	40	120	4.0M	80	4.0M	ME	T05									
17	SDT4401	50m	5.0 Øs	SJ 5.0	2.0	60	5.0	40	1.0uØ	5.00	5.0	40	120	# 15M _Δ													
18	SDT4402	50m	5.0 Øs	SJ 5.0	2.0	80	5.0	60	1.0uØ	5.00	5.0	40	120	# 15M _Δ													
19	SDT4403	50m	5.0 Øs	SJ 5.0	2.0	100	5.0	80	1.0uØ	5.00	5.0	40	120	# 15M _Δ													
20	SDT4411	50m	5.0 Øs	SJ 5.0	2.0	60	5.0	40	1.0uØ	5.00	5.0	20	60	# 15M _Δ													
21	SDT4412	50m	5.0 Øs	SJ 5.0	2.0	80	5.0	60	1.0uØ	5.00	5.0	20	60	# 15M _Δ													
22	SDT4413	50m	5.0 Øs	SJ 5.0	2.0	100	5.0	80	1.0uØ	5.00	5.0	20	60	# 15M _Δ													
23	SDT4414	50m	5.0 Øs	SJ 5.0	2.0	60	5.0	40	1.0uØ	5.00	5.0	40	120	# 15M _Δ													
24	SDT4415	50m	5.0 Øs	SJ 5.0	2.0	80	5.0	60	1.0uØ	5.00	5.0	40	120	# 15M _Δ													
25	SDT4416	50m	5.0 Øs	SJ 5.0	2.0	100	5.0	80	1.0uØ	5.00	5.0	40	120	# 15M _Δ													
26	SDT4417	50m	5.0 Øs	SJ 5.0	2.0	60	5.0	40	1.0uØ	5.00	5.0	100	#	15M _Δ													
27	SDT4418	50m	5.0 Øs	SJ 5.0	2.0	80	5.0	60	1.0uØ	5.00	5.0	100	#	15M _Δ													
28	SDT4419	50m	5.0 Øs	SJ 5.0	2.0	100	5.0	80	1.0uØ	5.00	5.0	100	#	15M _Δ													
29	ST84027	50m	5.0 Øs	SJ 1.0	170	20	120	10u	10	200m	40	120	10	700m	1.0u	P	T05										
30	ST84028	50m	5.0 Øs	SJ 1.0	190	10	140	10u	10	200m	40	120	10	700m	1.0u	P	T05										
31	ST84029	50m	5.0 Øs	SJ 1.0	220	10	180	10u	10	200m	40	120	10	700m	1.0u	P	T05										
32	STC7644	50m	8.8	SJ 3.0	150	10	150	250u	# 4.0	1.0	20	60	#	400m		D	T05	AØ									
33	STC7645	50m	8.8	SJ 3.0	180	10	180	250u	# 4.0	1.0	15	60	#	450m		D	T05	AØ									
34#	ZT2876	50m	18 Ø*	SJ 2.5	80	4.0	60	1.0uØ	100u	1.0	150m	50	300	150M _Δ	2.6	AN1	X81	A									
35	TRS100HC	52m	1.0	SJ 2.0	200m	100	5.0	100	3.0uØ	100	1.0	15	25	40M _Δ	5.0	DM	T05	AØ									
36	TRS125HC	52m	1.0	SJ 2.0	200m	125	5.0	125	3.0uØ	100	1.0	15	25	40M _Δ	5.0	DM	T05	AØ									
37	TRS150HC	52m	1.0	SJ 2.0	200m	150	5.0	150	3.0uØ	100	1.0	15	25	40M _Δ	5.0	DM	T05	AØ									
38	TRS175HC	52m	1.0	SJ 2.0	200m	175	5.0	175	3.0uØ	100	1.0	15	25	40M _Δ	5.0	DM	T05	AØ									
39	TRS200HC	52m	1.0	SJ 2.0	200m	200	5.0	200	3.0uØ	100	1.0	15	25	40M _Δ	5.0	DM	T05	AØ									
40	MPSU02	54m	1.0	SJ 800m	80	5.0	40	100uØ	100u	1.0	150m	50	300	150M _Δ	2.6	AN1	X81	A									
41	2N3925	55m	10 Ø	SJ 10	36	4.0	18	100uØ	100u	200	4.0	20	100	# 4.0M _Δ		100nØ	T039	AØ									
42	2N4877	55m	10 Ø	SJ 40	10	36	4.0	18	100uØ	100u	200	4.0	20	100	# 4.0M _Δ		100nØ	T039	AØ								
43	2N5688	56m	10 Ø	SJ 500m	40	1.0	30	20	1.0uØ	100	50m	15	20														
44#	2SC10131	56m	7.0 Ø	SJ 1.5	35	5.0	20	1.0uØ	4.0	500m	35	#	300	# 70M _Δ	1.0	200n	PET	X51b	P								
45#	2SC10141	56m	7.0 Ø	SJ 1.5	50	5.0	40	1.0uØ	4.0	500m	35	#	300	# 70M _Δ	1.0	200n	PET	X51b	P								
46	2N38301	57m	1.0	SJ 1.2	80	5.0	50	500uØ	1.00	500m	30	#	200	200M _Δ		50n	T05	AØ									
47	2N38311	57m	1.0	SJ 1.2	70	5.0	40	500uØ	1.00	500m	30	#	200	200M _Δ		50n	T05	AØ									
48	2N3961	57m	1.0	SJ 1.0	65	4.0	40	1.0mØ	2.0	200m	18	#	1.0mØ	2.0													
49	2N4063	57m	10 Ø	SJ 10	500m	450	7.0	350	20uØ	100	20	20	40	160	15M _Δ												
50	2N4064	57m	10 Ø	SJ 10	500m	300	7.0	250	20uØ	100	20	20	40	160	15M _Δ												
51	2N4430	57m	10 Ø	SJ 10	500m	95	3.5	40	2.0mØ	5.00	100m	20	200	200M _Δ													
52	2N53201	57m	10 Ø	SJ 2.0	100	7.0	75	100uØ	4.0	500m	30	#	130	50M _Δ	1.6	80nØ	T05	AØ									
53	2N53211	57m	10 Ø	SJ 2.0	100	75	5.0	50	100uØ	4.0	500m	40	#	250	50M _Δ	1.6	80nØ	T05	AØ								
54	2N5482	57m	10 Ø	SJ 350m	100m	50	3.0	30	3.0mØ	5.00	50m	20	250														
55	2N5699	57m	10 Ø	SJ 1.0	40	1.0	35	1.0mØ	2.0	250m	25	#	100	50M _Δ	</td												

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	DE RATE J to C	MAX P _c FREE AIR @ 25°C (W/C)	I _c (A)	I _b (A)	ABSOLUTE MAX. RATINGS @ 25°C			MAX. I _{co} @ 25°C	HFE			fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #	C E O A D D E	
						A	E	X M P		BIAS	MIN	MAX							
1# XB475			63m	11 Ø	SJ 2.0	500m	60	4.0	30	100uΔ	5.0Ø	125m	10	200	900M _s		PE T0117		
2 2N4440			65m	11 Ø	SJ 1.5	200m	65	4.0	40	100uΔ	5.0Ø	125m	15	75	400M _s	4.0	D T060	A	
3 2N10681			66m	10 Ø	SJ 1.5	500m	60	12	30	500u	4.0Ø	750m			1.5M _s	2.6	D T08	A	
4 2N2201			66m	2.0	SJ 1.0	500m	120	10	100	50u	6.8Ø	200m	25	90	# 10M _s		MD14 R45	A	
5 2N2202			66m	1.0	SJ 1.0	500m	120	10	100	50u	6.8Ø	200m	25	90	# 10M _s		R46	A	
6 2N2203			66m	1.0	SJ 1.0	500m	120	10	100	50u	6.8Ø	200m	25	90	# 10M _s		MT19	A	
7 2N2204			66m	1.0	SJ 1.0	500m	120	10	100	50u	6.8Ø	200m	25	90	# 10M _s		MD14	A	
8 2N2472			66m	1.0	SJ 1.0	500m	120	10	100	10uΔ	100Ø	200m	30	90	# 10M _s		MD14	A	
9 2N2611			66m	2.0	SJ	120	10	100	50u	100Ø	200m	12	36	20M _s	8.5				
10 2N2849-11			68m	850m	SJ 3.0		100	5.0	80		1.0Ø	1.0	100	300	# 30k _s	400m	125n _Z	PE T05	Ø
11 2N2845-11			66m	850m	SJ 3.0		60	5.0	40		1.0Ø	1.0	100	300	# 30k _s	400m	125n _Z	PE T05	
12 2N3015			66m	3.3 Ø	SJ 2.5	500m	100	4.0	80	100nØ	5.0Ø	1.0	60					R81	
13 2N3017			66m	3.3 Ø	SJ 5.0	10	100	4.0	50	100nØ	5.0Ø	1.0	80					MT27	
14 2N3375			66m	11	SJ 1.5	200m	65	4.0	40	100uΔ	5.0Ø	250m	10	100	350M _s	4.0	TO60		
15 JAN2N3375			66m	2.6	SJ 1.5	65	4.0	40	200uΔØ	5.0Ø	150m	15	150	# 350M _s		MT31			
16 2N3589			66m	2.0	SJ 500m	250m	200	10	200	1.0uØ	8.0Ø	200m	30	90	# 15M _s		MD14		
17 2N3590			66m	2.0	SJ 500m	250m	200	10	200	1.0uØ	8.0Ø	200m	75	150	# 15M _s		MD14		
18 2N3591			66m	1.0	SJ 500m	250m	200	10	200	1.0uØ	8.0Ø	200m	30	90	# 15M _s		R46		
19 2N3592			66m	1.0	SJ 500m	250m	200	10	200	1.0uØ	8.0Ø	200m	75	150	# 15M _s		R46		
20* 2N3595			66m	1.5	SJ 500m	250m	200	10	200	1.0uØ	8.0Ø	200m	30	90	# 15M _s		MT20a	AØ	
21 2N3596			66m	1.5	SJ 500m	250m	200	10	200	1.0uØ	8.0Ø	200m	75	150	# 15M _s		MT20a	AØ	
22 2N3861			66m	2.0	SJ 25m	50m	530	5.0	530	# 100u	4.0Ø	25m	30	200	50M _s	60	MD14		
23 2N3926			66m	12 Ø	SJ 1.5	36	4.0	18	100uØ	100Ø	200m	50	150	250M _s		TO60			
24 2N4012			66m	11 Ø		200m	65	4.0	40	100uΔ	5.0Ø	1.0	60	60	350M _s	4.0	TO60	A	
25 2N4271			66m	5.0 Ø	SJ 1.0	500m	175	8.0	140	50nØ	100Ø	200m	20	140	# 20M _s		T05	AØ	
26 2N4272			66m	5.0 Ø	SJ 2.5	175	9.0	140	100nØ	100Ø	1.0	140	50	150	# 10M _s		T05	AØ	
27 2N43051			66m	1.5	SJ 5.0	2.5	120	6.0	80	10uØ	2.0Ø	1.0	50	150	# 15M _s		T05	AØ	
28 2N43071			66m	1.5	SJ 5.0	2.5	100	6.0	60	10uØ	2.0Ø	1.0	50	150	# 15M _s		90m		
29 2N43091			66m	1.5	SJ 5.0	2.5	120	6.0	80	10uØ	2.0Ø	1.0	50	150	# 15M _s		90m		
30 2N43111			66m	1.5	SJ 5.0	2.5	100	6.0	60	10uØ	2.0Ø	1.0	40	120	# 15M _s		TO5	AØ	
31 JAN2N4440			66m	2.8	SJ 1.5	65	4.0	40	200uØ	5.0Ø	150m	15	150	# 350M _s		MT31	F		
32 2N57291			66m	10 Ø	SJ 5.0	2.0	100	5.0	80	1.0m*	2.0Ø	2.0	30	300	30M _s	300m	200n _Z	PE T05	
33# 2SC5220T			66m	10 Ø	SJ 1.5	1.5 Ø	140	5.0	100	1.0uØ	2.0Ø	200m	50	150			DPL MD29		
34# 2SC522RT			66m	10 Ø	SJ 1.5	1.5 Ø	140	5.0	100	1.0uØ	2.0Ø	200m	30	90	60M _s	300m	130n _Z	DPL MD29	AØ
35# 2SC5230T			66m	10 Ø	SJ 1.5	1.5 Ø	120	5.0	80	1.0uØ	2.0Ø	200m	50	150	60M _s	300m	130n _Z	DPL MD29	AØ
36# 2SC523R1			66m	10 Ø	SJ 1.5	1.5 Ø	120	5.0	80	1.0uØ	2.0Ø	200m	30	90	60M _s	300m	130n _Z	DPL MD29	AØ
37# 2SC524			66m	10 Ø	SJ 1.5	500m	100	50	60	3.0uØ	2.0Ø	200m	30	150	50M _s		PL MD29		
38# 2SC5240T			66m	10 Ø	SJ 1.5	100	50	60	60	1.0uØ	2.0Ø	200m	50	150	60M _s	300m	130n _Z	DPL MD29	AØ
39# 2SC524R1			66m	10 Ø	SJ 1.5	100	50	60	60	1.0uØ	2.0Ø	200m	30	90	60M _s	300m	130n _Z	DPL MD29	AØ
40# 2SC525			66m	10 Ø	SJ 1.5	500m	70	5.0	40	3.0uØ	2.0Ø	200m	30	150	50M _s		PL MD29		
41# 2SC5250T			66m	10 Ø	SJ 1.5	1.5 Ø	70	5.0	40	1.0uØ	2.0Ø	200m	50	150	60M _s	300m	130n _Z	DPL MD29	AØ
42# 2SC525R1			66m	10 Ø	SJ 1.5	1.5 Ø	70	5.0	40	1.0uØ	2.0Ø	200m	30	90	60M _s	300m	130n _Z	DPL MD29	AØ
43# 2SC542			66m	11 Ø	SJ 1.5	65	4.0	40	5.0uØ	4.0Ø	150m	25	Ø	450M _s		PE T05	A		
44# 2SC549			66m	10 Ø	SJ 1.5	65	4.0	40	100uØ	3.0Ø	150m	10		400M _s	2.0	PE T060			
45# 2SC550			66m	10 Ø	SJ 1.5	36	4.0	18	100uØ	3.0Ø	150m	30		400M _s	4.0	PE T060			
46# 2SC558			66m	10 Ø	SJ 1.5	65	4.0	40	5.0uØ	2.0Ø	100m	30	120	400M _s	2.0	PE MT68	A		
47# 2SC635			66m	10 Ø	SJ 1.5	65	4.0	40	3.0uØ	2.0Ø	100m	20	200	500M _s		PE TO60			
48# 2SC637			66m	10 Ø	SJ 1.0	40	4.0	20	10uØ	1.0Ø	500m	20	#	500M _s		PE MT68	AØ		
49# 2SC697			66m	10 Ø	SJ 3.0	600m	100	5.0	60	3.0uØ	2.0	100m _A	30	173	35M _s	400m	PE T037	A	
50# 2SC697A			66m	10 Ø	SJ 3.0	600m	130	5.0	80	3.0uØ	2.0	100m _A	30	173	35M _s	400m	PE T037	A	
51# 2SC799			66m	10 Ø	SJ 3.0	#	80	5.0	40	1.0uØ	1.0Ø	150m	50	90	# 150M _s	600m	PE T05		
52# 2SD182			66m	10 Ø	SJ 1.0	40	12	30	15uØ	4.0Ø	750m	15	120	1.5M _s		D T08			
53# 2SD183			66m	10 Ø	SJ 1.0	100	12	55	15uØ	4.0Ø	750m	15	120	1.5M _s		D T08			
54 3TX616			66m			500m	200m	65	4.0	50	100uØ					PE MT59			
55 2849-11			66m	1.0	SJ 3.0		100	5.0	80	100nØ	1.0Ø	1.0	100	#	30M _s	30M _s	TO5		
56 2849-31			66m	1.5	SJ 3.0		100	5.0	80	100nØ	1.0Ø	1.0	100	#	30M _s	30M _s	TO60		
57 402791			66m	12 Ø	SJ 1.5	65	4.0	40	100nØ	5.0Ø	150m	10				PE T060	AØ		
58 402811			66m	12 Ø	SJ 1.0	36	4.0	18	100uΔ	4.0Ø	150m	10				PE T060	AØ		
59 40291			66m	11 Ø	SJ 500m		40	4.0	50	*# 100uΔ	4.0Ø	150m	20				PE T060	AØ	
60 40306			66m	1.0	SJ 1.0	500m	65	4.0	40	175	5.0uØ	100m	25	Ø	10M _s	50	D T05		
61 40346			66m	1.0	SJ 1.0	500m				175	5.0uØ	100m	25	Ø	10M _s	50	D T05		
62 40346V2			66m	10 Ø	SJ 1.0	500m				175	5.0uØ	100m	25	Ø	10M _s	50	D T05		
63 40347V2			66m	12 Ø	SJ 1.5	500m	60	7.0	40	1.0u*	4.0Ø	450m	20				D T05		
64 40348V2			66m	12 Ø	SJ 1.5	500m	90	7.0	65	1.0u*	4.0Ø	300m	30	100			D T05		
65 40349V2			66m	12 Ø	SJ 1.5	500m	160	7.0	140	1.0u*	4.0Ø	150m	25	100			D T05		
66 40412			66m	1.0	SJ 500m		250	5	1.0m*	Ø	200	30	40		10M _s </td				

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE- MENT J to C	MAX Pc M FREE AIR @ 25°C	MAX Ic (W/C)	ABSOLUTE MAX. RATINGS @ 25°C	MAX. Icbo @ 25°C	hFE			fae	MAX. SAT. RES. (Hz)	tr (s)	STRUCTURE	Y200 s/a	DWG #	L C E O A D D E		
							A	E	Ib	9Vcb	BVebo	BVceo	BIAS Vcb	Vcb	Ic	MIN	MAX	
1	MSP6605	66m	2.0	SA	400m	200m	800	5.0	660	10u	100	100m	20	50m ^s	60		DM	MD14
2	PPR10069	66m	7.5	Ø	5.0		60		40		5.0	3.0	40	30			PL	MT27 AØ
3	PPR10088	66m	7.5	Ø	5.0		90		75		5.0	3.0	30				PL	MT27 AØ
4	PT5916	66m	11	Ø	5.0	2.0	100	6.0	80	1.0m	2.0	1.0	40	150	30M	250m	350Ø	PL T05 A
5	SDT6104	66m	11		5.0	2.0	65	4.0	30	10u	5.0	2.0	10	450M			PL	T060
6	SDT6105	66m	11		5.0	2.0	65	4.0	40	10u	5.0	2.0	10	450M			PL	T060
7	SDT6106	66m	11		5.0	2.0	65	4.0	50	10u	5.0	2.0	10	450M			PL	T060
8	SDT9901	66m	115		15	3.0	60	12	40	1.0u	5.0	5.0	20	60	5.0M		ME	T061
9	SDT9902	66m	115		15	3.0	80	12	60	1.0u	5.0	5.0	20	60	5.0M		ME	T061
10	SDT9903	66m	115		15	3.0	100	12	80	1.0u	5.0	5.0	20	60	5.0M		ME	T061
11	SDT9904	66m	115		15	3.0	120	12	100	1.0u	5.0	5.0	20	60	5.0M		ME	T061
12	TRS25X5	66m	2.0	SJ	1.0	500m	300	12	250	100u	100	20m	1.6k	30k	50kΔ ^Ø		DM	MD14
13	TRS30X5	66m	2.0	SJ	1.0	500m	400	12	300	100u	100	20m	2.5k	32k	50kΔ ^Ø		DM	MD14
14	TRS35X5	66m	2.0	SJ	1.0	500m	450	12	350	100u	100	20m	1.6k	30k	50kΔ ^Ø		DM	MD14
15	TRS1005	66m	2.0	SJ	400m	50m	100	6.0	100	3.0u	4.0	50m	30	Ø	50k ³	30		
16	TRS1205	66m	2.0	SJ	400m	50m	120	6.0	120	3.0u	4.0	50m	30	Ø	50k ³	30		MD14
17	TRS1405	66m	2.0	SJ	400m	50m	140	6.0	140	3.0u	4.0	50m	30	Ø	50k ³	30		MD14
18	TRS1605	66m	2.0	SJ	400m	50m	160	6.0	160	3.0u	4.0	50m	30	Ø	50k ³	30		MD14
19	TRS1805	66m	2.0	SJ	400m	50m	180	6.0	180	3.0u	4.0	50m	30	Ø	50k ³	30		MD14
20	TRS2005	66m	2.0	SJ	400m	50m	200	6.0	200	3.0u	4.0	50m	20	Ø	50k ³	38		MD14
21	TRS2255	66m	2.0	SJ	400m	50m	225	6.0	225	3.0u	4.0	50m	22	Ø	50k ³	36		MD14
22	TRS2505	66m	2.0	SJ	400m	50m	250	6.0	250	2.0u	4.0	50m	20	Ø	50k ³	38		MD14
23	TRS2755	66m	2.0	SJ	400m	50m	275	6.0	275	3.0u	4.0	50m	25	Ø	50k ³	38		MD14
24	TRS2805S	66m	2.0	SJ	400m	340	5.0	280	2.0u	8.0	200m	25	45 Ø	50MΔ ^Ø	30		DM	MD14
25	TRS3015	66m	2.0	SJ	400m	300	6.0	300	3.0u	4.0	50M	22	Ø	50k ³	36		MD14	
26	TRS3205S	66m	2.0	SJ	400m	385	5.0	320	2.0u	8.0	200m	25	45 Ø	50MΔ ^Ø	30		DM	MD14
27	TRS3255	66m	2.0	SJ	400m	50m	325	6.0	325	3.0u	4.0	50m	30	#	50M ³	30		MD14
28	TRS3505	66m	2.0	SJ	400m	350	6.0	350	3.0u	4.0	50m	22	Ø	50k ³	36		MD14	
29	TRS3605S	66m	2.0	SJ	400m	420	5.0	360	2.0u	8.0	200m	25	45 Ø	50MΔ ^Ø	30		DM	MD14
30	TRS3755	66m	2.0	SJ	400m	50m	375	6.0	375	3.0u	4.0	50m	20	#	50M ³	38		MD14
31	TRS4005	66m	2.0	SJ	400m	400	6.0	400	3.0u	4.0	50m	30	#	85 Ø	30		MD14	
32	TRS4015	66m	2.0	SJ	400m	50m	400	8.0	400	2.0u	4.0	50m	22	Ø	50k ³	36		MD14
33	TRS4015S	66m	2.0	SJ	400m	480	5.0	400	10u	100	100m	20	30 Ø	50MΔ ^Ø	60		DM	MD14
34	TRS4255	66m	2.0	SJ	400m	50m	425	6.0	425	3.0u	4.0	50m	30	Ø	50k ³	30		MD14
35	TRS4505	66m	2.0	SJ	400m	450	6.0	450	2.0u	4.0	50m	22	Ø	50k ³	36		MD14	
36	TRS4755	66m	2.0	SJ	400m	475	6.0	475	2.0u	4.0	50m	30	#	50M ³	30		MD14	
37	TRS4805S	66m	2.0	SJ	400m	580	5.0	480	10u	100	100m	20	30 Ø	50MΔ ^Ø	60		DM	MD14
38	TRS5015	66m	2.0	SJ	400m	500	6.0	500	2.0u	5.0	50m	22	Ø	50k ³	30		MD14	
39	TRS5205S	66m	2.0	SJ	400m	625	5.0	520	10u	100	100m	20	30 Ø	50MΔ ^Ø	60		DM	MD14
40	TRS5255	66m	2.0	SJ	400m	50m	525	6.0	525	2.0u	5.0	50m	25	Ø	50k ³	72		MD14
41	TRS5405S	66m	2.0	SJ	400m	650	5.0	540	10u	100	100m	20	30 Ø	50MΔ ^Ø	60		DM	MD14
42	TRS6505	66m	2.0	SJ	400m	550	6.0	550	10u	100	100m	25	Ø	50MΔ ^Ø	72		MD14	
43	TRS5755	66m	2.0	SJ	400m	575	6.0	575	2.0u	5.0	50m	25	Ø	50k ³	72		MD14	
44	TRS5805S	66m	2.0	SJ	400m	700	5.0	580	10u	100	100m	20	30 Ø	50MΔ ^Ø	60		DM	MD14
45	TRS6015	66m	2.0	SJ	400m	600	6.0	600	5.0u	10u	5.0	25	Ø	50MΔ ^Ø	60		DM	MD14
46	TRS6205S	66m	2.0	SJ	400m	750	5.0	620	10u	100	100m	20	30 Ø	50MΔ ^Ø	60		DM	MD14
47	TRS6505	66m	2.0	SJ	400m	650	6.0	650	5.0u	10u	5.0	25	Ø	50M ³	60		MD14	
48	TRS6605S	66m	2.0	SJ	400m	800	5.0	660	10u	100	100m	20	30 Ø	50MΔ ^Ø	60		DM	MD14
49	TRS7015	66m	2.0	SJ	400m	700	6.0	700	5.0u	10u	5.0	25	Ø	50M ³	60		MD14	
50	TRS7015S	66m	2.0	SJ	400m	850	5.0	700	10u	100	100m	20	30 Ø	50MΔ ^Ø	60		DM	MD14
51	TRS7505	66m	2.0	SJ	400m	750	6.0	750	5.0u	10u	5.0	25	Ø	50M ³	60		MD14	
52	TRS8015	66m	2.0	SJ	400m	800	8.0	800	5.0u	10u	5.0	25	Ø	50M ³	60		PE X48	
53	VX3375	66m	12	Ø	1.5	65	4.0	40	100u	100	100	40	120	600M ³	2.0		PE TO5	
54	2N1085	67m	2.0	Ø	2.0	20	60	5.0	50	5.0	5.0	50	50	120	10k ¹	6.0		PE TO5
55#	2SC977	67m	10	Ø	500m	35	3.5	350u	280	50m	10	#	180	1.3G ¹	V		PE1 MT83	
56#	2850-11	67m	1.2	Ø	5.0	100	5.0	80	100u	1.0	50m	25	Ø	40M ³	250m	50n	PL TO5	
57#	2850-31	67m	1.5	Ø	100	5.0	80	100u	1.0	50m	25	Ø	40M ³	250m	50n	PL MT32 AØ		
58#	2851-11	67m	1.2	Ø	5.0	100	5.0	80	100u	1.0	50m	25	Ø	40M ³	400m	50n	PL MT32 AØ	
59#	2851-31	67m	1.5	Ø	100	5.0	80	100u	1.0	50m	25	Ø	40M ³	400m	50n	PL MT32 AØ		
60#	2852-11	67m	1.2	Ø	5.0	100	5.0	80	100u	1.0	50m	15	Ø	25M ³	300m	60n	PL MT32 AØ	
61#	2852-31	67m	1.5	Ø	60	5.0	40	100u	1.0	50m	15	Ø	25M ³	300m	60n	PL MT32 AØ		
62#	2853-11	67m	1.2	Ø	5.0	60	5.0	40	100u	1.0	50m	50	Ø	50M ³	400m	50n	PL TO5	
63#	2853-31	67m	1.5	Ø	60	5.0	40	100u	1.0	50m	50	Ø	50M ³	400m	50n	PL MT32 AØ		
64#	2854-11	67m	1.2	Ø	60	5.0	40	100u	1.0	50m	50	Ø	50M ³	400m	50n	PL TO5		
65#	2854-31	67m	1.5	Ø	60	5.0	40	100u	1.0	50m	50	Ø	50M ³	400m	50n	PL TO5		
66#	2855-11	67m	1.2	Ø	60	5.0	40	100u	1.0	50m	50	Ø	50M ³	400m	50n	PL TO5		
67#	2855-31	67m	1.5	Ø	60	5.0	40	100u	1.0	50m	50	Ø	50M ³	400m	50n	PL MT32 AØ		
68#	2856-11	67m	1.2	Ø	60	5.0	40	100u	1.0	50m	50	Ø	50M ³ </					

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX PC FREE AIR @ 25°C (W)	M T A E	ABSOLUTE MAX. RATINGS @25°C						MAX. ICBO @ 25°C (A)	MAX. BIAS VCB (V)	HFE (A)	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #	C s/a	E O AD	
					Ic (A)	Ib (A)	BVCBO (V)	BVEBO (V)	BVCEO (V)	MIN. Ic (A)											
1	SIT740501	76m#	11 Ø#	SJ 2.0	145	10	100 *	10uØ	100	1.0	30	120 #	30MΔ	500nØ	PL	T05					
2	SIT740511	76m#	11 Ø#	SJ 2.0	170	10	120 *	10uØ	100	1.0	30	120 #	30MΔ	500nØ	PL	T05					
3+	2N5918	80m\$	10 Ø#	SJ 500m	60	1	40†	30	5.0m†									PL	MT78	R	
4+	2SC355	80m	15 Ø	SJ 2.5	75	4.0				1.0uØ	4.0	500m	100 Ø					PL	TO60		
5+	2SC893	80m	12 Ø	SJ 300m	100	6.0	60	1.0uØ	4.0	50m	50	370	180M	20M			PL	MD29	AØ		
6+	3TX622	80m	14	J 2.0	400m	36	3.5	18	100u	5.0	100m	10	200	700M				PL	MT89	Z	
7+	3TX632	80m	14	J 2.0	400m	60	4.0	30	100u	5.0	100m	10	200	650M				PL	MT59	Z	
8+	3TX822	80m	14	J 2.0	400m	36	3.5	18	100u	5.0	100m	10	200	800M				PL	MT59	Z	
9+	3TX832	80m	14	J 2.0	400m	60	4.0	30	100u	5.0	100m	10	200				PL	MT59	Z		
10+	BLY53A	80m	10	SJ 1.3		36		18				500m	50		800M	1.0			PL	MT59R	R
11+	BLY55	80m	10 Ø	SJ 1.0		60	6.0	40	5.0m\$	5.0Ø	200m	10	60 Ø	450M	60M	12		PL	TO60	AØ	
12+	FTO27	80m	13 Ø	SJ 1.0					150	25m	20	40 Ø					ME	T08			
13	K561061	80m		SJ 2.0	500m	80	4.5	80	500u	5.0	1.0	15		400M				PE	TO60		
14	K561101	80m		SJ 2.0	500m	40	4.5	40	500u	5.0	1.0	15		350M				PE	TO60		
15	K561111	80m		SJ 2.0	500m	80	4.5	80	500u	5.0	1.0	15		400M				PE	TO60		
16	K561121	80m		SJ 2.0	500m	40	4.5	40	500u	5.0	1.0	15		350M				PE	TO60		
17	MSP60A	80m	12	SJ 1.0 #	400m	600	5.0	600	10uØ	100	100m	30	200	30M	2.0			DM	MD14		
18	MSP70A	80m	12	SJ 1.0	400m	700	5.0	700	10uØ	100	100m	30	200	30M	2.0			DM	MD14		
19	SE7020	80m	10 Ø	SJ 400m	300	5.0	300	10u	100	50m	40	240 #	30M				DPL	TO66	CØ		
20+	SFT440	80m	12 Ø	SJ 1.0	80	4.0	80	10uØ	100	100m	10	50 Ø	200M	12.4				TO60			
21+	SFT443A	80m	12 Ø	SJ 1.0	80	4.0	80	10uØ	100	100m	15	40 Ø	180M	1.8				TO60			
22	2N5921	83m	14 Ø	SJ 700m	50	1	35†	50	1.0m†									MM15	A		
23	2N5915	85m\$	15 Ø	SJ 1.5	35	1	35†	14	1.0m†									MT78	R		
24+	2N5995	85m\$	10 Ø	SJ 1.5	38	3.5	14	2.5m										MT78	R		
25	2N5589	86m	15 Ø	SJ 600m	38	4.0	18	1.0mØ	5.0Ø	100m	5.0		200M				MT7	C	R		
26+	2SC22	86m	13 Ø	SJ 600m	75	5.0	50	2.0mØ	100	150m	20	100 #	110M	2.4			PE	T08			
27+	2SC23	86m	13 Ø	SJ 500m	75	5.0	50	2.0mØ	100	150m	20	100 #	110M	2.4			PE	T08			
28+	2SC24	86m	12 Ø	SJ 500m	100	5.0	70	5.0mØ	100	150m	20	100 #	110M	2.4			PE	T08			
29+	2SC592	86m	13 Ø	SJ 2.5	400m	75	4.0	50	1.0uØ	4.0Ø	500m	25	100	180M				DPL	TO60		
30+	A253	86m	15	SJ 1.3	36	4.0	18			5.0Ø	500m	50	Ø	800M	1.0			PL	MT59h	V	
31+	BLY37	86m		SJ 3.0 #	65	4.0	36			5.0Ø	100	5.0		700M	500m			PL	MT59h	S	
32+	BLY53	86m	10	SJ 3.0 #	36	4.0	18			5.0Ø	100	5.0		700M	1.0			PL	MT59h	S	
33+	PT6000	86m	13 Ø	SJ 2.0	60	4.0	45	5	1.0uØ	120	1.0	15	45 #	210M	2.0			PL	T08	A	
34	PT6010	86m	13 Ø	SJ 2.0	50	4.0	45	5	1.0uØ	120	1.0	30	90 #	270M	2.0			PL	T08	A	
35	PT612	86m	2.0	SJ 2.0	75	5.0	60	5	500uØ	280	350m	7.5	75	60M	Ø			PL	T08	A	
36+	2SC1102	88mØ	11 Ø	SJ 50m	300	70	300	100uØ	100	10m	40	200					ME	TO66	CØ		
37	A271	90m	16 Ø	SJ 750m	65	4.0	36	5.0mØ	5.0Ø	500m	5.0		500M	1.0			PE	MT72c	R		
38+	A275	90m	16 Ø	SJ 1.2	36	4.0	18	5.0mØ	5.0Ø	500m	5.0		700M	1.0			PE	MT72c	R		
39+	BLY91	90m	16	SJ 750m	65	4.0	36	5.0mØ	5.0Ø	500m	5.0		700M	1.0			PE	MT72c	R		
40	2N5947	91m	16 Ø	SJ 400m	40	3.5	30	10uØ	200	75m	25		250	1.1G	1.7m			Ø	MT81	R	
41+	BLY87	91m	16 Ø	SJ 1.2	36	4.0	18	5.0mØ	5.0Ø	500m	5.0		700M	1.0			PE	MT72	CØ		
42	JAN2N1072t	100m	2.0	J 2.0 Ø	75	6.0	75	Ø	100uØ	5.0Ø	750m	20		70M	2.7			DA	TO38	A	
43	2N1709	100m	15 Ø	SJ 2.0	75	4.0	60	100uØ	280	350m	7.5	75	75 #	150M	5.0			PL	T08	A	
44	2N1710	100m	15 Ø	SJ 2.0	60	3.0	45	5	50uØ	280	350m	7.5	75	75 #	120M	5.0			PL	T08	A
45	2N2631	100m	8.8 Ø	SJ 1.5	80	4.0	60	100uØ	200	350m	7.5	75	75 #	200M				PL	TO39	AØ	
46	2N2697	100m	18 Ø	SJ 5.0	500m	80	8.0	60	100uØ	2.0Ø	1.0	40	120 #	20M	500m	80nØ		PL	MT9		
47	2N2698	100m	18 Ø	SJ 5.0	500m	100	8.0	80	100uØ	2.0Ø	1.0	40	120 #	20M	500m	80n		PL	MT9		
48	2N2781	100m	15 Ø	SJ 2.0	75	5.0	75	50uØ	280	350m	7.5	75	75 #	140M	5.0			PL	T08	A	
49	2N2782	100m	15 Ø	SJ 2.0	100	5.0	100	50uØ	280	350m	7.5	75	75 #	140M	5.0			PL	T08	A	
50	2N2783	100m	15 Ø	SJ 2.0	100	5.0	100	50uØ	280	350m	7.5	75	75 #	140M	5.0			PL	T08	A	
51	2N2874	100m	15 Ø	SJ 2.0	75	4.0	75	100uØ	280	350m	7.5	75	75 #	140M	5.0			PL	T08	A	
52	JAN2N2876	100m	18 Ø	SJ 2.5	80	4.0	60	100uØ	100	300m	30	150	150M	400m	80nØ			PL	MT31		
53	N23229	100m	17 Ø	SJ 2.5	105	4.0	60	1.0uØ	1.0	2.5	5.0						DPL	MT31			
54	2N4040	100m	18 Ø	SJ 1.0	300m	60	4.0	40	200uØ	5.0Ø	100m	10	80	400M	2.0			PL	TO117	R	
55	2N4041	100m	18 Ø	SJ 1.0	300m	60	4.0	40	200uØ	5.0Ø	100m	10	80	400M	2.0			PL	TO117	R	
56+	2SD79	100m\$	15 Ø	SJ 2.0	10	1.0	100	12	60uØ	1.0uØ	2.0	500m	40	160			PE	MD32			
57+	2SD141	100m	15 Ø	SJ 3.0	500m	20	5.0	12	100uØ	2.0	1.0	30	240 #	300m			PE	MD10			
58+	2SD142	100m	15 Ø	SJ 3.0	500m	40	5.0	20	100uØ	2.0	1.0	30	240 #	300m			PE	MD10			
59+	2SD152	100m	15 Ø	SJ 1.0	500m	150	6.0	70	100uØ	2.0	500m	30	70 Ø	1.5			PL	TO66	AØ		
60	40422	100m	8.0 Ø	SJ 150m	150m	300	12	300 #	100u	100	50m	30	150	25M			PL	TO66	AØ		
61	40424	100m	8.0 Ø	SJ 150m	300	20	300 #	100u	100	50m	30	150	25M				PL	TO66	AØ		
62	40426	100m	8.0 Ø	SJ 150m	300	20	300 #	100u	100	50m	30	150	25M				PL	TO66	AØ		
63	40491	100m	3.8 Ø	SJ 150m	300	20	300 #	100u	100	50m	30	150	25M				PL	TO66	AØ		
64+	BD135A	100m	6.5 Ø	SJ 1.0	500m	100m	45	45	100uØ	100	150m	40	250	250M	1.2			PE	X58	BØ	
65+	BD135Ø	100m	6.5 Ø	SJ 1.0	500m	60	45	45	100uØ	100	150m	40	250	250M	1.0			PE	X100	BØ	
66+	BD137A	100m	6.5 Ø	SJ 1.0	500m	60	45	45	100uØ	100	150m	40	160	250M	1.0		</				

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C	MAX Pc/M FREE AIR @ 25°C	ABSOLUTE MAX. RATINGS @ 25°C				MAX. Icbo @ @ 25°C	hFE	fae	MAX. SAT. RES.	tr	STRUCTURE	DWG #		
				Ic	Ib	BVcbo	BVebo	BVceo	BIAS Vcb	MIN / MAX	(Hz)	(Ω)	(s)	s/a	L C	
1	STT2402	100ms	10 Ø	SJ 7.5	10	140	12	120	1.00u	150 2.0	50	150 #	25Ms	DPLA	T05 A	
2	STT2403	100ms	10 Ø	SJ 7.5	10	120	12	100	1.0u	150 2.0	30	90 #	25Ms	DPLA	T05 A	
3	STT2404	100ms	10 Ø	SJ 7.5	10	100	12	80	1.0u	150 2.0	30	90 #	25Ms	DPLA	T05 A	
4	STT2405	100ms	10 Ø	SJ 7.5	10	75	10	60	1.0u	150 2.0	30	90 #	25Ms	DPLA	T05 A	
5	STT2406	100ms	10 Ø	SJ 7.5	10	40	10	30	500u	150 2.0	25 #		25Ms	DPLA	T05 A	
6	2N5765	103m	19 Ø	SJ 1.5	500m	55 t	3.51	25	7.5mØ	5.0Ø 100m	20	200			MT77 R	
7*	2N5774	103m	18 Ø	SJ 1.5	500m	65 t	3.51	35	4.0mØ	5.0Ø 100m	20	200			T0129 R	
8	2N4431	108m	18 Ø	SJ 2.0	10	55	3.5	40	4.0m#	5.0Ø 100m	20	200	600Ms	PE†	T066 V	
9#	2SC692	110m	17 Ø	SJ 1.0	60	40	40	200u	1.0u	100 10m	50 #				MT59b R	
10#	#BD127	111m	14 Ø	SJ 150m	50m	350	7.0	300	120uØ	200 50m	50	10M	1A	ME	MD17 Ø	
11#	BD1281	111m	16 Ø	SJ 150m	50m	400	7.0	350	200uØ	200 50m	30	50 Ø	20Ms	ME	MD17b CØ	
12#	BD129	111m	16 Ø	SJ 150m	50m	350	5.0	350	1.0u	200 50m	40	60 Ø	10MØ 200	ME	MD17b CØ	
13	2N5424	114m	20 Ø	SJ 4.0	2.0	36	4.0	18	1.0uØ	5.0Ø 2.0	20	100	250Ms		250m	T060 AØ
14*	2N5424A	114m	20 Ø	SJ 4.0	2.0	36	4.0	18	1.0uØ	5.0Ø 2.0	20	100	250Ms		250m	T066 CØ
15	2N5598	114m	20 Ø	SJ 2.0	10	80	6.0	60	1.0m#	5.0Ø 1.0	70	200	60M			T066 CØ
16	2N5600	114m	20 Ø	SJ 2.0	10	100	6.0	80	1.0m#	5.0Ø 1.0	70	200	60M			T066 CØ
17	2N5602	114m	20 Ø	SJ 2.0	10	100	6.0	80	1.0m#	5.0Ø 1.0	70	200	60M			T066 CØ
18	2N5604	114m	20 Ø	SJ 2.0	10	120	6.0	100	1.0m#	5.0Ø 1.0	30	90	50M			T066 CØ
19	2N5847	114m	20 Ø	SJ 2.0	36	4.0	18	1.0mØ	5.0Ø 500m	5.0					MT72b R	
20#	2SC599	114m	20 Ø	SJ 1.5	60	40	40	500u	280 100m	15 #	60 Ø	300Ms	PE†	MT59b R		
21#	2SC737	114m	20 Ø	SJ 1.5	60	40	40	500u	100 100m	5.0 #		300Ms	PE†	MT59b R		
22#	2SC975	114m	20 Ø	SJ 2.0	40	30	40	5	200uØ	100 100m	5.0 #		12G	PT83 VD		
23	PT2600	114m	1.0	SJ 1.0	400m	100	4.0	100	5	100uØ	400 300m	20	100			M740
24	PT6636	114m	20 Ø	SJ 1.0	55	3.5	30									
25#	ZT2887	114m	20 Ø	SJ 1.2	400m	100	4.0	80 *	500uØ	250 400m	15	100	420Ms	12		PL
26	2N5483	115m	20 Ø	SJ 700m	200m	45 t	3.0	30	6.0mØ	5.0Ø 100m	20	250	900Ms			MT74 R
27#	XB437	115m	20 Ø	SJ 2.0	700m	36	4.0	18	4.0mØ	5.0Ø 50m	20					MT59d SØ
28#	2SC892	117m	17 Ø	SJ 1.2	40	4.0	20	10uØ	10Ø 1.0	15 #						MT77 Z
29	2N5768	118m	20 Ø	SJ 700m	125m	55 t	3.51	25	10mØ	5.0Ø 100m	20 *					MT77a R
30	2N5595	120m	20 Ø	SJ 1.2	500m	55	3.5	30	4.0mØ	5.0Ø 50m	20					MT77a R
31#	2SC487	120m	15 Ø	SJ 1.5	110	50	110	5	120uØ	200 200m	40	250	20M		400m	DM T066 AØ
32#	2SC491	120m	15 Ø	SJ 1.5	50	50	35	10uØ	200 50m	30	250	30Ms		10	DM T066 CØ	
33#	2SC791	120m	15 Ø	SJ 1.5	90	50	90	5	120uØ	200 200m	40	250	20M		14	DM T066 CØ
34#	2SC978	120m	18 Ø	SJ 1.2	55	3.5	35	3.5	500uØ	280 50m	10	180	1.3G			PT83 V
35*	2SD150	120m	15 Ø	SJ 1.0	500m	50	50	40	1.0mØ	200 1.0	30	240	10kØ			PT83 V
36#	3TX602	120m	20 Ø	J 4.0	500m	36	4.0	18	1.0mØ	5.0Ø 200m	20	100	250M			PL MT59f Z
37	MJE3439	120m	15 Ø	SJ 300m	150m	450	50	350	20uØ	100 20m	30	15M	10			X58 B
38	MJE3440	120m	15 Ø	SJ 300m	150m	350	50	250	20uØ	100 20m	40	160	15M			X58 B
39	MSA8505	120m	21 Ø	SJ 3.0	4.0	33	5.0m#	1.0	5.0Ø 1.0	10 #			435M		1.0	DPE M72a R
40	2N3138	125m	20 Ø	SJ 2.0	200m	65	1.0	65	100uØ	100 1.0	10					M72a R
41	2N3139	125m	20 Ø	SJ 2.0	200m	140	1.0	140	100uØ	100 1.0	10					M72a R
42	2N3140	125m	20 Ø	SJ 2.0	200m	65	1.0	65	100uØ	100 1.0	10					M72a R
43	2N3141	125m	20 Ø	SJ 2.0	200m	140	1.0	140	100uØ	100 1.0	10					M72a R
44	MJ2251	125m	10 Ø	SJ 500m	60	6.0	225	100uØ	100 50m	25	200	10M			TO66 CØ	
45	MJ2252	125m	10 Ø	SJ 500m	70	40	70	100uØ	100 50m	25	200	10M			TO66 CØ	
46	ST15008	125m	125 Ø	SJ 40	80	125	12	80	10uØ	5.0Ø 40	10			60m		PE T063
47	MSA8507	126m	22 Ø	SJ 2.0	4.0t	4.0t	4.0t	18	1.0m#	5.0Ø 1.0	50 #			500Ms		DPE M72a R
48	2N3927	128m	23 Ø	SJ 3.0	36	4.0	18	250uØ								TO66 AØ
49#	2SC488	128m	16 Ø	SJ 3.0	140	5.0	110	3.0Ms	5.0Ø 500m	80 1						DM T066
50#	2SC489	128m	16 Ø	SJ 3.0	30 Ø	100	50	80	120uØ	5.0Ø 500m	20	200	10Ms		500m	DM T066 CØ
51#	2SC490	128m	16 Ø	SJ 3.0	30 Ø	60	50	50	120uØ	5.0Ø 500m	20	200	10Ms		500m	DM T066 CØ
52	2N3632	131m	23 Ø	SJ 30	400m	65 t	4.0t	40	500uØ	500 250m	10	150				TO60 A
53	2N3733	131m	23 Ø	SJ 1.0	400m	65	4.0	40	500uØ	500 250m	10	150				TO60 A
54	2N5215	131m	23 Ø	SJ 1.0	500m	70	40	70	500uØ	500 500m	10	80	400Ms		500m	TO60 AØ
55#	2SC543	131m	23 Ø	SJ 3.0	65	4.0	40	120uØ	4.0Ø 1.0	25 Ø						PE T060 A
56	40307	131m	23 Ø	SJ 3.0	65	4.0	40	250uØ	5.0Ø 300m	10						PE T060 A
57	40665	131m	23 Ø	SJ 1.0	65	4.0	40	120uØ	5.0Ø 300m	10						E T060 AØ
58	VX3733	131m	23 Ø	SJ 3.0	65	4.0	40	250uØ								PE T060
59#	XB404	131m	23 Ø	SJ 3.0	10	60	40	40								ME MT13
60	2N1718	133m	2.0	SJ 1.0	60	60	50u	50u	5.0Ø 200m	20	60	16Ms		10		ME MT13
61	2N1719	133m	2.0	SJ 1.0	60	60	100	50u	5.0Ø 200m	20	60	16Ms		10		ME MT13
62	2N1720	133m	2.0	SJ 1.0	60	60	50u	50u	5.0Ø 200m	40	120	16Ms		10		ME MT13
63	2N1721	133m	2.0	SJ 1.0	60	60	100	50u	5.0Ø 200m	40	120	16Ms		10		ME MT13
64	2N2196	133m	2.0	SJ 1.0	500m	80	8.0	60	75uØ	300 10m	30	1	100			MD14 AØ
65	2N2197	133m	2.0	SJ 1.0	500m	80	8.0	60	75uØ	300 10m	30	1	100			MD14 AØ
66#	2N2849-3	133m	10 Ø	SJ 3.0	1.0	100	50	80	100uØ	1.0Ø 1.0	100					PE MT13
67#	2N2850-3	133m	10 Ø	SJ 3.0	1.0	100	50	80	100uØ	1.0Ø 1.0	100					PE MT13
68#	2N2851-3	133m	10 Ø	SJ 3.0	1.0	100	50	80	100uØ	1.0Ø 1.0	100					PE MT13
69#	2N2852-3	133m	10 Ø	SJ 3.0	1.0	100	60	80	100uØ	1.0Ø 1.0	100					PE MT13
70#	2N2853-3	133m	10 Ø	SJ 3.0	10	60	50	40	100uØ	1.0Ø 1.0	100					PE MT13
71#	2N2854-3	133m	10 Ø	SJ 3.0	10	60	50	40	100uØ	1.0Ø 1.0	100					PE MT13
72#	2N2855-3	133m	10 Ø	SJ 3.0	10	60	50	40	100uØ	1.0Ø 1.0	100					PE MT13
73#	2N2856-3	133m	10 Ø	SJ 3.0	10	60	50	40	100uØ	1.0Ø 1.0	20					PE MT13
74	2N2995	133m	1.5	SJ 1.0	500m	120	10	100	50u	30 30m	30 1	100	10M			TO66 CØ
75	2N3738	133m	20 Ø	SJ 250m	500m	325	60	300	100u	100 100m	40	200	10M			TO66 CØ
76	2N3739	133m	20 Ø	SJ 250m	50											

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/C)	MAX FREE AIR @ 25°C (W)	MAX T A E Ic (A)	ABSOLUTE MAX. RATINGS @25°C				MAX. Icbo @ MAX Vcb @25°C (A)	hFE	f _{ce} (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG. # Y200 s/a TO200 Ser.	C E O A D D E				
					A	I _b (A)	BV _{cbo} (V)	BV _{ebo} (V)	BV _{ceo} (V)	BIAS V _{cb} (V)	I _c (A)	MIN	MAX							
1	SPT3738	133m	20	SJ 3.0	1.0	250	6.0	225	500u#	100	250m	50	100M ^Δ	10	Δ	T068				
2	TRS2006	133m	20	SJ 1.0	500m	200	6.0	200	500u	100	50m	30	300	50M		T068				
3	TRS3006	133m	20	SJ 1.0	500m	300	6.0	300	500u	100	50m	30	300	50M		T066				
4	TRS4006	133m	20	SJ 1.0	500m	400	6.0	400	100u	100	50m	30	300	50M		T068				
5	TRS4016S	133m	20	SJ 1.0	500m	450	6.0	400	100u	100	50m	30	300	50M		T066				
6	TRS4506	133m	20	SJ 1.0	500m	450	6.0	450	100u	100	50m	30	300	50M		T066				
7	TRS5006	133m	20	SJ 1.0	500m	500	6.0	500	100u	100	20m	30	300	50M		T068				
8	TRS6006	133m	20	SJ 1.0	500m	600	6.0	600	500u	100	20m	30	300	50M		T066				
9	TRS7006	133m	20	SJ 1.0	500m	700	6.0	700	500u	100	20m	30	300	50M		T066				
10	TRS8006	133m	20	SJ 1.0	500m	800	6.0	800	500u	100	20m	30	300	50M		T066				
11	2N3327	134m	20	SS 2.0	200m	65	3.0	85	500u	100	500m	10	100M ^Δ			MT31	A			
12	2N122	140m ^Δ	9.0	SJ 140m	120	1.0	100u	35	100m	3.0	100KT	200	G	MS6						
13#	BD215	140m	21	SJ 500m	60	300	1.5	40	15u ^Δ	100	700m	40	10M ^Δ		3D	MD17b	C ^Δ			
14	2N1483	142m	25	SJ 3.0	1.5	60	12	40	15u ^Δ	4.0	750m	20	60	1.2M ^Δ	2.6	D	T08	A ^Δ		
15	JAN2N1483	142m	1.7	SJ 3.0	100	12	40	15u ^Δ	4.0	750m	20	60	# 600K ^Δ		Δ	T08	A ^Δ			
16	2N1484	142m	25	SJ 3.0	1.5	100	12	55	15u ^Δ	4.0	750m	20	60	1.2M ^Δ	2.6	D	T08	A ^Δ		
17	JAN2N1484	142m	1.7	SJ 3.0	100	12	40	15u ^Δ	4.0	750m	20	60	# 600K ^Δ		Δ	T08	A ^Δ			
18	2N1485	142m	25	SJ 3.0	1.5	60	12	40	15u ^Δ	4.0	750m	35	100	1.2M ^Δ	1.0	D	T08	A ^Δ		
19	JAN2N1485	142m	1.7	SJ 3.0	100	12	55	15u ^Δ	4.0	750m	35	100	# 600K ^Δ		Δ	T08	A ^Δ			
20	2N1486	142m	25	SJ 3.0	1.5	100	12	55	15u ^Δ	4.0	750m	35	100	# 600K ^Δ		D	T08	A ^Δ		
21	JAN2N1486	142m	1.7	SJ 3.0	100	12	55	15u ^Δ	4.0	750m	35	100	# 600K ^Δ		Δ	T08	A ^Δ			
22	2N2035	142m ^Δ	14	SJ 3.0	1.0	80	10	50	25u	4.0	1.5	15	45	1.5KT	300m	1.8u	D ^Δ	T08	A ^Δ	
23	2N2304	142m	25	SJ 3.0	1.5	60	6.0	40	100u ^Δ	4.0	500m	20	80	3.0		T08	A ^Δ			
24	2N2308	142m	25	SJ 3.0	1.0	100	12	80	50u ^Δ	4.0	1.0	20	60	1.0M ^Δ	1.0	D	T08	A ^Δ		
25	2N2887	142m	25	SJ 1.2	400m	100	4.0	80	5	280	350m	15	80	# 1.2		PL	MT39			
26	2N3054	142m	25	SJ 4.0	2.0	90	7.0	60	5	1.0#	4.0	500m	25	100	30k ^Δ	2.0		MD6e	A ^Δ	
27	2N3142	142m	25	SS 2.0	200m	65	1.0	65	100u ^Δ	1.0	1.0			10M ^Δ			MT46			
28	2N3143	142m	25	SS 2.0	200m	140	1.0	140	100u ^Δ	1.0	1.0			10M ^Δ			MT46			
29	2N3144	142m	25	SS 2.0	200m	65	1.0	65	100u ^Δ	1.0	1.0			10M ^Δ			MT46			
30	2N3145	142m	25	SS 2.0	200m	140	1.0	140	100u ^Δ	1.0	1.0			10M ^Δ			MT46			
31	2N3226	142m	75	SJ 5.0	2.6	35	6.0	35	200u#	3.0	2.0	20	50	30k ^Δ	500m		T03	C ^Δ		
32	2N3441	142m	25	SJ 3.0	2.0	160	7.0	140	5	100M ^Δ	4.0	500m	25	100	2.2		T066	C ^Δ		
33	JAN2N3441	142m	2.5	SJ 3.0	2.0	160	7.0	140	100u ^Δ	4.0	500m	20	80	# 3.0M ^Δ	2.0		T066	C ^Δ		
34	2N3442	142m	25	SJ 1.0	7.0	160	7.0	140	* 200M ^Δ	4.0	3.0	20	70			T03	C ^Δ			
35	2N4127	142m	25	SJ 2.0	500m	60	1	40	500u ^Δ	5.0	200m	10	80	300M ^Δ	1.0		MT59	GE		
36	2N4910	142m	25	SJ 1.0	1.0	40	5.0	40	100u	1.0	500m	20	100	# 3.0M ^Δ		T066	C ^Δ			
37	2N4911	142m	25	SJ 1.0	1.0	60	5.0	60	100u	1.0	500m	20	100	# 3.0M ^Δ		T066	C ^Δ			
38	2N4912	142m	25	SJ 1.0	1.0	80	5.0	80	100u	1.0	500m	20	100	# 3.0M ^Δ		T066	C ^Δ			
39	2N5216	142m	25	SJ 1.5	400m	80	4.0	80	100u ^Δ	5.0	500m	10	60	350M ^Δ	800m		MT62b	F ^Δ		
40#	ZSC297	142m	10	SJ 3.0	600m	70	5.0	40	3.0u ^Δ	2.0	100m	5.0	#	150M ^Δ		T037				
41#	ZSC298	142m	10	SJ 3.0	600m	100	5.0	60	3.0u ^Δ	2.0	100m	30	173	80M ^Δ	400m	60n	PE	T037		
42#	ZSC299	142m	10	SJ 3.0	600m	130	5.0	80	3.0u ^Δ	2.0	100m	30	173	80M ^Δ	400m	60n	PE	T037		
43#	ZSC703	142m	25	SJ 2.0	100	40	4.0	20	1.0m ^Δ	1.0	100m	5.0	#	150M ^Δ		60n ^Δ	PE	MT59b	R	
44#	ZSC9161	142m ^Δ	2.0	SJ 2.0	100	60	70	50u ^Δ	1.0	750m	35	100					D	T066	A ^Δ	
45	40368	142m	25	SJ 3.0	1.5	100	12	55	9.0u ^Δ	4.0	750m	35	100							
46#	BD109	142m	15	SJ 2.0	50m	60	5.0	40	100u		20	120		50M ^Δ			PE	MD6b		
47#	DT3301	142m	15	SJ 5.7	2.0	60	8.0	60	10u	5.0	500m	25	100	1.0M ^Δ	500m		D	T066		
48#	DT3302	142m	15	SJ 5.7	2.0	100	8.0	100	10u	5.0	500m	25	100	1.0M ^Δ	500m		D	T066		
49	MJ4T01	142m	25	SJ 1.0	50	50	4.0	40	1.0m ^Δ	1.0	100m	5.0	#	435M ^Δ	1.0		DPE	T068	A ^Δ	
50	MSA7505	142m	25	SJ 1.2	100	4.0	60	60	1.0m ^Δ	2.80	350m	15	#	170M ^Δ			T05			
51	PT26351	142m	2.5	SJ 1.2	100	4.0	60	60	1.0m ^Δ	2.80	350m	15	#				PE	DME	T066	C ^Δ
52	ST050	142m	25	SJ 2.0	45	3.5	30	5	2.0#	5.0	500m	20		1.2G ^Δ			PE			
53#	SB0319	142m	25	SJ 3.0	1	1.0	60	1	5.0t	60	60	15	1.5	130	# 1.0M ^Δ		DM			
54	SDT4611	142m ^Δ	14	SJ 1.0	60	8.0	40	1.0u	1.0	20	60	60	1.0	60	40M ^Δ		T08			
55	SDT4612	142m ^Δ	14	SJ 1.0	80	8.0	60	1.0u	1.0	20	60	60	1.0	60	40M ^Δ		T08			
56	SDT4613	142m ^Δ	14	SJ 1.0	100	8.0	80	1.0u	1.0	20	60	60	1.0	60	40M ^Δ		T08			
57	SDT4614	142m ^Δ	14	SJ 1.0	60	8.0	40	1.0u	1.0	20	60	60	1.0	60	40M ^Δ		T08			
58	SDT4815	142m ^Δ	14	SJ 1.0	80	8.0	60	1.0u	1.0	20	60	60	1.0	60	60M ^Δ		T08			
59	SDT4616	142m ^Δ	14	SJ 1.0	100	8.0	80	1.0u	1.0	20	60	60	1.0	60	60M ^Δ		T08			
60	SDT4617	142m ^Δ	14	SJ 1.0	60	8.0	40	1.0u	1.0	20	60	60	1.0	60	60M ^Δ		T08			
61	SDT4618	142m ^Δ	14	SJ 1.0	80	8.0	60	1.0u	1.0	20	60	60	1.0	60	60M ^Δ		T08			
62	SOT4619	142m ^Δ	14	SJ 1.0	100	8.0	80	1.0u	1.0	20	60	60	1.0	60	60M ^Δ		T08			
63	STC4401	142m	25	SJ 4.0	2.0	50	5.0	40	1.0m ^Δ	4.0	25	100	#	100			T066	A ^Δ		
64#	ZT1483	142m	25	SJ 3.0	1.5	60	1													

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE NO.

LINE No.	TYPE No.	MIN. DERATE J to C	MAX P _c M FREE AIR @ 25°C	ABSOLUTE MAX. RATINGS @ 25°C						MAX. V _{cbo} @ 25°C	hFE	BIAS V _{ceo}	MIN	MAX	f _{ee} (Hz)	MAX. SAT. RES.	tr (s)	STRUCTURE	DWG # s/a	L E O D E
				A	E	I _c	I _b	BV _{cbo}	BV _{ceo}											
1#	ZSC508	160m	20 ⁰	5.3	4.0	4.0 ⁰	180	5.0	180 ⁰	120u ⁰	5.0 ⁰	4.0	20	40 ⁰	25M ¹	500m		DM	T066	C ⁰
2#	ZSC779	160m	20 ⁰	SJ	2.0	1.0	300	6.0	250	100u ⁰	10 ⁰	100m	30	80 ⁰				ME	T066	
3#	ZSC782	160m	20 ⁰	SJ	1.5	1.5 ⁰	300	5.0	300	100u ⁰	10 ⁰	100m	30	250				DM	T066	C ⁰
4#	ZSC783	160m	20 ⁰	SJ	1.5	1.5 ⁰	200	5.0	200	100u ⁰	10 ⁰	100m	30	250				DM	T066	C ⁰
5#	ZSC840	160m	20 ⁰	SJ	2.0	1.0 [#]	100	5.0	60	5.0 ⁰	3.0 ⁰	1.0	30	50 ⁰	750m		DM	T066	C ⁰	
6#	ZSC840A	160m	20 ⁰	SJ	2.0	1.0 [#]	150	5.0	100	5.0 ⁰	3.0 ⁰	1.0	30	50 ⁰	750m		DM	T066	C ⁰	
7#	ZSC890	160m ⁰	24 ⁰	SJ	2.0		50	4.0	25	10u ⁰	10 ⁰	1.0	15	200 [#]	300M ¹		PE	M766a	C ⁰	
8#	ZSC1104	160m ⁰	20 ⁰	SJ	700m		300	5.0	300	100u ⁰	10 ⁰	400m	40	200				ME	T066	C ⁰
9#	ZSD57	160m	20 ⁰	SJ	3.0	1.0	30	10	20	200u ⁰	4.0 ⁰	1.0	20	180 [#]	3.5M ¹		D	MD17	C ⁰	
10#	ZSD58	160m	20 ⁰	SJ	3.0	1.0	60	10	40	40u ⁰	4.0 ⁰	1.0	20	180 [#]	3.5M ¹		D	T09		
11#	ZSD901	160m	20 ⁰	SJ	3.0	1.0	30	10	20	2.0 ⁰	4.0 ⁰	1.0	20	40 [#]	5.0M ¹	500m	1.0u	D	T09	
12#	ZSD911	160m	20 ⁰	SJ	3.0	1.0	60	10	40	2.0 ⁰	4.0 ⁰	1.0	20	40 [#]	5.0M ¹	500m	1.0u	D	T09	
13#	ZSD921	160m	20 ⁰	SJ	3.0	1.0	100	10	55	2.0 ⁰	4.0 ⁰	1.0	20	40 [#]	5.0M ¹	500m	1.0u	D	T09	
14#	ZSD931	160m	20 ⁰	SJ	3.0	1.0	150	10	70	2.0 ⁰	4.0 ⁰	1.0	20	40 [#]	5.0M ¹	500m	1.0u	D	T09	
15#	ZSD941	160m	20 ⁰	SJ	3.0	1.0	200	10	80	2.0 ⁰	4.0 ⁰	1.0	20	40 [#]	5.0M ¹	500m	1.0u	D	T09	
16#	SGD034T	160m	28 ⁰	SJ	10.1	2.0	80 ¹	6.0 ¹	60 ⁰	10u ⁰	2.0 ⁰	2.0	30	120 [#]	50M ¹	300n ¹	DPE	T059	A	
17#	SG0034AT	160m	28 ⁰	SJ	10.1	2.0	80 ¹	5.0 ¹	60 ⁰	10u ⁰	2.0 ⁰	2.0	30	100 [#]	80M ¹	300n ¹	DPE	T059	A	
18#	SG6207	160m	24 ⁰	SJ	2.0	1		18.0 ¹	10u ⁰	5.0 ⁰	1.0	30	90 [#]	50M ¹		DPL	T059	A		
19#	SG6207A	160m	24 ⁰	SJ	2.0	1		18.0 ¹	10u ⁰	5.0 ⁰	1.0	30	70 [#]	60M ¹		DPL	T059	A		
20	2N2948	166m	25 ⁰	SC	1.5	500m	40	12	40	1.0 ⁰	2.0 ⁰	400m	2.5	100 [#]	100M ¹	500m		TO3	C ⁰	
21	2N3818	166m	25 ⁰	SC	1.0	1.0	60	4.0	60 ⁰	1.0 ⁰	2.0 ⁰	400m	5.0	50 [#]	100M ¹		TO66	A ⁰		
22	2N4273	166m	25 ⁰	SC	2.5		175	9.0	140	100u ⁰	10 ⁰	20	140 [#]	10M ¹						
23#	ZSD1841	166m	25 ⁰	SJ	1.5		60	12	40	10u ⁰	4.0 ⁰	750m	20	100 [#]	1.5M ¹	2.0	500ns	ME	T08	
24#	ZSD1851	166m	25 ⁰	SJ	1.5		100	12	55	10u ⁰	4.0 ⁰	750m	20	100 [#]	1.5M ¹	1.0	500ns	ME	T08	
25	40250	166m	29 ⁰	SJ	4.0	2.0	50	15.0	40	1.0m ⁰	4.0 ⁰	1.5	25	100 [#]	1.0M ¹		D	T066	C ⁰	
26	40310	166m	29 ⁰	SJ	4.0	2.0		2.5	35	10u ⁰	2.0 ⁰	2.0	20	120 [#]	750k ¹		D	T066	C ⁰	
27	40312	166m	29 ⁰	SJ	4.0	2.0		2.5	60 ⁰	10u ⁰	2.0 ⁰	1.0	20	120 [#]	750k ¹		D	T066	C ⁰	
28	40315	166m	29 ⁰	SJ	4.0	2.0			40 ⁵	10u ⁰	2.0 ⁰	1.0	20	120 [#]	750k ¹		D	T066	C ⁰	
29	40324	166m	29 ⁰	SJ	4.0	2.0			35	10u ⁰	2.0 ⁰	1.0	20	120 [#]	750k ¹		D	T066	C ⁰	
30	A272	166m	29 ⁰	SJ	1.5		65	4.0	36	10m ⁰	5.0 ⁰	500m	5.0		700M ¹	600m		PE	M72c	R
31#	A276	166m	29 ⁰	SJ	2.5		36	4.0	18	10m ⁰	5.0 ⁰	500m	5.0		700M ¹	600m		D	T072c	R
32#	BD148	166m	24 ⁰	SJ	4.0	2.0		7.0	80 ⁰	2.0m ⁰	1.5 ⁰	500m	40	250 [#]	1.0M ¹		MD17	A ⁰		
33#	BD149	166m	24 ⁰	SJ	4.0	2.0		7.0	80 ⁰	2.0m ⁰	1.5 ⁰	500m	40	160 [#]	1.0M ¹		MD17	A ⁰		
34#	BD162	166m	15 ⁰	SJ	4.0	2.0		40	7.0	20	2.0 ⁰	1.5	30							
35#	BD163	166m	15 ⁰	SJ	4.0	2.0		60	7.0	40	2.0 ⁰	1.5	20	120 [#]	750k ¹		MD17			
36#	BLY88	166m	29 ⁰	SJ	2.5		36	4.0	18	10m ⁰	5.0 ⁰	500m	5.0		700M ¹	600m		PE	M72c	G ⁰
37#	BLY92	166m	29 ⁰	SJ	1.5		65	4.0	36	10m ⁰	5.0 ⁰	500m	5.0		500M ¹	600m		PE	M72c	R
38#	BUY43	166m	24 ⁰	SJ	4.0	2.0		7.0	40	1.0m ⁰	1.5 ⁰	500m	40	60 [#]	1.0M ¹		MD17e	C ⁰		
39#	BUY46	166m	24 ⁰	SJ	4.0	2.0		7.0	55	10m ⁰	1.5 ⁰	500m	25	100 [#]	1.0M ¹		MD17e	C ⁰		
40	MJE340	166m	20 ⁰	SJ	500m		13.0	3.0	300	100u ⁰	10 ⁰	50m	30	240 [#]			X58	B		
41	PP3083	166m	30 ⁰	SC	7.0	2.0	80	8.0	80	4.0 ⁰	4.0 ⁰	1.0	20	1.0M ¹	750m		DM	T066	C ⁰	
42	PP3084	166m	30 ⁰	SC	7.0	2.0	100	8.0	100	4.0 ⁰	4.0 ⁰	1.0	20	1.0M ¹	750m		DM	T066	C ⁰	
43	PP3085	166m	30 ⁰	SC	7.0	2.0	40	16.0	40	4.0 ⁰	4.0 ⁰	3.0	20	1.0M ¹	1.0		DM	T066	C ⁰	
44	PP3086	166m	30 ⁰	SC	7.0	2.0	60	16.0	80	4.0 ⁰	4.0 ⁰	3.0	20	1.0M ¹	1.0		DM	T066	C ⁰	
45	PP3087	166m	30 ⁰	SC	7.0	2.0	80	16.0	80	4.0 ⁰	4.0 ⁰	3.0	20	1.0M ¹	1.0		DM	T066	C ⁰	
46	PP3088	166m	30 ⁰	SC	7.0	2.0	100	16.0	100	4.0 ⁰	4.0 ⁰	3.0	20	1.0M ¹	1.0		DM	T066	C ⁰	
47	PP3250	166m	30 ⁰	SC	4.0	2.0	50	16.0	40	1.0m ⁰	4.0 ⁰	1.5	25	100 [#]	1.0M ¹		DM	T066	C ⁰	
48	PP3310	166m	30 ⁰	SC	4.0	2.0	45	16.0	35	10u ⁰	4.0 ⁰	1.0	20	1.0M ¹	750m		DM	T066	C ⁰	
49	PP3312	166m	30 ⁰	SC	4.0	2.0	70	16.0	60	10u ⁰	4.0 ⁰	1.0	20	1.0M ¹	750m		PL	T066	C ⁰	
50	SDT5901	166m ⁰	16 ⁰	SJ	2.0		60	8.0	40	100n ⁰	2.0 ⁰	500m	50	150 [#]	50M ¹	700m		PL	T066	C ⁰
51	SDT5902	166m ⁰	16 ⁰	SJ	2.0		80	8.0	60	100n ⁰	2.0 ⁰	500m	50	150 [#]	50M ¹	700m		PL	T066	C ⁰
52	SDT5903	166m ⁰	16 ⁰	SJ	2.0		100	8.0	80	100n ⁰	2.0 ⁰	500m	50	150 [#]	50M ¹	700m		PL	T066	C ⁰
53	SDT5904	166m ⁰	16 ⁰	SJ	2.0		140	8.0	100	100n ⁰	2.0 ⁰	500m	50	150 [#]	50M ¹	700m		PL	T066	C ⁰
54	SDT5905	166m ⁰	16 ⁰	SJ	2.0		180	8.0	120	100n ⁰	2.0 ⁰	500m	50	150 [#]	50M ¹	700m		PL	T066	C ⁰
55	SDT5906	166m ⁰	16 ⁰	SJ	2.0		200	8.0	16											

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	J to C	MAX P _c	M	T	ABSOLUTE MAX. RATINGS @ 25°C						MAX @ 25°C	hFE	fae	MAX. SAT. RES.	tr	STRUCTURE	DWG #		
						DERATE FREE AIR @ 25°C	I _c	I _b	8V _{ceo}	8V _{beo}	8V _{ceo}									
1	ZN39191	200ms	15	10	2.0	120	6.0	60	5.0m [#]	2.0	2.0	40	120	80M ^Δ			T03	C ²		
2	ZN39201	200ms	15	10	2.0	120	6.0	60	5.0m [#]	2.0	2.0	100	300	80M ^Δ			T03	C ²		
3	ZN39291	200ms	20	3.0	500m	80	4.0t	40	1.0m [#]	1.0	1.5	20	300	200M ^Δ		30n ^Δ	T059	A ²		
4	ZN4231	200m	35	3.0	1.0	40	5.0	40	50u	2.0	1.5	25	100	4.0M ^Δ			T066	A ²		
5	ZN4232	200m	35	3.0	1.0	60	5.0	60	50u	2.0	1.5	25	100	4.0M ^Δ			T066	A ²		
6	ZN4233	200m	35	3.0	1.0	80	5.0	80	50u	2.0	1.5	25	100	4.0M ^Δ			T066	A ²		
7	ZN4240f	200m	35	3.0	1.0	440	6.0t	300	2.0m [#]	2.0	750m	6.0	240	15M ^Δ	1.3	500n	T066	C ²		
8	ZN4428	200m	3.5	3.0	430m	150m	55	3.5	35	1.0m [#]	5.0	50m	20	200	700M ^Δ			T039	A	
9	ZN4998	200m [#]	30	2.0	1.0	100	6.0	80	1.0m [#]	5.0	1.0	30	90	50M ^Δ			T059	A		
10	ZNB500	200m [#]	30	2.0	1.0	700	8.0	80	1.0m [#]	5.0	1.0	70	200	60M ^Δ			T059	A		
11	ZNB5016	200m [#]	30	4.5	1.5	65	4.0	30	5.0m [#]	4.0	500m	10	200	500M ^Δ			T060	G ²		
12	JAN2N5016	200m [#]	2.6	4.5		4.0	30	5.0m [#]	4.0	500m	10	200	500M ^Δ			T060	A ²			
13	ZN50831	200m	35	3.0	1.0	120	6.0	60	1.0m ^s	2.0	2.0	40	120	50M ^Δ			T059	C		
14	ZN50841	200m	35	3.0	1.0	120	6.0	80	1.0m ^s	2.0	2.0	100	300	80M ^Δ			T059	C		
15	ZN50851	200m	35	3.0	1.0	150	6.0	80	1.0m ^s	2.0	2.0	40	120	50M ^Δ			T059	C		
16	ZN52021	200m	35	3.0	2.0	100	6.0	75	10m [#]	1.0	4.0	10	100	60M ⁹²	300m	400n	T066	C ²		
17	ZN53261	200m [#]	20	5.0	1.0	100	6.0	80	1.0	1.0	50	150	80M ^Δ			T059	A			
18	ZN56601	200m [#]	20	5.0	200m	250	6.0	200	1.0u [#]	5.0	500m	40	150	20M ^Δ			T066	A ²		
19	ZN56611	200m [#]	20	5.0	200m	400	6.0	300	1.0u ^s	5.0	500m	40	150	20M ^Δ			T066	A ²		
20	ZN5700	200m	35	3.0	40	t	4.0t	18	2.0m ^Δ	1.0	50m	15					T0129	R		
21	ZN5701	200m	35	3.0	40	t	4.0t	18	2.5m ^Δ	1.0	50m	15					T0129	R		
22	ZN5919	200ms	25	1.5	55	t	4.0t	30	10m ^s								MT78	R		
23	ZN5938	200ms	2.5	3.0	1.0	60	4.0	50	100u ^s	3.0	1.0	30	150	150M ^Δ			u79	A		
24#	ZSC679	200m	30	4.0	2.0	100	6.0	300	1.0u ^s	1.0	100m	35	200	230K			MD10f	A ²		
25#	ZSC690	200m	35	3.0	2.0	60	4.0	40	1.0m ^Δ	1.0	100m	50	200	200M ^Δ			PET	M1595R		
26#	ZSC825	200m	30	2.0	300	6.0	300	200u ^s	1.0	500m	20	250	15M ^Δ			D	T066			
27#	ZSD129	200m	25	3.0	90	10	80	1.0m ^Δ	5.0	1.0	30	200				D	T066			
28#	ZSD130	200m	25	3.0	30	60	10	50	1.0m ^Δ	5.0	500m	30	200	* 1.0M ^Δ	500m		D	T066		
29#	ZSD158	200m	30	3.0	1200	3.0	200	20u ^s	1.0	500m	20	250	* 15M ^Δ	6.0		D	T066			
30#	ZSD159	200m	30	3.0	100	3.0	300	20u ^s	1.0	500m	20	250	* 15M ^Δ	6.0		D	T066			
31#	ZSD226	200m	25	2.0	1.0	#	40	40	30u ^s	1.0	20	90	25K	700m		D	T066			
32#	ZSD226A	200m	25	2.0	1.0	#	60	10	30u ^s	1.0	20	90	25K	700m		D	T066			
33#	ZSD226B	200m	25	2.0	1.0	#	80	10	30u ^s	1.0	20	90	25K	700m		D	T066			
34#	ZSD2340	200m	1.5	3.0	30	60	10	50	200u ^s	5.0	500m	70	140	1.0M ^Δ	400m		D	X75		
35#	ZSD234R	200m	1.5	3.0	30	60	10	50	200u ^s	5.0	500m	70	140	1.0M ^Δ	400m		D	X75		
36#	ZSD234Y	200m	1.5	3.0	30	60	10	50	200u ^s	5.0	500m	120	240	1.0M ^Δ	400m		D	X75		
37#	ZSD2350	200m	1.5	3.0	30	40	10	35	200u ^s	5.0	500m	70	140	1.0M ^Δ	110		D	X75		
38#	ZSD235R	200m	1.5	3.0	30	40	10	35	200u ^s	5.0	500m	40	80	1.0M ^Δ	110		D	X75		
39#	ZSD235Y	200m	1.5	3.0	30	40	10	35	200u ^s	5.0	500m	120	240	1.0M ^Δ	110		D	X75		
40	BD1313	200m	35	3.0	1.0		2.5	300				100	100m	40	250		D	T066		
41	BD1318	200m	35	3.0	1.0		2.5	300				100	20m	40			D	T066		
42	BD3222	200m	35	3.0	1.0				300			100	20	40			D	T066		
43	BD3228	200m	35	3.0	2.0	1.0						100	100m	20			D	T066		
44	BD3634	200m	35	3.0	7.0	5.0						100	500m	35	175		D	T066		
45	A235	200m	12	2.5								10	220		450M ^Δ		D	T060		
46	B3585	200m	35	5.0								100	10				PE	T051		
47	B3586	200m	30	5.0								100	10				PE	T061		
48	B3587	200m	30	5.0								100	10				PE	T061		
49	B3588	200m	30	5.0								100	10				PE	T061		
50	B3589	200m	30	5.0								100	10				PE	T061		
51	B3590	200m	30	5.0								100	10				PE	T061		
52	B3591	200m	30	5.0								100	10				PE	T061		
53	B3592	200m	30	5.0								100	10				PE	T061		
54	B3593	200m	30	5.0								100	10				PE	T061		
55	B3618	200m	40	5.0								60	5.0				PE	T061		
56	B3619	200m	40	5.0								80	5.0				PE	T061		
57	B3620	200m	40	5.0								100	5.0				PE	T061		
58	B3621	200m	40	5.0								60	5.0				PE	T061		
59	B3622	200m	40	5.0								80	5.0				PE	T061		
60	B3623	200m	40	5.0								100	5.0				PE	T061		
61	B3624	200m	40	5.0								60	5.0				PE	T061		
62	B3625	200m	40	5.0								80	5.0				PE	T061		
63	B3626	200m	40	5.0								100	5.0				PE	T061		
64#	BD111	200m [#]	15	2.0	10	#	2.0	60	5.0	60	10u ^Δ	2.0	2.0	40	#	90	100M ^Δ		DPE	T03
65#	BD113	200m [#]	20	2.0	250m ^Δ	400	5.0	400	3.0	200	200	200m	20	t			12M ^Δ		T03	A
66#	BD144	200m [#]	8.0	1.0	250m ^Δ	400	5.0	400	3.0	10u ^s	2.0	2.0	40	#	90	100M ^Δ		DPE	T03	
67#	BD145	200m	15	5.0								100	5.0				214m	280u12	PEΔ	T03
68#	BDY601	200m	15	5.0								100	5.0				100M ^Δ	140m	PE	T03
69#	BDY611	200m	15	5.0								100	5.0				100M ^Δ	180m	PE	T03
70#	BDY627	200m	15	5.0								100	5.0				100M ^Δ	180m	PE	T03
71#	BLY12	200m	3.0	5.0	1.5		60	4.0	30	100u ^Δ	2.0	2.0	30	#	60M ^Δ	500m		DPE	T03	
72#	BU100	200ms	15	5.0	1.0	2.0		</												

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE AIR @ 25°C	MAX Pc (W/C)	MAX FREE AIR @ 25°C	ABSOLUTE MAX. RATINGS @25°C				MAX. Icb @ 25°C	MAX. Vcb @ 25°C	MAX. Ic @ 25°C	hFE			fae	MAX. SAT. RES.	tr (Hz)	STRUCTURE	DWG #	LC		
					A	E	Ic	Ib	BVcbo	BVebo	BVceo	Bias (A)	Vcb (V)	Ic (A)	MIN	MAX	(Ω)	(s)				
1	SDT7513	200ms	20	8J	100	5.0	80	1.0uA				5.0	20	60	40MΩ				T0208	E0		
2	SDT7514	200ms	20	8J	60	5.0	40	1.0uA				5.0	40	120	50MΩ				T0208	E0		
3	SDT7515	200ms	20	8J	80	5.0	60	1.0uA				5.0	40	120	50MΩ				T0208	E0		
4	SDT7516	200ms	20	8J	100	5.0	80	1.0uA				5.0	40	120	50MΩ				T0208	E0		
5	SDT7517	200ms	20	8J	60	5.0	40	1.0uA				5.0	100	100	60MΩ				T0208	E0		
6	SDT7518	200ms	20	8J	80	5.0	60	1.0uA				5.0	100	100	60MΩ				T0208	E0		
7	SDT7519	200ms	20	8J	100	5.0	80	1.0uA				5.0	100	100	60MΩ				T0208	E0		
8	ST14030t	200m#	300	8J	60	125	10	80	100uA	100	20	30	120	#	10MΩΔ	500nΩ	PL	T063	C0			
9	ST14031t	200m#	300	8J	60	145	10	100	100uA	100	20	30	120	#	10MΩΔ	500nΩ	PL	T063	C0			
10	ST14032t	200m#	300	8J	60	170	10	120	100uA	100	20	30	120	#	10MΩΔ	500nΩ	PL	T063	C0			
11	ZN1768	220m	40	8A	3.0	1.5	60	12	40	15uA	4.0	750m	35	100	600k	1.0			MT5	A0		
12	ZN1769	220m	40	8A	3.0	1.5	100	12	55	15uA	4.0	750m	35	100	600k	1.0			MT5	A0		
13#	ZSC1015	220m	33	8J	130		40	5.0	18	500uA	100	100m	5.0	#	1.2GΩ		PET	MT83	VZ			
14	ZN2036	222m#	17	8S	50		80	10	60	5.0uA	4.0	200m	30		2.0MΩ	600m		DA	T037	A0		
15#	MP8111	222m	3.0	8J	1.2		60	7.0	60	5.0uA	5.0	200m	30		100MΩΔ	800m		PEΔ	X95			
16#	MP8112	222m	3.0	8J	1.2		60	7.0	60	5.0uA	5.0	200m	50		100MΩΔ	600m		PEΔ	X95			
17#	MP8113	222m	3.0	8J	1.2		60	7.0	60	5.0uA	5.0	200m	100		240	100MΩΔ	600m		PEΔ	X95		
18#	MP8121	222m	3.0	8J	1.2		35	7.0	35	5.0uA	5.0	200m	20		80	100MΩΔ	600m		PEΔ	X95		
19#	MP8122	222m	3.0	8J	1.2		35	7.0	35	5.0uA	5.0	200m	50		120	100MΩΔ	600m		PEΔ	X95		
20#	MP8123	222m	3.0	8J	1.2		35	7.0	35	5.0uA	5.0	200m	100		100MΩΔ	600m		PEΔ	X95			
21#	MP8211	222m	5.0	8J	400m		60	7.0	60	1.0mΩ	5.0	500m	30		60	100MΩ			PE	T066	C0	
22#	MP8212	222m	5.0	8J	400m		60	7.0	60	1.0mΩ	5.0	500m	50		120	100MΩ			PE	T066	C0	
23#	MP8213	222m	5.0	8J	400m		60	7.0	60	1.0mΩ	5.0	500m	100		100MΩ			PE	T066	C0		
24#	MP8221	222m	5.0	8J	400m		35	7.0	35	1.0mΩ	5.0	500m	20		60	100MΩ			PE	T066	C0	
25#	MP8222	222m	5.0	8J	1.5		35	7.0	35	1.0mΩ	5.0	500m	50		120	100MΩ			PE	T066	C0	
26#	MP8223	222m	5.0	8J	1.5		35	7.0	35	1.0mΩ	5.0	500m	100		100MΩ			PE	T066	C0		
27	ZN5596	225m	40	8S	12.5	1.0	55	3.5	30	4.0mΩ	5.0	50m	20		1.5GΩΔ			MT73a	R			
28	JAN2N1047A	227m	1.0	8S	500m		10	80	15uA	100	50m	12		36	#	2.0MΩΔ	15		T057	A0		
29	JAN2N1048A	227m	1.0	8S	500m		10	120	15uA	100	50m	12		36	#	2.0MΩΔ	15		T057	A0		
30	JAN2N1049A	227m	1.0	8S	500m		10	80	15uA	100	50m	30		90	#	2.0MΩΔ	15		T057	A0		
31	JAN2N1050A	227m	1.0	8S	500m		10	120	15uA	100	50m	30		90	#	2.0MΩΔ	15		T057	A0		
32	ZN4128	227m	40	8A	4.0	10	60	4.0	40	1.0mΩ	5.0	200m	10		200MΩΔ	500m			MT59	R		
33#	ZSC704	227m	40	8A	4.0		40	4.0	20	2.0mΩ	5.0	100m	5.0	#	100MΩ			PET	MT59b	R		
34	PT5693	227m	40	8S	4.0		40	4.0	20	5.0mΩ	100	100m	15		120		5.0		PL	MT59		
35	ZN1047	228m	1.0	8J	500m		80	6.0	15uA	100	500m	12		36	#	75kΩ			T057	A0		
36	ZN1047A	228m	1.0	8J	500m		80	10	80	350uA	100	500m	12		36	#	75kΩ			T057	A0	
37	ZN1047B	228m	1.0	8J	750m		80	10	80	10uA	100	500m	12		36	#	125kΩ			T057	A0	
38	ZN1048	228m	1.0	8J	500m		120	6.0	15uA	100	500m	12		36	#	75kΩ			T057	A0		
39	ZN1048A	228m	1.0	8J	500m		120	10	120	350uA	100	500m	12		36	#	125kΩ			T057	A0	
40	ZN1048B	228m	1.0	8J	750m		120	10	120	10uA	100	500m	12		100		500m			T057	A0	
41	ZN1049	228m	1.0	8J	500m		80	6.0	15uA	100	500m	30		90	#	75kΩ			T057	A0		
42	ZN1049A	228m	1.0	8J	500m		80	10	80	350uA	100	500m	30		90	#	125kΩ			T057	A0	
43	ZN1049B	228m	1.0	8J	750m		80	10	80	10uA	100	500m	30		90	#	125kΩ			T057	A0	
44	ZN1050	228m	1.0	8J	500m		120	6.0	15uA	100	500m	30		90	#	90kΩ			T057	A0		
45	ZN1050A	228m	1.0	8J	500m		120	10	120	350uA	100	500m	30		90	#	90kΩ			T057	A0	
46	ZN1050B	228m	1.0	8J	750m		120	10	120	10uA	100	500m	30		90	#	125kΩ			T067	A0	
47	ZN1690	228m	1.0	8J	500m		80	10	80	350uA	100	500m	20		60	#	90kΩ			MT5	A0	
48	ZN1691	228m	1.0	8J	500m		120	10	120	10uA	100	500m	20		60	#	90kΩ			MT5	A0	
49	ZN5177	228m	40	8J	4.0	1.0	55	3.5	35	10m#	5.0	100m	10		150		200MΩΔ			MD36	F1	
50	ZN54271	228m	40	8J	7.0	1.0	80	1.0	80	10uA	2.0	200	2.0		50		30MΩΔ	100n		T066	C0	
51	ZN54281	228m	40	8J	7.0	1.0	80	1.0	80	10uA	2.0	200	2.0		60		30MΩΔ	100n		T066	C0	
52	ZN54291	228m	40	8J	7.0	1.0	100	1.0	100	10uA	2.0	200	2.0		30		120MΩΔ	100n		T066	C0	
53	ZN54301	228m	40	8J	7.0	1.0	100	1.0	100	10uA	2.0	200	2.0		60		30MΩΔ	100n		T066	C0	
54	M338011	228m	40	8J	10	1.0	500m	8.0	7.5	80	10uA	4.0	60k	10k		50MΩΔ	200m		L69	-		
55	M338021	228m	40	8J	10	1.0	500m	80	7.5	80	10uA	4.0	120	1.0k		20k		50MΩΔ	200m		L69	-
56	ZNC2828	229m	40	8A	3.0	1.0	60	6.0	40	4.0mΩ	4.0	500m	20		60		1.0MΩΔ	800m	1.5u	D	MT25	
57	STC1300	229m	40	8J	1.5		60	6.0	40	4.0mΩ	4.0	200m	30		90		2.5MΩ	15		MT5		
58	STC1336	229m	40	8J	3.0		500m	65	3.5	35	5.0m#	5.0	100m	10		150			MD36			
59#	2NS775	230m	40	8S	3.0		2.0	85	5.0	75	2.0m#	4.0	2.0	20		100		333m			T066	C0
60*	ZN5954	232m	40	8J	6.0		2.0	80	1.0	80	10uA	2.0	200	20		100		333m			T066	C0
61*	ZN5955	232m	40	8J	6.0		2.0	70	5.0	60	2.0m#	4.0	2.5	20		100		333m			T066	C0
62*	ZN5956	232m	40	8J	6.0		2.0	50	5.0	40	2.0m#	4.0	3.0	20		100		333m			T066	C0
63	ZN4921	238m	1.6	8J	1.0		40	5.0	40	10uA	1.0	500m	20		100		3.0MΩΔ			X58	B0	
64	Z																					

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/C)	MAX PC FREE AIR @ 25°C	M T Ic (A)	ABSOLUTE MAX. RATINGS @ 25°C				MAX. Icbo @ MAX Vcb @ 25°C (A)	RFE			MAX. SAT. RES. (Ω)	tr	STRUCTURE	DWG #	C				
					A	E	Ib	BV _{cbo}	BV _{ebo}	BV _{cso}	V _{cbo}	Ic	MIN	MAX	(Hz)	(s)					
1#	BLY89	250m	44 Ø	SJ 3.5	36	4.0	18	10mA	5.0Ø	500m	150	700mS	600m	600m		PE	MT72	GL			
2#	BLY83	250m	44	SJ 2.0	65	4.0	36	10mA	5.0Ø	500m	50	500mS	600m	600m		PE	MT72c	R			
3	BR100D ⁵	250m	35 Ø	SJ 10	2.0	60	3.0	40	1.0mA	5.0Ø	3.0	30	150 #	300mS		TO60	AA				
4	BR101D ⁵	250m	35 Ø	SJ 10	2.0	90	2.0	75	1.0mA	5.0Ø	3.0	40	200 #	300mS		TO60	AA				
5▼	D44R1	250m	1.6	SJ 1.0				5.0	250	1.0mA	100	500m	30	90		1.6u#	Δ	X102	B		
6▼	D44R2	250m	1.6	SJ 1.0				5.0	250	1.0mA	100	500m	75	175		1.6u#	Δ	X102	B		
7▼	D44R3	250m	1.6	SJ 1.0				5.0	300	1.0mA	100	500m	30	90		1.6u#	Δ	X102	B		
8▼	D44R4	250m	1.6	SJ 1.0				5.0	300	1.0mA	100	500m	75	175		1.6u#	Δ	X102	B		
9	KSP1121	250m			10	12.0	225	8.0	200	10u	5.0	20	60	50M		PE	TO66				
10	KSP1122	250m			10	2.0	250	8.0	225	10u	5.0	20	60	50M		PE	TO66				
11	KSP1123	250m			10	2.0	275	8.0	250	10u	5.0	20	60	50M		PE	TO66				
12	KSP1124	250m			10	2.0	300	8.0	275	10u	5.0	20	60	50M		PE	TO66				
13	KSP1125	250m			10	2.0	325	8.0	300	10u	5.0	20	60	50M		PE	TO66				
14	PPR1007 ⁷	250m	35 Ø	SJ 10		60	40	5.0	3.0	40	6.0Ø	3.0	40			TO60	AØ				
15	PPR1009 ⁸	250m	35 Ø	SJ 10		90	75	6.0Ø	3.0	30						TO60	AØ				
16▼	PT29931	250m	44 Ø	SJ A		100	5.0	80	2.0Ø	3.0	100	300	100M	165mV		PL	MT65				
17	SDT7901	250m ⁹	25 Ø	SJ 10		225	8.0	200	1.0uØ	5.0Ø	5.0	20	60	50M		PL	TO66	CØ			
18	SDT7902	250m ⁹	25 Ø	SJ 10		250	8.0	225	1.0uØ	5.0Ø	5.0	20	60	50M		PL	TO66	CØ			
19	SDT7903	250m ⁹	25 Ø	SJ 10		275	8.0	250	1.0uØ	5.0Ø	5.0	20	60	50M		PL	TO66	CØ			
20	SDT7904	250m ⁹	25 Ø	SJ 10		325	8.0	300	1.0uØ	5.0Ø	5.0	20	60	50M		PL	TO66	CØ			
21	SDT7905	250m ⁹	25 Ø	SJ 10		350	8.0	325	1.0uØ	5.0Ø	5.0	20	60	50M		PL	TO66	CØ			
22	SDT7907	250m	43		10	2.0	200	8.0	200	10u	5.0	5.0	15			PL	TO66				
23	SDT7908	250m	43		10	2.0	250	8.0	250	10u	5.0	5.0	15			PL	TO66				
24	SDT7909	250m	43		10	2.0	300	8.0	300	10u	5.0	5.0	15			PL	TO66				
25	SDT7910	250m	43		10	2.0	150	5.0	150	10u	5.0	5.0	10			PL	TO66				
26	ST15043 ¹	250m [#]	187 Ø	SJ 40		125	10	80 *	100uØ	100	10	30	120 #	10M		500nØ	PL	TO63			
27	ST15044 ¹	250m [#]	187 Ø	SJ 40		145	10	100 *	100uØ	100	10	30	120 #	10M		500nØ	PL	TO63			
28	ST15045 ¹	250m [#]	187 Ø	SJ 40		170	10	120 *	100uØ	100	10	30	120 #	10M		500nØ	PL	TO63			
29	2N5025	256m	45 Ø	SJ 5.0		75	4.5	75	10uØ	2.0Ø	2.0	20	#	150M		TO60	AØ				
30	2N5026	256m	45 Ø	SJ 5.0		90	4.5	90	10uØ	2.0Ø	2.0	20	#	150M		TO60	AØ				
31	2N5713	256m	45 Ø	SJ 5.0		60	1	4.0†	40	500uØ	100	10m	10				TO128	R			
32	2N1648	263m	40 Ø	SJ 3.0		120	8.0	80	100uØ	100	500m	15	45	2.0M	3.0	1.0u	Δ	MT11	AØ		
33	2N1650	263m	40 Ø	SJ 3.0		120	6.0	80	100uØ	100	500m	30	90	2.0M	3.0	500n	Δ	MT11	AØ		
34	2N2018	263m ⁵	20 Ø	SJ 2.0		500m	150	6.0	125	100uØ	100	500m	20	60	10M	6.0	1.0u	MT11			
35	2N2019	263m ⁵	20 Ø	SJ 2.0		500m	200	6.0	140	100uØ	100	500m	20	60	10M	6.0	1.0u	MT11			
36	2N1647	266m	40 Ø	SJ 3.0		80	6.0	80 *	100uØ	100	500m	15	45	3.0M	3.0		Δ	MT11	AØ		
37	2N1649 ⁷	266m	40 Ø	SJ 3.0		80	6.0	80 *	100uØ	100	500m	30	90	3.0M	3.0		Δ	MT11	AØ		
38	2N1886	266m	40 Ø	SJ 3.0		60	6.0	60	350uØ	100	500m	20		2.0M	5.0		Δ	MT11	CØ		
39	2N2632	266m	40 Ø	SJ 5.0		500m	90	8.0	60	100uØ	2.0Ø	1.0	40	120	30M	250m	80n	PLA	MT24		
40	2N2833	268m	40 Ø	SJ 2.0		500m	120	8.0	80	100uØ	2.0Ø	1.0	40	120	30M	250m	80n	PLA	MT24		
41	2N2834	268m	40 Ø	SJ 2.0		500m	150	8.0	100	100uØ	2.0Ø	1.0	40	120	30M	250m	80n	PLA	MT24		
42	2N2866	268m	40 Ø	SJ 2.0		150m	120	10	80	5.0Ø	5.0	500m	20	60	20M	750m		PL	MT21		
43	2N2867	268m	40 Ø	SJ 2.0		150m	120	10	80	5.0Ø	5.0	500m	40	120	20M	750m		PL	MT21		
44	2N5050 ¹	268m	40 Ø	SJ 2.0		125	6.0	125	5.0Ø	5.0	500m	25	100	10M		300nØ	TO66	CØ			
45	2N5051 ¹	268m	40 Ø	SJ 2.0		150	6.0	150	5.0Ø	5.0	500m	25	100	10M		300nØ	TO66	CØ			
46	2N5052 ¹	268m	40 Ø	SJ 2.0		200	6.0	200	5.0Ø	5.0	500m	25	100	10M		300nØ	TO66	CØ			
47#	2S0331	268m	4.0	SJ 3.0	2.0	200	8.0	75	2.0mØ	100	1.0	30	100	15M		450nØ	DM	T03			
48#	2S0341	268m	4.0	SJ 3.0	2.0	100	8.0	75	2.0mØ	100	1.0	60	200	15M		450nØ	DM	T03			
49#	2S0351 ¹	268m	4.0	SJ 3.0	2.0	150	8.0	100	2.0mØ	100	1.0	30	100	15M		450nØ	DM	T03			
50#	2S0361 ¹	268m	4.0	SJ 3.0	2.0	150	8.0	100	2.0mØ	100	1.0	60	200	15M		450nØ	DM	T03			
51	SDT6001 ¹	268m	40 Ø	SJ 5.0		100	5.0	50	1.0uØ	5.0Ø	1.0	10	120	30M	1.0		PL	MT24			
52	SDT6011 ¹	268m	40 Ø	SJ 5.0		80	8.0	40	1.0uØ	5.0Ø	1.0	20	60	30M	500m		PL	MT24			
53	SDT6012 ¹	268m	40 Ø	SJ 5.0		100	8.0	80	1.0uØ	5.0Ø	1.0	20	60	30M	500m		DPL	MT24			
54	SDT6013 ¹	268m	40 Ø	SJ 5.0		80	8.0	40	1.0uØ	5.0Ø	1.0	40	120	30M	500m		PL	MT24			
55	SDT6014 ¹	268m	40 Ø	SJ 5.0		100	8.0	80	1.0uØ	5.0Ø	1.0	40	120	30M	500m		PL	MT24			
56	SDT6015 ¹	268m	40 Ø	SJ 5.0		80	8.0	40	1.0uØ	5.0Ø	1.0	40	100	100	#	30M	500m		PL	MT24	
57	SDT6016 ¹	268m	40 Ø	SJ 5.0		100	8.0	80	1.0uØ	5.0Ø	1.0	100	#	30M	500m		PL	MT24			
58	SDT6031 ¹	268m	40 Ø	SJ 5.0		600m	60	5.0	40	1.0uØ	5.0Ø	1.0	20	60	30M	500m		PL	MT24		
59▼	SG7207 ¹	268m	40 Ø	SJ 5.0	1	60	6.0	80	2.0*	10uØ	5.0Ø	2.5	30	90	#	50M		DPE	T059	A	
60▼	SG7207A ¹	268m	40 Ø	SJ 5.0	1	60	6.0	80	2.0*	10uØ	5.0Ø	2.5	30	90	#	60M		DPE	T059	A	
61	2N2020 ¹	277m	40 Ø	SJ 2.0		150	6.0	125	100uØ	100	500m	40	90	3.0M	6.0			Δ	MT11	CØ	
62	2N2021 ¹	277m	40 Ø	SJ 2.0		200	6.0	140	100uØ	100	500m	40	90	3.0M	6.0			Δ	MT11	CØ	
63	40813	277m	1.8	SJ 4.0	2.0	50	3.0	2.0	5.0Ø	32	500n	4.0Ø	1.5	25	100			H	X75a	T	
64	40818	277m	1.8	SJ 4.0	2.0	50	3.0	2.0	5.0Ø	40	500n	4.0Ø	1.5	25	100			H	X75a	T	
65	40821	277m	1.8	SJ 4.0	2.0	50	3.0	2.0	5.0Ø	40	500n	4.0Ø	1.5	25	100			H	X75a	T	
66	40822	277m	1.8	SJ 4.0	2.0	50	3.0	2.0	5.0Ø	40	500n	4.0Ø	1.5								

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX P _c (W/C)	M T FREE AIR @ 25°C	ABSOLUTE MAX. RATINGS @ 25°C						MAX. I _{cbo} @ 25°C	hFE			fae	MAX. SAT. RES.	tr	STRU CTURE	DWG # Y200 s/a T0200 Ser.	LC E O A D D E									
					A	E	I _c	I _b	BV _{cbo}	BV _{beo}	BV _{ceo}	V _{cbo}	V _{be}	V _{ce}	(A)	(V)	(V)	BIAS	MIN	MAX									
1*	JAN2N37491	300ms	2.0	5A	5.0				110	8.0	80	400m Ω	5.0 μ	1.0	40	120 #	20m Δ	250m	300n Ω		M153a	M							
2	2N39961	300ms	2.0	5A	5.0	1.0			100	8.0	80	5.0 μ	2.0 μ	50m	30		40m Δ	250m	300n Ω		M153	M							
3	2N39971	300ms	2.0	5A	5.0	1.0			100	8.0	80	5.0 μ	2.0 μ	50m	60		40m Δ	300m	300n Ω		M153	M							
4	2N39981	300ms	2.0	5A	5.0	1.0			100	8.0	80	5.0 μ	2.0 μ	50m	30		40m Δ	300n Ω	300n Ω		M142	A Δ							
5	2N39991	300ms	2.0	5A	5.0	1.0			100	8.0	80	5.0 μ	2.0 μ	50m	60		40m Δ	300n Ω	300n Ω		M142	A Δ							
6	2N56581	300m	3.0	5A	10				120	7.0	80	200ns	5.0 μ	5.0	50	150 #	30m Δ	150n Ω		T059	A Δ								
7	2N56581	300m	3.0	5A	10				120	7.0	80	200ns	5.0 μ	5.0	50	150 #	30m Δ	150n Ω		T011	G								
8	2N56641	300m#	3.0	5A	3.0				600m	250	6.0	200	1.0 μ	5.0 μ	1.0	40	120 #	20m Δ	250n Ω		T066	A Δ							
9	2N56651	300m#	3.0	5A	3.0				600m	400	6.0	300	1.0 μ	5.0 μ	1.0	40	120 #	20m Δ	250n Ω		T066	A Δ							
10	2N57301	300m#	4.5	5A	10				100	5.0	80	1.0m Δ	2.0 μ	2.0	30	300	30m Δ	240m	200n Ω		T059	A							
11*	2850-21	300m	2.0	5A	5.0				100	5.0	80	100ns	1.0 μ	50m	25		40m Δ	250m	50n Ω		PL	T059	A Δ						
12*	2851-21	300m	2.0	5A	5.0				100	5.0	80	100ns	1.0 μ	50m	25		40m Δ	400m	50n Ω		PL	T059	A Δ						
13*	2852-21	300m	2.0	5A	5.0				100	5.0	80	100ns	1.0 μ	50m	15		30m Δ	400m	60n Ω		PL	T059	A Δ						
14*	2853-21	300m	2.0	5A	5.0				80	5.0	40	100ns	1.0 μ	85n Ω	50m	40 #	40m Δ	40n	50m Ω		PL	T059	A Δ						
15*	2854-21	300m	2.0	5A	5.0				60	5.0	40	100ns	1.0 μ	50m	50		50m Δ	50n	60n Ω		PL	T059	A Δ						
16*	2855-21	300m	2.0	5A	5.0				60	5.0	40	100ns	1.0 μ	50m	25		40m Δ	50n	60n Ω		PL	T059	A Δ						
17*	2856-21	300m	2.0	5A	5.0				60	5.0	40	100ns	1.0 μ	50m	15		30m Δ	60n	60n Ω		PL	T059	A Δ						
18*	BD117	300m	3.0	5A	5.0				100	5.0	80	5.0 μ	2.0 μ	30	110							PE	T03	G					
19*	BUV39	300m	2.0	5A	5.0	1.0			100	8.0	80	50 μ	2.0 μ	1.0	40	240	40m Δ						PE	M153					
20*	BUV40	300m	2.0	5A	5.0	1.0			100	8.0	80	50 μ	2.0 μ	1.0	40	240	40m Δ						PE	M142					
21*	CP657	300m	3.0	5A	5.0				120	6.0	100	10u Ω	5.0 μ	2.0	25	95 #	50m Δ	400n Ω						400n Ω	TO3	H			
22	KSP1091	300m	-	5A	10				225	8.0	200	1.0u	5.0	1.0	20		60	40m							PE	T03			
23	KSP1092	300m	-	5A	10				250	8.0	225	1.0u	5.0	1.0	20		60	40m							PE	T03			
24	KSP1093	300m	-	5A	10				275	8.0	250	1.0u	5.0	1.0	20		60	40m							PE	T03			
25	KSP1094	300m	-	5A	10				300	8.0	275	1.0u	5.0	1.0	20		60	40m							PE	T03			
26	KSP1095	300m	-	5A	10				325	8.0	300	1.0u	5.0	1.0	20		60	40m							PE	T03			
27	BD121	303m	45	5A	5.0	1.0			60	6.0	35	100u	10 μ	100m	15		60m Δ	650m	200n Ω		D	T03	C Δ						
28	BD123	303m	45	5A	5.0	1.0			90	6.0	60	100u	10 μ	100m	15		60m Δ	650m	200n Ω		D	T03	C Δ						
29	PT4926	303m	53	5A	10				100	5.0	80	1.0m	5.0	5.0	80		200	60m	250m	350n Ω		PL	T059	A					
30	2N5190	320m	40	5A	4.0	1.0			40	5.0	40	100u	2.0 μ	1.5	25		100	2.0m Δ	350m			X58	B Δ						
31	2N5191	320m	40	5A	4.0	1.0			60	5.0	60	100u	2.0 μ	1.5	25		100	2.0m Δ	350m			X58	B Δ						
32	2N5192	320m	40	5A	4.0	1.0			80	5.0	80	100u	2.0 μ	1.5	20		80	2.0m Δ	350m			X58	B Δ						
33	MJE521	320m	40	5A	4.0	2.0			40	4.0	40	100u	1.0 μ	40	40	#									X58	B			
34	MJE2520	320m	40	5A	3.0	1.0			40	5.0	40	200us	4.0 μ	2.0	200m	40	200 #	3.0m Δ										X104	D
35	MJE2521	320m	40	5A	3.0	1.0			60	5.0	60	200us	4.0 μ	2.0	200m	40	200 #	3.0m Δ										X104	D
36	MJE2522	320m	40	5A	3.0	1.0			40	5.0	40	200us	4.0 μ	2.0	200m	40	200 #	3.0m Δ										X104	D
37	MJE2523	320m	40	5A	3.0	1.0			60	5.0	60	200us	4.0 μ	2.0	200m	40	200 #	3.0m Δ										X104	D
38	MJE3054	320m	40	5A	4.0	2.0			90	5.0	50	1.0m	4.0 μ	500m	25		100	3.0k Δ	450n Ω		D	X756	B Δ						
39	TIP311T	322m	20	5A	3.0	1.0			40	5.0	40	500u	4.0 μ	1.0	20		100	3.0k Δ	450n Ω		D	X756	B Δ						
40	TIP31AT	322m	20	5A	3.0	1.0			60	5.0	60	500u	4.0 μ	1.0	20		100	3.0k Δ	450n Ω		D	X756	B Δ						
41	TIP31B	322m	20	5A	3.0	1.0			80	5.0	80	500u	4.0 μ	1.0	20		100	3.0k Δ	450n Ω		D	X756	B Δ						
42	TIP31C	322m	20	5A	3.0	1.0			100	5.0	100	500u	4.0 μ	1.0	20		100	3.0k Δ	450n Ω		D	X756	B Δ						
43	2N5614*	330m#	50	5A	5.0	2.0			80	6.0	60	1.0m Δ	5.0 μ	2.5	70		200 #	70m Δ										X104	C
44	2N5616	330m#	50	5A	5.0	2.0			100	6.0	80	1.0m Δ	5.0 μ	2.5	70		200 #	60m Δ										X104	C
45	2N5618	330m#	50	5A	5.0	2.0			100	6.0	80	1.0m Δ	5.0 μ	2.5	70		200 #	70m Δ										X104	C
46	2N5620	330m#	50	5A	5.0	2.0			120	6.0	100	1.0m Δ	5.0 μ	2.5	30		90 #	60m Δ										X104	C
47	40464	330m	40	5A	5.0	1.0			35	4.0	35	250u	1.0 μ	2.0	30		170	2.0m Δ										E	T03
48	40465	330m	40	5A	5.0	1.0			40	4.0	40	100u	1.0 μ	2.0	50		170	2.0m Δ										E	T03
49	40466	330m	40	5A	5.0	1.0			50	4.0	50	100u	1.0 μ	2.0	50		170	2.0m Δ										E	T03
50	2N10691	233m	50	5A	4.0	1.3			60	9.0	45	1.0n	4.0 μ	1.5	10		50	1.2m Δ	2.0	1.8u		D	T03	C Δ					
51	2N10701	233m	50	5A	4.0	1.3			60	9.0	45	1.0n	4.0 μ	1.5	10		50	1.2m Δ	2.0	1.8u		D	T03	C Δ					
52	2N1470	333m	3.0																										

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE- MENT	MAX P _c FREE J to C	MAX T	ABSOLUTE MAX. RATINGS @ 25°C						MAX. I _{cbo} @ AIR @ 25°C	MAX. V _{cb} @ 25°C	HFE			MAX. SAT. RES.	tr	STRU- TURE	DWG #	LC s/a	
					(A)	(A)	(V)	(V)	(V)	(A)			(A)	(V)	(A)	(Hz)					
1	B3579	333m	40 Øs	SC 5.0		100	8.0	80	1.0mØ	1.0	20	60	30Ms	500m		PE	T059				
2	B3580	333m	40 Øs	SC 5.0		80	8.0	40	1.0mØ	1.0	40	120	30Ms	500m		PE	T059				
3	B3581	333m	40 Øs	SC 5.0		100	8.0	80	1.0mØ	1.0	40	120	30Ms	500m		PE	T059				
4	B3582	333m	40 Øs	SC 5.0		80	8.0	40	1.0mØ	1.0	100		30Ms	500m		PE	T059				
5	B3583	333m	40 Øs	SC 5.0		100	8.0	80	1.0mØ	1.0	100		30Ms	500m		PE	T059				
6	B3584	333m	40 Øs	SC 5.0		50	5.0	40	1.0mØ	1.0	20	60	30Ms	500m		PE	T059				
7	B144000	333m	25	SJ 10	2.0	50	50	40	1.0mØ	100	3.0	45	90			2.0u	Δ	T059	A		
8	B144001	333m	25	SJ 10	2.0	50	50	40	1.0mØ	100	3.0	70	140			2.0u	Δ	T059	A		
9	B144002	333m	25	SJ 10	2.0	50	50	40	1.0mØ	100	3.0	120	240			2.0u	Δ	T059	A		
10	B144003	333m	25	SJ 10	2.0	70	50	60	1.0mØ	100	3.0	45	90			2.0u	Δ	T059	A		
11	B144004	333m	25	SJ 10	2.0	70	50	60	1.0mØ	100	3.0	70	140			2.0u	Δ	T059	A		
12	B144005	333m	25	SJ 10	2.0	70	50	60	1.0mØ	100	3.0	120	240			2.0u	Δ	T059	A		
13	B144006	333m	25	SJ 10	2.0	90	50	80	1.0mØ	100	3.0	45	90			2.0u	Δ	T059	A		
14	B144007	333m	25	SJ 10	2.0	90	50	80	1.0mØ	100	3.0	70	140			2.0u	Δ	T059	A		
15	B144008	333m	25	SJ 10	2.0	90	50	80	1.0mØ	100	3.0	120	240			2.0u	Δ	T059	A		
16	B145000	333m	25	SJ 10	2.0	50	50	40	1.0mØ	100	3.0	45	90			2.0u	Δ	T061	A		
17	B145001	333m	25	SJ 10	2.0	50	50	40	1.0mØ	100	3.0	70	140			2.0u	Δ	T061	A		
18	B145002	333m	25	SJ 10	2.0	50	50	40	1.0mØ	100	3.0	120	240			2.0u	Δ	T061	A		
19	B145003	333m	25	SJ 10	2.0	70	50	60	1.0mØ	100	3.0	45	90			2.0u	Δ	T061	A		
20	B145004	333m	25	SJ 10	2.0	70	50	60	1.0mØ	100	3.0	70	140			2.0u	Δ	T061	A		
21	B145005	333m	25	SJ 10	2.0	70	50	60	1.0mØ	100	3.0	120	240			2.0u	Δ	T061	A		
22	B145006	333m	25	SJ 10	2.0	90	50	80	1.0mØ	100	3.0	45	90			2.0u	Δ	T061	A		
23	B145007	333m	25	SJ 10	2.0	90	50	80	1.0mØ	100	3.0	70	140			2.0u	Δ	T061	A		
24	B145008	333m	25	SJ 10	2.0	90	50	80	1.0mØ	100	3.0	120	240			2.0u	Δ	T061	A		
25	B145009	333m	25	SJ 10	2.0	50	50	40	1.0mØ	100	3.0	45	90			2.0u	Δ	T061	A		
26	B145010	333m	25	SJ 10	2.0	50	50	40	1.0mØ	100	3.0	70	140			2.0u	Δ	T061	A		
27	B145011	333m	25	SJ 10	2.0	50	50	40	1.0mØ	100	3.0	120	240			2.0u	Δ	T061	A		
28	B145012	333m	25	SJ 10	2.0	70	50	60	1.0mØ	100	3.0	45	90			2.0u	Δ	T061	A		
29	B145013	333m	25	SJ 10	2.0	90	50	80	1.0mØ	100	3.0	70	140			2.0u	Δ	T061	A		
30	B145014	333m	25	SJ 10	2.0	90	50	80	1.0mØ	100	3.0	120	240			2.0u	Δ	T061	A		
31#	BU111	333m	25 Ø	SJ 4.0	1.5	60	300	15m	100	10m	8.0		10Ms	1.0u	#	DΔ	M017	C			
32#	DT3200	333m	15	5.0	330m	45	80	30	15u	5.0	3.0	15	45			600m	O	T08			
33#	DT3201	333m	15	5.0	330m	80	80	60	15u	5.0	3.0	15	45			600m	O	T08			
34#	D74011	333m	30 Ø	SJ 5.0	1.0	100	80	70	50u	5.0	3.0	20	70				D	T03			
35	NS90021	333m	30 Ø	SJ 5.0	500m	100	80	80	200Ø	5.0	1.0	30				20MsΔ	250m	250u	PL	MT42	AØ
36	PT59291	333m	53 Ø	SJ 10	5.0	100	50	90	1.0uØ	5.0	5.0	80	200			75MØ	250m	200nØ	PL	T059	A
37	SDT34011	333m	20	SJ 5.0	2.0	40	50	40	10u#	5.0	2.0	40	120	#		500n	PE	T0111			
38	SDT34021	333m	20	SJ 5.0	2.0	60	60	60	10u#	5.0	2.0	40	120	#		40MØΔ	500n	PE	T0111		
39	SDT34031	333m	20	SJ 5.0	2.0	80	60	80	10u#	5.0	2.0	40	120	#		40MØΔ	500n	PE	T0111		
40	SDT34041	333m	20	SJ 5.0	2.0	100	60	100	10u#	5.0	2.0	40	120	#		40MØΔ	500n	PE	T0111		
41	SDT34051	333m	2.0	SJ 5.0	2.0	40	60	40	10u#	5.0	2.0	20	60	#		40MØΔ	500n	PE	T0111		
42	SDT34061	333m	2.0	SJ 5.0	2.0	60	60	60	10u#	5.0	2.0	20	60	#		40MØΔ	500n	PE	T0111		
43	SDT34071	333m	2.0	SJ 5.0	2.0	80	60	80	10u#	5.0	2.0	20	60	#		40MØΔ	500n	PE	T0111		
44	SDT34081	333m	2.0	SJ 5.0	2.0	100	60	100	10u#	5.0	2.0	20	60	#		40MØΔ	500n	PE	T0111		
45	SDT34091	333m	2.0	SJ 5.0	2.0	120	60	120	10u#	5.0	2.0	20	60	#		40MØΔ	500n	PE	T0111		
46	SDT6308	333m	30 Ø	SJ 5.0	500m	60	80	40	1.0u	2.0	1.0	20	60	#		30Ms	500m	PL	MT42		
47	SDT6309	333m	30 Ø	SJ 5.0	500m	80	80	60	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT42		
48	SDT6310	333m	30 Ø	SJ 5.0	500m	100	80	80	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT42		
52	SDT6314	333m	30 Ø	SJ 5.0	500m	60	80	40	1.0u	2.0	1.0	20	60	#		30Ms	500m	PL	MT42		
53	SDT6315	333m	30 Ø	SJ 5.0	500m	80	80	60	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT42		
54	SDT6316	333m	30 Ø	SJ 5.0	500m	100	80	80	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT42		
55	SDT6408	333m	30 Ø	SJ 5.0	500m	60	80	40	1.0u	2.0	1.0	20	60	#		30Ms	500m	PL	MT53	GN	
56	SDT6409	333m	30 Ø	SJ 5.0	500m	80	80	60	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT53	GN	
57	SDT6410	333m	30 Ø	SJ 5.0	500m	100	80	80	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT53	GN	
58	SDT6411	333m	30 Ø	SJ 5.0	500m	60	80	40	1.0u	2.0	1.0	20	60	#		30Ms	500m	PL	MT53	GN	
59	SDT6412	333m	30 Ø	SJ 5.0	500m	80	80	60	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT53	GN	
60	SDT6413	333m	30 Ø	SJ 5.0	500m	100	80	80	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT53	GN	
61	SDT6414	333m	30 Ø	SJ 5.0	500m	60	80	40	1.0u	2.0	1.0	20	60	#		30Ms	500m	PL	MT53	GN	
62	SDT6416	333m	30 Ø	SJ 5.0	500m	80	80	60	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT53	GN	
63	SDT6416	333m	30 Ø	SJ 5.0	500m	100	80	80	1.0uØ	2.0	1.0	20	60	#		30Ms	500m	PL	MT53	GN	
64	ST18015	333m	30 Ø	SJ 5.0	375	10	375		10	2.5	20		10M	500m			O	PE	T059		
65	ST18016	333m	30 Ø	SJ 5.0	300	10	300		10	2.5	20		10M	500m			O	PE	T059		
66	ST18017	333m	30 Ø	SJ 5.0	250	10	250		10	2.5	20		10M	500m			O	PE	T059		
67	ST18018	333m	30 Ø	S																	

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX P _c	M	T	ABSOLUTE MAX. RATINGS @ 25°C						MAX. I _{CEO} @ 25°C	hFE	MAX. SAT. RES.	tr	STRUCTURE	DWG #	LC			
						FREE AIR @ 25°C (W/C)	AIR @ 25°C (W)	E	I _c (A)	I _b (A)	BV _{CBO} (V)	BV _{EBO} (V)	BV _{CEO} (V)	BIAS (A)	MIN (Hz)	MAX (Hz)	f _{ae} (Hz)	(s)			
1	2N2812	400m	70	SS	10	2.0	80	8.0	60	100n	5.0	15.0	40	120	# 15M _Δ	100m	150m	PL	MT29	EO	
2	2N2813	400m	70	SS	10	2.0	120	8.0	80	100n	5.0	5.0	20	60	# 15M _Δ	100m	200m	PL	MT29	s/a	
3	2N2814	400m	70	SS	10	2.0	120	8.0	80	100n	5.0	5.0	40	120	# 15M _Δ	100m	150m	PL	MT29	AD	
4	2N3220	400m	2.0	SC	2.0	1.0	100	8.0	80	10u	5.0	1.0	20	60	# 10M _Δ	1.3			M147		
5	2N3221	400m	2.0	SC	2.0	1.0	100	8.0	80	10u	5.0	1.0	40	120	# 10M _Δ	1.3			M147		
6	2N3222	400m	2.0	SC	2.0	1.0	80	8.0	60	10u	5.0	1.0	20	60	# 10M _Δ	1.3			M147		
7	2N3223	400m	2.0	SC	2.0	1.0	80	8.0	60	10u	5.0	1.0	40	120	# 10M _Δ	1.3			M147		
8	2N3543	400m _Δ	60	SS	5.0	50	65	4.0	60	0.1m	5.0	4.5	10	# 80	150M _Δ	22			CO		
9	2N3950	400m	70	SS	3.3	1	65	5	4.01	35	*	10m*						T060	AD		
10	2NA0041	400m	1.2	SS	20	10	100	8.0	80	1.0m	5	4.0	10	30	# 30M _Δ	X21			X21		
11	2NA0051	400m	1.2	SS	20	10	120	8.0	100	1.0m	5	4.0	10	30	# 30M _Δ	X21			X21		
12	2N4131	400m	60	SS	5.0	1.0	90	4.0	80	10u	5.0	1.0	10	80	# 150M _Δ	TO3			D12		
13	2N4932	400m	70	SS	3.3	1	50	4.0	25			5.0	10	10	100	100K _Δ	TO60	A		TO60	A
14	2N4933	400m	70	SS	3.3	1	70	4.0	35			5.0	10	10	100	100K _Δ	TO60	A		TO60	A
15	2N5070	400m	70	SS	3.3	1	65	4.0	30	1.0m	5	3.0	10	100	100M _Δ	TO60	A		TO60	A	
16	2N5071	400m	70	SS	3.3	1	65	4.0	30	1.0m	5	3.0	10	100	100M _Δ	TO60	A		TO60	A	
17	2N5074	400m	70	SS	3.0	300m	200	6.0	200	1.0m	# 1	5.0	500m	30	110	# 40M _Δ	670m			TO59	A
18	2N5075	400m	70	SS	3.0	300m	200	6.0	200	1.0m	# 1	5.0	500m	90	250	# 40M _Δ	670m			TO59	A
19	2N5076	400m	70	SS	3.0	300m	250	6.0	250	1.0m	# 1	5.0	500m	30	110	# 40M _Δ	670m			TO59	A
20	2N5077	400m	70	SS	3.0	300m	250	6.0	250	1.0m	# 1	5.0	500m	90	250	# 40M _Δ	670m			TO59	A
21	2N5468	400m _Δ	40	SS	3.0	10	500	8.0	400	1.0m	5	3.0	15	60	# 2.5M _Δ	T066			TO66	A	
22	2N5469	400m _Δ	40	SS	3.0	10	700	8.0	400	1.0m	5	3.0	15	60	# 2.5M _Δ	T066			TO66	A	
23	2N5490	400m	50	SS	7.0	30	60	5.0	50	5.0	5	4.0	20	20	100	307m			X75	D	
24	2N5491	400m	50	SS	7.0	30	60	5.0	50	5.0	5	4.0	20	20	100	307m			X75a	T	
25	2N5492	400m	50	SS	7.0	30	75	5.0	65	10u	5	4.0	25	20	100	307m			X75	D	
26	2N5493	400m	50	SS	7.0	30	25	5.0	65	10u	5	4.0	25	20	100	307m			X75a	T	
27	2N5494	400m	50	SS	7.0	30	60	5.0	50	1.0m	5	4.0	3.0	20	100	307m			X75	D	
28	2N5495	400m	50	SS	7.0	30	60	5.0	50	5.0	5	4.0	3.0	20	100	307m			X75a	T	
29	2N5496	400m	50	SS	7.0	30	90	5.0	80	5.0	5	4.0	3.5	20	100	285m			X75	D	
30	2N5497	400m	50	SS	7.0	3.0	90	5.0	80	5.0	5	4.0	3.5	20	100	285m			X75a	T	
31	2N5591	400m	70	SS	3.5	4.0	36	4.0	18	1.0m	5	500m	50			200M _Δ			MT72R	R	
32	2N5707	400m	70	SS	4.0	10	70	1	4.0t	50	5.0m	100	100m	50	50				TO128	V	
33	2N5714	400m	70	SS	8.0	60	1.0	4.0t	40	1.0m	5	100	10						MD36	F	
34	2N5776	400m	70	SS	6.0	10	65	1	35	10m	5	500	200m	10	150						
35	2N59395	400ms	20	SS	10	4.0	80	5.0	80	500u	4.0	50	40	200	# 120M _Δ	TO111	A		TO111	A	
36	2N59405	400ms	2.0	SS	10	4.0	70	5.0	70	500u	4.0	50	40	200	# 120M _Δ	TO111	A		TO111	A	
37	2SC493	400m	50	SS	5.0	50	80	5.0	80	10m	5	500	100m	20	200	* 10M _Δ	500m			DM	T03
38	2SC494	400m	50	SS	5.0	50	80	5.0	80	10m	5	500	100m	20	200	* 10M _Δ	500m			DM	T03
39	2SC519A1	400m	50	SS	5.0	7.0	130	5.0	110	1.0m	5	500	100m	20	200	* 20M _Δ	400m			DM	T03
40	2SC520A1	400m	50	SS	5.0	7.0	100	5.0	80	1.0m	5	500	100m	30	200	* 20M _Δ	400m			DM	T03
41	2SC521A1	400m	50	SS	5.0	7.0	70	5.0	50	1.0m	5	500	100m	30	200	* 20M _Δ	400m			DM	T03
42	2SC5556	400m	50	SS	5.0	6.0	250	5.0	250	1.0m	5	500	50m	20	40	40			DM	T03	
43	2SC642	400m	50	SS	5.0	10	1.1k	5.0	10	10u	5	150	150m	30	160				ME	T03	
44	2SC643	400m	50	SS	5.0	2.5	1.1k	5.0	10	10u	5	150	200	7.0					ME	T03	
45	2SC9397	400m _Δ	50	SS	5.0	150	70	60	2.0m	5	500	50	15	120				10u#	ME	T03	
46	2SC9401	400m _Δ	50	SS	5.0	50	200	70	90	2.0m	5	500	50	15	120				10u#	ME	T03
47	2SC1004	400m	50	SS	5.0	500m	1.1k	700	5	10u	5	150	150m	30	2.0M ₁				ME	T03	
48	2SC1021	400m	50	SS	5.0	60	60	5.0	40	2.0m	5	100	100m	50	# 500M ₅				PEI	MT79	
49	2SC1022	400m	50	SS	5.0	60	60	5.0	40	2.0m	5	100	100m	50	# 500M ₅				PEI	MT79	
50	2SC1100	400m _Δ	50	SS	5.0	3.0	1.1k	7.0	400	1.0m	5	150	30	10				ME	T03		
51	2SC1101	400m _Δ	50	SS	5.0	1.0	1.1k	5.0	500	1.0m	5	150	50m	30	120				ME	T03	
52	2SD45	400m	50	SS	5.0	1.5	150	6.0	100	15m	5	100	1.0	12	128	2.0M ₁	600m			ME	T03
53	2SD46	400m	50	SS	5.0	1.5	150	6.0	75	15m	5	100	1.0	12	184	2.0M ₁	600m			ME	T03
54	2SD47	400m	50	SS	5.0	1.5	100	6.0	50	15m	5	100	1.0	12	184	2.0M ₁	600m			ME	T03
55	2SD51A	400m	50	SS	5.0	1.5	150	6.0	110	100u	5	3.0	2.0	30	120	10M ₁	500m			ME	T03
56	2SD59	400m	50	SS	5.0	1.0	100	5.0	30u	4.0	1.0	35	180	10	3.0M ₁				D	T03	
57	2SD60	400m	50	SS	5.0	1.0	150	5.0	75	30u	4.0	1.0	35	180	10	3.0M ₁				D	T03
58	2SD73	400m	60	SS	7.5	1.5	100	5.0	60	5.0m	100	1.0	25	80	# 80M ₁	400m			EM	T03	
59	2SD74	400m	60	SS	7.5	1.5	150	5.0	90	5.0m	100	1.0	25	80	# 80M ₁	400m			EM	T03	
60	2SD801	400m	50	SS	6.0	3.0	30	10	20	200u	5	40	60	1.5M ₁	500m	1.2u		D	T03		
61	2SD811	400m	50	SS	6.0	3.0	60	10	40	50u	5	40	60	1.5M ₁	500m	1.2u		D	T03		
62	2SD821	400m	50	SS	6.0	3.0	100	10	60	30u	4.0	10	40	60	1.5M ₁	500m	1.2u		D	T03	
63	2SD831	400m	50	SS	6.0	3.0	150	10	75	30u	4.0	10	40	60	1.5M ₁	500m	1.2u		D	T03	
64	2SD841	400m	50	SS	6.0	3.0	200	10	85	30u	4.0	10	40	60	1.5M ₁	500m	1.2u		D	T03	
65	2SD124AH	400m	60	SS	7.0	30	75	10	50	25u	4.0	15	20	80	12k	200m			D	T03	
66	2SD125AH	400m	60	SS	7.0	30	100	10	75	25u	4.0	15	20	80	12k	200m			D	T03	
67	2SD126H	400m	60	SS	7.0	30	150	50	100	25u	4.0	15	20	40	20k	20k _Δ			EM	T03	
68	2SD180	400m _Δ	50	SS	5.0	20	80	7.0	60	2.0m	5	130	30	20				2.0u	EM	T03	
69	2SD200	400m	10	SS	2.5	2.5	1.5k	50	15k	1.0m	5	2.0	2.0	30					2.0u	EM	T03
70	# 2SD201f	400m	5	SS																	

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE FREE AIR @ 25°C (W/C)	MAX PC	Pc	T	ABSOLUTE MAX. RATINGS @ 25°C	MAX. I _{cbo} @ 25°C	MAX. HFE	f _{ce}	MAX. SAT. RES. (Ω)	tr	STRUCTURE	DWG #	C				
1*	SDT1157	400m	50 °C	SJ	10	3.0	8.0	400	1.0mA	5.0Ω	2.0	10 #	50	50M5	PL TO66			
2*	SDT1158	400m	50 °C	SJ	10	3.0	8.0	400	1.0mA	5.0Ω	2.0	10 #	50	50M5	PL TO66			
3*	SDT1159	400m	50 °C	SJ	10	3.0	8.0	400	1.0mA	5.0Ω	2.0	10 #	50	50M5	PL TO66			
4*	SDT1160	400m	50 °C	SJ	10	3.0	8.0	200	1.0mA	5.0Ω	3.0	10 #	50	50M5	PL TO66			
5*	SDT1161	400m	50 °C	SJ	10	3.0	8.0	325	1.0mA	5.0Ω	3.0	10 #	50	50M5	PL TO66			
6*	SDT1162	400m	50 °C	SJ	10	3.0	8.0	400	1.0mA	5.0Ω	3.0	10 #	50	50M5	PL TO66			
7*	SDT1163	400m	50 °C	SJ	10	3.0	8.0	400	1.0mA	5.0Ω	3.0	10 #	50	50M5	PL TO66			
8*	SDT1164	400m	50 °C	SJ	10	3.0	8.0	400	1.0mA	5.0Ω	3.0	10 #	50	50M5	PL TO66			
9	ST91057†	400m#	60 °C#	SJ	10	125	10	80 *	30uA	100	2.0	120 #	10M5Δ	500nΩ	PL TO59			
10	ST91058†	400m#	60 °C#	SJ	10	145	10	100 *	30uA	100	2.0	30	120 #	10M5Δ	500nΩ	PL TO59		
11	ST91059†	400m#	60 °C#	SJ	10	170	10	120 *	30uA	100	2.0	30	120 #	10M5Δ	500nΩ	PL TO59		
12	STT2800	400ms	40 °C	SJ	7.5	1.0	150	12	1.0uA	150	2.0	30	90 #	25M5	DPLA TO59 A			
13	STT2801	400ms	40 °C	SJ	7.5	1.0	140	12	1.0uA	150	2.0	30	90 #	25M5	DPLA TO59 A			
14	STT2802	400ms	40 °C	SJ	7.5	1.0	140	12	1.0uA	150	2.0	30	90 #	25M5	DPLA TO59 A			
15	STT2803	400ms	40 °C	SJ	7.5	1.0	120	12	1.0uA	150	2.0	30	90 #	25M5	DPLA TO59 A			
16	STT2804	400ms	40 °C	SJ	7.5	1.0	100	12	1.0uA	150	2.0	30	90 #	25M5	DPLA TO59 A			
17	STT2805	400ms	40 °C	SJ	7.5	1.0	75	10	60	1.0uA	150	2.0	30	90 #	25M5	DPLA TO59 A		
18	STT2806	400ms	40 °C	SJ	7.5	1.0	40	10	30	500uA	150	2.0	25 #	25M5	DPLA TO59 A			
19	2N5178	401m	70 °C	SJ	8.0	2.0	55	3.5	35	20mA	5.0Ω	200m	10	150	200M5Δ	MD36 F		
20	2N3018	416ms	25 °C	SJ	10	2.0	100	4.0	50	100mA	5.0Ω	1.0	60	60	TO61	A		
21	2N1487	424m	75 °C	SC	6.0	3.0	60	10	40	25mA	4.0Ω	1.5	15	45	1.0M1	2.7	1.0u	MEΔ MD6
22	JAN2N1487	424m	75 °C	SC	6.0	3.0	60	10	40	25mA	4.0Ω	1.5	15	45 #	500kΩΔ	Δ TO3		
23	2N1488	424m	75 °C	SC	6.0	3.0	100	10	55	25mA	4.0Ω	1.5	15	45 #	1.0M1	2.7	1.0u	MEΔ MD6
24	JAN2N1488	424m	75 °C	SC	6.0	3.0	100	10	55	25mA	4.0Ω	1.5	15	45 #	500kΩΔ	Δ TO3		
25	2N1489	424m	75 °C	SC	6.0	3.0	60	10	40	25mA	4.0Ω	1.5	25	75 #	1.0M1	1.0	1.0u	MEΔ MD6
26	JAN2N1489	424m	75 °C	SC	6.0	3.0	100	10	55	25mA	4.0Ω	1.5	25	75 #	500kΩΔ	Δ TO3		
27	2N1490	424m	75 °C	SC	6.0	3.0	100	10	55	25mA	4.0Ω	1.5	25	75 #	1.0M1	1.0	1.0u	MEΔ MD6
28	JAN2N1490	424m	75 °C	SC	6.0	3.0	100	10	55	25mA	4.0Ω	1.5	25	75 #	500kΩΔ	Δ TO3		
29	2N2305	424m	75 °C	SC	6.0	3.0	60	10	40	200mA	4.0Ω	800m	15	60	2.0	800m	Δ TO3	
30	40369	424m	75 °C	SC	6.0	3.0	100	10	55	100mA	4.0Ω	1.5	25	75	800m	Δ TO3		
31#	ZT1702	424m	75 °C*	SC	5.0	2.5	60	5.0	40	200mA	4.0Ω	800m	15	60	1.0M1	4.0	1.2uΩ	D TO3
32	ZN1702	425m	75 °C	SC	5.0	2.5	60	6.0	40	200mA	4.0Ω	800m	15	60	300kΩΔ	4.0	Δ TO3	
33	ZN1703	425m	75 °C	SC	5.0	2.5	60	6.0	40	200mA	4.0Ω	800m	15	60	300kΩΔ	4.0	Δ TO36	
34#	ZSC851	427mΩ	75 °C	SC	8.0	10	50	50	25	500mA	5.0Ω	20	250 #	110M5Δ	200m	PE TO3		
35	ZNC1511	428m	75 °C	SC	6.0	3.0	60	10	40	500mA	4.0Ω	1.5	15	45	300kΩΔ	1.2	TO36	
36	ZNC1512	428m	75 °C	SC	6.0	3.0	100	10	55	500mA	4.0Ω	1.5	15	45	300kΩΔ	1.2	TO36	
37	ZN1513	428m	75 °C	SC	6.0	3.0	60	10	40	500mA	4.0Ω	1.5	25	75	300kΩΔ	1.0	TO36	
38	ZN1514	428m	75 °C	SC	6.0	3.0	100	10	55	500mA	4.0Ω	1.5	25	75	300kΩΔ	1.0	TO36	
39#	ZT1487†	429m	75 °C	SC	6.0	#3.0	60	10	40	25mA	4.0Ω	1.5	15	45	1.0M1	2.0	1.2uΩ	D TO3
40#	ZT1488†	429m	75 °C	SC	6.0	#3.0	100	10	55	25mA	4.0Ω	1.5	15	45	1.0M1	2.0	1.2uΩ	D TO3
41#	ZT1489†	429m	75 °C	SC	6.0	#3.0	60	10	40	25mA	4.0Ω	1.5	25	75	1.0M1	670m	1.2uΩ	D TO3
42#	ZT1490†	429m	75 °C	SC	6.0	#3.0	100	10	55	25mA	4.0Ω	1.5	25	75	1.0M1	670m	1.2uΩ	D TO3
43	ZN5635	430m	75 °C	SC	10	60	4.0	35	100mA	5.0Ω	100m	5.0	500M5Δ	500m	MT171B	R		
44	STC1080	434ms	75 °C	SC	3.0	10	40	10m	10m	150	1.0	12	36	750m	Δ TO3			
45	STC1081	434ms	75 °C	SC	3.0	10	60	10m	10m	150	1.0	12	36	750m	Δ TO3			
46	STC1082	434ms	75 °C	SC	3.0	10	80	10m	10m	150	1.0	12	36	750m	Δ TO3			
47	STC1083	434ms	75 °C	SC	5.0	10	40	10m	10m	150	2.0	10	30	500m	Δ TO3			
48	STC1084	434ms	75 °C	SC	5.0	10	60	10m	10m	150	2.0	10	30	500m	Δ TO3			
49	STC1085	434ms	75 °C	SC	5.0	10	80	10m	10m	150	2.0	10	30	500m	Δ TO3			
50	ZN2101	450m	75 °C	SC	3.0	3.0 Ø	60	10	40	300mA	150	1.0	15	60	5.0	MT10 A		
51	STC1550	450ms	85 °C	SC	3.0	10	40	10m	10m	150	1.0	12	36	750m	Δ MT10			
52	STC1551	450ms	85 °C	SC	3.0	10	60	10m	10m	150	1.0	12	36	750m	Δ MT10			
53	STC1552	450ms	85 °C	SC	3.0	10	80	10m	10m	150	1.0	12	36	750m	Δ MT10			
54	STC1553	450ms	85 °C	SC	3.0	10	40	10m	10m	150	2.0	10	30	500m	Δ MT10			
55	STC1554	450ms	85 °C	SC	3.0	10	60	10m	10m	150	2.0	10	30	500m	Δ MT10			
56	STC1555	450ms	85 °C	SC	3.0	10	80	10m	10m	150	2.0	10	30	500m	Δ MT10			
57†	ZT6944†	454m	80 °C	SA	120	8.0	70	50	3.0 Ø	400	200	100m	133m	133m	TO3			
58†	PT6945†	454m	80 °C	SA	160	8.0	100	50	3.0 Ø	40	200	100m	186m	186m	TO3			
59†	PT6946†	454m	80 °C	SA	200	8.0	140	50	3.0 Ø	30	150	100m	200m	200m	TO3			
60†	PT79121†	454m	80 °C	SA	90	6.0	70	50	3.0 Ø	200	400	100m	133m	133m	TO3			
61†	PT79131†	454m	80 °C	SA	90	5.0	70	50	3.0 Ø	10	50	250	100m	133m	133m	TO3		
62†	PT79141†	454m	80 °C	SA	120	8.0	70	50	3.0 Ø	10	50	200	400	100m	166m	166m	TO3	
63†	PT79151†	454m	80 °C	SA	120	8.0	100	50	3.0 Ø	10	50	250	100m	166m	166m	TO3		
64†	PT79161†	454m	80 °C	SA	120	8.0	100	50	3.0 Ø	10	50	250	100m	166m	166m	TO3		
65†	PT79171†	454m	80 °C	SA	160	8.0	100	50	3.0 Ø	10	50	300	100m	200m	200m	TO3		
66†	PT7918†	454m	80 °C	SA	170	5.0	140	50	3.0 Ø	10	50	300	100m	200m	200m	TO3		
67†	PT7919†	454m	80 °C	SA	170	6.0	140	50	3.0 Ø	10	50	150	100m	200m	200m	TO3		
68†	PT7920†	454m	80 °C	SA	200	8.0	140	50	3.0 Ø	10	50	150	100m	233m	233m	TO3		
69†	PT7958†	454m	80 °C	SA	225	6.0	200	50	3.0 Ø	10	50	150	100m	333m	333m	TO3		
70†	PT7959†	454m	80 °C	SA	325	6.0	300	50	3.0 Ø	10	50	150	100m	333m	333m	TO3		
71	STC1500	460m	8.5	2.5	60	6.0	40	18	3.0 mA	400	80	100m	15	60	2.5M1	4.0	.90u	MT10 X92 R
72	ZN5708	460m	8.5	2.5	36	4.0	18	3.0 mA	500	100m	15	60	2.5M1	4.0	.90u	MT10 X92 R		
73	ZN389A	476mΩ																

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE NO.

LINE No.	TYPE No.	11-MIN. DERATE FREE AIR @ 25°C (W/C)		MAX. IC (A)		ABSOLUTE MAX. RATINGS @ 25°C			MAX. ICBO @ 25°C (A)		hFE			MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #	C			
		Pc	M	T	A	V _c	V _e	V _c	V _{cb}	I _c	MIN.	MAX.	f _{ce} (Hz)		s/a	Y200					
1	JAN2N424	500m	85	SS	20	80	10	80	10m ⁺	150	1.0	15	50	#	10	D	T053	A			
2	2N2383	500m	85	SS	20	80	8.0	60	1.0m ⁺	4.0 ²	1.5	20	50	3.0M ^Δ	670m	900n	D	MS3			
3	2N2384	500m	85	SS	5.0	80	8.0	60	1.0m ⁺	4.0 ²	1.5	20	60	3.0M ^Δ	670m	900n	D	MT10			
4	JAN2N2812T	500m	4.0	SC	10	2.0	80	8.0	80	100n	5.0 ²	5.0	40	120	#	15M ^Δ	350n ²	T061	A ²		
5	JAN2N2814T	500m	4.0	SC	10	2.0	120	8.0	80	100n	5.0 ²	5.0	40	120	#	15M ^Δ	350n ²	T061	A ²		
6	2N4301	500m ²	50	SS	10	4.0	100	8.0	80	10μ ²	4.0 ²	6.0	30	120	#	4.0M ^Δ	T061	A ²			
7	2N4395T	500m	62	SS	5.0	900m	60	14.0	40	100u	1.0 ²	2.0	50	170	#	4.0M ^Δ	180m	T03	C ²		
8	2N4396T	500m	62	SS	5.0	900m	80	4.0	60	100u	1.0 ²	2.0	40	170	#	4.0M ^Δ	180m	T03	C ²		
9	2N4913	500m	88	SS	1.0	40	5.0	40	10u ²	2.0 ²	2.5	25	100	#	4.0M ^Δ	T03	C ²				
10	2N4914	500m	88	SS	5.0	1.0	60	5.0	60	1.0m ²	2.0 ²	2.5	25	100	#	4.0M ^Δ	T03	C ²			
11	2N4915	500m	88	SS	5.0	1.0	80	5.0	80	1.0m ²	2.0 ²	2.5	25	100	#	4.0M ^Δ	T03	C ²			
12	N5067	500m	88	SS	5.0	1.0	40	5.0	40	1.0m ²	2.0 ²	1.0	20	80	#	4.0M ^Δ	T03	C ²			
13	N5068	500m	88	SS	5.0	1.0	60	5.0	80	1.0m ²	2.0 ²	1.0	20	80	#	4.0M ^Δ	T03	C ²			
14	N5069	500m	88	SS	5.0	1.0	80	5.0	80	1.0m ²	2.0 ²	1.0	20	80	#	4.0M ^Δ	T03	C ²			
15	N52181	500m ²	50	SS	10	1.0	220	8.0	200	500n ²	5.0 ²	5.0	15	120	#	40M ^Δ	600n	T061	A ²		
16	2N5264T	500m	87	SS	10	2.0	400	5.0	180	1.0m ²	2.5 ²	1.0	30	300	#	50M ^Δ	178m	10u	T03	C ²	
17	N53131	500m ²	50	SS	10	2.5	80	6.0	80	10u ²	5.0 ²	1.0	30	90	#	30M ^Δ	500n	T061	A ²		
18	N53151	500m ²	50	SS	10	2.5	100	6.0	100	10u ²	5.0 ²	1.0	30	90	#	30M ^Δ	500n	T061	A ²		
19	N53171	500m ²	50	SS	10	2.0	80	6.0	80	10u ²	5.0 ²	5.0	30	90	#	30M ^Δ	400n	T061	A		
20	N53191	500m ²	50	SS	10	2.0	100	6.0	100	10u ²	5.0 ²	5.0	30	90	#	30M ^Δ	400n	T061	A		
21	N55401	500m ²	50	SS	10	2.0	325	8.0	300	500n ²	5.0 ²	5.0	20	60	#	20M ^Δ	1.5u	T03	C ²		
22	N5542T	500m ²	50	SS	10	2.0	175	8.0	130	500n ²	5.0 ²	5.0	30	90	#	20M ^Δ	500n	T061	A ²		
23	N5691	500m	88	SS	8.0	50	50	1.0	30	1.5M ^Δ	100 ²	100m	10	35	#	X92	R				
24	N57311	500m ²	75	SS	20	4.0	100	5.0	80	1.0m ²	2.0 ²	5.0	30	300	#	30M ^Δ	120m	300n ²	T061	A	
25	N57321	500m ²	75	SS	20	4.0	100	5.0	80	1.0m ²	2.0 ²	5.0	30	300	#	30M ^Δ	120m	300n ²	T03	A ²	
26	N58691	500m	87	SS	3.0	1.0	60	1.5	60	100u ²	4.0 ²	1.5	20	100	#	4.0M ^Δ	500m	700n ²	T03	C ²	
27	N58701	500m	87	SS	3.0	1.0	80	1.5	80	100u ²	4.0 ²	1.5	20	100	#	4.0M ^Δ	500m	700n ²	T03	C ²	
28#	2SC240	500m ²	75	SS	5.0	1.0	100	5.0	85	5.0m ²	10 ²	1.0	15	35	#	25M ^Δ	500m	ME	T03		
29#	2SC241	500m ²	75	SS	5.0	1.0	60	5.0	40	10m ²	10 ²	1.0	15	35	#	35M ^Δ	500m	ME	T03		
30#	2SC242	500m ²	75	SS	5.0	1.0	100	5.0	65	10m ²	10 ²	1.0	15	35	#	35M ^Δ	500m	ME	T03		
31#	2SC243	500m ²	75	SS	5.0	1.0	140	5.0	80	10m ²	10 ²	1.0	15	35	#	35M ^Δ	500m	ME	T03		
32#	S2D12	500m	60	SS	2.5	75	4.0	40	10m ²	10 ²	1.0	25	75	#	20M ^Δ	800m	PL	MT62a ²			
33#	3TE610	500m	87	J	8.0	3.0	80	4.0	60	10m ²	10 ²	1.0	10	250	#	250M ^Δ	500m	PL	MT62a ²		
34#	3TE611	500m	87	J	8.0	3.0	60	4.0	30	1.0m ²	5.0	4.5	10	150	#	100M ^Δ	100m	PL	MT62a ²		
35#	180T2A	500m	85	SS	6.0	3.0	60	10	60	10m ²	4.0 ²	2.0	15	90	#	10M ^Δ	100m	T03	C ²		
36#	180T2B	500m	85	SS	6.0	3.0	100	5.0	65	10m ²	4.0 ²	2.0	15	90	#	10M ^Δ	100m	T03	C ²		
37#	180T2C	500m	85	SS	7.0	2.0	100	5.0	80	1.0m ²	2.0 ²	5.0	30	300	#	30M ^Δ	120m	300n ²	T03	A	
38#	181T2A	500m	85	SS	6.0	3.0	100	10	90	1.0m ²	4.0 ²	2.0	15	45	#	10M ^Δ	100m	T03	C ²		
39#	181T2B	500m	85	SS	6.0	3.0	100	10	90	1.0m ²	4.0 ²	2.0	30	90	#	10M ^Δ	100m	T03	C ²		
40#	181T2C	500m	85	SS	6.0	3.0	100	10	90	1.0m ²	4.0 ²	2.0	75	180	#	10M ^Δ	100m	T03	C ²		
41#	182T2A	500m	85	SS	6.0	3.0	200	10	140	1.0m ²	4.0 ²	2.0	15	45	#	10M ^Δ	100m	T03	C ²		
42#	182T2B	500m	85	SS	6.0	3.0	200	10	140	1.0m ²	4.0 ²	2.0	30	90	#	10M ^Δ	100m	T03	C ²		
43#	182T2C	500m	85	SS	6.0	3.0	200	10	140	1.0m ²	4.0 ²	2.0	75	180	#	10M ^Δ	100m	T03	C ²		
44#	183T2A	500m	85	SS	6.0	3.0	300	10	180	1.0m ²	4.0 ²	2.0	15	45	#	10M ^Δ	100m	T03	C ²		
45#	183T2B	500m	85	SS	6.0	3.0	300	10	180	1.0m ²	4.0 ²	2.0	30	90	#	10M ^Δ	100m	T03	C ²		
46#	183T2C	500m	85	SS	7.0	3.0	300	10	180	1.0m ²	4.0 ²	2.0	75	180	#	10M ^Δ	100m	T03	C ²		
47#	184T2A	500m	85	SS	6.0	3.0	400	10	200	1.0m ²	4.0 ²	2.0	15	45	#	10M ^Δ	100m	T03	C ²		
48#	184T2B	500m	85	SS	6.0	3.0	400	10	200	1.0m ²	4.0 ²	2.0	30	90	#	10M ^Δ	100m	T03	C ²		
49#	185T2A	500m	85	SS	6.0	3.0	500	10	250	1.0m ²	4.0 ²	2.0	15	45	#	10M ^Δ	100m	T03	C ²		
50#	185T2B	500m	85	SS	6.0	3.0	500	10	250	1.0m ²	4.0 ²	2.0	30	90	#	10M ^Δ	100m	T03	C ²		
51#	17T6-04021	500m ²	50	SS	10	2.0	100	5.0	100	1.0m ²	10 ²	1.0	20	20	#	40M ^Δ	250m	300n ²	EM	T061	A
52	17T6-04051	500m ²	50	SS	10	2.0	200	4.0	7.0	200u ²	2.0 ²	2.0	20	20	#	40M ^Δ	120m	400n ²	EM	T061	A
53	17T6-04051	500m ²	50	SS	10	2.0	200	4.0	7.0	200u ²	2.0 ²	2.0	20	20	#	40M ^Δ	250m	300n ²	EM	T061	A
54	17T6-06021	500m ²	50	SS	10	2.0	200	4.0	7.0	200u ²	2.0 ²	2.0	20	20	#	40M ^Δ	120m	400n ²	EM	T061	A
55	17T6-06051	500m ²	50	SS	10	2.0	200	5.0	7.0	200u ²	2.0 ²	2.0	20	20	#	40M ^Δ	120m	400n ²	EM	T061	A
56	17T6-160801	500m ²	50	SS	10	2.0	200	8.0	7.0	200u ²	2.0 ²	5.0	20	20	#	40M ^Δ	250m	300n ²	EM	T061	A
57	17T6-1608051	500m ²	50	SS	10	2.0	200	8.0	7.0	200u ²											

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE- MENT (W/C)	MAX Pcm FREE AIR @ 25°C	Pcm (W)	ABSOLUTE MAX. RATINGS @25°C				MAX (cbo @ MAX Vce @25°C)	NFE	fae	MAX. SAT. RES. (Ω)	tr	STRUCTURE	DWG #	C E A D E				
					J to C	A E	Ic (A)	Ib (A)	BVcbo (V)	BVbeo (V)	BVceo (V)	BIAS (A)	Vcb (V)	Ic (A)	MIN	MAX	(Hz)	(s)		
1	SDT7017	500m ^s	50 ⁰	SJ 10	2.0	60	5.0	40	1.0u ⁰	5.0 ⁰	5.0	100	#	15M ^Δ	PL	T061				
2	SDT7018	500m ^s	50 ⁰	SJ 10	2.0	80	5.0	60	1.0u ⁰	5.0 ⁰	5.0	100	#	15M ^Δ	PL	T061				
3	SDT7019	500m ^s	50 ⁰	SJ 10	2.0	100	5.0	80	1.0u ⁰	5.0 ⁰	5.0	100	#	15M ^Δ	PL	T061				
4	SDT7140	500m ^s	87	SJ 10	2.0	120	8.0	100	100n	5.0	5.0	40	120	50M	PL	T061				
5	SDT7141	500m ^s	87	SJ 10	2.0	200	8.0	150	100n	5.0	5.0	40	120	50M	PL	T061				
6	SDT7150	500m ^s	87	SJ 10	2.0	140	8.0	120	500n	5.0	5.0	20	60	50M	PL	T061				
7	SDT7151	500m ^s	87	SJ 10	2.0	170	8.0	150	500n	5.0	5.0	20	60	50M	PL	T061				
8	SDT7152	500m ^s	87	SJ 10	2.0	220	8.0	200	500n	5.0	5.0	20	60	50M	PL	T061				
9	SDT7154	500m ^s	87	SJ 10	2.0	140	8.0	120	500n	5.0	5.0	40	120	50M	PL	T061				
10	SDT7155	500m ^s	87	SJ 10	2.0	170	8.0	150	500n	5.0	5.0	40	120	50M	PL	T061				
11	SDT7156	500m ^s	87	SJ 10	2.0	220	8.0	200	500n	5.0	5.0	40	120	50M	PL	T061				
12	SDT7801	500m ^s	50 ⁰	S 10	5.0	225	7.0	200	1.0u ⁰	5.0	5.0	20	60	30M ^Δ	100m	PL	T061			
13	SDT7802	500m ^s	50 ⁰	S 10	5.0	250	7.0	225	1.0u ⁰	5.0	5.0	20	60	30M ^Δ	100m	PL	T061			
14	SDT7803	500m ^s	50 ⁰	S 10	5.0	275	7.0	250	1.0u ⁰	5.0	5.0	20	60	30M ^Δ	100m	PL	T061			
15	SDT7804	500m ^s	50 ⁰	S 10	5.0	325	7.0	300	1.0u ⁰	5.0	5.0	20	60	30M ^Δ	100m	PL	T061			
16	SDT7805	500m ^s	50 ⁰	S 10	5.0	350	7.0	325	1.0u ⁰	5.0	5.0	20	60	30M ^Δ	100m	PL	T061			
17	SDT7806	500m ^s	50 ⁰	SJ 10	1.5	150	5.0	150	10u ⁰	5.0	5.0	10	#	15M ^Δ	PL	MT50 ^a	A			
18	SDT7807	500m ^s	50 ⁰	SJ 10	1.5	200	5.0	200	10u ⁰	5.0	5.0	15	#	15M ^Δ	PL	MT50 ^a	A			
20	SDT7809	500m ^s	50 ⁰	SJ 10	1.5	300	5.0	300	10u ⁰	5.0	5.0	15	#	15M ^Δ	PL	MT50 ^a	A			
21	ST86020	500m ^s	50 ⁰	SJ 5.0	1.25	10	80	100n	10	3.0	20	120	10M	400m	2.0u	P	T061			
22	ST86021	500m ^s	50 ⁰	SJ 5.0	1.45	10	100	100n	10	3.0	20	120	10M	400m	2.0u	P	T061			
23	ST86022	500m ^s	50 ⁰	SJ 5.0	1.70	10	120	100n	10	3.0	20	120	10M	400m	2.0u	P	T061			
24	TIP41	520m	2.0	SJ 5.0	3.0	40	5.0	40	700u	4.0	3.0	15	75	3.0 ^Δ	D	X75b	B			
25	TIP41A	520m	2.0	SJ 5.0	3.0	60	5.0	60	700u	4.0	3.0	15	75	3.0 ^Δ	D	X75b	B			
26	TIP41B	520m	2.0	SJ 5.0	3.0	80	5.0	80	700u	4.0	3.0	15	75	3.0 ^Δ	D	X75b	B			
27	TIP41C	520m	2.0	SJ 5.0	3.0	100	5.0	100	700u	4.0	3.0	15	75	3.0 ^Δ	D	X75b	B			
28	MJE205	522m ^s	65 ⁰	SJ 5.0	2.5	50	4.0	50	100n	2.0	2.0	25	100	X58a	B					
29	2N35511	528m ^s	40 ⁰	SJ 12	5.0	115	7.0	60	10m# ⁰	2.0	2.0	20	90	# 40M ^Δ	100m	300n ⁰	ME	X15		
30	2N35521	528m ^s	40 ⁰	SJ 12	5.0	140	7.0	80	10m# ⁰	2.0	2.0	20	90	# 40M ^Δ	100m	300n ⁰	ME	X15		
31	2N5862	533m#	80 ⁰	SJ 8.0	65	1	40	35	2.0m ⁰	5.0	3.0	5.0					MT75b	R		
32	MM1552	533m	80 ⁰ #	SJ 8.0	65	4.0	35	2.0m ⁰	5.0	3.0	5.0					MT80	C			
33	MM1553	533m	80 ⁰ #	SJ 8.0	100	4.0	70	2.0m ⁰	5.0	2.0	15					MT80	C			
34	SG8207	533m	80 ⁰ #	SJ 10 ⁺	10	100	6.0	75	10u ⁰	5.0	5.0	30	90	# 30M ^Δ	DPE	T066	A			
35	SG8207A	533m	80 ⁰ #	SJ 10 ⁺	10	100	6.0	80	10u ⁰	5.0	5.0	30	150	150m	80m	DPE	T066	A		
36	PT8907	555m	75	SJ 30	10	100	6.0	75	5.0m	3.0	15	30	150	150m	80m	PL	T063	A		
37	BUY20	568m	85 ⁰	SJ 7.0	3.0	200	8.0	120	100u	5.0	3.0	20	300	# 15M ^Δ	DMA	T03	C			
38	BUY21	568m	85 ⁰	SJ 7.0	3.0	300	8.0	180	100u	5.0	3.0	20	300	# 15M ^Δ	DMA	T03	C			
39	BUY21A	568m	85 ⁰	SJ 7.0	3.0	400	8.0	230	100u	5.0	3.0	20	300	15M ^Δ	DM	T03	C			
40	BUY22	568m	85 ⁰	SJ 7.0	3.0	450	8.0	200	100u	5.0	3.0	20	300	# 15M ^Δ	DMA	T03	C			
41	2N5239	570m	100	SJ 5.0	2.0	300	6.0	225	4.0m ⁰	100	2.0	20	80	5.0M ^Δ	11	T0128	V			
42	2N5240	570m	100	SJ 5.0	2.0	375	6.0	300	2.0m ⁰	100	2.0	20	80	5.0M ^Δ	11	T0117	R			
43	2N5708	570m	100 ⁰	SJ 8.0	7.0	70	1.0	40	5.0m ⁰	100	100m	5.0	50	50M ^Δ		MT75b	R			
44	2N5711	570m	100 ⁰	SJ 8.0	7.0	750m	60	31	36	200u ⁰	100	50m	20							
45	2N5849	571m	100 ⁰	SJ 8.0	7.0	48	4.0	24	1.0m ⁰	5.0	2.4	3.0								
46	MM1620	571m	100 ⁰	SJ 8.0	7.0	48	4.0	24	1.0m ⁰	5.0	2.4	3.0					MT75b	R		
47	SCC321	571m	100 ⁰	SJ 10	4.0	50	6.0	10m ⁰	1.0m ⁰	1.0	2.0	20	100	100	333m	DME	T03	C		
48	2N58381	572ms	57 ⁰	SJ 13.0	1.5	275	6.0	275	#	2.0	2.0	180	40	# 5.0M ^Δ	1.5u ⁰	DME	T03	C		
49	2N58391	572ms	57 ⁰	SJ 3.0	1.5	300	6.0	300	#	3.0	2.0	10	50	# 5.0M ^Δ	1.5u ⁰	DME	T03	C		
50	2N58401	572ms	57 ⁰	SJ 3.0	1.5	375	6.0	375	#	3.0	2.0	10	50	# 5.0M ^Δ	1.7u ⁰	DME	T03	C		
51	2N58731	572m	100 ⁰	SJ 15	1.5	60	60	50t	60	250u ⁰	4.0	2.5	20	100	14.0M ^Δ	250m	700n ⁰	DME	T03	C
52	2N58741	572m	100 ⁰	SJ 15	1.5	80	60	80	250u ⁰	4.0	2.5	20	100	4.0M ^Δ	250m	700n ⁰	DME	T03	C	
53	2N4347	577m	100 ⁰	SJ 15	3.0	140	1.0	120	200m ⁰	4.0	2.0	15	60	# 15M ^Δ	250m	700n ⁰	DME	T03	C	
54	# BU110	588m	30 ⁰	SJ 8.0	2.5	150	6.0	150	15m ⁰	1.5	6.0	8.0					MD17 ¹	C		
55	3TE225A	600m ^s	105	SJ 5.0	2.0	95	4.0	95	1.0m ⁰	5.0	4.5	10								
56	KS61201	600m ^s	15	SJ 15	13.0	100	4.5	100	500u	5.0	10	15					150M ¹	20n ⁰		
57	KS61211	600m ^s	15	SJ 15	13.0	60	4.5	60	500u	5.0	10	15					150M ¹	20n ⁰		
58	KS61221	600m ^s	15	SJ 15	13.0	40	4.5	40	500u	5.0	10	15					150M ¹	30n ⁰		
59	KS61251	600m ^s	15	SJ 15	13.0	80	4.5	80	500u	5.0	10	15					150M ¹	15n ⁰		
60	KS61261	600m ^s	15	SJ 15	13.0	40	4.5	40	500u	5.0	10	15					150M ¹	25n ⁰		
61	# 2SC1108	620m ^s	200	SJ 2.0	1.2	110	1.0	100	1.0m ⁰	5.0	1.0	48	1.0M ¹				ME	T03	C	
62	MJE2020	640m ^s	80 ⁰	SJ 5.0	3.0	40	5.0	40	400u	4.0	1.0	25	125	# 3.0M ^Δ	1.0M ⁰	△ X104	D			
63	MJE2021	640m ^s	80 ⁰	SJ 5.0	3.0	60	5.0	60	400u	4.0	1.0	25	125	# 3.0M ^Δ	1.0M ⁰	△ X104	D			
64	# BU108	645m ^s	65 ⁰	SJ 10	3.0	40	6.0	40	700u	4.0	1.0									

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J TO C	MAX FREE AIR @ 25°C	PC W/C	M T	ABSOLUTE MAX. RATINGS @25°C						MAX. V _{ceo} @25°C	MAX. I _c	HFE	f _{ce}	MAX. SAT. RES.	tr	DWG #	E O T200 D E	
						A	E	I _c	I _b	BV _{ceo}	BV _{beo}	V _{ceo}	I _{cbo}	BIAS	MIN	MAX	(Hz)	(s)	(s)	
1	2N3234	666m	117	3C	7.5	3.0	160	6.0	160	1.0m#	100	3.0	18	55	10M ^Δ				MD21	Ø
2	2N3235	666m	117	3C	15	7.0	85	7.0	55	5.0m#	4.00	4.0	20	70	10M ^Δ				MD21	Ø
3	2N32631	666m ⁵	84	3S	25	10	150	7.0	90	1.2m#	2.00	15	20	55	20M ^Δ				X21	Ø
4	2N32641	666m ¹	84	3S	25	10	120	7.0	60	2.0m#	3.00	15	25	80	20M ^Δ				X21	Ø
5	JAN2N3442	666m	4.0	3S	10	7.0	160	7.0	140	1.0m ²	4.00	3.0	20	70	#				T03	Ø
6	2N34451	666m	115	3S	7.5	4.0	80	6.0	60	100u#	5.00	3.0	20	60	10M ^Δ	500m	350n ^Δ	EA	T03	Ø
7	2N34461	666m	115	3S	7.5	4.0	100	10	80	100u#	5.00	3.0	20	60	10M ^Δ	500m	350n ^Δ	EA	T03	Ø
8	2N34471	666m	115	3S	7.5	4.0	80	6.0	60	100u#	5.00	3.0	40	120	10M ^Δ	300m	350n ^Δ	EA	T03	Ø
9	2N34481	666m	115	3S	7.5	4.0	100	10	80	100u#	5.00	3.0	40	120	10M ^Δ	300m	350n ^Δ	EA	T03	Ø
10	2N34871	666m	115	3C	7.5	4.0	80	10	80	100u	5.00	3.0	20	60	10M ^Δ	300m	350n ^Δ		T061	Ø
11	2N34881	666m	115	3C	7.5	4.0	100	10	80	100u	5.00	3.0	20	60	10M ^Δ	300m	350n ^Δ		T061	Ø
12	2N34891	666m	115	3C	7.5	4.0	120	10	100	100u	5.00	3.0	15	45	10M ^Δ	300m	350n ^Δ		T061	Ø
13	2N34901	666m	115	3C	7.5	4.0	80	10	60	100u	5.00	3.0	40	120	10M ^Δ	300m	350n ^Δ		T061	Ø
14	2N34911	666m	115	3C	7.5	4.0	100	10	80	100u	5.00	3.0	40	120	10M ^Δ	300m	350n ^Δ		T061	Ø
15	2N34921	666m	115	3C	7.5	4.0	120	10	100	100u	5.00	3.0	30	90	10M ^Δ	300m	350n ^Δ		T061	Ø
16	2N3788	666m	100	3S	12.0	10	400	5.0	325	15.0m#	5.00	500m	20	180	50K ^Δ	2.0			T03	Ø
20	2N5008	666m ⁵	100	3S	10	3.0	100	6.0	80	10m#	5.00	5.0	70	200	# 40M ^Δ				MT16A	A
21	2N5034	666m	83	3S	6.0	6.0	55	5.0	45	200m ²	4.00	4.0	20	80					MT16A	A
22	2N5035	666m	83	3S	6.0	6.0	55	5.0	45	200m ²	4.00	4.0	20	80					MS9	Ø
23	2N5036	666m	83	3S	8.0	6.0	70	5.0	60	200m ²	4.00	5.0	20	80					MS9a	Ø
24	2N5037	666m	83	3S	8.0	6.0	70	5.0	60	200m ²	4.00	5.0	20	80					MS9	Ø
25	2N50481	666m	100	3S	10	3.0	100	6.0	80	10m#	5.00	5.0	30	90	# 30M ^Δ				MT16A	A
26	2N50491	666m	100	3S	10	2.0	60	14	50	10m#	4.00	10	15	60	10M ^Δ	250m	1.0u		T051	Ø
27	2N5288	666m ⁵	100	3S	10	3.0	120	6.0	100	10m#	5.00	5.0	70	200	# 30M ^Δ				MT16A	A
28	2N5289	666m ⁵	100	3S	10	3.0	120	6.0	100	10m#	5.00	5.0	70	200	# 40M ^Δ				EM	Ø
29	2S024	666m	100	3S	7.5	2.0	100	10	32	1.0m	150	2.0	20	30	12M ^Δ	500m			ME	MS3
30	2S025	666m	100	3S	7.5	2.0	150	10	60	1.0m	150	2.0	20	30	12M ^Δ	500m			ME	MS3
31	2S026	666m	100	3S	7.5	2.0	200	10	100	1.0m	150	2.0	20	30	12M ^Δ	500m			ME	MS3
32	2SC4081	666m ⁵	100	3S	10	3.0	150	4.0	100	5.0m	5.00	5.0	20	80	400K ^Δ	200m	1.0u		T03	Ø
33	2SC4091	666m ⁵	100	3S	10	3.0	200	4.0	140	2.0m	5.00	5.0	10	30	400K ^Δ	200m	1.0u		T03	Ø
34	2SC4101	666m ⁵	100	3S	10	3.0	200	4.0	140	2.0m	5.00	5.0	20	40	400K ^Δ	200m	1.0u		T03	Ø
35	2SC4111	666m ⁵	100	3S	10	3.0	300	4.0	200	5.0m	5.00	5.0	10	30	400K ^Δ	200m	1.0u		T03	Ø
36	2SC4121	666m ⁵	100	3S	10	3.0	300	4.0	200	5.0m	5.00	5.0	20	40	400K ^Δ	200m	1.0u		T03	Ø
37	2SC586	666m	50	3S	5.0	6.0	150	6.0	150	1.5m								320m	Ø	
38	2SC647	666m ⁵	50	3S	5.0	6.0	80	5.0	80	1.0m	4.00	4.0	20	30	300k				DM	Ø
39	2SC687	666m	50	3S	5.0	6.0	150	6.0	150	1.5m	4.00	5.0	14	33	320m	1.0u#			ME	Ø
40	2SC901	666m	50	3S	5.0	15	200	6.0	200	1.5m	4.00	5.0	14	25	320m	300n#	D ^Δ		T03	Ø
41	2SC901A	666m	50	3S	5.0	15	250	6.0	250	1.5m	4.00	5.0	14	25	320m	300n#	D ^Δ		T03	Ø
42	2SD13	666m	100	3S	10	3.5	25	4.0	20	4.5m	100	2.5	30	90	20K ^Δ	3.0			ME	T036
43	2SD14	666m	100	3S	10	3.5	75	4.0	40	4.5m	4.00	10	15	45	20K ^Δ	3.0			ME	T036
44	2SD151	666m ⁵	80	3S	6.0	3.0	60	10	45	2.0m	4.00	15	10	80	20M ^Δ	1.0			D	T03
45	2SD161	666m ⁵	80	3S	6.0	3.0	100	10	55	1.0m	4.00	15	10	80	20M ^Δ	1.0			D	T03
46	2SD171	666m ⁵	80	3S	6.0	3.0	150	10	70	500u	4.00	15	10	80	20M ^Δ	1.0			D	T03
47	2SD181	666m ⁵	80	3S	6.0	3.0	200	10	85	50u#	4.00	15	10	80	2.0M ^Δ	1.0			D	T03
48	2SD53	666m	100	3S	10	4.0	90	12	50	200u	4.00	5.0	12	48	1.2M ^Δ				D	T03
49	2SD161†	666m	100	3S	10	3.0	130	10	110	5.0m	5.00	10	20	40	2.0M ^Δ	300m			D	T03
50	2SD111†	666m	100	3S	10	3.0	100	10	80	5.0m	5.00	10	20	40	2.0M ^Δ	300m			D	T03
51	2SD151	666m	120	3S	15	3.0	100	6.0	60	1.0m	100	10	20	100	#	100m			EM	T03
52	2SD1631	666m	100	3S	10	4.0	60	10	40	500u	4.0	5.0	15	30	800K ^Δ	300m	1.4u		D	T03
53	2SD1641	666m	100	3S	10	4.0	100	10	55	50u#	4.0	5.0	15	30	800K ^Δ	300m	1.4u		D	T03
54	2SD1651	666m	100	3S	10	4.0	150	10	70	50u#	4.0	5.0	15	30	800K ^Δ	300m	1.4u		D	T03
55	2SD1661	666m	100	3S	10	4.0	200	10	85	50u#	4.0	5.0	15	30	800K ^Δ	300m	1.4u		D	T03
56	2SD172	666m	100	3S	10	4.0	60	6.0	40	20u#	4.00	5.0	10	60	* 1.2M ^Δ	500m			D	T03
57	2SD173	666m	100	3S	10	4.0	100	6.0	60	20u#	4.00	5.0	10	60	* 1.2M ^Δ	500m			D	T03
58	2SD176	666m	100	3S	10	4.0	90	12	50	1.2m	4.00	5.0	10	50	1.2M ^Δ				D	T03
59	2SD177	666m	100	3S	10	4.0	120	12	70	1.2m	4.00	5.0	10	50	1.2M ^Δ				D	T03
60	2SD189	666m ⁵	50	3S	5.0	5.0	80	5.0	80	10m#	4.00	4.0	20	160	40M ^Δ	400m			DM	T03
61	2SD189A	666m ⁵	50	3S	5.0	5.0	100	5.0	100	1.0m	4.00	4.0	20	160	40M ^Δ	400m			DM	T03
62	40251	666m	117	3S	15	7.0	50	5.0	40	5.0m	4.00	8.0	15	60	500K ^Δ	190m			D	T03
63	40363	666m	115	3S	17	7.0	40	7.0	70	500u	4.00	4.0								

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. MAX P _c	MAX T _c	ABSOLUTE MAX. RATINGS @ 25°C						MAX. I _{bc} @ MAX V _{cb} @ 25°C	hFE			fae	MAX. SAT. RES.	tr	STRUCTURE	DWG #	C			
				DÉRAT. J to C	FREE AIR @ 25°C	A E X M P	I _c	I _b	BV _{cbo}	BV _{ebo}	BV _{ceo}	BIAS	V _{cb}	I _c	MIN	MAX						
(W/C)	(W)	(A)	(A)	(A)	(V)	(V)	(V)	(A)	(V)	(A)	(Hz)	(Ω)	(s)									
1	B176007	666m ^s	50	50	5.0	2.5	400	5.0	400	#	2.0uΩ	5.0	2.5	10					TO3	C0		
2	B178008	666m ^s	50	50	5.0	2.5	550	5.0	550	#	2.0uΩ	5.0	100m	25					TO3	C0		
3	B176009	666m ^s	50	50	5.0	2.5	550	5.0	550	#	2.0uΩ	5.0	500m	20					TO3	C0		
4	B176010	666m ^s	50	50	5.0	2.5	550	5.0	550	#	2.0uΩ	5.0	1.5	10					TO3	C0		
5	B176011	666m ^s	50	50	5.0	2.5	550	5.0	550	#	2.0uΩ	5.0	2.5	10					TO3	C0		
6	B176012	666m ^s	50	50	5.0	2.5	650	5.0	650	#	2.0uΩ	5.0	100m	25					TO3	C0		
7	B176013	666m ^s	50	50	5.0	2.5	650	5.0	650	#	2.0uΩ	5.0	500m	20					TO3	C0		
8	B176014	666m ^s	50	50	5.0	2.5	650	5.0	650	#	2.0uΩ	5.0	1.5	10					TO3	C0		
9	B176015	666m ^s	50	50	5.0	2.5	650	5.0	650	#	2.0uΩ	5.0	2.5	10					TO3	C0		
10	B176024	666m ^s	50	50	5.0	2.5	400	5.0	400	#	2.0uΩ	5.0	1.5	10				△	TO3	C0		
11	B176025	666m ^s	50	50	5.0	2.5	400	5.0	400	#	2.0uΩ	5.0	2.5	10				△	TO3	C0		
12	B176026	666m ^s	50	50	5.0	2.5	550	5.0	550	#	2.0uΩ	5.0	1.5	10				△	TO3	C0		
13	B176027	666m ^s	50	50	5.0	2.5	550	5.0	550	#	2.0uΩ	5.0	2.5	10				△	TO3	C0		
14	B176028	666m ^s	50	50	5.0	2.5	650	5.0	650	#	2.0uΩ	5.0	1.5	10				△	TO3	C0		
15	B176029	666m ^s	50	50	5.0	2.5	650	5.0	650	#	2.0uΩ	5.0	2.5	10				△	TO3	C0		
16#	BDT30	666m ^s	117	50	#J	15	7.0	100	7.0	60		4.0	4.0	20	70	1.3M ^s		PL				
17#	BD141	666m ^s	117	50	#J	10	7.0	160	7.0	140		4.0	3.0	20	70			PL	TO3			
18#	BD142	666m ^s	117	50	#J	15	7.0	50	5.0	40		4.0	4.0	12	160	1.3M ^s		PL	TO3			
19#	BDY17	666m ^s	115	50	#J	10	2.0	80	7.0	60		5.0m	4.0	6.0	10		1.0M ^s	D	TO3	C0		
20#	BDY18	666m ^s	115	50	#J	10	2.0	120	7.0	70		5.0m	4.0	8.0	10		1.0M ^s	D	TO3	C0		
21#	BDY19	666m ^s	115	50	#J	10	2.0	150	7.0	80		5.0m	4.0	10	10		1.0M ^s	D	TO3	C0		
22#	BDY38	666m ^s	115	50	#J	6.0	#	20	#	50		7.0	4.0	1.0m	4.0	2.0	30	1.0M ^s	D	TO3	C0	
23#	BDY39	666m ^s	100	50	#J	10	7.0	7.0	60	200uS		4.0	4.0	20	70	1.1M ^s	200m	D	TO3	C0		
24#	BLY17	666m ^s	100	50	#J	10	2.0	100	4.0	100		10m ^s	0.0	10	5.0	25	1.0M ^s	DPL	TO36			
25#	BU118	666m ^s	50	50C	20	8.0	800	10	600	5	2.0m	5.0	20	100			100m	DM	TO3	C0		
26#	BU116	666m ^s	50	50C	20	8.0	400	10	300	5	2.0m	5.0	20	100			200m	DM	TO3	C0		
27#	BU117	666m ^s	50	50C	20	8.0	250	10	200	5	2.0m	5.0	20	100			200m	DM	TO3	C0		
28#	BU120	666m ^s	50	50C	5.0	5.0		8.0	400	5	5.0	1.0	35	165			1.0M ^s	660m	DM	TO3	C0	
29#	BU121	666m ^s	50	50C	15	5.0		8.0	320	5	5.0	6.0	7.0				6.0M ^s	290m	1.12uf	DM	TO3	C0
30#	BU122	666m ^s	50	50C	5.0	5.0		8.0	250	5	5.0	1.0	25	250			1.0M ^s	930m	DM	TO3	C0	
31#	BU123	666m ^s	50	50C	5.0	5.0		8.0	180	5	5.0	1.0	25	250			1.0M ^s	930m	DM	TO3	C0	
32	DT5701	666m ^s	50	50	5.0	1.0		250m		5.0		500uA	5.0	150m	20			1.5M ^s	DT	TO3	C0	
33	DT5702	666m ^s	50	50	5.0	3.0		1.0		5.0		500uA	5.0	2.0				1.5M ^s	DT	TO3	C0	
34	DT5704	666m ^s	50	50	5.0	3.0		1.0		5.0		500uA	5.0	2.0				1.5M ^s	DT	TO3	C0	
35	DT5721	666m ^s	50	50	5.0	3.0		1.0		5.0		250uA	5.0	150m	20	60		1.5M ^s	DT	TO3	C0	
36	DT5723	666m ^s	50	50	5.0	3.0		1.0		5.0		500uA	5.0	10				1.5M ^s	800m	DM	TO3	C0
37	MJ3010	666m ^s	100	50	#J				5.0	200				500m	20	180		670m	TO3			
38	MJ3011	666m ^s	100	50	#J				5.0	325				2.0	10			670m	TO3			
39	PP3000	666m ^s	115	50		15			60	50			4.0	5.0	12			DM	TO3	C0		
40	PP3001	666m ^s	115	50		15			100	80			4.0	5.0	12			DM	TO3	C0		
41	PP3002	666m ^s	115	50		15			120	100			4.0	5.0	12			DM	TO3	C0		
42	PP3003	666m ^s	115	50		15			60	50			4.0	5.0	12			DM	TO3	C0		
43	PP3004	666m ^s	115	50		15			100	80			4.0	5.0	12			DM	TO3	C0		
44	PP3005	666m ^s	115	50		15			120	100			4.0	5.0	12			DM	TO3	C0		
45	PT1937	666m ^s	5.0	50	#J	7.0			140	4.0	100	5	50m	2.0	7.0	15	60 #	40M ^s Δ	PL	TO80		
46	PT5592	666m ^s	118	50	#J	30			120	5.0	70		5.0m	5.0	10	20		30M	IX15			
47	PT6339†	666m ^s	100	50	#J	220			8.0	200			5.0	5.0	40			100m	TO61	A		
48	PT6894†	666m ^s	100	50	#J	30			250	8.0	250		5.0m ^s	5.0	10	15	75	50M ^s Δ	PL	TO63	A0	
49	PT6988†	666m ^s	100	50	#J	30			250	6.0	250		5.0m ^s	5.0	10	15	75	50M ^s Δ	PL	TO63	A0	
50	SDT7201	666m ^s	50	50	#J	10			225	8.0	200		1.0uΩ	5.0	20	60	60 #	50M ^s Δ	PL	TO3	A	
51	SDT7202	666m ^s	50	50	#J	10			250	8.0	225		1.0uΩ	5.0	20	60	60 #	50M ^s Δ	PL	TO3	A	
52	SDT7203	666m ^s	50	50	#J	10			275	8.0	250		1.0uΩ	5.0	20	60	60 #	50M ^s Δ	PL	TO3	A	
53	SDT7204	666m ^s	50	50	#J	10			325	8.0	300		1.0uΩ	5.0	20	60	60 #	50M ^s Δ	PL	TO3	A	
54	SDT7205	666m ^s	50	50	#J	10			350	8.0	325		1.0uΩ	5.0	20	60	60 #	50M ^s Δ	PL	TO3	A	
55	SDT7206	666m ^s	115	50	#J	10			2.0	150	8.0	150	1.0uΩ	5.0	5.0	10		30M	PL	TO3	C0	
56	SDT7207	666m ^s	115	50	#J	10			2.0	200	8.0	200	1.0uΩ	5.0	5.0	15		30M	PL	TO3	C0	
57	SDT7208	666m ^s	115	50	#J	10			2.0	250	8.0	250	1.0uΩ	5.0	5.0	15		30M	PL	TO3	C0	
58	SDT7209	666m ^s	115	50	#J	10			300	8.0	300		1.0uΩ	5.0	5.0	20		30M	PL	TO3	C0	
59	SDT7601	666m ^s	60	50	#J	10			60	8.0	40		500n	5.0	5.0	40	120 #	60M ^s	100m	PE	TO3	C0
60	SDT7602	666m ^s	60	50	#J	10			80	8.0	60		500n	5.0	5.0	40	120 #	60M ^s	100m	PE	TO3	C0
61	SDT7603	666m ^s	60	50	#J	10			100	8.0	80		500n	5.0	5.0	40	120 #	60M ^s	100m	PE	TO3	C0
62	SDT7604	666m ^s	60	50	#J	10																

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	ABSOLUTE MAX. RATINGS @25°C										MAX. ICBO @ 25°C	HFE	fae	MAX. SAT. RES.	tr	STRUCTURE	DWG #		
		1 MIN. DERATE FREE J to C	Pc	M	T	A	E	Ic	Ib	BVcbo	BVebio	BVceo								
		(W/C)	(W)			(A)	(A)	(V)	(V)	(V)										
1	T11126	666m#	80	Ø	SJ	7.5	5.0	100	8.0	50	10m	4.0#	2.0	15	60	# 7.5MΔ	500m	ME	T053 AØ	
2	T11131	666m#	80	Ø	SJ	7.5	5.0	200	8.0	100	10m	4.0#	2.0	30	120	# 7.5MΔ	500m	ME	MT10 Ø	
3	T11132	666m#	80	Ø	SJ	7.5	5.0	200	8.0	100	10m	4.0#	2.0	15	60	# 7.5MΔ	500m	ME	MT10 Ø	
4	T11133	666m#	80	Ø	SJ	7.5	5.0	150	8.0	75	10m	4.0#	2.0	30	120	# 7.5MΔ	500m	ME	MT10 Ø	
5	T11134	666m#	80	Ø	SJ	7.5	5.0	150	8.0	75	10m	4.0#	2.0	15	60	# 7.5MΔ	500m	ME	MT10 Ø	
6	T11135	666m#	80	Ø	SJ	7.5	5.0	100	8.0	50	10m	4.0#	2.0	30	120	# 7.5MΔ	500m	ME	MT10 Ø	
7	T11136	666m#	80	Ø	SJ	7.5	5.0	100	8.0	50	10m	4.0#	2.0	15	60	# 7.5MΔ	500m	ME	MT10 Ø	
8	T11141	666m#	80	Ø	SJ	7.5	5.0	200	8.0	100	10m	4.0#	5.0	20	80	# 7.5MΔ	500m	ME	T053 AØ	
9	T11142	666m#	80	Ø	SJ	7.5	5.0	200	8.0	100	10m	4.0#	5.0	10	40	# 7.5MΔ	500m	ME	T053 AØ	
10	T11143	666m#	80	Ø	SJ	7.5	5.0	150	8.0	75	10m	4.0#	5.0	20	80	# 7.5MΔ	500m	ME	T053 AØ	
11	T11144	666m#	80	Ø	SJ	7.5	5.0	150	8.0	75	10m	4.0#	5.0	10	40	# 7.5MΔ	500m	ME	T053 AØ	
12	T11145	666m#	80	Ø	SJ	7.5	5.0	100	8.0	50	10m	4.0#	5.0	20	80	# 7.5MΔ	500m	ME	T053 AØ	
13	T11146	666m#	80	Ø	SJ	7.5	5.0	100	8.0	50	10m	4.0#	5.0	10	40	# 7.5MΔ	500m	ME	T053 AØ	
14	T11151	666m#	80	Ø	SJ	7.5	5.0	200	8.0	100	10m	4.0#	5.0	10	40	# 7.5MΔ	500m	ME	MT10 Ø	
15	T11152	666m#	80	Ø	SJ	7.5	5.0	200	8.0	100	10m	4.0#	5.0	10	40	# 7.5MΔ	500m	ME	MT10 Ø	
16	T11153	666m#	80	Ø	SJ	7.5	5.0	150	8.0	75	10m	4.0#	5.0	20	80	# 7.5MΔ	500m	ME	MT10 Ø	
17	T11154	666m#	80	Ø	SJ	7.5	5.0	150	8.0	75	10m	4.0#	5.0	10	40	# 7.5MΔ	500m	ME	T053 AØ	
18	T11155	666m#	80	Ø	SJ	7.5	5.0	100	8.0	50	10m	4.0#	5.0	20	80	# 7.5MΔ	500m	ME	MT10 Ø	
19	T11156	666m#	80	Ø	SJ	7.5	5.0	100	8.0	50	10m	4.0#	5.0	10	40	# 7.5MΔ	500m	ME	MT10 Ø	
20	TK9201	666m	115	Ø	SC	15	7.0	55	7.0	45	5.0#	4.0	4.0	18	20	2.0MΔ	275m	ME	T03 CØ	
21	TK30551	666m	115	Ø	SC	15	7.0	65	10	45	2.0MΔ	4.0	4.0	20	70	2.0MΔ	275m	ME	T03 CØ	
22	TK30552	666m	115	Ø	SC	15	7.0	100	7.0	80	700uΔ	4.0	4.0	20	70	2.0MΔ	275m	ME	T03 CØ	
23	TK30553	666m	115	Ø	SC	15	7.0	120	7.0	100	700uΔ	4.0	4.0	20	70	2.0MΔ	275m	ME	T03 CØ	
24	TK30554	666m	115	Ø	SC	15	7.0	140	7.0	120	700uΔ	4.0	4.0	20	70	2.0MΔ	275m	ME	T03 CØ	
25	TK30555	666m	115	Ø	SC	15	7.0	55	7.0	45	2.0MΔ	4.0	4.0	15	70	2.0MΔ	275m	ME	T03 CØ	
26	TK30556	666m	115	Ø	SC	15	7.0	80	7.0	60	700uΔ	4.0	4.0	15	70	2.0MΔ	275m	ME	T03 CØ	
27	TK30557	666m	115	Ø	SC	15	7.0	100	7.0	80	700uΔ	4.0	4.0	15	70	2.0MΔ	275m	ME	T03 CØ	
28	TK30558	666m	115	Ø	SC	15	7.0	120	7.0	100	700uΔ	4.0	4.0	15	70	2.0MΔ	275m	ME	T03 CØ	
29	TK30559	666m	115	Ø	SC	15	7.0	140	7.0	120	700uΔ	4.0	4.0	15	70	2.0MΔ	275m	ME	T03 CØ	
30	TK30560	666m	115	Ø	SC	15	7.0	40	5.0	30	5.0#	2.0	2.0	15	70	2.0MΔ	275m	ME	T03 CØ	
31	ZT3442	666m	117	Ø	SC	10	7.0	180	7.0	140	3.0#	4.0	3.0	20	70	80KΔ	500m	D	T03 Ø	
32	2N38631	667m	117	Ø	C	7.5	3.0	70	7.0	50	1.0#	2.0	3.0	30	60	500KΔ	33	8 Out		
33	2N5622	667m#	100	Ø	SJ	10	3.0	80	1	6.0#	1.0#	5.0	5.0	70	200	# 40MΔ		D	T03 CØ	
34	2N5624	667m#	100	Ø	SJ	10	3.0	100	1	6.0#	1.0#	5.0	5.0	30	90	# 30MΔ		D	T03 CØ	
35	2N5626	667m#	100	Ø	SJ	10	3.0	100	1	6.0#	1.0#	5.0	5.0	70	200	# 40MΔ		D	T03 CØ	
36	2N5628	667m#	100	Ø	SJ	10	3.0	120	1	6.0#	1.0#	5.0	5.0	30	90	# 30MΔ		D	T03 CØ	
37	ZN3667	670m	117	Ø	SC	15	7.0	50	5.0	50	5.0#	3.0	3.0	15	60	# 500KΔ		6 Out		
38	1756-06401	670ms	240	Ø	SJ	75	#	15	80	60	5.0#	3.0	40	15	60	# 20MΔ	500n	EM	T063	
39	1756-06601	670ms	240	Ø	SJ	75	#	15	60	7.0	5.0#	3.0	40	15	60	# 20MΔ	600n	EM	T063	
40	1756-08040	670ms	240	Ø	SJ	75	#	15	80	7.0	80	5.0#	3.0	40	15	60	# 20MΔ	500n	EM	T063
41	1756-08601	670ms	240	Ø	SJ	75	#	15	80	8.0	80	5.0#	3.0	40	15	60	# 20MΔ	600n	EM	T063
42	1756-10401	670ms	240	Ø	SJ	75	#	15	100	7.0	100	5.0#	3.0	40	15	60	# 20MΔ	500n	EM	T063
43	1756-10601	670ms	240	Ø	SJ	75	#	15	100	7.0	100	5.0#	3.0	40	15	60	# 20MΔ	600n	EM	T063
44	1756-12401	670ms	240	Ø	SJ	75	#	15	120	7.0	120	5.0#	3.0	40	15	60	# 20MΔ	500n	EM	T063
45	1756-12601	670ms	240	Ø	SJ	75	#	15	120	7.0	120	5.0#	3.0	40	15	60	# 20MΔ	600n	EM	T063
46	1756-14401	670ms	240	Ø	SJ	75	#	15	140	7.0	140	5.0#	3.0	40	15	60	# 20MΔ	500n	EM	T063
47	1756-14601	670ms	240	Ø	SJ	75	#	15	140	7.0	140	5.0#	3.0	40	15	60	# 20MΔ	600n	EM	T063
48	1756-16401	670ms	240	Ø	SJ	75	#	15	160	7.0	160	5.0#	3.0	40	15	60	# 20MΔ	600n	EM	T063
49	1756-16601	670ms	240	Ø	SJ	75	#	15	160	7.0	180	5.0#	3.0	40	15	60	# 20MΔ	600n	EM	T063
50	1756-18401	670ms	240	Ø	SJ	75	#	15	180	7.0	180	5.0#	3.0	40	15	60	# 20MΔ	600n	EM	T063
51	1756-18601	670ms	240	Ø	SJ	75	#	15	180	7.0	180	5.0#	3.0	40	15	60	# 20MΔ	600n	EM	T063
52	2N54121	671m	100	Ø	SJ	15	3.0	80	7.0	60	1.0#	2.0	2.0	10	160	# 60MΔ	100m	200n	T061 AØ	
53	2N4348	685m	120	Ø	SJ	10	4.0	140	1	7.0#	120	200mΔ	4.0	5.0	15	60	# 60		D	T03 CØ
54	STC4252	685m	120	Ø	SJ	8.0	3.0	10	4.0	40	20m#	4.0	5.0	15	#	1.0MΔ	200m	D	T03 CØ	
55	STC4253	685m	120	Ø	SJ	8.0	3.0	10	6.0	60	20m#	4.0	5.0	15	#	1.0MΔ	200m	D	T03 CØ	
56	STC4254	685m	120	Ø	SJ	8.0	3.0	10	8.0	80	20m#	4.0	5.0	15	#	1.0MΔ	200m	D	T03 CØ	
57	STC4255	685m	120	Ø	SJ	8.0	3.0	10	100	100	1.0m	4.0#	5.0	15	#	1.0MΔ	300m	D	T03 CØ	
58	Z151-30	700m	100	Ø	SJ	16	3.0	325	25	300	10	#	4.0#	1.5	22	Ø	870m	7.0	Ø	FΔ
59	Z152-30	700m	100	Ø	SJ	16	3.0	325	25	300	10	#	4.0#	1.5	37	Ø	830m	7.0	Ø	FΔ
60	KS61271	700m	100	Ø	SJ	18	4.0	80	4.5	80	1.0m	5.0	15		120M1	20n	PE	T03 CØ		
61	KS61281	700m	100	Ø	SJ	18	4.0	40	4.5	40	1.0m	5.0	15		120M1	30n	PE	T03 CØ		
62	PT169471	714m	125	Ø	SA	125	Ø	120	8.0	70	5.0#	5.0	40	200	100M	120m	120M1	140m	PE	T03 CØ
63	PT169481	714m	125	Ø	SA	125	Ø	160	8.0	10										

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE NO.

LINE No.	TYPE No.	1 MIN. DERATE (W/C)	MAX FREE J to C	PC _M AIR @ 25°C	T X M P	ABSOLUTE MAX. RATINGS @ 25°C			MAX. I _{cbo} @ @ 25°C	hFE	f _{ee}	MAX. SAT. RES. (Ω)	tr	STRUCTURE	DWG #					
						I _C (A)	I _b (V)	BV _{cbo} (V)	BV _{beo} (V)	BV _{ceo} (V)	BIAS V _{cb} (V)	I _c (A)	MIN	MAX	(Hz)	s/a	A D E			
1	PT6935	800m	140	10	50	120	7.0	75	50m	5.0	10	20	100	50M	125m	400nΩ	PL	T03	K	
2	SDM2401	800m	140	10	500m	60	10	40	1.0u	5.0	5.0	2.0k	30M	PL	T061					
3	SDM2402	800m	140	10	500m	80	10	60	1.0u	5.0	5.0	2.0k	30M	PL	T061					
4	SDM2403	800m	140	10	500m	100	10	80	1.0u	5.0	5.0	2.0k	30M	PL	T061					
5♦	SDT1050	800m	100	∅	\$J	10	3.0	8.0	200	5.0mΔ	5.0	1.0	15	#	5.0M	PL	T03	CO		
6♦	SDT1051	800m	100	∅	\$J	10	3.0	8.0	325	5.0mΔ	5.0	1.0	15	#	5.0M	PL	T03	CO		
7♦	SDT1052	800m	100	∅	\$J	10	3.0	8.0	400	5.0mΔ	5.0	1.0	15	#	5.0M	PL	T03	CO		
8♦	SDT1053	800m	100	∅	\$J	10	3.0	8.0	400	5.0mΔ	5.0	1.0	15	#	5.0M	PL	T03	CO		
9♦	SDT1054	800m	100	∅	\$J	10	3.0	8.0	400	5.0mΔ	5.0	1.0	15	#	5.0M	PL	T03	CO		
10♦	SDT1055	800m	100	∅	\$J	10	3.0	8.0	200	1.0mΔ	5.0	2.0	10	#	50	5.0M	PL	T03	CO	
11♦	SDT1056	800m	100	∅	\$J	10	3.0	8.0	325	1.0mΔ	5.0	2.0	10	#	50	5.0M	PL	T03	CO	
12♦	SDT1057	800m	100	∅	\$J	10	3.0	8.0	400	1.0mΔ	5.0	2.0	10	#	50	5.0M	PL	T03	CO	
13♦	SDT1058	800m	100	∅	\$J	10	3.0	8.0	400	1.0mΔ	5.0	2.0	10	#	50	5.0M	PL	T03	CO	
14♦	SDT1059	800m	100	∅	\$J	10	3.0	8.0	400	1.0mΔ	5.0	2.0	10	#	50	5.0M	PL	T03	CO	
15♦	SDT1060	800m	100	∅	\$J	10	3.0	8.0	200	1.0mΔ	5.0	2.0	10	#	50	5.0M	PL	T03	CO	
16♦	SDT1061	800m	100	∅	\$J	10	3.0	8.0	325	1.0mΔ	5.0	2.0	10	#	50	5.0M	PL	T03	CO	
17♦	SDT1062	800m	100	∅	\$J	10	3.0	8.0	400	1.0mΔ	5.0	2.0	10	#	50	5.0M	PL	T03	CO	
18♦	SDT1063	800m	100	∅	\$J	10	3.0	8.0	400	1.0mΔ	5.0	2.0	10	#	50	5.0M	PL	T03	CO	
19♦	SDT1064	800m	100	∅	\$J	10	3.0	8.0	400	1.0mΔ	5.0	2.0	10	#	5.0M	PL	T03	CO		
20	SDT3225	800m	140	10	2.0	40	6.0	40	10u	5.0	5.0	20	80	40M	PL	T0111	G			
21	SDT3226	800m	140	10	2.0	60	6.0	60	10u	5.0	5.0	20	80	40M	PL	T0111	G			
22	SDT3227	800m	140	10	2.0	80	6.0	80	10u	5.0	5.0	20	80	40M	PL	T0111	G			
23	SDT3228	800m	140	10	2.0	100	8.0	100	10u	5.0	5.0	20	80	40M	PL	T0111	G			
24	SDT3229	800m	140	10	2.0	120	6.0	120	10u	5.0	5.0	20	80	40M	PL	T0111	G			
25#	ZSD196	833m	125	∅	\$J	10	100	12	50	20uΩ	4.0	9.0	10	50	300m	DΔ	T036			
26#	ZSD197	833m	125	∅	\$J	10	130	12	70	20uΩ	4.0	9.0	10	50	240m	DΔ	T036			
27	CH3055	833m	117	∅	\$J	15	7.0	100	7.0	60	5.0mΩ	4.0	4.0	20	800kΩ	DM	R151	B		
28	CH3226	833m	117	∅	\$J	15	7.0	35	4.0	35	5.0mΩ	4.0	4.0	20	800kΩ	DM	R151	B		
29	CH322	833m	117	∅	\$J	15	7.0	80	4.0	60	5.0mΩ	4.0	4.0	12	800kΩ	DM	R151	B		
30	SDT9801	833m	90	15	3.0	120	12	100	1.0u	5.0	5.0	20	80	5.0M	ME	T03				
31	SDT9802	833m	90	15	3.0	80	12	60	1.0u	5.0	5.0	20	80	5.0M	ME	T03				
32	SDT9803	833m	90	15	3.0	100	12	80	1.0u	5.0	5.0	20	80	5.0M	ME	T03				
33	SDT9804	833m	90	15	3.0	120	12	100	1.0u	5.0	5.0	20	80	5.0M	ME	T03				
34▼	KSD3771	850m	145	10	50	50	5.0	40	2.0m	4.0	15	10	30	800k	D	T03				
35▼	KSD3772	850m	145	10	50	100	5.0	60	2.0m	4.0	10	10	30	800k	D	T03				
36▼	KSD3773	850m	145	10	50	160	7.0	140	2.0m	4.0	8.0	10	30	800k	D	T03				
37▼	KSD9701	850m	145	10	50	100	7.0	80	2.0m	4.0	8.0	15	60	800k	D	T03				
38▼	KSD9701A	850m	145	10	50	100	7.0	80	2.0m	4.0	8.0	10	30	800k	D	T03				
39▼	KSD9702	850m	145	10	50	120	7.0	100	2.0m	4.0	8.0	15	60	800k	D	T03				
40▼	KSD9702A	850m	145	10	50	120	7.0	100	2.0m	4.0	8.0	10	30	800k	D	T03				
41▼	KSD9703	850m	145	10	50	140	7.0	120	2.0m	4.0	8.0	15	60	800k	D	T03				
42▼	KSD9703A	850m	145	10	50	140	7.0	120	2.0m	4.0	8.0	10	30	800k	D	T03				
43▼	KSD9704	850m	145	10	40	100	7.0	80	10m	4.0	5.0	20	80	800k	D	T03				
44▼	KSD9705	850m	145	10	40	120	7.0	100	10m	4.0	5.0	20	80	800k	D	T03				
45▼	KSD9706	850m	145	10	40	140	7.0	120	10m	4.0	5.0	20	80	800k	D	T03				
46▼	KSD9707	850m	145	10	40	80	7.0	60	10m	4.0	5.0	15	80	800k	D	T03				
47	2N2015	854m	150	∅	\$C	10	6.0	100	10	50	50uΩ	4.0	5.0	15	50	250m	DΔ	T036	CS	
48	JAN2N2015	854m	150	∅	\$J	10	6.0	100	10	100	50uΩ	4.0	5.0	15	50	250m	DΔ	T036	CS	
49	JAN2N2016	854m	150	∅	\$C	10	6.0	130	10	65	50uΩ	4.0	5.0	15	50	250m	DΔ	T036	CS	
51	JAN2N2018	854m	150	∅	\$J	10	6.0	130	10	130	50uΩ	4.0	5.0	15	50	250m	DΔ	T036	CS	
52	ZN2326	854m	150	∅	\$C	15	4.5	90	7.0	90	2.0m#	4.0	5.0	17	60	1OMΔ	MD21			
53	ZN2328	854m	150	∅	\$C	15	7.5	80	8.0	80	5.0m#	120	10	8.5	25	1OMΔ	MD21			
54	ZN2329	854m	150	∅	\$C	15	7.5	80	8.0	80	5.0m#	102	10	8.5	25	1OMΔ	MD21			
55	ZN3240	854m	150	∅	\$C	15	7.5	160	8.0	160	5.0m#	102	10	8.5	25	1OMΔ	MD21			
56	ZN3713	854m	150	∅	\$J	10	4.0	80	7.0	80	1.0m#	2.0	10	25	75	30kΩ	TD3			
57	ZN3714	854m	150	∅	\$J	10	4.0	100	7.0	80	1.0m#	2.0	10	25	75	30kΩ	TD3			
58	ZN3715	854m	150	∅	\$J	10	4.0	80	7.0	60	1.0m#	2.0	10	15	150	30kΩ	TD3			
59	JAN2N3715†	854m	150	∅	\$A	10	4.0	80	7.0	60	1.0m#	2.0	10	50	150	4.0M	1.5uΩ	TD3	CS	
60	ZN3716	854m	150	∅	\$J	10	4.0	100	7.0	80	1.0m#	2.0	10	50	150	30kΩ	TD3			
61	JAN2N3716†	854m	150	∅	\$A	10	4.0	100	7.0	80	1.0m#	2.0	10	5	150	4.0M	1.5uΩ	TD3	CS	
62	ZN3771	854m	150	∅	\$J	10	7.5	50	5.0	40	2.0m	4.0	15	15	60	1.50M	130m	TD3		
63	ZN3772	854m	150	∅	\$J	10	7.5	100	7.0	60	5.0m	4.0	10	15	60	1.50M	140m	TD3		
64*	1723-04051	854m	85	∅	\$J	20	5.0	70	40	40	4.0	5.0	20	#	30M	250mΩ	EMΔ	T03	CS	
65*	1723-04101	854m	85	∅	\$J	20	5.0	50	70	60	4.0	5.0	20	#	30M	300mΩ	EMΔ	T03	CS	
66*	1723-06051	854m	85	∅	\$J	20	5.0	70	60	60	4.0	5.0	20	#	30M	250mΩ	EMΔ	T03	CS	
67*	1723-06101	854m	85	∅	\$J	20	5.0	70	60	60	4.0	5.0	20	#	30M	300mΩ	EMΔ	T03	CS	
68*	1723-08051	854m	85	∅	\$J	20	5.0	90	7.0	80	4.0	5.0	20	#	30M	250mΩ	EMΔ	T03	CS	
69*	1723-08101	854m	85	∅	\$J	20	5.0	90	7.0	80	4.0	5.0	20	#	30M	300mΩ	EM			

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
(2) TYPE No.

LINE No.	TYPE No.	MIN DERATE J to C	MAX FREE (W/C)	MAX AIR @ 25°C (W)	ABSOLUTE MAX. RATINGS @ 25°C						MAX. @ 25°C Vcb, Vcb (A)	hFE MIN MAX (A)	fae (Hz)	MAX. SAT. RES. (Hz)	tr (s)	STRUCTURE	DWG #	C s/a TO200 D/E		
					Ic (A)	Ib (A)	Vceo (V)	BVceo (V)	BVbeo (V)	Ic (A)										
1	1843-27101		854ms	85	85	85	SJ	30 #	10 #	275	7.0	275	3.0mΩ	5.0#	10	15 #	25M5Δ	500nΩ	EM TO3 C	
2	1843-27201		854ms	85	85	85	SJ	30 #	10 #	275	7.0	275	3.0mΩ	5.0#	20	10 #	25M5Δ	500nΩ	EM TO3 C	
3	1843-30051		854ms	85	85	85	SJ	30 #	10 #	300	7.0	300	3.0mΩ	5.0#	5.0	20 #	25M5Δ	500nΩ	EM TO3 C	
4	1843-30101		854ms	85	85	85	SJ	30 #	10 #	300	7.0	300	3.0mΩ	5.0#	10	15 #	25M5Δ	500nΩ	EM TO3 C	
5	1843-30201		854ms	85	85	85	SJ	30 #	10 #	300	7.0	300	3.0mΩ	5.0#	20	10 #	25M5Δ	500nΩ	EM TO3 C	
6	1843-32051		854ms	85	85	85	SJ	30 #	10 #	325	7.0	325	3.0mΩ	5.0#	5.0	20 #	25M5Δ	500nΩ	EM TO3 C	
7	1843-32101		854ms	85	85	85	SJ	30 #	10 #	325	7.0	325	3.0mΩ	5.0#	10	15 #	25M5Δ	500nΩ	EM TO3 C	
8	1843-32201		854ms	85	85	85	SJ	30 #	10 #	325	7.0	325	3.0mΩ	5.0#	20	10 #	25M5Δ	500nΩ	EM TO3 C	
9	1843-35051		854ms	85	85	85	SJ	30 #	10 #	350	7.0	350	3.0mΩ	5.0#	5.0	20 #	25M5Δ	500nΩ	EM TO3 C	
10	1843-35101		854ms	85	85	85	SJ	30 #	10 #	350	7.0	350	3.0mΩ	5.0#	10	15 #	25M5Δ	500nΩ	EM TO3 C	
11	1843-35201		854ms	85	85	85	SJ	30 #	10 #	350	7.0	350	3.0mΩ	5.0#	20	10 #	25M5Δ	500nΩ	EM TO3 C	
12	1843-37051		854ms	85	85	85	SJ	30 #	10 #	375	7.0	375	3.0mΩ	5.0#	5.0	20 #	25M5Δ	500nΩ	EM TO3 C	
13	1843-37101		854ms	85	85	85	SJ	30 #	10 #	375	7.0	375	3.0mΩ	5.0#	10	15 #	25M5Δ	500nΩ	EM TO3 C	
14	1843-37201		854ms	85	85	85	SJ	30 #	10 #	375	7.0	375	3.0mΩ	5.0#	20	10 #	25M5Δ	500nΩ	EM TO3 C	
15	40411		854ms	150	85	85	SJ	30	15	40	90	90	500u*	4.0#	4.0	35	100	800kΩ	200m	D TO3 C
16	B177000		854ms	150	85	85	SJ	30		100	7.0	80	5.0m	4.0#	10	15	60 #		DM TO3 C	
17	MJ2840		854ms	150	85	85	SJ	10	4.0	60	4.0	100	2.0#	3.0	20	100 #	2.0M5Δ		MD6c C	
18	MJ2841		854ms	150	85	85	SJ	10	4.0	80	4.0	80	1.00	2.0#	4.0	20	100 #	2.0M5Δ		MD6c C
19	MJ37711		854ms	150	85	85	SJ	30	7.5	50	5.0	40	2.0m	4.0#	15	15	60 #	2.0M5Δ	350n	T03 C
20	MJ37721		854ms	150	85	85	SJ	20	5.0	100	7.0	60	1.5m	4.0#	10	15	60 #	2.0M5Δ	350n	T03 C
21	MJ7000		854ms	150	85	85	SJ	30	10	100	7.0	100	5.0u	4.0#	10	20	100 #	3.0M5Δ	A T063	
22	PT8998		854ms	150	85	85	SJ	20	5.0	160	7.0	140	2.0m	4.0#	8.0	15	60	50M	170m 700nΩ	PL TO3 K
23	SDT9701		854ms	150	85	85	SJ	30	3.0	100	7.0	80	5.0m	5.0#	8.0	15	60	100K		ME TO3
24	SDT9702		854ms	150	85	85	SJ	30	3.0	120	7.0	100	5.0m	5.0#	8.0	15	60	100K		ME TO3
25	SDT9703		854ms	150	85	85	SJ	30	3.0	140	7.0	120	5.0m	5.0#	8.0	15	60	100K		ME TO3
26	SDT9704		854ms	150	85	85	SJ	30	3.0	100	7.0	80	5.0m	5.0#	8.0	20	80	100K		ME TO3
27	SDT9705		854ms	150	85	85	SJ	30	3.0	120	7.0	100	5.0m	5.0#	8.0	20	80	100K		ME TO3
28	SDT9706		854ms	150	85	85	SJ	30	3.0	140	7.0	120	5.0m	5.0#	8.0	20	80	100K		ME TO3
29	SDT9707		854ms	150	85	85	SJ	30	3.0	80	7.0	60	10m	5.0#	8.0	15	60	100K		ME TO3
30	SPC40411		854ms	150	85	85	SJ	30	15	90	4.0	90	500u*	4.0#	4.0	35	100	200m	250m 4.0uΩ	DA TO36
31#	ZT2015		854ms	150	85	85	SC	10	6.0	100	10	50	5.0u	4.0#	5.0	15	50	25k	250m 4.0uΩ	DA TO36
32#	ZT2016		854ms	150	85	85	SC	10	6.0	130	10	65	5.0u	4.0#	5.0	15	50	25k	250m 4.0uΩ	DA TO36
33	ZN3773		854ms	150	85	85	SJ	16	4.0	160	7.0	140	2.0m	4.0#	16	5.0	60 #			T03 C
34	ZN59701		855ms	85	85	85	SJ	15		50	5.0	80	#*	1.5#	5.0	20	60 #	4.0M5Δ		T03 C
35	ZN59711		855ms	85	85	85	SJ	15		50	6.0	80	#*	1.5#	5.0	25	75 #	4.0M5Δ		T03 C
36	ZN59721		855ms	85	85	85	SJ	15		100	6.0	90	#*	1.5#	5.0	25	75 #	4.0M5Δ		T03 C
37	ZN59731		855ms	85	85	85	SJ	15		120	6.0	100	#*	1.5#	5.0	25	75 #	4.0M5Δ		T03 C
38	JAN2N37711		857m	60	85	85	SJ	30	7.5	50	7.0	50	2.0m	4.0#	15	60	600KΔ			T03 C
39	JAN2N37721		857m	60	85	85	SJ	20	5.0	100	7.0	60	2.0m	4.0#	15	60	600KΔ			T03 C
40	ZN5632		857m	150	85	85	SJ	10	5.0	100	7.0	100	1.0m	2.0#	5.0	25	100 #	1.0M5Δ		T03 C
41	ZN5633		857m	150	85	85	SJ	10	5.0	120	7.0	120	1.0m	2.0#	5.0	20	80 #	1.0M5Δ		T03 C
42	ZN5634		857m	150	85	85	SJ	10	5.0	140	7.0	140	1.0m	2.0#	5.0	15	60 #	1.0M5Δ		T03 C
43	ZN5758		857m	150	85	85	SJ	16	4.0	100	7.0	100	1.0m	2.0#	3.0	25	100 #	1.0M5Δ	333m	MD6 C
44	ZN5759		857m	150	85	85	SJ	60	4.0	120	7.0	120	1.0m	2.0#	3.0	20	80	1.0M5Δ	333m	MD6 C
45	ZN5760		857m	150	85	85	SJ	60	4.0	140	7.0	140	1.0m	2.0#	3.0	15	60	1.0M5Δ	333m	MD6 C
46	ZN58771		857m	150	85	85	SJ	80	2.0	60	5.0	60	500u*	4.0#	4.0	20	100	4.0M5Δ	200m 700nΩ	TO3 C
47	ZN58781		857m	150	85	85	SJ	80	2.0	80	5.0	80	500u*	4.0#	4.0	20	100	4.0M5Δ	200m 700nΩ	TO3 C
48	SCE321		857m	150	85	85	SA	10	4.0	100	7.0	100	1.0m	4.0#	4.0	20	100	250m	DME TO3 C	
49	ZN56336		860m	15	85	85	SJ	15		60	4.0	35	1.0m	5.0	200m	5.0	20	450M5Δ		MT71b R
50	ZN5641		860m	15	85	85	SS	10		65	4.0	25	1.0m	5.0	200m	5.0	20	300M5Δ		MT71b R
51#	BUY51		862m	150	85	85	SJ	30	10	60	8.0	80	10m	4.0#	10	20	150	10M5	1.5uΩ	EM TO61 A
52#	BUY51A		862m	150	85	85	SJ	30	10	60	8.0	80	10m	4.0#	10	20	150	10M5	1.5uΩ	EM TO61 C
53#	BUY52		862m	150	85	85	SJ	30	10	60	8.0	80	10m	4.0#	15	20	150	10M5	2.0uΩ	EM TO61 A
54#	BUY52A		862m	150	85	85	SJ	30	10	60	8.0	80	10m	4.0#	15	20	150	10M5	2.0uΩ	EM TO61 C
55#	BUY53		862m	150	85	85	SJ	30	10	100	8.0	100	10m	4.0#	10	20	150	10M5	1.5uΩ	EM TO61 A
56#	BUY53A		862m	150	85	85	SJ	30	10	100	8.0	100	10m	4.0#	10	20	150	10M5	2.0uΩ	EM TO61 C
57#	BUY54		862m	150	85	85	SJ	30	10	100	8.0	100	10m	4.0#	15	20	150	10M5	2.0uΩ	EM TO61 A
58#	BUY54A		862m	150	85	85	SJ	20	7.5	60	5.0	60	1.5m	4.0#	10	15	90 #	1.0M5Δ	DME TO3 C	
59	SC0328		880m	150	85	85	SS	20	7.5	60	5.0	60	500u*	4.0#	6.0	20	100	4.0M5Δ	142m 700nΩ	TO3 C
60	ZN58811		915m	160	85	85	SJ	12	4.0	60	5.0	60	500u*	4.0#	6.0	20	100	4.0M5Δ	142m 700nΩ	TO3 C
61	ZN58821		915m	160	85	85	SJ	12	4.0	80	5.0	80	500u*	4.0#	6.0	20	100	4.0M5Δ	100m 1.0uΩ	MT38 A
62	ZN1899		10	125	85	85	SC													

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C	MAX PC M T FREE AIR @ 25°C	ABSOLUTE MAX. RATINGS @ 25°C						MAX. Icbo @ 25°C	hFE	f _{ce}	MAX. SAT. RES.	tr	STRUCTURE	DWG #	C E A D D E			
				Ic (W/C)	Ib (W)	V _{cebo}	V _{bebo}	V _{bcso}	(A)											
1#	T08T2	1.0	175	30	15	120	10	80	4.0	10	20	60	140m	200ns	ME	T03				
2#	109T2	1.0	175	30	15	160	10	125	4.0	10	20	60	140m	200ns	ME	T03				
3#	1743-0610T	1.0	175	\$A	30	10	70	7.0	60	4.0	10	20	100	30MΔ	500ns	E	T03	CØ		
4#	1743-0830T	1.0	175	\$A	30	10	70	7.0	60	4.0	30	20	100	30MΔ	700ns	E	T03	CØ		
5#	1743-0820T	1.0	175	\$A	30	10	90	7.0	80	4.0	20	20	100	30MΔ	600ns	E	T03	CØ		
6#	1743-1010T	1.0	175	\$A	30	10	110	7.0	100	4.0	10	20	100	30MΔ	500ns	E	T03	CØ		
7#	1743-1030T	1.0	175	\$A	30	10	110	7.0	100	4.0	30	20	100	30MΔ	700ns	E	T03	CØ		
8#	1743-1220T	1.0	175	\$A	30	10	130	7.0	120	4.0	20	20	100	30MΔ	600ns	E	T03	CØ		
9#	1743-1410T	1.0	175	\$A	30	10	150	7.0	140	4.0	10	20	100	30MΔ	500ns	E	T03	CØ		
10#	1743-1430T	1.0	175	\$A	30	10	150	7.0	140	4.0	30	20	100	30MΔ	700ns	E	T03	CØ		
11#	1743-1620T	1.0	175	\$A	30	10	170	7.0	160	4.0	20	20	100	30MΔ	600ns	E	T03	CØ		
12#	1743-1810T	1.0	175	\$A	30	10	190	7.0	180	4.0	10	20	100	30MΔ	500ns	E	T03	CØ		
13#	1743-1820T	1.0	175	\$A	30	10	190	7.0	180	4.0	20	20	100	30MΔ	600ns	E	T03	CØ		
14#	1743-1930T	1.0	175	\$A	30	10	190	7.0	180	4.0	30	20	100	300MΔ	700ns	E	T03	CØ		
15	1748-0610T	1.0	\$	100	\$J	40	10	60	7.0	60	5.0m	2.0	10	20	#	30MΔ	300ns	A		
16	1748-0630T	1.0	\$	100	\$J	40	10	60	7.0	60	5.0m	3.0	20	20	#	30MΔ	500ns	A		
17	1748-0810T	1.0	\$	100	\$J	40	10	80	7.0	80	5.0m	2.0	10	20	#	30MΔ	300ns	A		
18	1748-0820T	1.0	\$	100	\$J	40	10	80	7.0	80	5.0m	2.50	20	20	#	30MΔ	450ns	A		
19	1748-0830T	1.0	\$	100	\$J	40	10	80	7.0	80	5.0m	3.0	20	20	#	30MΔ	500ns	A		
20	1748-1010T	1.0	\$	100	\$J	40	10	100	7.0	100	5.0m	2.0	10	20	#	30MΔ	300ns	A		
21	1748-1030T	1.0	\$	100	\$J	40	10	100	7.0	100	5.0m	3.0	20	20	#	30MΔ	500ns	A		
22	1748-1210T	1.0	\$	100	\$J	40	10	120	7.0	120	5.0m	2.0	10	20	#	30MΔ	300ns	A		
23	1748-1220T	1.0	\$	100	\$J	40	10	120	7.0	120	5.0m	2.50	20	20	#	30MΔ	450ns	A		
24	1748-1230T	1.0	\$	100	\$J	40	10	120	7.0	120	5.0m	3.0	20	20	#	30MΔ	500ns	A		
25	1748-1410T	1.0	\$	100	\$J	40	10	140	7.0	140	5.0m	2.0	10	20	#	30MΔ	300ns	A		
26	1748-1430T	1.0	\$	100	\$J	40	10	140	7.0	140	5.0m	3.0	20	20	#	30MΔ	500ns	A		
27	1748-1610T	1.0	\$	100	\$J	40	10	160	7.0	160	5.0m	2.0	10	20	#	30MΔ	300ns	A		
28	1748-1620T	1.0	\$	100	\$J	40	10	160	7.0	160	5.0m	2.50	20	20	#	30MΔ	450ns	A		
29	1748-1630T	1.0	\$	175	\$J	50	#	10	#	160	7.0	160	5.0m	3.0	20	20	#	30MΔ	500ns	A
30	1748-1810T	1.0	\$	100	\$J	40	10	180	7.0	180	5.0m	2.0	10	20	#	30MΔ	300ns	A		
31	1748-1820T	1.0	\$	100	\$J	40	10	180	7.0	180	5.0m	2.50	20	20	#	30MΔ	450ns	A		
32	1748-1830T	1.0	\$	175	\$J	40	#	10	#	180	7.0	180	5.0m	3.0	20	20	#	30MΔ	500ns	A
33	1768-0610	1.0	\$	100	\$J	40	#	50	60	7.0	60	500u	2.0	10	20	#	30MΔ	300ns	E	
34	1768-0620	1.0	\$	100	\$J	40	#	50	60	7.0	60	500u	2.50	20	20	#	30MΔ	450ns	E	
35	1768-0630	1.0	\$	100	\$J	40	#	50	60	7.0	60	500u	3.0	20	20	#	30MΔ	500ns	E	
36	1768-0810	1.0	\$	100	\$J	40	#	50	80	7.0	80	500u	2.0	10	20	#	30MΔ	300ns	E	
37	1768-0820	1.0	\$	100	\$J	40	#	50	80	7.0	80	500u	2.50	20	20	#	30MΔ	450ns	E	
38	1768-0830	1.0	\$	100	\$J	40	#	50	80	7.0	80	500u	3.0	20	20	#	30MΔ	500ns	E	
39	1768-1010	1.0	\$	100	\$J	40	#	50	100	7.0	100	500u	2.0	10	20	#	30MΔ	300ns	E	
40	1768-1020	1.0	\$	100	\$J	40	#	50	100	7.0	100	500u	2.50	20	20	#	30MΔ	450ns	E	
41	1768-1030	1.0	\$	100	\$J	40	#	50	100	7.0	100	500u	3.0	20	20	#	30MΔ	500ns	E	
42	1768-1210	1.0	\$	100	\$J	40	#	50	120	7.0	120	500u	2.0	10	20	#	30MΔ	300ns	E	
43	1768-1220	1.0	\$	100	\$J	40	#	50	120	7.0	120	500u	2.50	20	20	#	30MΔ	450ns	E	
44	1768-1230	1.0	\$	100	\$J	40	#	50	120	7.0	120	500u	3.0	20	20	#	30MΔ	500ns	E	
45	1768-1410	1.0	\$	100	\$J	40	#	50	140	7.0	140	500u	2.0	10	20	#	30MΔ	300ns	E	
46	1768-1420	1.0	\$	100	\$J	40	#	50	140	7.0	140	500u	2.50	20	20	#	30MΔ	450ns	E	
47	1768-1430	1.0	\$	100	\$J	40	#	50	140	7.0	140	500u	3.0	20	20	#	30MΔ	500ns	E	
48	1768-1610	1.0	\$	100	\$J	40	#	50	160	7.0	160	500u	2.0	10	20	#	30MΔ	300ns	E	
49	1768-1620	1.0	\$	100	\$J	40	#	50	160	7.0	160	500u	2.50	20	20	#	30MΔ	450ns	E	
50	1768-1630	1.0	\$	100	\$J	40	#	50	160	7.0	160	500u	3.0	20	20	#	30MΔ	500ns	E	
51	1768-1810	1.0	\$	100	\$J	40	#	50	180	7.0	180	500u	2.0	10	20	#	30MΔ	300ns	E	
52	1768-1820	1.0	\$	100	\$J	40	#	50	180	7.0	180	500u	2.50	20	20	#	30MΔ	450ns	E	
53	1768-1830	1.0	\$	100	\$J	40	#	50	180	7.0	180	500u	3.0	20	20	#	30MΔ	500ns	E	
54#	BDY64	1.0	40	\$	30	10	120	8.0	100	2.0Δ	4.0	15	100	100	PE	MT63	A			
55#	BLY40	1.0	125	Ø	\$C	10	50	100	60	100	5.0m	30m	10	10	15	60	40MΔ	1.0	E	
56#	DT6105	1.0	50	Ø	♦J	5.0	1.0	400	4.0	265	10m	5.0	5.0	10	50	500kΔ	500m	1.0u	T03	
57#	DT6106	1.0	50	Ø	♦J	5.0	1.0	500	4.0	325	10m	5.0	5.0	10	50	500kΔ	500m	1.0u	T03	
58	DTS4011	1.0	100	Ø	\$J	2.0	1.0	5.0	400	500u	500u	500m	20	100	4.0M	6.0M	1.6	400nØ	D	
59	DTS4131	1.0	75	Ø	\$J	2.0	1.0	400	5.0	400	500u	500m	20	80	80	1.5MΔ	1.5MΔ	1.5MΔ	T03	
60	DTS801	1.0	25	Ø	\$J	500m	100m	5.0	800	500u	500m	200m	20	100	1.5MΔ	1.5MΔ	1.5MΔ	T03		
61	DTS802	1.0	100	Ø	\$J	5.0	2.0	5.0	1.0k	500u	5.0	3.5	2.2	15	15	1.5MΔ	1.5MΔ	1.5MΔ	T03	
62	DTS804	1.0	100	Ø	\$J	5.0	2.0	5.0	1.0k	500u	5.0	3.5	2.2	15	15	1.5MΔ	1.5MΔ	1.5MΔ	T03	
63	KSP1201	1.0	20	Ø	\$J	225	8.0	200	1.0u	5.0	1.0u	5.0	10	15	80	30M	60M	PL		
64	KSP1202	1.0	20	Ø	\$J	250	8.0	225	1.0u	5.0	1.0u	5.0	10	15	60	30M	60M	PL		
65	KSP1203	1.0	20	Ø	\$J	275	8.0	250	1.0u	5.0	1.0u	5.0	10	15	60	30M	60M	PL		
66	KSP1204	1.0	20	Ø	\$J	300	8.0	275	1.0u	5.0	1.0u	5.0	10	15	60	30M	60M	PL		
67	KSP1205	1.0	20	Ø	\$J	325	8.0	300	1.0u	5.0	1.0u	5.0	10	15	60	30M	60M	PL		
68	KSP1251	1.0	20	Ø	\$J	60	8.0	40	1.0u	5.										

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE- MENT J to C	MAX FREE AIR @ 25°C	Pc M T X M P	ABSOLUTE MAX. RATINGS @ 25°C						MAX. I _{CEO} @ 25°C	HFE			MAX. SAT. RES.	tr	STRUCTURE	DWG Y200	# C E O S/a TO200 D E	
					(W/C)	(W)	(A)	(V)	(V)	(V)		BIAS	V _{CB}	I _C	MIN	MAX	[Hz]	(B)	(s)	
1	SDT7732	1.0	175		15	3.0	80	20	60	10u	5.0	5.0	20	80	5.0M			PL	T03	
2	SDT7733	1.0	175		15	3.0	100	20	80	10u	5.0	5.0	20	80	5.0M			PL	T03	
3	SDT7734	1.0	175		15	3.0	120	20	100	10u	5.0	5.0	20	80	5.0M			PL	T03	
4	SDT7735	1.0	175		15	3.0	140	20	125	10u	5.0	5.0	20	80	5.0M			PL	T03	
5	SDT7736	1.0	175		15	3.0	165	20	150	10u	5.0	5.0	20	80	5.0M			PL	T03	
6	SDT7761	1.0	175		15	3.0	60	20	40	10u	5.0	5.0	20	80	5.0M			PL	T061	
7	SDT7762	1.0	175		15	3.0	80	20	60	10u	5.0	5.0	20	80	5.0M			PL	T061	
8	SDT7763	1.0	175		15	3.0	100	20	80	10u	5.0	5.0	20	80	5.0M			PL	T061	
9	SDT7764	1.0	175		15	3.0	120	20	100	10u	5.0	5.0	20	80	5.0M			PL	T061	
10	SDT7765	1.0	175		15	3.0	140	20	125	10u	5.0	5.0	20	80	5.0M			PL	T061	
11	SDT8002	1.0	100		SJ	20		80	8.0	100u	5.0	10	40	120	# 20M Δ		D	T063		
12	SDT8003	1.0	100		SJ	20		100	8.0	80	100u	5.0	10	40	120	# 20M Δ		D	T063	
13	SDT8012	1.0	100		SJ	20		80	8.0	60	10u	5.0	10	20	60	# 25M Δ		PL	T063	
14	SDT8013	1.0	100		SJ	20		100	8.0	80	10u	5.0	10	20	60	# 25M Δ		PL	T063	
15	SDT8015	1.0	100		SJ	20		80	8.0	60	10u	5.0	10	40	120	# 25M Δ		PL	T063	
17	SDT8016	1.0	100		SJ	20		100	8.0	80	10u	5.0	10	40	120	# 25M Δ		PL	T063	
18	SDT8045	1.0	100		SJ	20		40	5.0	25	10u	5.0	10	40	120	# 25M Δ		PL	T063	
19	SDT8070	1.0	100		SJ	20		80	8.0	60	10u	5.0	10	100	#	25M Δ		PL	T063	
20	SDT8071	1.0	100		SJ	20		100	8.0	80	10u	5.0	10	100	#	25M Δ		PL	T063	
21	SDT8151	1.0	175		20	4.0	150	8.0	120	100u	5.0	10	40	120	30M		PL			
22	SDT8152	1.0	175		20	4.0	100	8.0	80	100u	5.0	10	40	120	30M		PL			
23	SDT8153	1.0	175		20	4.0	80	8.0	60	100u	5.0	10	40	120	30M		PL			
24	SDT8154	1.0	175		20	4.0	100	8.0	80	100u	5.0	10	100		30M		PL			
25	SDT8155	1.0	175		20	4.0	80	8.0	60	100u	5.0	10	100		30M		PL			
26	SDT8156	1.0	175		20	4.0	150	8.0	120	100u	5.0	10	20	60	30M		PL			
27	SDT8157	1.0	175		20	4.0	100	8.0	80	100u	5.0	10	20	60	30M		PL			
28	SDT8158	1.0	175		20	4.0	80	8.0	60	100u	5.0	10	20	60	30M		PL			
29	SDT8159	1.0	175		20	4.0	40	5.0	25	100u	5.0	10	20	60	30M		PL			
30	SDT8301	1.0	100		SJ	30		80	8.0	60	10u	5.0	10	40	120	# 25M Δ		PL	T063	
31	SDT8302	1.0	100		SJ	30		100	8.0	80	10u	5.0	10	40	120	# 25M Δ		PL	T063	
32	SDT8303	1.0	100		SJ	30		80	8.0	60	10u	5.0	10	100	#	25M Δ		PL	T063	
33	SDT8304	1.0	100		SJ	30		100	8.0	80	10u	5.0	10	100	#	25M Δ		PL	T063	
34	SDT8751	1.0	175		20	4.0	120	8.0	100	10u	5.0	10	15	60	25M		PL	T063		
35	SDT8752	1.0	175		20	4.0	140	8.0	120	10u	5.0	10	15	60	25M		PL	T063		
36	SDT8753	1.0	175		20	4.0	170	8.0	150	10u	5.0	10	15	60	25M		PL	T063		
37	SDT8754	1.0	175		20	4.0	200	8.0	180	10u	5.0	10	15	60	25M		PL	T063		
38	SDT8755	1.0	175		20	4.0	120	8.0	100	10u	5.0	10	30	90	25M		PL	T063		
39	SDT8756	1.0	175		20	4.0	140	8.0	120	10u	5.0	10	30	90	25M		PL	T063		
40	SDT8757	1.0	175		20	4.0	170	8.0	150	10u	5.0	10	30	90	25M		PL	T063		
41	SDT8758	1.0	175		20	4.0	200	8.0	180	10u	5.0	10	30	90	25M		PL	T063		
42	SDT8801	1.0	100		SJ	20		200	8.0	200	1.0u	5.0	10	15	60	# 30M Δ		PL	T063	
43	SDT8802	1.0	100		SJ	20		225	8.0	225	1.0u	5.0	10	15	60	# 30M Δ		PL	T063	
44	SDT8803	1.0	100		SJ	20		250	8.0	250	1.0u	5.0	10	15	60	# 30M Δ		PL	T063	
45	SDT8804	1.0	100		SJ	20		275	8.0	275	1.0u	5.0	10	15	60	# 30M Δ		PL	T063	
46	SDT8805	1.0	100		SJ	20		300	8.0	300	1.0u	5.0	10	15	60	# 30M Δ		PL	T063	
47	SPC401	1.0	100		SJ	2.0	1.0	400	5.0	300	500u	5.0	200m	20	100	4.0M	160m		D	T03
48	SPC413	1.0	75		SJ	2.0	1.0	400	5.0	325	500u	5.0	200m	20	80	6.0M	1.6		D	T03
49	ST170601	1.0	# 150		SJ	30		125	10	80	100u	100	10	30	120	# 10M Δ	500n Δ	PL	T063	
50	ST170611	1.0	# 150		SJ	30		145	10	100	100u	100	10	30	120	# 10M Δ	500n Δ	PL	T063	
51	ST170621	1.0	# 150		SJ	30		170	10	120	100u	100	10	30	120	# 10M Δ	500n Δ	PL	T063	
52	ST18007	1.0	100		SJ	20		375	10	375	10	10	20	10	10M	150m	PE	T063		
53	ST18008	1.0	100		SJ	20		300	10	300	10	10	20	10	10M	150m	PE	T063		
54	ST18009	1.0	100		SJ	20		250	10	250	10	10	20	10	10M	150m	PE	T063		
55	ST18010	1.0	100		SJ	20		200	10	200	10	10	20	10	10M	150m	PE	T063		
56	STC1726	1.0	200		SJ	20	4.5				10	80	2.0m	3.0	10	20	80	100m	ME	MT18
57	STC1728	1.0	200		SJ	30	4.5				10	80	2.0m	3.0	10	20	80	100m	ME	MT18
58	STC1731	1.0	200		SJ	20	4.5				10	100	2.0m	3.0	10	20	80	100m	ME	MT18
59	STC1733	1.0	200		SJ	30	4.5				10	100	2.0m	3.0	10	20	80	100m	ME	MT18
60	STC1736	1.0	200		SJ	20	4.5				10	150	2.0m	3.0	10	20	80	100m	ME	MT18
61	STC1738	1.0	200		SJ	30	4.5				10	150	2.0m	3.0	10	20	80	100m	ME	MT18
62	STC2220	1.0	200		SJ	20	10	80	10	80	2.0m	3.0	10	10	50	#	150m	1.0u Δ	D	MD21
63	STC2221	1.0	200		SJ	20	10	150	10	150	2.0m	3.0	10	10	50	#	150m	1.0u Δ	D	MD21
64	STC2222	1.0	200		SJ	20	10	200	10	200	2.0m	3.0	10	10	50	#	150m	1.0u Δ	D	MD21
65	STC2223	1.0	200		SJ	25	10	150	10	150	2.0m	3.0	10	10	50	#	150m	1.0u Δ	D	MD21
66	STC2224	1.0	200		SJ	25	10	80	10	80	2.0m	3.0	10	10	50	#	100m	6.0u Δ	D	MD21
67	STC2225	1.0	200		SJ	25	10	100	10	100	2.0m	3.0	10	10	50	#	100m	6.0u Δ	D	MD21
68	STC2226	1.0	200		SJ	25	10	150	10	150	2.0m	3.0	10	10	50	#	100m	6.0u Δ	D	MD21
69	STC2227	1.0	200		SJ	25	10	200	10	200	2.0m	3.0	10	10	50	#	100m	6.0		

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE- MENT J to C	MAX Pc FREE AIR @ 25°C (W/C)	PC T M T	ABSOLUTE MAX. RATINGS @25°C						MAX. Vcb @25°C (V)	RFE Icbo @ MAX Vcb/Vcb (A)	BIAS Ic (A)	MIN. fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG # Y200 s/a TO200 Ser.	C E D O		
					A E X M P	Ic (A)	IB (A)	BV _{cbo} (V)	BV _{ceo} (V)	BV _{ceo} (V)											
1	1561-1415	1.1	150	SJ	30	7.0	140	7.0	140	2.0	4.0#	15	15	60	800	1A	130m		T03	C	
2	1561-1610	1.1	150	SJ	30	7.0	160	7.0	160	2.0	4.0#	10	15	60	800	1A	140m		T03	C	
3	1561-1615	1.1	150	SJ	30	7.0	160	7.0	160	2.0	4.0#	15	15	60	800	1A	130m		T03	C	
4	1561A808	1.1	150	SJ	30	7.0	60	7.0	60	2.0	4.0#	8.0	15	60	800	1A	180m		T03	C	
5	1561A615	1.1	150	SJ	30	7.0	60	7.0	60	2.0	4.0#	15	15	60	800	1A	130m		T03	C	
6	A580-0402	1.1	175	SJ	10	3.0	40	25	40	10m#	4.0#	2.0	15	#	250k	400m	10u#	10u#	AΔ	T03	C
7	A580-0403	1.1	175	SJ	10	3.0	40	25	40	10m#	4.0#	3.0	15	#	250k	300m	10u#	10u#	AΔ	T03	C
8	A580-0405	1.1	175	SJ	10	3.0	40	25	40	10m#	4.0#	5.0	15	#	250k	200m	10u#	10u#	AΔ	T03	C
9	A580-0802	1.1	175	SJ	10	3.0	80	25	80	10m#	4.0#	2.0	15	#	250k	400m	10u#	10u#	AΔ	T03	C
10	A580-0803	1.1	175	SJ	10	3.0	80	25	80	10m#	4.0#	3.0	15	#	250k	300m	10u#	10u#	AΔ	T03	C
11	A580-0805	1.1	175	SJ	10	3.0	80	25	80	10m#	4.0#	5.0	15	#	250k	200m	10u#	10u#	AΔ	T03	C
12	A580-1202	1.1	175	SJ	10	3.0	120	25	120	10m#	4.0#	2.0	15	#	250k	400m	10u#	10u#	AΔ	T03	C
13	A580-1203	1.1	175	SJ	10	3.0	120	25	120	10m#	4.0#	3.0	15	#	250k	300m	10u#	10u#	AΔ	T03	C
14	A580-1205	1.1	175	SJ	10	3.0	120	25	120	10m#	4.0#	5.0	15	#	250k	200m	10u#	10u#	AΔ	T03	C
15	A580-1602	1.1	175	SJ	10	3.0	160	25	160	10m#	4.0#	2.0	15	#	250k	400m	10u#	10u#	AΔ	T03	C
16	A580-1603	1.1	175	SJ	10	3.0	160	25	160	10m#	4.0#	3.0	15	#	250k	300m	10u#	10u#	AΔ	T03	C
17	A580-1605	1.1	175	SJ	10	3.0	160	25	160	10m#	4.0#	5.0	15	#	250k	200m	10u#	10u#	AΔ	T03	C
18	A580-1802	1.1	175	SJ	10	3.0	180	25	180	10m#	4.0#	2.0	15	#	250k	400m	10u#	10u#	AΔ	T03	C
19	A580-1803	1.1	175	SJ	10	3.0	180	25	180	10m#	4.0#	3.0	15	#	250k	300m	10u#	10u#	AΔ	T03	C
20	A580-1805	1.1	175	SJ	10	3.0	180	25	180	10m#	4.0#	5.0	15	#	250k	200m	10u#	10u#	AΔ	T03	C
21	A580-2002	1.1	175	SJ	10	3.0	200	25	200	10m#	4.0#	2.0	15	#	250k	400m	10u#	10u#	AΔ	T03	C
22	A580-2003	1.1	175	SJ	10	3.0	200	25	200	10m#	4.0#	3.0	15	#	250k	300m	10u#	10u#	AΔ	T03	C
23	A580-2005	1.1	175	SJ	10	3.0	200	25	200	10m#	4.0#	5.0	15	#	250k	200m	10u#	10u#	AΔ	T03	C
24	A580-2202	1.1	175	SJ	10	3.0	220	25	220	10m#	4.0#	2.0	15	#	250k	400m	10u#	10u#	AΔ	T03	C
25	A580-2203	1.1	175	SJ	10	3.0	220	25	220	10m#	4.0#	3.0	15	#	250k	300m	10u#	10u#	AΔ	T03	C
26	A580-2205	1.1	175	SJ	10	3.0	220	25	220	10m#	4.0#	5.0	15	#	250k	200m	10u#	10u#	AΔ	T03	C
27	A580-2402	1.1	175	SJ	10	3.0	240	25	240	10m#	4.0#	2.0	15	#	250k	400m	10u#	10u#	AΔ	T03	C
28	A580-2403	1.1	175	SJ	10	3.0	240	25	240	10m#	4.0#	3.0	15	#	250k	300m	10u#	10u#	AΔ	T03	C
29	BDY57	1.1	150	SJ	30	15	120	10	80	5.0m	4.0#	10	20	60	10M	5Δ	140m	200n	ME	T03	C
30	BDY58	1.1	150	SJ	30	15	160	10	125	5.0m	4.0#	10	20	60	10M	5Δ	140m	200n	ME	T03	C
31	MJ802	1.1	200	SJ	30	7.5	100	4.0	90	10m	2.0#	7.5	25	100	#	2.0M	8Δ	100m		T03	C
32	ST28135	1.1	150	SJ	30	8.0	70	10	40	500u	10	15	30	150	10M	130m		PE	T03	C	
33	ST28136	1.1	150	SJ	30	8.0	90	10	60	500u	10	15	30	150	10M	130m		PE	T03	C	
34	ST28137	1.1	150	SJ	30	8.0	110	10	80	500u	10	15	30	150	10M	130m		PE	T03	C	
35	ST28138	1.1	150	SJ	20	6.0	70	10	40	500u	10	10	30	150	10M	130m		PE	T03	C	
36	ST28139	1.1	150	SJ	20	6.0	90	10	60	500u	10	10	30	150	10M	130m		PE	T03	C	
37	ST28140	1.1	150	SJ	20	6.0	110	10	80	500u	10	10	30	150	10M	130m		PE	T03	C	
38	STC1094	1.1	200	SJ	20	4.5	90	10	90	15m	4.0#	10	7.5		2.5M	5Δ	500m		T03	C	
39	2N52411	1.2	125	SJ	50	20	400	5.0	400	500u#	5.0#	2.5	15	35	2.5M	5Δ	500m		T03	C	
40	2N59661	1.2	125	SJ	40	5.0	100	1	101	500u#	100#	10	30	120	10M	5Δ	80m	500n	2Δ	T063	A
41	2N59681	1.2	125	SJ	40	5.0	100	1	101	500u#	100#	10	30	120	10M	5Δ	80m	500n	2Δ	T063	A
42	ZSC1079	1.2	100	SJ	12		150	50	110	10m#	5.0#	2.0	40	240	3.0M		1DM	T03	C		
43	ZSC1080	1.2	100	SJ	12		110	50	110	100u#	5.0#	2.0	40	240	3.0M		1DM	T03	C		
44	#ZSC11151	1.2	100	SJ	10	4.0	140	12	80	1.0	4.0#	3.0	30	150	10M	500m	1.2u	D	T03	C	
45	#ZSC11161	1.2	100	SJ	10	4.0	180	12	120	1.0	4.0#	3.0	30	150	10M	500m	1.2u	D	T03	C	
46	PT6953	1.2	220	SJ	50	10	120	8.0	70	10m	5.0#	20	40	200m	30m	350n	PL	T03	K		
47	PT6954	1.2	220	SJ	50	10	160	8.0	100	10m	5.0#	20	30	150	100M	40m	350n	PL	T03	K	
48	PT6955	1.2	220	SJ	50	10	200	8.0	140	10m	5.0#	20	30	150	100M	50m	350n	PL	T03	K	
49	PT79391	1.2	220	SJ			90	6.0	70	10m	5.0#	20	20	150	125M	35m		T03	C		
50	PT79401	1.2	220	SJ			90	6.0	70	10m	5.0#	20	20	150	125M	30m		T03	C		
51	PT79411	1.2	220	SJ			120	8.0	70	10m	5.0#	20	20	150	125M	45m		T03	C		
52	PT79421	1.2	220	SJ			120	8.0	100	10m	5.0#	20	20	150	125M	40m		T03	C		
53	PT79431	1.2	220	SJ			120	8.0	100	10m	5.0#	20	20	150	125M	40m		T03	C		
54	PT79441	1.2	220	SJ			160	8.0	100	10m	5.0#	20	20	150	125M	45m		T03	C		
55	PT79451	1.2	220	SJ			170	6.0	140	10m	5.0#	20	20	150	125M	75m		T03	C		
56	PT79461	1.2	220	SJ			170	6.0	140	10m	5.0#	20	20	150	125M	50m		T03	C		
57	PT79471	1.2	220	SJ			200	8.0	140	10m	5.0#	20	20	150	125M	75m		T03	C		
58	ST15010	1.3	200	SJ	40	8.0	150	12	100	10u#	5.0#	40	10	10	10M	60m		PE	T063	C	
59	2N34291	1.3	200	SJ	50	30	25	50	25	2.0#	2.0#	5.0	10	35	20k	200m	5.0u#		MT52	B	
60	ZN34301	1.3	200	SJ	50	30	100	25	100	2.0#	2.0#	5.0	10	35	20k	200m	5.0u#		MT52	B	
61	ZN34311	1.3	200	SJ	50	30	150	25	150</td												

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	DERATE J to C	MAX P _m T	ABSOLUTE MAX RATINGS @ 25°C 25°C						MAX icbo @ @ 25°C	hFE	MAX SAT. RES.	tr	STRUCTURE	DWG #			
				A	E	I _c	I _b	V _{bcbo}	V _{bebo}	V _{ceo}								
1	DTS4111	1.3	100	\$J 3.6	2.0	300	5.0	300	500uA#	5.00	1.0	30	90	5.0mΩ	800m	300nΩ	ME T03 C	
2	DT54231	1.3	100	\$J 3.5	2.0	400	5.0	400	500uA#	5.00	1.0	30	90	5.0mΩ	800m	300nΩ	ME T03 C	
3	DT5423M1	1.3	100	\$J 3.5	2.0	400	5.0	400	250uA	5.00	1.0	30	90	3.0mΩ	800m	800nΩ	D T03 C	
4	DT54241	1.3	100	\$J 3.5	2.0	50	5.0	500	250uA	5.00	1.0	30	90	4.0mΩ	300m	300nΩ	D T03 C	
5	DT54251	1.3	100	\$J 3.5	2.0	50	5.0	500	250uA	5.00	1.0	30	90	4.0mΩ	300m	300nΩ	D T03 C	
6	SDT402	1.3	100	\$J 3.5	2.0	50	5.0	400	500uA			4.0mΩ		1.9uA#	D A	T03 A		
7	SDT4101	1.3	80	\$J 3.5	2.0	200	5.0	200	500uA#	5.00	1.0	30	# 90	4.0mΩ		250n	ME T03 C	
8	SDT4111	1.3	100	\$J 3.5	2.0	300	5.0	300	500uA#	5.00	1.0	30	# 90	4.0mΩ		250n	ME T03 C	
9	SDT4231	1.3	100	\$J 3.5	2.0	400	5.0	400	500uA#	5.00	1.0	30	# 90	4.0mΩ		250n	ME T03 C	
10	SDT4241	1.3	100	\$J 3.5	2.0	700	5.0	500	500uA#	5.00	1.0	30	# 90	4.0mΩ		250n	ME T03 C	
11	SDT4251	1.3	100	\$J 3.5	2.0	700	5.0	500	500uA#	5.00	1.0	30	# 90	4.0mΩ		250n	ME T03 C	
12	SDT4301	1.3	125	\$J 5.0	2.0	400	5.0	400	5.0mΩ	5.00	2.5	15	# 45	4.0mΩ		250n	ME T03 C	
13	SDT4311	1.3	125	\$J 5.0	2.0	400	5.0	400	5.0mΩ	5.00	2.5	15	# 45	4.0mΩ		250n	ME T03 C	
14	SDT2101	1.3		#J 150		10		5.0				150	40			M741		
15	SDT2110	1.3		#J 150		10		5.0				150	40			M741a		
16	SDT2111	1.3		#J 175		10		5.0				175	40			M741a		
17	SDT2112	1.3		#J 200		10		5.0				200	40			R121		
18	SDT2150	1.3		#J 150		10		5.0				150	40			R121		
19	SDT2151	1.3		#J 175		10		5.0				175	40			R121		
20	SDT2152	1.3		#J 200		10		5.0				200	40			R121		
21	SPC153-04	1.3	200	\$J 7.5	65	25	40	10m#	4.00	1.5	15					T061		
22	SPC153-06	1.3	200	\$J 7.5	65	25	50	10m#	4.00	1.5	15					T061		
23	SPC153-08	1.3	200	\$J 7.5	65	25	80	10m#	4.00	1.5	15					T061		
24	SPC153-10	1.3	200	\$J 7.5	30	125	25	100	10m#	4.00	1.5	15					T061	
25	SPC153-12	1.3	200	\$J 7.5	30	145	25	120	10m#	4.00	1.5	15					T061	
26	SPC153-14	1.3	200	\$J 7.5	30	165	25	140	10m#	4.00	1.5	15					T061	
27	SPC153-16	1.3	200	\$J 7.5	30	185	25	160	10m#	4.00	1.5	15					T061	
28	SPC153-18	1.3	200	\$J 7.5	30	205	25	180	10m#	4.00	1.5	15					T061	
29	SPC153-20	1.3	200	\$J 7.5	30	225	25	200	10m#	4.00	1.5	15					T061	
30	SPC153-22	1.3	200	\$J 7.5	30	245	25	220	10m#	4.00	1.5	15					T061	
31	SPC153-24	1.3	200	\$J 7.5	30	265	25	240	10m#	4.00	1.5	15					T061	
32	SPC153-26	1.3	200	\$J 7.5	30	285	25	260	10m#	4.00	1.5	16					T061	
33	SPC153-28	1.3	200	\$J 7.5	30	305	25	280	10m#	4.00	1.5	15					T061	
34	SPC153-30	1.3	200	\$J 7.5	30	325	25	300	10m#	4.00	1.5	15					T061	
35	SPC154-04	1.3	200	\$J 7.5	30	65	25	40	10m#	4.00	1.5	25					T061	
36	SPC154-06	1.3	200	\$J 7.5	30	85	25	60	10m#	4.00	1.5	25					T061	
37	SPC154-08	1.3	200	\$J 7.5	30	105	25	80	10m#	4.00	1.5	25					T061	
38	SPC154-10	1.3	200	\$J 7.5	30	125	25	100	10m#	4.00	1.5	25					T061	
39	SPC154-12	1.3	200	\$J 7.5	30	145	25	120	10m#	4.00	1.5	25					T061	
40	SPC154-14	1.3	200	\$J 7.5	30	165	25	140	10m#	4.00	1.5	25					T061	
41	SPC154-16	1.3	200	\$J 7.5	30	185	25	160	10m#	4.00	1.5	25					T061	
42	SPC154-18	1.3	200	\$J 7.5	30	205	25	180	10m#	4.00	1.5	25					T061	
43	SPC154-20	1.3	200	\$J 7.5	30	225	25	200	10m#	4.00	1.5	25					T061	
44	SPC154-22	1.3	200	\$J 7.5	30	245	25	220	10m#	4.00	1.5	25					T061	
45	SPC154-24	1.3	200	\$J 7.5	30	265	25	240	10m#	4.00	1.5	26					T061	
46	SPC154-26	1.3	200	\$J 7.5	30	285	25	260	10m#	4.00	1.5	25					T061	
47	SPC154-28	1.3	200	\$J 7.5	30	305	25	280	10m#	4.00	1.5	25					T061	
48	SPC154-30	1.3	200	\$J 7.5	30	325	25	300	10m#	4.00	1.5	25					T061	
49	SPC402	1.3	100	\$J 3.5	2.0	400	5.0	325	500uA	5.00	500m	20	100	4.0mΩ	800m	300nΩ	T061	
50	SPC410	1.3	80	\$J 3.5	2.0	200	5.0	200	500uA#	5.00	1.0	30	90	4.0mΩ	160m	160nΩ	T03	
51	SPC411	1.3	100	\$J 3.5	2.0	300	5.0	300	500uA#	5.00	1.0	30	90	5.0mΩ	800m	800nΩ	T03	
52	SPC423	1.3	100	\$J 3.5	2.0	400	5.0	325	500uA#	5.00	1.0	30	90	4.0mΩ	800m	800nΩ	T03	
53	SPC424	1.3	100	\$J 3.5	2.0	500	6.0	350	250uA	5.00	1.0	30	90	4.0mΩ	800m	800nΩ	T03	
54	SPC425	1.3	100	\$J 3.5	2.0	500	6.0	400	250uA	5.00	1.0	30	90	4.0mΩ	800m	800nΩ	T03	
55	ST15006	1.3	125	\$J 40	80	100	12	60	10m#	5.00	40	10		10mΩ	.06	PE	T063	
56	2N10151	1.4	*	150	\$J 7.5	50	25	30	20m#	4.00	2.0	10		20k		6.0uΩ	MT1	
57	2N10151A	1.4	*	150	\$J 7.5	50	25	50	20m#	4.00	2.0	10				6.0uΩ	MT1	
58	2N10151B1	1.4	*	150	\$J 7.5	50	25	100	20m#	4.00	2.0	10				6.0uΩ	MT1	
59	2N10151C1	1.4	*	150	\$J 7.5	50	25	150	20m#	4.00	2.0	10				6.0uΩ	MT1	
60	2N10151D1	1.4	*	150	\$J 7.5	50	25	200	20m#	4.00	2.0	10				6.0uΩ	MT1	
61	2N10151E1	1.4	*	150	\$J 7.5	50	25	250	20m#	4.00	2.0	10				6.0uΩ	MT1	
62	2N10151F1	1.4	*	150	\$J 7.5	50	25	300	20m#	4.00	5.0	10				6.0uΩ	MT1	
63	2N10161	1.4	*	150	\$J 7.5	50	25	300	20m#	4.00	5.0	10				6.0uΩ	MT1	
64	2N1016A1	1.4	*	150	\$J 7.5	50	25	100	20m#	4.00	5.0	10				6.0uΩ	MT1	
65	JAN2N1016B1	1.4	*	150	\$J 7.5	50	100	25	10m#	4.00	2.0	20	80	20k		6.0uΩ	MT1	
66	JAN2N1016C	1.4	*	150	\$J 7.5	50	100	25	10m#	4.00	2.0	20	80	20k		6.0uΩ	MT1	
67	JAN2N1016D1	1.4	*	150	\$J 7.5	50	100	25	10m#	4.00	2.0	20	80	20k		6.0uΩ	MT1	
68	JAN2N1016C	1.4	*	150	\$J 7.5	50	100	150	10m#	4.00	2.0	20	80	20k		6.0uΩ	MT1	
69	2N1016D1	1.4	*	150	\$J 7.5	50	100	200	20m#	4.00	5.0	10				6.0uΩ	MT1	
70	JAN2N1016D	1.4	*	150	\$J 7.5	50	100	200	10m#	4.00	2.0	20	80	20k		6.0uΩ	MT1	
71	JAN2N1016E1	1.4	*	150	\$J 7.5	50	100	250	20m#	4.00	5.0	10				6.0uΩ	MT1	
72	JAN2N1016F1	1.4	*	150	\$J 7.5	50	100	300	20m#	4.00	5.0	10				6.0uΩ	MT1	
73	2N2580T	1.4	*	150	\$C 50	10	400	50	400	5.0m#	5.00	50	10	40</				

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/C)	MAX P _c FREE AIR @ 25°C (W)	M T X P	ABSOLUTE MAX. RATINGS @25°C						MAX. ICBO @ MAX V _{cb} /V _{cb} @25°C (A)	HFE BIAS MIN (V) (A)	fae (Hz)	MAX. SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG # Y200 s/a TO200 Ser.	C E A D E		
					A E I _c (A)	I _b (A)	BV _{ceo} (V)	BV _{beo} (V)	BV _{ceo} (V)	10m# 4.0# 1.5 (A)										
1	152-22†	1.4	100	6.0	18.0	6.0	3.0	245	25	220	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	37	7.0uΩ‡	F	MT1		
2	152-24†	1.4	100	6.0	18.0	6.0	3.0	265	25	240	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	37	7.0uΩ‡	F	MT1		
3	152-25†	1.4	100	6.0	18.0	6.0	3.0	285	25	260	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	37	7.0uΩ‡	F	MT1	A	
4	152-28†	1.4	100	6.0	18.0	6.0	3.0	305	25	280	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	10m# 4.0# 1.5 (A)	37	7.0uΩ‡	F	MT1	A	
5	1776-0840†	1.4 s	150	6.0	75	75	15 #	15 #	60	7.0	60	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	37m	500nΩ‡	EM
6	1776-0660†	1.4 s	150	6.0	75	75	15 #	15 #	60	7.0	60	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	25m	600nΩ‡	EM
7	1776-0840†	1.4 s	150	6.0	75	75	15 #	15 #	80	7.0	80	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	37m	500nΩ‡	EM
8	1776-0860†	1.4 s	150	6.0	75	75	15 #	15 #	80	7.0	80	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	25m	600nΩ‡	EM
9	1776-1040†	1.4 s	150	6.0	75	75	15 #	15 #	100	7.0	100	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	37m	500nΩ‡	EM
10	1776-1060†	1.4 s	150	6.0	75	75	15 #	15 #	100	7.0	100	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	25m	600nΩ‡	EM
11	1776-1240†	1.4 s	150	6.0	75	75	15 #	15 #	120	7.0	120	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	37m	500nΩ‡	EM
12	1776-1260†	1.4 s	150	6.0	75	75	15 #	15 #	120	7.0	120	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	25m	600nΩ‡	EM
13	1776-1440†	1.4 s	150	6.0	75	75	15 #	15 #	140	7.0	140	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	37m	500nΩ‡	EM
14	1776-1460†	1.4 s	150	6.0	75	75	15 #	15 #	140	7.0	140	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	25m	500nΩ‡	EM
15	1776-1640†	1.4 s	150	6.0	75	75	15 #	15 #	160	7.0	160	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	37m	500nΩ‡	EM
16	1776-1860†	1.4 s	150	6.0	75	75	15 #	15 #	160	7.0	160	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	25m	600nΩ‡	EM
17	1776-1840†	1.4 s	150	6.0	75	75	15 #	15 #	180	7.0	180	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	37m	500nΩ‡	EM
18	1776-1860†	1.4 s	150	6.0	75	75	15 #	15 #	180	7.0	180	2.0m# 3.0# 40	2.0m# 3.0# 60	2.0m# 3.0# 40	2.0m# 3.0# 60	15	20MΩΔ	25m	600nΩ‡	EM
19	DT5430†	1.4	125	6.0	5.0	2.0	400	5.0	400	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	15	4.0MΩ	360m	400n	O		
20	DT5431†	1.4	125	6.0	5.0	2.0	400	5.0	400	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	15	4.0MΩ	280m	400n	D		
21	DT5431M1†	1.4	125	6.0	5.0	2.0	400	5.0	400	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	15	4.0MΩ	300m	800nΩ‡	D		
22	SDT2205	1.4	121	6.0	4.5	10	10	50	50	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	10	40#	120	120	A		
23	SDT2305	1.4	121	6.0	4.5	10	10	50	50	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	5.0m# 5.0# 2.5	10	45#	450k	3.0m	A		
24†	SPC151-04	1.4	100	6.0	6.0	6.5	25	40	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	120	120	866m	D			
25†	SPC151-06	1.4	100	6.0	6.0	3.0	85	25	60	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
26†	SPC151-08	1.4	100	6.0	6.0	3.0	105	25	80	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
27†	SPC151-10	1.4	100	6.0	6.0	3.0	125	25	100	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
28†	SPC151-12	1.4	100	6.0	6.0	3.0	145	25	120	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
29†	SPC151-14	1.4	100	6.0	6.0	3.0	165	25	140	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
30†	SPC151-16	1.4	100	6.0	6.0	3.0	185	25	160	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
31†	SPC151-18	1.4	100	6.0	6.0	3.0	205	25	180	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
32†	SPC151-20	1.4	100	6.0	6.0	3.0	225	25	200	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
33†	SPC151-22	1.4	100	6.0	6.0	3.0	245	25	220	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
34†	SPC151-24	1.4	100	6.0	6.0	3.0	265	25	240	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
35†	SPC151-26	1.4	100	6.0	6.0	3.0	285	25	260	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
36†	SPC151-28	1.4	100	6.0	6.0	3.0	305	25	280	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
37†	SPC151-30	1.4	100	6.0	6.0	3.0	325	25	300	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	11	—	—	866m	D		
38†	SPC152-04	1.4	100	6.0	6.0	3.0	65	25	40	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	18	—	—	833m	D		
39†	SPC152-06	1.4	100	6.0	6.0	3.0	85	25	60	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	18	—	—	833m	D		
40†	SPC152-08	1.4	100	6.0	6.0	3.0	105	25	80	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	18	—	—	833m	D		
41†	SPC152-10	1.4	100	6.0	6.0	3.0	125	25	100	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	18	—	—	833m	D		
42†	SPC152-12	1.4	100	6.0	6.0	3.0	145	25	120	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	18	—	—	833m	D		
43†	SPC152-14	1.4	100	6.0	6.0	3.0	165	25	140	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	18	—	—	833m	D		
44†	SPC152-16	1.4	100	6.0	6.0	3.0	185	25	160	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	18	—	—	833m	D		
45†	SPC152-18	1.4	100	6.0	6.0	3.0	205	25	180	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	10m# 4.0# 1.5	18	—	—	833m	D		
46†	SPC152-20																			

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	1 MIN. DERATE J to C (W/C)	MAX P _c FREE AIR @ 25°C (W)	M T A E ic 1b BV _{ceo} BV _{ceo}	ABSOLUTE MAX. RATINGS @ 25°C			MAX. I _{ceo} @ 25°C (A)	BIAS MAX V _{ceo} / V _{cb} / V _{cb} (A)	hFE			MAX SAT. RES. (Ω)	tr (s)	STRUCTURE	DWG #	C	
					A X M P (V)	V (V)	V (V)			MIN	MAX							
1	ZN5586	1.7	300	SJ 50	15	80	50	80	2.0m	2.0	25	15	60	# 2.0m Δ		MD68	C	
2#	BUY23t	1.7	100	SJ 10	3.0	600	80	250	2.0m	5.0	2.5	20	200	# 25m Δ	1.0μ Ω	DM	Y200	E
3#	BUY23A1	1.7	100	SJ 10	3.0	700	80	300	2.0m	5.0	2.5	20	200	# 25m Δ	1.0μ Ω	DM	TO3	s/a
4	MJ7200	1.7	300	SJ 60	20	100	60	80	100u	5.0	20	20	100	# 20m Δ		△ MT69a	A	
5	MJ7201	1.7	300	SJ 60	20	120	60	100	100u	5.0	20	20	100	# 20m Δ		△ MT69a	A	
6	ZN1936	2.0	150	SJ 20	10	125	60	60	10m $\#$	10	10	10	50	# 4.0m Δ		ME	TO63	Ø
7	ZN1937	2.0	150	SC 10	10	125	60	80	10m $\#$	10	10	50	50	# 4.0m Δ		ME	TO63	A
8	ZN2226	2.0	150	SC 10	10	50	50	50	20m $\#$	6.0	9.0	100	500	7.0k Δ	380m	MT1	A	
9	ZN2227	2.0	150	SC 10	10	100	50	100	20m $\#$	6.0	9.0	100	500	7.0k Δ	380m	MT1	A	
10	ZN2228	2.0	150	SC 10	10	150	15	150	20m $\#$	6.0	9.0	100	500	7.0k Δ	380m	MT1	A	
11	ZN2229	2.0	150	SC 10	10	200	15	200	20m $\#$	6.0	9.0	100	500	7.0k Δ	380m	MT1	A	
12	ZN2230	2.0	150	SC 10	10	50	15	50	20m $\#$	6.0	9.0	350	4.0k Δ	380m	MT1	A		
13	ZN2231	2.0	150	SC 10	10	100	15	100	20m $\#$	6.0	9.0	350	4.0k Δ	380m	MT1	A		
14	ZN2232	2.0	150	SC 10	10	150	15	150	20m $\#$	6.0	9.0	350	4.0k Δ	380m	MT1	A		
15	ZN2233	2.0	150	SC 10	10	200	15	200	20m $\#$	6.0	9.0	360	4.0k Δ	380m	MT1	A		
16	ZN27381	2.0	200	SC 20	7.5	50	15	50	15m $\#$	4.0	10	10		150m	6.0u Ω	MT1	B	
17	ZN27401	2.0	200	SC 20	7.5	100	15	100	15m $\#$	4.0	10	10		150m	6.0u Ω	MT1	B	
18	ZN27411	2.0	200	SC 20	7.5	150	15	150	15m $\#$	4.0	10	10		150m	6.0u Ω	MT1	B	
19	ZN27421	2.0	200	SC 20	7.5	200	15	200	15m $\#$	4.0	10	10		150m	6.0u Ω	MT1	B	
20	ZN27431	2.0	200	SC 20	7.5	250	15	250	15m $\#$	4.0	10	10		75m	6.0u Ω	MT1B	B	
21	ZN27441	2.0	200	SC 20	7.5	300	15	300	15m $\#$	4.0	10	10		75m	6.0u Ω	MT1B	B	
22	ZN27451	2.0	200	SC 20	7.5	50	15	50	15m $\#$	4.0	15	10		100m	6.0u Ω	MT1	B	
23	ZN27461	2.0	200	SC 20	7.5	100	15	100	15m $\#$	4.0	15	10		100m	6.0u Ω	MT1	B	
24	ZN27471	2.0	200	SC 20	7.5	150	15	150	15m $\#$	4.0	15	10		100m	6.0u Ω	MT1	B	
25	ZN27481	2.0	200	SC 20	7.5	200	15	200	15m $\#$	4.0	15	10		100m	6.0u Ω	MT1	B	
26	ZN27511	2.0	200	SC 20	7.5	50	15	50	15m $\#$	4.0	20	10		75m	7.0u Ω	MT1	B	
27	ZN27521	2.0	200	SC 20	7.5	100	15	100	15m $\#$	4.0	20	10		75m	7.0u Ω	MT1	B	
28	ZN27531	2.0	200	SC 20	7.5	150	15	150	15m $\#$	4.0	20	10		75m	7.0u Ω	MT1	B	
29	ZN27541	2.0	200	SC 20	7.5	200	15	200	15m $\#$	4.0	20	10		75m	7.0u Ω	MT1B	B	
30	ZN27551	2.0	200	SC 20	7.5	250	15	250	15m $\#$	4.0	20	10		75m	7.0u Ω	MT1B	B	
31	ZN27561	2.0	200	SC 20	7.5	300	15	300	15m $\#$	4.0	20	10		75m	7.0u Ω	MT1B	B	
32	ZN27571	2.0	200	SC 30	7.5	50	15	50	15m $\#$	4.0	10	10		150m	6.0u Ω	MT33	A	
33	ZN27581	2.0	200	SC 30	7.5	100	15	100	15m $\#$	4.0	10	10		150m	6.0u Ω	MT33	A	
34	ZN27591	2.0	200	SC 30	7.5	150	15	150	15m $\#$	4.0	10	10		150m	6.0u Ω	MT33	A	
35	ZN27601	2.0	200	SC 30	7.5	200	15	200	15m $\#$	4.0	10	10		150m	6.0u Ω	MT33	A	
36	ZN27611	2.0	200	SC 30	7.5	250	15	250	15m $\#$	4.0	10	10		150m	6.0u Ω	MT33	A	
37	ZN27621	2.0	200	SC 30	7.5	300	15	300	15m $\#$	4.0	10	10		150m	6.0u Ω	MT33	A	
38	ZN27631	2.0	200	SC 30	7.5	50	15	50	15m $\#$	4.0	15	10		100m	6.0u Ω	MT33	A	
39	ZN27641	2.0	200	SC 30	7.5	100	15	100	15m $\#$	4.0	15	10		100m	6.0u Ω	MT33	A	
40	ZN27651	2.0	200	SC 30	7.5	150	15	150	15m $\#$	4.0	15	10		100m	6.0u Ω	MT33	A	
41	ZN27661	2.0	200	SC 30	7.5	200	15	200	15m $\#$	4.0	15	10		100m	6.0u Ω	MT33	A	
42	ZN27671	2.0	200	SC 30	7.5	250	15	250	15m $\#$	4.0	15	10		100m	6.0u Ω	MT33	A	
43	ZN27681	2.0	200	SC 30	7.5	300	15	300	15m $\#$	4.0	15	10		100m	6.0u Ω	MT33	A	
44	ZN27691	2.0	200	SC 30	7.5	50	15	50	15m $\#$	4.0	20	10		75m	7.0u Ω	MT33	A	
45	ZN27701	2.0	200	SC 30	7.5	100	15	100	15m $\#$	4.0	20	10		75m	7.0u Ω	MT33	A	
46	ZN27711	2.0	200	SC 30	7.5	150	15	150	15m $\#$	4.0	20	10		75m	7.0u Ω	MT33	A	
47	ZN27721	2.0	200	SC 30	7.5	200	15	200	15m $\#$	4.0	20	10		75m	7.0u Ω	MT33	A	
48	ZN27731	2.0	200	SC 30	7.5	250	15	250	15m $\#$	4.0	20	10		75m	7.0u Ω	MT33	A	
49	ZN27741	2.0	200	SC 30	7.5	300	15	300	15m $\#$	4.0	20	10		75m	7.0u Ω	MT33	A	
50	ZN27751	2.0	200	SC 30	7.5	50	15	50	15m $\#$	4.0	25	10		60m	8.0u Ω	MT33	A	
51	ZN27761	2.0	200	SC 30	7.5	100	15	100	15m $\#$	4.0	25	10		60m	8.0u Ω	MT33	A	
52	ZN27771	2.0	200	SC 30	7.5	150	15	150	15m $\#$	4.0	25	10		60m	8.0u Ω	MT33	A	
53	ZN27781	2.0	200	SC 30	7.5	200	15	200	15m $\#$	4.0	25	10		60m	8.0u Ω	MT33	A	
54	ZN27791	2.0	200	SC 30	7.5	250	15	250	15m $\#$	4.0	25	10		60m	8.0u Ω	MT33	A	
55	ZN27801	2.0	200	SC 30	7.5	300	15	300	15m $\#$	4.0	25	10		80m	8.0u Ω	MT33	A	
56	ZN3149	2.0	300	SJ 70	15	80	10	80	2.0m $\#$	3.0	50	10	#	100k Δ	30m	10u Ω	MT49	Ø
57	ZN3150	2.0	300	SJ 70	15	100	10	100	2.0m $\#$	3.0	50	10	#	100k Δ	30m	10u Ω	MT49	Ø
58	ZN3151	2.0	300	SJ 70	15	150	10	150	2.0m $\#$	3.0	50	10	#	100k Δ	30m	10u Ω	MT49	Ø
59	ZN3470	2.0	150	SC 10	1.0	50	15	50	20m $\#$	6.0	9.0	100	500	7.0k Δ	390m	F	MT33	A
60	ZN3471	2.0	150	SC 10	1.0	100	15	100	20m $\#$	6.0	9.0	100	500	7.0k Δ	390m	F	MT33	A
61	ZN3472	2.0	150	SC 10	1.0	150	15	150	20m $\#$	6.0	9.0	100	500	7.0k Δ	390m	F	MT33	A
62	ZN3473	2.0	150	SC 10	1.0	200	15	200	20m $\#$	6.0	9.0	100	500	7.0k Δ	390m	F	MT33	A
63	ZN3474	2.0	150	SC 10	1.0	50	15	50	20m $\#$	6.0	9.0	350	4.0k Δ	390m	F	MT33	A	
64	ZN3475	2.0	150	SC 10	1.0	100	15	100	20m $\#$	6.0	9.0	350	4.0k Δ	390m	F	MT33	A	
65	ZN3476	2.0	150	SC 10	1.0	150	15	150	20m $\#$	6.0	9.0	350	4.0k Δ	390m	F	MT33</td		

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE J to C (W/C)	MAX Pc FREE AIR @ 25°C (W)	M T X P	ABSOLUTE MAX. RATINGS @ 25°C				MAX. MAX. Vcb @ 25°C	Icbo @ MAX Vcb Ic @ 25°C	hFE			fae	MAX. SAT. RES.	tr	STRUCTURE	DWG #	C			
					A	E	Ic	Ib	BVcbo	BVebo	BVceo	BIAS	MIN	MAX	(Hz)	(Ω)	(s)					
1	164-041	2.0	200	SJ	20	7.5	55	15	40	30m#	4.00	50	25		200m	6.0uΩ		MT33	A			
2	164-05	2.0	200	SJ	20	7.5	65	15	50	30m#	4.00	50	42		200m	6.0uΩ		MT33	A			
3	164-061	2.0	200	SJ	20	7.5	75	15	60	30m#	4.00	50	25		200m	6.0uΩ		MT33	A			
4	164-07	2.0	200	SJ	20	7.5	85	15	70	30m#	4.00	50	42		200m	6.0uΩ		MT33	A			
5	164-081	2.0	200	SJ	20	7.5	95	15	80	30m#	4.00	50	25		200m	6.0uΩ		MT33	A			
6	164-09	2.0	200	SJ	20	7.5	105	15	90	30m#	4.00	50	42		200m	6.0uΩ		MT33	A			
7	164-101	2.0	200	SJ	20	7.5	115	15	100	30m#	4.00	50	25		200m	6.0uΩ		MT33	A			
8	164-121	2.0	200	SJ	20	7.5	135	15	120	30m#	4.00	50	25		200m	6.0uΩ		MT33	A			
9	164-141	2.0	200	SJ	20	7.5	155	15	140	30m#	4.00	50	25		200m	6.0uΩ		MT33	A			
10	164-161	2.0	200	SJ	20	7.5	175	15	160	30m#	4.00	50	25		200m	6.0uΩ		MT33	A			
11	164-181	2.0	200	SJ	20	7.5	195	15	180	30m#	4.00	50	25		200m	6.0uΩ		MT33	A			
12	164-201	2.0	200	SJ	20	7.5	215	15	200	30m#	4.00	50	25		200m	6.0uΩ		MT33	A			
13	164-221	2.0	200	SJ	20	7.5	235	15	220	30m#	4.00	50	42		200m	6.0uΩ		F	MT33	A		
14	164-241	2.0	200	SJ	20	7.5	255	15	240	30m#	4.00	50	42		200m	6.0uΩ		F	MT33	A		
15	164-261	2.0	200	SJ	20	7.5	275	15	260	30m#	4.00	50	42		200m	6.0uΩ		F	MT33	A		
16	164-281	2.0	200	SJ	20	7.5	295	15	280	30m#	4.00	50	42		200m	6.0uΩ		F	MT33	A		
17	164-301	2.0	200	SJ	20	7.5	315	15	300	30m#	4.00	50	25		200m	6.0uΩ		F	MT33	A		
18#	BDY23	2.0	85	SJ	6.0	3.0	80	10	60	1.0m	4.00	20	15	180	10M△	500m	500nΩ	ME	T03	C		
19#	BDY24	2.0	85	SJ	6.0	3.0	120	10	90	1.0m	4.00	20	15	180	10M△	300m	500nΩ	ME	T03	C		
20#	BDY25	2.0	85	SJ	6.0	3.0	200	10	140	1.0m	4.00	20	15	180	10M△	300m	500nΩ	ME	T03	C		
21#	BDY26	2.0	85	SJ	6.0	3.0	300	10	180	1.0m	4.00	20	15	180	10M△	300m	500nΩ	ME	T03	C		
22#	BDY27	2.0	85	SJ	6.0	3.0	400	10	200	1.0m	4.00	20	15	180	10M△	300m	500nΩ	ME	T03	C		
23#	BDY28	2.0	85	SJ	6.0	3.0	500	10	250	1.0m	4.00	20	15	180	10M△	300m	500nΩ	ME	T03	C		
24#	BU102	2.0	50	SJ	7.0	4.00	5.0	150	10uΩ	5.0	1.0	30	t	110	1.0uΩ	DPE	T03					
25#	BU104	2.0	85	SJ	7.0	3.0	400	10	10m	3.50	60	10	50	10M△	350m	600nΩ	ME	T03	C			
26	KSP1001	2.0	100	SJ	7.0	15	80	8.0	60	10u	5.0	70	10	40	15M			PE	T0114			
27	KSP1002	2.0	100	SJ	7.0	15	100	8.0	80	10u	5.0	70	10	40	15M			PE	T0114			
28	KSP1603	2.0	100	SJ	7.0	15	120	8.0	100	10u	5.0	70	10	40	15M			PE	T0114			
29	KSP1601	2.0	60	SJ	10	225	8.0	200	10u	10	40	10	40	15M			PE	T0114				
30	KSP1602	2.0	60	SJ	10	250	8.0	225	10u	10	40	10	40	15M			PE	T0114				
31	KSP1603	2.0	60	SJ	10	275	8.0	250	10u	10	40	10	40	15M			PE	T0114				
32	KSP1604	2.0	60	SJ	10	300	8.0	275	10u	10	40	10	40	15M			PE	T0114				
33	KSP1605	2.0	60	SJ	10	325	8.0	300	10u	10	40	10	40	15M			PE	T0114				
34	PT500	2.0	300	SJ	70	20	175	10	2.0m	2.00	50	10	#				D	T0114				
35	PT501	2.0	300	SJ	70	20	150	10	120	2.0m	2.00	50	10	#				D	T0114			
36	PT502	2.0	350	SJ	100	20	150	10	100	2.0m	2.00	50	10	#				D	T0114			
37	PT600△	2.0	300	SJ	70	20	175	10	150	2.0m	2.00	60	10	#				D	T0114			
38	PT601△	2.0	300	SJ	70	20	150	10	120	2.0m	2.00	60	10	#				D	T0114			
39	PT6021	2.0	350	SJ	100	20	150	10	100	2.0m	2.00	60	10	#				D	T0114			
40#	PT7001	2.0	350	SJ	100	20	175	10	150	2.0m	2.00	70	10	#				D	T0114			
41	PT701	2.0	300	SJ	70	20	150	10	120	2.0m	2.00	70	10	#				D	T0114			
42#	PT7021	2.0	350	SJ	100	20	100	10	150	2.0m	2.00	70	10	#				D	T0114			
43	PT7503	2.0	350	SJ	70	15	175	10	150	2.0m	2.00	30	10	#				D	T063			
44	PT7506†	2.0	350	SJ	80	20	175	10	150	2.0m	2.00	40	10	#				D	T063			
45	PT7508†	2.0	350	SJ	90	20	175	10	150	2.0m	2.00	50	10	#				D	T063			
46#	PT7509†	2.0	350	SJ	70	15	200	10	200	2.0m	2.00	30	10	#				D	T063			
47#	PT7510†	2.0	350	SJ	80	20	200	10	200	2.0m	2.00	40	10	#				D	T063			
48#	PT7511†	2.0	350	SJ	90	20	200	10	200	2.0m	2.00	50	10	#				D	T063			
49	PT85021	2.0	350	SJ	150	40	150	10	120	2.0m	2.00	100	10	#				D	T063			
50	SDT1808	2.0	170	SJ	60	10	60	30	45	5.0m	2.00	50	15						A	T036	C	
51	SDT1809	2.0	170	SJ	60	10	40	20	30	5.0m	2.00	50	15						A	T036	C	
52	SDT810	2.0	350	SJ	90	20	80	8.0	60	0.1m	5.0	75	10						20M	MT49		
53	SDT8920	2.0	350	SJ	90	20	100	8.0	80	0.1m	5.0	75	10						20M	MT49		
54	SDT8921	2.0	350	SJ	90	20	100	8.0	80	0.1m	5.0	75	10						20M	MT49		
55	SDT8922	2.0	350	SJ	90	20	120	8.0	100	0.1m	5.0	75	10						20M	MT49		
56	SDT8923	2.0	350	SJ	90	20	140	8.0	120	0.1m	5.0	75	10						20M	MT49		
57	SDT8951	2.0	350	SJ	60	15	200	8.0	10uΩ	100	40	10	40	#	20M			PL	MT49A			
58	SDT8952	2.0	350	SJ	60	15	225	8.0	10uΩ	100	40	10	40	#	20M			PL	MT49a			
59	SDT8953	2.0	350	SJ	60	15	250	8.0	10uΩ	100	40	10	40	#	20M			PL	MT49a			
60	SDT8954	2.0	350	SJ	60	15	275	8.0	10uΩ	100	40	10	40	#	20M			PL	MT49a			
61	SDT8955	2.0	350	SJ	60	15	300	8.0	10uΩ	100	40	10	40	#	20M			PL	MT49a			
62▼	SPC163-04	2.0	200	SJ	20	7.5	55	15	40	30m#	4.00	50	15						220m	D	T063	
63▼	SPC163-06	2.0	200	SJ	20	7.5	75	15	60	30m#	4.00	50	15						220m	D	T063	
64▼	SPC163-08	2.0	200	SJ	20	7.5	95	15	80	30m#	4.00	50	15						220m	D	T063	
65▼	SPC163-10	2.0	200	SJ	20	7.5	115	15	100	30m#	4.00	50	15						220m	D	T063	
66▼	SPC163-12	2.0	200	SJ	20	7.5	135	15	120	30m#	4.00	50	15						220m	D	T063	
67▼	SPC163-14	2.0	200	SJ	20	7.5	155	15	140	30m#</												

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE- J to C	MAX P _c (W/C)	M T FREE AIR @ 25°C	ABSOLUTE MAX. RATINGS @ 25°C						MAX cbo @ 25°C	HFE	MAX. SAT. RES.	tr (s)	STRUCTURE	DWG #				
					A	E	I _c	I _b	BV _{cbo}	BV _{ebc}	BV _{ceo}									
1	STC3728	2.0	200	SJ	20	7.5	115	10	100				4.0#	5.0	15 #	220m	D	MT18		
2	STC3729	2.0	200	SJ	20	7.5	135	10	120				4.0#	5.0	15 #	220m	D	MT18		
3	STC3730	2.0	200	SJ	20	7.5	155	10	140				30m#	4.0#	5.0	15 #	220m	D	MT18	
4	STC3731	2.0	200	SJ	20	7.5	175	10	160				30m#	4.0#	5.0	15 #	220m	D	MT18	
5	STC3732	2.0	200	SJ	20	7.5	195	10	180				30m#	4.0#	5.0	15 #	220m	D	MT18	
6	STC3733	2.0	200	SJ	20	7.5	215	10	200				30m#	4.0#	5.0	15 #	220m	D	MT18	
7	STC3734	2.0	200	SJ	20	7.5	55	10	40				30m#	4.0#	5.0	25 #	200m	D	MT18	
8	STC3735	2.0	200	SJ	20	7.5	65	10	50				30m#	4.0#	5.0	25 #	200m	D	MT18	
9	STC3736	2.0	200	SJ	20	7.5	75	10	60				30m#	4.0#	5.0	25 #	200m	D	MT18	
10	STC3737	2.0	200	SJ	20	7.5	85	10	70				30m#	4.0#	5.0	25 #	200m	D	MT18	
11	STC3738	2.0	200	SJ	20	7.5	95	10	80				30m#	4.0#	5.0	25 #	200m	D	MT18	
12	STC3739	2.0	200	SJ	20	7.5	105	10	90				30m#	4.0#	5.0	25 #	200m	D	MT18	
13	STC3740	2.0	200	SJ	20	7.5	115	10	100				30m#	4.0#	5.0	25 #	200m	D	MT18	
14	STC3741	2.0	200	SJ	20	7.5	135	10	120				30m#	4.0#	5.0	25 #	200m	D	MT18	
15	STC3742	2.0	200	SJ	20	7.5	155	10	140				30m#	4.0#	5.0	25 #	200m	D	MT18	
16	STC3743	2.0	200	SJ	20	7.5	175	10	160				30m#	4.0#	5.0	25 #	200m	D	MT18	
17	STC3744	2.0	200	SJ	20	7.5	195	10	180				30m#	4.0#	5.0	25 #	200m	D	MT18	
18	STC3745	2.0	200	SJ	20	7.5	215	10	200				30m#	4.0#	5.0	25 #	200m	D	MT18	
19	2N18091	2.1	250	SJ	10	10	50	15	50 #				30m#	4.0#	10	10	150m	20uΩ	MT14	C
20	2N18101	2.1	250	SJ	10	10	100	15	100 #				30m#	4.0#	10	10	150m	20uΩ	MT14	C
21	2N18111	2.1	250	SJ	10	10	150	15	150 #				30m#	4.0#	10	10	150m	20uΩ	MT14	C
22	2N18121	2.1	250	SJ	10	10	200	15	200 #				30m#	4.0#	10	10	150m	20uΩ	MT14	C
23	2N18131	2.1	250	SJ	10	10	250	15	250 #				30m#	4.0#	10	10	150m	20uΩ	MT14	C
24	2N18141	2.1	250	SJ	10	10	300	15	300 #				30m#	4.0#	10	10	150m	20uΩ	MT14	C
25	2N18161	2.1	250	SJ	15	10	50	15	50 #				30m#	4.0#	15	10	100m	20uΩ	MT14	C
26	2N18171	2.1	250	SJ	15	10	100	15	100 #				30m#	4.0#	15	10	100m	20uΩ	MT14	C
27	2N18181	2.1	250	SJ	15	10	150	15	150 #				30m#	4.0#	15	10	100m	20uΩ	MT14	C
28	2N18191	2.1	250	SJ	15	10	200	15	200 #				30m#	4.0#	15	10	100m	20uΩ	MT14	C
29	2N18231	2.1	250	SJ	20	10	50	15	50 #				30m#	4.0#	20	10	75m	20uΩ	MT14	C
30	2N18241	2.1	250	SJ	20	10	100	15	100 #				30m#	4.0#	20	10	75m	20uΩ	MT14	C
31	2N18251	2.1	250	SJ	20	10	150	15	150 #				30m#	4.0#	20	10	75m	20uΩ	MT14	C
32	2N18261	2.1	250	SJ	20	10	200	15	200 #				30m#	4.0#	20	10	75m	20uΩ	MT14	C
33	2N18271	2.1	250	SJ	20	10	250	15	250 #				30m#	4.0#	20	10	75m	20uΩ	T049	
34	2N18301	2.1	250	SJ	25	10	50	15	50 #				30m#	4.0#	25	10	60m	20uΩ	MT14	C
35	2N18311	2.1	250	SJ	25	10	100	15	100 #				30m#	4.0#	25	10	60m	20uΩ	MT14	C
36	2N18321	2.1	250	SJ	25	10	150	15	150 #				30m#	4.0#	25	10	60m	20uΩ	MT14	C
37	2N18331	2.1	250	SJ	25	10	200	15	200 #				30m#	4.0#	25	10	60m	20uΩ	MT14	C
38	2N21091	2.1	250	SJ	10	10	50	15	50 #				30 #	1.4#	10	10	150m	20uΩ	MT12	F
39	2N21101	2.1	250	SJ	10	10	100	15	100 #				30 #	1.4#	10	10	150m	20uΩ	MT12	F
40	2N21111	2.1	250	SJ	10	10	150	15	150 #				30 #	1.4#	10	10	150m	20uΩ	MT17	F
41	2N21121	2.1	250	SJ	10	10	200	15	200 #				30 #	1.4#	10	10	150m	20uΩ	MT17	F
42	2N21131	2.1	250	SJ	10	10	250	15	250 #				30 #	1.4#	10	10	150m	20uΩ	MT17	F
43	2N21141	2.1	250	SJ	10	10	300	15	300 #				30 #	1.4#	10	10	160m	20uΩ	MT17	F
44	2N21161	2.1	250	SJ	15	10	50	15	50 #				30 #	1.4#	15	10	100m	20uΩ	MT17	F
45	2N21171	2.1	250	SJ	15	10	100	15	100 #				30 #	1.4#	15	10	100m	20uΩ	MT17	F
46	2N21181	2.1	250	SJ	15	10	150	15	150 #				30 #	1.4#	15	10	100m	20uΩ	MT17	F
47	2N21191	2.1	250	SJ	15	10	200	15	200 #				30 #	1.4#	15	10	100m	20uΩ	MT17	F
48	2N21231	2.1	250	SJ	20	10	50	15	50 #				30 #	1.4#	20	10	75m	20uΩ	MT17	F
49	2N21241	2.1	250	SJ	20	10	100	15	100 #				30 #	1.4#	20	10	75m	20uΩ	MT17	F
50	2N21251	2.1	250	SJ	20	10	150	15	150 #				30 #	1.4#	20	10	75m	20uΩ	MT17	F
51	2N21261	2.1	250	SJ	20	10	200	15	200 #				30 #	1.4#	20	10	75m	20uΩ	MT17	F
52	2N21271	2.1	250	SJ	20	10	250	15	250 #				30m#	4.0#	20	10	75m	20uΩ	T053	
53	2N21301	2.1	250	SJ	25	10	50	15	50 #				30 #	1.4#	25	10	60m	20uΩ	MT17	F
54	2N21311	2.1	250	SJ	25	10	100	15	100 #				30 #	1.4#	25	10	60m	20uΩ	MT17	F
55	2N21321	2.1	250	SJ	25	10	150	15	150 #				30 #	1.4#	25	10	60m	20uΩ	MT17	F
56	2N21331	2.1	250	SJ	25	10	200	15	200 #				30 #	1.4#	25	10	60m	20uΩ	MT17	F
57	2N21201	2.2	250	SJ	15	10	250	15	250 #				30m#	4.0#	15	10	100m	20uΩ	MT17	F
58	PT2920	3.3	4.0	SJ	10	20	100	5.0	80	1.0uΩ	1.0uΩ	1.0uΩ	3.0#	100	10	10	20m		MT49	
77	PT2972	3.3	3.0	SJ	10	20	100	8.0	100	1.0uΩ	1.0uΩ	1.0uΩ	3.0#	100	10	10	20m		MT49	
78	PT2986	3.3	4.0	SJ	10	20	100	5.0	100	1.0uΩ	1.0uΩ	1.0uΩ	3.0#	100	10	10	20m		PL	T059
79	2SC782A	5.0	25	SJ	1.5	30	300	5.0	300	3.0uΩ	1.0uΩ	1.0uΩ	4.0#	100	40	40	350		DME	T059
80	#2SCD561	5.0	25	SJ	4.0	1.0	60	7.0	40	1.0uΩ	4.0#	1.0uΩ	4.0#	1.0	40	40	80		D	T056
81	#2SCD571	5.0	25	SJ	4.0	1.0	90	7.0	60	1.0uΩ	4.0#	1.0uΩ	4.0#	1.0	40	40	80		D	T056
82	#2SCD581	5.0	25	SJ	4.0	1.0	110	7.0	80	1.0uΩ	4.0#	1.0uΩ	4.0#	1.0	40	40	80		D	T056
83	#2SCD591	5.0	25	SJ	4.0	1.0	130	7.0	100	1.0uΩ	4.0#	1.0uΩ	4.0#	1.0	40	40	80		D	T056
84	1401-0205	5.0	625	SJ	25	35	30	10	20	2.0m#	4.0#	50	10 #						D	1401a
85	1401-0207	5.0</td																		

11. SILICON NPN - HIGH POWER TRANSISTORS

IN ORDER OF (1) MIN. DERATING FACTOR
& (2) TYPE No.

LINE No.	TYPE No.	MIN. DERATE- MENT J to C	MAX. FREE AIR @ 25°C	PC A E M T	ABSOLUTE MAX. RATINGS @ 25°C				MAX. ICBO @ MAX V _{CB} @ 25°C	BIAS V _{CB} V _{CE}	hFE	fae	MAX. SAT. RES.	tr	STRUCTURE	DWG #	C s/a TO200 Ser.				
					IC	ID	BV _{CEO}	BV _{EBO}													
					(W/C)	(W)	(A)	(V)	(V)	(A)	(V)	(A)	(Hz)	(Ω)	(s)						
1	1401-10151	5.0	625	0	SJ 250	75		7.0	100	10m#	4.00	150	10 #	500kΔ	5.0uΩ	D	MT14a	C			
2	1401-10201	5.0	625	0	SJ 250	75		7.0	100	10m#	4.00	200	10 #	500kΔ	5.0uΩ	D	MT14a	C			
3	1401-10251	5.0	625	0	SJ 250	75		7.0	100	10m#	4.00	250	10 #	500kΔ	5.0uΩ	D	MT14a	C			
4	1401-1205	5.0	625	0	SJ 250	35		130	10	120	2.0m#	4.00	50	10 #	500kΔ	5.0uΩ	D	MT14a	C		
5	1401-1207	5.0	625	0	SJ 250	35		130	10	120	2.0m#	4.00	75	10 #	500kΔ	5.0uΩ	D	MT14a	C		
6	1401-1210	5.0	625	0	SJ 250	35		130	10	120	2.0m#	4.00	100	10 #	500kΔ	5.0uΩ	D	MT14a	C		
7	1401-12151	5.0	625	0	SJ 250	75		7.0	120	2	10m#	4.00	150	10 #	500kΔ	5.0uΩ	D	MT14a	C		
8	1401-12201	5.0	625	0	SJ 250	35		110	10	120	2.0m#	4.00	200	10 #	500kΔ	5.0uΩ	D	MT14a	C		
9	1401-12251	5.0	625	0	SJ 250	35		110	10	120	2.0m#	4.00	200	10 #	500kΔ	5.0uΩ	D	MT14a	C		
10	1401-1405	5.0	625	0	SJ 250	35		150	10	140	2.0m#	4.00	50	10 #	500kΔ	5.0uΩ	D	MT14a	C		
11	1401-1407	5.0	625	0	SJ 250	35		150	10	140	2.0m#	4.00	75	10 #	500kΔ	5.0uΩ	D	MT14a	C		
12	1401-1410	5.0	625	0	SJ 250	35		150	10	140	2.0m#	4.00	100	10 #	500kΔ	5.0uΩ	D	MT14a	C		
13	1401-1415	5.0	625	0	SJ 250	35		150	10	140	2.0m#	4.00	150	10 #	500kΔ	5.0MΩ	D	MT14a	C		
14	1401-1420	5.0	625	0	SJ 250	35		150	10	140	2.0m#	4.00	200	10 #	500kΔ	5.0uΩ	D	MT14a	C		
15	1401-1425	5.0	625	0	SJ 250	35		150	10	140	2.0m#	4.00	250	10 #	500kΔ	5.0uΩ	D	MT14a	C		
16#	BDY107	5.0	150	0	SJ 2.0			50	5.0	40	300u	2.00	2.0	10	50	10K	350m	4.0u	T03	C	
17#	BDY111	5.0	150	0	SJ 2.0			100	5.0	70	300u	2.00	2.0	10	50	10K	350m	4.0u	T03	C	
18#	2SC481	5.5	6.0	0	SJ 1.0			60	5.0	10uΦ	2.00	150mΔ	50 t		100MΔ		PE	T039			
19	1571-0420	6.0	29	0	SC 4.0	2.0		40	7.0	40	1.0 #	4.00	500m	20		800kΔ	2.0				
20	1571-0425	6.0	29	0	SC 4.0	2.0		40	7.0	40	1.0 #	4.00	500m	25		800kΔ	2.0				
21	1571-0620	6.0	29	0	SC 4.0	2.0		60	7.0	60	1.0 #	4.00	500m	20		800kΔ	2.0				
22	1571-0820	6.0	29	0	SC 4.0	2.0		80	7.0	80	1.0 #	4.00	500m	20		800kΔ	2.0				
23	1571-0825	6.0	29	0	SC 4.0	2.0		80	7.0	80	1.0 #	4.00	500m	25		800kΔ	2.0				
24	1571-1020	6.0	29	0	SC 4.0	2.0		100	7.0	100	1.0 #	4.00	500m	20		800kΔ	2.0				
25	1571-1025	6.0	29	0	SC 4.0	2.0		100	7.0	100	1.0 #	4.00	500m	25		800kΔ	2.0				
26	1571-1220	6.0	29	0	SC 4.0	2.0		120	7.0	120	1.0 #	4.00	500m	20		800kΔ	2.0				
27	1571-1225	6.0	29	0	SC 4.0	2.0		120	7.0	120	1.0 #	4.00	500m	25		800kΔ	2.0				
28	1571-1425	6.0	29	0	SC 4.0	2.0		140	7.0	140	1.0 #	4.00	500m	25		800kΔ	2.0				
29	1571-1620	6.0	29	0	SC 4.0	2.0		160	7.0	160	1.0 #	4.00	500m	20		800kΔ	2.0				
30	1571-1625	6.0	29	0	SC 4.0	2.0		160	7.0	140	1.0 #	4.00	500m	25		800kΔ	2.0				
31	2N5185	6.6	1.0	0	SJ 50m				5.0	120		100	50m	10		50M		R119	A		
32#	2SC615A	7.5	20	0	SJ 100m			300	5.0	200	100uΦ	100	50m	30		20M		T066	C		
33▼#	2SD2221	12	10	0	SJ 1.5			500m	40	70	10uΦ	4.00	500m	20		80.0M	1.0	300n	D		
34▼#	2SD2231	12	10	0	SJ 1.5			500m	80	70	50	10uΦ	4.00	500m	20		80.0M	1.0	300n	D	
35▼#	2SD2241	12	10	0	SJ 1.5			500m	110	70	80	10uΦ	4.00	500m	20		80.0M	1.0	300n	D	
36▼#	2SD2361	12	10	0	SJ 1.5			500m	40	70	30	10uΦ	4.00	500m	20		80.0M	1.0	300n	D	
37▼#	2SD2371	12	10	0	SJ 1.5			500m	80	70	50	10uΦ	4.00	500m	20		80.0M	1.0	300n	D	
38▼#	2SD2381	12	10	0	SJ 1.5			500m	110	70	80	10uΦ	4.00	500m	20		80.0M	1.0	300n	D	
39	83746	13	1.0	0	SJ 800m					20		100	10m	20				T018	A		
40	TRL2015	13	2.0	0	IS 3.0	1.0		200	4.0	200	10uΦ	10u	100	15		35		400n	DM		
41	TRL2255S	13	2.0	0	IS 3.0	1.0		250	4.0	225	10u	100	500m	15		35		400n	DM		
42	TRL2505	13	2.0	0	IS 3.0	1.0		250	4.0	250	10uΦ	100	500m	15		35		400n	DM		
43	TRL2505S	13	2.0	0	IS 3.0	1.0		275	4.0	250	10u	100	500m	15		35		400n	DM		
44	TRL2755S	13	2.0	0	IS 3.0	1.0		300	4.0	275	10u	100	500m	15		35		400n	DM		
45	TRL3015	13	2.0	0	IS 3.0	1.0		300	4.0	300	10uΦ	100	500m	15		35		400n	DM		
46	TRL3015S	13	2.0	0	IS 3.0	1.0		325	4.0	300	10u	100	500m	15		35		400n	DM		
47	TRL3505	13	2.0	0	IS 3.0	1.0		350	4.0	350	10u	100	500m	15		35		400n	DM		
48	TRL3515S	13	2.0	0	IS 3.0	1.0		375	4.0	350	10u	100	500m	15		35		400n	DM		
49	TRL4015	13	2.0	0	IS 3.0	1.0		400	4.0	400	10uΦ	100	500m	15		35		400n	DM		
50	PT3986	15	1.5	0	SJ 5.0	1.0		100	5.0	60	100uΦ	1.0	40	40		50M	250m	75n	PL		
51	PT4992	15	1.5	0	SJ 5.0	1.0		100	8.0	80	100uΦ	2.00	1.0	40		120	20M	500m	80n	PL	
52	PT5909	20	1.0	0	SJ 10	2.0		100	6.0	80	1.0uΦ	5.00	1.0	100		300	50M	150m	70nΦ	PL	
53#	BU125	25	800	0	SJ 5.0			130	5.0	60	10u	2.00	5.0	15		650nΦ		PE	T039	A	
54▼#	BF857	30	50	0	SJ 100m			160	5.0	160	50nΔ	100	30m	25					PE	T039	A
55▼#	BT858	30	50	0	SJ 100m			250	5.0	250	50nΔ	100	30m	25					PE	T039	A
56▼#	BF859	30	50	0	SJ 100m			300	5.0	300	50nΔ	100	30m	25					PE	T039	A
57#	2SC1038	40	3.7	0	S 150mΩ			40	3.0	20	50uΦ	100	70m	15		200		2.0G	PE	MT75c	GJ
58#	2SC1039	40	7.5	0	S 250mΩ			40	3.0	20	100uΦ	100	100m	15		200		2.0G	PE	MT75c	GJ
59#	2SC1041	40	3.7	0	S 150mΩ			40	3.0	20	50uΦ	100	70m	15		200		2.0G	PE	MT75c	GJ
60#	2SC1042	40	7.5	0	S 250mΩ			40	3.0	20	100uΦ	100	100m	15		200		2.0G	PE	MT75c	GJ
61▼#	2SD2197	250	500m	0	SJ 1.0			500m	40	7.0	30	1.0uΦ	4.00	200m	40		400	8.0M	1.0	300n	D
62▼#	2SD2201	250	500m	0	SJ 1.0			500m	80	7.0	50	1.0uΦ	4.00	200m	40		400	8.0M	1.0	300n	D
63▼#	2SD2211	250	500m	0	SJ 1.0			600m	110	7.0	80	1.0uΦ	4.00	200m	40		400	8.0M	1.0	300n	D
64	SDT4451	40M	4.0	0	SJ 5.0			80	18.0	40	1										

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1) fab (Hz)	2) MAX RISE TIME tr (s)	MAX DELAY td (s)	MAX STORE ts (s)	MAX FALL tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob	rbb X Cob (s)	STRUCTURE P-PNP N-NPN	M A T	MAX TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C E O A D D E
								Vcb	le	hFE								
1	2N5432		1.0n	40nØ	6.0nØ	30n	300m				5.0	30ps	N	Si	T50S	T052	DJ	
2	2N5433		1.0n	40nØ	6.0nØ	30n	300m				7.0	30ps	N	Si	150S	T052	DJ	
3	2N5434		1.0n	40nØ	6.0nØ	30n	300m				10	30ps	N	Si	150S	T052	DJ	
4#	E1112		1.0n	5.0n	5.0nØ	4.0n	800m	10 Ø	150mØ	120 Ø	3.0		N-PE	Si	175J	R100	A	
5#	E108		1.0n	3.0nØ	5.0nØ	25n	250m				8.0	5	N	Si	125A	X45	DB	
6#	E109		1.0n	3.0nØ	5.0nØ	25n	250m				12	5	N	Si	125A	X45	DB	
7#	E110		1.0n	3.0nØ	5.0nØ	25n	250m				18	5	N	Si	125A	X45	DB	
8	NS1110		1.0n	5.0n	5.0nØ	4.0n	500m						N	Si	175J	TO18	AØ	
9	NS1111		1.0n	5.0n	5.0nØ	4.0n	500m						N	Si	175J	TO18	AØ	
10	2N4856		3.0n	6.0nØ	25nØ	380m					25	5	N	Si	200S	TO18	DBØ	
11	2N4856A		3.0n	5.0nØ	25nØ	20nØ	1.8 Ø				25	5	N	Si	200S	TO18	DB	
12	2N4859		3.0n	6.0nØ	25nØ	360m					25	5	N	Si	200S	TO18	DBØ	
13	2N4859A		3.0n	5.0nØ	20nØ	1.8 Ø					25	5	N	Si	200S	TO18	DB	
14#	BSV38		3.0n	6.0n	25nØ	300mØ					25	5	N	Si	150S	u51	G	
15#	BSV38P		3.0n	6.0n	25nØ	150mØ					25	5	N	Si	150S	u17c	E	
16#	BSV78		3.0n	5.0n	50nØ	350m					25	5	N	Si	200J	TO18	DBØ	
17	TIS73		3.0n	6.0nØ	25nØ	360m					50	5	N	Si	150S	X55	DB	
18	2N4857		4.0n	6.0nØ	50nØ	360m					40	5	N	Si	200S	TO18	DBØ	
19	2N4857A		4.0n	8.0nØ	40nØ	1.8 Ø					40	5	N	Si	200S	TO18	DB	
20	2N4860		4.0n	6.0nØ	50nØ	360m					40	5	N	Si	200S	TO18	DBØ	
21	2N4860A		4.0n	6.0nØ	40nØ	1.8 Ø					40	5	N	Si	200S	TO18	DB	
22#	E111		4.0n	10nØ	15nØ	10n	250m				30	5	N	Si	125A	X45	D8	
23	E112		4.0n	10nØ	20nØ	15n	250m				50	5	N	Si	125A	X45	DB	
24#	E113		4.0n	10nØ	35nØ	20n	250m				100	5	N	Si	125A	X45	DB	
25	TIS74		4.0n	6.0nØ	50nØ	360m					40	5	N	Si	150S	X55	DB	
26	2N4391		5.0n	15nØ	20nØ	15n	1.8 Ø				30	5	N	Si	200S	TO18	DBØ	
27	2N4392		5.0n	15nØ	35nØ	20n	1.8 Ø				60	5	N	Si	200S	TO18	DBØ	
28	2N4393		5.0n	15nØ	50nØ	30n	1.8 Ø				100	5	N	Si	200S	TO18	DBØ	
29	2N4977		5.0n	5.0n	50nØ	20nØ	1.8 Ø				15	5	N	Si	200S	TO18	Ø	
30	2N5555		5.0n	5.0n	50nØ	10n	310m				150	5	N	Si	150S	T092	DD	
31	2N5638		5.0n	5.0n	10n	310m					10ps		N	Si	150S	T092	DD	
32	2N5653		5.0n	5.0n	10n	310m					10ps		N	Si	150S	T092	DD	
33#	BSV79		5.0n	7.0n	50nØ	350m					40	5	N	Si	200J	TO18	DBØ	
34	HSC4391		5.0n	15nØ	20nØ	15n	310m				30	5	N	Si	125S	T0106	DB	
35	HSC4392		5.0n	15nØ	35nØ	20n	310m				60	5	N	Si	125S	T0106	DB	
36	HSC4393		5.0n	15nØ	50nØ	30n	310m				100	5	N	Si	125S	T0106	DB	
37	HSC5538		5.0n	5.0n	10n	10n	310m				10p		N	Si	150J	u34	DB	
38	LDF691		5.0n	15nØ	20nØ	15n	360m				16psØ		N	Si	150J	u34	DB	
39	LDF692		5.0n	15nØ	35nØ	20n	360m				16psØ		N	Si	150J	u34	DB	
40	3N167		6.0n	8.0nØ	12nØ	9.0n	225m				20	5	P	Si	150S	T072	DM	
41	3N168		6.0n	8.0nØ	12nØ	9.0n	225m				40	5	P	Si	150S	T072	DM	
42	MFE2007		6.0n	10n	10n	65n	1.8 Ø				30psØ		N	Si	175J	TO18	DBØ	
43	MFE2008		6.0n	10n	40n	40n	1.8 Ø				30psØ		N	Si	175J	TO18	DB	
44	MFE2009		6.0n	10n	25n	25n	1.8 Ø				30psØ		N	Si	175J	TO18	DBØ	
45	MFE2010		6.0n	10n	75n	75n	1.8 Ø				50psØ		N	Si	175J	TO18	DBØ	
46	MFE2011		6.0n	10n	45n	45n	1.8 Ø				50psØ		N	Si	200S	TO18	DBØ	
47	MFE2012		6.0n	10n	25n	25n	1.8 Ø				50psØ		N	Si	200S	TO18	DBØ	
48	2N4858A		8.0n	8.0nØ	80nØ	1.8 Ø					60	5	N	Si	200S	TO18	DB	
49	2N4861A		8.0n	8.0nØ	80nØ	1.8 Ø					60	5	N	Si	200S	TO18	DB	
50	2N5639		8.0n	8.0n	20n	20n	310m				10ps		N	Si	150S	T092	DD	
51	2N5654		8.0n	8.0n	20n	20n	310m				10ps		N	Si	150S	T092	DD	
52	HSC5639		8.0n	10n	30nØ	20n	310m				10p		N	Si	125S	T0106	DB	
53	2N3970		10n	10n	40nØ	360m					16psØ		N	Si	200S	TO18	DBØ	
54	JAN2N4091		10n	10n	40nØ	360m					20	5	N	Si	175A	TO18	DBØ	
55	2N4094		10n	15n	40nØ	1.8 Ø					60	5	N	Si	200S	TO18	DBØ	
56	2N4858		10n	10n	100nØ	360m					60	5	N	Si	200S	TO18	DBØ	
57	2N4861		10n	10n	100nØ	360m					18psØ		N	Si	200S	TO18	DBØ	
58	2N4978		10n	50n	40nØ	1.8 Ø					20	5	N	Si	200S	TO18	DBØ	
59	2N5114		10n	50n	15n	15n	500m				75	5	N	Si	200S	TO18	DAØ	
60	2N5640		10n	15n	30n	310m					10ps		N	Si	150S	T092	DD	
61	3N189		10n	15n	15n	800mØ					5.0ps		N	Si	200S	T072	DRØ	
62	3N170		10n	15n	15n	800mØ					5.0ps		N	Si	200S	T072	DRØ	
63	3N171		10n	15n	800mØ						5.0ps		N	Si	200S	T072	DRØ	
64#	BSV80		10n	10n	50nØ	350m					60	5	N	Si	200J	TO18	DBØ	
65	HSC5640		10n	15n	40nØ	1.8 Ø					10p		N	Si	125S	T0106	DB	
66	MFE2006		10n	15n	100nØ	360m					16psØ		N	Si	175J	TO18	DBØ	
67	TIS75		10n	10n	100nØ	360m					60	5	N	Si	120S	X55	DE	
68	U1897E		10n	15n	40nØ	1.8 Ø					30	5	N	Si	125J	R97b	DB	
69	D26B1		12nØ	10nØ	90n	1.0 Ø					4.0pØ		N	Si	100J	u40b	DB	
70	D26B2		12nØ	13n	18nØ	90n	1.0 Ø				4.0pØ		N	Si	100J	u40b	DB	
71	MMT76		13n	24n	125n	11n	225m	1.0 Ø	10mØ	400 Ø	5.0pØ		N	Si	135J	u43	C	
72	2N3971		15n	24n	60nØ	1.8					60	5	N	Si	200S	T018	DBØ	
73	JAN2N501A		18n	25n	12n	10n	80m	500mØ	50mØ	30 Ø	5.0	3.0pØ	P	Si	100S	R139	A	
74	MMT75		18n	25n	140n	1.0 Ø	300m	50 Ø	10mØ	400 Ø	5.0	3.0pØ	N	Si	135J	u43	C	
75	JAN2N4092		20n	50n	60nØ	360m					50	5	N	Si	200S	TO18	DBØ	
76	2N4092A		20n	15n	60nØ	1.8 Ø					40	5	N	Si	200S	TO18	DBØ	
77	2N4095		20n	15n	60nØ	1.8 Ø					70psØ		N	Si	200S	TO18	DBØ	
78	2N4445		20n	15n	20n	15n	400m				70psØ		N	Si	200S	TO46	DDØ	
79	2N4446		20n	15n	20n	15n	400m				70psØ		N	Si	200S	TO46	DDØ	
80	2N4447		20n	15n	20n	15n												

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	1	2	MAX RISE TIME	MAX DELAY tr	MAX STORE td	MAX FALL ts	MAX. IN FREE time tf	Pc AIR @ 25°C	BIAS	MAX. SAT. RES. (Ω)	Cob	rbb X Cob (s)	STRUCTURE	M A T	DWG # Y200 s/a	L C E O A D D E
					(s)	(s)	(s)	(s)	(W)	(V)	(A)							
1	MEM402		30n	30n	180n	600m	600m	50n	50n	15	500μs	75s	30ps	Si	200S	TO33	DM	
2	MFE3020		30n	20n	180n	600m	600m	50n	50n	15	500μs	500s	7.0ps	P+P	Si	175J	L18a	
3	MFE3021		30n	20n	180n	600m	600m	50n	50n	15	500μs	250s	7.0ps	P+P	Si	175J	L18a	
4	2N94		35n	45n	200m	25	25	10n	140	1	18	6.0ps	P	Si	150S	TO18	A	
5	3N176		35n	30n	150n	225m	225m	55n	180n	1.0	300s	6.0s	N	Si	200S	TO72	DR	
6	3N182		35n	35n	180n	300m	300m	160n	1.0	1.0	25ps	60s	N	Si	200S	TO72	DM	
7	CM897		35n	35n	400m							15s	N-E	Si	200J	R135	DD	
8	2N3972		40n	40n	100n	1.8	1.8					100s	N	Si	200S	TO18	DB	
9	JAN2N4093		40n	40n	80n	360m	360m					16ps	N	Si	200S	TO18	DB	
10	2N4082A		40n	20n	80n	1.8	1.8					16ps	N	Si	200S	TO18	DB	
11	2N5189		40n	40n	70n	1.0	1.0					1.0	N	Si	200S	R81	A	
12#	2SC1072		40n	50n	60n	800m	800m	60n	500m	35	35	12p	N-PE	Si	175J	R81c	A	
13#	2SC1072A		40n	40n	50n	800m	800m	60n	500m	35	35	3.0ps	N-PE	Si	175J	R81c	A	
14	3N177		40n	35n	150n	225m	225m	60n	1.0	1.0	7.0ps	N-MOS	Si	200S	TO72	DR		
15	3N183		40n	40n	160n	300m	300m	160n	1.0	1.0	7.5s	PMOS	Si	200S	TO72	DM		
16#	BFV51		40n	50n	150m	150m	150m	50n	500m	20	20	3.3	NPE	Si	200J	U345	P	
17#	BFV53		40n	40n	150m	150m	150m	50n	500m	20	20	3.3	NPE	Si	200J	U345	P	
18	MFE2004		40n	20n	80n	1.8	1.8					16ps	N	Si	175J	TO18	DB	
19	U1893E		40n	20n	80n	300m	300m					80s	N	Si	125J	R975	DB	
20#	2SC913		42n	25n	38n	300m	300m	1.0	30m	45	1Δ	5.0ps	N-PE	Si	175J	TO18	A	
21#	2SC915		42n	25n	38n	300m	300m	1.0	30m	45	1Δ	5.0ps	N-PE	Si	175J	TO18	A	
22#	2SC1071		45n	27n	42n	300m	300m	1.0	30m	40	Δ	5.0ps	N-PE	Si	175J	TO18	A	
23	3N184		45n	35n	150n	300m	300m	100n	360m	15	400us	9.0ps	PMOS	Si	200S	TO72	DM	
24	3N174		50n	50n	150n	300m	300m	100n	360m	15	400us	4.0ps	PMOS	Si	200S	TO72	DM	
25	3N185		50n	40n	60n	800m	800m	1.0	500m	50	Δ	750m	N-PE	Si	200S	TO72	OM	
26#	BSV69		50n	50n	60n	800m	800m	1.0	500m	50	Δ	10ps	N	Si	200J	TO39	A	
27	CMX740		50n	50n	75n	400m	400m	75n	400m	50	Δ	2.5s	N	Si	200J	TO46	DD	
28	3N188		55n	45n	150n	300m	300m	150n	500m	5.0	100m	200	11ps	PMOS	Si	200S	TO72	DM
29	JAN2N560		50n	50n	250n	500m	500m	250n	500m	10m	10m	55	8.0ps	N	Si	200S	T05	A
30	2N1499		50n	50n	250n	500m	500m	250n	500m	10m	10m	20	P-AD	Ge	85S	T09	A	
31	2N4353		50n	60n	120n	180n	180n	250n					P	Si	125S	TO72	DM	
32#	2SC916		60n	20n	200n	2.0	2.0	1.0	400m	40	1Δ	38ps	N-PE	Si	175J	T08		
33	2N3867		65n	35n	325n	75n	6.0	3.0	2.5	25	Δ	1.0	120ps	P	Si	200S	T05	A
34	2N3888		65n	35n	325n	75n	6.0	3.0	2.5	20	Δ	1.0	120ps	P	Si	200S	T05	A
35	2N4351		65n	45n	160n	300m	300m	160n	300m	100	300s	5ps	N	Si	200S	TO72	DR	
36	2N4352		65n	45n	160n	300m	300m	160n	300m	100	600s	5ps	P	Si	200S	TO72	DR	
37	3N155		65n	45n	100n	300m	300m	100n	300m	100	600s	5ps	P	Si	175J	TO72	DR	
38	3N155A		65n	100n	100n	300m	300m	100n	300m	100	600s	5ps	P	Si	175J	TO72	DR	
39	3N156		65n	45n	100n	300m	300m	100n	300m	100	600s	5ps	P	Si	175J	TO72	DR	
40	3N156A		65n	45n	100n	300m	300m	100n	300m	100	600s	5ps	P	Si	175J	TO72	DR	
41	MEM200		65n	45n	100n	100n	100n	225m	225m	100	200s	5.0ps	N	Si	200S	TO22	DR	
42	MEM201		65n	45n	100n	100n	100n	225m	225m	100	300s	5.0ps	N	Si	200S	TO22	DR	
43	MEM202		65n	45n	100n	100n	100n	225m	225m	100	500s	5.0ps	N-MOS	Si	200S	TO22	DR	
44	MEM562		65n	45n	160n	650m	650m	10	2.0m	1.0	300s	7.0ps	P	Si	125S	TO72	DR	
45	JAN2N1646		70n	70n	100n	150n	150n	500m	500m	15	Δ	60	5.0ps	P	Si	100S	X25	A
46	JAN2N695		75n	100n	100n	150m	150m	200m	10m	25	Δ	20	5.0ps	P	Ge	100J	T017	G
47	JAN2N705		75n	100n	100n	150m	150m	200m	10m	10	Δ	20	5.0ps	P	Ge	100J	TO18	Ø
48	2N710A		75n	50n	75n	300m	300m	500m	500m	25	Δ	50	8.0ps	P	Ge	100S	TO18	A
49	2N782		75n	35n	75n	300m	300m	25	10m	20	Δ	20	5.0ps	P	Ge	100J	T018	A
50	2N5019		75n	15n	100n	1.8	1.8					150s	45ps	P	Si	200J	T018	DA
51	MEM100		75n	55n	150n	300m	300m	150n	300m	100	150s	9.0ps	P	Si	200S	TO72	DM	
52	MEM101		75n	55n	150n	300m	300m	150n	300m	100	175s	10ps	P	Si	200S	TO72	DM	
53	MEM102		75n	55n	150n	300m	300m	150n	300m	100	200s	11ps	P	Si	125J	R975	DB	
54	P1087E		75n	15n	100n	300m	300m	100n	300m	100	45ps	P	Si	100S	T029	A		
55#	2SC914		80n	50n	80n	300m	300m	1.0	30m	45	Δ	5.0ps	N-PE	Si	175J	TO18	A	
56	2N4305		90n	50n	300n	100n	1.5	2.0	5.0m	10	#	20	100ps	N	Si	200J	T05	A
57	2N4306		90n	50n	300n	100n	4.0	2.0	5.0m	10	#	20	100ps	N	Si	200S	MT65	
58	2N4307		90n	50n	300n	100n	1.5	2.0	5.0m	10	#	20	100ps	P	Si	200S	TO5	A
59	2N4308		90n	50n	300n	100n	4.0	2.0	5.0m	10	#	20	100ps	P	Si	200S	MT65	
60	2N4309		90n	50n	300n	100n	1.5	2.0	5.0m	10	#	20	100ps	P	Si	200J	TO5	A
61	2N4310		90n	50n	300n	100n	4.0	2.0	5.0m	10	#	33	100ps	P	Si	200C	MT65	
62	2N4311		90n	50n	300n	100n	1.5	2.0	5.0m	10	#	33	100ps	P	Si	200J	T05	A
63	2N4312		90n	50n	300n	100n	4.0	2.0	5.0m	10	#	33	100ps	P	Si	200C	MT65	
64	JAN2N1072		100n	85n	300n	120m	1.2	5.0	750m	20	Δ	1.5	55ps	P	Si	150S	T038	A
65	2N1450		100n	100n	85n	120m	1.0	1.0	10m	10	Δ	25	P-AD	Ge	85S	T09		
66	JAN2N1450M		100n	100n	85n	120m	1.0	1.0	10m	10	Δ	25	P-AD	Ge	100S	R81a		
67	2N3966		100n	20n	100n	320m	320m					220s	6.0ps	N	Si	200S	TO72	OH
68	3N147		100n	20n	150n	1.7	1.7					850s	N	Si	175J	L18a		
69	3N148		100n	20n	150n	1.7	1.7					850s	N	Si	175J	L18a		
70	3N149		100n	20n	150n	1.3	1.3					400s	N	Si	175J	TO72	DM	
71	3N150		100n	20n	150n	1.3	1.3					400s	N	Si	175J	TO72	DM	
72	2N3342		150n	80n	200m	250m	1.0	2.0	5.0m	30	Δ	20	10ps	P	Si	175S	TO5	A
73	2N4256		180n	3.5u	200m	200m	1.0	2.0	5.0m	20	Δ	20	2.0ks	P	Si	12		

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	MAX RISE TIME		MAX DELAY TIME		MAX STORE TIME		MAX FALL TIME		MAX. IN FREE		BIAS		MAX. SAT. RES.	Cob	r'bb (Ω)	STRUCTURE	MAX. TEMP.	Y200 S/A	DWG #	L C E O A D T O 200 D E
			tr (s)	td (s)	ts (s)	tr (s)	td (s)	ts (s)	Vcb (V)	Ie (A)	HFE	(V)	(A)	(Ω)	(F)	X Cob	P-PNP N-NPN	A T				
1	154-04		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
2	154-06		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
3	154-08		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
4	154-10		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
5	154-12		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
6	154-14		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
7	154-16		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
8	154-18		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
9	154-20		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
10	154-22		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
11	154-24		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
12	154-26		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
13	154-28		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
14	154-30		3.0u	0.1			6.0u	0.1	200	0	4.0	0	1.5	0	25	△	833m		Si	175J	MT58	
15	JAN2N2528	4000n	3.0u	2.0u			85	0	20	0	2.0	0	3.0	0	20	△	80m	P	Ge	110J	MD61	CQ
16	B170018	4000n	300n	500n	60	0	4.0	0	1.0	0	30		400m		N-DM	Si	200J	T03	CQ			
17	B170021	4000n	300n	500n	60	0	4.0	0	1.0	0	30		400m		N-DM	Si	200J	T03	CQ			
18	B170024	4000n	300n	500n	60	0	4.0	0	1.0	0	30		400m		N-DM	Si	200J	T03	CQ			
19	ZN2739	6000n	12u	0			20ms	0	12	0	2.5	0	25	TA	15		N	Si	175C	MT1	B	
20	ZN2740	6000n	12u	0			20ms	0	12	0	2.5	0	25	TA	15		N	Si	175C	MT1	B	
21	ZN2741	6000n	12u	0			20ms	0	12	0	2.5	0	25	TA	15		N	Si	175C	MT1	B	
22	ZN2742	6000n	12u	0			20ms	0	12	0	2.5	0	25	TA	15		N	Si	175C	MT1	B	
23	ZN2743	6.0u	12u	0			20ms	0	4.0	0	10	0	10	△		N	Si	175C	MT1b	B		
24	ZN2744	6.0u	12u	0			20ms	0	4.0	0	10	0	10	△		N	Si	175C	MT1b	B		
25	ZN2745	6000n	12u	0			20ms	0	12	0	3.7	0	20	TA	10		N	Si	175C	MT1	B	
26	ZN2746	6000n	12u	0			20ms	0	12	0	3.7	0	20	TA	10		N	Si	175C	MT1	B	
27	ZN2747	6000n	12u	0			20ms	0	12	0	3.7	0	20	TA	10		N	Si	175C	MT1	B	
28	ZN2748	6000n	12u	0			20ms	0	12	0	3.7	0	20	TA	10		N	Si	175C	MT1	B	
29	ZN2757	6000n	12u	0			20ms	0	12	0	2.5	0	25	TA	15		N	Si	175C	MT33	A	
30	ZN2758	6000n	12u	0			20ms	0	12	0	2.5	0	25	TA	15		N	Si	175C	MT33	A	
31	ZN2759	6000n	12u	0			20ms	0	12	0	2.5	0	25	TA	15		N	Si	175C	MT33	A	
32	ZN2760	6000n	12u	0			20ms	0	12	0	2.5	0	25	TA	15		N	Si	175C	MT33	A	
33	ZN2761	6000n	12u	0			20ms	0	12	0	2.5	0	25	TA	15		N	Si	175C	MT33	A	
34	ZN2762	6.0u	12u	0			200	0	12	0	10	0	10	△		N	Si	175C	MT33	A		
35	ZN2763	6000n	12u	0			20ms	0	12	0	3.7	0	20	TA	10		N	Si	175C	MT33	A	
36	ZN2764	6000n	12u	0			20ms	0	12	0	3.7	0	20	TA	10		N	Si	175C	MT33	A	
37	ZN2765	6000n	12u	0			20ms	0	12	0	3.7	0	20	TA	10		N	Si	175C	MT33	A	
38	ZN2766	6000n	12u	0			20ms	0	12	0	3.7	0	20	TA	10		N	Si	175C	MT33	A	
39	ZN2767	6.0u	12u	0			200	0	12	0	15	0	10	△		N	Si	175C	MT33	A		
40	ZN2768	6.0u	12u	0			200	0	12	0	15	0	10	△		N	Si	175C	MT33	A		
41	ZN5926	6.0u	4.0u	6.0u	200	0	2.0	0	50	0	10	0	#		N	Si	200J	T063	AQ			
42	ZN5927	6.0u	4.0u	6.0u	200	0	2.0	0	70	0	10	0	#		N	Si	200J	T014	AQ			
43	163-04	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
44	163-06	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
45	163-08	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
46	163-10	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
47	163-12	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
48	163-14	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
49	163-16	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
50	163-18	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
51	163-22	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
52	163-24	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
53	163-26	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
54	163-28	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
55	163-30	6.0u	12u	0			200	0	4.0	0	5.0	0	15	△		N	Si	175J	MT33	AQ		
56	164-04	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
57	164-06	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
58	164-08	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
59	164-10	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
60	164-12	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
61	164-14	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
62	164-16	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
63	164-18	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
64	164-20	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
65	164-22	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
66	164-24	6.0u	12u	0			200	0	4.0	0	5.0	0	25	△		N	Si	175J	MT33	AQ		
67	164-26	6.0u	12u	0			200	0	4.0	0	5.0</td											

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1	2	MAX RISE TIME tr (Hz)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob (Ft)	r _{bb} X Cob (s)	STRUCTURE P-PNP N-NPN	MAX TEMP T (°C)	DWG #	L C
		fab		V _{cb} (V)	I _e (A)	HFE											Y200 s/a	T0200 Ser.
1	2N5438	12u	10u	8.0u	120 Ø	2.0 Ø	25 Ø	40 Δ	P	Ge	110J	T03	CØ					
2	2N5439	12u	8.0u	120 Ø	2.0 Ø	25 Ø	40 Δ	P	Ge	110J	T03	CØ						
3	2N5440	12u	8.0u	120 Ø	2.0 Ø	25 Ø	40 Δ	P	Ge	110J	T03	CØ						
4	2N637	15.0u		35u	25	5.0 Ø	3 Ø	30 Δ	P	Ge	100J	T03	CØ					
5	2N637A	15.0u		35u	25	5.0 Ø	3 Ø	30 Δ	P	Ge	100J	T03	CØ					
6	2N637B	15.0u		35u	25	5.0 Ø	3 Ø	30 Δ	P	Ge	100J	T03	CØ					
7	2N638	15.0u		35u	25	5.0 Ø	3 Ø	20 Δ	P	Ge	100J	T03	CØ					
8	2N638A	15.0u		35u	25	5.0 Ø	3 Ø	20 Δ	P	Ge	100J	T03	CØ					
9	2N638B	15.0u		35u	25	5.0 Ø	3 Ø	20 Δ	P	Ge	100J	T03	CØ					
10	2N639	15.0u		35u	25	5.0 Ø	3 Ø	15 Δ	P	Ge	100J	T03	CØ					
11	2N639A	15.0u		35u	25	5.0 Ø	3 Ø	15 Δ	P	Ge	100J	T03	CØ					
12	2N639B	15.0u		35u	25	5.0 Ø	3 Ø	15 Δ	P	Ge	100J	T03	CØ					
13	2N5575	15uØ		15uØ	150 Ø	4.0 Ø	60 Ø	10 Δ#	N	Si	175J	MD41	CØ					
14	2N5576	15uØ		15uØ	150 Ø	4.0 Ø	60 Ø	10 Δ#	N	Si	175J	MD37	CØ					
15	2N5577	15uØ		15uØ	150 Ø	4.0 Ø	60 Ø	10 Δ#	N	Si	175J	MD38	CØ					
16	DTG2400M	18u	12u	18u	85 Ø	2.0 Ø	25 Ø	15 Δ	P	Ge	110J	T03	CØ					
17	2N1809	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT14	CØ					
18	2N1810	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT14	CØ					
19	2N1811	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT14	CØ					
20	2N1812	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT14	CØ					
21	2N1813	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT14	CØ					
22	2N1814	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT14	CØ					
23	2N1816	20uØ		25uØ	250 Ø	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT14	CØ					
24	2N1817	20uØ		25uØ	250 Ø	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT14	CØ					
25	2N1818	20uØ		25uØ	250 Ø	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT14	CØ					
26	2N1819	20uØ		25uØ	250 Ø	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT14	CØ					
27	2N1820	20uØ		25uØ	250mØ	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT14	CØ					
28	2NT1823	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	MT14	CØ					
29	2N1824	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	MT14	CØ					
30	2N1825	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	MT14	CØ					
31	2N1826	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	MT14	CØ					
32	2N1827	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	TO49	CØ					
33	2N1830	20uØ		25uØ	250 Ø	4.0 Ø	25 Ø	10 Δ	N	Si	175J	MT14	CØ					
34	2N1831	20uØ		25uØ	250 Ø	4.0 Ø	25 Ø	10 Δ	N	Si	175J	MT14	CØ					
35	2N1832	20uØ		25uØ	250 Ø	4.0 Ø	25 Ø	10 Δ	N	Si	175J	MT14	CØ					
36	2N1833	20uØ		25uØ	250 Ø	4.0 Ø	25 Ø	10 Δ	N	Si	175J	MT14	CØ					
37	2N2109	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT17	F					
38	2N2110	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT17	F					
39	2N2111	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT17	F					
40	2N2112	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT17	F					
41	2N2113	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT17	F					
42	2N2114	20uØ		25uØ	250 Ø	4.0 Ø	10 Ø	10 Δ	N	Si	175J	MT17	F					
43	2N2116	20uØ		25uØ	250 Ø	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT17	F					
44	2N2117	20uØ		25uØ	250 Ø	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT17	F					
45	2N2118	20uØ		25uØ	250 Ø	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT17	F					
46	2N2119	20uØ		25uØ	250 Ø	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT17	F					
47	2N2120	20uØ		25uØ	250mØ	4.0 Ø	15 Ø	10 Δ	N	Si	175J	MT17	F					
48	2N2123	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	MT17	F					
49	2N2124	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	MT17	F					
50	2N2125	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	MT17	F					
51	2N2126	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	MT17	F					
52	2N2127	20uØ		25uØ	250 Ø	4.0 Ø	20 Ø	10 Δ	N	Si	175J	TO83	C					
53	2N2130	20uØ		25uØ	250 Ø	4.0 Ø	25 Ø	10 Δ	N	Si	175J	MT17	F					
54	2N2131	20uØ		25uØ	250 Ø	4.0 Ø	25 Ø	10 Δ	N	Si	175J	MT17	F					
55	2N2132	20uØ		25uØ	250 Ø	4.0 Ø	25 Ø	10 Δ	N	Si	175J	MT17	F					
56	2N2133	20uØ		25uØ	250 Ø	4.0 Ø	25 Ø	10 Δ	N	Si	175J	MT17	F					
57	2N5692	20u		15u	120 Ø	2.0 Ø	40 Ø	10 Δ	P	Ge	110J							
58	2N5693	20u		15u	120 Ø	2.0 Ø	40 Ø	10 Δ	P	Ge	110J							
59	2N5694	20u		15u	120 Ø	2.0 Ø	40 Ø	10 Δ	P	Ge	110J							
60	2N5695	20u		15u	120 Ø	2.0 Ø	40 Ø	10 Δ	P	Ge	110J							
61	2N5696	20u		15u	120 Ø	2.0 Ø	40 Ø	10 Δ	P	Ge	110J							
62	MP900	25u		5.0u	250 Ø	2.0 Ø	70 Ø	20 Ø	P	PAN	110J	X71	A					
63	MP901	25u		5.0u	250 Ø	2.0 Ø	70 Ø	20 Ø	P	PAN	110J	X71	A					
64	MP902	25u		5.0u	250 Ø	2.0 Ø	70 Ø	20 Ø	P	PAN	110J	X71	A					
65	B113003	30u		6.0u	20u	3.5 Ø	100 Ø	100 Ø	P	DA	110	T03	CØ					
66	B113004	30u		6.0u	20u	3.5 Ø	100 Ø	100 Ø	P	DA	110	T03	CØ					
67	B113005	30u		6.0u	20u	3.5 Ø	100 Ø	30 Ø	P	DA	110	T03	CØ					
68	166-20	66.0uØ		12uØ	200 Ø	4.0 Ø	5.0 Ø	15 Δ	N	Si	175J	MT33	AØ					
69	151-06	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
70	151-08	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
71	151-10	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
72	151-12	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
73	151-14	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
74	151-16	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
75	151-18	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
76	151-20	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
77	151-22	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
78	151-24	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
79	151-26	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
80	151-28	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
81	151-30	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	11 Δ	N	Si	150J	MT1						
82	152-04	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	18 Ø	N	Si	150J	MT1						
83	152-06	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	18 Ø	N	Si	150J	MT1						
84	152-08	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	18 Ø	N	Si	150J	MT1						
85	152-10	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	18 Ø	N	Si	150J	MT1						
86	152-12	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	18 Ø	N	Si	150J	MT1						
87	152-14	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	18 Ø	N	Si	150J	MT1						
88	152-16	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	18 Ø	N	Si	150J	MT1						
89	152-18	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	18 Ø	N	Si	150J	MT1						
90	152-20	7.0mØ		14mØ	100	4.0 Ø	1.5mØ	18 Ø	N	Si	150J	MT1						
91	152-22	7.0mØ		14mØ	100	4.0 Ø	1.5m Ø	18 Ø	N	Si	150J	MT1						
92	152-24	7.0mØ		14mØ	100	4.0 Ø	1.5m Ø	18 Ø	N	Si	150J	MT1						
93	152-26	7.0mØ		14mØ</td														

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	MAX		MAX		MAX		BIAS		MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob (s)	STRUCTURE	MAX. TEMP. s/a	DWG #	L C E O D E	
		fab	RISE TIME tr	MAX DELAY td	MAX STORE ts	MAX FALL time tf	Pc in FREE AIR @ 25°C	V _{cb}	I _e	hFE							
		(Hz)	(s)	(s)	(s)	(W)	(V)	(A)									
1#	ZN4280	2.0k Δ	200 μ			100u \emptyset	170 \emptyset	2.0 \emptyset	15 \emptyset	60 Δ #			P	Ge	110J	T03	C \emptyset
2#	ZN4281	2.0k Δ	20u \emptyset			100u \emptyset	170 \emptyset	2.0 \emptyset	15 \emptyset	80 Δ #			P	Ge	110J	T03	C \emptyset
3#	ZN4282	2.0k Δ	20u \emptyset			100u \emptyset	170 \emptyset	2.0 \emptyset	15 \emptyset	60 Δ #			P	Ge	110J	T03	C \emptyset
4#	ZN4283	2.0k Δ	20u \emptyset			100u \emptyset	170 \emptyset	2.0 \emptyset	15 \emptyset	80 Δ #			P	Ge	110J	T03	C \emptyset
5	JAN2N1553A	3.0k Δ	10u	2.0u	5.0u	30u	90 \emptyset	2.0 \emptyset	5.0 \emptyset	30 Δ	700m		P	Ge	100J	T03	C \emptyset
6	JAN2N1554A	3.0k Δ	10u	2.0u	5.0u	30u	90 \emptyset	2.0 \emptyset	5.0 \emptyset	30 Δ	700m		P	Ge	100J	T03	C \emptyset
7	JAN2N1555A	3.0k Δ	10u	2.0u	5.0u	30u	90 \emptyset	2.0 \emptyset	5.0 \emptyset	30 Δ	700m		P	Ge	100J	T03	C \emptyset
8	JAN2N1556A	3.0k Δ	10u	2.0u	5.0u	30u	90 \emptyset	2.0 \emptyset	5.0 \emptyset	30 Δ	700m		P	Ge	100J	T03	C \emptyset
9	ZN2T28	3.0k Δ	25u			15u	170 \emptyset	2.0 \emptyset	20u \emptyset	40 Δ	2.0m		P	Ge	110C	T036	C \emptyset
10	ZN463	4.0k Δ	4.6u \emptyset			4.0u \emptyset	15u \emptyset	2.0 \emptyset	2.0 \emptyset	27	80m	310p	P-A	Si	100	T032	A \emptyset
11	JAN2N2079A	5.0k Δ	25u			25u	150m	2.0 \emptyset	12m \emptyset	12 Δ	60m		P	Ge	100S	T036	C \emptyset
12	ZN1358A	0.05M	30.0u			30u	50 \emptyset	2.0 \emptyset	1.2 \emptyset	40 Δ	0.6		P	Ge	100C	T036	A \emptyset
13	CDT1319	0.06M	3500n			6.5u	2.5u	45m \emptyset	2.0 \emptyset	2.0m	40	30	P-A	Ge	100J	T03	C \emptyset
14	CDT1320	0.06M	3500n			6.5u	2.5u	45m \emptyset	2.0 \emptyset	2.0m	40	30	P-A	Ge	100J	T03	C \emptyset
15	CDT1321	0.06M	3500n			6.5u	2.5u	45m \emptyset	2.0 \emptyset	2.0m	40	30	P-A	Ge	100J	T03	C \emptyset
16	CDT1322	0.06M	3500n			6.5u	2.5u	45m \emptyset	2.0 \emptyset	2.0m	40	30	P-A	Ge	100J	T03	C \emptyset
17	CDT1310	0.08M	3500n			6.5u	2.5u	45m \emptyset	2.0 \emptyset	2.0m	80	30	P-A	Ge	100J	T03	C \emptyset
18	CDT1311	0.08M	3500n			6.5u	2.5u	45m \emptyset	2.0 \emptyset	2.0m	80	30	P-A	Ge	100J	T03	C \emptyset
19	CDT1312	0.08M	3500n			6.5u	2.5u	45m \emptyset	2.0 \emptyset	2.0m	80	30	P-A	Ge	100J	T03	C \emptyset
20	CDT1313	0.08M	3500n			6.5u	2.5u	45m \emptyset	2.0 \emptyset	2.0m	80	30	P-A	Ge	100J	T03	C \emptyset
21#	BOY10	10k Δ	4000n \emptyset	250nt	1.5u \emptyset	3.0u \emptyset	150 \emptyset	2.0 \emptyset	200m \emptyset	20 Δ	350m		N-D	Si	175J	T03	C \emptyset
22#	BDY11	10k Δ	4000nt	250nt	1.5u \emptyset	3.0u \emptyset	150 \emptyset	2.0 \emptyset	200m \emptyset	20 Δ	350m		N-D	Si	175J	T03	C \emptyset
23	JAN2N1549A	10k Δ	8.0u	2.0u	3.0u	6.0u	90 \emptyset	2.0 \emptyset	5.0 \emptyset	15 Δ	100m		P	Ge	100J	T03	C \emptyset
24	JAN2N1550A	10k Δ	8.0u	2.0u	3.0u	6.0u	90 \emptyset	2.0 \emptyset	5.0 \emptyset	15 Δ	100m		P	Ge	100J	T03	C \emptyset
25	JAN2N1551A	10k Δ	8.0u	2.0u	3.0u	6.0u	90 \emptyset	2.0 \emptyset	15 \emptyset	15 Δ	100m		P	Ge	100J	T03	C \emptyset
26	JAN2N1552A	10k Δ	8.0u	2.0u	3.0u	6.0u	90 \emptyset	2.0 \emptyset	5.0 \emptyset	15 Δ	100m		P	Ge	100J	T03	C \emptyset
27	ZN1159	0.01M	10.9u			10u	2.0 \emptyset	1.0 \emptyset	150 \emptyset	30			P	Ge	95J	T03	C \emptyset
28	ZN1160	0.01M	10.9u			10u	2.0 \emptyset	2.0 \emptyset	100 \emptyset	20			P	Ge	95J	T03	C \emptyset
29	ZN1100	0.01M	15.0u			15u	3.0 \emptyset	2.0 \emptyset	12 \emptyset	20	0.6		P	Ge	95J	T036	C \emptyset
30	ZN46	12k Δ	6000n \emptyset			12u	5.0 \emptyset	2.0 \emptyset	10m \emptyset	27			P-A\$	Ge	100J	T015	G \emptyset
31	CST1773	0.015M	2500n			300n	400n	2.0 \emptyset	2.0 \emptyset	500m \emptyset	25 Δ	50	P	Ge	100	MS7	
32	CST1773A	0.015M	2500n			300n	400n	2.0 \emptyset	2.0 \emptyset	500m \emptyset	25 Δ	50	P	Ge	100	MS7	
33	CST1773B	0.015M	2500n			300n	400n	2.0 \emptyset	2.0 \emptyset	500m \emptyset	25 Δ	50	P	Ge	100	MS7	
34	ZN445	16.5k Δ	3.0n			6.0u	75 \emptyset	2.0 \emptyset	10 \emptyset	33			P-A\$	Ge	100J	T015	G \emptyset
35	ZN3429	20k Δ	4000n			4.0u	8.0u	150 \emptyset	2.0 \emptyset	5.0 \emptyset	10 Δ	200m	P	Si	175J	MT52	B \emptyset
36	ZN3430	20k Δ	4000n			4.0u	8.0u	150 \emptyset	2.0 \emptyset	5.0 \emptyset	10 Δ	200m	P	Si	175J	MT52	B \emptyset
37	ZN3431	20k Δ	4000n			4.0u	8.0u	150 \emptyset	2.0 \emptyset	5.0 \emptyset	10 Δ	200m	P	Si	175J	MT52	B \emptyset
38	ZN3432	20k Δ	4000n			4.0u	8.0u	150 \emptyset	2.0 \emptyset	5.0 \emptyset	10 Δ	200m	P	Si	175J	MT52	B \emptyset
39	ZN3433	20k Δ	4000n			4.0u	8.0u	150 \emptyset	2.0 \emptyset	5.0 \emptyset	10 Δ	200m	P	Si	175J	MT52	B \emptyset
40	ZN3434	20k Δ	4000n			4.0u	8.0u	150 \emptyset	2.0 \emptyset	5.0 \emptyset	10 Δ	200m	P	Si	175J	MT52	B \emptyset
41	ZN1015	0.02M	6000n \emptyset			20u		700m \emptyset	4.0 \emptyset	2 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
42	ZN1015A	0.02M	6000n \emptyset			20u		700m \emptyset	4.0 \emptyset	2 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
43	ZN1016B	0.02M	6000n \emptyset			20u		700m \emptyset	4.0 \emptyset	2 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
44	ZN1015C	0.02M	6000n \emptyset			20u		700m \emptyset	4.0 \emptyset	2 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
45	ZN1015D	0.02M	6000n \emptyset			20u		700m \emptyset	4.0 \emptyset	2 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
46	ZN1015E	0.02M	6000n \emptyset			20u		700m \emptyset	4.0 \emptyset	2 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
47	ZN1015F	0.02M	6000n \emptyset			20u		700m \emptyset	4.0 \emptyset	2 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
48	ZN1016	0.02M	6000n \emptyset			10u		700m \emptyset	4.0 \emptyset	5 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
49	ZN1016A	0.02M	6000n \emptyset			10u		700m \emptyset	4.0 \emptyset	5 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
50	ZN1016B	0.02M	6000n \emptyset			10u		700m \emptyset	4.0 \emptyset	5 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
51	ZN1016C	0.02M	6000n \emptyset			10u		700m \emptyset	4.0 \emptyset	5 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
52	ZN1016D	0.02M	6000n \emptyset			10u		700m \emptyset	4.0 \emptyset	5 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
53	ZN1016E	0.02M	6000n \emptyset			10u		700m \emptyset	4.0 \emptyset	5 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
54	ZN1016F	0.02M	6000n \emptyset			10u		700m \emptyset	4.0 \emptyset	5 \emptyset	10 Δ		N	Si	150J	MT1	B \emptyset
55#	DT1510	25k	100n	300n	4.5u	1.0u	800m	6.0 \emptyset	300m \emptyset	25	7.0		P	Ge	150S	T05	
56#	DT1511	25k	100n	300n	4.5u	1.0u	800m	6.0 \emptyset	300m \emptyset	25	7.0		P	Ge	150S	T05	
57#	DT1512	25k	100n	300n	4.5u	1.0u	800m	6.0 \emptyset	300m \emptyset	25	7.0		P	Ge	150S	T05	
58	ZN2580	0.03M	6000n			6.0u	5.0u	150 \emptyset	5.0 \emptyset	5.0m \emptyset	10 Δ	14	P	Si	150C	T036	C \emptyset
59	ZN2581	0.03M	6000n			6.0u	5.0u	150 \emptyset	5.0 \emptyset	5.0m \emptyset	25 Δ						

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab. (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1	2	MAX RISE TIME	MAX DELAY TIME	MAX STORE TIME	MAX FALL TIME	MAX. Pc IN FREE AIR @ 25°C	BIAS			MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob (s)	STRUCTURE	M A T	DWG #	L C	
		fab	(Hz)	tr (s)	td (s)	ts (s)	tf (s)	(W)	V _{cb}	I _e	hFE					s/a	TO200	Ser.	
1#	NKT404	43M	18.0u		8.0u	20u	50.0	1.0	3.0	35 Δ	42	185p	P	Ge	90J	MD17d	C0		
2	DTG1010	450ks	6.0ut		1.6u	700nt	106.0			160m	160m		P	Ge	110J	T03	C0		
3	DTG1110	450ks	6.0ut		1.6u	700nt	106.0			160m	160m		P	Ge	110J	T03	C0		
4#	DT1610	.50M	1000n	300n	4.5u	1.0u	600m	6.0	200m	10 Δ	7.0		N	Si	115S	T03	C0		
5	2N1069	500kΔ	1.8u	200n	1.4u	25 s	4.0	1.5	20	2.0			N-D	Si	175A	T03	C0		
6	2N1070	500kΔ	1.8u	200n	1.4u	25 s	4.0	1.5	20	670m			N-D	Si	175A	T03	C0		
7	2N3795	.50MΔ	5.0u			5u0	5.0m0	2.0	10m	12 Δ	20		P	Si	1200J	T05	A0		
8	1401-0415	500kΔ	5.0u			10u0	625.0	4.0	150	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
9	1401-0420	500kΔ	5.0u			10u0	625.0	4.0	200	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
10	1401-0425	500kΔ	5.0u			10u0	625.0	4.0	250	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
11	1401-0615	500kΔ	6.0u			10u0	625.0	4.0	150	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
12	1401-0620	500kΔ	5.0u			10u0	625.0	4.0	200	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
13	1401-0625	500kΔ	5.0u			10u0	625.0	4.0	250	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
14	1401-0815	500kΔ	5.0u			10u0	625.0	4.0	150	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
15	1401-0820	500kΔ	5.0u			10u0	625.0	4.0	200	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
16	1401-0825	500kΔ	5.0u			10u0	625.0	4.0	250	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
17	1401-1015	500kΔ	5.0u			10u0	625.0	4.0	150	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
18	1401-1020	500kΔ	5.0u			10u0	625.0	4.0	200	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
19	1401-1025	500kΔ	5.0u			10u0	625.0	4.0	250	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
20	1401-1215	500kΔ	5.0u			10u0	625.0	4.0	150	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
21	1401-1220	500kΔ	5000n			10u0	625m0	4.0	200	10 Δ			N-D	Si	200J	MT14a	C		
22	1401-1225	500kΔ	5000n			10u0	625m0	4.0	250	10 #			N-D	Si	200J	MT14a	C		
23	1401-1415	500kΔ	5.0u			10u0	625.0	4.0	150	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
24	1401-1420	500kΔ	5.0u			10u0	625.0	4.0	200	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
25	1401-1425	500kΔ	5.0u			10u0	625.0	4.0	250	10 Δ	#Δ		N-D	Si	200J	MT14a	C		
26	2N3667	500kΔ	6.0u			12u0	117.0	3.0	8.0	15 #Δ			N	Si	200J	T03	C0		
27	2N3863	50MΔ	8.0u			16u0	117.0	2.0	3	30 Δ	33		N	Si	200C	T03	C0		
28	2N3864	50MΔ	8.0u			16u0	117.0	2.0	3	30 Δ	33		N	Si	200C	T03	C0		
29	2N3865	50MΔ	8.0u			16u0	117.0	2.0	3	30 Δ	33		N	Si	200C	T03	C0		
30	JAN2N1651	600kΔ	10u		6.0u	5.0u	100.0	2.0	10	35 Δ	26m		P	Ge	110J	MD27			
31	JAN2N1652	600kΔ	10u		6.0u	5.0u	100.0	2.0	10	35 Δ	26m		P	Ge	110J	MD27			
32	JAN2N1653	600kΔ	10u		6.0u	5.0u	100.0	2.0	10	35 Δ	26m		P	Ge	110J	MD27			
33#	ACY41	600kΔ	12u	900n	10u	35u	260m	0.0	50m	105	1.0		50n†	P-AØ	Ge	90J	T05	A0	
34	ZN2691A	600MΔ	700u		3.0u	3.0u	170.0	1.5	20m	100 #	03		P	Ge	110C	TO41	A0		
35	2N1067	750kΔ	1.2u	200n	700n	900n	2.5 s	4.0	200m	35	10		N-D	Si	175A	T08	A0		
36	2N1068	750kΔ	1.6u	200n	700n	900n	1.0 s	4.0	200m	35	10		N-D	Si	175A	T08	A0		
37	ZT1068	750kΔ	1.6u	1.0u		1.8u	5.0 s	4.0	750m	38	2.6		N-D	Si	175A	T08	A0		
38#	ZSD120H	80M9			1.70n	1.1n	1.0m	4.0	2	60			N	Si	175J	T039			
39#	ZSD121H	80M9			70n	1.1n	1.0m	4.0	2	60			N	Si	200J	T039			
40	2N5559	80M9Δ	6.0u			8u0	100.0	2.0	4	20 Δ	18	400ps		P	Ge	110S	T03	C0	
41#	ACY40	800kΔ	15u	900n	7.0u	35u	260m	0.0	50m	45	1.0		50n†	P-AØ	Ge	90J	T05	A0	
42	DTG600	850kΔ	4.4u		3.1u	6.4u	85.0	2.0	50	115	30m		P	DA	Ge	110J	T03	C0	
43	DTG601	850kΔ	4.4u		3.1u	6.4u	85.0	2.0	50	115	30m		P	DA	Ge	110J	T03	C0	
44	DTG602	850kΔ	4.4u		3.1u	6.4u	85.0	2.0	50	115	30m		P	DA	Ge	110J	T03	C0	
45	DTG603	850kΔ	4.4u		3.1u	6.4u	85.0	2.0	50	115	33		P	DA	Ge	110J	T03	C0	
46	DTG603M	85M5	13.0u		6.0u	10u	85.0*	2.0	5	250			P	Ge	110S	T03	C0		
47#	ACY17	1.00M9	12p	900n	10u	35u	260m	0.0	50m	100	1.0		50n†	P-AØ	Ge	90J	T05	A0	
48#	ACY22	1.00M9	12p	900n	10u	35u	260m	0.0	50m	85	1.0		50n†	P-AØ	Ge	90J	T05	A0	
49#	ZSD124AH	1.0M	1.4n	15n	2.2u	5.0n	4.0	1.5	40	20 Δ	12 Δ	3.0		N	Si	175J	T039		
50#	DT1003	1.00M	300n		250n	150n	600m	6.0	200m	12 Δ	3.0		12p	150n†	P-A	Ge	70J	R55	
51#	ZSA32	1.00M	800n		1.5u	1.2u	100m	6.0	1.0m	65	4.0								
52#	ZT1487	1.0M9	1.2u			2.2u0	43.0\$	4.0	1.5	15	20	200p		N-D	Si	220C	T03	C0	
53#	ZT1488	1.0M9	1.2u			2.2u0	43.0\$	4.0	1.5	15	20	200p		N-D	Si	220C	T03	C0	
54#	ZT1489	1.0M9	1.2u			2.2u0	43.0\$	4.0	1.5	25	670m	200p		N-D	Si	220C	T03	C0	
55#	ZT1490	1.0M9	1.2u			2.2u0	43.0\$	4.0	1.5	25	670m	200p		N-D	Si	220C	T03	C0	
56#	ZSD125AH	1.00M	1400n†	160n†	2.2ut	5ut	23	4.0	1.5	50	20	200p		N-D	Si	175J	T03	C0	
57#	ZSD126H	1.00M	1400n†	160n†	2.2ut	5ut	23	4.0	1.5	40	20	200p		N-D	Si	175J	T03	C0	
58	ZN2858	1.00M9Δ	2000n			5u0	600m	4.0	1.0	20 Δ	30			N-D	Si	200J	T05	A0	
59	ZN2859	1.00M9Δ	2000n			5u0	600m	4.0	1.0	20 Δ	30			N-D	Si	200J	T05	A0	
60#	2X2N3055	1.0M9	2.0u†	400n†	2.0u†	2.5u†	117.0	0.0	400m	2.5	100m	250ps		N-D	Si	200J	T03	C0	
61#	PT7509	1.0M	2.0u	2.0n	2.0u	1.5u	350	2.0	30	10	100m	1.8n		N-DM	Si	200J	TO63		
62#	PT7510	1.0M	2.0u	2.0n	2.0u	1.5u	350	2.0	30	10	100m	1.8n		N-DM	Si	200J	TO63		
63#	PT7511	1.0M	2.0u	2.0n	2.0u	1.5u	350	2.0	30	10	100m	1.8n		N-DM	Si	200J	TO63		
64#	PT7000	1.0M9	2.5u		3.0u	2.5u	200 s	4.0	120	50 Δ	1.8n			N	Si	200A	MT69B		
65#	PT702	1.0M9	2.5u		3.0u	2.5u	200 s	4.0	120	50 Δ	1.8n			N	Si	200J	T05	A0	
66	2N3774	300M9Δ	3000n		3u0		5.0	2.0	20m	20	#Δ			N	Si	200J	T05	A0	
67	2N3775	1.00M9Δ	3000n		3u0		5.0	2.0	20m	20	#Δ			N	Si	200J	T05	A0	
68	2N3776	1.00M9Δ	3000n		3u0		5.0	2.0	20m	20	#Δ			N	Si	200J	T05	A0	
69	2N3777	1.00M9Δ	3000n		3u0		5.0	2.0	20m	20	#Δ			N	Si	200J	T05	A0	
70	ZT3778	1.00M9Δ	3000n		3u0		5.0	2.0	20m	10 #Δ				N	Si	200J	T05	A0	
71	ZN3779	1.00M9Δ	3000n		3u0		5.0	2.0	20m	10 #Δ				N	Si	200J	T05	A0	
72	ZN3780	1.00M9Δ	3000n		3u0		5.0	2.0	20m	10 #Δ				N	Si	200J	T05	A0	
73	ZN																		

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1: MAX RISE TIME		MAX DELAY		MAX STORE		MAX FALL		MAX. PC IN FREE		BIAS		MAX SAT. RES.	Cob	rbb X Cob	STRUCTURE	MAX TEMP	DWG #	L C E O A D E D E
		fab	(Hz)	tr	td	ts	ff	air @ 25°C	(W)	Vcb	Ie	hFE	(V)	(A)	(Ω)	(F)	(s)	T	TO200	
1#	ZSD110	2.00M Δ	2000n Ω	12u Ω	9.0u Ω	100 Ω	5.0 Ω	5.0 Ω	10 Δ	30	200p Ω	N-D	Si	150J	T03	C Δ				
2#	ZSD111	2.00M Δ	2000n Ω	12u Ω	9.0u Ω	100 Ω	5.0 Ω	5.0 Ω	10 Δ	30	200p Ω	N-D	Si	150J	T03	C Δ				
3	ZN5324	2.00M Δ	15.0u	10M	7.0u	56 Ω	2.0 Ω	5.0 Ω	60 Δ	05	-	P	Ge	110J	T03	C Δ				
4	2N5325	2.00M Δ	15.0u	10M	7.0u	56 Ω	2.0 Ω	5.0 Ω	60 Δ	05	-	P	Ge	110J	T03	C Δ				
5	JAN2N3902	2.5M Δ	800n Ω	-	-	1.7u Ω	100 Ω	5.0 Ω	2.5 Ω	10 Δ	1800m	250p Ω	N	Si	200S	T03	C Δ			
6	JAN2N157	2.5M Δ	800n Ω	-	-	1.7u Ω	100 Ω	5.0 Ω	2.5 Ω	10 Δ	800m	250p Ω	N	Si	200S	T03	C Δ			
7	DTS431M	2.50M Δ	800n Ω	1.7u Ω	125 Ω	50 Ω	3.5 Ω	10 Δ	30	-	-	N-D	Si	150	T03	C Δ				
8	JAN2N425	2.50M Δ	1050n Ω	-	1.2u Ω	150m	250m Ω	1.0m Δ	40 Δ	400m	20p Ω	P	Ge	100S	T05	A				
9	2N5157	2.80M Δ	800n Ω	1.7u Ω	100 Ω	5.0 Ω	2.5 Ω	10 Δ	71	150p Ω	N	Si	150J	T03	C Δ					
10#	ZSA208H	3.00M	-	-	350n	120m	30 Ω	200m	40	-	-	N	Ge	85J	T05	C Δ				
11#	ZSC89H	3.00M	-	-	-	100 Ω	120m	20 Ω	200 Ω	20 Δ	-	N	Ge	85J	T05	C Δ				
12	TIP32	3.00M Δ	170n Ω	-	-	500n Ω	40 Δ	4.0 Ω	3 Ω	80 Δ	# Δ	P	Si	150J	X75b	B Δ				
13	TIP32A	3.00M Δ	170n Ω	-	-	500n Ω	40 Δ	4.0 Ω	3 Ω	80 Δ	# Δ	P	Si	150J	X75b	B Δ				
14	TIP30	3.00M Δ	250n Ω	-	-	900n Ω	30 Ω	4.0 Ω	1 Ω	10 Δ	# Δ	P	Si	150J	X75b	B Δ				
15	TIP30A	3.00M Δ	250n Ω	-	-	900n Ω	30 Ω	4.0 Ω	1 Ω	10 Δ	# Δ	P	Si	150J	X75b	B Δ				
16	TIP34	3.00M Δ	350n Ω	-	-	800n Ω	80 Ω	4.0 Ω	3 Ω	12 Δ	# Δ	P	Si	150J	X86	B Δ				
17	TIP34A	3.00M Δ	350n Ω	-	-	800n Ω	80 Ω	4.0 Ω	3 Ω	12 Δ	# Δ	P	Si	150J	X86	B Δ				
18#	ZSA208	3.00M	440n	350n	350n	120m	30	200m	100 Ω	-	25p Ω	N	Ge	85	T05	C Δ				
19#	ZSC89	3.00M	450n	200n	180n	120m	20	20m	100 Ω	-	25p Ω	N	Ge	85	T01	C Δ				
20#	ZSC179	3.00M	450n	200n	180n	120m	20	20m	100 Ω	-	25p Ω	N	Ge	85	T01	C Δ				
21	TIP31	3.00M Δ	450n Ω	-	-	650n Ω	40 Ω	4.0 Ω	3 Ω	80 Δ	# Δ	N	ND	Si	150J	X75b	B Δ			
22	TIP31A	3.00M Δ	450n Ω	-	-	650n Ω	40 Ω	4.0 Ω	3 Ω	80 Δ	# Δ	N	ND	Si	150J	X75b	B Δ			
23	TIP33	3.00M Δ	450n Ω	-	-	350n Ω	80 Ω	4.0 Ω	3 Ω	12 Δ	# Δ	N	ND	Si	150J	X86	B Δ			
24	TIP33A	3.00M Δ	450n Ω	-	-	350n Ω	80 Ω	4.0 Ω	3 Ω	12 Δ	# Δ	N	ND	Si	150J	X86	B Δ			
25	TIP36	3.00M Δ	450n Ω	-	-	550n Ω	90 Ω	4.0 Ω	15m Ω	10 Δ	# Δ	P	Si	150J	X86	B Δ				
26#	TIP29	3.0M Δ	500n Ω	-	2.0u Ω	30 Ω	4.0 Ω	200m Ω	40 Δ	# Δ	N-DM	Si	150J	u84	B					
27#	TIP29A	3.0M Δ	500n Ω	-	2.0u Ω	30 Ω	4.0 Ω	200m Ω	40 Δ	# Δ	N-DM	Si	150J	u84	B					
28#	TIP29B	3.0M Δ	500n Ω	-	2.0u Ω	30 Ω	4.0 Ω	200m Ω	40 Δ	# Δ	N-DM	Si	150J	u84	B					
29#	TIP29C	3.0M Δ	500n Ω	-	2.0u Ω	30 Ω	4.0 Ω	200m Ω	40 Δ	# Δ	N-DM	Si	150J	u84	B					
30	TIP36A	3.00M Δ	550n Ω	-	-	550n Ω	90 Ω	4.0 Ω	15m Ω	10 Δ	# Δ	P	Si	150J	X86	B Δ				
31	TIP35	3.00M Δ	600n Ω	-	-	800n Ω	90 Ω	4.0 Ω	15m Ω	10 Δ	# Δ	N	ND	Si	150J	X86	B Δ			
32	TIP35A	3.00M Δ	600n Ω	-	-	800n Ω	90 Ω	4.0 Ω	15m Ω	10 Δ	# Δ	N	ND	Si	150J	X86	B Δ			
33	2N1302	3.00M Δ	700n	120n	500n	800n	150m	1.0 Ω	10m	50 Δ	20	20p Ω	N-A	Ge	100S	T05	A Δ			
34	2N1993	3.00M Δ	700n	120n	500n	800n	150m	1.0 Ω	10m	50 Δ	20	20p Ω	N	ND	Si	150J	T03	C Δ		
35	DTS423M	3.00M Δ	800n Ω	-	1.7u Ω	100 Ω	5.0 Ω	2.5m Ω	10 Δ	80	-	N	ND	Si	150J	T03	C Δ			
36	JAN2N426	3.00M Δ	1050n Ω	-	-	11u Ω	150m	250m Ω	1.0m Δ	60 Δ	400m	20p Ω	P	Ge	100S	T05	A			
37#	ZSD80	3.00M	1200n Ω	120n	2.0u Ω	25u Ω	50 Ω	4.0 Ω	60 Ω	50	-	N	ND	Si	150J	T03	C Δ			
38#	ZSD81	3.00M	1200n Ω	120n	2.0u Ω	25u Ω	50 Ω	4.0 Ω	60 Ω	50	-	N	ND	Si	150J	T03	C Δ			
39#	ZSD82	3.00M	1200n Ω	120n	2.0u Ω	25u Ω	50 Ω	4.0 Ω	60 Ω	50	-	N	ND	Si	150J	T03	C Δ			
40#	ZSD83	3.00M	1200n Ω	120n	2.0u Ω	25u Ω	50 Ω	4.0 Ω	60 Ω	50	-	N	ND	Si	150J	T03	C Δ			
41#	ZSD84	3.00M	1200n Ω	120n	2.0u Ω	25u Ω	50 Ω	4.0 Ω	60 Ω	50	-	N	ND	Si	150J	T05	A			
42#	NKT126	3.00M Δ	2000n	2.0u Ω	750n	75m	1.0 Ω	25m Ω	50 Δ	80	22p Ω	N	ND	Si	85S	T05	A Δ			
43	2N356	3.00M Δ	2100n Ω	-	700n	2.0u Ω	100m	25 Ω	100m Ω	30	14p Ω	N	ND	Si	85J	R5	A Δ			
44	2N679	3.00M	3000n	-	-	-	-	50 Ω	3.0m Ω	30 t	-	-	N	ND	Si	200J	T03	C Δ		
45	JAN2N377	3.0M Δ	10u Ω	-	-	120n	150 Ω	4.0 Ω	15 Ω	10 Δ	1.2n Ω	N	ND	Si	200J	T03	C Δ			
47	2N1353	3.50M	600n Ω	230n	400n	1.0u Ω	200m	10 Ω	10m	70	40	12p Ω	P-A	Ge	85J	T05	A			
48#	ZSC34	3.50M Δ	1000n Ω	-	-	-	-	200m	30	-	150n Ω	N-A	Ge	75	R9	-				
49#	ZSD90	3.50M	2000n	70n	1.4u Ω	1.8u Ω	20 Ω	4.0 Ω	1 Ω	40	50	-	N	ND	Si	150J	T09	-		
50#	ZSD91	3.50M	2000n	70n	1.4u Ω	1.8u Ω	20 Ω	4.0 Ω	1 Ω	40	50	-	N	ND	Si	150J	T09	-		
51#	ZSD92	3.50M	2000n	70n	1.4u Ω	1.8u Ω	20 Ω	4.0 Ω	1 Ω	40	50	-	N	ND	Si	150J	T09	-		
52#	ZSD93	3.50M	2000n	70n	1.4u Ω	1.8u Ω	20 Ω	4.0 Ω	1 Ω	40	50	-	N	ND	Si	150J	T09	-		
53#	ZSD94	3.50M	2000n	70n	1.4u Ω	1.8u Ω	20 Ω	4.0 Ω	1 Ω	40	50	-	N	ND	Si	150J	T09	-		
54	2N438	3.75M Δ	700n	-	-	-	-	100m	1.0 Ω	50m	25 t	9.0p Ω	P	Ge	85J	T05	A			
55#	ZSA212H	4.00M	-	-	320n	130n	20m	30 Ω	100m Ω	60	-	20p Ω	P	Ge	85J	T05	C Δ			
56	2N1518	4.00M Δ	50n	-	-	-	-	50m	4.0 Ω	15m	15 Δ	03	P	Ge	100J	T03	C Δ			
57	2N1520	4.00M Δ	50n	-	-	-	-	25n	50m	4.0 Ω	17 Δ	02	P	Ge	100J	T03	C Δ			
58	2N1522	4.00M Δ	50n	-	-	30n	50m	4.0 Ω	15m	37	01	-	P	Ge	100J	T03	C Δ			
59	2N2930	4.0M Δ	73n	350n	73n	250m	60 Ω	100m Ω	50 Δ	25	20p Ω	N	ND	Si	200J	T03	C Δ			
60	2N1519	4.00M Δ	80n	-	20n	50m	4.0 Ω	15 Ω	15 Ω	03	-	P	Ge	100J	T03					

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab. (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	fab (Hz)	MAX	MAX	MAX	MAX	MAX.	BIAS			MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob	STRUCTURE	M A TEMP (°C)	DWG #	L C		
			RISE TIME tr (s)	DELAY TIME td (s)	STORE TIME ts (s)	FALL TIME tf (s)	AIR @ 25°C (W)	V _{cb}	I _e	hFE						s/a	TO200	E O	
1	2N5878	4.0M _Δ	700n		1.0u	800n	150	4.0	8.0	5.0 Δ	200m	300p _Δ	N	Si	200J	T03	C ₀		
2	2N5879	4.0M _Δ	700n		1.0u	800n	160	4.0	12	5.0 Δ	142m	600p _Δ	P	Si	200J	T03	C ₀		
3	2N5880	4.0M _Δ	700n		1.0u	800n	160	4.0	12	5.0 Δ	142m	600p _Δ	P	Si	200J	T03	C ₀		
4	2N5881	4.0M _Δ	700n		1.0u	800n	160	4.0	12	5.0 Δ	142m	400p _Δ	N	Si	200J	T03	C ₀		
5	2N5882	4.0M _Δ	700n		1.0u	800n	160	4.0	12	5.0 Δ	142m	400p _Δ	N	Si	200J	T03	C ₀		
6	2N5883	4.0M _Δ	700n		1.0u	800n	200	4.0	20	5.0 Δ	66m	800p _Δ	[2]	Si	200J	T03	C ₀		
7	2N5884	4.0M _Δ	700n		1.0u	800n	200	4.0	20	5.0 Δ	66m	800p _Δ	P	Si	200J	T03	C ₀		
8	2N5885	4.0M _Δ	700n		1.0u	800n	200	4.0	20	5.0 Δ	66m	500p _Δ	N	Si	200J	T03	C ₀		
9	2N5886	4.0M _Δ	700n		1.0u	800n	200	4.0	20	5.0 Δ	66m	500p _Δ	N	Si	200J	T03	C ₀		
10	2N4395	4.00M _Δ	800n _Δ		1.5u _Δ	63	1.0	1.0	75	18				N	Si	150J	T03	C ₀	
11	2N5241	4.00M _Δ	800n _Δ		1.7u _Δ	125	5.0	3.5	10	600m			N-D	Si	150J	T03			
12	2N4396	4.00M _Δ	1000n _Δ		2.0u _Δ	63	1.0	1.0	60	18			N	Si	150J	T03	C ₀		
13	2N425	4.00M	1050n _Δ			1.2u _Δ	170m	250m _Δ	1.0m _Δ	30	3.2	14p	50n	P-FA	Ge	85J	T05	A	
14	2N4044	4.00M _Δ	1400n _Δ				150m	30	24m	24	12	20p _Δ	P-A	Ge	100A	T05	A5		
15	ASY31	4.00M _Δ	2200n _Δ		1.4u		125m	0.0	20m	80	20	16p _Δ	P-A	Ge	75J	R9			
16	JAN2N3055	4.00M _Δ	8.0n _Δ			1.2u _Δ	117	4.0	4.0m _Δ	15	#Δ	700p _Δ	N	Si	200J	T03	C ₀		
17	2N383	4.50M	550n _Δ	210n _Δ	500n	400n _Δ	1.0	10m	85	4.0	12p	130nt	P-A	Ge	100S	T05	A5		
18	2N1394	4.50M	550n _Δ	210n _Δ	500n	400n _Δ	1.0	10m	70	4.0	12p	130nt	P-A	Ge	85J	T05	A		
19#	2SC35	4.50M _Δ	1000n		1.0u	400n	140m	0.0	200m	65			N-A	Ge	75	R9			
20#	2SA209H	5.00M	400n			250n	120m	30	200m	65			P	Ge	85J	T05			
21#	2SC90H	5.0M	350n			180n	120m	300m _Δ	200m _Δ	20	Δ		N	Ge	85J	T05			
22	JAN2N167A	5.0M _Δ	60n _Δ			220n _Δ	70m	1.0	500p _Δ	25	Δ	6.0p _Δ	N	P-FA	Ge	85A	OV5	A	
23	2N653	5.00M	100n _Δ	32nt	70nt	144n _Δ	210m	350m _Δ	50m _Δ	1.3	20	12p	60nt	P-DE	Si	100J	T05	A	
24#	NKT135	5.00M	280n			450n	150m	35	200m _Δ	15	Δ	20p _Δ	N-D	Si	150J	T03	C ₀		
25	2N2946	5.00M	300n			150n	300n	6.0	200m _Δ	200		9.0p	P-DE	Si	200J	TO46	A		
26#	2SA40	5.00M	300n _Δ		400n _Δ	200n _Δ	80m	6.0	1.0m	65	1	10p	P-A	Ge	85J	T01			
27	DTS411	5.00M _Δ	300n		650n	200n	100	5.0	2.5	10	Δ	80	N-D	Si	150J	T03	C ₀		
28	DTS423	5.00M _Δ	300n _Δ		550n	550n _Δ	100	5.0	2.5	10	Δ	800m	N-ME	Si	150J	T03	C ₀		
29	2N585	5.00M	350n	50n	250n	200n	120m	2.0	20m	40	10	12p	17nt	N-A	Ge	71A	T09	A	
30	2N1892	5.00M _Δ	350n	150n	1.2u	650n	150m	1.0	10m _Δ	40	2.0	20p _Δ	P	Ge	85	T05			
31#	2SA209	5.00M	350n		400n	250n	120m	30	200m	120	Δ	25p	P	Ge	85	T05			
32#	2SC90	5.00M	400n		200n	180n	120m	30	200m	120	Δ	25p	N	Ge	85	T05			
33#	2SC180	5.00M	400n		200n	180n	120m	30	200m	120	Δ	25p	N	Ge	85	T01			
34	2N1304	5.00M _Δ	450n	100n	500n	600n	150m	1.0	10m	70	20	20p _Δ	N-A	Ge	100S	T05	A ₅		
35#	NKT234	5.00M	450n		500n	600n	150m	3.5	2	15	Δ	20p _Δ	N	Ge	85J	T05	A		
36	JAN2N123	5.0M _Δ	500n	200n	1.0u	400n	150m	1.0	10m _Δ	30	#Δ	20p _Δ	P-A	Ge	100S	R116	A		
37	2N395A	5.00M	650n _Δ	200n	800n	400n _Δ	200m _Δ	35	200m _Δ	15	Δ	40p _Δ	P	Ge	100S	T05	A ₅		
38	JAN2N427	5.00M _Δ	850n _Δ		1.1u _Δ	150m _Δ	250m _Δ	1.0m _Δ	90	12	160m _Δ	20p _Δ	P-A	Ge	100S	T05	A		
39	2N578	5.00M	900n _Δ			600n _Δ	120m	400m	15	75			N-A	Ge	71A	T05	A		
40	GT123	5.00M _Δ	900n				150m	1.0	10m	90	+	15p	P-A	Ge	100S	T05	A		
41	2N1681	5.00M _Δ	950n _Δ			950n _Δ	180m	1.0	10m	75	10	20p _Δ	P-A	Ge	100J	T05	A		
42	2N315	5.00M _Δ	1000n _Δ		300n	400n	80n	1.0	10m	20	14p	P-A	Ge	100S	T05	A			
43	2N315A	5.00M _Δ	1200n _Δ			600n	150m	2.0	100m	35		14p	P-A	Ge	100S	T05	A		
44	2N5838	5.0M _Δ	1.5u		1.0u	57	2.0	3.0	8.0	#Δ			N	Si	200J	T03	C ₀		
45	2N5839	5.0M _Δ	1.5u		1.0u	57	3.0	2.0	10	#Δ			N	Si	200J	T03	C ₀		
46	2N5840	5.0M _Δ	1.7u		1.0u	57	3.0	2.0	10	#Δ			N	Si	200J	TO46	A		
47	2N459	5.0M _Δ	25u			40u	50	2.0	2.0m	20	Δ	.50	P-A	Ge	100J	T03	C ₀		
48#	SFT226	5.50M _Δ	150n _Δ				150m	500m _Δ	10m _Δ	25	18		P-A	Ge	85J	T05	A		
49#	2SA414	5.50M _Δ	270n _Δ		50n	850n	450n	150m	50	100m _Δ	30			P-A	Ge	85J	T05	A	
50#	2SC128	5.50M _Δ	270n _Δ		50n	850n	450n	125m	50	100m _Δ	30			N-A	Ge	75J	T05	C ₀	
51#	SDT413	6.0M _Δ	250n _Δ			600n _Δ	150n _Δ	75	5.0	1.0	15	Δ	N-ME	Si	200J	T03	C ₀		
52	ASY74	6.00M _Δ	300n		55n	400n	200n	500m	0.0	0.5m	40	Δ	16p _Δ	N-A	Ge	85J	T05	A	
53#	ASY29	6.00M _Δ	350n		75n	620n	125m	0.0	20m	50	Δ	16p _Δ	N-A	Ge	75J	T05	A		
54	DT5413	6.00M _Δ	400n _Δ			550n _Δ	75	5.0	1.0	15	Δ	1.6	N-ME	Si	150J	T03	C ₀		
55	2N357	6.00M _Δ	1300n _Δ		700n	1.2u	100m	25	200m _Δ	30		14p	N	Ge	85S	T05	A ₅		
56#	ASY32	6.00M _Δ	2200n _Δ		1.4u	700n	1.2u	125m	0.0	20m	150	16p _Δ	P-A	Ge	75J	R9			
57	2N377	6.00M _Δ	2500n _Δ		700n	1.0u	150m	1.0	30m _Δ	60	12	20p _Δ	N	Ge	100J	T05	A ₅		
58	2N377A	6.00M	3.0u		700n	1.0u	150m	1.0	30m _Δ	60	12	20p _Δ	N	Ge	100J	T05	A ₅		
59	JAN2N2034	6.00M _Δ	3.0u		60n	600n	150m	7.5	2.0m	10	#Δ	200p _Δ	N	Si	200A	T05	A ₅		
60	JAN2N2858	6.00M _Δ	3.0u		60n	600n	150m	7.5	2.0m	10	#Δ	200p _Δ	N	Si	200A	T05	A ₅		
61	JAN2N2859	6.00M _Δ	3.0u		60n	600n	150m	7.5	2.0m	10	#Δ	200p _Δ	N	Si	200A	T05	A ₅		
62	JAN2N2911	6.00M _Δ	3.0u		60n	600n	150m	7.5	2.0m	10	#Δ	200p _Δ	N	Si	200A	T05	A ₅		
63	2N1090	7.00M	250n		50n	700n	150m	1.0	20m	20	50	10	17p	N-A	Ge	85A	T09	A	
64	2N1000	7.00M _Δ	700n		60n	500n	800n	150m	1.0	20m	90		14p	N-A	Ge	100S	T05	A	
65	2N1344	7.00M _Δ	1000n		60n	500n	600n	100m _Δ	1.0	25m _Δ	50	8.0	22p _Δ	N	P	Ge	85J	T05	A
66#	NKT125	7.00M _Δ	1000n		</														

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1	2	MAX	MAX	MAX	MAX	BIAS	MAX. SAT. RES. (Ω)	Cob	r _b X Cob	STRUCTURE	MAX. TEMP. (°C)	OWG #	L C E O A D	
		fab	RISE TIME (Hz)	DELAY TIME (s)	STORE ts	FALL TIME (s)	IN FREE AIR @ 25°C	V _{cb}	I _e							
1#	ZSC91H	10.0M				10n	120m	30	200m ²	20 Δ			N	Ge 85J T05		
2	2N659	10.0M	120n ¹	17n ¹	67n ¹	128n ¹	210m	350m ²	50m ²	70	1.3	12p	P-FA	Ge 100J T05	A	
3	2N599	10.0M ³	175n			1.0u	185n	250m	1.0	200m ²	75 Δ		P	Ge 100J T05	A ³	
4	JAN2N599	10.0M		175n		1.0u	185n	250m	1.0	200m ²	300 Δ	20	P	Ge 100S T05		
5	2N601	11.0M ³	175n			1.0u	185n	750m ²	1.0	200m ²	125	2.0	P-A	Ge 100J MT60		
6#	2SA210	10.0M		200n		400n	150n	120m	30	200m ²	150 Δ		P	Ge 85 T05		
7	ASY75	10.0M ³	200n		50n	450n	150n	500m	0	0.5m	65 Δ		N-A	Ge 85J T05		
8#	NKT137	10.0M	200n		800n	350n	150m	35	200m ²	20 Δ	20	P	Ge 85J T05	A		
9	2N1306	10.0M ³	220n		500n	450n	150m	1.0	10m	100	20	P	Ge 100S T05	A ³		
10	ZN2945	10.0M		230n		150n	230n	400m	6.0	200m ²	200 Δ	20	P-DE	Si 200J T046	A	
11	N598	10.0M		240n		900n	330n	250m	1.0	100m	70 Δ	2.0	P-A	Ge 100J T05	A ³	
12	2N440	10.0M		300n			100m	1.0	50m	70 Δ	9.0p	N-A	Ge 85J T05	A		
13	ZN821	10.0M ³	300n ¹			600n ¹	200n ¹	75m	1.0	50m	70	5.0	N-Fa	Ge 85J T05		
14	2N5050	10M ³	300n		3.5u	1.2u	40	5.0	1.0	25 Δ#			N	Si 175J T066	C ³	
15	2N5051	10M ³	300n		3.5u	1.2u	40	5.0	1.0	25 Δ#			N	Si 175J T066	C ³	
16	2N5052	10M ³	300n		3.5u	1.2u	40	5.0	1.0	25 Δ#			N	Si 175J T066	C ³	
17#	ZSC91	10.0M		300n		250n	100n	120m	30	200m ²	220 Δ	2.0	N	Si 175J T066	C ³	
18#	ZSC181	10.0M		300n		250n	180n	120m	30	200m ²	220 Δ	2.0	N	Si 85 T01		
19	ZN3445	10.0M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	60 Δ	500m	400p	N-EA	Si 200J T03	C ³	
20	ZN3446	10.0M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	60 Δ	500m	400p	N-EA	Si 200J T03	C ³	
21	ZN3447	10.0M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	120 Δ	300m	400p	N-EA	Si 200J T03	C ³	
22	ZT3445	10.0M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	120 Δ	300m	400p	N-EA	Si 200J T03	C ³	
23	ZN3487	10M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	20 Δ	4.0		N	Si 200C T061		
24	ZN3488	10M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	20 Δ	4.0		N	Si 200C T061		
25	ZN3489	10M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	20 Δ	4.0		N	Si 200C T061		
26	ZN3490	10M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	40 Δ	3.3		N	Si 200C T061		
27	ZN3491	10M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	40 Δ	3.3		N	Si 200C T061		
28	ZN3492	10M ³	350n ²		2.0u	350n	115	5.0	3.0m ²	40 Δ	3.3		N	Si 200C T061		
29	ZN2425	10.0M	500n ²		3.75n	350n	375m	1.0	25m ²	20 Δ	14p		N	Si 160S T05		
30▼	ZN5957	10M ³	500n ²			1.0u	150	#	1.0	1.0	40	125m	350p	N	Si 200J T061	A ³
31▼	ZN5959	10M ³	500n ²			1.0u	150	#	1.0	1.0	40	125m	350p	N	Si 200J T061	A ³
32▼	ZN5966	10M ³	500n ²			1.0u	187	#	1.0	1.0	40	80m	550p	N	Si 200J T063	A
33▼	ZN5968	10M ³	500n ²			1.0u	187	#	1.0	1.0	40	80m	550p	N	Si 200J T063	A ³
34▼	ZN6060	10M ³	500n ²			1.0u	225	#	1.0	60	10 Δ	50m	850p	N	Si 200J T063	A ³
35▼	2N6062	10M ³	500n ²			1.0u	225	#	1.0	60	10 Δ	50m	850p	N	Si 200J T063	A ³
36	ST14030	10M ³	500n ²			1.0u	200	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
37	ST14031	10M ³	500n ²			1.0u	200	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
38	ST14032	10M ³	500n ²			1.0u	200	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
39	ST15043	10M ³	500n ²			1.0u	125	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
40	ST15044	10M ³	500n ²			1.0u	125	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
41	ST15045	10M ³	500n ²			1.0u	125	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
42	ST17060	10M ³	500n ²			1.0u	100	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
43	ZT17061	10M ³	500n ²			1.0u	100	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
44	ZT17062	10M ³	500n ²			1.0u	100	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
45	ZT19054	10M ³	500n ²			1.0u	100	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
46	ZT19055	10M ³	500n ²			1.0u	100	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
47	ZT19056	10M ³	500n ²			1.0u	100	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
48	ZT19057	10M ³	500n ²			1.0u	100	#	1.0	1.0	40 Δ#		N-PL	Si 200J T063		
49	ST91058	10M ³	500n ²			1.0u	10	25	10	500m ²	40 Δ#		N-PL	Si 200J T059		
50	ST91059	10M ³	500n ²			1.0u	10	25	10	500m ²	40 Δ#		N-PL	Si 200J T059		
51	2N1317	10.0M	600n ²		800n	600n	25	1.0m	85	150n	150n	150n ¹	P-A	Ge 85J T05	A	
52	ZR5048	10.0M ²	600n ²		1.5u	600n	100	4.0	10m ²	15 Δ	20		N	Si 200S T061	A ³	
53	2N1345	10.0M		700n	30n	800n	700n	150m	30	400m ²	60	14p	P-A	Ge 85J T05	A	
54	2N1346	10.0M		700n	30n	800n	700n	150m	25	35m ²	125	14p	P-A	Ge 85J T05	A	
55#	BC100	10.0M ³	700n	500n		800n	900n	2.5	*	20	10m ²	95	14p	N-ME	Si 175J T05	A ³
56	JAN2N428	10M	850n ²			1.0u	850n ²	1.1u	1.0u	150m ²	20 Δ	1.2		P	Ge 100S T05	A ³
57	ZN428A	10.0M	850n ²			1.0u	150m ²	2.5	1.0m	80	1.6	20p	P-A	Ge 100S T05	A ³	
58	ZN1316	10.0M	1000n ²			1.0u	200m	25	1.0m	100	20p	150n ¹	P-A	Ge 85J T05	A	
59	ZN5049	10.0M ²	1000n ²		2.5u	1.0u	100	50	3.0	60			N	Si 200S T061	A ³	
60	ZN1969	10.0M	1200n ²			650n	650n	25	1.0m	1.0m ²	200	250m ²	P	Ge 85J T05	A ³	
61▼	ZSC1111	10M		1.2u	100n	2.1u	450n	50	3.0	40	1.0	1.0	N-D	Si 150J T03	C ³	
62▼	ZSC1112	10M		1.2u	100n	2.1u	450n	50	3.0	40	1.0	1.0	N-D	Si 150J T03	C ³	
63▼	ZSC1115	10M		1.2u	100n	2.7u	460n	100	3.0	40	1.0	1.0	N-D	Si 150J T03	C ³	
64▼	ZSC1116	10M		1.2u	100n	2.7u	460n	100	3.0	40	1.0	1.0	N-D	Si 150J T03	C ³	
65	ZN2912	10M ³	2000n		10u	75	20	2.0	1.0m	150 Δ	0.2		N	Si 200J T074	A ³	
66	ZN4865	10M ³	2000n		1.5u	500n	350	5.0	90	5.0	5.0		N	Si 200J T074	A ³	
67	ZN4866	10M ³	2000n		1.5u	500n	350	5.0	90	5.0	5.0		N	Si 200J T074	A ³	
68	ZN5260	10M ³	2000n		1.5u	500n	350	5.0	90	5.0	5.0		N	Si 200J T074	A ³	
69	ZN5251	10M ³	2000n		1.5u	500n	350	5.0	90	5.0	5.0		N	Si 200J T074	A ³	
70	ZN5384	10M ³	3000n		4.0u	3.0u	20	1.0m	140	140	75		N	Si 200J T066	C ³	
71	ZN5385	10M ³	3000n		4.0u	3.0u	20	1.0m	140	140	75		N	Si 200J T066	C ³	
72	ZN2832	10M ³	4000n		6.0u	2.5u	85	2.0	1.0m ²	50 Δ	25m		P	Ge 110C T03	C ³	
73	ZN2833															

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1 fab	2 MAX RISE TIME (Hz)	MAX DELAY TIME tr (s)	MAX STORE TIME td (s)	MAX FALL TIME ts (s)	MAX Pc IN FREE (W)	BIAS			MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob (s)	STRUCTURE P-PNP N-NPN	M A T	MAX. TEMP (°C)	DWG # Y200 s/b TO200	L C E A D E		
								V _{cb}	I _e	hFE										
1	2N2944	15.0M	175n		150n	175n	400m	6.0	200m	200	20	9.0p	P-DE	Si	200J	T046	A			
2	2N580	15.0M	200n		400n	120m	30	400m	45	75		P-A	Ge	71A	T05					
3	2N4150	15.0MΔ	200n		2.0u	200n	5.0	5.0	5.0	40	#Δ	N	Si	200J	T05	A				
4#	2SA64	15.0M	200n		350n	150n	80m	6.0	1.0m	65	8.3	P-A	Ge	85J	T01					
5	2N1308	15.0MΔ	220n		500n	400n	150m	1.0	10m	150	20	N-A	Ge	100S	T05	A				
6	2N2424	15.0M	300n		300n	200n	375m	1.0	25m	25	20	P-A	Si	160S	T05	A				
7	JAN2N3584	15.0MΔ	300n		700n	2.5m	10	100m	40	120p		N	Si	200J	T066	C				
8	JAN2N3585	15.0MΔ	300n		700n	2.5m	10	100m	40	120p		N	Si	200J	T066	C				
9#	2SA138	15.0M	300n		500n	400n	80m	1.0	10m	70	4.0	P-A	G	85J	T01					
10	2N4240	15.0MΔ	500n		6.0u	3.0u	35	2.0	75m	6.0	1.3	N	Si	200	T066	C				
11	2N5804	15MΔ	500n		3.5u	2.0u	62	0.8	4.0	5.0	10	400m	N	Si	200J	T03	C			
12	2N5805	15MΔ	500n		3.5u	2.0u	62	0.8	4.0	5.0	10	400m	N	Si	200J	T03	C			
13#	NKT124	15.0MΔ	500n		2.0u	300n	100m	1.0	25m	50	8.0	22p	P	Ge	75J	T05	A			
14	2N2541	15.0M	1.5u			215m	500m	1.0	25m	50	750m	P-FA	Ge	100J	T05					
15	2N1759	15.0M	360n			28m	2.0	50m	105	27	P-A	Ge	95J	MS7						
16	2N1760	15.0M	350n			28m	2.0	50m	105	27	P-A	Ge	95J	MS7						
17	2N1755	15.0M	400n			28m	2.0	50m	52	23	P-A	Ge	95J	MS7						
18	2N1758	15.0M	400n			28m	2.0	50m	52	23	P-A	Ge	95J	MS7						
19	2N1757	15.0M	4000n			28m	2.0	150m	52	23	P-A	Ge	95J	MS7						
20	2N1758	15.0M	4000n			28m	2.0	50m	52	23	P-A	Ge	95J	MS7						
21	2N1761	15.0M	500n			28m	2.0	50m	105	27	P-A	Ge	95J	MS7						
22	2N1752	15.0M	5000n			28m	2.0	50m	105	27	P-A	Ge	95J	MS7						
23	2N864A	16.0MΔ	150n		150n	150n	6.0	1.0m	350	120	9.0p	P	Si	200S	TO18					
24#	SFT288	16.0M	190n		35n	60n	160m	350m	400m	750m	12p	P-AΔ	Ge	85J	T05	A				
25	2N428	17.0M	850n			1.1u	170m	250m	1.0m	80	1.6	P-FA	Ge	85J	T05	A				
26	2N582	18.0M	1200n				150m	20	24m	60	8.4	P-A	Ge	85A	T05	A				
27	2N584	18.0M	1200n				120m	20	24m	60	8.4	P-A	Ge	85A	T01	A				
28	2N1119	20.0M	175n				150m	500m	15m	25	30	6.0p	P-FA	Si	140S	T05	A			
29	TN63	20.0MΔ	30n		10n	450n	120n	800m	10	150m	25		N-PE	Si	200J	T05	A			
30	TN64	20.0MΔ	30n		10n	450n	120n	500m	10	150m	25		N-PE	Si	200J	TO18	A			
31	2N661	20.0M	68n		27n	56n	139n	210m	350m	50m	120	750m	12p	75n	P-FA	Ge	100J	T05	A	
32	2N2657	20.0MΔ	80n			60n	80n	4	5	60	5	15	#Δ	N	Si	200	T05	A		
33	2N2658	20.0MΔ	80n			60n	80n	4	5	60	5	15	#Δ	N	Si	200J	T05	A		
34	NS9001	20.0MΔ	100n				250n	1.2	5.0	1.0	30	600m	70p	N-PL	Si	200	TO39	A		
35	NS9002	20.0MΔ	100n				250n	30	5.0	1.0	30	250m	70p	N-PL	Si	200J	MT42	A		
36	2N730	20.0M	110n		40n	140n	105n	500m	10	150m	40	10	35p	N-PL	Si	175S	TO18	A		
37	2N4006	20.0MΔ	120n		60n	320n	120n	400m	2.0	200m	90	3.0	10ps	P	Si	200	T046	A		
38#	2SC5100	20MΔ	130n			3.0u	200n	8.0	5	2.0	200m	90	3.0	40p	N-DPL	Si	175J	T039	A	
39#	2SC510R	20MΔ	130n			3.0u	200n	8.0	5	2.0	200m	90	3.0	40p	N-DPL	Si	175J	T039	A	
40	2SC5110	20MΔ	130n			3.0u	200n	8.0	5	2.0	200m	150	3.0	40p	N-DPL	Si	175J	T039	A	
41#	2SC511R	20MΔ	130n			3.0u	200n	8.0	5	2.0	200m	90	3.0	40p	N-DPL	Si	175J	T039	A	
42#	2SC5120	20MΔ	130n			3.0u	200n	8.0	5	2.0	200m	150	3.0	40p	N-DPL	Si	175J	T039	A	
43#	2SC512R	20MΔ	130n			3.0u	200n	8.0	5	2.0	200m	90	3.0	40p	N-DPL	Si	175J	T039	A	
44#	2SC5130	20MΔ	130n			3.0u	200n	8.0	5	2.0	200m	150	3.0	40p	N-DPL	Si	175J	T039	A	
45#	2SC513R	20MΔ	130n			3.0u	200n	8.0	5	2.0	200m	90	3.0	40p	N-DPL	Si	175J	T039	A	
46#	2SC5220	20MΔ	130n			3.0u	200n	10	2	200m	150	3.0	25p	N-DPL	Si	175J	MD29	A		
47#	2SC522R	20MΔ	130n			3.0u	200n	10	2	200m	150	3.0	25p	N-DPL	Si	175J	MD29	A		
48#	2SC5230	20MΔ	130n			3.0u	200n	10	2	200m	150	3.0	25p	N-DPL	Si	175J	MD29	A		
49#	2SC523R	20MΔ	130n			3.0u	200n	10	2	200m	150	3.0	25p	N-DPL	Si	175J	MD29	A		
50#	2SC5240	20MΔ	130n			3.0u	200n	10	2	200m	150	3.0	25p	N-DPL	Si	175J	MD29	A		
51#	2SC524R	20MΔ	130n			3.0u	200n	10	2	200m	150	3.0	25p	N-DPL	Si	175J	MD29	A		
52#	2SC5250	20MΔ	130n			3.0u	200n	10	2	200m	150	3.0	25p	N-DPL	Si	175J	MD29	A		
53#	2SC525R	20MΔ	130n			3.0u	200n	10	2	200m	150	3.0	25p	N-DPL	Si	175J	MD29	A		
54	2N731	20.0M	140n		40n	90n	130n	500m	10	150m	80	10	35p	N-PL	Si	175S	TO18	A		
55	2N3850	20.0MΔ	150n			50n	700n	200n	30m	1.0	1.0m	50	#Δ	1.2	125p	N	Si	200C	T059	A
56	2N3851	20.0MΔ	150n			50n	700n	200n	30m	1.0	1.0m	30	#Δ	1.2	125p	N	Si	200C	T059	A
57	2N3852	20.0MΔ	150n			50n	700n	200n	30m	1.0	1.0m	50	#Δ	1.2	125p	N	Si	200C	T059	A
58	2N3853	20.0MΔ	150n			50n	700n	200n	30m	1.0	1.0m	30	#Δ	1.2	125p	N	Si	200C	T059	A
59	2N5660	20MΔ	150n			50n	850n	20	#	5.0	10	15	1Δ#	1.2	80p	N	Si	200J	T066	A
60	2N5661	20MΔ	150n			50n	850n	20	#	5.0	10	15	1Δ#	1.2	80p	N	Si	200J	T066	A
61	2N5682	20MΔ	150n			50n	850n	15	#	5.0	10	15	1Δ#	1.2	80p	N	Si	200J	T05	A
62	2N5683	20MΔ	150n			50n	850n	15	#	5.0	10	15	1Δ#	1.2	80p	N	Si	200J	T05	A
63#	2SC519A	20.0M	200n		50n	30n	800n	50	50	10	10	400m	400p	N-DM	Si	150J	T03	C		
64#	2SC520A	20.0M	200n		50n	30n	800n	50	50	10	10	400m	150p	N-DM	Si	150J	T03	C		
65#	2SC521A	20.0M	200n		50n	30n	800n	50	50	10	10	400m	150p	N-DM	Si	150J	T03	C		
66#	2SC827	20.0M	200n		2.0u	200n	700m	40	50	370	*	500m	10	N-D	Si	175J	T05	A		
67	2N5684	20MΔ	250n			1.5u	250n	30	#	5.0	3.0	15	1Δ#	1.2	125p	N	Si	200J	T066	A
68	2N5685	20MΔ	250n			1.5u	250n	30	#	5.0	3.0	15	1Δ#	1.2	125p	N	Si	200J	T066	A
69	2N5686	20MΔ	250n			1.5u	250n	30	#	5.0	3.0	15	1Δ#	1.2	125p	N	Si	200J	T05	A
70	2N5687	20MΔ	250n			1.5u	250n	30	#	5.0	3.0	15	1Δ#	1.2	125p	N	Si	200J	T05	A
71	2N317	20.0M	300n		50n															

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab. (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1	2	MAX	MAX	MAX	MAX	MAX	BIAS			MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob (s)	STRUCTURE M P-PNP N-NPN	MAX TEMP s/a	DWG #	L C	
		fab	RISE TIME (Hz)	DELAY tr (s)	STORE TIME (s)	FALL td (s)	TIME ts (s)	IN FREE tf (s)	AIR @ 25°C (W)	V _{cb} (V)	I _e (A)	hFE					T	T0200	E O
1	ST54004	20M _{5A}	500n ₀				1.0u ₀	125 ₀ #	10 ₀	10 ₀	40 ₀ #	875p ₀	P-PL	Si	200J	T063			
2	ST54005	20M _{5A}	500n ₀				1.0u ₀	125 ₀ #	10 ₀	1.0 ₀	40 ₀ #	875p ₀	P-PL	Si	200J	T063			
3	ST54006	20M _{5A}	500n ₀				1.0u ₀	125 ₀ #	10 ₀	1.0 ₀	40 ₀ #	875p ₀	P-PL	Si	200J	T063			
4	ST72036	20M _{5A}	500n ₀				1.0u ₀	30 ₀ s	10 ₀	500m ₀	40 ₀ #	300p ₀	P-PL	Si	200J	T063			
5	ST72037	20M _{5A}	500n ₀				1.0u ₀	30 ₀ s	10 ₀	500m ₀	40 ₀ #	300p ₀	P-PL	Si	200J	T063			
6	ST72038	20M _{5A}	500n ₀				1.0u ₀	30 ₀ s	10 ₀	500m ₀	40 ₀ #	300p ₀	P-PL	Si	200J	T063			
7	ST72039	20M _{5A}	500n ₀				1.0u ₀	10 ₀ s	10 ₀	500m ₀	40 ₀ #	300p ₀	P-PL	Si	200J	T05			
8	ST72040	20M _{5A}	500n ₀				1.0u ₀	10 ₀ s	10 ₀	500m ₀	40 ₀ #	300p ₀	P-PL	Si	200J	T05			
9	ST72041	20M _{5A}	500n ₀				1.0u ₀	10 ₀ s	10 ₀	500m ₀	40 ₀ #	300p ₀	P-PL	Si	200J	T05			
10	ST75004	20M _{5A}	500n ₀				1.0u ₀	7.5 ₀ s	10 ₀	500m ₀	40 ₀ #	100p ₀	P-PL	Si	200J	T05			
11	ST75005	20M _{5A}	500n ₀				1.0u ₀	7.5 ₀ s	10 ₀	500m ₀	40 ₀ #	100p ₀	P-PL	Si	200J	T05			
12	ST75006	20M _{5A}	500n ₀				1.0u ₀	7.5 ₀ s	10 ₀	500m ₀	40 ₀ #	100p ₀	P-PL	Si	200J	T05			
13	ST76018	20M _{5A}	500n ₀				1.0u ₀	40 ₀ s	10 ₀	500m ₀	40 ₀ #	400p ₀	P-PL	Si	200J	T059			
14	ST76019	20M _{5A}	500n ₀				1.0u ₀	40 ₀ s	10 ₀	500m ₀	40 ₀ #	400p ₀	P-PL	Si	200J	T059			
15	ST76020	20M _{5A}	500n ₀				1.0u ₀	40 ₀ s	10 ₀	500m ₀	40 ₀ #	400p ₀	P-PL	Si	200J	T059			
16	1756-0660	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063				
17	1756-0860	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063				
18	1756-1060	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063				
19	1756-1260	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063				
20	1756-1460	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063				
21	1756-1660	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063				
22	1756-1860	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063				
23	1776-0660	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063	A			
24	1776-0860	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063	A			
25	1776-1060	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063	A			
26	1776-1260	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063	A			
27	1776-1460	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063	A			
28	1776-1660	20M _{5A}	600n ₀		700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063	A			
29	1776-1860	20M _{5A}	600n ₀		1700n	450n	240	3.0 ₀	60 ₀	15	1.6n ₀	N-EM	Si	200J	T063	A			
30#	25C728	20M _{5A}	100n ₀		8.0u	350m	4.0 ₀	10m ₀	90		9.0p	N	Si	175J	T018				
31	JAN2N3715	20.0M _{5D}	15u ₀				2.0u ₀	90 ₀ s	10 ₀	500m ₀	30 ₀ Δ	500p ₀	N	Si	200J	T03	C		
32	JAN2N3716	20.0M _{5D}	15u ₀				2.0u ₀	90 ₀ s	10 ₀	500m ₀	30 ₀ Δ	500p ₀	N	Si	200J	T03	C		
33	JAN2N3791	20M _{5A}	15u ₀				2.0u ₀	90 ₀ s	4.0 ₀	10	5.0 ₀ #Δ	500p ₀	P	Si	200J	T03	C		
34	JAN2N3792	20M _{5A}	15u ₀	1.5u			1.2u ₀	90 ₀ s	4.0 ₀	12	5.0 ₀ #Δ	500p ₀	P	Si	200J	T03	C		
35	2N5540	20M _{5A}	1.5u				11.5u	50 ₀	5.0 ₀	5.0 ₀	20 ₀ #Δ	500p ₀	N	Si	200J	T061	A		
36	2N4296	20.0M _{5D}	7000n ₀				10u ₀	20m ₀	10 ₀	50m ₀	150 ₀ Δ	6.0ps ₀	N	Si	175	T066	C		
37	2N4297	20.0M _{5A}	7000n ₀				10u ₀	20m ₀	10 ₀	50m ₀	300 ₀ Δ	6.0ps ₀	N	Si	175	T066	C		
38	2N4298	20.0M _{5A}	7000n ₀				10u ₀	20m ₀	10 ₀	50m ₀	75 ₀ Δ	6.0ps ₀	N	Si	175	T066	C		
39	2N4299	20.0M _{5A}	7000n ₀				10u ₀	20m ₀	10 ₀	50m ₀	150 ₀ Δ	6.0ps ₀	N	Si	175	T066	C		
40	2N864	22.0M ₅	100n				100n	100n	150 ₀	50 ₀	5.0m ₀	38 ₁	50p	P-A	Si	T018	A		
41	2N863	22.0M ₅	125n				100n	100n	150 ₀	50 ₀	5.0m ₀	35 ₁	50p	P-A	Si	T018	A		
42	2N861	22.0M ₅	150n				100n	150n	150 ₀	50 ₀	5.0m ₀	35 ₁	50p	P-A	Si	T018	A		
43	2N865A	24.0M _{5D}	100n				150n	100n	300m	5.0 ₀	1.0m ₀	500 ₀ Δ	20	9.0p ₀	P	Si	2005	T018	
44#	H21256	25.0M _{5A}	25n ₀				40n ₀	300n	10 ₀	2.0m ₀	25 ₀ Δ	30	10p ₀	P-ME	Si	175A	T018		
45#	H21258	25.0M _{5A}	25n ₀				60n ₀	300n	10 ₀	2.0m ₀	75 ₀ Δ	60	10p ₀	P-ME	Si	175A	T018		
46#	H21254	25.0M _{5A}	30n				20n	80n	300m	3.0 ₀	1.0m ₀	25 ₀ Δ	10p ₀	N	Si	150S	T043	A	
47	2N1104	25M _{5A}	50n ₀				70n ₀	150n	500m ₀	10m ₀	75 ₀ Δ	9.0	3.0p ₀	P-AA	Ge	85J	T05		
48#	SFT229	25.0M ₅	70n ₀				1.5u ₀	85 ₀	5.0 ₀	5.0 ₀	20 ₀ #Δ	600p ₀	N-PE	Si	200	MT20			
49	2N5552-4	25.0M ₅	100n ₀				1.5u ₀	700n ₀	1.5	5.0 ₀	10 ₀	30 ₀	10	1.6n ₀	N-EM	Si	200J	T03	C
50#	2S033	25.0M ₅	450n ₀	2.0u			2.0u ₀	1.0u ₀	4.0	10 ₀	3.0u ₀	10 ₀	120p ₀	N-DM	Si	175	T03		
51#	2S034	25.0M ₅	450n ₀	2.0u			2.0u ₀	1.0u ₀	4.0	10 ₀	3.0u ₀	25 ₀ #Δ	120p ₀	N-DM	Si	175	T03		
52#	2S035	25.0M ₅	450n ₀	2.0u			2.0u ₀	1.0u ₀	4.0	10 ₀	3.0u ₀	20 ₀ #Δ	120p ₀	N-DM	Si	175	T03		
53#	2S036	25.0M ₅	450n ₀	2.0u			1.5u ₀	1.0u ₀	85 ₀	5.0 ₀	5.0 ₀	20 ₀ #Δ	600p ₀	N-EM	Si	200J	T03		
54	1843-2005	25M _{5A}	500n ₀				1.5u ₀	1.0u ₀	85 ₀	5.0 ₀	10 ₀	15 ₀ #Δ	600p ₀	N-EM	Si	200J	T03	C	
55	1843-2010	25M _{5A}	500n ₀				1.5u ₀	1.0u ₀	85 ₀	5.0 ₀	20 ₀	10 ₀ #Δ	600p ₀	N-EM	Si	200J	T03	C	
56	1843-2020	25M _{5A}	500n ₀				1.5u ₀	1.0u ₀	85 ₀	5.0 ₀	20 ₀	10 ₀ #Δ	600p ₀	N-EM	Si	200J	T03	C	
57	1843-2205	25M _{5A}	500n ₀				1.5u ₀	1.0u ₀	85 ₀	5.0									

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	BIAS										MAX. SAT. RES. (Ω)	Cob	r _b X Cob (s)	STRUCTURE	MAX. TEMP. (°C)	DWG #	L C E O A D D E
		1	2	MAX RISE TIME fab (Hz)	MAX DELAY TIME tr (s)	MAX STORE TIME td (s)	MAX FALL TIME ts (s)	MAX. Pc IN FREE AIR @ 25°C (W)	V _{cb} (V)	I _e (A)	hFE							
1	2N5477	30.0M Δ	100n	100n	2.0u	200n	60 \varnothing	2.0 \varnothing	500n \varnothing	30 $\Delta\#$	250p	N	Si	200J	T059	C \varnothing		
2	2N5478	30.0M Δ	100n	100n	2.0u	200n	60 \varnothing	2.0 \varnothing	500n \varnothing	60 $\Delta\#$	250p	N	Si	200J	T059	C \varnothing		
3	2N5479	30.0M Δ	100n	100n	2.0u	200n	60 \varnothing	2.0 \varnothing	500n \varnothing	60 $\Delta\#$	250p	N	Si	200J	T059	C \varnothing		
4	2N5480	30.0M Δ	100n	100n	2.0u	200n	60 \varnothing	2.0 \varnothing	500n \varnothing	60 $\Delta\#$	250p	N	Si	200J	T059	C \varnothing		
5	2N5552	30.0M Δ	100n \varnothing	100n \varnothing	700n \varnothing	15 \varnothing	5.0 \varnothing	10m \varnothing	30 $\Delta\#$	150p	N	Si	200J	R113	A \varnothing			
6*	2852-1	30M \varnothing	100n	50n	400n	150n	5.0 \varnothing	1.0 \varnothing	50n \varnothing	15 Δ	400m	60p	N-PL	Si	200A	T05	A \varnothing	
7*	2852-2	30M \varnothing	100n	50n	400n	150n	22 \varnothing	1.0 \varnothing	50n \varnothing	15 Δ	400m	60p	N-PL	Si	200A	T059	A \varnothing	
8*	2852-3	30M \varnothing	100n	50n	400n	150n	5.0 \varnothing	1.0 \varnothing	50n \varnothing	15 Δ	400m	60p	N-PL	Si	200A	MT32	A \varnothing	
9*	2856-1	30M \varnothing	100n	50n	400n	150n	5.0 \varnothing	25					N-PL	Si	200A	MT32	A \varnothing	
10	2856-2	30.0M \varnothing	100n	50n	400n	150n	2.0	1.0 \varnothing	50n \varnothing	15 Δ	400m	125p \varnothing	N-PL	Si	200A	T059	A \varnothing	
11	2856-3	30.0M \varnothing	100n	50n	400n	150n	1.5	1.0 \varnothing	50n \varnothing	15 $\Delta\#$	400m	125p \varnothing	N-PL	P	Si	200A	MT35	A \varnothing
12	MJ500	30M Δ	100n	1.0u	150n	60 \varnothing	2.0 \varnothing	50 \varnothing	15 $\Delta\#$	300p \varnothing								
13	MJ501	30M Δ	100n	1.0u	150n	60 \varnothing	2.0 \varnothing	50 \varnothing	15 $\Delta\#$	300p \varnothing								
14	MJ6700	30M Δ	100n	1.0u	150n	60 \varnothing	2.0 \varnothing	50 \varnothing	15 $\Delta\#$	300p \varnothing								
15	MJ6701	30M Δ	100n	1.0u	150n	60 \varnothing	2.0 \varnothing	50 \varnothing	15 $\Delta\#$	300p \varnothing								
16	MJ8100	30M \varnothing	100n	1.0u	150n	10 \varnothing	2.0 \varnothing	50 \varnothing	15 $\Delta\#$	300p \varnothing								
17	MJ8101	30M \varnothing	100n	1.0u	150n	10 \varnothing	2.0 \varnothing	50 \varnothing	15 $\Delta\#$	300p \varnothing								
18	ZN2877	30M \varnothing	120n		60n	80n	30 \varnothing	2.0 \varnothing	10m \varnothing	15 Δ	150p \varnothing	N	Si	200J	T011	A \varnothing		
19	2N2879	30M \varnothing	120n		60n	80n	30 \varnothing	2.0 \varnothing	10m \varnothing	15 Δ	150p \varnothing	N	Si	200J	TO111	A \varnothing		
20	2N3744	30.0M \varnothing	120n		60n	80n	30 \varnothing	5.0 \varnothing	5 \varnothing	10 Δ	150p \varnothing	N	Si	200J	MT53	G		
21	2N3745	30.0M \varnothing	120n		60n	80n	30 \varnothing	5.0 \varnothing	5 \varnothing	10 Δ	150p \varnothing	N	Si	200J	MT53	G		
22	2N3746	30.0M \varnothing	120n		60n	80n	30 \varnothing	5.0 \varnothing	5 \varnothing	10 Δ	150p \varnothing	N	Si	200J	MT53	G		
23	ZN2849	30.0M \varnothing	125n	50n	300n	175n	850m	1.0 \varnothing	500m \varnothing	50 Δ	400m	125p \varnothing	N-PE	Si	200S	R61	\varnothing	
24	ZN2849-1	30.0M \varnothing	125n	50n	300n	175n	850m	1.0 \varnothing	500m \varnothing	50 Δ	400m	125p \varnothing	N-PE	Si	200S	T05	\varnothing	
25	ZN2849-3	30.0M \varnothing	125n		300n	175n	850m	1.0 \varnothing	500m \varnothing	50 Δ	400m	125p \varnothing	N-PE	Si	200S	MT32	\varnothing	
26	ZN2850	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	500m \varnothing	25 Δ	250m	125p \varnothing	N-PE	Si	200S	R61	\varnothing	
27	ZN2850-1	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	500m \varnothing	25 Δ	250m	125p \varnothing	N-PE	Si	200S	T05	A \varnothing	
28	ZN2850-3	30.0M \varnothing	125n		400n	175n	850m	1.0 \varnothing	500m \varnothing	25 Δ	250m	125p \varnothing	N-PE	Si	200S	MT32	\varnothing	
29	ZN2851	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	500m \varnothing	25 Δ	400m	125p \varnothing	N-PE	Si	200S	R61	\varnothing	
30	ZN2851-1	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	500m \varnothing	25 Δ	400m	125p \varnothing	N-PE	Si	200S	T05	A \varnothing	
31	ZN2851-3	30.0M \varnothing	125n		400n	175n	850m	1.0 \varnothing	500m \varnothing	25 Δ	400m	125p \varnothing	N-PE	Si	200S	MT32	\varnothing	
32	ZN2852	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	500m \varnothing	15 Δ	400m	125p \varnothing	N-PE	Si	200S	R61	\varnothing	
33	ZN2852-1	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	500m \varnothing	15 Δ	400m	125p \varnothing	N-PE	Si	200S	T05	A \varnothing	
34	ZN2852-3	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	500m \varnothing	15 Δ	400m	125p \varnothing	N-PE	Si	200S	MT32	\varnothing	
35	ZN2853	30.0M \varnothing	125n	50n	400n	200n	850m	3.0 \varnothing	5.0 \varnothing	20 $\Delta\#$	300m	125p \varnothing	N-PE	Si	200S	R61	\varnothing	
36	ZN2853-1	30.0M \varnothing	125n	50n	400n	200n	850m	3.0 \varnothing	5.0 \varnothing	20 $\Delta\#$	300m	125p \varnothing	N-PE	Si	200S	T05	A \varnothing	
37	ZN2853-3	30.0M \varnothing	125n	50n	400n	200n	850m	3.0 \varnothing	5.0 \varnothing	20 $\Delta\#$	300m	125p \varnothing	N-PE	Si	200S	MT32	\varnothing	
38	ZN2854	30.0M \varnothing	125n	50n	300n	175n	850m	1.0 \varnothing	50m \varnothing	50 Δ	400m	125p \varnothing	N-PE	Si	200S	R61	\varnothing	
39	ZN2854-1	30.0M \varnothing	125n	50n	300n	175n	850m	1.0 \varnothing	50m \varnothing	50 Δ	400m	125p \varnothing	N-PE	Si	200S	T05	\varnothing	
40	ZN2854-3	30.0M \varnothing	125n	50n	300n	175n	850m	1.0 \varnothing	50m \varnothing	50 Δ	400m	125p \varnothing	N-PE	Si	200S	MT32	\varnothing	
41	ZN2855	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	50m \varnothing	25 Δ	400m	125p \varnothing	N-PE	Si	200S	R61	\varnothing	
42	ZN2855-1	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	50m \varnothing	25 Δ	400m	125p \varnothing	N-PE	Si	200S	T05	A \varnothing	
43	ZN2855-3	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	50m \varnothing	25 Δ	400m	125p \varnothing	N-PE	Si	200S	MT32	\varnothing	
44	ZN2856	30.0M \varnothing	125n	50n	400n	175n	850m	1.0 \varnothing	50m \varnothing	15 Δ	400m	125p \varnothing	N-PE	Si	200S	R61	\varnothing	
45	ZN2856-1	30.0M \varnothing	125n	50n	300n	175n	850m	1.0 \varnothing	50m \varnothing	15 Δ	400m	125p \varnothing	N-PE	Si	200S	T05	A \varnothing	
46	ZN2856-3	30.0M \varnothing	125n		400n	175n	850m	1.0 \varnothing	50m \varnothing	15 Δ	400m	125p \varnothing	N-PE	Si	200S	MT32	\varnothing	
47	2849-1	30.0M \varnothing	125n	50n	300n	175n	1.0	1.0 \varnothing	500m \varnothing	50 Δ	400m	125p \varnothing	N-PE	Si	200S	T05	\varnothing	
48	2849-2	30.0M \varnothing	125n	50n	300n	175n	2.0	1.0 \varnothing	500m \varnothing	50 Δ	400m	125p \varnothing	N-PE	Si	200S	T059	\varnothing	
49	2849-3	30.0M \varnothing	125n	50n	300n	175n	1.5	1.0 \varnothing	500m \varnothing	50 Δ	400m	125p \varnothing	N-PE	Si	200S	MT32	\varnothing	
50	ZN5658	30.0M \varnothing	150n \varnothing		800n \varnothing	30	2.0 \varnothing	500m \varnothing	40 $\Delta\#$	150p \varnothing	N	Si	200J	T059	A \varnothing			
51	ZN5659	30.0M \varnothing	150n \varnothing		800n \varnothing	30	2.0 \varnothing	500m \varnothing	40 $\Delta\#$	150p \varnothing	N	Si	200J	T0111	G			
52	ZN5316	30.0M \varnothing	200n		1.0u	200n	50 \varnothing	5.0 \varnothing	10 \varnothing	10 $\Delta\#$	500p	N	Si	200J	T061	A		
53	ZN5318	30.0M \varnothing	200n		1.0u	200n	50 \varnothing	5.0 \varnothing	10 \varnothing	10 $\Delta\#$	500p	N	Si	200J	T061	A		
54	ZN5729	30M \varnothing	200n		3.0u	500n	10 $\varnothing\#\mathbb{A}$	5.0 \varnothing	10 \varnothing	50 Δ	300m	150p \varnothing	N	Si	200J	T05	A \varnothing	
55	ZN5730	30M \varnothing	200n		3.0u	500n	45 $\varnothing\#\mathbb{A}$	5.0 \varnothing	10 \varnothing	50 Δ	240m	150p \varnothing	N	Si	200J	T059	A \varnothing	
56	SDT3105																	

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab. (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1. fab	2. RISE TIME (s)	MAX DELAY TIME (s)	MAX STORE TIME (s)	MAX TIME ts	MAX AIR @ 25°C (W)	MAX. Pc (W)	BIAS			MAX. SAT. RES. (Ω)	Cob	rbb X Cob (s)	STRUCTURE	M A T	MAX Y200 s/a	DWG #	L C A D D E
									Vcb	Ie	hFE								
1	1748-1030	30M1Δ	500nΩ	600n	400n	100	30	30	20	#Δ		800pΩ	N-E	Si	200J	T063	A		
2	1748-1230	30M1Δ	500nΩ	600n	400n	100	30	30	20	#Δ		800pΩ	N-E	Si	200J	T063	A		
3	1748-1430	30M1Δ	500nΩ	600n	400n	100	30	30	20	#Δ		800pΩ	N-E	Si	200J	T063	A		
4	1748-1630	30M1Δ	500nΩ	600n	400n	175	30	30	20	#Δ		800pΩ	N-EM	Si	200J	T063	A		
5	1748-1830	30M1Δ	500nΩ	600n	400n	175	30	30	20	#Δ		800pΩ	N-EM	Si	200J	T063	A		
6	SDT3101	30 OM1Δ	50n	750n	500n	3.0	5.0	10uΩ	90	#Δ		500pΩ	P-PE	Si	200J	T061	A		
7	SDT3102	30 OM1Δ	50n	750n	500n	3.0	5.0	10uΩ	90	#Δ		500pΩ	P-PE	Si	200J	T061	A		
8	SDT3103	30 OM1Δ	50n	750n	500n	3.0	5.0	10uΩ	90	#Δ		500pΩ	P-PE	Si	200J	T061	A		
9	SDT3104	30 OM1Δ	50n	750n	500n	3.0	5.0	10uΩ	90	#Δ		500pΩ	N-PE	Si	200J	T061	A		
10	SDT3201	30 OM1Δ	50n	1.0u	500n	13.0	50	10uΩ	90	#Δ		500pΩ	N-PE	Si	200J	T061	A		
11	SDT3202	30 OM1Δ	50n	1.0u	500n	13.0	50	10uΩ	90	#Δ		500pΩ	N-PE	Si	200J	T061	A		
12	SDT3203	30 OM1Δ	50n	1.0u	500n	3	5.0	0.1mΩ	90	#Δ		500pΩ	N-PE S	Si	200J	T061	A		
13	SDT3204	30 OM1Δ	50n	1.0u	500n	3	5.0	0.1mΩ	90	#Δ		500pΩ	N-PE S	Si	200J	T061	A		
14	ST74049	30M1Δ	500nΩ	1.0uΩ	7.5	10	500mΩ	40	#Δ		60pΩ	N-PL	Si	200J	T05				
15	ST74050	30M1Δ	500nΩ	1.0uΩ	7.5	10	500mΩ	40	#Δ		60pΩ	N-PL	Si	200J	T05				
16	ST74051	30M1Δ	500nΩ	1.0uΩ	7.5	10	500mΩ	40	#Δ		60pΩ	N-PL	Si	200J	T05				
17	2N5932	30M1Δ	60n	650n	350n	100	4.0	30	12	#Δ		N	N	Si	200J	MD6f	CØ		
18	2N5933	30M1Δ	60n	550n	350n	100	4.0	30	12	#Δ		N	N	Si	200J	MD6f	CØ		
19	2N5934	30M1Δ	60n	550n	350n	100	4.0	30	12	#Δ		N	N	Si	200J	MD6f	CØ		
20	2N6046	30M1Δ	60n	550n	350n	114	4.0	30	12	#Δ		N	N	Si	200J	T063	AØ		
21	2N6047	30M1Δ	60n	550n	350n	114	4.0	30	12	#Δ		N	N	Si	200J	T063	AØ		
22	2N6048	30M1Δ	60n	550n	350n	114	4.0	30	12	#Δ		N	N	Si	200J	T063	AØ		
23	1743-0820	30M1Δ	60n	550n	350n	100	4.0	30	12	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
24	1743-1220	30M1Δ	60n	550n	350n	100	4.0	30	12	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
25	1743-1620	30M1Δ	60n	550n	350n	100	4.0	30	12	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
26	1743-1820	30M1Δ	60n	550n	350n	100	4.0	30	12	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
27	2N5733	30M1Δ	70n	3.0u	11.0u	150	5.0	30	5.0	#Δ	60m	750pΩ	N	N	Si	200J	T063	AØ	
28	2N5734	30M1Δ	70n	3.0u	11.0u	150	5.0	30	5.0	#Δ	60m	750pΩ	N	N	Si	200J	T03	AØ	
29	2N5935	30M1Δ	70n	600n	400n	100	4.0	30	20	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
30	2N5936	30M1Δ	70n	600n	400n	100	4.0	30	20	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
31	1743-0830	30M1Δ	70n	600n	400n	100	4.0	40	10	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
32	1743-1030	30M1Δ	70n	600n	400n	100	4.0	40	10	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
33	1743-1430	30M1Δ	70n	600n	400n	100	4.0	40	10	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
34	1743-1830	30M1Δ	70n	600n	400n	100	4.0	40	10	#Δ		800pΩ	N-E	Si	200A	T03	CØ		
35	2N4002	30 OM1Δ	1000nΩ	3uΩ	4.0	4.0	1	30	10	04		N	N	Si	200J	T063	AØ		
36	2N4003	30 OM1Δ	1000nΩ	3uΩ	4.0	4.0	1	30	10	04		N	N	Si	200J	T063	AØ		
37	2N4004	30 OM1Δ	1000nΩ	4.0uΩ	1.2	4.0	2	15	#Δ	05	#	P-DM	Ge	Si	200	X21			
38	2N4005	30 OM1Δ	1000nΩ	4.0uΩ	1.2	4.0	2	15	#Δ	05	#	P-DM	Ge	Si	200	X21			
39	2N1301	35M1Δ	70n	90n	70n	150m	500mΩ	40m	0			P-DM	Ge	Si	200	X21			
40	2N1384	35M1Δ	80n	20n	250n	100n	240m	50	200m	50		P-DM	Ge	Si	200	X21			
41	JAN2N3846	35M1Δ	4.0uΩ			7.0uΩ	150	3.0	5.0	40	#Δ	750pΩ	N	Si	175A	T05	AØ		
42	JAN2N3847	35M1Δ	4.0uΩ			7.0uΩ	150	3.0	5.0	40	#Δ	750pΩ	N	Si	175A	T05	AØ		
43	2N3388	35 OM1Δ	1000n	200n	400n	1.2u	600m	1.5	2.5mΩ	60	400	35pΩ	N	Si	175A	T05	AØ		
44	2N3389	35 OM1Δ	1000n	200n	400n	1.2u	600m	1.5	2.5mΩ	60	400	35pΩ	N	Si	175A	T05	AØ		
45	2N1122	40 OM1Δ	150n	25*	250m	10m	25	1.2	6.0pΩ	750pΩ	P-MA	Ge	Si	200	T024	A			
46	2N1122A	40 OM1Δ	150n	25*	250m	10m	25	1.2	6.0pΩ	750pΩ	P-MA	Ge	Si	200	T024	A			
47	JAN2N1854	40 OM1Δ	25n	60n	60n	150m	1.0	50mΩ	400		P-ME	Si	Si	175A	T018				
48	2H1255	40 OM1Δ	25n	60n	60n	150m	1.0	2.0m	40		P-ME	Si	Si	175A	T018				
49	2H1257	40 OM1Δ	25n	60n	60n	150m	1.0	2.0m	40		P-ME	Si	Si	200S	T05				
50	#2H1259	40 OM1Δ	25n	60n	60n	150m	1.0	2.0m	25		P-ME	Si	Si	175A	T018				
51	2N1259	40 OM1Δ	25n	60n	60n	150m	1.0	2.0m	100		P-ME	Si	Si	200S	T05				
52	#2HT100	40 OM1Δ	25n	80n	300n	10	2.0m	14		P-ME	Si	Si	175A	T018					
53	#2HT101	40 OM1Δ	25n	80n	300n	10	2.0m	120		P-ME	Si	Si	175A	T018					
54	2N5334	40 OM1Δ	50n	950n	100n	8	2.0	2.0mΩ	15	#Δ	75p	N	N	Si	200J	T039	AØ		
55	2N5335	40 OM1Δ	50n	950n	100n	8	2.0	2.0mΩ	15	#Δ	75p	N	N	Si	200J	T039	AØ		
56	D43C1	40M1Δ	50n	500n	50n	1.7	1.0	1.0	10		500m	125pΩ	P-DM	Ge	Si	175A	T018		
57	D43C2	40M1Δ	50n	500n	50n	1.7	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	175A	T018		
58	D43C3	40M1Δ	50n	500n	50n	1.7	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	175A	T018		
59	D43C4	40M1Δ	50n	500n	50n	1.7	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	175A	T018		
60	D43C5	40M1Δ	50n	500n	50n	1.7	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	175A	T018		
61	D43C6	40M1Δ	50n	500n	50n	1.7	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	175A	T018		
62	D43C7	40M1Δ	50n	500n	50n	1.7	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	175A	T018		
63	D43C8	40M1Δ	50n	500n	50n	1.7	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	175A	T018		
64	D45C1	40M1Δ	50n	500n	50n	1.3	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	125J	X102	D	
65	D45C2	40M1Δ	50n	500n	50n	1.3	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	125J	X102	D	
66	D45C3	40M1Δ	50n	500n	50n	1.3	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	125J	X102	D	
67	D45C4	40M1Δ	50n	500n	50n	1.3	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	125J	X102	D	
68	D45C5	40M1Δ	50n	500n	50n	1.3	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	125J	X102	D	
69	D45C6	40M1Δ	50n	500n	50n	1.3	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	125J	X102	D	
70	D45C7	40M1Δ	50n	500n	50n	1.3	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	125J	X102	D	
71	D45C8	40M1Δ	50n	500n	50n	1.3	1.0	1.0	20		500m	125pΩ	P-DM	Ge	Si	125J	X102	D	
72																			

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1	2	MAX	MAX	MAX	MAX	MAX	BIAS	MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob	STRUCTURE	M A T	MAX	DWG #	L
		fab	RISE TIME (Hz)	DELAY TR (s)	STORE TIME (s)	FALL TIME (s)	AIR @ 25°C	V _{cb}	I _e							Y200	E
1♦	1714-0602	40M _Δ	300n _Ø	600n	300n _Ø	25 Øs	20 Øs	20 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
2♦	1714-0802	40M _Δ	300n _Ø	600n	300n _Ø	25 Øs	20 Øs	20 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
3♦	1714-1002	40M _Δ	300n _Ø	600n	300n _Ø	25 Øs	20 Øs	20 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
4♦	1714-1202	40M _Δ	300n _Ø	600n	300n _Ø	25 Øs	20 Øs	20 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
5♦	1714-1402	40M _Δ	300n _Ø	600n	300n _Ø	25 Øs	20 Øs	20 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
6♦	1714-1602	40M _Δ	300n _Ø	600n	300n _Ø	25 Øs	20 Øs	20 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
7♦	1714-1802	40M _Δ	200n _Ø	600n	300n _Ø	25 Øs	20 Øs	20 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
8	1716-0402	40M _Δ	300n _Ø	600n	300n _Ø	87	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
9	1716-0602	40M _Δ	300n _Ø	600n	300n _Ø	87	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
10	1716-0802	40M _Δ	300n _Ø	600n	300n _Ø	87	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
11	1716-1002	40M _Δ	300n _Ø	600n	300n _Ø	87	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
12	1716-1202	40M _Δ	300n _Ø	600n	300n _Ø	87	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
13	1716-1402	40M _Δ	300n _Ø	600n	300n _Ø	87	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
14	1716-1602	40M _Δ	300n _Ø	600n	300n _Ø	87	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
15	1716-1802	40M _Δ	300n _Ø	600n	300n _Ø	87	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
16	1718-0402	40M _Δ	300n _Ø	600n	300n _Ø	58	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
17	1718-0602	40M _Δ	300n _Ø	600n	300n _Ø	58	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	TD111	G		
18	1718-0802	40M _Δ	300n _Ø	600n	300n _Ø	58	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
19	1718-1002	40M _Δ	300n _Ø	600n	300n _Ø	58	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
20	1718-1202	40M _Δ	300n _Ø	600n	300n _Ø	58	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
21	1718-1402	40M _Δ	300n _Ø	600n	300n _Ø	58	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
22	1718-1602	40M _Δ	300n _Ø	600n	300n _Ø	58	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
23	1718-1802	40M _Δ	300n _Ø	600n	300n _Ø	58	20 Øs	20 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
24	2N3879	40M _Δ	400n _Ø	500n _Ø	800n _Ø	40	20 Ø	4 Ø	12 Ø	30	N	Si	200J	T066	C		
25♦	1714-0405	40M _Δ	400n _Ø	600n	300n _Ø	25 Øs	20 Øs	5 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
26♦	1714-0605	40M _Δ	400n _Ø	600n	300n _Ø	25 Øs	20 Øs	5 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
27♦	1714-0805	40M _Δ	400n _Ø	600n	300n _Ø	25 Øs	20 Øs	5 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
28♦	1714-1005	40M _Δ	400n _Ø	600n	300n _Ø	25 Øs	20 Øs	5 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
29♦	1714-1205	40M _Δ	400n _Ø	600n	300n _Ø	25 Øs	20 Øs	5 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
30♦	1714-1405	40M _Δ	400n _Ø	600n	300n _Ø	25 Øs	20 Øs	5 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
31♦	1714-1605	40M _Δ	400n _Ø	600n	300n _Ø	25 Øs	20 Øs	5 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
32♦	1714-1805	40M _Δ	400n _Ø	600n	300n _Ø	25 Øs	20 Øs	5 Ø	20 Ø#	250p _Ø	N-E	Si	200J	T066	C		
33	1716-0405	40M _Δ	400n _Ø	600n	300n _Ø	87	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
34	1716-0605	40M _Δ	400n _Ø	600n	300n _Ø	87	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
35	1716-0805	40M _Δ	400n _Ø	600n	300n _Ø	87	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
36	1716-1005	40M _Δ	400n _Ø	600n	300n _Ø	87	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
37	1716-1205	40M _Δ	400n _Ø	600n	300n _Ø	87	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
38	1716-1405	40M _Δ	400n _Ø	600n	300n _Ø	87	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
39	1716-1605	40M _Δ	400n _Ø	600n	300n _Ø	87	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
40	1716-1805	40M _Δ	400n _Ø	600n	300n _Ø	87	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	T061	A		
41	1718-0405	40M _Δ	400n _Ø	600n	300n _Ø	58	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
42	1718-0605	40M _Δ	400n _Ø	600n	300n _Ø	58	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
43	1718-0805	40M _Δ	400n _Ø	600n	300n _Ø	58	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
44	1718-1005	40M _Δ	400n _Ø	600n	300n _Ø	58	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
45	1718-1205	40M _Δ	400n _Ø	600n	300n _Ø	58	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
46	1718-1405	40M _Δ	400n _Ø	600n	300n _Ø	58	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
47	1718-1605	40M _Δ	400n _Ø	600n	300n _Ø	58	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
48	1718-1805	40M _Δ	400n _Ø	600n	300n _Ø	58	20 Øs	5 Ø	20	250p _Ø	N-EM	Si	200J	TO111	G		
49	2N5404	40M _Δ	500n	750n	200n	5 Ø	5 Ø	5 Ø	5 Ø#	150p _Ø	P	Si	200J	T05	A		
50	2N5405	40M _Δ	500n	750n	200n	5 Ø	5 Ø	5 Ø	5 Ø#	150p _Ø	P	Si	200J	T05	A		
51	2N5406	40M _Δ	500n	1.0u	300n	5 Ø	5 Ø	5 Ø	10 Ø	150p _Ø	P	Si	200J	T05	A		
52	2N5407	40M _Δ	500n	1.0u	300n	5 Ø	5 Ø	5 Ø	10 Ø	150p _Ø	P	Si	200J	T05	A		
53	2N5408	40M _Δ	500n	1.0u	250n	30m _Ø	5 Ø	5 Ø	5 Ø	150p _Ø	P	Si	200J	TO111	A		
54	2N5409	40M _Δ	500n	1.0u	250n	30m _Ø	5 Ø	5 Ø	5 Ø	150p _Ø	P	Si	200J	TO111	A		
55	2N5410	40M _Δ	500n	1.0u	300n	30m _Ø	5 Ø	5 Ø	5 Ø	10 Ø	150p _Ø	P	Si	200J	TO111	A	
56	2N5411	40M _Δ	500n	1.0u	300n	30m _Ø	5 Ø	5 Ø	5 Ø	10 Ø	150p _Ø	P	Si	200J	TO111	A	
57	SDT3301	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	P-PE	Si	200J	TO111	A		
58	SDT3302	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	P-PE	Si	200J	TO111	A		
59	SDT3303	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	P-PE	Si	200J	TO111	A		
60	SDT3304	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	P-PE	Si	200J	TO111	A		
61	SDT3305	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	P-PE	Si	200J	TO111	A		
62	SDT3306	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	P-PE	Si	200J	TO111	A		
63	SDT3307	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	P-PE	Si	200J	TO111	A		
64	SDT3308	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	P-PE	Si	200J	TO111	A		
65	SDT3309	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	P-PE	Si	200J	TO111	A		
66	SDT3401	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø	2.0 Ø	120 Ø#	N-PF	Si	200J	TO111	A		
67	SDT3402	40M _Δ	500n	1.0u	300n	2.0 Ø	5 Ø	5 Ø</									

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1.	2.	MAX. RISE (Hz)	MAX. DELAY (s)	MAX. STORE (s)	MAX. FALL (s)	MAX. Pc (W)	BIAS (V)	hFE	MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob (s)	STRUCTURE M P-PNP N-NPN	MAX. TEMP. (°C)	DWG #	L C Y200 s/a TO200 Ser	
		fab	TIME tr (s)	td (s)	ts (s)	tf (s)	AIR @ 25°C	Vcb	Ie									
1	2N2350	50 OM ^Δ	70n		150n	50n	400m	10	150m ^Δ	300	2.3	20p ^Δ	N-PE	Si	200J	TO46	A ^Δ	
2	2N2350A	50 OM ^Δ	70n		150n	50n	400m	10	150m ^Δ	300	1.6	20p ^Δ	N-PE	Si	200J	TO46	A ^Δ	
3	2N2351	50 OM ^Δ	70n		150n	50n	400m	10	150m ^Δ	120	2.3	20p ^Δ	N-PE	Si	200J	TO46	A ^Δ	
4	2N2351A	50 OM ^Δ	70n		150n	50n	400m	10	150m ^Δ	120	1.6	20p ^Δ	N-PE	Si	200J	TO46	A ^Δ	
5	2N2352	50 OM ^Δ	70n		150n	50n	400m	10	150m ^Δ	60	2.3	20p ^Δ	N-PE	Si	200J	TO46	A ^Δ	
6	2N2352A	50 OM ^Δ	70n		150n	50n	400m	10	150m ^Δ	60	1.6	20p ^Δ	N-PE	Si	200J	TO46	A ^Δ	
7	2N2364	50 OM ^Δ	70n	50n	500n	100n	400m	10	150m ^Δ	120	2.3	15p ^Δ	N-PE	Si	200J	TO46	A ^Δ	
8	2N2364A	50 OM ^Δ	70n	50n	500n	100n	400m	10	150m ^Δ	120	1.6	20p ^Δ	N-PE	Si	200J	TO46	A ^Δ	
9#	BSY46	50 OM ^Δ	70n		150n	50n	800m	10	150m ^Δ	80	2.0	20p ^Δ	N-PE	Si	200J	T05		
10	2N2878	50M ^Δ	80n		80n	30n	30 s ^Δ	20	10m ^Δ	30	Δ	150p ^Δ	N	Si	200J	T0111	A ^Δ	
11	2N2880	50M ^Δ	80n		80n	30	30 s ^Δ	20	10m ^Δ	30	Δ	150p ^Δ	N	Si	200J	T0111	A ^Δ	
12	2N3750	50 OM ^Δ	80n		80n	30	50	5	5	20	Δ	150p ^Δ	N	Si	200J	MT53	G	
13	2N3751	50 OM ^Δ	80n		80n	30	50	5	5	20	Δ	150p ^Δ	N	Si	200J	MT53	G	
14	2N3752	50 OM ^Δ	80n		80n	30	50	5	5	20	Δ	150p ^Δ	N	Si	200J	MT53	G	
15	2N5320	50 OM ^Δ	80n		800n ^Δ	10	2.0	1.0	10	Δ	1.0	N	Si	200J	T05	A ^Δ		
16	2N5321	50 OM ^Δ	80n		800n ^Δ	10	4.0	500m ^Δ	250	Δ	1.6	N	Si	200J	T05	A ^Δ		
17	2N3039	50 OM ^Δ	100n	50n	500n	150n	10	100μ	15	Δ	20	40p ^Δ	P	Si	200S	T060	A	
18	2N3040	50 OM ^Δ	100n	50n	500n	150n	10	100μ	30	Δ	20	40p ^Δ	P	Si	200S	T050	A	
19	2N3341	50 OM ^Δ	100n ^Δ			400m	10	10u ^Δ	40	Δ	25k	60p ^Δ	P	Si	175A	TO46	A ^Δ	
20	2N5322	50 OM ^Δ	100n ^Δ			1u ^Δ	10	10	10	1.0	1.4	N	Si	200J	T05	A ^Δ		
21	2N5323	50 OM ^Δ	100n ^Δ			1u ^Δ	10	4.0	500m ^Δ	250	Δ	2.4	N	Si	200J	T05	A ^Δ	
22	2N5357	50 OM ^Δ	100n	50n	600n	100n	30	1.0	50m	45	Δ	0.3	60p ^Δ	P	Si	200J	T037	A ^Δ
23#	2854-1	50M ^Δ	100n	50n	300n	150n	5.0	1.0	50m ^Δ	50	Δ	60p ^Δ	N-PL	Si	200A	T05	A ^Δ	
24#	2854-2	50M ^Δ	100n	50n	300n	150n	22	1.0	50m ^Δ	50	Δ	60p ^Δ	N-PL	Si	200A	T059	A ^Δ	
25#	2854-3	50M ^Δ	100n	50n	300n	150n	5.0	1.0	50m ^Δ	50	Δ	60p ^Δ	N-PL	Si	200A	MT32	A ^Δ	
26#	D42C1	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	1.7	1.0	10	Δ	500m ^Δ	100p ^Δ	N	Si	150J	X51c	B	
27#	D42C2	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	1.7	1.0	10	Δ	500m ^Δ	100p ^Δ	N	Si	150J	X51c	B	
28#	D42C3	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	1.7	1.0	10	Δ	500m ^Δ	100p ^Δ	N	Si	150J	X51c	B	
29#	D42C4	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	1.7	1.0	10	Δ	500m ^Δ	100p ^Δ	N	Si	150J	X51c	B	
30#	D42C5	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	1.7	1.0	10	Δ	500m ^Δ	100p ^Δ	N	Si	150J	X51c	B	
31#	D42C6	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	1.7	1.0	10	Δ	500m ^Δ	100p ^Δ	N	Si	150J	X51c	B	
32#	D42C7	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	1.7	1.0	10	Δ	500m ^Δ	100p ^Δ	N	Si	150J	X51c	B	
33#	D42C8	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	1.7	1.0	10	Δ	500m ^Δ	100p ^Δ	N	Si	150J	X51c	B	
34	D44C1	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	30	1.0	100	Δ	10	Δ	100p ^Δ	N	Si	150J	X102	D
35	D44C2	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	30	1.0	100	Δ	10	Δ	100p ^Δ	N	Si	150J	X102	D
36	D44C3	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	30	1.0	100	Δ	10	Δ	100p ^Δ	N	Si	150J	X102	D
37	D44C4	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	30	1.0	100	Δ	10	Δ	100p ^Δ	N	Si	150J	X102	D
38	D44C5	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	30	1.0	100	Δ	10	Δ	100p ^Δ	N	Si	150J	X102	D
39	D44C6	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	30	1.0	100	Δ	10	Δ	100p ^Δ	N	Si	150J	X102	D
40	D44C7	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	30	1.0	100	Δ	10	Δ	100p ^Δ	N	Si	150J	X102	D
41	D44C8	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	30	1.0	100	Δ	10	Δ	100p ^Δ	N	Si	150J	X102	D
42	D44C9	50M ^Δ	100n ^Δ		500n ^Δ	75n ^Δ	30	1.0	100	Δ	10	Δ	100p ^Δ	N	Si	150J	X102	D
43#	2SA408	50 OM ^Δ	105n		150n	80t	50	1.0	15m ^Δ	100		3.0p	P-MD	Ge	R48			
44	T1486	50M ^Δ	140n ^Δ		2.6u ^Δ	1.0	5.0	200m ^Δ	20	Δ	3.0p	N-DPL	Si	200C	T05	A ^Δ		
45	T1487	50M ^Δ	140n ^Δ		2.6u ^Δ	2.0	5.0	200m ^Δ	20	Δ	3.0p	N-DPL	Si	200C	MT13	A ^Δ		
46	2N3036	50 OM ^Δ	150n	30n	1.0u	200n	5.0	10	10m ^Δ	40	Δ	150p	N	Si	200S	T05	A ^Δ	
47	2N3037	50 OM ^Δ	150n	30n	1.0u	200n	5.0	10	100μ	15	Δ	20	15p ^Δ	N	Si	200S	T050	A
48	2N3038	50 OM ^Δ	150n	30n	1.0u	200n	5.0	10	100μ	30	Δ	30p ^Δ	N	Si	200S	T050	A	
49#	2SA251	50 OM ^Δ	150n		230n	150n	50	1.0	15m ^Δ	50		2.5p	P-MD	Ge				
50	USA55191/33	50 OM ^Δ	150n ^Δ		600n ^Δ	50	5.0	10	150m ^Δ	19	Δ	16	35p ^Δ	N	Si	200S	2005	A ^Δ
51	2N697A	50 OM ^Δ	190n ^Δ		300n ^Δ	50	5.0	10	150m ^Δ	120	Δ	35p ^Δ	N	Si	200J	T05	A ^Δ	
52	JAN2N696	50M ^Δ	200n ^Δ		1.0u ^Δ	20	10	300m ^Δ	13	Δ	10	250p	N	Si	200S	T05	A ^Δ	
53	MJ3801	50M ^Δ	200n	200n	3.0u	200n	40	4.0	10m ^Δ	1.0	Δ	75p ^Δ	N	Si	200J	L69		
54	MJ3802	50M ^Δ	200n	200n	3.0u	200n	40	4.0	10m ^Δ	250	Δ	75p ^Δ	N	Si	200J	L69		
55#	C1004	50M ^Δ	225n ^Δ		800n ^Δ	360m	10	10m ^Δ	40	Δ	2.5p	N	Si	125	T0105	A		
56#	BC140	50 OM ^Δ	250n ^Δ		850n ^Δ	37	1.0	10	100m ^Δ	15	Δ	2.5p ^Δ	N-E	Si	175J	T039	A ^Δ	
57#	BC141	50 OM ^Δ	250n ^Δ		850n ^Δ	37	1.0	10	100m ^Δ	15	Δ	2.5p ^Δ	N-E	Si	175J	T039	A ^Δ	
58	2N2890	50M ^Δ	300n ^Δ		1.5u ^Δ	50	2.0	10	10m ^Δ	10	Δ	120p ^Δ	N	Si	200J	T05	A ^Δ	
59	2N2891	50M ^Δ	300n ^Δ		1.5u ^Δ	50	2.0	10	10m ^Δ	10	Δ	120p ^Δ	N	Si	200J	T05	A ^Δ	
60	2N2892	50M ^Δ	300n ^Δ		1.5u ^Δ	17	2.0	10	10m ^Δ	10	Δ	120p ^Δ	N	Si	200J	T059	A ^Δ	
61	2N2893	50M ^Δ	300n ^Δ		1.5u ^Δ	17	2.0	10	10m ^Δ	30	Δ	120p ^Δ	N	Si	200J	T059	A ^Δ	
62#	2N4895	50M ^Δ	300n	50n	350n	300n	4.0	2.0	10	10m ^Δ	120	Δ	200m ^Δ </td					

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1 fab	2 MAX RISE TIME (Hz)	MAX DELAY tr (s)	MAX STORE TIME (s)	MAX FALL TIME (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob (s)	STRUCTURE	M A TEMP (°C)	DWG # Y200 s/a TO200 Ser.	L C E O A D E			
								V _{cb}	I _e	hFE										
1	ZN5345	60OMSΔ	100n	600n	100n	40s	5.0	1.0mΩ	7 #Δ	3.0			P	Si	200J	T066	C			
2#	2SA412	60OMSΔ	180n	200n	60n	90n	1.0μΩ	5.0	30m	30	10	12p	P	Si	85	T01	C			
3	JAN2N697	60OMSΔ	200n					10	500mΩ	20 #Δ	10	25p	N	Si	2005	T05	A			
4	ZN3T08	60OMSΔ	200n					1.0	150mΩ	40 #Δ		20p	N	Si	2005	T05	A			
5	ZN3110	60OMSΔ	200n					1.0	150mΩ	40 #Δ		25p	N	Si	2005	T05	A			
6	ZN5412	60OMSΔ	200n	25n	30n	300n	100	5.0	2	20	1Δ	10	N	Si	175J	T061	A			
7	B148000	60OMSΔ	200n	25n	300n	300n	100	5.0	0.2mΩ	160	#Δ	10	N	Si	175J	T061	A			
8	B148001	60OMSΔ	200n	25n	300n	300n	100	5.0	0.2mΩ	160	#Δ	10	N	Si	175J	T061	A			
9	B148002	60OMSΔ	200n	25n	300n	300n	100	5.0	0.2mΩ	160	#Δ	10	N	Si	175J	T061	A			
10	B148003	60OMSΔ	200n	25n	300n	300n	100	5.0	0.2mΩ	160	#Δ	10	N	Si	175J	T061	A			
11	B146004	60OMSΔ	200n	25n	300n	300n	100	5.0	0.2mΩ	160	#Δ	10	N	Si	175J	T061	A			
12	BD121	60M	200n	30n	350n	150n	45	10	1.0	30	650m		N-D	Si	175J	T03	C			
13	BD123	60M	200n	30n	350n	150n	45	10	1.0	30	650m		N-D	Si	175J	T03	C			
14#	8SX33	60OMSΔ	200n					600n	1.8	10	10mΩ	40 #Δ	25p	N-OPE	Si	200J	T018	C		
15	ZN5202	60OMSΔ	400n					400n	35m	1.2	4	10	N	Si	200	T066	C			
16	ZN5038	60OMSΔ	500n	500n	1.5u	500n	140	5.0	12	20	Δ	125m	N	Si	200J	T03	C			
17	ZN5039	60OMSΔ	500n	500n	1.5u	500n	140	5.0	10	20	Δ	125m	N	Si	200J	T03	C			
18	JAN2N388	60OMSΔ	1.0μΩ					700n	750m	200m	30	Δ	20p	N	Ge	1005	T05	A		
19	ZN1252	64OMΔ	80n					600m	10	150mΩ	35	#Δ	10	N-O	Si	175J	T05	A		
20	ZN696	64OMΔ	200n					600m	10	150mΩ	20	#Δ	10	N-O	Si	175S	T05	A		
21	ZN717	64OMΔ	200n					400m	10	150mΩ	20	#Δ	10	N-O	Si	175S	T018	A		
22	ZN2592	66OMSΔ	700n	400n	500n	1.0u	300m	1.0	100	90	Δ	20	5.0p	N-PE	Si	175J	T018	A		
23	JAN2N1711	70OMSΔ	700n	30n*	800m	100	10	100	35	Δ	10	25p	NQ	Si	200J	T05	A			
24	JAN2N1890	70OMSΔ	700n	30n*	800m	100	10	100	35	Δ	24	15p	NQ	Si	200J	T05	A			
25	ZNT411	70OMSΔ	30n	160ns				25m	1.0	50m	75		3.0p	550nt	P-MA	Ge	85J	T024	F	
26#	ZSC850	70OMSΔ	80n		800n	150n	500m	4.0	10mΩ	160			N	Si	175J	T018	C			
27	ZN3340	70OMSΔ	100n					400m	1.0	0.1mΩ	40	Δ	20k	6.0p	N	Si	175A	T046	A	
28	ZN3107	70OMSΔ	200n					1u	5.0	10	10mΩ	35	Δ	20p	N	Si	200J	T05	A	
29	ZN3109	70OMSΔ	200n					1u	5.0	10	10mΩ	35	Δ	25p	N	Si	200J	T05	A	
30#	ZSA623	70M	200n					600n	800n	7.0	4.0	500mΩ	35	#Δ	1.0	P-PET	Si	125J	X51b	P
31#	ZSA624	70M	200n					600n	800n	7.0	4.0	500mΩ	35	#Δ	1.0	P-PET	Si	125J	X51b	P
32#	ZSA645	70M	200n					600n	800n	7.0	4.0	300mΩ	35	#Δ	2.0	P-PET	Si	125J	X51b	P
33#	ZSA646	70M	200n					600n	800n	7.0	4.0	300mΩ	20	#Δ	2.0	P-PET	Si	125J	X51b	P
34#	ZSA647	70M	200n					600n	800n	7.0	4.0	300mΩ	20	#Δ	2.0	N-PEI	Si	150J	X51b	P
35#	ZSC1013	70M	200n					1.0u	1.2u	7.0	4.0	500mΩ	35	#Δ	1.0	N-PEI	Si	125J	X51b	P
36#	ZSC1014	70M	200n					1.0u	1.2u	7.0	4.0	500mΩ	35	#Δ	1.0	N-PEI	Si	125J	X51b	P
37#	ZSC1155	70M	200n					1.0u	1.2u	7.0	4.0	300mΩ	35	#Δ	2.0	N-PEI	Si	125J	X51b	P
38#	ZSC1156	70M	200n					1.0u	1.2u	7.0	4.0	300mΩ	20	#Δ	2.0	N-PEI	Si	125J	X51b	P
39#	ZSC1157	70M	200n					1.0u	1.2u	7.0	4.0	300mΩ	20	#Δ	2.0	N-PEI	Si	125J	X51b	P
40#	BSX62	70M	300n					1.5u	7.7	1.0	1.0	250			N-PE	Si	200J	T039	A	
41	JAN2N2812	70OMSΔ	350n					200n	50	50	50	50	#Δ	350p	N	Si	200	T061	A	
42	JAN2N2814	70OMSΔ	350n					200n	50	50	50	50	#Δ	350p	N	Si	200	T061	A	
43	ZN5584	70OMSΔ	350n					1.2m	1.0k	3.0	20	15	Δ	75m	N	Si	200J	T063	A	
44#	BFX34	70OMSΔ	600n					1.2u	5.0m	2.0	1.0	100	#Δ	100p	N-DPE	Si	200J	T05	C	
45	JAN2N4865	70OMSΔ	2.0u					500n	300	5.0	20	30	#Δ	100p	N	Si	200J	MT49a	A	
46	JAN2N5250	70OMSΔ	2.0u					1.5u	500n	300	5.0	20	30	#Δ	100p	N	Si	200J	MT49a	A
47	JAN2N5251	70OMSΔ	2.0u					1.5u	500n	50m	5.0	40m	50	†	1.5p	P-MD	Ge	85A	T09	A
48	ZN1754	75OMSΔ	25n					800n	53	5.0	5.0	80	Δ	250m	N-P	Si	200A	T059	C	
49	PT6940	75M	150n					400n	30	3.0	3.0	30	Δ	240m	N-P	Si	200A	T05	C	
50	PT6941	75M	150n					400n	35	5.0	1.0	40	Δ	400m	N-P	Si	200A	T03	C	
51	PT6942	75M	150n					400n	35	5.0	1.0	40	Δ	500m	N-P	Si	200A	T03	C	
52	PT6943	75M	150n					400n	35	5.0	1.0	30	Δ	600m	N-P	Si	200A	T03	C	
53	PT7903	75M	150n					400n	35	5.0	1.0	30	Δ	500m	N-P	Si	200A	T03	C	
54	PT7904	75M	150n					400n	35	5.0	1.0	40	Δ	400m	N-P	Si	200A	T03	C	
55	PT7905	75M	150n					400n	35	5.0	1.0	30	Δ	500m	N-P	Si	200A	T03	C	
56	PT7906	75M	150n					400n	35	5.0	1.0	30	Δ	600m	N-P	Si	200A	T03	C	
57	PT7907	75M	150n					400n	35	5.0	1.0	40	Δ	500m	N-P	Si	200A	T03	C	
58	PT7908	75M	150n					400n	35	5.0	1.0	30	Δ	600m	N-P	Si	200A	T03	C	
59	PT7909	75M	150n					400n	35	5.0	1.0	15	Δ	700m	N-P	Si	200A	T03	C	
60	PT7910	75M	150n					400n	35	5.0	1.0	30	Δ	600m	N-P	Si	200A	T03	C	
61	PT7911	75M	150n					400n	35	5.0	1.0	15	Δ	700m	N-P	Si	200A	T03	C	
62	PT7956	75M	150n					400n	35	5.0	1.0	10	Δ	1.0	N-P	Si	200A	T03	C	
63	PT7957	75M	150n					400n	35	5.0	1.0	10	Δ	1.0	N-P	Si	200A	T03	C	
64	ZTS928	75M	200n					800n	53	5.0	5.0	80	Δ	250m	N-P	Si	200A	T059	A	
65	JAN2N4150	75OMSΔ	50n	1.5u	500n	1.5m	1.5m	1.0	10	10	10	350p	N	Si	200A	T05	A			
66	JAN2N5237	75OMSΔ	50n	1.5u	500n	1.5m	1.5m	1.0	10	10	10	350p	N	Si	200A	T05	A			
67	JAN2N5238	75OMSΔ	500n	50n	1.5u	500n	1.5m	5.0	10	10	10	350p	N	Si	200A	T05	A			
68	ZN796	80OMSΔ	60n	80n	60n	100n	50m	150m	300m	10m	75	8.0p	P-ME	Ge	85A	T018	A			
69#	2SA409	80OMSΔ	90n	10n	400n	25n	2.0	1.0	10	10	100	3.0p	N-P	Si	200J	R48	A			
70#	ZSA252	80OM	120n					400n	2.0	1.0	150mΩ	150n	2.5p	P-MD	Ge	85J	R48	A		
71	ZN5326	80OMSΔ	150n					400n	2.0	1.0										

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1. MAX		MAX		MAX		MAX		BIAS		MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob	STRUCTURE	MAX. TEMP. T	DWG #	L C
		fab	RISE TIME (s)	tr	DELAY TIME (s)	STORE ts	FALL time (s)	IN FREE air @ 25°C	V _{cb}	I _e	hFE							
1	TN82	100M Δ	30n	10n	450n	100n	1.8	10	500m Ω	30	Δ	8.0p	N-Pe	Si	200J	T018	A	
2#	V205	100M Δ	35n	29n	300n	15n	1.0	10	50m Ω	40	#	8.0p	P-Pe	Si	175A	T018	A Δ	
3	2N3883	100M Δ	40n	15n	70n	40n	300m	1.0	200m Ω	30	Δ	2.5	P	Si	100S	T05	A Δ	
4#	BSV83	100M Δ	40n	100n	250n	100n	800m	500m Ω	150m Ω	70	25p	25p	P	Si	200	T039	A	
5	2N4890	100M Δ	50n	50n	200n	70n	5.0	2.5	150m Ω	25	Δ	15p Δ	P-Pe	Si	200S	T05	A Δ	
6	TQ69	100M Δ	50n	10n	450n	120n	3.0	10	150m Ω	100	Δ	20	P-Pe	Si	200J	T05	A	
7	TQ59A	100M Δ	50n	10n	450n	120n	3.0	10	150m Ω	100	Δ	20	P-Pe	Si	200J	T05	A	
8	TQ60	100M Δ	50n	10n	450n	120n	1.8	10	150m Ω	100	Δ	20	P-Pe	Si	200J	T018	A	
9	TQ60A	100M Δ	50n	10n	450n	120n	1.8	10	150m Ω	100	Δ	20	P-Pe	Si	200J	T018	A	
10	TQ61	100M Δ	50n	10n	450n	120n	3.0	10	150m Ω	50	Δ	20	P-Pe	Si	200J	T05	A	
11	TQ61A	100M Δ	50n	10n	450n	120n	3.0	10	150m Ω	50	Δ	20	P-Pe	Si	200J	T05	A	
12	TQ62	100M Δ	50n	10n	450n	120n	1.8	10	150m Ω	50	Δ	20	P-Pe	Si	200J	T018	A	
13	TQ62A	100M Δ	50n	10n	450n	120n	1.8	10	150m Ω	50	Δ	20	P-Pe	Si	200J	T018	A	
14	TQ63	100M Δ	50n	10n	450n	120n	3.0	10	150m Ω	25	Δ	20	P-Pe	Si	200J	T05	A	
15	TQ63A	100M Δ	50n	10n	450n	120n	3.0	10	150m Ω	25	Δ	20	P-Pe	Si	200J	T05	A	
16	TQ64	100M Δ	50n	10n	450n	120n	1.8	10	150m Ω	25	Δ	20	P-Pe	Si	200J	T018	A	
17	TQ64A	100M Δ	50n	10n	450n	120n	1.8	10	150m Ω	25	Δ	20	P-Pe	Si	200J	T018	A	
18	2N979	100M Δ	60n	—	—	60m	500m Ω	40m	50	12	15p	P-MD	Si	100S	T018	A Δ		
19	2N995A	100M Δ	60n ϕ	—	90n ϕ	360m	1.0	20	140	140	#	5.0	6.0p	P	Si	200J	T018	A Δ
20	JAN2N1499A	100M Δ	60n	—	60m ϕ	60m	500m Ω	40m Ω	20	Δ	20	3.0p	N	Si	100S	T09	A	
21	2N1956A	100M Δ	60n ϕ	25n	45n ϕ	600m	1.0	1	15	15	#	14p ϕ	N	Si	200J	T05	A Δ	
22	2N1959A	100M Δ	60n ϕ	25n	45n ϕ	600m	10	2	25	25	#	14p ϕ	P-PET	Si	125J	T092	D	
23#	2SA628	100M Δ	60n ϕ	100n	290n ϕ	150m	6.0	1.0m Ω	55	55	#	30	3.5p	P-PET	Si	125J	T092	D
24#	2SA628A	100M Δ	60n ϕ	100n	290n ϕ	150m	6.0	1.0m Ω	55	55	#	30	3.5p	P-PET	Si	125J	T092	D
25#	2SC713	100M Δ	60n ϕ	120n	30n ϕ	200m	6.0	10m Ω	90	90	#	35	2.5p	N-Pe	Si	125J	T092	D
26#	BFX87	100M Δ	60n ϕ	—	150n ϕ	600m	10	1.0m Ω	40	40	Δ	20p	P-Pe	Si	200J	T05	A Δ	
27#	BFX88	100M Δ	60n ϕ	—	150n ϕ	600m	10	1.0m Ω	40	40	Δ	20p	P-Pe	Si	200J	T05	A Δ	
28	2N1958	100M Δ	65n ϕ	25n	45n ϕ	200m	10	2	150m Ω	40	Δ	3.0	16p ϕ	N	Si	125J	T05	A Δ
29	2N1959	100M Δ	65n ϕ	25n	45n ϕ	120m ϕ	10	2	150m Ω	80	Δ	3.0	16p ϕ	P	Si	175J	T05	A Δ
30	2N3638	100M Δ	70n	20n	140n	70n	700m	1.0	50m Ω	30	Δ	20p	P	Si	125J	T0106	A	
31	2N5142	100M Δ	70n	50n	150n	75n	700m ϕ	1.0	50m Ω	30	Δ	10p	P-EA	Si	135	T092	A	
32	2N5143	100M Δ	70n	50n	150n	75n	500m ϕ	1.0	50m Ω	30	Δ	10p	P	Si	125J	T0106	A	
33	MPS3638	100M Δ	70n	50n	150n	70n	310m ϕ	1.0	50m Ω	30	Δ	20p	P-EA	Si	200J	T046	A Δ	
34#	TP3638	100M Δ	70n	20n	140n	70n	360m	10	10m Ω	20	Δ	20p	P-Pe	Si	150J	X55a	A	
35	2N2695	100M Δ	75n ϕ	—	170n ϕ	360m	1.0	50m Ω	30	12#	3.0	20p	P-Pe	Si	200J	T018	A Δ	
36	2N2696	100M Δ	75n ϕ	—	170n ϕ	360m	1.0	50m Ω	30	12#	3.0	20p	P-Pe	Si	200J	T05	A Δ	
37	2N2927	100M Δ	75n ϕ	—	170n ϕ	300	1.0	50m Ω	30	12#	3.0	20p	P-Pe	Si	200J	T046	A Δ	
38	2N2927/46	100M Δ	75n ϕ	—	170n ϕ	400m	1.0	50m Ω	30	12#	3.0	20p	P-Pe	Si	200J	T05	A Δ	
39	RT1116	100M Δ	80n	—	130n	55n	800m	1.0	150m Ω	30	Δ	4.5	15p	N-Pe	Si	200J	T05	φ
40	2N5865	100M Δ	90n	30n	350n	150n	70	2	100m Ω	40	Δ	2.5	20p	P	Si	200S	T039	A Δ
41	2N4354	100M Δ	100n	—	400n ϕ	800m ϕ	10	10m Ω	50	50	#	1.0	30p	P	Si	125J	R124b	A
42	2N4355	100M Δ	100n	—	400n ϕ	800m ϕ	10	10m Ω	100	100	#	1.0	30p	P	Si	125J	R124b	A
43	2N4356	100M Δ	100n ϕ	—	400n ϕ	800m ϕ	10	10m Ω	50	50	#	1.0	30p	P	Si	125J	R124b	A
44#	BFX38	100M Δ	100n ϕ	—	350n	50n	4.0m	5.0	100m Ω	30	Δ	20p	N-DPE	Si	200J	T05	A Δ	
45#	BFX39	100M Δ	100n ϕ	—	350n	50n	4.0m	5.0	100m Ω	15	Δ	20p	N-DPE	Si	200J	T05	A Δ	
46#	BFX40	100M Δ	100n ϕ	—	350n	50n	4.0m	5.0	100m Ω	25	Δ	20p	N-DPE	Si	200J	T05	A Δ	
47#	BFX41	100M Δ	100n ϕ	—	350n	50n	4.0m	5.0	100m Ω	10	Δ	20p	N-DPE	Si	200J	T05	A Δ	
48	2N2380	100M Δ	125n	—	130n	65n	1.0	2.5	150m Ω	15	Δ	8.7	14p	N	Si	175J	T05	A Δ
49	2N2380A	100M Δ	125n	—	900n ϕ	5.0s	50m Ω	5	50	50	Δ	12	14p	N	Si	200J	T05	A
50	2N5327	100M Δ	200n ϕ	—	900n ϕ	30s	50m Ω	5	50	50	Δ	12	20p	N	Si	200J	T059	A
51	2N5328	100M Δ	200n ϕ	—	900n ϕ	30s	50m Ω	5	50	50	Δ	12	20p	N	Si	200J	T059	A
52▼	PT2983	100M ϕ	200n ϕ	—	800n ϕ	44	2	3.0	100	Δ	150p	N	Si	200A	M165	C		
53▼	PT6944	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	40	Δ	150p	N	Si	200A	T03	C	
54▼	PT6945	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	40	Δ	150p	N	Si	200A	T03	C	
55▼	PT6946	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	20	Δ	150p	N	Si	200A	T03	C	
56▼	PT7912	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	20	Δ	150p	N	Si	200A	T03	C	
57▼	PT7913	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	50	Δ	150p	N	Si	200A	T03	C	
58▼	PT7914	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	50	Δ	150p	N	Si	200A	T03	C	
59▼	PT7915	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	50	Δ	150p	N	Si	200A	T03	C	
60▼	PT7916	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	50	Δ	150p	N	Si	200A	T03	C	
61▼	PT7917	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	50	Δ	150p	N	Si	200A	T03	C	
62▼	PT7918	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	100	Δ	150p	N	Si	200A	T03	C	
63▼	PT7919	100M ϕ	200n ϕ	—	800n ϕ	80	3.0	50	50	100								

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1	2	MAX RISE TIME (Hz)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. IN FREE AIR @ 25°C	Vcb	Ie	hFE	MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob (s)	STRUCTURE P-PNP N-NPN	M A T	MAX. Y200 TEMP °C	DWG # E O A D E
									(V)	(A)		(F)					TO200 Ser.	
1#	ZT40	110M ₃	110n ₀				175n ₀	300m	6.0 ₀	10m ₀	30	5.0 ₀	N	Si	150J	T018		
2#	ZT41	110M ₃	110n ₀				175n ₀	300m	6.0 ₀	10m ₀	30	5.0 ₀	N	Si	150J	T018		
3#	ZT42	110M ₃	110n ₀				175n ₀	300m	6.0 ₀	10m ₀	60	5.0 ₀	N	Si	150J	T018		
4#	ZT43	110M ₃	110n ₀				175n ₀	300m	6.0 ₀	10m ₀	60	5.0 ₀	N	Si	150J	T018		
5#	ZT44	110M ₃	110n ₀				175n ₀	300m	6.0 ₀	10m ₀	120	5.0 ₀	N	Si	150J	T018		
6#	ZG106	120M ₃	1.35n ₀	16n ₀	70n		150m	250m	10m ₀	30 △	25	5.0 ₀	P-ME Ge	Si	100A	T018		
7	KS6127	120M	20n	30n	100n	40n			5.0	15	15 △	200p	N-PE	Si	200J	T03		
8	KS6129	120M	20n	25n	90n	30n			5.0	20	15 △	200p	N-PE	Si	200J	T03		
9	KS6130	120M	25n	30n	100n	40n			5.0	20	15 △	200p	N-PE	Si	200J	T03		
10	KS6128	120M	30n	40n	120n	50n			5.0	15	15 △	200p	N-PE	Si	200J	T03		
11	2N2800	120M ₃	45n	225n	45n		800m	10 □	150m ₀	90 □	2.6	25p ₀	P-E	Si	200S	T05	A ₀	
12	2N2800/46	120M ₃	45n	15n	225n	45n	400m	10 □	150m ₀	90 □	2.6	25p ₀	P-E	Si	200S	T046		
13	2N2801	120M ₃	45n	25n	225n	45n	800m	10 □	150m ₀	225 □	2.6	25p ₀	P	Si	200S	T05	A ₀	
14	2N2837	120M ₃	45n	25n	225n	45n	500m	10 □	150m ₀	90 □	2.6	25p ₀	P	Si	200S	T018	A ₀	
15	2N2838	120M ₃	45n	25n	225n	45n	500m	10 □	150m ₀	225 □	2.6	25p ₀	P	Si	200S	T018	A ₀	
16#	BD124	120M ₃	75n ₁	15n ₁	240n ₁	40n ₁	15 □	5.0 ₀	500m ₀	75	500m	N-PE	Si	175J	M017c	C ₀		
17#	ZT60	120M ₃	80n ₀				300n ₀	350m	6.0 ₀	10m ₀	38 △	40	8.0p ₀	N-PE	Si	150J	T05	
18#	ZT61	120M ₃	80n ₀				300n ₀	350m	6.0 ₀	10m ₀	38 △	40	8.0p ₀	N-PE	Si	150J	T05	
19#	ZT62	120M ₃	80n ₀				300n ₀	350m	6.0 ₀	10m ₀	75 △	8.0	8.0p ₀	N-PE	Si	150J	T05	
20#	ZT63	120M ₃	80n ₀				300n ₀	350m	6.0 ₀	10m ₀	35 △	8.0	8.0p ₀	N-PE	Si	200J	T05	
21#	ZT64	120M ₃	80n ₀				300n ₀	350m	6.0 ₀	10m ₀	75 △	8.0	8.0p ₀	N-PE	Si	200J	T05	
22#	ZT66	120M ₃	80n ₀				300n ₀	350m	6.0 ₀	10m ₀	35 △	4.0	8.0p ₀	N-PE	Si	200J	T05	
23#	ZT68	120M ₃	80n ₀				300n ₀	750m	6.0 ₀	10m ₀	35 △	40	8.0p ₀	N-PE	Si	200J	T05	
24#	ZT80	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	152 □	40	8.0p ₀	N-PE	Si	150J	T018	
25#	ZT81	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	152 □	40	8.0p ₀	N-PE	Si	150J	T018	
26#	ZT82	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	250 □	20	8.0p ₀	N-PE	Si	150J	T018	
27#	ZT83	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	85 □	20	8.0p ₀	N-PE	Si	200J	T018	
28#	ZT84	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	70 □	40	8.0p ₀	N-PE	Si	200J	T018	
29#	ZT86	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	85 □	40	8.0p ₀	N-PE	Si	200J	T018	
30#	ZT87	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	250 □	40	8.0p ₀	N-PE	Si	200J	T018	
31#	ZT88	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	170 □	20	8.0p ₀	N-PL ₀	Si	200J	T018	
32#	ZT89	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	250 □	20	8.0p ₀	N-PL ₀	Si	200J	T018	
33#	ZT110	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	152 □	40	8.0p ₀	N-PL ₀	Si	150J	T046	
34#	ZT111	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	152 □	40	8.0p ₀	N-PL ₀	Si	150J	T046	
35#	ZT112	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	250 □	40	8.0p ₀	N-PL ₀	Si	200J	T046	
36#	ZT113	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	85 □	20	8.0p ₀	N-PL ₀	Si	200J	T046	
37#	ZT114	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	170 □	20	8.0p ₀	N-PL ₀	Si	200J	T046	
38#	ZT116	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	85 □	20	8.0p ₀	N-PL ₀	Si	200S	T046	
39#	ZT117	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	250 □	40	8.0p ₀	N-PL ₀	Si	150J	T046	
40#	ZT118	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	170 □	20	8.0p ₀	N-PL ₀	Si	200J	T046	
41#	ZT119	120M ₃	80n ₀				300n ₀	300m	6.0 ₀	10m ₀	250 □	20	8.0p ₀	N-PL ₀	Si	200J	T046	
42#	ZSC309	120M ₃	250n	200n	200n	200n	800m	10 □	150m ₀	65 □	10	10p	N-PL ₀	Si	200J	T05	A ₀	
43#	ZSC310	120M ₃	250n	200n	200n	200n	800m	10 □	150m ₀	65 □	10	10p	N-PL ₀	Si	200J	T05	A ₀	
44	JAN2N3996	120M ₃	300n ₀				1.5u ₀	2.0m	50m ₀	30 △			150p	N	Si	200S	MT53	M
45	JAN2N3997	120M ₃	300n ₀				2.0u ₀	2.0m	50m ₀	60 △			150p	N	Si	200S	MT53	M
46	JAN2N3998	120M ₃	300n ₀				1.5u ₀	2.0m	50m ₀	30 △			150p	N	Si	200S	MT42a	A
47	JAN2N3999	120M ₃	300n ₀				2.0u ₀	2.0m	50m ₀	60 △			150p	N	Si	200S	MT42a	A
48#	BSY51	125M ₃	8.0n	2.0n	12n	800m	10 □	150m ₀	135 □	#1.7	1.7	12p ₀	N	Si	200J	T05		
49#	PT5952	125M ₃	8.0n	2.0n	12n	800m	10 □	150m ₀	100 □	#2.4	2.4	12p ₀	N	Si	200J	T05		
50#	PT5956	125M ₃	8.0n ₀	1.0u ₀	175n ₀	5.0 ₀	10 □	20 □	20 □	20 □			600p	N	Si	200A	T063	
51#	PT5961	125M ₃	8.0n ₀	1.0u ₀	220n ₀	5.0 ₀	10 □	20 □	20 □	20 □			600p	N	Si	200A	T063	C ₀
52#	PT7939	125M ₃	360n ₀				1.0u ₀	220n ₀	50m ₀	20 □			600p	N	Si	200A	T03	C ₀
53#	PT7940	125M ₃	360n ₀				1.0u ₀	220n ₀	50m ₀	20 □			600p	N	Si	200A	T03	C ₀
54#	PT7941	125M ₃	360n ₀				1.0u ₀	220n ₀	50m ₀	20 □			600p	N	Si	200A	T03	C ₀
55#	ZT7942	125M ₃	360n ₀				1.0u ₀	220n ₀	50m ₀	20 □			600p	N	Si	200A	T03	C ₀
56#	ZT7943	125M ₃	360n ₀				1.0u ₀	220n ₀	50m ₀	20 □			600p	N	Si	200A	T03	C ₀
57#	ZT7944	125M ₃	360n ₀				1.0u ₀	220n ₀	50m ₀	20 □			600p	N	Si	200A	T03	C ₀
58#	ZT7945	125M ₃	360n ₀				1.0u ₀	220n ₀	50m ₀	20 □			600p	N	Si	200A	T03	C ₀
59#	ZT7946	125M ₃	360n ₀				1.0u ₀	220n ₀	50m ₀	20 □			600p	N	Si	200A	T03	C ₀
60#	ZT7947	125M ₃	360n ₀				1.0u ₀	220n ₀ </td										

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1. fab	2. MAX RISE TIME (Hz)	MAX DELAY TIME (s)	MAX STORE TIME (s)	MAX FALL TIME (s)	MAX. PC AIR @ 25°C (W)	BIAS Vcb (V)	hFE (A)	MAX SAT. RES (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE P-PNP N-NPN	M ₁ MAX TEMP T (°C)	DWG #	L C	
															s/a	AD	
1	EN2901	150M ^{5Δ}	40n	10n ⁰	80n	30n	200m	10 ⁰	150m ⁰	300 #Δ	8 Op ²	P	Si	125J	TO106	A	
2	EN3502	150M ^{5Δ}	40n ⁰	100n ⁰	300m	10 ⁰	150m ⁰	100 #Δ	8 Op ²	P	Si	125J	TO106	A			
3	EN3504	150M ^{5Δ}	40n ⁰	100n ⁰	200m	10 ⁰	150m ⁰	100 #Δ	8 Op ²	P	Si	125J	TO105	A			
4	KSE119	150M	40n	35n	140n	60n	150	50	10m ⁰	15 #Δ	90p	N-PE	Si	200J	TO3	Ø	
5	2N5372	150M ^{5Δ}	50n ⁰	150n ⁰	360m	10 ⁰	10m ⁰	30 #Δ	10ps	P	Si	150J	X93	A			
6	2N5373	150M ^{5Δ}	50n ⁰	150n ⁰	360m	10 ⁰	10m ⁰	75 #Δ	10ps	P	Si	150J	X93	A			
7	2N5374	150M ^{5Δ}	50n ⁰	175n ⁰	360m	10 ⁰	10m ⁰	150 #Δ	10ps	P	Si	150J	X93	A			
8	2N5375	150M ^{5Δ}	50n ⁰	175n ⁰	360m	10 ⁰	10m ⁰	30 #Δ	10ps	P	Si	150J	X93	A			
9#	BSW42	150M ^{5Δ}	50n ⁰	20n ¹	200m ¹	50n ¹	360m	4.5 ⁰	2.0m ⁰	75 #Δ	60	N-PE	Si	125J	R110	A	
10#	BSW42A	150M ^{5Δ}	50n ⁰	20n ¹	200m ¹	50n ¹	300m	4.5 ⁰	2.0m ⁰	180 #Δ	60	N-PE	Si	125J	R110	A	
11#	BSW43	150M ^{5Δ}	50n ⁰	20n ¹	200m ¹	50n ¹	300m	4.5 ⁰	2.0m ⁰	180 #Δ	60	N-PE	Si	125J	R110	A	
12#	BSW43A	150M ^{5Δ}	50n ⁰	20n ¹	200m ¹	50n ¹	300m	4.5 ⁰	2.0m ⁰	180 #Δ	60	N-PE	Si	125J	R110	A	
13#	BSX51	150M ^{5Δ}	50n ⁰	20n ¹	200m ¹	50n ¹	300m	4.5 ⁰	2.0m ⁰	225 #Δ	60	N-PE	Si	175A	TO18	Ø	
14#	BSX51A	150M ^{5Δ}	50n ⁰	20n ¹	200m ¹	50n ¹	300m	4.5 ⁰	2.0m ⁰	225 #Δ	60	N-PE	Si	175A	TO18	Ø	
15#	BSX52	150M ^{5Δ}	50n ⁰	20n ¹	200m ¹	50n ¹	300m	4.5 ⁰	2.0m ⁰	540 #Δ	60	N-PE	Si	175A	TO18	Ø	
16#	BSX52A	150M ^{5Δ}	50n ⁰	20n ¹	200m ¹	50n ¹	300m	4.5 ⁰	2.0m ⁰	540 #Δ	60	N-PE	Si	175A	TO18	Ø	
17#	D41D1	150M ^{5Δ}	50n ⁰	75n ⁰	40n	10 #	20	10	10m ⁰	10 #Δ	10ps	P	Si	150S	X51c	F	
18#	D41D2	150M ^{5Δ}	50n ⁰	75n ⁰	40n	10 #	20	10	10m ⁰	10 #Δ	10ps	P	Si	150S	X51c	F	
19#	D41D4	150M ^{5Δ}	50n ⁰	75n ⁰	40n	10 #	20	10	10m ⁰	10 #Δ	10ps	P	Si	150S	X51c	F	
20#	D41D5	150M ^{5Δ}	50n ⁰	75n ⁰	40n	10 #	20	10	10m ⁰	10 #Δ	10ps	P	Si	150S	X51c	F	
21#	D41D7	150M ^{5Δ}	50n ⁰	75n ⁰	40n	10 #	20	10	10m ⁰	10 #Δ	10ps	P	Si	150S	X51c	F	
22#	D41D8	150M ^{5Δ}	50n ⁰	75n ⁰	40n	10 #	20	10	10m ⁰	10 #Δ	20	N-PE	Si	150S	X51c	F	
23	T2551	150M ^{5Δ}	50n ⁰	150n ⁰	360m	10 ⁰	10m ⁰	20	10ps	P-PL	Si	150J	T098	B			
24	T2552	150M ^{5Δ}	50n ⁰	150n ⁰	360m	10 ⁰	10m ⁰	50 #Δ	10ps	P-PL	Si	150J	T098	B			
25	T2553	150M ^{5Δ}	50n ⁰	150n ⁰	360m	10 ⁰	10m ⁰	100 #Δ	10ps	P-PL	Si	150J	T098	B			
26	T2554	150M ^{5Δ}	50n ⁰	150n ⁰	360m	10 ⁰	10m ⁰	20 #Δ	10ps	P-PL	Si	150J	T098	B			
27	2N1495	150M ^{5Δ}	55n	-	-	-	250m	50 ⁰	200m ⁰	25 #Δ	15	N-PL	Si	100S	T09	A ^Ø	
28	2N1496	150M ^{5Δ}	55n	-	-	-	500m	50 ⁰	200m ⁰	25 #Δ	15	N-PL	Si	100S	T031	A ^Ø	
29#	2N2048	150M ^{5Δ}	60n	-	-	-	60n	150m ⁰	50m ⁰	35 #Δ	40	N-PE	Si	100S	T05	A ^Ø	
30	2N3081	150M ^{5Δ}	60n ⁰	175n ⁰	600m	10 ⁰	10m ⁰	30 #Δ	12ps	P-PE	Si	200S	T039	A ^Ø			
31	2N3081/746	150M ^{5Δ}	60n ⁰	175n ⁰	400m	10 ⁰	10m ⁰	30 #Δ	20	P-PE	Si	200J	T046	A ^Ø			
32	2N4406	150M ^{5Δ}	60n	15n	175n	50n	5.0	50 ⁰	150m ⁰	30 #Δ	15ps	P	Si	200S	T039	A ^Ø	
33	2N4407	150M ^{5Δ}	60n	15n	175n	50n	6.0	50 ⁰	150m ⁰	80 #Δ	15ps	P	Si	200S	T039	A ^Ø	
34#	2N4436	150M ^{5Δ}	60n ⁰	-	-	-	200m ⁰	500m ⁰	10 ⁰	150m ⁰	15 #Δ	8 Op ²	N-PL	Si	175J	T05	A
35#	2SC189	150M ^{5Δ}	60n ⁰	-	-	-	700n	300m	600m	10 #Δ	250m	N-PL	Si	175J	X206	B	
36#	2SC868	150M ^{5Δ}	60n ⁰	-	-	-	120n	30n	200m ⁰	10 #Δ	35 #Δ	N-PL	Si	175J	X206	B	
37#	2SC869	150M ^{5Δ}	60n ⁰	-	-	-	120n	30n	200m ⁰	10 #Δ	35 #Δ	N-PL	Si	200J	T018	A ^Ø	
38#	BFX50	150M ^{5Δ}	60n ⁰	-	-	-	200n ⁰	350m	10 ⁰	150m ⁰	30 #Δ	12ps	N-PE	Si	200J	T018	A ^Ø
39#	BFX52	150M ^{5Δ}	60n ⁰	-	-	-	200n ⁰	350m	10 ⁰	150m ⁰	60 #Δ	12ps	N-PE	Si	200J	T018	A ^Ø
40	2N3636A	150M ^{5Δ}	70n	20n	140n	70n	700m ⁰	10 ⁰	10m ⁰	80 #Δ	10ps	P	Si	125J	R110a	A	
41	GEG368	150M ^{5Δ}	70n	20n	140n	70n	360m	10 ⁰	10m ⁰	30 #Δ	10ps	P-PE	Si	125J	T018	A	
42	GET3638A	150M ^{5Δ}	70n	20n	140n	70n	360m	10 ⁰	10m ⁰	80 #Δ	10ps	P-PE	Si	125J	T018	A	
43	MPS3638A	150M ^{5Δ}	70n	20n	140n	70n	310m	10 ⁰	10m ⁰	100 #Δ	10ps	P-PL	Si	175J	T05	A ^Ø	
44#	TP3638A	150M ^{5Δ}	70n	20n	140n	70n	360m	10 ⁰	10m ⁰	100 #Δ	22	P-PL	Si	175J	T05	A ^Ø	
45	2N2400	150M ^{5Δ}	75n ⁰	140n ⁰	-	-	130n	150m ⁰	10m ⁰	30 #Δ	4 Op ²	P	Si	175J	T05	A ^Ø	
46	2N2086	150M ^{5Δ}	85n	-	-	-	130n	20 #Δ	150m ⁰	20 #Δ	45	N-PL	Si	175J	T05	A ^Ø	
47	2N2087	150M ^{5Δ}	85n	-	-	-	100n	55n	20 #Δ	150m ⁰	120 #Δ	33	N-PL	Si	175J	T05	A ^Ø
48	2N711A	150M ^{5Δ}	100n	-	-	-	150n	150n	10m ⁰	25 #Δ	11	P-ME G	Si	100S	T018	A ^Ø	
49	2N711B	150M ^{5Δ}	100n	-	-	-	110n	150m	50 #Δ	30 #Δ	9.0	P-ME G	Si	100S	T018	A ^Ø	
50	2N2315	150M ^{5Δ}	100n	-	-	-	400m	10m ⁰	150m ⁰	70 #Δ	10	N-PL	Si	175A	T046	A ^Ø	
51	2N2479	150M ^{5Δ}	100n	-	-	-	130n	600m	15m ⁰	150m ⁰	120 #Δ	14p	N-PL	Si	200J	T046	A ^Ø
52	2N2310	150M	-	-	-	-	400m	10 #Δ	200m ⁰	60 #Δ	25	N-PL	Si	200J	T046	A ^Ø	
53	2N2311	150M	-	-	-	-	400m	10 #Δ	200m ⁰	60 #Δ	25	N-PL	Si	200J	T046	A ^Ø	
54	2N2312	150M	-	-	-	-	400m	10 #Δ	200m ⁰	20 #Δ	14p	N-PL	Si	200J	T046	A ^Ø	
55	2N2313	150M	-	-	-	-	400m	10 #Δ	200m ⁰	20 #Δ	14p	N-PL	Si	200J	T046	A ^Ø	
56#	ZT180	150M ^{5Δ}	120n ⁰	-	-	-	250n ⁰	300m	6.0 ⁰	10m ⁰	38 #Δ	20	N-PL	Si	150J	T018	A ^Ø
57#	ZT181	150M ^{5Δ}	120n ⁰	-	-	-	250n ⁰	300m	6.0 ⁰	10m ⁰	38 #Δ	20	N-PL	Si	150J	T018	A ^Ø
58#	ZT182	150M ^{5Δ}	120n ⁰	-	-	-	250n ⁰	300m	6.0 ⁰	10m ⁰	75 #Δ	20	N-PL	Si	150J	T018	A ^Ø
59#	ZT183	150M ^{5Δ}	120n ⁰	-	-	-	100n	55n	20 #Δ	150m ⁰	38 #Δ	80	N-PL	Si	150J	T018	A ^Ø
60#	ZT184	150M ^{5Δ}	120n ⁰	-	-	-	100n	55n	20 #Δ	150m ⁰	38 #Δ	80	N-PL	Si	150J	T018	A ^Ø
61#	ZT187	150M ^{5Δ}	120n ⁰	-	-	-	150n	150n	10m ⁰	25 #Δ	20	N-PL	Si	150J	T018	A ^Ø	
62#	ZT189	150M ^{5Δ}	120n ⁰	-	-	-	150n	150n	10m ⁰	75 #Δ	40	N-PL	Si	150J	T018	A ^Ø	
63#	ZT280	150M ^{5Δ}	120n ⁰	-	-	-	150n	150n	10m ⁰	38 #Δ	20	N-PL	Si	15			

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	fab	MAX	MAX	MAX	MAX	BIAS			MAX. SAT. RES. (Ω)	Cob	r _{bb} X P-PNP N-NPN (s)	STRUCTURE	MAX. A TEMP. (°C)	DWG # Y200 E s/a AD TO200 D Ser.		
			RISE TIME (Hz)	DELAY tr (s)	STORE TIME (s)	FALL time (s)	IN FREE AIR @ 25°C (W)	V _{cb}	I _e	hFE							
1▼#BCW81C	180M _Δ	50n _t	35n _t	400n _t	80n _t	150m _*	5.0 Ø	2.0mØ	350	25	6.0p _Δ	P-PE _Δ	SI	150J	056a	A	
2▼#BCW61D	180M _Δ	50n _t	35n _t	400n _t	80n _t	150m _*	5.0 Ø	2.0mØ	500	25	6.0p _Δ	P-PE _Δ	SI	150J	056a	A	
3 2N1253	180M _Δ	80n _t	150n _Ø	600n _t	600n _t	10 Ø	150m _Ø	45 #	10	45p _Δ	N-D	SI	175J	T05	AØ		
4# ZSC802	180M _Δ	100n _t	1.0u	80n _t	1.0 Ø	4.0 Ø	150mØ	30		5.0p	N	SI	175J	T05			
5# 2SA608	180M _Δ	110n _t	70n	80n _t	100m	1.0 Ø	10mØ	100		1.2p	P-PE	SI	125J	R145	D		
6 CS4012	190M _Δ	75n _Ø		170n _Ø	300m	1.0 Ø	50mØ	67 #		6.0p	P-E	SI	125J	T0105	A		
7 CS4013	190M _Δ	75n _Ø		170n _Ø	300m	1.0 Ø	50mØ	130 #		6.0n	P-E	SI	125J	T0105	A		
8 2N706/46	200M _{ΔΔ}	60n _t	60n _t	400n _t	400m	1.0 Ø	10mØ	20 1Δ	60	6.0p _Δ	N-E	SI	175J	T046	A		
9 TIS44	200M _{ΔΔ}	60n _t	60n _t	25n _t	300m	1.0 Ø	10mØ	20 #Δ	60	6.0p _Δ	P-E	SI	150J	T092			
10# ZTX310	200M _{ΔΔ}	80n _t	27n _Ø	130n _Ø	16n _t	100m	2.0 Ø	10mØ	55	4.0p	N-PL	SI	125S	X59	F		
11# ZTX311	200M _{ΔΔ}	80n _t	25n _t	300m	350mØ	10mØ	200mØ			6.0p	N-PL	SI	125S	X59	F		
12# BLY33	200M _{ΔΔ}	10n _t	27n _Ø	130n _Ø	16n _t	100m	2.0 Ø	10mØ	55		N-PE	SI	100J	T039	AØ		
13 UD3005	200M _{ΔΔ}	10n _t	40n	250n _t	90n _t	250m	10 Ø	100mØ	35	27	8.0p _Δ	N-PE _Δ	SI	200S	L56a		
14 UD3006	200M _{ΔΔ}	10n _t	40n	250n _t	90n _t	250m	10 Ø	100mØ	35	27	8.0p _Δ	P-PE _Δ	SI	200S	L56b		
15 UD3007	200M _{ΔΔ}	10n _t	40n	250n _t	90n _t	250m	10 Ø	10mØ	35	27	8p _Δ	P-PE _Δ	SI	125J	L59		
16# BFY26	200M _{ΔΔ}	13n _t	9.0n _t	400n _t	300n _t	360m	9.0 Ø	10mØ	26	150	5.5p _Δ	N-PL	SI	200J	T018		
17 2N3426	200M _{ΔΔ}	15n _t	5.0n	20n	15n	3.0 Ø	50 Ø	300mØ	120 #Δ	25	25p _Δ	N	SI	200J	R94	AØ	
18# 2N5881	200M _{ΔΔ}	15n _t	6.0n	35n	30n	5.0 Ø	10 Ø	500mØ	25 Δ	1.0	7.0p _Δ	N	SI	200J	T039	AØ	
19 KS6107	200M _{ΔΔ}	15n _t	15n _t	100n _t	30n _t		5.0	1.0	15	15p	N-PE	SI	150J	T037			
20# LDS210	200M _{ΔΔ}	15n _Ø		50n _Ø	360m	1.0 Ø	300mØ	30 Δ #		6.0p	N-PL	SI	135J	u34c	P		
21 MMT2222	200M _{ΔΔ}	16n _Ø		160n _Ø	225m	10 Ø	10mØ	75 Δ		3.5p	N-AN _Δ	SI	135J	u43	P		
22 2N783	200M _{ΔΔ}	18n _t	25n _t	140n _t	15n _t	30n _t	1.0 Ø	10mØ	80 Ø	25	3.5p _Δ	N	SI	175J	T018	AØ	
23 MMT3905	200M _{ΔΔ}	18n _t	25n _t	140n _t	15n _t	225m	1.0 Ø	1.0mØ	40 Δ	25	4.5p _Δ	P	SI	135J	u23c		
24 2N717A	200M _{ΔΔ}	20n _t		1.8 Ø								N-PL	SI	175J	T018		
25 2N784	200M _{ΔΔ}	20n _t		15n _t	40n _t	1.0 Ø	1.0 Ø	10m	25	19	3.5p _Δ	N	SI	175J	T018	AØ	
26 2N2411	200M _{ΔΔ}	20n _t	10n _t	90n _t	20n _t	300m	500mØ	10mØ	35	20	3.7p	P-PE	SI	200J	T018	AØ	
27 2N2412	200M _{ΔΔ}	20n _t	10n _t	90n _t	20n _t	300m	500mØ	10mØ	55	20	3.7p	P-EPL	SI	200J	T018	AØ	
28 2N4400	200M _{ΔΔ}	20n _t	25n _t	225n _t	30n _t	310m	1.0 Ø	150mØ	50 #Δ		7p _Δ	N	SI	135J	T092	A	
29 2N4403	200M _{ΔΔ}	20n _t	25n _t	225n _t	30n _t	310m	1.0 Ø	1.0mØ	60		9p _Δ	P	SI	135J	T092	A	
30# 2SC641H	200M _{ΔΔ}	20n _Ø	30n	20n _Ø	100m	1.0 Ø	10mØ	200 Ø	*	6.0p _Δ	N-E	SI	175J	MM12c	A		
31# 2SC841H	200M _{ΔΔ}	20n _Ø	30n	20n _Ø	100m	1.0 Ø	10mØ	200 Ø		6.0p _Δ	N-PE	SI	175J				
32 KS6108	200M _{ΔΔ}	20n _t	20n _t	40n _t	5.0	1.0	1.5	15	20p	N-PE	SI	200J	T037				
33 MMT2907	200M _{ΔΔ}	20n _Ø	20n _Ø	150n _Ø	225m	10 Ø	10mØ	75 Δ		4.8p	P-AN _Δ	SI	135J	u43	D		
34 TIS110	200M _{ΔΔ}	20n _t	15n _t	230n _t	60n _t	360m	1.0 Ø	1.0mØ	20 Δ		8.5p _Δ	N-PET	SI	150S	X55	A	
35 2N919	200M _{ΔΔ}	25n _t				1.2 Ø	1.0 Ø	10mØ	60 Ø	20	7.0p _Δ	N	SI	200J	T018	WØ	
36 2N920	200M _{ΔΔ}	25n _t				1.2 Ø	1.0 Ø	10mØ	120 Ø	20	7.0p _Δ	N	SI	200J	T018	WØ	
37# 2N4404	200M _{ΔΔ}	25n _t	15n _t	175n _t	35n _t	5.0 Ø	5.0 Ø	10mØ	40 #Δ		10p _Δ	P	SI	200S	T039	AØ	
38# 2N4405	200M _{ΔΔ}	25n _t	15n _t	175n _t	35n _t	5.0 Ø	5.0 Ø	10mØ	100 #Δ		10p _Δ	P	SI	200S	T039	AØ	
39# 2SA495G	200M _{ΔΔ}	25n _t	300n _t	35n _t	200mØ	10 Ø	10mØ	240 Ø	#	50	7.0p _Δ	P-PET	SI	125S	R67a	B	
40# D4001	200M _{ΔΔ}	25n _Ø		200n _t	50n _t	1.0 Ø	1.0 Ø	20 Ø	1.0 Ø	1.0 Ø	8.0p _Δ	N	SI	150S	X51c	A	
41# D4002	200M _{ΔΔ}	25n _Ø		200n _t	50n _t	1.0 Ø	1.0 Ø	20 Ø	1.0 Ø	1.0 Ø	8.0p _Δ	N	SI	150S	X51c	A	
42# D4003	200M _{ΔΔ}	25n _Ø		200n _t	50n _t	1.0 Ø	1.0 Ø	20 Ø	1.0 Ø	1.0 Ø	8.0p _Δ	N	SI	150S	X51c	A	
43# D4004	200M _{ΔΔ}	25n _Ø		200n _t	50n _t	1.0 Ø	1.0 Ø	20 Ø	1.0 Ø	1.0 Ø	8.0p _Δ	N	SI	150S	X51c	A	
44# D4005	200M _{ΔΔ}	25n _Ø		200n _t	50n _t	1.0 Ø	1.0 Ø	20 Ø	1.0 Ø	1.0 Ø	8.0p _Δ	N	SI	150S	X51c	A	
45# D4007	200M _{ΔΔ}	25n _Ø		200n _t	50n _t	1.0 Ø	1.0 Ø	20 Ø	1.0 Ø	1.0 Ø	8.0p _Δ	N	SI	150S	X51c	A	
46# D4008	200M _{ΔΔ}	25n _Ø		200n _t	50n _t	1.0 Ø	1.0 Ø	20 Ø	1.0 Ø	1.0 Ø	8.0p _Δ	N	SI	150S	X51c	A	
47# 8SY26	200M _{ΔΔ}	27n _t		50n _t	130n _t	300m	2.0 Ø	100 Ø	60 Ø	35	6.0p _Δ	N-PE	SI	175J	T018	AØ	
48# BSY27	200M _{ΔΔ}	27n _t		50n _t	130n _t	300m	2.0 Ø	100 Ø	120 Ø	35	6.0p _Δ	N-PE	SI	175J	T018	AØ	
49# 2N5845	200M _{ΔΔ}	28n	17n	40n _t	30n _t	1.2 Ø	1.0 Ø	500mØ	25 #Δ		9.0p _Δ	N	SI	135S	T092	A	
50 2N3252	200M _{ΔΔ}	30n _t	15n _t	40n _t	30n _t	5.0 Ø	5.0 Ø	500mØ	90 #Ø		12p _Δ	N	SI	200J	T05	AØ	
51 2N3298	200M _{ΔΔ}	30n _t	5.0n	50n _t	5.0n	5.0 Ø	5.0 Ø	10 Ø	40 #Δ		25p _Δ	N	SI	175J	T059	AØ	
52 2N3299	200M _{ΔΔ}	30n _t	5.0n	50n _t	5.0n	25 Ø	20 Ø	50 Ø	10 Ø	40 #Δ	25p _Δ	N	SI	200S	T039	AØ	
53 2N5023	200M _{ΔΔ}	30n _t	15n	65n _t	30n _t	1 Ø	1 Ø	100mØ	30 Ø	1.7	25p	P	SI	150J	u34	P	
54 LDA404	200M _{ΔΔ}	30n _t				225n _t	360m	10 Ø	100 Ø	40 #Δ	2.6	8.0p _Δ	N-PE	SI	150J	u34	P
55 LDA405	200M _{ΔΔ}	30n _t				225n _t	360m	10 Ø	100 Ø	100 Ø	2.6	8.0p _Δ	N-PE	SI	150J	u34c	P
56# LDS208	200M _{ΔΔ}	30n _t				225n _t	360m	10 Ø	100 Ø	100 Ø	2.6	8.0p _Δ	N-PE	SI	150J	u34c	P
57# MM3724	200M _{ΔΔ}	30n _t				50n _t	10	2.0 Ø	500mØ	25 Ø		9.0p _Δ	N-EA	SI	200J	T05	AØ
58# MM3725	200M _{ΔΔ}	30n _t				50n _t	10	2.0 Ø	500mØ	25 Ø		10p _Δ	P-EA	SI	200J	T05	AØ
59# MM3726	200M _{ΔΔ}	30n _t				50n _t	10	2.0 Ø	500mØ	25 Ø		12p _Δ	N-PE	SI	150S	X55	A
60 TIS113	200M _{ΔΔ}	30n _t		10n	50n _t	25n _t	1.2 Ø	10 Ø	300mØ	40 Ø			N-PE	SI	150S	T05	A
61 TIS114	200M _{ΔΔ}	30n _t		10n	50n _t	25n _t	1.2 Ø	10 Ø	300mØ	35 Ø		12p _Δ	N-PE	SI	150S	X55	A
62 TIS115	200M _{ΔΔ}	30n _t		10n	50n _t	30n _t	1.2 Ø	10 Ø	300mØ	40 Ø		12p _Δ	N-PE	SI	150S	X55	A
63 TIS116	200M _{ΔΔ}	30n															

12. SWITCHING TRANSISTORS

IN ORDER OF (1) Iab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1. MAX RISE TIME		MAX DELAY TIME		MAX STORE TIME		MAX FALL TIME		MAX. PC IN FREE AIR @ 25°C		BIAS		MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob	STRUCTURE	M MAX. A TEMP T	DWG # Y200 L E O D
		fab	(Hz)	tr	(s)	td	ts	tf	(s)	(W)	(V)	Ie	hFE	(A)					
1	A3T2907	200M _S	40n	10n	80n	35n	225m	10	150m ₂	300	2#	12p ₂	P-PE	SI	150S	u44	A		
2	A3T2907A	200M _S	40n	10n	85n	35n	225m	10	150m ₂	300	2#	12p ₂	P-PE	SI	150S	u44	A		
3	A5T2907	200M _S	40n	10n	80n	30n	360m	10	1.0m ₂	50	△	8.0p ₂	P-PE	SI	150S	X55	A		
4#	BFV49	200M _S	40n			35n	75n	150m	1.0	1.0m ₂	30	△	NPE	SI	200J	u34b	P		
5#	BFV86	200M _S	40n	10n	80n	30n	360m	10	1.0m ₂	75	△	8.0p ₂	P-PE	SI	200S	u26a	B		
6#	BFV88A	200M _S	40n	10n	80n	30n	360m	10	1.0m ₂	100	△	8.0p ₂	P-PE	SI	200S	u26a	B		
7#	BFV88B	200M _S	40n	10n	80n	30n	360m	10	1.0m ₂	35	△	8.0p ₂	P-PE	SI	200S	u26a	B		
8#	BFV88C	200M _S	40n	10n	80n	30n	360m	10	1.0m ₂	40	△	8.0p ₂	P-PL	SI	200S	u26a	B		
9#	BFW88	200M _S	40n	15n	250n	50n	300m	5.0	1.0m ₂	125	2.6	P-PL	SI	125J	MM10	A			
10#	BFW90	200M _S	40n	15n	250n	50n	300m	5.0	1.0m ₂	125	2.6	P-PL	SI	125J	MM10	A			
11#	BFW91	200M _S	40n	15n	250n	50n	300m	5.0	1.0m ₂	125	2.6	N-PE	SI	125J	u47	D			
12#	BSW12	200M _S	40n			70n	50m*	1.0	1.0m ₂	150	40	6.0p ₂	P-DPE	SI	200J	TQ18	A		
13#	BSW23	200M _S	40n	10n	80n	30n	700m	10	1.0m ₂	40	#	2.7	P-PE	SI	200J	T050	A		
14#	BSW24	200M _S	40n	10n	80n	30n	400m	10	1.0m ₂	40	#	2.7	P-PE	SI	200J	T018	A		
15#	BSW26	200M _S	40n			85n	1.8	2.0	1.0m ₂	25	△	3.5	10p ₂	N-PE	SI	200J	T018	A	
16#	BSW27	200M _S	40n			85n	3.0	2.0	1.0m ₂	25	△	3.5	10p ₂	N-PL	SI	200J	T018	A	
17#	BSW29	200M _S	40n			85n	5.0	2.0	1.0m ₂	25	△	3.5	10p ₂	N-PL	SI	200J	T05	A	
18#	BSX36	200M _S	40n			100n	1.2	10	1.0m ₂	75		6.0p ₂	P-DPE	SI	200J	TQ18	A		
19#	BSX89	200M _S	40n			75n	300m	10	1.0m ₂	20	#	60	2.5p	NPE	SI	175J	T018	A	
20#	GET2904	200M _S	40n	10n	80n	30n	700m	10	1.0m ₂	25	△	8.0p ₂	P-PE	SI	125J	X105			
21#	GET2905	200M _S	40n	10n	80n	30n	700m	10	1.0m ₂	50	△	8.0p ₂	P-PE	SI	125J	X105			
22#	GET2906	200M _S	40n	10n	80n	30n	700m	10	1.0m ₂	25	△	8.0p ₂	P-PE	SI	125J	X93a	F		
23#	GET2907	200M _S	40n	10n	80n	30n	700m	1.0	1.0m ₂	50	△	8.0p ₂	P-PE	SI	125J	X93a	F		
24	M60001	200M _S	40n	20n	280n	70n	500m	10	1.0m ₂	40	#	4.3	8.0p	P-N	SI	200J	T089		
25	M60001F	200M _S	40n	20n	280n	70n	250m	10	1.0m ₂	40	#	4.3	8.0p	P-N	SI	200J	L66		
26	M60002	200M _S	40n	20n	280n	70n	500m	10	1.0m ₂	100	#	4.3	8.0p	P-N	SI	200J	T089		
27	M60002F	200M _S	40n	20n	280n	70n	250m	10	1.0m ₂	100	#	4.3	8.0p	P-N	SI	200J	X20d		
28	MPS706	200M _S	40n			75n	310m	1.0	1.0m ₂	20	#	8.0p ₂	N-ANT	SI	135J	X20d	A		
29	MPS706A	200M _S	40n			75n	310m	1.0	1.0m ₂	60	#	6.0p ₂	N-ANT	SI	135J	X20d	A		
30	TIS112	200M _S	40n	10n	80n	20n	360m	10	1.0m ₂	60	#	8.0p ₂	P-PE1	SI	150S	X55	A		
31#	ZT1706A	200M _S	40n	25n	75n	300m	1.0	1.0m ₂	60	△	8.0p ₂	N-PL	SI	175J	T018				
32#	ZT1708	200M _S	40n	25n	50n	300m	1.0	1.0m ₂	20	△	8.0p ₂	N-PE	SI	175J	T046				
33#	ZT120205	200M _S	40n	25n	50n	300m	1.0	1.0m ₂	20	△	8.0p ₂	N-PE	SI	175J	T018				
34#	ZT120206	200M _S	40n	35n	40n	300m	1.0	1.0m ₂	40	△	8.0p ₂	N-PE	SI	175J	T046				
35	JAN2N2904	200M _S	45n	18n*	175n	30	△	10	1.0m ₂	35	△	8.0p ₂	P	SI	200S	T05	A		
36	JAN2N2904A	200M _S	45n	18n*	175n	30	△	10	1.0m ₂	40	△	8.0p ₂	P	SI	200S	T05	A		
37	JAN2N2905	200M _S	45n	18n*	200n	30	△	10	1.0m ₂	75		8.0p ₂	P	SI	200S	T05	A		
38	JAN2N2905A	200M _S	45n	18n*	200n	30	△	10	1.0m ₂	100		8.0p ₂	P	SI	200S	T05	A		
39	JAN2N2906	200M _S	45n	18n*	175n	1.8	△	10	1.0m ₂	35		8.0p ₂	P	SI	200S	T018	A		
40	JAN2N2906A	200M _S	45n	18n*	175n	1.8	△	10	1.0m ₂	40	2.6	8.0p ₂	P	SI	200S	T018	A		
41	JAN2N2907	200M _S	45n	18n*	200n	1.8	△	10	1.0m ₂	75	2.6	8.0p ₂	P	SI	200S	T018	A		
42	JAN2N2907A	200M _S	45n	18n*	200n	1.8	△	10	1.0m ₂	100	2.6	8.0p ₂	P	SI	200S	T018	A		
43	JAN2N3465A	200M _S	45n			175n	20	△	10	1.0m ₂	40	△	8.0p ₂	P	SI	200S	T046	A	
44	JAN2N3486A	200M _S	45n			200n	20	△	10	1.0m ₂	75	△	8.0p ₂	P	SI	200S	T046	A	
45#	JAN2N3838	200M _S	45n			300n	250m	10	1.0m ₂	100	#	8.0p ₂	P	SI	200J	L19c			
46#	JAN2N3854	200M _S	45n			300n	300m	10	1.0m ₂	100	#	8.0p ₂	P	SI	200J	L19c			
47	MD1T2907	200M _S	45n			80n	100n	400m	10	1.0m ₂	100	△	8.0p ₂	P	SI	150A	T0122	P	
48#	PL4031	200M _S	45n			80n	100n	360m	10	1.0m ₂	20	△	8.0p ₂	P-PE	SI	175S	J51		
49#	PL4032	200M _S	45n			80n	100n	360m	10	1.0m ₂	100	△	8.0p ₂	P-PE	SI	175S	J51		
50#	PL4033	200M _S	45n			80n	100n	360m	10	1.0m ₂	35	△	8.0p ₂	P-PE	SI	175S	J51		
51#	PL4034	200M _S	45n			80n	100n	360m	10	1.0m ₂	75	△	8.0p ₂	P-PE	SI	175S	J51		
52	2N3830	200M _S	50n	10n	40n	30n	1.0	1.0	500m ₂	30	#	3.5	12p ₂	N	SI	200S	T05	A	
53	2N3831	200M _S	50n	10n	40n	30n	1.0	1.0	500m ₂	35	#	3.5	12p ₂	N	SI	200S	T05	A	
54#	2SC944	200M _S	50n			800n	250m	10	2.0m ₂	60	△	3.0p ₂	N-PE	SI	125J	T092	B		
55	40458	200M _S	50n	25n	500n	75n	500m	10	1.0m ₂	150	10	20p ₂	N-DPE	SI	175J	R123			
56	40459	200M _S	50n	25n	500n	75n	1.0	1.0	10m ₂	150	10	20p ₂	N-DPE	SI	175J	R119			
57#	BSW28	200M _S	50n			120n	3.0	△	10	1.0m ₂	200	10p ₂	P-DPE	SI	200J	T05	A		
58#	BSW53	200M _S	50n			85n	3.0	△	2.0	1.0m ₂	25	3.5	10p ₂	N-PL	SI	200J	T05	A	
59#	BSX54	200M _S	50n	75n	100n	50n	150m	1.0	50m ₂	50	△	5.0p	N-PE	SI	175	T018			
60#	BSX54	200M _S	50n	75n	100n	50n	150m	1.0	50m ₂	50	△	5.0p	N-PE	SI	175	T018			
61#	BSX79	200M _S	50n	75n	100n	50n	360m	1.0	50m ₂	50	△	5.0p	N-PE	SI	175	T018			
62	2N3973	200M _S	60n			110n	360m	1.0	1.0m ₂	35	△	2.0	N	SI	150S	R67	B		
63	2N3974	200M _S	60n			110n	360m	1.0	1.0m ₂	55	△	2.0	N	SI	150S	R67	B		
64	2N3975	200M _S	60n			200n	360m	1.0	1.0m ₂	35	△	2.0	N	SI	150S	R67	B		
65	2N3976	200M _S	60n			250n	360m	1.0	1.0m ₂	55	△								

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME (Hz)	MAX DELAY TIME tr (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob (s)	STRUCTURE P-PNP N-NPN	M TEMP (°C)	DWG # Y200 s/a	L C E O A D T O 2 0 S e r.	
								V _{cb}	I _e	hFE								
1	ZN3637	200M ^Δ	400n ^Δ		600n ^Δ	5.0 Δ	10 Δ	10m ^Δ	100 Δ	40	10p ^Δ	P	Si	200S	T05	A ^Δ		
2#	BSY40	210M ^Δ	20n	10n	90n	20n	1.2 Δ	500m ^Δ	10m ^Δ	60 Δ	20	8.0p ^Δ	P-PE	Si	175J	T018	A ^Δ	
3	ZN1204A	220M ^Δ	35n			20n	1.2 Δ	500m ^Δ	200m	25 Δ		P	Ge	100	T039	A ^Δ		
4#	BSY41	230M ^Δ	20n	10n	90n	20n	1.2 Δ	500m ^Δ	10m ^Δ	200 Δ	20	12p	P-PE	Si	175J	T018	A ^Δ	
5	ZN1410A	230M ^Δ	40n	15n	170n	30n	800m	10 Δ	150m	60 Δ	2.0	12p	N-PL	Si	175J	T05	A	
6#	BFW87	230M ^Δ	40n	15n	250n	50n	300m	5.0 Δ	10m ^Δ	155 Δ	2.6	40p ^Δ	P-PL	Si	125J	MM10	A	
7#	BFW89	230M ^Δ	40n	15n	250n	50n	300m	5.0 Δ	10m ^Δ	155 Δ	2.6	40p ^Δ	P-PL	Si	125J	MM10	A	
8	JAN2N3506	240M ^Δ	30n	15n	55n	35n	5.0 Δ	5.0 Δ	3.0 Δ	200 Δ	# ^Δ	40p ^Δ	N	Si	200A	T05	A ^Δ	
9	JAN2N3507	240M ^Δ	30n	15n	55n	35n	5.0 Δ	5.0 Δ	3.0 Δ	150 Δ	# ^Δ	40p ^Δ	N	Si	200A	T05	A ^Δ	
10#	ZN6011	240M ^Δ	35n	10n	375n	50n	10 Δ	1.0 Δ	10m ^Δ	100 Δ	8.0	15p ^Δ	P	Si	150J	X55a	A	
11#	ZN6015	240M ^Δ	35n	10n	375n	50n	10 Δ	1.0 Δ	10m ^Δ	100 Δ	8.0	15p ^Δ	P	Si	150J	X55a	A	
12#	ZSC317H	240M ^Δ	45n ^Δ	130n ^Δ	350n ^Δ	65n ^Δ	350m	6.0 Δ	10m ^Δ	80 *		10p ^Δ	N-PM S	i	175J	TQ1	A	
13	JAN2N3867	240M ^Δ	65n	35n	325n	75n	10 Δ	5.0 Δ	3.0 Δ	20 Δ	500m	120p ^Δ	P	Si	200S	T05	A ^Δ	
14	JAN2N3868	240M ^Δ	65n	35n	325n	75n	10 Δ	5.0 Δ	3.0 Δ	20 Δ	500m	120p ^Δ	P	Si	200S	T05	A ^Δ	
15#	BFY18	245M ^Δ	13n	9.0n	160n	30n	300m	9.0 Δ	10m ^Δ	35 Δ	5.5p ^Δ	N-PL	Si	175J	T018			
16#	ZSC907H	250M ^Δ					200m	1.0 Δ	10m ^Δ	60 Δ	2.0p	N	Si	175J	T01			
17#	BSX76	250M ^Δ	5.0n	7.0n	50n	12n	9.0n	300m	400m	1.0m ^Δ	64 Δ	2.5p	PL	Si	175J	T018	A ^Δ	
18	MPS2713	250M ^Δ	6.0n	7.0n			310m	4.5 Δ	2.0m ^Δ	30 Δ		N-PL	Si	135J	T092	A		
19	MPS2714	250M ^Δ	6.0n	7.0n			310m	4.5 Δ	2.0m ^Δ	75 Δ	2.5p	N-PL	Si	135J	T092	A		
20	ZN2256	250M ^Δ	7.0n ^Δ				300m	1.0 Δ	10m	30	5.0p ^Δ	50n ^Δ	N-ME	Si	175J	T01	A	
21	ZN2257	250M ^Δ	7.0n ^Δ				300m	1.0 Δ	10m	50	5.0p ^Δ	50n ^Δ	N-ME	Si	175J	T01	A	
22	ZN2258	250M ^Δ	8.0n ^Δ				150m	1.0 Δ	10m	30	8.0p ^Δ	75n ^Δ	P-ME	Ge	100J	T01	A	
23	ZN2259	250M ^Δ	8.0n ^Δ				150m	1.0 Δ	10m	50	8.0p ^Δ	75n ^Δ	P-ME	Ge	100J	T01	A	
24	ZN978	250M ^Δ	10n				100m	5.0 Δ	40m ^Δ	25 Δ	8.5	30p ^Δ	P	Ge	100S	T018	A	
25	ZN5134	250M ^Δ	12n	14n	13n	20n	200m	1.0 Δ	10m ^Δ	20 # ^Δ		4ps ^Δ	N	Si	125J	T0106	A	
26	A5T2222	250M ^Δ	12n ^Δ	8.0n ^Δ	190n ^Δ	30n ^Δ	360m	10 Δ	5.0 Δ	20 # ^Δ		8.0p ^Δ	N-PE1	Si	150S	X55	A	
27	TIS109	250M ^Δ	12n ^Δ	8.0n ^Δ	190n ^Δ	30n ^Δ	360m	10 Δ	5.0 Δ	20 # ^Δ		8.0p ^Δ	N-PE1	Si	150S	X55	A	
28	MMT3903	250M ^Δ	13n ^Δ	24n ^Δ	125n ^Δ	1n ^Δ	225m	1.0 Δ	1.0m ^Δ	35 Δ	20	4.0p ^Δ	NØ	Si	135J	U23C	F	
29	ZN3248	250M ^Δ	15n	5.0n	60n	20n	12 Δ	1.0 Δ	10m ^Δ	50 # ^Δ		8.0p ^Δ	P	Si	200J	T018	A ^Δ	
30#	ZN5860	250M ^Δ	15n	6.0n	35n	30n	50 Δ	1.0 Δ	500m	35 Δ	7.0p ^Δ	N	Si	200J	T039	A ^Δ		
31#	BSV85	250M ^Δ	15n	4.5n	110n	40n	380m	10 Δ	150m ^Δ	80 Δ	25	8.0p ^Δ	PL	Si	175J	T018	A ^Δ	
32#	BSX77	250M ^Δ	15n	5.0n	75n	30n	300m	1.0m ^Δ	500m	64 Δ		N-PE	Si	150S	u44	A		
33	A3T2221	250M ^Δ	16n ^Δ	7.0n ^Δ	130n ^Δ	20n ^Δ	225m	10 Δ	150m ^Δ	120 # ^Δ		8.0p ^Δ	N-PE	Si	150S	u44	A	
34	A3T2222	250M ^Δ	16n ^Δ	7.0n ^Δ	160n ^Δ	20n ^Δ	225m	10 Δ	150m ^Δ	300 # ^Δ		8.0p ^Δ	N-PE	Si	150S	u44	A	
35	MMT3906	250M ^Δ	18n ^Δ	25n ^Δ	140n ^Δ	15n ^Δ	225m	10 Δ	1.0m ^Δ	80 Δ	25	4.5p ^Δ	P	Si	135J	u23c	A	
36	ZN4401	250M ^Δ	20n	15n	225n	30n	310m	10 Δ	150m ^Δ	100 # ^Δ		7ps ^Δ	N	Si	135J	T092	A	
37	ZN5027	250M ^Δ	20n	15n	25n	25n	320m	10 Δ	150m ^Δ	150 # ^Δ		8ps ^Δ	N	Si	120	T098	B	
38	ZN5224	250M ^Δ	20n	25n	25n	310m	300m	10 Δ	100m ^Δ	15 Δ	35	4ps ^Δ	N	Si	135S	T092	A	
39	TIS111	250M ^Δ	20n	15n	230n	60n	380m	10 Δ	1.0m ^Δ	40 Δ		8.5ps ^Δ	N-PE1	Si	150S	X55	A	
40	ZN3512	250M ^Δ	24n	6.0n	30n	15n	15n	4.0 Δ	1.0 Δ	500m	10 # ^Δ	2.6	10p ^Δ	N	Si	200S	T05	A ^Δ
41	A0283	250M ^Δ	24n	6.0n	30n	15n	20 Δ	1.0 Δ	500m	10 # ^Δ	2.6	10p ^Δ	N-DPE	Si	200S	T046	A ^Δ	
42	ZN2218A	250M ^Δ	25n	10n	225n	60n	800m	10 Δ	10m ^Δ	50 Δ		8.0p ^Δ	NØ	Si	175J	T05	A ^Δ	
43	ZN2221A	250M ^Δ	25n	10n	225n	60n	18 Δ	10 Δ	1.0m ^Δ	25 Δ		8.0p ^Δ	N	Si	175J	T018	A ^Δ	
44	ZN2476	250M ^Δ	25n	25n	45n	600m	600m	40 Δ	150m ^Δ	20 Δ	1.5	10p ^Δ	N	Si	200J	T05	A ^Δ	
45	ZN2477	250M ^Δ	25n	25n	45n	600m	600m	40 Δ	150m ^Δ	40 Δ	1.3	10p ^Δ	N	Si	200J	T05	A ^Δ	
46	ZN2847	250M ^Δ	25n				360m	10 Δ	150m ^Δ	140 1# ^Δ		8.0p ^Δ	N	Si	200J	T018	A ^Δ	
47	ZN2848	250M ^Δ	25n				400m	10 Δ	150m ^Δ	140 1# ^Δ		8.0p ^Δ	N	Si	200J	T05	A ^Δ	
48	ZN3678	250M ^Δ	25n				600m	10 Δ	150m ^Δ	40 # ^Δ		8.0p ^Δ	N	Si	200J	T05	A ^Δ	
49	ZN5581	250M ^Δ	25n	15n	190n	60n	60n	2.0 Δ	10 Δ	35 Δ		8.0p ^Δ	N	Si	120	T046	A ^Δ	
50#	ZN5845A	250M ^Δ	25n	15n	38n	27n	12 Δ	1.0 Δ	500m	35 Δ	# ^Δ	9.0p ^Δ	N-PE1	Si	135S	T092	A	
51	A3T2221A	250M ^Δ	25n	15n	225n	60n	225m	10 Δ	150m ^Δ	120 # ^Δ		8.0p ^Δ	N-PE1	Si	150S	u44	A	
52#	BC194	250M ^Δ	25n				150n ^Δ	100m ^Δ	100m ^Δ	25 Δ		8.0p ^Δ	N-PE	Si	125J	u30B	D	
53#	BFV85	250M ^Δ	25n ^Δ	200n ^Δ	360m	10n	10 Δ	10m ^Δ	10m ^Δ	35 Δ		8.0p ^Δ	N-PE	Si	175J	u26B	B	
54#	BFV85A	250M ^Δ	25n ^Δ	10n	225n	60n	360m	10 Δ	10m ^Δ	75 Δ		8.0p ^Δ	N-PE	Si	175J	u26B	B	
55#	BFV85B	250M ^Δ	25n ^Δ				175n ^Δ	360m	10m ^Δ	35 Δ		8.0p ^Δ	N-PE	Si	175J	u26B	B	
56#	BFV93N	250M ^Δ	25n ^Δ				200n ^Δ	400m	10m ^Δ	150m ^Δ	300 # ^Δ		10p ^Δ	N-PE	Si	175	L56	
57#	BFV94	250M ^Δ	25n ^Δ				200n ^Δ	400m	10m ^Δ	150m ^Δ	300 # ^Δ		10p ^Δ	N-PE	Si	175	L56	
58#	BFV94N	250M ^Δ	25n ^Δ				200n ^Δ	400m	10m ^Δ	150m ^Δ	300 # ^Δ		10p ^Δ	N-PE	Si	175	L56	
59#	BFV95	250M ^Δ	25n ^Δ				200n ^Δ	400m	10m ^Δ	150m ^Δ	300 # ^Δ		10p ^Δ	N-PE	Si	175	L56	
60#	BFV95N	250M ^Δ	25n ^Δ				200n ^Δ	400m	10m ^Δ	150m ^Δ	300 # ^Δ		10p ^Δ	N-PE	Si	175	L56	
61#	BSX72	25																

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1 fab	2 MAX RISE TIME (Hz)	MAX TIME tr (s)	MAX STORE TIME (s)	MAX FALL time (s)	MAX. Pc (W)	BIAS			MAX. SAT. RES	Cob	r _{bb} (F)	STRUCTURE	MAX TEMP A T	DWG # Y200 TO200	L C E D A D A E	
								V _{cb} (V)	I _e (A)	HFE				X P-PNP N-NPN	Cob			
1	2N2845	250M Δ	40n Δ			40n Δ	360m	10 Δ	150m Δ	120 Δ #Δ	8.0p Δ	N	Si	200J	TO18	A Δ		
2	2N2846	250M Δ	40n Δ			40n Δ	800m	10 Δ	150m Δ	120 Δ #Δ	8.0p Δ	N	Si	200J	TO5	A Δ		
3	2N3015	250M Δ	40n Δ		60n Δ	30 Δ	10 Δ	150m Δ	120 Δ #Δ	8.0p Δ	N	Si	200J	TO5	A Δ			
4	2N3735	250M Δ	40n	8.0n	30n	30n	1.0	1.0 Δ	500m Δ	35 Δ	20	N	Si	200S	TO5	A Δ		
5	2N3737	250M Δ	40n	8.0n	30n	30n	500m	1.0 Δ	150m Δ	40 Δ	20	N	Si	200S	TO46	A Δ		
6	2N4140	250M Δ	40n	10n	125n	50n	300m	10 Δ	150m Δ	120 Δ	3.2	N	Si	125J	R110	A		
7	2N4141	250M Δ	40n	10n	250n	60n	300m	10 Δ	150m Δ	300 Δ	3.2	N	Si	125J	R110	A		
8	2N4227	250M Δ	40n	10n	250n	60n	300m	10 Δ	150m Δ	150 Δ	8.0p Δ	N	Si	125J	TO98	B		
9	2N4951	250M Δ	40n Δ		350n Δ	360m	10 Δ	10m Δ	40 Δ #Δ	8.0p Δ	N	Si	150S	TO98	B			
10	2N4952	250M Δ	40n Δ		350n Δ	360m	10 Δ	10m Δ	150 Δ	8.0p Δ	N	Si	150S	TO98	B			
11	2N4953	250M Δ	40n Δ		400n Δ	360m	10 Δ	10m Δ	150 Δ	8.0p Δ	N	Si	150S	TO98	B			
12	2N4954	250M Δ	40n Δ		400n Δ	360m	10 Δ	10m Δ	150 Δ	8.0p Δ	N	Si	150S	TO98	B			
13	2N5368	250M Δ	40n Δ			350n Δ	360m	10 Δ	10m Δ	40 Δ #Δ	8.0p Δ	N	Si	150J	X93	A		
14	2N5369	250M Δ	40n Δ			350n Δ	360m	10 Δ	10m Δ	75 Δ #Δ	8.0p Δ	N	Si	150J	X93	A		
15	2N5370	250M Δ	40n Δ			400n Δ	360m	10 Δ	10m Δ	150 Δ	8.0p Δ	N	Si	150J	X93	A		
16	2N5371	250M Δ	40n Δ			400n Δ	360m	10 Δ	10m Δ	40 Δ #Δ	8.0p Δ	N	Si	150J	X93	A		
17#	2SC98	250M Δ	40n		300n	600m	10 Δ	10m Δ	50 Δ	3.0p	70n Δ	N-ME	Si	175J	TO5	D		
18#	2SC619	250M Δ	40n Δ		150n	250n Δ	250m	6.0 Δ	10m Δ	110 Δ #Δ	10	7.0p	100n Δ	N-PET	Si	125J	TO92	D
19#	2SC714	250M Δ	40n Δ		150n	250n Δ	250m	6.0 Δ	10m Δ	60 Δ #Δ	10	7.0p	100n Δ	N-PET	Si	125J	TO92	D
20#	BFV54	250M Δ	40n Δ			60n	150m	7.0 Δ	300m Δ	10 Δ	8.0p Δ	N	NPE	Si	200J	u34b	P	
21#	BFV88A	250M Δ	40n Δ		20n	40n Δ	360m	10 Δ	10m Δ	20 Δ	8.0p Δ	N	NPE	Si	200J	u26a	B	
22#	BFV88B	250M Δ	40n Δ		20n	40n Δ	360m	10 Δ	10m Δ	35 Δ	8.0p Δ	N	NPE	Si	200J	u26a	B	
23#	BFV88C	250M Δ	40n Δ			60n	360m	7.0 Δ	300m Δ	10 Δ #Δ	8.0p Δ	N	NPE	Si	200J	u20	A	
24#	BSV59	250M Δ	40n Δ			40n	360m	10 Δ	150m Δ	30 Δ	8.0p Δ	N	N	Si	200J	TO18	A	
25#	BSX30	250M Δ	40n Δ			60n	30 Δ	700m Δ	300m Δ	50 Δ	8.0p Δ	N	N-PDE	Si	200J	TO5		
26	CSB368	250M Δ	40n Δ			350n Δ	360m	10 Δ	10m Δ	40 Δ #Δ	8.0p Δ	N	N	Si	150J	TO106	A	
27	CS9369	250M Δ	40n Δ			350n Δ	360m	10 Δ	10m Δ	75 Δ #Δ	8.0p Δ	N	N	Si	150J	TO106	A	
28	CS5370	250M Δ	40n Δ			400n Δ	360m	10 Δ	10m Δ	150 Δ	8.0p Δ	N	N	Si	150J	TO106	A	
29	CS5371	250M Δ	40n Δ			400n Δ	360m	10 Δ	10m Δ	40 Δ #Δ	8.0p Δ	N	N	Si	150J	TO106	A	
30#	V435	250M Δ	40n Δ			100n Δ	300m	10 Δ	10m Δ	40 Δ	12p Δ	N	P	Si	125J	R97		
31#	ZTX360	250M Δ	40n Δ			75n Δ	500m	10 Δ	500m Δ	150 Δ	1.2	10p Δ	N	N-PL	Si	175A	X59	F
32	2N2787	250M Δ	50n		50n	30 Δ	5.0 Δ	10m Δ	15 Δ	8.0p Δ	N	N	Si	175J	TO5	A Δ		
33	2N2788	250M Δ	50n		60n	30 Δ	5.0 Δ	10m Δ	30 Δ	8.0p Δ	N	N	Si	175J	TO5	A Δ		
34	2N2789	250M Δ	50n		70n	30 Δ	5.0 Δ	10m Δ	80 Δ	8.0p Δ	N	N	Si	175J	TO5	A Δ		
35	2N2790	250M Δ	50n		50n	1.8	5.0 Δ	10m Δ	15 Δ	8.0p Δ	N	N	Si	175J	TO18	A Δ		
36	2N2791	250M Δ	50n		60n	1.8	5.0 Δ	10m Δ	30 Δ	8.0p Δ	N	N	Si	175J	TO18	A Δ		
37	2N2792	250M Δ	50n		70n	1.8	5.0 Δ	10m Δ	80 Δ	8.0p Δ	N	N	Si	175J	TO18	A Δ		
38#	2SA544	250M Δ	50n		200n	250n Δ	750m	10 Δ	10m Δ	40 Δ #Δ	13	7.0p	N-P.E	Si	175J	TO39	A Δ	
39#	2SC97	250M Δ	50n		100n	150n Δ	800m	10 Δ	150m Δ	60 Δ	20p Δ	N-P.E	Si	175J	TO5			
40#	BCY65E	250M Δ	50n Δ	15n Δ	300n Δ	150n Δ	1.0 Δ	10 Δ	10m Δ	260 Δ	3.5p	N	N-PE	Si	200J	TO18	A Δ	
41#	BSW41	250M Δ	50n Δ	10n Δ	100n	3.0	10 Δ	500m Δ	20 Δ	8.0p Δ	N	N-PE	Si	200J	TO18	A Δ		
42	2N4450	250M Δ	50n Δ	30n Δ	140n	3.0	10 Δ	10m Δ	35 Δ	8.0p Δ	N	F	Ge	100S	TO18	A Δ		
43	2N5953	250M Δ	60n		120n	150m	1.0 Δ	10m Δ	20 Δ	20	5.0p Δ	N	P	Ge	100S	TO18	A Δ	
44	2N967	250M Δ	60n		120n	150m	1.0 Δ	10m Δ	40 Δ	20	5.0p Δ	N	P	Ge	100S	TO18	A Δ	
45	2N3299	250M Δ	60n		150n	3.0	10 Δ	150m Δ	120 Δ #Δ	12	8.0p Δ	N	N	Si	200J	TO5	A Δ	
46	2N3300	250M Δ	60n		150n	3.0	10 Δ	150m Δ	300 Δ #Δ	12	8.0p Δ	N	N	Si	200J	TO5	A Δ	
47	2N3301	250M Δ	60n		150n	1.8	10 Δ	150m Δ	120 Δ #Δ	12	8.0p Δ	N	N	Si	200J	TO18	A Δ	
48	2N3302	250M Δ	60n		150n	360m	1.0 Δ	150m Δ	300 Δ #Δ	12	8.0p Δ	N	N	Si	200J	TO18	A Δ	
49	2N4437	250M Δ	60n		150n	500m Δ	10 Δ	150m Δ	100 Δ	8.0p Δ	N	N	Si	125J	R124	A		
50#	ZT600	250M Δ	60n		100n	50 Δ	1.0 Δ	150m Δ	150 Δ	10	12p Δ	N	N-PL	Si	200S	TO5	A Δ	
51#	C111E	250M Δ	65n Δ	30n Δ		80n Δ	1.0	10 Δ	50m Δ	50 Δ	6.0p	N	N-P.E	Si	175S	TO18	A Δ	
52#	2SC87	250M Δ	70n		300n	50n	600m	10 Δ	10m Δ	50 Δ	4.0p	N	N-ME	Si	175J	TO5		
53#	BFY72	250M Δ	70n		170n	30 Δ	10 Δ	10m Δ	85 Δ	8.0p Δ	N	N-DPE	Si	200J	TO5			
54	GI3638	250M Δ	70n	20n	1140n	70n	300m	1.0 Δ	50m Δ	30 Δ	20p Δ	N	P-E	Si	125	R97d		
55	GI3638A	250M Δ	70n	20n	100n Δ	70n	300m	1.0 Δ	50m Δ	100 Δ	10p Δ	N	P	Ge	100S	TO18	A	
56	2N2402	250M Δ	75n Δ	100n Δ		100n	150m	1.0 Δ	50m Δ	50 Δ	20	4.0p	N	N	Si	200S	TO5	A Δ
57	2N2958	250M Δ	75n	20n	300n	200n	3.0	10 Δ	150m Δ	300 Δ	8.0p Δ	N	N	Si	200S	TO5	A Δ	
58	2N2959	250M Δ	75n	20n	300n	200n	3.0	10 Δ	150m Δ	300 Δ	8.0p Δ	N	N	Si	200S	TO5	A Δ	
59	2N2960	250M Δ																

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	3 TYPE No.	1 fab	MAX RISE TIME tr (Hz)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob	r _{bb} X Cob (s)	STRUCTURE P-PNP N-NPN	M MAX. TEMP (°C)	DWG # Y200 s/a T0200	L C E O A D E
								V _{cb}	i _e	hFE							
1	ZN3449	300M _Δ	30n	25n	65n	65n	150m	25 _Δ	10m _Δ	20 _Δ	100	5.0p _Δ	P	Ge	100S	T018	A ₀
2	JAN2N3449	300M _Δ	30n	18n	60n	65n	150m	250m _Δ	10m _Δ	20 _Δ	20	5.0p _Δ	P	Ge	100S	T018	A ₀
3	ZN3724	300M _Δ	30n	10n	50n	25n	3.5 _Δ	1.0 _Δ	500m _Δ	35 _{#Δ}	12p _Δ	N	Si	200J	T05	A ₀	
4	ZN3724A	300M _Δ	30n	10n	50n	25n	5.0 _Δ	1.0 _Δ	10m _Δ	30 _Δ	12p _Δ	N	Si	200S	T05	A ₀	
5	ZN3725	300M _Δ	30n	10n	50n	30n	3.5 _Δ	1.0 _Δ	500m _Δ	35 _{#Δ}	10p _Δ	N	Si	200J	T05	A ₀	
6	ZN3725A	300M _Δ	30n	10n	50n	30n	5.0 _Δ	1.0 _Δ	10m _Δ	30 _Δ	10p _Δ	N	Si	200S	T05	A ₀	
7	ZN4013	300M _Δ	30n	10n	50n	25n	1.2 _Δ	1.0	10m _Δ	30 _Δ	10p _Δ	N	Si	200J	T018	A ₀	
8	ZN4014	300M _Δ	30n	10n	50n	30n	1.2 _Δ	1.0	10m _Δ	30 _Δ	10p _Δ	N	Si	200J	T018	A ₀	
9#	FOS104	300M _Δ	30n _Δ	35n	50n	360m	1.0 _Δ	10m _Δ	80 _f	8.0p _Δ	8.0p _Δ	P	Si	200	T018	A ₀	
10#	ME9021	300M _Δ	30n _Δ	20n	50n _Δ	625m _Δ	2.0 _Δ	300m _Δ	10 _Δ	25	6.0p _Δ	N-PE	Si	150J	R110c	A	
11	MPS3639	300M _Δ	30n	10n	12n	500m _Δ	300m _Δ	10m _Δ	30 _{#Δ}	16	3.5p _Δ	P-E	Si	125J	X20b	A	
12	ZN985	300M _Δ	35n _Δ	20n	80n _Δ	150m	500m _Δ	100m	60 _Δ	30m	6.0p _Δ	P-EM	Ge	100J	T018	A ₀	
13	ZN3251	300M _Δ	35n	35n	200n	50 _Δ	380m	1.0 _Δ	10m _Δ	300 _{#Δ}	6.0p _Δ	P	Si	200J	T018	A ₀	
14	ZN3605	300M _Δ	35n _Δ	20n	45n _Δ	200m	1.0 _Δ	10m _Δ	30 _Δ	6.0p _Δ	P	Si	150S	R67	B		
15	ZN3605A	300M _Δ	35n _Δ	20n	45n _Δ	320m	1.0 _Δ	10m _Δ	120 _Δ	25p _Δ	6.0n	N	Si	120J	T098	B	
16	ZN3904	300M _Δ	35n	35n	200n	50 _Δ	310m	1.0 _Δ	10m _Δ	40 _{#Δ}	4.0p _Δ	NØ	Si	135J	T092	A	
17	A5T3904	300M _Δ	35n	200n	50n	360m	1.0 _Δ	10m _Δ	70 _Δ	4.0p _Δ	N-PEØ	Si	100S	X55	A		
18	CS3605	300M _Δ	35n _Δ	20n	45n _Δ	500m _Δ	1.0 _Δ	10m _Δ	30 _Δ	6.0p _Δ	N-DPL	Si	150J	R97	A		
19	CS3904	300M _Δ	35n	35n	200n	50 _Δ	310m	1.0 _Δ	10m _Δ	40 _{#Δ}	4.0p _Δ	NØ	Si	135J	T0106	A	
20	EN3904	300M _Δ	35n	35n	200n	50 _Δ	700m _Δ	1.0 _Δ	10m _Δ	100 _{#Δ}	20	4.0p _Δ	N-DPEØ	Si	135J	T0106	A
21	GET914	300M _Δ	35n _Δ	20n	40n _Δ	360m	1.0 _Δ	10m _Δ	120 _{#Δ}	6.0p _Δ	N-PE	Si	125J	T018	A		
22	GET2222A	300M _Δ	35n _Δ	20n _Δ	285n _Δ	1.0 _Δ	10 _Δ	1.0m _Δ	50 _Δ	8.0p _Δ	N-PE	Si	125J	U80	A		
23	MM1758	300M _Δ	35n _Δ	20n _Δ	285n _Δ	1.0 _Δ	10 _Δ	150m	100 _Δ	8.0p _Δ	N	Si	125J	T046	A		
24#	NKT13329	300M _Δ	35n _Δ	20n _Δ	35n _Δ	1.0 _Δ	10 _Δ	10m _Δ	40 _Δ	7.0	N	Si	200J	T018	A ₀		
25#	NKT13429	300M _Δ	35n _Δ	20n _Δ	35n _Δ	1.0 _Δ	10 _Δ	10m _Δ	80 _Δ	7.0	N	Si	200S	T018	A ₀		
26	JAN2N708	300M _Δ	40n _Δ	25n	75n _Δ	1.2 _Δ	1.0 _Δ	500m _Δ	15 _Δ	40	8.0p _Δ	P	Si	175J	T046	A ₀	
27	ZN1708A	300M _Δ	40n _Δ	25n	75n _Δ	1.0 _Δ	10 _Δ	10m _Δ	120 _Δ	22	N	Si	175J	T046	A ₀		
28	ZN2451	300M _Δ	40n _Δ	20n	45n _Δ	360m	1.0 _Δ	10m _Δ	40 _{#Δ}	5.0p _Δ	N	Si	200J	T018	A ₀		
29	ZN3210	300M _Δ	40n _Δ	20n	40n _Δ	1.2 _Δ	1.0 _Δ	10m _Δ	120 _{#Δ}	3.7	6.0p _Δ	P	Si	300S	T018	A ₀	
30	ZN3606	300M _Δ	40n _Δ	35n	50n	60m _Δ	1.0 _Δ	10m _Δ	30 _Δ	8.0p _Δ	N	Si	150S	R67	B		
31	ZN3606A	300M _Δ	40n _Δ	35n	60n	320m	1.0 _Δ	10m _Δ	120 _{#Δ}	25p _Δ	6.0n	N	Si	120J	T098	B	
32	ZN3734	300M _Δ	40n	8.0n	30n	1.0	1.0 _Δ	500m _Δ	35 _Δ	20	9.0p _Δ	P	Si	200S	T05	A ₀	
33	ZN3736	300M _Δ	40n	8.0n	30n	500m	1.0 _Δ	10m _Δ	40 _Δ	9.0p _Δ	P	Si	200S	T046	A ₀		
34#	ZSA571	300M _Δ	40n _Δ	130n _Δ	180n _Δ	800m	10 _Δ	50m _Δ	40 _Δ	1.2	25p _Δ	P-PE	Si	175J	T05	A	
35#	BFV46	300M _Δ	40n _Δ	30n	50n	150m	2.0 _Δ	200m _Δ	12 _Δ	3.5	5.0p _Δ	NPE	Si	200J	U34b	P	
36#	BFV83A	300M _Δ	40n _Δ	20n	40n	300m	5.0 _Δ	500m _Δ	10 _Δ	3.5	6.0p _Δ	P	Si	200J	U26a	B	
37#	BSV35A	300M _Δ	40n _Δ	25n	75n _Δ	350m	1.0 _Δ	10m _Δ	20 _Δ	60	6.0p _Δ	P	Si	175J	U53	F	
38#	BSX87	300M _Δ	40n _Δ	40n	40n	360m	1.0 _Δ	10m _Δ	30 _{#Δ}	3.5	4.5p _Δ	NPE	Si	200J	T018	A ₀	
39#	BSX88	300M _Δ	40n _Δ	40n	75n _Δ	360m	1.0 _Δ	10m _Δ	30 _{#Δ}	40	4.0p _Δ	P	Si	200J	T018	A ₀	
40#	BSY21	300M _Δ	40n _Δ	40n	60n _Δ	360m	1.0 _Δ	10m _Δ	120 _{#Δ}	3.5	6.0p _Δ	N	Si	200J	T018	A	
41	CS3606	300M _Δ	40n _Δ	35n	75n _Δ	500m _Δ	1.0 _Δ	10m _Δ	30 _Δ	25	6.0p _Δ	N-DPL	Si	150J	R97	A	
42	EN708	300M _Δ	40n _Δ	40n	75n _Δ	200m	1.0 _Δ	10m _Δ	120 _{#Δ}	6.0p _Δ	75n _Δ	N	Si	125J	T0106	A	
43	EN914	300M _Δ	40n _Δ	40n	75n _Δ	200m	1.0 _Δ	10m _Δ	120 _{#Δ}	6.0p _Δ	N	Si	125J	T0106	A		
44	GET708	300M _Δ	40n _Δ	35n	75n _Δ	360m	1.0 _Δ	10m _Δ	120 _{#Δ}	6.0p _Δ	N-PE	Si	125J	T018	A ₀		
45#	ME0401	300M _Δ	40n	10n	80n	600m _Δ	10 _Δ	1.0m _Δ	35	8.0p _Δ	P-PE	Si	150J	R110c	A		
46#	ME0402	300M _Δ	40n	10n	80n	30n	600m _Δ	10 _Δ	1.0m _Δ	60	8.0p _Δ	P-PE	Si	150J	T092	A	
47	TIS46	300M _Δ	40n _Δ	20n	40n	360m	1.0 _Δ	10m _Δ	120 _{#Δ}	6.0p _Δ	P	Si	150J	T092	A		
48	ZN3607	300M _Δ	45n	45n	70n _Δ	200m	1.0 _Δ	10m _Δ	30 _Δ	25	6.0p _Δ	N-DPL	Si	150J	R97	A	
49	ZN15139	300M _Δ	45n	20n	170n	50n	500m _Δ	10 _Δ	50m _Δ	15 _{#Δ}	5p _Δ	P	Si	125J	T0106	A	
50	CS3607	300M _Δ	45n _Δ	50n _Δ	100n _Δ	100m _Δ	1.0 _Δ	10m _Δ	50 _Δ	200m	6.0p _Δ	N	Si	100S	T018	A ₀	
51	ZN980	300M _Δ	50n _Δ			85n _Δ	150m	1.0 _Δ	100m _Δ	20 _Δ	20	4.0p _Δ	P	Si	100S	T018	A ₀
52	ZN981	300M _Δ	50n _Δ			85n _Δ	150m	1.0 _Δ	100m _Δ	20 _Δ	20	4.0p _Δ	P	Si	100S	T018	A ₀
53	ZN982	300M _Δ	50n _Δ			100n _Δ	150m	1.0 _Δ	100m _Δ	20 _Δ	20	4.0p _Δ	P	Si	100S	T018	A ₀
55	JAN2N962	300M _Δ	50n _Δ			100n _Δ	150m	1.0 _Δ	100m _Δ	20 _Δ	20	5.0p _Δ	P-E	Ge	100J	T018	A ₀
56	ZN964	300M _Δ	50n _Δ			85n _Δ	150m	1.0 _Δ	100m _Δ	40 _Δ	18	4.0p _Δ	P	Ge	100S	T018	A ₀
57	JAN2N964	300M _Δ	50n _Δ			85n _Δ	150m	1.0 _Δ	100m _Δ	40 _Δ	18	4.0p _Δ	P-E	Ge	100J	T018	A ₀
58	ZN965	300M _Δ	50n _Δ			100n _Δ	150m	1.0 _Δ	100m _Δ	40 _Δ	18	4.0p _Δ </td					

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1	2	MAX RISE TIME fab (Hz)	MAX DELAY TIME tr (s)	MAX STORE TIME td (s)	MAX FALL TIME ts (s)	MAX. IN FREE AIR @ 25°C (W)	BIAS	MAX. SAT. RES. (Ω)	Cob (F)	r _{bb} X Cob (s)	STRUCTURE P-PNP N-NPN (s)	MAX. TEMP °C	DWG #	L C	
								V _{cb} (V)	I _e (A)						Y200 s/a	E 0 A D	
1	2N3510	350M ^Δ	12n	10n	16n	12n	360m	1.0	150m ^Δ	150 Δ	2.6	4.0p ^Δ	N	Si	200	T052	A \emptyset
2	2N3647	350M ^Δ	12n	10n	16n	12n	400m	1.0	150m ^Δ	25 Δ	4.0p ^Δ	N	Si	200	T046	A \emptyset	
3	CS2269	350M ^Δ	12n \emptyset	12n \emptyset	13n	18n \emptyset	250m	2.0	100u ^Δ	20 $\#$ Δ	25	4.0p ^Δ	N-DPL	Si	150J	R97 α	A
4	GET2369	350M ^Δ	12n \emptyset	12n \emptyset	18n \emptyset	18n \emptyset	360m	1.0	10m ^Δ	120 Δ	25	4.5p ^Δ	N-PE	Si	125J	T018	
5	2N3009	350M ^Δ	15n \emptyset	18n \emptyset	25n \emptyset	1.2 \emptyset	5.0	100m ^Δ	25 $\#$ Δ	5.0p ^Δ	N	Si	200J	T052	A \emptyset		
6	2N3013	350M ^Δ	15n \emptyset	18n \emptyset	25n \emptyset	1.2 \emptyset	4.0	30m ^Δ	120 $\#$ Δ	5.0p ^Δ	N	Si	200J	T052	A \emptyset		
7	JAN2N3013	350M ^Δ	15n \emptyset	18n	25n \emptyset	360m	400m ^Δ	30m ^Δ	120 $\#$ Δ	5.0p ^Δ	N	Si	200J	T052	A \emptyset		
8	2N3646	350M ^Δ	15n	10n	20n	15n	500m ^Δ	1.0	300m ^Δ	15 $\#$ Δ	5.0p ^Δ	N	Si	125J	R110	A	
9	2N3629	350M ^Δ	15n	10n	50n	15n	360m	4.0	30m ^Δ	30 $\#$ Δ	6.0p ^Δ	N	Si	200S	T052	A \emptyset	
10	2N422	350M ^Δ	15n	10n	20n	15n	360m	1.0	300m ^Δ	15 $\#$ Δ	5.0p ^Δ	N	Si	150S	X55	A	
11 ∇	2N6000	360M ^Δ	15n	10n	25n	70n	800m ^Δ	1.0	10m ^Δ	100 Δ	8.0	6.0p ^Δ	N	Si	125J	X55a	A
12 ∇	2N6004	360M ^Δ	15n \emptyset	10n	25n	70n	800m ^Δ	1.0	10m ^Δ	100 Δ	8.0	6.0p ^Δ	N	Si	125J	X55a	B
13#	BFV83B	350M ^Δ	15n \emptyset	18n	25n \emptyset	300m	1.0	30m ^Δ	120 $\#$ Δ	5.0p ^Δ	N-PE	Si	200J	T046			
14#	BSX26	350M ^Δ	15n \emptyset	18n \emptyset	25n \emptyset	1.2 \emptyset	1.0	300m ^Δ	15 $\#$ Δ	5.0p ^Δ	N-DPE	Si	200J	T018			
15#	BSX39	350M ^Δ	15n \emptyset	18n \emptyset	25n \emptyset	1.2 \emptyset	1.0	100m ^Δ	55 $\#$ Δ	5.0p ^Δ	N-DPE	Si	200J	T018			
16	EN3009	350M ^Δ	15n \emptyset	25n \emptyset	200m	40	30m ^Δ	120 $\#$ Δ	6.0	5.0p ^Δ	N	Si	125J	T016	A		
17	EN3013	350M ^Δ	15n \emptyset	25n \emptyset	200m	40	30m ^Δ	120 $\#$ Δ	6.0	5.0p ^Δ	N	Si	125J	T016	A		
18	GET3013	350M ^Δ	15n \emptyset	18n	25n \emptyset	360m	400m ^Δ	30m ^Δ	120 $\#$ Δ	4.5p ^Δ	N-PE	Si	125J	T018			
19	K36101	350M	15n	8.0n	25n	8.0n	5.0	250m	15 Δ	2.0p	N-PE	Si	200J	T039			
20	MPS3646	350M ^Δ	15n	10n	20n	15n	500m ^Δ	400m ^Δ	30m ^Δ	120 $\#$ Δ	5.0p ^Δ	N-EA	Si	125J	T092	A	
21	T1555	350M ^Δ	15n	10n	20n	15n	500m ^Δ	100m ^Δ	25 $\#$ Δ	5.0p ^Δ	N-PE	Si	125J	T092			
22	2N3014	350M ^Δ	16n \emptyset	18n \emptyset	25n \emptyset	1.2 \emptyset	4.0	30m ^Δ	120 $\#$ Δ	5.0p ^Δ	N	Si	200J	T052	A \emptyset		
23#	BFV83C	350M ^Δ	16n	18n	25n \emptyset	300m	4.0	30m ^Δ	30 $\#$ Δ	5.0p ^Δ	N-PE	Si	200J	u268	B		
24#	BFV92	350M ^Δ	16n	18n	35n \emptyset	400m	1.0	30m ^Δ	150 $\#$ Δ	5.0p ^Δ	N-PE	Si	175	L56f			
25#	BFV82N	350M ^Δ	16n	18n	35n \emptyset	400m	1.0	30m ^Δ	120 $\#$ Δ	4.5p ^Δ	N-PE	Si	175	L56g			
26	EN3014	350M ^Δ	16n \emptyset	18n	25n \emptyset	360m	400m ^Δ	30m ^Δ	120 $\#$ Δ	4.5p ^Δ	N-PE	Si	125J	T018	A		
27	GET3014	350M ^Δ	16n \emptyset	18n \emptyset	25n \emptyset	225m	400m ^Δ	30m ^Δ	200 $\#$ Δ	7.3	5.0p ^Δ	N-AN	Si	135J	u43	D	
28	MMT3014	350M ^Δ	16n \emptyset	18n \emptyset	25n \emptyset	310m	1.0	10m ^Δ	25 $\#$ Δ	4.0p ^Δ	N-AN	Si	135J	T092	A		
29	MPS834	350M ^Δ	16n \emptyset	25n	20n	25n \emptyset	360m	4.0	30m ^Δ	120 $\#$ Δ	5.0p ^Δ	N-PE	Si	125J	T092		
30	T1552	350M ^Δ	16n \emptyset	25n	20n	25n \emptyset	310m	1.0	10m ^Δ	25 $\#$ Δ	4.0p ^Δ	N-AN	Si	135J	T092		
31	GET3646	350M ^Δ	18n \emptyset	18n	28n \emptyset	360m	400m ^Δ	30m ^Δ	120 $\#$ Δ	80	4.5p ^Δ	N-PE	Si	125J	T018		
32	SE3646	350M ^Δ	18n \emptyset	18n \emptyset	28n \emptyset	500m ^Δ	400m ^Δ	30m ^Δ	30 $\#$ Δ	5.0p ^Δ	N-DPE	Si	125J	T016	A		
33	2N984	350M	20n			20n	60m	500m ^Δ	10m	70	1.9p	P-MD	Ge	100S	T018		
34	2N2170	350M ^Δ	20n			18n	60m	500m ^Δ	10m	70	1.9p	P-MD	Ge	100S	T09		
35#	BSX87A	350M ^Δ	20n \emptyset			30n \emptyset	360m	1.0	10m ^Δ	34 $\#$ Δ	2.5	P-ME	Si	200J	T018		
36	K56102	350M	20n			10n	12n	5.0	250m	15 Δ	2.0p	N-PE	Si	200J	T039		
37	MD1128	350M ^Δ	20n \emptyset			30n \emptyset	35n \emptyset	300m	1.0	10m ^Δ	25 Δ	4.0p ^Δ	P-PE	Si	200J	L26	
38	K56110	350M	25n			120n	50n	5.0	1.0	15 Δ	2.0p	N-PE	Si	200J	T060		
39	K56112	350M	25n			100n	40n	5.0	1.0	15 Δ	2.0p	N-PE	Si	200J	T060		
40#	2SC97A	360M ^Δ	30n \emptyset			70n	90n \emptyset	800m ^Δ	1.0	500m ^Δ	40 $\#$ Δ	1.2	N-PE	Si	175J	T039	A \emptyset
41#	BSX88A	360M ^Δ	30n \emptyset			70n \emptyset	360m	1.0	10m ^Δ	30 $\#$ Δ	3.2	N-PE	Si	200J	T018	A \emptyset	
42	2N834/46	360M ^Δ	35n \emptyset			25n	50n	400m ^Δ	1.0	10m ^Δ	25 Δ	4.0p ^Δ	N-E	Si	200	T05	
43	2N4349	360M ^Δ	35n	20n	125n	40n	7.0 \emptyset	1.0	20	500m	1.2p	N-PE	Si	200	T05		
44#	2SC52	350M	50n			250n	500m	6.0	1.0m ^Δ	50	2.5	N-PL	Si	150J	T018		
45#	2SC54	350M	50n			250n	500m	6.0	1.0m ^Δ	50	2.5	N-PL	Si	150J	T018		
46#	#BFV10	350M	60n			150n \emptyset	800m	1.0	150m ^Δ	60 Δ	5.0p	N	PE	200J	T039	A	
47#	#BFV11	350M	60n			150n \emptyset	400m ^Δ	1.0	500m ^Δ	40 Δ	5.0p	N	PE	200J	T018	A	
48#	BFV31	350M ^Δ	60n \emptyset			100n \emptyset	150m	1.0	100m ^Δ	15 Δ	20	P-PE	Si	200J	u34b	P	
49#	BFV32	350M ^Δ	60n \emptyset			100n \emptyset	150m	1.0	100m ^Δ	10 Δ	20	P-PE	Si	200J	u34b	P	
50#	ME0461	350M	70n			225n \emptyset	500m ^Δ	1.0	10m ^Δ	60	3.5p	P-PE	Si	150J	R110c	A	
51#	ME0462	350M	70n			225n \emptyset	500m ^Δ	1.0	10m ^Δ	110	3.5p	P-PE	Si	150J	R110c	A	
52#	MT0461	350M	70n			225n \emptyset	250m	1.0	100u ^Δ	40	15.5p	P-PL	Si	150J	u81	B	
53#	MT0462	350M	70n			225n \emptyset	250m	1.0	100u ^Δ	80	15.5p	P-PL	Si	150J	u81	B	
54#	2SC772	350M ^Δ	150n			150n	120m	6.0	1.0m ^Δ	45	1.5p	N-PE	Si	125J	R145	D	
55#	2N8013	360M ^Δ	35n	10n	450n	75n	1.0	10m ^Δ	250 Δ	8.0	15.5p	N	Si	150J	X55a	A	
56#	2N8017	360M ^Δ	35n	10n	450n	75n	1.0	10m ^Δ	250 Δ	8.0	15.5p	N	Si	150J	X55a	A	
57#	BSV29	380M ^Δ	5.0n \emptyset	7.0n \emptyset	8.0n \emptyset	14n \emptyset	300m	2.0	10m ^Δ	34	3.5p	N-PE	Si	175J	T018		
58#	BSV28	380M ^Δ	5.0n \emptyset	7.0n \emptyset	8.0n \emptyset	14n \emptyset	300m	2.0	10m ^Δ	40	20	N-ME	Si	200J	T018		
59	2N921	400M	25n			125n	360m	1.0	10m ^Δ	40	8.0p	P	Si	150J	u34	E	
60#	2SA548H	400M	15n			150n	200m	1.0	10m ^Δ	60	1.0m ^Δ	N	Si	150J	u17c	E	
61#	BSV53	400M	12n			13n	300m	1.0	10m ^Δ	120 Δ	2.5	N-PE	Si	150J	u34	E	

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab. (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1	2	MAX RISE TIME	MAX DELAY	MAX STORE TIME	MAX FALL TIME	MAX. IN FREE AIR @ 25°C	BIAS		hFE	MAX. SAT. RES. (Ω)	Cob	rbb X Cob (s)	STRUCTURE	M A T	MAX. TEMP. S/a (°C)	DWG #	L E O A D D E		
		fab	tr	td	ts	tf	Vcb	Ie	(V)	(A)											
1#	BSW11	400M ^Δ	25n ^Δ				50n ^Δ	50m*	1.0	0	10m ^Δ	50 Δ	3.5	3.0p ^Δ	N-PE	Si	125J	u47	D		
2#	ME6101	400M ^Δ	25n	10n	225n	60n	600m ^Δ	1.0	0	1.0m ^Δ	40	3.2	5.0p	P-PE	Si	150J	R110c	A			
3#	2N4451	400M ^Δ	30n	35n	65n	30n	300m	50	0	30m ^Δ	40	#Δ	6ps ^Δ	P	Si	200S	TO46	A			
4#	2SA417	400M ^Δ	30n ^Δ			30n	40n ^Δ	150m					4.0p	FEM	Ge	100J	TO46	A			
5#	BSV65	400M	30n ^Δ				50n ^Δ	300m	500m ^Δ	30m ^Δ	150	Δ	5.0	6.0p	P	Si	150	u34	C		
6#	BSV55P	400M	30n ^Δ				50n ^Δ	150m	600m ^Δ	30m ^Δ	150	Δ	5.0	6.0p	P	Si	150	u17c	E		
7#	BSY34	400M ^Δ	30n ^Δ				50n ^Δ	12.6	1.0	0	100m ^Δ	42	Δ	4.5p	N-DPE	Si	200J	TO39	A		
8#	MMT73	400M ^Δ	30n ^Δ				30n ^Δ	225m	1.0	0	50m ^Δ	20	Δ	20	5.0p ^Δ	P-AN	Si	135J	u43	C	
9#	2N2056	400M ^Δ	35n			70n	60n	250m	1.5	0	400m	40	1.8	1.5p	P-D	Ge	100S	TO31	A		
10#	BSV77	400M ^Δ	35n ^Δ				800m	1.0	0	100m ^Δ	60	Δ	4.8p	N	PE	200J	TO39	A			
11#	BSV95	400M ^Δ	35n ^Δ				800m	1.0	0	500m	20	Δ	4.8p	N	PE	200J	TO39	A			
12#	BSY58	400M ^Δ	35n ^Δ				60n ^Δ	2.6	1.0	0	100m ^Δ	42	Δ	30	4.5p	N-DPE	Si	200J	TO39	A	
13#	2N706B	400M ^Δ	40n ^Δ				75n ^Δ	300m	1.0	0	10m ^Δ	40	Δ	40	4.5p ^Δ	39nt	N-ME	Si	175J	TO18	A
14#	2N4034	400M ^Δ	40n	15n	140n	40n	40n	1.0	0	1.0m ^Δ	60	Δ	130	3.5ps ^Δ	P	Si	200J	TO18	A		
15#	2N4121	400M ^Δ	40n	15n	140n	40n	200m	1.0	0	10m ^Δ	70	#Δ	130	4.5p ^Δ	50n	P	Si	125J	R110	A	
16#	2N4122	400M ^Δ	40n ^Δ				40n ^Δ	200m	1.0	0	10m ^Δ	150	#Δ	130	4.5p ^Δ	50n	P	Si	125J	R110	A
17#	2N4916	400M ^Δ	40n ^Δ				40n ^Δ	360m	1.0	0	10m ^Δ	30	Δ	40	6.0p ^Δ	N-PL	Si	200J	TO18	A	
18#	BSY19	400M ^Δ	40n ^Δ				160n ^Δ	1.0	0	10m ^Δ	160	#Δ		3.5p ^Δ	P-DPE	Si	200J	TO18	A		
19#	BFX48	400M ^Δ	50n ^Δ				95n ^Δ	1.0	0	10m ^Δ	37	*Δ		4.5p ^Δ	N-DPE	Si	200J	TO18	A		
20#	BSX49	400M ^Δ	50n ^Δ				80n ^Δ	1.2	0	10m ^Δ	120	Δ	5.0	6.0p ^Δ	P-AN	Si	200J	TO18	A		
21#	MM8698	400M ^Δ	50n ^Δ				75n ^Δ	1.2	0	30m ^Δ	120	Δ	6.0	5.0p ^Δ	P	Si	200J	TO18	A		
22#	ZN2894	400M ^Δ	60n ^Δ				90n ^Δ	360m	1.5	0	30m ^Δ	150	#Δ		6.0p ^Δ	P	Si	200J	TO18	A	
23#	ZN3012	400M ^Δ	60n ^Δ				90n ^Δ	12.0	0	30m ^Δ	120	Δ		6.0p ^Δ	P	Si	200J	TO18	A		
24#	ZN3209	400M ^Δ	60n ^Δ				90n ^Δ	360m	500m ^Δ	30m ^Δ	30	Δ	6.0	5.0p ^Δ	P-PE	Si	200J	TO18	A		
25#	A3T2894	400M ^Δ	60n ^Δ				90n ^Δ	225m	500m ^Δ	30m ^Δ	150	#Δ		6.0p ^Δ	P-PET	Si	150S	u44	A		
26#	BVF81	400M ^Δ	60n ^Δ				90n ^Δ	300m	50	0	30m ^Δ	40	#Δ		6.0p ^Δ	P-PE	Si	200J	u26a	B	
27#	BVF81A	400M ^Δ	60n ^Δ				75n ^Δ	300m	50	0	30m ^Δ	30	#Δ		6.0p ^Δ	P-PET	Si	200J	u26a	B	
28#	BVF91N	400M ^Δ	60n ^Δ				100n ^Δ	400m	500m ^Δ	30m ^Δ	120	*Δ		6.0p ^Δ	P-PE	Si	175J	L56d			
29#	BVF91N	400M ^Δ	60n ^Δ				100n ^Δ	400m	500m ^Δ	30m ^Δ	120	*Δ		6.0p ^Δ	P-PE	Si	175J	L56e			
30#	BSV21	400M ^Δ	60n ^Δ				75n ^Δ	360m	500m ^Δ	30m ^Δ	30	Δ	6.0	5.0p ^Δ	P-PE	Si	200J	TO18	A		
31#	BSV37	400M ^Δ	60n ^Δ				90n ^Δ	350m	500m ^Δ	30m ^Δ	150	#Δ	15	6.0p ^Δ	P	Si	175J	u53	F		
32#	BSV55A	400M	60n ^Δ				90n ^Δ	300m	500m ^Δ	30m ^Δ	120	Δ	5.0	6.0p	P	Si	150	u34			
33#	BSV55AP	400M	60n ^Δ				90n ^Δ	150m	500m ^Δ	30m ^Δ	120	Δ	5.0	6.0p	P	Si	150	u17c	E		
34#	BSX20	400M ^Δ	60n ^Δ				90n ^Δ	1.2	0	500m ^Δ	30m ^Δ	60	#	5.0	6.0p ^Δ	P-DPE	Si	200J	TO18	A	
35#	TIS50	400M ^Δ	60n ^Δ				90n ^Δ	360m	300m ^Δ	10m ^Δ	30	#Δ	1.0	6.0p ^Δ	P-PLT	Si	125J	X59	F		
36#	ZTX510	400M ^Δ	60n ^Δ				90n ^Δ	250m	500m ^Δ	30m ^Δ	150	#Δ	1.0	6.0p ^Δ	P	Si	200J	TO18	A		
37#	BSX48	400M ^Δ	65n ^Δ				110n ^Δ	1.0	0	10m ^Δ	37	*Δ		4.5p ^Δ	N-DPE	Si	200J	TO18	A		
38#	ZN828	400M ^Δ	70n ^Δ				50n	150m	300m ^Δ	10m	40		3.5p	P-EM	Ge	100J	TO18	A			
39#	V405A	400M ^Δ	80n ^Δ				110n ^Δ	1.0	0	2.0	20	#Δ	3.0n	3.0n	P-DPE	Si	175J	TO18	A		
40#	2N4026	400M ^Δ	100n ^Δ				350n	50n	2.0	0	50m ^Δ	25	#Δ	1.0	20ps ^Δ	P	Si	200J	TO18	A	
41#	2N4027	400M ^Δ	100n ^Δ				350n	50n	2.0	0	50m ^Δ	25	#Δ	1.0	20ps ^Δ	P	Si	200J	TO18	A	
42#	2N4030	400M ^Δ	100n ^Δ				350n	50n	4.0	0	50m ^Δ	25	#Δ	1.0	20ps ^Δ	P	Si	200J	TO18	A	
43#	ZN4031	400M ^Δ	100n ^Δ				350n	50n	14.0	0	50m ^Δ	25	#Δ	1.0	20ps ^Δ	P	Si	200J	T05	A	
44#	ZSC752G	400M ^Δ	100n ^Δ				30n	70n	200m	1.0	0	10m ^Δ	240	#Δ	12	6.0p ^Δ	N-PE	Si	125J	R67a	B
45#	ZSC407	400M ^Δ	100n ^Δ				200n	4.0	1.0	0	50m ^Δ	20	Δ	20	500p ^Δ	P	Si	150J	MD10		
46#	ZSC408	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD10		
47#	ZSC409	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD10		
48#	ZSC410	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD10		
49#	ZSC411	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD10		
50#	ZSC431	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD18		
51#	ZSC432	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD18		
52#	ZSC432	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD18		
53#	ZSC433	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD18		
54#	ZSC434	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD18		
55#	ZSC435	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD18		
56#	ZSC436	400M ^Δ	1000n				200n	4.0	1.0	0	100	0		5.0	500p ^Δ	P	Si	150J	MD18		
57#	ZT20	420M ^Δ	25n	12n	350n	150n	1.0	0	10m ^Δ	250	Δ	150	0	10ps ^Δ	N	Si	150J	X55a	A		
58#	ZN6012	420M ^Δ	25n	12n	350n	150n	1.0	0	10m ^Δ	250	Δ	150	0	10ps ^Δ	N	Si	150J	X55a	A		
59#	ZN6016	420M ^Δ	25n	12n	350n	150n	1.0	0	10m ^Δ	250	Δ	150	0	10ps ^Δ	N	Si	150J	X55a	A		
60																					

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab. (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	fab	MAX RISE TIME	MAX DELAY	MAX STORE TIME	MAX FALL TIME	MAX IN FREE AIR @ 25°C	MAX PC	BIAS			Cob	r _{bb} X Cob	STRUCTURE	M TEMP	DWG # Y200 s/a	L C E O A D T0200		
									V _{cb}	I _e	hFE								
			(Hz)	(s)	(s)	(s)	(s)	(W)	(V)	(A)		(Ω)	(F)						
1	MMT2369	500M1Δ	12n0		18n0	225m	1.0	10m0	40	#Δ	4.0pΩ	N-AN	SI	135J u43	D				
2	MPS2369	500M1Δ	12n0		18n0	310m	2.0	10m0	20	#Δ	4.0pΩ	N-AN	SI	135J T092	A				
3#	PL4022	500M1Δ	12n0		13n	180	1.0	10m0	120	□	25	4.0pΩ	N-PE	SI	175S u51				
4#	PL4023	500M1Δ	12n0		13n	180	1.0	10m0	120	#Δ	20	4.0pΩ	N-PE	SI	175S u51				
5#	TIS48	500M1Δ	12n0		18n	230	1.0	10m0	40	#Δ	25	4.0pΩ	N-PE	SI	150J T092	B			
6#	TIS49	500M1Δ	12n0		18n	230	1.0	10m0	120	#Δ	50	4.0pΩ	N-PE	SI	150J T092	B			
7#	ZT2369	500M1Δ	12n0	12n0	18n0	360m	1.0	10m0	40	△	4.0pΩ	N-PL	SI	200 TO18					
8#	ZT2369A	500M1Δ	12n0	12n0	18n0	300m	1.0	10m0	10m0	120	□	24	4.0pΩ	N-PL	SI	200 TO18	F		
9#	ZTX313	500M1Δ	12n0		13n	180	1.0	10m0	120	□	20	4.0pΩ	N-PL	SI	125S X59				
10#	ZTX314	500M1Δ	12n0		13n	180	1.0	10m0	120	□	15	3.0pΩ	P	SI	125J R110	A			
11	ZN4257	500M1Δ	15n		15n	10	500m0	50	1.0m0	15	15	3.0pΩ	P	SI	200 TO18				
12	ZN4257A	500M1Δ	15n	10n	12n	10n	500m0	500m0	1.0m0	15	15	3.0pΩ	P	SI	125J R124	A			
13#	BFV27	500M1Δ	15n0		8.0n	200	1.0	10m0	10m0	20	#Δ	133	3.0pΩ	N-PE	SI	200 J348	P		
14#	TP4257	500M1Δ	15n0	15n	15n	500m0	1.0	10m0	50m0	30	#Δ	13.0pΩ	P-PL	SI	125J X55a	A			
15	2N834	500M1Δ	16n0	25ns		30n	300m	1.0	10m0	40	8.0	2.8pΩ	N-EM	SI	175J T018	A			
16	2N834A	500M1Δ	16n0		10n	24n	360m	1.0	10m0	25	#Δ	25	4.0pΩ	N	SI	200J TO18	A		
17	2N3227	500M1Δ	18n	5.0n	13n	15n	1.2	1.0	10m0	300	#Δ	4.0pΩ	N	SI	200J TO18	A			
18	2N3508	500M1Δ	18n	5.0n	13n	15n	400m	1.0	10m0	120	#Δ	14	4.0pΩ	N	SI	200S TO46	A		
19	2N3509	500M1Δ	18n	5.0n	13n	15n	400m	1.0	10m0	300	#Δ	25	4.0pΩ	N	SI	200S TO46	A		
20	ZN2710	500M1Δ	20n0		20n	35n	360m	1.0	10m0	40	#Δ	8.0	4.0pΩ	N	SI	200 TO18	A		
21	ZN3639	500M1Δ	20n		10n	20n	500m0	30	10m0	30	#Δ	3.5pΩ	P	SI	125J R110	A			
22	ZN3640	500M1Δ	20n	10n	20n	12n	500m0	30	10m0	30	#Δ	3.5pΩ	P	SI	125J R110	A			
23	ZSA413	500M1Δ	20n	30n	40n	100m	1.0	10m0	30m0	70	1.0	5.0pΩ	P-AD	Ge	75J TO18				
24	TIS53	500M1Δ	20n	10n	20n	12n	360m	300m0	1.0	10m0	30	#Δ	16	3.5pΩ	P-PE	SI	150J T092		
25	TIS54	500M1Δ	20n	10n	20n	12n	360m	300m0	1.0	10m0	30	#Δ	20	3.5pΩ	P-PE	SI	150J T092		
26	JAN2N3467	500M1Δ	30n	10n	60n	30n	5.0	5.0	1.0m0	40	1.2	2.5pΩ	P	SI	200S T05	A			
27	JAN2N3468	500M1Δ	30n	10n	60n	5.0	5.0	5.0	1.0m0	25	1.2	2.5pΩ	P	SI	200S T05	A			
28	MPS3640	500M1Δ	30n	10n	20n	12n	310m	1.0	10m0	50m0	20	#Δ	20	3.5pΩ	PAN	SI	135J X200	A	
29#	ZT2938	500M1Δ	30n0		15n	30n0	300m	1.0	200m	60	#Δ	8.0	4.0pΩ	N-PE	SI	175J T018			
30	JAN2N253	500M1Δ	35n	40n	30n	5.0	5.0	1.0m0	20	12	1.2	1.2pΩ	N-E	SI	200S TO5	A			
31	JAN2N3444	500M1Δ	35n	40n	30n	5.0	5.0	1.0m0	15	1.2	1.2	1.2pΩ	N-E	SI	200S TO5	A			
32	JAN2N5581	500M1Δ	35n0		30n	2.0	10	10m0	40	8.0pΩ	8.0pΩ	N	SI	200J TO46	A				
33	JAN2N5582	500M1Δ	35n0		30n	2.0	10	10m0	100	100	8.0pΩ	N	SI	200J TO46	A				
34	ZN3304	500M1Δ	60n0		60n0	300	1.0	10m0	63	10	1.0	3.5pΩ	P	SI	200J TO18	A			
35	ZN4449	500M1Δ	60n	9.0n	12n	8.0n	300m	1.0	10m0	40	#Δ	4.0pΩ	P	SI	200S TO46	A			
36	FT1702	500M1Δ	60n0		75n0	500m0	300m0	1.0	10m0	30	#Δ	20	3.5pΩ	P-PE	SI	200 TO18	A		
37#	ZSC423	500M1Δ	70n		120n	60n	500m	1.0	20m0	80	1.0	5.0pΩ	N-PE	SI	175J T038				
38#	ZSC425	500M1Δ	70n		120n	60n	500m	1.0	20m0	80	1.0	5.0pΩ	N-PE	SI	175J T039				
39#	ZSC933	500M1Δ	70n		120n	60n	200m	1.0	20m0	80	1.0	5.0pΩ	N-PE	SI	125J T0104				
40#	ZSC934	500M1Δ	70n		120n	60n	200m	1.0	20m0	80	1.0	5.0pΩ	N-PE	SI	125J T0104				
41	ZN4028	500M1Δ	100n0		35n0	50n	2.0	5.0	500m0	70	#Δ	1.0	20pΩ	P	SI	200J TO18	A		
42	ZN4029	500M1Δ	100n0		35n0	50n	2.0	5.0	500m0	70	#Δ	1.0	20pΩ	P	SI	200J TO18	A		
43	ZN4032	500M1Δ	100n0		35n0	50n	4.0	5.0	500m0	70	#Δ	1.0	20pΩ	P	SI	200J T05	A		
44	ZN4033	500M1Δ	100n0		35n0	50n	4.0	5.0	500m0	70	#Δ	1.0	20pΩ	P	SI	200J T05	A		
45#	ZSA450H	530M1Δ	13n1	12n1	14n1	24n	300m0	1.0	50m0	30	#Δ	4.0pΩ	P-EM	Ge	100J T018	A			
46#	ZSA451H	530M1Δ	13n1	12n1	14n1	24n	300m0	1.0	50m0	60	#Δ	4.0pΩ	P-EM	Ge	100J T018	A			
47#	ZSA452H	530M1Δ	13n1	12n1	14n1	24n	300m0	1.0	50m0	120	#Δ	4.0pΩ	P-EM	Ge	100J T018	A			
48	ZN5065	550M1Δ	12n	7.0n	25n	15n	2.5	5.0	300m0	120	2.3	6.0pΩ	N-E	SI	200J R83a	A			
49#	BSX92	550M1Δ	12n0		15n0	360m	1.0	10m0	20	#Δ	4.0pΩ	N-PE	SI	200J T018	A				
50	ZN5055	550M1Δ	15n	10n	20n	15n	500m0	50	10m0	100	#Δ	13	4.5pΩ	P	SI	125J R122	A		
51#	ZSC689H	600M1Δ	16n0		3.0n	3.0n	300m	1.0	10m0	85	1.8pΩ	N	SI	175J T018					
52#	ZDS205	600M1Δ	6.0n		15n0	360m	1.0	10m0	120	10	3.0pΩ	N-PE	SI	150J T0122	P				
53	ZN3320	600M1Δ	10n	10n	20n	60n	50	10m0	40m0	40	△	3.0pΩ	P	SI	100S TO18	A			
54	ZN3321	600M1Δ	10n	10n	25n	15n	60m	50	10m0	40m0	80	1.0	3.5pΩ	P	SI	100S TO18	A		
55	ZN3322	600M1Δ	10n	10n	30n	15n	60m	50	10m0	40m0	25	1.0	3.5pΩ	P	SI	100S TO18	A		
56	ZN3010	600M1Δ	12n	6.0ns	12n	30m	40	10m0	25	#Δ	3.0pΩ	N	SI	200J T018	A				
57#	BSV89	600M1Δ	12n0		18n0	360m	1.0	10m0	35	3.0pΩ	N	SI	200J T018	A					
58#	BSV90	600M1Δ	12n0		18n0	360m	1.0	10m0	25	3.0pΩ	N	SI	200J T018	A					
60#	BSX22	600M1Δ	12n0	6.0ns	12n0	300m	1.0	10m0	60	#Δ	3.0pΩ	N-DPE	SI	200J T018	A				
61	ZN5056	600M1Δ	15n	10n	30n	15n	1.2	50	30m0	100	#Δ	13	4.5pΩ	P	SI	200J T018	A		
62	FT709	600M1Δ	15n	6.0n	6.0n	30m	400m0	10m0	30	△	2.0pΩ	N-PE	SI	200J T018	A				
63#	ME9003	600M1Δ	15n	10n	20n0	625m0	50	10m0	30	250	2.0pΩ	N-PE	SI	150J R110c	A				
64#	ZT709	600M1Δ	15n0		6.0n	30n	1.0	30m0	45	2.1pΩ	N-PL	SI	200 J18	F					
65#	BSV36	600M1Δ	20n0		6.0n	35n	350m	1.0	400m0	20m0	150	2.4pΩ	N-PE	SI	175J u53				
66#	ZT2475	600M1Δ	20n0		9.0n	300m	1.0	300m0	50	20	1.5pΩ	N-PE	SI	200 R64					
67	ZN2651	600M1Δ	35n0		25n	75n0	360m	1.0	10m0	50	2.6pΩ	N-PE	SI	300 TO18	A				
68	JAN2N3763	600M1Δ	35n	8.0n	80n	35n	10	1.0	500m0	40	#Δ	10	15pΩ	P	SI	200J T05	A		
69	JAN2N3765	600M1Δ	35n	8.0n	80n	35n	50m0	1.0	500m0	40	#Δ	10	15pΩ	P	SI	200J T046	A		
70	ZN3862	600M1Δ	39n	3.9n	25n	380m	1.0	10m0	50	25	4.0pΩ	N	SI	200A T018	A				

12. SWITCHING TRANSISTORS

IN ORDER OF (1) fab, (2) MAX RISE TIME &
(3) TYPE No.

LINE No.	TYPE No.	1	2	MAX RISE TIME (Hz)	MAX DELAY TIME td (s)	MAX STORE TIME ts (s)	MAX FALL TIME tf (s)	MAX. Pc IN FREE AIR @ 25°C (W)	BIAS			MAX. SAT. RES. (Ω)	Cob	rbb X Cob (s)	STRUCTURE	MAX. A-TEMP ("C)	DWG #	L C E O A D D E
		fab	tr	ts	tf	Vcb (V)	Ie (A)	hFE	(F)									
1	2N3832	800M Δ	20n	15n	10n	20n	200m	50 Ω	2.0m Δ	25 Δ	40	4.5p μ	N	Si	200S	T072	G	
2#	BSW25	800M Δ	20n Δ	20n Δ	25n Δ	1.2 Δ	500m Δ	30m Δ	40 Δ	40 Δ	4.5p μ	P-DPE	S	Si	200J	T018	A Δ	
3	EN2894A	800M Δ	20n Δ			200m Δ	50 Δ	30m Δ	120 Δ	40 Δ	4.5p μ	P	Si	125J	T016	A		
4	2N2894A	800M Δ	50n Δ		20n	20n Δ	360m	500m Δ	30m Δ	120 Δ	4.5	4.5p μ	P	Si	200J	T018	Δ	
5	MM2894A	800M Δ	60n Δ			35n Δ	1.2 Δ	50 Δ	30m Δ	120 Δ	4.5	4.5p μ	P-AN	Si	200J	T018	A Δ	
6	JAN2N3498	800M Δ	115n Δ			1.1n Δ	1.1n Δ	10 Δ	100u Δ	20 Δ	40 Δ	10p μ	N	Si	200J	T05	A Δ	
7	JAN2N3499	800M Δ	115n Δ				1.1n Δ	5.0 Δ	10 Δ	100u Δ	35 Δ	10p μ	N	Si	200J	T05	A Δ	
8	JAN2N3500	800M Δ	115n Δ			1.1n Δ	5.0 Δ	10 Δ	100u Δ	20 Δ	40 Δ	8.0p μ	N	Si	200J	T05	A Δ	
9	JAN2N3501	800M Δ	115n Δ			1.1n Δ	5.0 Δ	10 Δ	100u Δ	35 Δ	40 Δ	8.0p μ	N	Si	200J	T05	A Δ	
10	JAN2N3634	800M Δ	400n Δ			600n Δ	5.0 Δ	10 Δ	100u Δ	25 Δ	40 Δ	10p μ	P Δ	Si	200J	T05	A Δ	
11	JAN2N3636	800M Δ	400n Δ			600n Δ	5.0 Δ	10 Δ	100u Δ	25 Δ	40 Δ	10p μ	P Δ	Si	200J	T05	A Δ	
12	2N3919	800M Δ	500n Δ		1u		15ms Δ	2.0 Δ	2 Δ	40 Δ		N	Si	150J	T03	C Δ		
13	2N3920	800M Δ	500n Δ			15ms Δ	2.0 Δ	2 Δ	100 Δ	40 Δ		N	Si	150J	T03	C Δ		
14	N4209	850M Δ	15n Δ	10n	20n	10n	300m	30 Δ	10m Δ	120 Δ	150	3.0p μ	P	Si	200J	T018	A Δ	
15	MM4208	850M Δ	15n Δ		20n	1.2 Δ	30 Δ	10m Δ	120 Δ	18	3.0p μ	P-AN	Si	200J	T018	A Δ		
16	MM4208A	850M Δ	15n Δ			20n	1.2 Δ	30 Δ	10m Δ	120 Δ	18	3.0p μ	P-AN	Si	200J	T018	A Δ	
17	MM4209	850M Δ	15n Δ		20n	1.2 Δ	30 Δ	10m Δ	120 Δ	18	3.0p μ	P-AN	Si	200J	T018	A Δ		
18	MM4209A	850M Δ	15n Δ		20n	1.2 Δ	30 Δ	10m Δ	120 Δ	18	3.0p μ	P-AN	Si	200J	T018	A Δ		
19	JAN2N3635	850M Δ	400n Δ			600n Δ	5.0 Δ	10 Δ	100u Δ	25 Δ	40 Δ	10p μ	P Δ	Si	200J	T05	A Δ	
20	JAN2N3637	850M Δ	400n Δ			600n Δ	5.0 Δ	10 Δ	100u Δ	55 Δ	40 Δ	10p μ	P Δ	Si	200J	T05	A Δ	
21	JN4872	900M Δ	15n Δ	10n	20n	10n	700m	30 Δ	10m Δ	50 Δ	130	3.0p μ	P	Si	200J	T018	A Δ	
22	2N769	900M Δ	30n Δ				35m	500m Δ	20m	55	24	1.5p μ	P-MD	Ge	100J	T018	A	
23	JAN2N3250A	900M Δ	35n Δ	35n	175n	50n	1.2 Δ	1.0 Δ	10m Δ	50 Δ	25	6.0p μ	P Δ	Si	200S	T018	A Δ	
24	JAN2N3251A	900M Δ	35n Δ	35n	200n	1.2 Δ	1.0 Δ	10m Δ	100 Δ	25	6.0p μ	P Δ	Si	200S	T018	A Δ		
25	2N2784	1000M Δ	9.0n Δ			5.0n	9.0n Δ	300m	500m Δ	10m Δ	87	3.0p μ	N-PE	Si	200J	T018	A Δ	
26	2N2784/46	1000M Δ	9.0n Δ			5.0n	9.0n Δ	400m	500m Δ	10m Δ	87	3.0p μ	N-PE	Si	200J	T046	A Δ	
27	2N709A46	1.0G Δ	15n Δ			15n Δ	400m	500m Δ	10m Δ	60	100	3.0p μ	N-PE	Si	200J	T046	A Δ	
28	MPSL07	1.0G Δ	20n Δ	15n Δ		40n	310m	1.0 Δ	50m Δ	35	15	1.9p μ	P-AN	Si	135J	T092	A	
29	2N797	1000M Δ	40n Δ			80n Δ	150m	500m Δ	50m Δ	85	14	4.0p μ	N-ME	Ge	100	T018	A Δ	
30	JAN2N869A	1000M Δ	50n Δ			80n Δ	360m	5.0 Δ	10 Δ	120 Δ	15	6.0p μ	P Δ	Si	200J	T018	A Δ	
31	JAN2N4453	1000M Δ	50n Δ			80n Δ	300m	5.0 Δ	10 Δ	120 Δ	15	6.0p μ	P Δ	Si	200J	T046	A Δ	
32	JAN2N559	1000M Δ	85n Δ	50n Δ	95n	100n	300m Δ	500m Δ	10m Δ	120 Δ	15	6.0p μ	P-AN	Si	135J	T092	A Δ	
33	MPSL08	1.2G	20n Δ	20n Δ	95n	40n Δ	310m	1.0 Δ	50m Δ	35	15	1.9p μ	N-PL	Si	200J	T046	A Δ	
34	2N709/46	1280M	15n Δ			15n Δ	400m	500m Δ	10m Δ	55	100	3.0p μ	N-PL	Si	200J	T018	A Δ	
35	2N3959	1300M Δ	2.0n Δ		16n	52n	8.0n	1.3 Δ	5.0 Δ	62 Δ	200	2.5p μ	N-A	Si	200J	T018	A	
36	2N4251	1300M Δ	4.0n Δ								2.0p μ	N	Si	200J	T046	A Δ		
37	JN3633	1300M Δ	9.0n Δ			5.0n	9.0n Δ	300m	500m Δ	10m Δ	150 Δ	70	2.5p μ	N-PE	Si	200J	T018	A Δ
38	2N3960	1600M Δ	2.0n Δ								2.5p μ	N-A	Si	200J	T018	A		
39	MMT3960A	2.2G Δ	750pt					850p μ	225m	1.0 Δ	10m Δ	200	1.3p μ	AN	Si	135J	u43	D
40	MMT3960	2.25G	650pt	1.0n				750p μ	225m	1.0 Δ	30m	80 Δ	1.3p μ	N-AN	Si	125J	u43	D
41#	2SC989	3000M Δ	700pt Δ					500p μ	150m	1.0 Δ	30m Δ	30 Δ	1.5p μ	N-PE	Si	150J	X79	C Δ

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY STRUCTURE	M'DWG #	L C	DESCRIPTION
1	ZN5236*	N	T039	A	Max. Rad Level-300T NVT <h>FE-10 min</h> VCE(sat)-70 max, all pulsed
2#	AS5223	1 P-AD	Ge T07	E O	Ic-100mA max;ICBO-2.0uA;Pc-63mW;BVCEO-2.0V;tr-1.0ns
3	NS1110t	1 N	Si T018	A	ICBO-1.0uA max;Ih-300mA;VH-9.0V;IA-2.0mA;Ip-2.0A;BVCES-110V min.
4	NT1111	1 N	Si T018	A	ICBO-1.0uA max;Ih-300mA;VH-9.0V;IA-2.0mA;Ip-1.5A;BVCES-60V min.
5#	RT1110	1 N-PL	Si T018	A	BVCES-190V max;ICBO-1.0uA max;tr-1.0ns max;tf-2.5ns max
6#	RT1111	1 N-PL	Si T018	A	BVCES-120V max;ICBO-1.0uA max;tr-1.0ns max;tf-2.5ns max
7#	RT1116	1 N-PL	Si T018	A	BVCES-280V max;ICBO-1.0uA max;tr-1.0ns max;tf-2.5ns max
8	ZN592	2 P	Ge T05	A	Pt-125mW;VCBO-20V;ICBO-5.0uA max;hfe-40 typ;Cob-35pf;NF-16db
9	ZN593	2 P	Ge T09	A	Pt-125mW;VCBO-40V;ICBO-5.0uA max;hfe-80 typ;Cob-35pf;NF-16db
10	ZN594	2 N	Ge T05	A	Pc-15W max;BVCBO-20V;IC-30A max;tf-1.5Mc min
11	ZN595	2 N	Ge T05	A	Pc-15W max;BVCBO-20V;IC-30A max;fab-3.0Mc min
12	ZN596	2 N	Ge T05	A	Pc-15W max;BVCBO-20V;IC-30A max;fab-5.0Mc min
13	ZN1169	2 N	Ge T05	A	Pc-12W max;BVCBO-25V;IC-40A max;tr-350ns;tf-200ns;fab-7.0Mc
14	ZN1170	2 N	Ge T05	A	Pc-12W max;BVCBO-40V;IC-40A max;tr-350ns;tf-200ns;fab-7.0Mc
15	ZN1640	2 P-AD	Si T05	A	Pc-25W max;BVCBO-30V;IC-50mA max;fab-40Mc typ
16	ZN1641	2 P-AD	Si T05	A	Pc-25W max;BVCBO-30V;IC-50mA max;fab-1.2Mc Typ
17	ZN1642	2 P-AD	Si T05	A	Pc-150mW max;VCEO-25V max;VCEO-25V max;tf-5.0Mc min
18	ZN1891*	2 N	Ge T05	A	Pc-150mW;VCEO-20V;IC-1A max;fab-2.0Mc
19	ZN1994	2 N-A	Ge T05	A	Pc-15W max;BVCBO-30V;IC-30A max;ton-1500ns;toff-1800ns;fab-3Mc
20	ZN1995	2 N-A	Ge T05	A	Pc-15W max;BVCBO-25V;C-30A max;ton-1300ns;toff-1800ns;fab-5Mc
21	ZN1996	2 N-A	Ge T05	A	Pc-15W max;BVCBO-20V;C-30A max;ton-1100ns;toff-1800ns;fab-8Mc
22	ZN2474	2 P-AD	Si T05	A	Pc-25W max;BVCBO-30V;BVCEO-15V;hFE-15;VH-6mV max
23	ZN2968	2 P-PA	Si T05	A	Pd-150mW max;hFE-15 at 100uA;BVCEO-30V;IC-50mA max
24	ZN2969	2 P-PA	Si T018	A	Pd-150mW max;hFE-15 at 100uA;BVCEO-30V;IC-50mA max
25	ZN2970	2 P-PA	Si T05	A	Pd-150mW max;hFE-10 at 100uA;BVCEO-20V;IC-50mA max
26	ZN2971	2 P-PA	Si T018	A	Pd-150mW max;hFE-10 at 100uA;BVCEO-20V;IC-50mA max
27#	AC130	2 N-A	Ge T01	A	Pc-14W max;BVCBO-20V;IC-1A max;fab-2.0Mc
28	C106*	2 P	Si T05	A	A0 VO-2.0mV max;hFE-30 min at VCE-50V;RCE(SAT)-4.0 ohms max
29	C201	2 P-Δ	Si T05	A	Pc-25W max;BVCBO-40V;IC-50mA max;fab-40Mc
30	C302	2 P-Δ	Si T05	A	Pc-25W max;BVCBO-12V;IC-50mA max;fab-80Mc
31	C402	2 P-Δ	Si T05	A	Pc-25W max;BVCBO-15V;IC-50mA max;fab-80Mc
32	C502	2 P-Δ	Si T05	A	Pc-25W max;BVCBO-30V;IC-50mA;BVCEO-10V
33	C651	3 N-Δ	Si T05	A	Pc-25W max;ICBO-10uA
34	C652	3 N-Δ	Si T05	A	Pc-25W max;ICBO-10uA
35	ZN2707	5 N	Ge T01	A	Matched pair of 2N2430 and 2N2706, hFE1/2-1.1 max
36	2N3838t	5 N	Si L19c	A	Pt-35mW;BVCBO-60V;hFE-35 min;ft-200Mc min;tf-40ns;tf-90ns
37	JAN2N3B38t	5 PN	Si L19c	A	Pd 350mW both;BVCBO-60V;BVCEO-5.0V;BVCEO-40V;ICBO-10n at VCB-50V
38#	ZN4079	5 PN	Ge	A	2N4077/2N4078:hFE1/hFE2 1.40 max at VCB 0.0 and IE 500mA
39	ZN4107	5 P	Ge	A	2N4105/2N4106:hFE1/hFE2 1.25 at VCB 0.0IE 500mA
40	ZN4136	5 Ge	T01	A	Pair of 2N2430 and 2N2431:hFE1/hFE2 1.4 at VCB-0.0V and IE-300mA
41	ZN4854t	5 Si	L19b	A	Pc-30W each;VC1-2.120 max;BVCBO-60V max;IC-600mA;BVCEO-40V max
42	JAN2N4854t	5 P-NØ	Si L19e	A	Pd 600mW both;BVCBO-60V;BVCEO-5.0V;BVCEO-40V;ICBO-10n at VCB-50V
43	ZN4855t	5 Si	L19b	A	Pc-30W each;VC1-2.120 max;BVCBO-60V max;IC-600mA;BVCEO-40V max
44	40396	5 N-P	Ge T01	A	Pt-30W(each);VCEO-18V max;VEBO-2.5V max
45	AC127/AC128	5 Ge	T01	A	Matched pair of AC127 and AC128
46	AC127/AC132	5 Ge	T01	A	Matched pair of AC127 and AC132
47#	AC127/AC152	5 Ge	T01	A	BVCBO-32V;IC-500mA;hFE1/2-1.25
48#	AC153-AC176	5 A	Ge T07	A	Matched pair of AC153 and AC176
49#	#AC153K-AC176K	5 A	Ge X9a	A	Matched pair of AC153K and AC176K
50#	AC187/01/AC188/01	5 A	Ge X9c	A	hFE1/2-89 min; BVCBO-25V; IC peak-2A
51#	AC187/AC188	5 A	Ge T01	A	hFE1/2-89 min; BVCBO-25V; IC peak-2A
52#	#AC187K-AC188K	5 A	Ge X9a	A	Matched pair of AC187K and AC188K
53#	AD161/AD162	5 MD6b	Ge	A	BVCBO-32V;IC-2.0A;ft-1.0Mc;Pd-3.0W;hFE-40mm;hFE1/2-1.25max
54#	BFX79	5 DPE	Si L19	A	BVBCO-80V;BVCEO-60V;Pt-500mW;ft-100Mc;hFE-100 at IC-500mA
55#	BFX80	5 DPE	Si L19	A	BVBCO-60V;BVCEO-60V;Pt-500mW;ft-40Mc min;hFE-200 at IC-0.1mA
56#	BFX81	5 DPE	Si L19	A	BVBCO-25V;BVCEO-30V;Pt-350Mc min;hFE-30 min at IC-10mA
57	FP4339/2N4339	5 P-N	Si ZA25	A	Vp match-30%;DSS match-5%;BVGSS-40V max;Pc-30W max
58	FP4340/2N4340	5 P-N	Si ZA25	A	Vp match-30%;DSS match-5%;BVGSS-50V max;Pc-30W max
59	MD985	5 E	Si L19	A	VCBO-60V;VCEO-30V;Pc-500mW;ft-200Mc min;hFE-35 min at IC-10mA
60	MD985F	5 E	Si X22	A	VCBO-60V;VCEO-30V;Pc-250mW;ft-200Mc min;hFE-35 min at IC-10mA
61	MD986	5 E	Si L19	A	VCBO-60V;VCEO-15V;Pc-500mW;ft-200Mc min;hFE-25 min at IC-10mA
62	MD986F	5 E	Si X22	A	VCBO-40V;VCEO-15V;Pc-250mW;ft-200Mc min;hFE-25 min at IC-10mA
63	MD80011	5 P-N-EA	Si L66	A	Pt-800mW(both sides);VCEO-30V;hFE-40 min;120 max at 150mA and 10V
64	MD6001F1	5 P-N-EA	Si T089	A	Pd(both sides)-350mW;VCEO-30V;hFE-40 min;120 at 150mA;10V
65	MD6002F1	5 P-N-EA	Si L66	A	Pt-800mW(both sides);VCEO-30V;hFE-100 min;120 max at 150mA and 10V
66	MD6002F1	5 P-N-EA	Si T089	A	Pd(both sides)-350mW;VCEO-30V;hFE-100-300 at 150mA;10V
67	MD6003	5 P-AN	Si L2d	A	Pd 600mW(both sides);BVCBO-50V;BVCEO-30V;BVCEO-5.0V;ICBO-100nA;hFE 40 min
68	MD6100	5 P-N-EA	Si L66	A	Pt-600mW(both sides);VCEO-45V;hFE-100 at 100A;5.0V
69	TD600	5 PLTØ	Si L19b	A	Pt-400mW;hFE1/2-90 min;20MHz min;IC-500mA max
70	TD601	5 PLT	Si L19b	A	Pt-400mW;ft-20MHz min;hFE at 10uA-100min;IC-500mA max
71	TD602	5 PLT	Si L19b	A	Pt-400mW;ft-200MHz min;hFE at 1.0mA-50min;IC-500mA max
72	TD700	5 P-N-PLØ	Si L19d	A	Pt 400mW;hFE1/2-90 min;BVCEO-40V;BVCEO-30V;BVCEO-5.0V;hFE-120 min at IC 1.0mA;ft 20M min
73	TD701	5 P-N-PL	Si L19d	A	Pt 400mW;BVCBO-40V;BVCEO-30V;BVCEO-5.0V;hFE 100 min at IC 10uA;ft 20MHz min
74	TD702	5 P-N-PL	Si L19d	A	Pt 400mW;BVCBO-40V;BVCEO-30V;BVCEO-5.0V;hFE 120 min at IC 150mA;ft 200MHz min
75	TIS60M	5 N-PL	Si T092	A	Consist of TIS580 and TIS61; Available only with matching TIS61M
76	TIS61M	5 P-PL	Si T092	A	Consist of TIS61 and TIS60; Available only with matching TIS60M
77	TIS92M	5 N	Si X56	A	Same as TIS92, available only with matching TIS93M
78	TIS93M	5 P	Si X55	A	Same as TIS93, available only with matching TIS92M
79	UD3007†	5 PE	Si L59	A	BVCBO-60V;BVCEO-40V;BVCEO-5.0V;hFE-100-300 at IC-150mA;ft-200Mc
80#	2AC132	6 P-A	Ge T01	A	Matched Pair AC132, hFE1/hFE2-1.25 max
81#	2AC187	6 A-N	Ge T01	A	Pt-8W;BVCBO-25V max;IC-2A pulsed;hFE-100 min;f-5MHz
82#	2AC188	6 P-A	Ge T01	A	Matched pair of AC188;hFE1/2-1.25 max at IC-500mA
83#	2ACY17	6 P-AØ	Ge T05	A	hFE 1/2-1.2 max;VBE1/2-250mV max
84#	2ACY18	6 P-AØ	Ge T05	A	hFE 1/2-1.2 max;VBE1/2-250mV max
85#	2ACY19	6 P-AØ	Ge T05	A	hFE 1/2-1.2 max;VBE1/2-250mV max
86#	2AD139	6 P-A	Ge MD11	A	Matched Pair AD139, hFE1/hFE2-1.25 max
87#	2AD140	6 P-E	Ge T03	A	Matched Pair of AD140; hFE1/hFE2-1.25 to 1.0
88#	2AD149	6 P-A	Ge T03	A	BVCBO-50V;hfe-30 min at 0.0V and 1.0 IC; ICBO-35mA
89#	2AD161	6 P	Ge T09	A	Pt-4W;VCEO-32V;IC-3A pulsed;hFE-80 min;ft-3MHz
90#	2AD162	6 P	Ge M017c	CØ	Matched Pair of AD162;hFE1/2-1.1 at VCE-1.0V;IC-50mA
91#	ZAT329	6 N-PL	Si MM12a	CØ	Matched Pair of A1329;hFE1/hFE2-75 max
92#	ZAT331	6 P-PL	Si	CØ	Matched Pair of A1331;hFE1/hFE2-75 max
93#	ZBC119	6 N-PE	Si T039	D	Matched Pair of BC119;hFE 1/2 .80min-1.25max at IC of 300mA
94#	ZBC138	6 N-DPE	Si T039	D	Matched Pair of BC138;hFE 1/2 .80min-1.25max at IC of 10A
95#	ZBC139	6 P-DPE	Si T05	D	Matched Pair of BC139;hFE1/2-1.25 max;Pt-70W each
96#	ZBC142	6 N-PE	Si T039	D	Matched Pair of BC142;hFE 1/2 .80min-1.0max at IC of 50mA
97#	ZBC143	6 P-PE	Si T039	D	Matched Pair of BC143;hFE 1/2 .80min-1.25max at IC of 500mA
98#	ZBC144	6 N-DPE	Si T05	D	Matched Pair of BC144;hFE1/2-1.25 max;Pt-70W each
99#	ZBC221	6 F-DPE	Si T0105	D	Matched Pair of BC221;hFE 1/2 .80min-1.25max at IC of 200mA
100#	ZBC222	6 N-DPE	Si T0105	D	Matched Pair of BC222;hFE 1/2 .80min-1.25max at IC of 200mA
101#	ZBC286	6 N-DPE	Si T05	D	Matched Pair of BC286;hFE 1/2 .80min-1.25max at IC of 500mA
102#	ZBC288	6 N-DPE	Si T039	CØ	Matched Pair of BC288;hFE 1/2 .80min-1.25max at IC of 2.0A
103#	ZBD124	6 N-PE	Si MD17c	CØ	Matched pair of BD124;(1-2) 2.0mA max;BVCEO 70V
104#	ZBD131	6 N-PE	Si T0126	D	Pt 11W;BVCEO 70V;hFE 280 max at IC 500m, VCE 12V;hFE1/2 1.2
105#	ZBDY20	6 N-D	Si T03	CØ	Matched pair of BDY20;hFE1/2 1.5 at IC 400mA,VCE 4.0V
106#	ZBDY38	6 N-D	Si T03	CØ	Matched pair of BDY38;hFE1/2 1.5 at 1c 200mA, VCE 4.0V
107#	ZC444*	6 N-DPL	Si L2b	CØ	Pt-50W;hFE1/2-70 min;VBE1/2-20mV max;ft-200Mc min
108#	ZN2X	6 N-PL	Si T05	CØ	BVCEO-60V;ICBO-0.1uA; Matched pair for hFE1/hFE2-9 min, 1.1 max
109	ZN282	6 P	Ge R8	CØ	Matched Pair of ZN281

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY No.	MIDWG #	L C A E T D S T O D E R E S E R	DESCRIPTION
1	2N2060*	6 N	Si L2t	Pt-5W:hFE1/2-90 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-10uV/deg C	
2	JAN2N2060*	6 N	Si L2b	Pt-600mW both;VBE(1-2)-0.05V,hFE1/2-90 min,ΔVBE(1-2)-80mV	
3	2N2060A*	6 N	Si L2t	Pt-600mW both;VBE(1-2)-3.0mV max;hFE1/2-90 min	
4	2N2060B*	6 N	Si L2t	Pt-600mW;VCBO-100V,hFE1/2-85 min,VBE(1-2)-1.5mV	
5	2N2223*	6 N	Si L2t	Pt-6W:hFE1/2-80 min,VBE(1-2)-15mV max,ΔVBE(1-2)/ΔT-25uV/deg C	
6	2N2223A*	6 N	Si L2t	Pt-6W:hFE1/2-90 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-25uV/deg C	
7	2N2281	6 P-E	Si TO18	A Matched pair of 2N2280, VBE<10uV max	
8	2N2414	6 N	Si G TO1	Pc-50W max,IT-50mC min;VCBO-75V,ic-5A,match;FE-50 min,ic-10mA	
9#	2N2431MP	5 P-A	Si G TO1	Matched Pair 2N2431,3.0V out Class B,hFE1/1,hFE2/1-25 max	
10	2N2453*	6 N	Si L2t	Pt-30W:hFE1/2-90 min,VBE(1-2)-2.5mV max,ΔVBE(1-2)/ΔT-10uV/Deg.C	
11	2N2453A*	6 N	Si L2t	Pt-30W:hFE1/2-80 min,VBE(1-2)-5.0mV max	
12	2N2480*	6 N	Si L2t	Pt-6W:hFE1/2-80 min,VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT-15uV/deg C	
13	2N2480A*	6 N	Si L2t	Pt-8W:hFE1/2-80 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-15uV/deg C	
14	2N2639*	6 N	Si L2t	Pt-8W:hFE1/2-90 min,VBE(1-2)-5mV max,ΔBE1/2-ΔT-10uV/deg C	
15	JAN2N2639*	6 N	Si L2b	Pt-600mW both;hFE1/2-90 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-10uA/C	
16	2N2640*	6 N	Si L2t	Pt-6W:hFE1/2-80 min,VBE(1-2)-10mV,ΔBE1/2-ΔT-20uV/deg.C	
17	2N2642*	6 N	Si L2t	Pt-6W:hFE1/2-90 min,VBE(1-2)-5mV,ΔBE1/2-ΔT-10uV/deg.C	
18	JAN2N2642*	6 N	Si L2b	Pt-600mW both;hFE1/2-90 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-10uA/C	
19	2N2643*	6 N	Si L2t	Pt-6W:hFE1/2-80 min,VBE(1-2)-10mV,ΔBE1/2-ΔT-20uV/deg.C	
20	2N2662*	6 N	Si L2t	Pt-6W:hFE1/2-85 min,VBE(1-2)-3mV,ΔBE1/2-ΔT-10uV/deg.C	
21	2N2662A*	6 N	Si L2t	Pd-600mW both;hFE1/2-90 min,VBE(1-2)-3mV,ΔVBE(1-2)/ΔT-10uV/deg.C	
22	2N2708MP	6 P	Si G TO1	Matched Pair of 2N2708 for hFE1/2	
23	2N2720*	6 N	Si L2t	Pt-600mW:hFE1/2-90 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-1mV	
24	2N2721*	6 N	Si L2t	Pt-600mW:hFE1/2-80 min,VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT-2mV	
25	2N2722*	6 N	Si L2t	Pt-600mW:hFE1/2-90 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-1mV	
26	2N2802*	6 P	Si L17k	Pt-50W:hFE1/2-80 min,VBE(1-2)-5.0mV max;ΔVBE(1-2)/ΔT-10uV/deg.C	
27	2N2803*	6 P	Si L17k	Pt-50W:hFE1/2-80 min,VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT-20uV/deg.C	
28	2N2805*	6 P	Si L17k	Pt-50W:hFE1/2-80 min,VBE(1-2)-5.0mV max;ΔVBE(1-2)/ΔT-10uV/deg.C	
29	2N2806*	6 P	Si L17k	Pt-50W:hFE1/2-80 min,VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT-20uV/deg.C	
30	2N2903*	6 N	Si L2t	Pt-30W:hFE1/2-80 min,VBE(1-2)-1.0mV max;ΔVBE(1-2)/ΔT-20uV/deg.C	
31	2N2903A*	6 N	Si L2t	Pt-30W:hFE1/2-90 min,VBE(1-2)-5.0mV max	
32	2N2910*	6 N	Si L2b	Pt-600mW both;hFE1/2-80 min,VBE(1-2)-10mV,ΔVCE(sat)-35 ohms	
33	2N2915*	6 N	Si L2t	Pt-50W:hFE1/2-90 min,VBE(1-2)-5.0mV max;ΔVBE(1-2)/ΔT-1mV	
34	2N2915A*	6 N	Si L2t	hFE1/2-85 min,VBE(1-2)-2.0mV max;Pt-5W,ΔVBE(1-2)/ΔT-5uV/deg.C	
35	2N2916*	6 N	Si L2t	Pt-50W:hFE1/2-90 min,VBE(1-2)-5.0mV,ΔVBE(1-2)-80mV	
36	2N2916A*	6 N	Si L2t	hFE1/2-85 min,VBE(1-2)-2.0mV max;Pt-5W,ΔVBE(1-2)/ΔT-5uV/deg.C	
37	2N2917*	6 N	Si L2t	Pt-50W:hFE1/2-80 min,VBE(1-2)-10mV,ΔVBE(1-2)-1.6mV	
38	2N2918*	6 N	Si L2t	Pt-50W:hFE1/2-80 min,VBE(1-2)-10mV,ΔVBE(1-2)-1.6mV	
39	2N2919*	6 N	Si L2t	Pt-50W:hFE1/2-90 min,VBE(1-2)-10mV,ΔVBE(1-2)-80mV	
40	JAN2N2919*	6 N	Si L2v	Pt-50W both;hFE1/2-1.1max,ΔVBE(1-2)-800uV max;IEBO-2.0nA max	
41	2N2919A*	6 N	Si L2t	hFE1/2-85 min,VBE(1-2)-2.0mV max;Pt-5W,ΔVBE(1-2)/ΔT-5uV/deg.C	
42	2N2920*	6 N	Si L2t	Pt-50W:hFE1/2-90 min,VBE(1-2)-5.0mV,ΔVBE(1-2)-80mV	
43	JAN2N2920*	6 N	Si L2v	Pt-50W both;hFE1/2-1.1max,ΔVBE(1-2)-800uV max;IEBO-2.0nA max	
44	2N2920A*	6 N	Si L2t	hFE1/2-85 min,VBE(1-2)-2.0mV max;Pt-5W,ΔVBE(1-2)/ΔT-5uV/deg.C	
45	2N2936	6 N	Si L2b	VCBO-50V, max;each;VCEO-55V, max;each;VEBO-50V, max;each;Pc-6W	
46	2N2937	6 N	Si L2b	VCBO-60V, max;each;VCEO-55V, max;each;VEBO-50V, max;each;Pc-6W	
47	2N2974*	6 N	Si L2t	Pt-30W:hFE1/2-90 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-80mV	
48	2N2975*	6 N	Si L2t	Pt-30W:hFE1/2-90 min,VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT-80mV	
49	2N2976*	6 N	Si L2t	Pt-30W:hFE1/2-80 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-1.6mV	
50	2N2977*	6 N	Si L2t	Pt-30W:hFE1/2-80 min,VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT-1.6mV	
51	2N2978*	6 N	Si L2t	Pt-30W:hFE1/2-90 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-80mV	
52	2N2979*	6 N	Si L2t	Pt-30W:hFE1/2-90 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-80mV	
53	2N2980*	6 N	Si L2t	Pt-30W:hFE1/2-80 min,VBE(1-2)-3mV max;ΔVBE(1-2)/ΔT-10uV/deg.C	
54	2N2981*	6 N	Si L2t	Pt-30W:hFE1/2-80 min,VBE(1-2)-0.15V max;ΔVBE(1-2)/ΔT-25uV/deg.C	
55	2N2982*	6 N	Si L2t	Pt-30W:hFE1/2-90 min,VBE(1-2)-0.05V max;ΔVBE(1-2)/ΔT-15uV/deg.C	
56	2N3043	6 N-PE	Si L2t	Minature dual 2N930;hFE 100-300 at 10uA,10% match;NF-5.0db max	
57	2N3044	6 N-PL	Si L2f	Minature dual 2N930;hFE 100-300 at 10uA,20% match;NF-5.0db max	
58	2N3045	6 N-PL	Si L2f	Minature dual 2N930;hFE 100-300 at 10uA,10% match;NF-5.0db max	
59	2N3046	6 N-PL	Si L2f	Minature dual 2N929;hFE 50-200 at 10uA,10% match;NF-5.0db max	
60	2N3047	6 N-PL	Si L2f	Minature dual 2N929;hFE 50-200 at 10uA,20% match;NF-5.0db max	
61	2N3048	6 N-PL	Si L2f	Minature dual 2N929;hFE 50-200 at 10uA,NF-5.0db max	
62	2N3049	6 N-PL	Si L2f	Minature dual 2N2412, 10% HFE match; NF-6.0db max	
63	2N3050	6 P-PE	Si L2f	Minature dual 2N2412, 20% HFE match; NF-6.0db max	
64	2N3051	6 P-PE	Si L2f	Minature dual 2N2412,id-15usec,tr-20usec,tr-20usec,tf-30usec	
65	2N3052	6 N-PE	Si L2f	Minature dual 2N706-2N914 type,tr-62usec,maxtoff-55usec max	
66	2N3333*	6 P	Si L2fc	Pt-40mW;D(on)1/2-.95 min;VGS1/2-.95 min;VGS1/2-15mV	
67	2N3334*	6 P	Si L2fc	Pt-40mW;D(on)1/2-.95 min;VGS1/2-.95 min;VGS1/2-20mV	
68	2N3335*	6 P	Si L2fc	Pt-40mW;D(on)1/2-.90 min;VGS1/2-.90 min;VGS1/2-40mV	
69	2N3336*	6 P	Si L2fc	Pt-40mW;D(on)1/2-.80 min;VGS1/2-.80 min;VGS1/2-80mV	
70	2N3447*	6 P	Si L17k	Pt-6W:hFE1/2-90 min,R(sat)-50ohms	
71	2N3448*	6 P	Si L17k	Pt-6W:hFE1/2-80 min,R(sat)-50ohms	
72	2N3449*	6 P	Si L17k	Pt-6W:hFE1/2-60 min,R(sat)-50ohms	
73	2N3550*	6 P	Si L17k	Pt-6W:hFE1/2-90 min,R(sat)-50ohms	
74	2N3551*	6 P	Si L17k	Pt-6W:hFE1/2-80 min,R(sat)-50ohms	
75	2N3552*	6 P	Si L17k	Pt-6W:hFE1/2-60 min,R(sat)-50ohms	
76	2N3409*	6 N	Si L2y	Pt-600mW both;hFE1/2-80 min,VBE(1-2)-10mV,VC1C2-100V	
77	2N3410*	6 N	Si L2y	Pt-600mW both;hFE1/2-90 min,VBE(1-2)-10mV,VC1C2-100V	
78	2N3411*	6 N	Si L2y	Pt-600mW both;hFE1/2-90 min,VBE(1-2)-5.0mV,VC1C2-100V	
79	2N3423*	6 N	Si L2t	Pt-45W:hFE1/2-80 min,VBE(1-2)-10mV,ΔVBE(1-2)/ΔT-4uV/deg.C	
80	2N3424*	6 N	Si L2t	Pt-45W:hFE1/2-90 min,VBE(1-2)-5mV,ΔVBE(1-2)/ΔT-2uV/deg.C	
81	2N3513	6 N	Si L22	Pt-75W both sides;VCBO-80V max;VCEO-40V max;VEBO-5.0V max	
82	2N3515	6 N	Si X27	Pt-75W both sides;VCBO-80V max;VCEO-40V max;VEBO-5.0V max	
83	2N3516	6 N	Si L22	Pt-75W both sides;VCBO-100V max;VCEO-60V max;VEBO-7.0V max	
84	2N3518	6 N	Si X27	Pt-75W both sides;VCBO-100V max;VCEO-60V max;VEBO-7.0V max	
85	2N3520	6 N	Si X27	Pt-75W both sides;VCBO-60V max;VCEO-30V max;VEBO-7.0V max	
86	2N3521	6 N	Si L23	Pt-1.5W both sides;VCBO-70V max;VCEO-55V max;VEBO-7.0V max	
87	2N3522	6 N	Si L22	Pt-75W both sides;VCBO-70V max;VCEO-55V max;VEBO-7.0V max	
88	2N3524	6 N	Si X27	Pt-1.4W both sides;VCBO-70V max;VCEO-55V max;VEBO-7.0V max	
89	2N3537*	6 N	Si L2t	Pt-600mW,VBE(1-2)-2.0-20mV max;ΔVBE(1-2)/ΔT-1.2mV max,VC1C2-50V	
90	2N3680*	6 N	Si L2t	Pt-600mW;hFE1/2-.85 min,VBE(1-2)-3mV max;ΔVBE(1-2)/ΔT-400uV	
91	2N3728*	6 N	Si L2t	Pt-5.5W:hFE1/2-80 min,VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-20uV/deg.C	
92	2N3729*	6 N	Si L2t	Pt-5.5W:hFE1/2-90 min,VBE(1-2)-3mV max;ΔVBE(1-2)/ΔT-10uV/deg.C	
93	2N3802*	6 P	Si L17s	Pt-360mW;hFE1/2-80 min,VBE(1-2)-8.0mV max	
94	2N3803*	6 P	Si L17e	Pt-360mW;hFE1/2-90 min,VBE(1-2)-8.0mV max	
95	2N3804*	6 P	Si L17e	Pt-360mW;hFE1/2-90 min,VBE(1-2)-8.0mV max	
96	2N3804A*	6 P	Si L17e	Pt-36W;hFE1/2-.95 min;VBE(1-2)-2.5mV max;ΔVBE(1-2)/ΔT-50mV/deg.C	
97	2N3805*	6 P	Si L17e	Pt-36W;hFE1/2-8.0 min,VBE(1-2)-2.8.0mV max	
98	2N3805A*	6 P	Si L17e	Pt-36W;hFE1/2-9.5 min;VBE(1-2)-2.5mV max;ΔVBE(1-2)/ΔT-50mV/deg.C	
99	2N3808*	6 P	Si L17k	Pt-600mW;hFE1/2-8.0 min,VBE(1-2)-2.8.0mV max	
100	2N3809*	6 P	Si L17k	Pt-600mW;hFE1/2-9.0 min,VBE(1-2)-2.8.0mV max	
101	2N3810*	6 P	Si L17k	Pt-600mW;hFE1/2-9.0 min,VBE(1-2)-2.8.0mV max	
102	JAN2N3810	6 P	Si L17h	Pt-6W:hFE1/2-.95 min,VBE(1-2)-2.5mV max;ΔVBE(1-2)/ΔT-50mV/deg.C	
103	2N3810A*	6 P	Si L17h	Pt-6W:hFE1/2-.90 min,VBE(1-2)-2.5mV max;ΔVBE(1-2)/ΔT-50mV/deg.C	
104	2N3811*	6 P	Si L17h	Pt-600mW;hFE1/2-9.0 min,VBE(1-2)-2.5mV max	
105	JAN2N3811	6 P	Si L17h	Pt-(both sides);60W;hFE1/2-9.0 to 1.0;VBE(1-2)-0.056 max;VCBO-60V	
106	2N3811A*	6 P	Si L17h	Pt-8W;hFE1/2-.95 min,VBE(1-2)-2.5mV max;ΔVBE(1-2)/ΔT-50mV/deg.C	
107	2N3814*	6 P	Si L17s	Pt-35W;VBE(1-2)-8.0mV max;hFE1/2-1.0 max at IC-1mA;VCE-5V	
108	2N3815*	6 P	Si L17s	Pt-35W;VBE(1-2)-8.0mV max;hFE1/2-1.0 max at IC-1mA;VCE-5V	
109	2N3816*	6 P	Si L17s	Pt-35W;VBE(1-2)-5.0mV max;hFE1/2-2.0-1.0 max at IC-1mA;VCE-5V	
110	2N3816A*	6 P	Si L17s	Pt-35W;VBE(1-2)-5.0mV max;VBE(1-2)-2.5mV max;ΔVBE(1-2)/ΔT-50mV/deg.C	

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY No.	STRUCTURE No.	DWG # T	REV S	REV T	REV E	REV D	DESCRIPTION
1	2N3817*	6 P	Si L17s	A Y200	E O				Pt. 35W,VBE(1-2)-5.0mV max,hFE(1-2)-10 max at IC.1mA,VCE-5V.
2	2N3817A*	6 P	Si L17s						Pt. 35W,hFE(1-2)-95 min,VBE(1-2)-5mV max,ΔVBE(1-2)ΔT-50mV/deg C.
3	2N3907*	6 N	Si L21						Pt. 6W,hFE(1-2)-90 min,VBE(1-2)-2.5mV max,ΔVBE(1-2)ΔT-5uV/deg C.
4	2N3908*	6 N	Si L2t						Pt. 6W,hFE(1-2)-90 min,VBE(1-2)-2.5mV max,ΔVBE(1-2)ΔT-5uV/deg C.
5	2N3921*	6 N	Si L21						Pt. 300mW,gm 1/2-95min,VGS(1-2)-5.0mV max,ΔVGS(1-2)ΔT-10uV/C.
6	2N3922*	6 N	Si L21						Pt. 300mW,gm 1/2-95min,VGS(1-2)-5.0mV max,ΔVGS(1-2)ΔT-25uV/C.
7	2N3934*	6 N	Si L21						Pt. 300mW,gm 1/2-95min,VGS(1-2)-5.0mV max,ΔVGS(1-2)ΔT-10uV/C.
8	2N3935*	6 N	Si L21						Pt. 300mW,gm 1/2-95min,VGS(1-2)-5.0mV max,ΔVGS(1-2)ΔT-25uV/C.
9	2N3954	6 N	Si L61a						Pt. 50W,IDS(1-2)-95 min,VGS(1-2)-5mV max,Yfs(1-2)-97 min.
10	2N3954A*	6 N	Si L61a						Pt. 50W,IDS(1-2)-95 min,VGS(1-2)-5mV max,ΔVGS(1-2)ΔT-5mV.
11	2N3955	6 N	Si L61a						Pt. 50W,IDS(1-2)-95 min,VGS(1-2)-10mV max,Yfs(1-2)-95 min.
12	2N3955A*	6 N	Si L61a						Pt. 50W,IDS(1-2)-95 min,VGS(1-2)-5mV max,ΔVGS(1-2)ΔT-1.5mV.
13	2N3956	6 N	Si L61a						Pt. 50W,IDS(1-2)-98 min,VGS(1-2)-15mV max,Yfs(1-2)-95 min.
14	2N3957	6 N	Si L61a						Pt. 50W,IDS(1-2)-90 min,VGS(1-2)-20mV max,Yfs(1-2)-90 min.
15	2N3958	6 N	Si L61a						Pt. 50W,IDS(1-2)-85 min,VGS(1-2)-25mV max,Yfs(1-2)-85 min.
16	2N4009	6 P	Si T046	A0					Matched Pair ZN4006,Voff-.02mV,ΔRSON=5 ohms,ΔVCE-100mV max.
17	2N4010	6 P	Si T046	A0					Matched Pair ZN4007,Voff-.02mV,ΔRSON=5 ohms,ΔVCE-100mV max.
18	2N4011	6 P	Si T046	A0					Matched Pair ZN4008,Voff-.02mV,ΔRSON=5 ohms,ΔVCE-100mV max.
19	2N4015*	6 P	Si L17k						BVCBO-60V,C 300mA max,Pt. 50W,VBE(1-2)-5.0mV,hFE(1-2)-90 min.
20	2N4016*	6 P	Si L17k						BVCBO-60V,C 300mA max,Pt. 50W,VBE(1-2)-2.5mV,hFE(1-2)-90 min.
21	2N4020*	6 P	Si L17k						BVCBO-45V,C 200mA max,Pt. 60W,VBE(1-2)-5.0mV,hFE(1-2)-90 min.
22	2N4021*	6 P	Si L17k						BVCBO-60V,C 200mA max,Pt. 60W,VBE(1-2)-5.0mV,hFE(1-2)-80 min.
23	2N4022*	6 P	Si L17k						BVCBO-60V,C 200mA max,Pt. 60W,VBE(1-2)-3.0mV,hFE(1-2)-80 min.
24	2N4023*	6 P	Si L17k						BVCBO-60V,C 200mA max,Pt. 60W,VBE(1-2)-3.0mV,hFE(1-2)-90 min.
25	2N4024*	6 P	Si L17k						BVCBO-60V,C 200mA max,Pt. 60W,VBE(1-2)-3.0mV,hFE(1-2)-90 min.
26	2N4025*	6 P	Si L17k						BVCBO-60V,C 200mA max,Pt. 60W,VBE(1-2)-3.0mV,hFE(1-2)-90 min.
27	2N4044	6 N	Si L2m						BVCBO-60V,C 10mA,Pt. 75W,VBE(1-2)-3.0mV,hFE(1-2)-90 min.
28	2N4045	6 N	Si L2m						BVCBO-45V,C 10mA,Pt. 75W,VBE(1-2)-5.0mV,hFE(1-2)-80 min.
29	2N4082	6 N	Si L21						VGS(off)at ID-.50mA-3.0V,Yfs(300umhos min,Yfs(1-2)-95 min,BVDS-50V
30	2N4083	6 N	Si L21						VGS(off)at ID-.50mA-3.0V,Yfs(300umhos min,Yfs(1-2)-95 min,BVDS-50V
31	2N4084	6 N	Si L21						VGS(off)at ID-1mA-3.0V,Yfs(150umhos min,Yfs(1-2)-95 min,BVDS-50V
32	2N4085	6 N	Si L21						VGS(off)at ID-1mA-3.0V,Yfs(150umhos min,Yfs(1-2)-95 min,BVDS-50V
33	2N4100*	6 N	Si L2m						VBE1-VBE2=.50mV,max,(I _{B1} -I _{B2})-10nA,max,Δ(I _{B1} -I _{B2})-.70nA/deg C max.
34	2N4241MP	6 P	Ge T01						Matched pair of 2N4241 for hFE(1-2).
35	2N4878*	6 N	Si L2p						Pt. 5W,hFE(1-2)-90 min,VBE(1-2)-3mV max,ΔVBE(1-2)ΔT-3uV/deg C
36	2N4879*	6 N	Si L2p						Pt. 5W,hFE(1-2)-85 min,VBE(1-2)-5mV max,ΔVBE(1-2)ΔT-5uV/deg C
37	2N4880*	6 N	Si L2p						Pt. 5W,hFE(1-2)-80 min,VBE(1-2)-5mV max,ΔVBE(1-2)ΔT-10uV/deg C
38	2N4937*	6 P	Si L17k						Pt. 6W,VBE(1-2)-3mV max,ΔVBE(1-2)ΔT-1.0mV/deg C,hFE(1-2)-85 min.
39	2N4938*	6 P	Si L17k						Pt. 6W,VBE(1-2)-5mV max,ΔVBE(1-2)ΔT-2mV/deg C,hFE(1-2)-70 min.
40	2N4940*	6 P	Si L17d						Pt. 35W,hFE(1-2)-80 min,VBE(1-2)-5mV max,ΔVBE(1-2)ΔT-2.0mV max.
41	2N4941*	6 P	Si L17d						Pt. 35W,hFE(1-2)-90 min,VBE(1-2)-3mV max,ΔVBE(1-2)ΔT-1.0mV max.
42	2N5045*	6 N	Si L21						Pt. 400mW,VGS(1-2)-5.0mV,Yfs(1-2)-95 min,IGSS(1-2)-10nA max.
43	2N5046*	6 N	Si L21						Pt. 400mW,VGS(1-2)-10mV,Yfs(1-2)-90 min,IGSS(1-2)-10nA max.
44	2N5047*	6 N	Si L21						Pt. 400mW,VGS(1-2)-15mV,Yfs(1-2)-80 min,IGSS(1-2)-10nA max.
45	2N5117*	6 P-PL	Si L17c						Pt. 75W,VBE(1-2)-3mV,ΔVBE(1-2)-3uV/deg C,hFE(1-2)-90 min.
46	2N5118*	6 P-PL	Si L17c						Pt. 75W,VBE(1-2)-5mV,ΔVBE(1-2)-5uV/deg C,hFE(1-2)-85 min.
47	2N5119*	6 P-PL	Si L17c						Pt. 75W,VBE(1-2)-5mV,ΔVBE(1-2)-10uV/deg C,hFE(1-2)-80 min.
48	2N5120*	6 P	Si L17c						Pt. 500mW,VBE(1-2)-3mV,ΔVBE(1-2)-3uV/deg C,hFE(1-2)-90 min.
49	2N5121*	6 P	Si L17c						Pt. 500mW,VBE(1-2)-5mV,ΔVBE(1-2)-5uV/deg C,hFE(1-2)-85 min.
50	2N5122*	6 P	Si L17c						Pt. 500mW,VBE(1-2)-#5mV,ΔVBE(1-2)-10uV/deg C,hFE(1-2)-80 min.
51	2N5123*	6 P	Si L17w						Pt. 750mW,VBE(1-2)-3mV,ΔVBE(1-2)-3uV/deg C,hFE(1-2)-90 min.
52	2N5124*	6 P	Si L17w						Pt. 750mW,VBE(1-2)-5mV,ΔVBE(1-2)-5uV/deg C,hFE(1-2)-85 min.
53	2N5125*	6 P	Si L17w						Pt. 750mW,VBE(1-2)-10uV,ΔVBE(1-2)-10uV/deg C,hFE(1-2)-80 min.
54	2N5196*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-5.0mV max,Yfs(1-2)-97 min.
55	2N5197*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-15mV max,Yfs(1-2)-97 min.
56	2N5198*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-10mV max,Yfs(1-2)-95 min.
57	2N5199*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-15mV max,Yfs(1-2)-97 min.
58	2N5255*	6 P	Si L17t						Pt. 43W,hFE(1-2)-80 min,VBE(1-2)-5.0mV max,ΔVBE(1-2)ΔT-20uV/deg C
59	2N5256*	6 P	Si L17t						Pt. 43W,hFE(1-2)-90 min,VBE(1-2)-3.0mV max,ΔVBE(1-2)ΔT-10uV/deg C
60	2N5452*	6 N	Si L58						Pt. 50W,VGS(1-2)-5mV,ΔVGS(1-2)-5uV/deg C,yfs(1-2)-97 min.
61	2N5453*	6 N	Si L58						Pt. 50W,VGS(1-2)-10mV,ΔVGS(1-2)-10uV/deg C,yfs(1-2)-97 min.
62	2N5454*	6 N	Si L58						Pt. 50W,VGS(1-2)-15mV,ΔVGS(1-2)-25uV/deg C,yfs(1-2)-95 min.
63	2N5505*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-5.0mV max,Yfs(1-2)-TΔ-8mV
64	2N5506*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-15mV,VGS(1-2)-TΔ-8mV
65	2N5507*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-5mV,VGS(1-2)-TΔ-1.9mV
66	2N5508*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-15mV,VGS(1-2)-TΔ-1.9mV
67	2N5509*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-25mV,VGS(1-2)-TΔ-3.8mV
68	2N5510*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-5mV,VGS(1-2)-TΔ-8mV
69	2N5511*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-15mV,VGS(1-2)-TΔ-8mV
70	2N5512*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-5mV,VGS(1-2)-TΔ-1.9mV
71	2N5513*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-15mV,VGS(1-2)-TΔ-1.9mV
72	2N5514*	6 P	Si L21						Pt. 3W,(G1-2)-50pA,Yos(1-2)-1.5umhos,VGS(1-2)-25mV,VGS(1-2)-TΔ-3.8mV
73	2N5515*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-5.0mV max,Yfs(1-2)-97 min,CMRR 100dB min.
74	2N5616*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-5.0mV max,Yfs(1-2)-97 min,CMRR 100dB min.
75	2N5517*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-10mV max,Yfs(1-2)-95 min,CMRR 90dB min.
76	2N5518*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-15mV max,Yfs(1-2)-95 min,yos(1-2)-100nmho,max.
77	2N5519*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-15mV max,Yfs(1-2)-95 min,yos(1-2)-100nmho,max.
78	2N5520*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-5.0mV max,Yfs(1-2)-97 min,CMRR 100dB min.
79	2N5521*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-5.0mV max,Yfs(1-2)-97 min,CMRR 100dB min.
80	2N5522*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-10mV max,Yfs(1-2)-95 min,CMRR 90dB min.
81	2N5523*	6 N	Si L61						Pt. 375mW,IDS(1-2)-95 min,VGS(1-2)-15mV max,Yfs(1-2)-95 min,yos(1-2)-100nmho,max.
82	2N5524*	6 N	Si L61						Pt. 375mW,IDS(1-2)-90 min,VGS(1-2)-15mV max,Yfs(1-2)-90 max,yos(1-2)-100nmho,max.
83	2N5545*	6 N	Si L61a						Pt. 40W,IDS(1-2)-95 min,ΔVGS(1-2)ΔT-8mV,Yos(1-2)-1.0umho.
84	JAN2N5545*	6 N	Si L21						Pt. 400m both,Yfs(1-2)-970 mV max,VGS(1-2)-10mV max,ΔVGS(1-2)ΔT-1.0mV max.
85	2N5546*	6 N	Si L61a						Pt. 40W,IDS(1-2)-90 min,ΔVGS(1-2)ΔT-1.6mV,Yos(1-2)-2.0umho.
86	JAN2N5546*	6 N	Si L21						Pt. 400m both,Yfs(1-2)-950 mV max,VGS(1-2)-10mV max,ΔVGS(1-2)ΔT-2.0mV max.
87	2N5547*	6 N	Si L61a						Pt. 40W,IDS(1-2)-90 min,ΔVGS(1-2)ΔT-3.2mV,Yos(1-2)-3.0umho.
88	2N5561*	6 N	Si L61a						Pt. 400m both,Yfs(1-2)-900 mV max,ΔVGS(1-2)ΔT-4.0mV max.
89	2N5562*	6 N	Si L61a						Pt. 500mW,IDS(1-2)-95 min,VGS(1-2)-2.6mV max,ΔVGS(1-2)ΔT-600uVmax,Yfs(1-2)-97 min.
90	2N5562*	6 N	Si L61a						Pt. 500mW,IDS(1-2)-95 min,VGS(1-2)-10mV max,ΔVGS(1-2)ΔT-800uVmax,Yfs(1-2)-97 min.
91	2N5563*	6 N	Si L61a						Pt. 5v0mW,IDS(1-2)-95 min,VGS(1-2)-15mV max,ΔVGS(1-2)ΔT-2.0mV max,Yfs(1-2)-95 min.
92	2N5564*	6 N	Si L61a						Pt. 650mW,IDS(1-2)-95 min,VGS(1-2)-2.6mV max,ΔVGS(1-2)ΔT-800uVmax,Yfs(1-2)-95 min.
93	2N5565*	6 N	Si L61a						Pt. 650mW,IDS(1-2)-95 min,VGS(1-2)-10mV max,ΔVGS(1-2)ΔT-2.0mV max,Yfs(1-2)-95 min.
94	2N5566*	6 N	Si L61a						Pt. 650mW,IDS(1-2)-95 min,VGS(1-2)-15mV max,ΔVGS(1-2)ΔT-2.0mV max,Yfs(1-2)-95 min.
95	2N5843*	6 P	Si L2g						Pt. 600mW,hFE(1-2)-95 min,VBE(1-2)-2.0mV max,ΔVBE(1-2)ΔT-8.0uV/C max.
96	2N5844*	6 P	Si L2g						Pt. 600mW,hFE(1-2)-95 min,VBE(1-2)-2.0mV max,ΔVBE(1-2)ΔT-8.0uV/C max.
97	2N5902*	6 N	Si L54b						Pt. 500mW,(G1-2)-2.0nA max,IDS(1-2)-95 min,VGS(1-2)-15mV max,ΔVGS(1-2)ΔT-4.0mV max.
98	2N5903*	6 N	Si L54b						Pt. 500mW,(G1-2)-2.0nA max,IDS(1-2)-95 min,VGS(1-2)-5.0mV,Yfs(1-2)-97 min.
99	2N5904*	6 N	Si L54b						Pt. 500mW,(G1-2)-2.0nA max,IDS(1-2)-95 min,VGS(1-2)-10mV,Yfs(1-2)-97 min.
100	2N5905*	6 N	Si L54b	</					

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	2	TYPE No.	1	CATEGORY	MIDWG #	L C	E O	DESCRIPTION
			U	STRUCTURE	T	s/a	A D	
			S E		T O200		D E	
1 #	ZOC36	6 P-A	Ge	T03				Matched Pair of OC36:hFE 1/2-1.2
2 #	ZOC74	6 P-A	Ge	R8				Matched Pair of OC74:hFE1/2-1.15 at I-E-50mA;VCE-6.0V.
3 #	ZOC83	6 P-A	Ge	R8				Matched Pair of OC83
4 #	ZOC84	6 P-A	Ge	R8				Matched pair of OC84:hFE1/2-83 min.
5 #	2X2N3055†	6 N-D	Si	T03				Pt 117W:hFE1/2 1.15 at VCE 4.0V;IC 400mA;ft 1.0MHz.
6	3N151*	6 P-MOS	Si	L53				Pt-325mW;ID1/2-90min;VGS(1-2)-250mV;Vfs1/2-80min;Yfs1/2-10umhos.
7	3N165*	6 P-A	Si	L18c				Pt-325mW;Vfs1/2-90min;VGS(1-2)-100mV;max;tr 30nS;td 15nS;off 50nS.
8	3N188*	6 PMOSΔ	Si	L58b				Pt-525mW;Vfs1/2-85 min;VGS(1-2)-100mV;tr 30nS;td 30nS;off 50nS;td 15nS.
9	3N190*	6 PMOSΔ	Si	L58b				Pt-525mW;Vfs1/2-85 min;VGS(1-2)-100mV;tr 30nS;td 15nS;off 50nS.
10	12A104	6 N-PL	Si	L2				Pt-260mW;ea;ICBO-2.0nA max;hFE-25min;VBE1/2-5.0mV max;ft 80mC min.
11	12A105	6 N	Si	T018				PT 100mW Both Sides;BVCEO 60V;hFE match .90/1.0;VBE match 3.0mV.
12	12A107	6 N	Si	T018				PT 300mW Both Sides BVCEO 100V min;hFE match .90/1.0;VBE match 3.0mV.
13	12A108	6 N-PL	Si	T018				PT-75W both sides;VCBO-50V min;hFE match 40%;VBE match 15mV.
14	A800	6 N-PL	Si	L2b				VBE(1-2)-10mV;BVCEO-50V;C-50mA;ft-50mC;ICBO-10nA max;hFE1/2-90
15	A601	6 N-PL	Si	L2b				VBE(1-2)-10mV;IC-50mAmax;BVCEO-50V;ICBO-10nA max;hFE1/2-95 min.
16	A602	6 N-PL	Si	L2b				BVEO-35V;IC-30mA;ft-30mC;hFE1/2-80;VBE1/2-20mV max;hFE-50 min.
17	A603	6 N-PL	Si	L2b				BVEO-35V;IC-30mA;ft-30mC;hFE1/2-80;VBE1/2-5.0mV max;hFE-100 min.
18	A604	6 N-PL	Si	L2b				BVEO-35V;IC-30mA;ft-30mC;hFE1/2-80;VBE1/2-10mV max;hFE-100 min.
19	A805	6 N-PL	Si	L2b				BVEO-35V;IC-30mA;ft-30mC;hFE1/2-90;VBE1/2-5.0mV max;hFE-100 min.
20	A606	6 N-PL	Si	L2b				BVEO-35V;IC-30mA;ft-30mC;hFE1/2-90;VBE1/2-10mV max;hFE-100 min.
21†	A6401*	6 N-PLØ	Si	X56a	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 3.0mV max.
22†	A6405*	6 N-PLØ	Si	X56	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 3.0mV max.
23†	A6411*	6 N-PLØ	Si	X56a	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 3.0mV max.
24†	A6413*	6 N-PLØ	Si	X56	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 3.0mV max.
25†	A6420*	6 N-PLØ	Si	X56a	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 3.0mV max.
26†	A6425*	6 N-PLØ	Si	X56	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 3.0mV max.
27†	A6431*	6 N-PL	Si	X56a	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 15mV max.
28†	A6435*	6 N-PL	Si	X56	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 15mV max.
29†	A6441*	6 N-PL	Si	X56a	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 15mV max.
30†	A6445*	6 N-PL	Si	X56	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 15mV max.
31†	A6451*	6 N-PL	Si	X56a	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 15mV max.
32†	A6455*	6 N-PL	Si	X56	A			Pt 300mW both sides;hFE1/2 1.0 max;VBE(1-2) 15mV max.
33	A6491*	6 N-PLØ	Si	X56a	A			Pt .30W;hFE1(2)-90min;(VBE 1-VBE2)-1.0mV max;BVCEO-30V.
34	A6495*	6 N-PLØ	Si	X56	A			Pt .30W;hFE1(2)-90min;(VBE 1-VBE2)-1.0mV max;BVCEO-30V.
35	A1480	6 N-PE	Si	T018				Pt .300mW max;VCEO-5.0V;VEBO-5.0V;Voffset-250uV max;ΔVoff-50uV.
36#	ADY27*	6 P-A	Ge	MD17f				hFE1/hFE2 1.25 max;Pt 27.5W;ICEV 150uA;ft 450kHz.
37#	BC140-6*	6 N-PEΔ	Si	T039	A			Pt .3.7W at 45°C case;Vsat 1.4V max;hFE 1/2-1.25 max.
38#	BC140-10*	6 N-PEΔ	Si	T039	A			Pt .3.7W at 45°C case;Vsat 1.4V max;hFE 1/2-1.25 max.
39#	BC140-16*	6 N-PEΔ	Si	T039	A			Pt .3.7W at 45°C case;Vsat 1.4V max;hFE 1/2-1.25 max.
40#	BC141-6*	6 N-PEΔ	Si	T039	A			Pt .3.7W at 45°C case;Vsat 1.4V max;hFE 1/2-1.25 max.
41#	BC141-10*	6 N-PEΔ	Si	T039	A			Pt .3.7W at 45°C case;Vsat 1.4V max;hFE 1/2-1.25 max.
42#	BC141-16*	6 N-PEΔ	Si	T039	A			Pt .3.7W at 45°C case;Vsat 1.4V max;hFE 1/2-1.25 max.
43#	BC328/BC338	6 P-PL	Si	X54b	A			hFE1/hFE2 1.41 max;Pt 360mW;BVCES 30V;ft 100MHz.
44#	BC337/BC327	6 N-PE	Si	X54b	A			hFE1/hFE2 1.41 max;Pt 360mW;BVCES 50V;ft 100MHz.
45#	BCW25*	6 N-PL	Si	L2				Pt 600mW;hFE1/2-1.0max;VBE1(2)-20mV max;VBE(1-2)ΔTA-30uV/C max.
46#	BCY55	6 N-PF	Si	X14				Pc-300mW;VCB-45V;IC-30mA;ΔVBE-1uV;deg.C;ΔIB-50nA/deg.C
47#	BCY87	6 N-PLØ	Si	L17u				VBE(1-2)-3.0mV max;IB(1-2)-25nA max;ΔV/ΔT-1.0uV/deg.C
48#	BCY88	6 N-PLØ	Si	L17u				VBE(1-2)-6.0mV max;IB(1-2)-80nA max;ΔV/ΔT-2.0uV/deg.C
49#	BCY88	6 N-PLØ	Si	L17u				VBE(1-2)-10mV max;IB(1-2)-300nA max;ΔV/ΔT-4.0uV/deg.C
50#	BD135-8D136MP	6 N-PL	Si	X100	B			hFE1/2 1.3 typ. 1.6 max at IC 150mA, VCE 2.0V.
51†	BD137-BD138MP	6 N-PL	Si	X100	B			hFE1/2 1.3 typ. 1.6 max at IC 150mA, VCE 2.0V.
52†	BD139-BD140MP	6 N-PL	Si	X100	B			hFE1/2 1.3 typ. 1.6 max at IC 150mA, VCE 2.0V.
53#	BFW39	6 N	Si	L2				Pt .40W;ea;IC-30mA;hFE1/2-90 min;VBE(1-2)-5mV;hFE-60 min.
54#	BFW39A	6 N	Si	L2				hFE1/2-85 min;VBE(1-2)-2.0mV max;Pt .50W.
55#	BFW40	6 N	Si	L2				Pt .40W;ea;IC-30mA;hFE1/2-99 min;VBE(1-2)-5mV;hFE-150 min.
56#	BFW40A	6 N	Si	L2				Pt .50W;device;hFE1/2-1.1 max;VBE-10uV/deg. max.
57#	BFW51	6 N	Si	L2				ft-60mHz min;LVCEO-60V;hFE-60 to 240;VBE(1-2)3mV;hFE1/2-90 min.
58#	BFW51A	6 N	Si	L2				ft-60mHz min;LVCEO-60V;hFE-60 to 240;VBE(1-2)1.5mV;hFE1/2-90 min.
59#	BFW52	6 N	Si	L2				ft-60mHz min;LVCEO-60V;hFE-150 to 600;VBE(1-2)3mV;hFE1/2-90 min.
60#	BFW52A	6 N	Si	L2				ft-60mHz min;LVCEO-60V;hFE-150 to 600;VBE(1-2)1.5mW;hFE1/2-90 min.
61#	BFX11*	6 P-DPE	Si	L2d				Pt .40W each;ICBO-10nA max;hFE1/2-80 min;ΔVBE-5.0mV max.
62#	BFX15*	6 N-PL	Si	L2d				Pt .50W each;VBFE1/2-3.0mV max;hFE1/2-90 min;ICBO-10nA max.
63#	BFX16*	6 N-DPL	Si	L50				Pt .50W total;BVCEO-45V;hFE1/2-80 min;VBE1/VBE2-5.0mV max.
64#	BFX36*	6 P-DPE	Si	L2b				Pt .40W each;hFE1/2-80 min;VBFE1/2-3.0mV max;ICBO-10nA max.
65#	BFX70*	6 N-DPLØ	Si	L2b				Pt .6W;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)/ΔT-10uV/deg.C.
66#	BFX71*	6 N-DPL	Si	L2b				Pt .6W;hFE1/2-80 min;VBE(1-2)-15mV max;ΔVBE(1-2)/ΔT-25uV/deg.C.
67#	BFX72*	6 N-DPL	Si	L2b				Pt .5W;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)/ΔT-25uV/deg.C.
68#	BFX99*	6 N-DPLØ	Si	L2b				Pt .6W;hFE1/2-80 min;VBE(1-2)-1.5mV max;ΔVBE(1-2)-50mV max.
69#	BFY81	6 N-DPL	Si	L2b				Pt .6W;BVCEO-45V;ft-60mC min;hFE1/2-80 min;VBE(1-2)-10mV max.
70#	BFY82	6 NDPL	Si	L2b				Pt .30W;BVCEO-60V;ft-250mC min;hFE1/2-80 min;VBE(1-2)-15mV max.
71#	BFY83	6 NDPL	Si	L2b				Pt .6W;BVCEO-100V;ft-50mC min;hFE1/2-80 min;VBE(1-2)-15mV max.
72#	BFY84	6 N-PE	Si	L2b				Pt .38W;BVCEO-30V;ft-800mC min;hFE1/2-80 min;VBE(1-2)-15mV max.
73#	BFY85*	6 N-PE	Si	L2t				Pt .260mW;hFE Diff. 20% max;VBE Diff. 10mV max.
74#	BFY86*	6 N-PE	Si	L2t				Pt .260mW;hFE Diff. 10% max;VBE Diff. 5mV max.
75#	BFY91	6 N-PL	Si	L2t				ft-60mC;BVCEO-45V;hFE-60 to 240/10uA;5mV;VBE match;10%hFE match.
76#	BFY92	6 N-PL	Si	L2t				ft-60mC;BVCEO-45V;hFE-60 to 240/10uA;10mV;VBE match;20%hFE match.
77#	BN209	6 N	Si	L2b				Pt (both sides);250mW;hFE1/hFE2-80 min;VBE1-VBE2-10mV. max.
78#	D12A8	6 N-PL	Si	L17f				Pt (both sides);500mW;hFE1/2-60 min;VBE(1-2)-15mV max.
79#	D12E026	6 N-PL	Si	L2b				hFE1/2-60 min. 1.0 max;VBE(1-2)-15mV max;Pc 600mW both.
80#	D12E109	6 N-PL	Si	L2p				Pt (both sides);300mW;VCBO-60V;IC-50mA;hFE1/2-90 min.
81#	D12E126	6 N-PL	Si	L2p				hFE1/2-80 min. 1.0 max;VBE(1-2)-15mV max;Pc 500mW both.
82#	FM1100*	6 NØ	Si	L74				Pd 500mW;IDSS 1/2 1.0 max;VGS(1-2)10mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
83	FM1101*	6 NØ	Si	L74				Pd 500mW;IDSS 1/2 1.0 max;VGS(1-2)15mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
84	FM1102*	6 NØ	Si	L74				Pd 500mW;IDSS 1/2 1.0 max;VGS(1-2)20mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
85	FM1103*	6 NØ	Si	L74				Pd 500mW;IDSS 1/2 1.0 max;VGS(1-2)25mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
86	FM1104*	6 NØ	Si	L74				Pd 500mW;IDSS 1/2 1.0 max;VGS(1-2)30mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
87	FM1105*	6 NØ	Si	L74				Pd 500mW;IDSS 1/2 1.0 max;VGS(1-2)35mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
88#	FM1106*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)25.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
89	FM1107*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)30.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
90	FM1108*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)35.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
91	FM1109*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)40.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
92	FM1110*	6 N	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)45.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
93	FM1111*	6 N	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)50.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
94	FM1200*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)20.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
95	FM1201*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)25.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
96	FM1202*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)30.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
97	FM1203*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)35.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
98	FM1204*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)40.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
99	FM1205*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)45.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
100	FM1206*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)50.0mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
101	FM1207*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)10mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
102	FM1208*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)15mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
103	FM1209*	6 NØ	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)25mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
104	FM1210*	6 N	Si	L74				Pd 500mW;DSS 1/2 1.0 max;VGS(1-2)20mV max;G(1-2)10nA max;Yfs 1/2 1.0 max.
105	FM1211*	6 N	Si	L74				Pd 500mW;DSS

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	1. CATEGORY	M/DWG #	L C	DESCRIPTION
		U STRUC. S TURE	A Y200 T s/a T0200 Ser.	E O A D D E	
1	FM3957*	6 N	Si L74	Pd	500mW;IDSS 1/2 1.0max;VGS(1-2)20mVmax;IG(1-2)10nAmax;Yfs 1/2 1.0max.
2	FM3958*	6 N	Si L74	Pd	500mW; IDSS 1/2 1.0max; VGS(1-2) 25mVmax; IG(1-2)nAmax; Yfs 1/2 1.0max.
3	FT2974	6 N-DPL	Si L21	Pt	3W ea;IC-30mA;hFE1/2-1 max;hFE1/2-2 max;hFE-60 min;VCBO-45V.
4	FT2978	6 N-DPL	Si L21	Pt	3W ea;IC-30mA;hFE1/2-1 max;hFE1/2-2 max;hFE-60 min;VCBO-60V.
5	FT4020	6 P-DPE	Si L17e	Pt	VCBO-45V; 20% hFE match; Cob-6.0pf; VBE(1-2)-5.0mV; ICBO-10nA max.
6	FT4021	6 P-DPE	Si L17e	Pt	VCBO-60V; 20% hFE match; Cob-6.0pf; VBE(1-2)-5.0mV; ICBO-10nA max.
7	FT4022	6 P-DPE	Si L17e	Pt	VCBO-60V; 20% hFE match; Cob-6.0pf; VBE(1-2)-3.0mV; ICBO-10nA max.
8	FT4023	6 P-DPE	Si L17e	Pt	VCBO-60V; 10% hFE match; Cob-6.0pf; VBE(1-2)-3.0mV; ICBO-10nA max.
9	FT4024	6 P-DPE	Si L17e	Pt	VCBO-60V; 10% hFE match; Cob-6.0pf; VBE(1-2)-3.0mV; ICBO-10nA max.
10	FT4025	6 P-DPE	Si L17e	Pt	VCBO-60V; 10% hFE match; Cob-6.0pf; VBE(1-2)-3.0mV; ICBO-10nA max.
11	HSC3921*	6 N-E#	Si L21e	Pt	VGS(1-2) 5.0mV max;IDSS1/2 1.0ys1/2 1.0.
12	HSC3954*	6 N-E#	Si L21e	Pt	VGS(1-2) 5.0mV max;IDSS1/2 1.0ys1/2 1.0.
13	LDA400MP	6 N	Si u34	P	Matched Pair LDA400 Pt-360mW;hFE 1/2-90 min;VBE 1/2-10mV max;ΔVBE 1-2/ΔTA-10uV/Cmax
14	LDA401MP*	6 N	Si u24	P	Matched Pair LDA 401 Pt-360mW;hFE 1/2-90 min;VBE1/2-10mVmax;ΔVBE1-2/ΔTA-10uV/C max.
15	MD707A*	6 N-AN	Si L66a	Pt	400mW(both sides);hFE1/2-90 min;VBE1/2-5.0mV max;ton-16ns max.
16	MD7078AF*	6 N-AN	Si T089	Pt	350mW(both sides);hFE1/2-8 min;VBE1/2-10mV max;ton-16ns max.
17	MD708B*	6 N-AN	Si L66a	Pt	400mW(both sides);hFE1/2-90 min;VBE1/2-5.0mV max;ton-16ns max.
18	MD708BF*	6 N-AN	Si T089	Pt	350mW(both sides);hFE1/2-8 min;VBE1/2-10mV max;ton-16ns max.
19	MD911BA*	6 N-EA	Si L66a	Pt	400mW(both sides);hFE1/2-90 min;VBE1/2-5.0mV max;VCEO-15V.
20	MD911BAF*	6 N-EA	Si T089	Pt	Pd(both sides)-350mW;VCBO-15V;hFE1/2-90 min;VBE1/2-10mV max.
21	MD911BB*	6 N-EA	Si L66a	Pt	Pt(both sides)-350mW;VCBO-15V;hFE1/2-80 min;VBE1/2-10mV max;VCEO-15V.
22	MD911BBF*	6 N-EA	Si T089	Pt	Pd(both sides)-350mW;VCBO-15V;hFE1/2-80 min;VBE1/2-10mV max.
23	MD981	6 N-E	Si L2d	Pt	Pt(both sides)-600mW;VCBO-60V;IC-500mA;hFE-35 min.
24	MD981E	6 N-E	Si L2f	Pt	Pt(both sides)-350mW;VCBO-60V;IC-500mA;hFE-35 min.
25	MD982	6 P-E	Si L17c	Pt	Pt(both sides)-600mW;VCBO-60V;IC-500mA;hFE-35 min.
26	MD982F	6 P-E	Si L17d	Pt	Pt(both sides)-350mW;VCBO-60V;IC-500mA;hFE-35 min.
27	MD984	6 P-E	Si L17v	Pt	Pt(both sides)-600mW;VCBO-40V;IC-200mA;hFE-25 min.
28	MD984F	6 P-E	Si T089	Pt	Pt(both sides)-350mW;VCBO-40V;IC-200mA;hFE-25 min.
29	MD990	6 P-E	Si L17c	Pt	Pt(both sides)-600mW;VCBO-50V;IC-600mA;hFE-50 min.
30	MD1120	6 N	Si L2w	Pt	hFE-30/120 at IC-100uA;VBE(1-2) max-10mV at IC-100uA.
31	MD1120F	6 N	Si X22	Pt	hFE-30/120 at IC-100uA;VBE(1-2) max-10mV at IC-100uA.
32	MD1121	6 N	Si L2w	Pt	hFE-30/120 at IC-100uA;VBE(1-2) max-10mV at IC-100uA.
33	MD1121F	6 N	Si X22	Pt	hFE-30/120 at IC-100uA;VBE(1-2) max-10mV at IC-100uA.
34	MD1122	6 N	Si L2w	Pt	hFE-30/120 at IC-100uA;VBE(1-2) max-10mV at IC-100uA.
35	MD1122F	6 N	Si X22	Pt	hFE-30/120 at IC-100uA;VBE(1-2) max-5.0mV at IC-100uA.
36	MD1126	6 N-E	Si L2d	Pt	Pt(both sides)-400mW;VCBO-40V;IC-200mA;hFE-30 min.
37	MD1127	6 N-E	Si L2d	Pt	Pt(both sides)-400mW;VCBO-40V;IC-200mA;hFE-30 min.
38	MD11281	6 N-PE	Si L2d	Pt	Pt(both sides)-400mW;VCBO-40V;hFE-25 min at IC-10mA and VCE-1V.
39	MD1129	6 N	Si L2w	Pt	hFE-100/300 at IC-100uA;VBE1/2-5.0mV max at IC-100uA.
40	MD1128F	6 N	Si X22	Pt	hFE-100/300 at IC-100uA;VBE1/2-5.0mV max at IC-100uA.
41	MD1130	6 P	Si L2w	Pt	hFE-100/300 at IC-100uA;VBE1/2-5.0mV max at IC-100uA.
42	MD1130F	6 P	Si X22	Pt	hFE-100/300 at IC-100uA;VBE1/2-5.0mV max at IC-100uA.
43	MD1131	6 N-E	Si L2d	Pt	VCBO-30V;VCEO-15V;IC-50mA max;ft-600Mc min;hFE-50 min at IC-1mA.
44	MD1131F	6 N-E	Si L2f	Pt	VCBO-30V;VCEO-15V;IC-50mA max;ft-600Mc min;hFE-50 min at IC-1mA.
45	MD1132	6 N-E	Si L2w	Pt	hFE-50 min. at IC-1.0mA;VBE1/2-5.0mV max. at IC-1.0mA.
46	MD1132F	6 N-E	Si X22	Pt	hFE-50 min. at IC-1.0mA;VBE1/2-5.0mV max. at IC-1.0mA.
47	MD1134	6 N-E	Si R131b	Pt	400mW(both sides);VCBO-40V;hFE-50 min at 1C 10mA and VCE 1.0V.
48	MD2369A*	6 N-AN	Si L66a	Pt	Pt(both sides)-600mW;VCBO-50V;IC-50mA;hFE1/2-90 min.
49	MD2369AF*	6 N-AN	Si T089	Pt	Pt(both sides);hFE1/2-90 min;VBE1/2-5.0mV max;ton-15ns max.
50	MD2369B*	6 N-AN	Si L66a	Pt	Pt(both sides);hFE1/2-80 min;VBE1/2-10mV max;ton-15ns max.
51	MD2369BF*	6 N-AN	Si T089	Pt	Pt(both sides);hFE1/2-80 min;VBE1/2-10mV max;ton-15ns max.
52#	MD2974*	6 N-PLO	Si R148a	Pt	250mW(both sides);hFE1/2-90 min;VBE(1-2) 5.0mV max;ΔVBE(1-2) 800uV max.
53#	MD2975*	6 N-PLO	Si R148a	Pt	250mW(both sides);hFE1/2-90 min;VBE(1-2) 5.0mV max;ΔVBE(1-2) 800uV max.
54#	MD2978*	6 N-PLO	Si R148a	Pt	250mW(both sides);hFE1/2-90 min;VBE(1-2) 5.0mV max;ΔVBE(1-2) 800uV max.
55#	MD2979*	6 N-PLO	Si R148a	Pt	250mW(both sides);hFE1/2-90 min;VBE(1-2) 5.0mV max;ΔVBE(1-2) 800uV max.
56	MD3250	6 P-AN	Si L17c	Pt	Pt(both sides)-600mW;VCBO-50V;IC-50mA;hFE1/2-90 min.
57	MD3250A	6 P-AN	Si L17c	Pt	Pt(both sides)-600mW;VCBO-50V;IC-50mA;hFE1/2-90 min;VBE(1-2) 5mV max.
58	MD3250AF	6 P-AN	Si L17d	Pt	Pt(both sides)-350mW;VCBO-50V;IC-50mA;hFE1/2-90 min;VBE(1-2) 5mV max.
59	MD3250F	6 P-AN	Si L17d	Pt	Pt(both sides)-350mW;VCBO-50V;IC-50mA;hFE1/2-90 min.
60	MD3251	6 P-AN	Si L17c	Pt	Pt(both sides)-600mW;VCBO-50V;IC-50mA;hFE1/2-90 min.
61	MD3251A	6 P-AN	Si L17c	Pt	Pt(both sides)-600mW;VCBO-50V;IC-50mA;hFE1/2-90 min;VBE(1-2) 5mV max.
62	MD3251AF	6 P-AN	Si L17d	Pt	Pt(both sides)-350mW;VCBO-50V;IC-50mA;hFE1/2-90 min;VBE(1-2) 5mV max.
63	MD3251F	6 P-AN	Si L17d	Pt	Pt(both sides)-350mW;VCBO-50V;IC-50mA;hFE1/2-90 min.
64	MD5000*	6 P-EA	Si L66b	Pt	Pt(both sides)-400mW;VCEO-15V;hFE1/2-70 min;VBE(1-2) 5.0mV max.
65	MD5000A*	6 P-EA	Si L66b	Pt	Pt(both sides)-400mW;VCEO-15V;hFE1/2-90 min;VBE(1-2) 5.0mV max.
66	MD5000B*	6 P-EA	Si L66b	Pt	Pt(both sides)-400mW;VCEO-15V;hFE1/2-80 min;VBE(1-2) 10mV max.
67	MD8001*	6 N-EA	Si L2v	Pt	500mW;VBE1/2-15mV;IB1/2-1.0uA max;VCEO-40V max.
68	MD8002*	6 N-EA	Si L2v	Pt	600mW;VBE1/2-15mV;IB1/2-1.0uA max;VCEO-50V max.
69	MD8003*	6 N-EA	Si L2v	Pt	600mW;VBE1/2-15mV;IB1/2-1.0uA max;VCEO-60V max.
70	ME501	6 N-PE	Si L2	Pt	BVCEO-10V;BVCEO-3.0V;ICBO-10nA max;VCB-15V;hFE-100 min;IC-100uA.
71	ME502	6 N-PE	Si L3	Pt	Pair of 2N1893, Darlington Amplifier, hFE-750 min. at IC-10mA
72	ME504	6 N-PE	Si L2	Pt	BVCEO-30V;BVCEO-3.0V;ICBO-10nA max;VCB-15V;hFE-100 min;IC-100uA.
73	MEM551*	6 P	Si L54	Pt	1.12mW;Yfs1/2-80 min;Gfs(1-2)-200mV max;VGST 6.0V max.
74	MEM551C*	6 P	Si L54	Pt	85mW;Yfs1/2-80 min;Gfs(1-2)-200mV max;VGST 6.0V max.
75	MMF1	6 N	Si X74	DH	Yfs1/2-2.98 min;VGS(1-2)-5mV max;ΔVGS(1-2)/ΔT-10uV/deg.C.
76	MMF2	6 N	Si X74	DH	Yfs1/2-2.95 min;VGS(1-2)-5mV max;ΔVGS(1-2)/ΔT-25uV/deg.C.
77	MMF3	6 N	Si X74	DH	Yfs1/2-2.98 min;VGS(1-2)-5mV max;ΔVGS(1-2)/ΔT-25uV/deg.C.
78	MMF4	6 N	Si X74	DH	Yfs1/2-2.95 min;VGS(1-2)-5mV max;ΔVGS(1-2)/ΔT-25uV/deg.C.
79	MMF5	6 N	Si X74	DH	Yfs1/2-2.98 min;VGS(1-2)-5mV max;ΔVGS(1-2)/ΔT-50uV/deg.C.
80	MMF6	6 N	Si X74	DH	Yfs1/2-2.95 min;VGS(1-2)-5mV max;ΔVGS(1-2)/ΔT-50uV/deg.C.
81	MO3799A*	6 P-EA	Si L66c	DH	50W;hFE1/2-90 min;VBE1/2-3mV max;VBE(1-2)/ΔT-10uV/deg.C. max.
82#	MT102B*	6 N-DPL	Si L54a	Pt	Threshold Voltage-200mV;max;ΔDS-601 max;Δgm-35uA/V typ.
83#	MTD2974	6 N-DPL	Si u82	Pt	140mW(both sides);hFE1/2 900m min;VBE(1-2) 3.0mV max;ΔVBE(1-2)/ΔT 10uV/C.
84#	MTD2975	6 N-DPL	Si u82	Pt	140mW(both sides);hFE1/2 900m min;VBE(1-2) 3.0mV max;ΔVBE(1-2)/ΔT 10uV/C.
85#	MTD2978	6 N-DPL	Si u82	Pt	140mW(both sides);hFE1/2 900m min;VBE(1-2) 3.0mV max;ΔVBE(1-2)/ΔT 10uV/C.
86#	MTD2979	6 N-DPL	Si u82	Pt	140mW(both sides);hFE1/2 900m min;VBE(1-2) 3.0mV max;ΔVBE(1-2)/ΔT 10uV/C.
87	NFS50*	6 N	Si L74	DH	DSS1/2- .97 typ;VGS1/2 5.0mV typ;VGS 800uV typ at VDS 15V, ID 2.0mA.
88	NS7200	6 P-PL	Si L8a	Pt	600mW;BVFE1/2-3.0mV max;hFE1/2-10 max;hFE-60Mc.
89	NS7201	6 P-PL	Si L8a	Pt	600mW;BVFE1/2-5.0mV max;hFE1/2-1.0 max;hFE-60Mc.
90	NS7300	6 N-PL	Si L2b	Pt	BVCEO-40V;Pt-600mW;hFE-100 min;VBE(1-2)-10mV;hFE1/2-90-1.0
91	NS7301	6 N-PL	Si L2b	Pt	BVCEO-40V;Pt-600mW;hFE-100 min;VBE(1-2)-10mV;hFE1/2-80-1.0
92	NS7302	6 N-PL	Si L2b	Pt	BVCEO-40V;Pt-600mW;hFE-100 min;VBE(1-2)-10mV;hFE1/2-50-1.0
93	NS7303	6 N-PL	Si L2b	Pt	BVCEO-40V;Pt-400mW;hFE-100 min;VBE(1-2)-10mV;hFE1/2-90-1.0
94	NS7304	6 N-PL	Si L2b	Pt	BVCEO-40V;Pt-400mW;hFE-100 min;VBE(1-2)-10mV;hFE1/2-80-1.0
95	NS7305	6 N-PL	Si L2b	Pt	BVCEO-40V;Pt-400mW;hFE-100 min;VBE(1-2)-10mV;hFE1/2-50-1.0
96	OD100-71*	6 P-E	Si L2p	Pt	500mW(both sides);hFE1/2 15% max;VBE(1-2) 5.0mV max;IB(1-2) 25nA max.
97	OD100-78*	6 P-E	Si L2d	Pt	750mW(both sides);hFE1/2 15% max;VBE(1-2) 5.0mV max;IB(1-2) 25nA max.
98	OD101-71*	6 P-E	Si L2p	Pt	500mW(both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;IB(1-2) 5.0nA max.
99	OD101-78*	6 P-E	Si L2d	Pt	750mW(both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;IB(1-2) 5.0nA max.
100	OD102-71*	6 P-E	Si L2p	Pt	500mW(both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;IB(1-2) 5.0nA max.
101	OD102-78*	6 P-E	Si L2d	Pt	750mW(both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;IB(1-2) 5.0nA max.
102	OD103-71*	6 P-E	Si L2p	Pt	500mW(both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;IB(1-2) 5.0nA max.
103	OD103-78*	6 P-E	Si L2d	Pt	750mW(both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;IB(1-2) 5.0nA max.
104	OD104-71*	6 P-E	Si L2p	Pt	500mW(both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;IB(1-2) 5.0nA max.
105	OD104-78*	6 P-E	Si L2d	Pt	750mW(both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;IB(1-2) 5.0nA max.
106	OD400-71*	8 P-E	Si L2p	Pt	500mW(both sides);hFE1/2 15% max;VBE(1-2) 5.0mV max;IB(1-2) 5.0nA max.
107	OD400-78*	8 P-E	Si L2d	Pt	750mW(both sides);hFE1/2 15% max;VBE(1-2) 5.0mV max;IB(1-2) 5.0nA max.
108	OD401-71*	6 P-E	Si L2p	Pt	500mW(both sides);hFE1/2 10% max;VBE(1-2) 3.0mV max;IB(1-2) 2.0nA max.
109	OD401-78*	6 P-E	Si L2d	Pt	750mW(both sides);hFE1/2 10% max;VBE(1-2) 3.0mV max;IB(1-2) 2.0nA max.
110	OD402-71*	6 P-E	Si L2p	Pt	500mW(both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;IB(1-2) 2.0nA max.

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	1. CATEGORY U. STRUC- TURE	MIDWG # A/Y200 S/a E	L C T o D E	DESCRIPTION
1	QD402-78*	6 P-E	Si L2d	Pt 750mW/both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;I(B(1-2) 2.0nA max.	
2	QD403-71*	6 P-E	Si L2p	Pt 500mW/both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;I(B(1-2) 2.0nA max.	
3	QD403-78*	6 P-E	Si L2d	Pt 750mW/both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;I(B(1-2) 2.0nA max.	
4	QD404-71*	6 P-E	Si L2p	Pt 500mW/both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;I(B(1-2) 2.0nA max.	
5	QD404-78*	6 P-E	Si L2d	Pt 750mW/both sides);hFE1/2 10% max;VBE(1-2) 1.5mV max;I(B(1-2) 2.0nA max.	
6	SA2253*	5 N	Si L8a	BVCBO-40V min;hFE1/1/hFE2-7/1/VBE1-VBE2-20mV at IC:100uA	
7	SA2738*	6 N	Si L2t	Pt 6W;hFE1/2-90 min;VBE(1-2)-1.5mV max;ΔVBE(1-2)/ΔT-3uV/deg.C	
8	SA2739*	6 N	Si L2t	Pt 6W;hFE1/2-90 min;VBE(1-2)-1.5mV max;ΔVBE(1-2)/ΔT-5uV/deg.C	
9	SD5010*	6 P-MOSZ	Si L53	Pt 325mW/each side) at 25°C Case temp;ys 1/2 800m min;VGS(1-2) 70mV.	
10	SD5011*	6 P-MOSZ	Si L54	Pt 325mW/each side) at 25°C Case temp;ys 1/2 800m min;VGS(1-2) 70mV.	
11	SD5012*	6 P-MOSZ	Si L53	Pt 325mW/each side) at 25°C Case temp;ys 1/2 800m min;VGS(1-2) 70mV.	
12	SD5013*	6 P-MOSZ	Si L54	Pt 325mW/each side) at 25°C Case temp;ys 1/2 800m min;VGS(1-2) 70mV.	
13	SD5014*	6 P-MOSZ	Si L53	Pt 325mW/each side) at 25°C case temp;ys 1/2 80min;VGS 1/2-200mV max.	
14	SD5015*	6 P-MOSZ	Si L54	Pt 325mW/each side) at 25°C case temp;ys 1/2 80min;VGS 1/2-200mV max.	
15	SD5050*	6 N-MOSZ	Si L53	Pt 325mW/each side) at 25°C casetemp;ys 1/2 80min;VGS 1/2-200mV max.	
16	SD5051*	6 N-MOSZ	Si L54	Pt 325mW/each side) at 25°C case temp;ys 1/2 80min;VGS 1/2-200mV max.	
17#	SFT918	6 N-PL	Si L2b	Pt 300mW each;ft:600 MHz min;hFE 1/2-90 min;VBE (1-2)-5.0mV max.	
18#	SFT918A	6 N-PL	Si L2b	Pt 300mW each;ft:600 MHz min;hFE 1/2-90 min;VBE (1-2)-10mV max.	
19#	SFT978B	6 N-PL	Si L2b	Pt 300mW each;ft:600 MHz min;hFE 1/2-80 min;VBE (1-2)-900mV;VCE-600mV;ΔVBE(1-2)-3.0mV.	
20#	SL301A*	6 N	Si L44a	BVCBO-35V;BVCEO-16V;IC:50mA;hFE(1-2)-900mV;VCE-600mV;ΔVBE(1-2)-3.0mV.	
21#	SL301AE*	6 N	Si L44b	BVCBO-35V;BVCEO-16V;IC:50mA;hFE(1-2)-900mV;VCE-600mV;ΔVBE(1-2)-3.0mV.	
22#	SL301B*	6 N	Si L44a	BVCBO-30V;BVCEO-12V;IC:50mA;hFE(1-2)-500mV;VCE-1.0V;ΔVBE(1-2)-12mV.	
23#	SL301BE*	6 N	Si L44b	BVCBO-30V;BVCEO-12V;IC:50mA;hFE(1-2)-500mV;VCE-1.0V;ΔVBE(1-2)-12mV.	
24#	SL301C*	6 N	Si L44a	BVCBO-25V;BVCEO-10V;IC:50mA;VCE-600mV	
25#	SL301CE*	6 N	Si L44b	BVCBO-25V;BVCEO-10V;IC:50mA;hFE(1-2)-800m;VCE-600mV;ΔVBE(1-2)-5.0mV.	
26#	SL301E*	6 N	Si L44a	BVCBO-30V;BVCEO-12V;IC:50mA;hFE(1-2)-800m;VCE-800mV;ΔVBE(1-2)-5.0mV.	
27#	SL301EE*	6 N	Si L44b	BVCBO-30V;BVCEO-12V;IC:50mA;hFE(1-2)-900m;VCE-800mV;ΔVBE(1-2)-5.0mV.	
28#	SL303AE*	6 N	Si	BVCBO-35V;BVCEO-16V;IC:50mA;hFE(1-2)-900m;VCE-600mV;ΔVBE(1-2)-3.0mV	
29#	SL303AT*	6 N	Si	BVCBO-35V;BVCEO-16V;IC:50mA;hFE(1-2)-900m;VCE-600mV;ΔVBE(1-2)-3.0mV	
30#	SL303BE*	6 N	Si	BVCBO-30V;BVCEO-12V;IC:50mA;hFE(1-2)-500mV;VCE-1.0V;ΔVBE(1-2)-12mV.	
31#	SL303BT*	6 N	Si L43a	BVCBO-30V;BVCEO-12V;C:50mA;hFE(1-2)-500mV;VCE-1.0V;ΔVBE(1-2)-12mV	
32#	SL354BE*	6 N	Si L67	BVCBO-30V;BVCEO-12V;C:50mA;hFE(1-2)-500mV;VCE-1.0V;ΔVBE(1-2)-12mV	
33#	SL354BF*	6 N	Si L67	BVCBO-30V;BVCEO-12V;C:50mA;hFE(1-2)-500mV;VCE-1.0V;ΔVBE(1-2)-12mV	
34	SMT100	6 P	Si L17a	BVCEO-45V;C:30mA max;Pt 60W;VBE(1-2)-20mV;Cob-6.0pf.	
35	SMT101	6 P	Si L17a	BVCEO-45V;C:30mA max;Pt 60W;VBE(1-2)-20mV;Cob-6.0pf.	
36	SMT102	6 P	Si L17a	BVCEO-45V;C:30mA max;Pt 60W;VBE(1-2)-10mV;hFE1/hFE2-80 min	
37	SMT103	6 P	Si L17a	BVCEO-45V;C:30mA max;Pt 60W;VBE(1-2)-10mV;hFE1/hFE2-80 min.	
38	SMT104	6 P	Si L17a	BVCEO-45V;C:30mA max;Pt 60W;VBE(1-2)-5.0mV;hFE1/hFE2-90 min	
39	SMT105	6 P	Si L17a	BVCEO-45V;C:30mA max;Pt 60W;VBE(1-2)-5.0mV;hFE1/hFE2-90 min	
40	SP2060F	6 N	Si T089	Pt 350mW/both sides);hFE 1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)/ΔT-10uV/C	
41	SP2223AF	6 N	Si T089	Pt 350mW/both sides);hFE 1/2-80 min;VBE(1-2)-15mV max;ΔVBE(1-2)/ΔT-25mV/C	
42	SP2920F	6 N	Si T089	Pt 350mW/both sides);hFE 1/2-90 min;VBE(1-2)-5.0mV;ΔVBE(1-2)-800uV.	
43	SP10801	6 N-OPL	Si T089	hFE1/hFE2-0.8minΔ VBE1-VBE2-1.6mV max;NF-4.0db max	
44	SP10810	6 P-DPE	Si T089	hFE1/hFE2-0.8minΔ VBE1-VBE2-4.0mV max;hFE2-35min at 10mA-1.0V	
45	SP2074*	6 N	Si L21	Pt 300mW;gm1/2-95 min;VGS(1-2)-15mV max;AVGS(1-2)/ΔT-10uV/Deg.C	
46	SU2075*	6 N	Si L21	Pt 300mW;gm1/2-95 min;VGS(1-2)-15mV max;ΔVGS(1-2)/ΔT-15uV/Deg.C	
47	SU2076*	6 N	Si L21	Pt 250mW;gm1/2-95 min;VGS(1-2)-15mV max;ΔVGS(1-2)/ΔT-10uV/Deg.C	
48	SU2077*	6 N	Si L21	Pt 250mW;gm1/2-95 min;VGS(1-2)-15mV max;ΔVGS(1-2)/ΔT-25uV/Deg.C	
49	SU2078*	6 N	Si L21	Pt 250mW;gm1/2-95 min;VGS(1-2)-15mV max;ΔVGS(1-2)/ΔT-35uV/Deg.C	
50	SU2079*	6 N	Si L21	Pt 250mW;gm1/2-95 min;VGS(1-2)-15mV max;ΔVGS(1-2)/ΔT-60uV/Deg.C	
51	SU2080*	6 N	Si L21	Pt 250mW;gm1/2-90 min;VGS(1-2)-15mV max;ΔVGS(1-2)/ΔT-35uV/Deg.C	
52	SU2081*	6 N	Si L21	Pt 250mW;gm1/2-90 min;VGS(1-2)-15mV max;ΔVGS(1-2)/ΔT-60uV/Deg.C	
53	SU2098*	6 N	Si L21	Pt 3W;gm1/2-95 min;VGS(1-2)-5mV;AVGS(1-2)/ΔT-10uV/C max	
54	SU2098A*	6 NQ*	Si L21	Pt 300mW;gm1/2-95 min;VGS(1-2)-5mV;AVGS(1-2)/ΔT-10uV/C max	
55	SU2098B*	6 NQ*	Si L21	Pt 300mW;gm1/2-95 min;VGS(1-2)-25mV;AVGS(1-2)/ΔT-25uV/C max	
56	SU2099*	6 N	Si L21	Pt 3W;gm1/2-95 min;VGS(1-2)-5mV;AVGS(1-2)/ΔT-25uV/deg.C max	
57	SU2099A*	6 NQ*	Si L21	Pt 300mW;gm1/2-95 min;VGS(1-2)-5mV;AVGS(1-2)/ΔT-30uV/C max	
58	TD100*	6 N-PL	Si L2u	Pt 40W;hFE1/2-90 min;VBE(1-2)-5mV max;ΔVBE(1-2)/ΔT-20uV/deg.C max	
59	TD101*	6 N-PL	Si L2u	Pt 40W;hFE1/2-90 min;VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT-30uV/deg.C max	
60	TD200*	6 N-PL01	Si L2z	Pt 400mW;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)/ΔT 20uV/C max	
61	TD201*	6 N-PL01	Si L2z	Pt 400mW;hFE1/2-90 min;VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT 20uV/C max	
62	TD2050*	6 N-PL01	Si L2z	Pt 400mW;hFE1/2-90 min;VBE(1-2)-1.5mV max;ΔVBE(1-2)/ΔT 1.5mV max.	
63	TD400*	6 P-PL0	Si L17m	Pt 400mW;hFE1/2-90 min;VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT 30uV/deg.C	
64	TD401*	6 P-PL0	Si L17m	Pt 400mW;hFE1/2-90 min;VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT 30uV/deg.C	
65	TD500*	6 P-PL01	Si L17w	Pt 400mW;hFE1/2-90 min;VBE(1-2)-8.0mV max;ΔVBE(1-2)/ΔT 20uV/C max.	
66	TD501*	6 P-PL01	Si L17w	Pt 400mW;hFE1/2-90 min;VBE(1-2)-10mV max;ΔVBE(1-2)/ΔT 30uV/C max.	
67	TD550*	6 P-PL01	Si L17w	Pt 400mW;hFE1/2-90 min;VBE(1-2)-5.0mV max;ΔVBE(1-2)/ΔT 1.5uV/C max.	
68	TIS25	6 N-PE	Si L21a	FET;BVGSS-50V;IDSS-8.0mA max;Yfs match 5.0%;Yfs-1500umhos min.	
69	TIS26	6 N-PE	Si L21a	FET;BVGSS-50V;IDSS-8.0mA max;Yfs match 10%;Yfs-1500umhos min.	
70	TIS27	6 N-PE	Si L21a	FET;BVGSS-50V;IDSS-8.0mA max;Yfs match 20%;Yfs-1500umhos min.	
71	TIS68*	6 N-PE	Si T092	Pt 360mW;Yfs1/2-95 min;VGS(1-2)-5.0mV max;IGSS1/2-10nA max.	
72	TIS69	6 N-PE	Si T092	Pt 360mW;Yfs1/2-90 min;VGS(1-2)-10mV max;IGSS1/2-10nA max.	
73	TIS70*	6 N-PE	Si T092	Pt 360mW;Yfs1/2-80 min;VGS(1-2)-15mV max;IGSS1/2-10nA max	
74+	U2311*	6 NQ	Si L61	IG(1-2)-10nA max;VGS(1-2)-5.0mV max;ΔVGS(1-2)/ΔT 50uV/C	
75+	U2321*	6 NQ	Si L61	IG(1-2)-10nA max;VGS(1-2)-10mV max;ΔVGS(1-2)/ΔT 25uV/C	
76+	U233*	6 NQ	Si L61	IG(1-2)-10nA max;VGS(1-2)-15mV max;ΔVGS(1-2)/ΔT 50uV/C	
77+	U234*	6 NQ	Si L61	IG(1-2)-10nA max;VGS(1-2)-20mV max;ΔVGS(1-2)/ΔT 75uV/C	
78+	U235*	6 NQ	Si L61	IG(1-2)-10nA max;VGS(1-2)-25mV max;ΔVGS(1-2)/ΔT 100uV/C	
79+	U257*	6 N	Si L54b	IDSS1/2-1.0 mA;max;Yfs1/2-1.0 mA;max;Yfs-20umho max;VGS(1-2) 100mV max.	
80	UCX2910*	6 NΔØ	Si L2d	Pt .75W;hFE1/2-90 min;VBE(1-2)-1mV;tr:20ns;Pc-6W;max;hFE2-8 min;hFE40 min at 1mA;VBE1/VBE2-10W max.	
81	UPA15	6 N-PE	Si L5	△VEC-TO0uV max; VEC-2.0mV	
82#	ZDT11	6 N-PL	Si L2h	hFE1/hFE2-1.0 max; VBE1-VBE2-20mV max.	
83#	ZDT20	6 N-PL	Si L2h	hFE1/hFE2-1.0 max; VBE1-VBE2-5.0mV max.	
84#	ZDT21	6 N-PL	Si L2h	PL-500mW/both sides);Pair of ZT 84.	
85#	ZDT40	6 N-PL	Si L2d	PL-500mW/both sides);VBE(1-2)-5mV max;hFE1/hFE2-1.0 max.	
86#	ZDT41	6 N-PL	Si L2d	PL-500mW/both sides);VBE(1-2)-10mV max;hFE1/hFE2-1.0 max.	
87#	ZDT42	6 N-PL	Si L2d	PL-500mW/both sides);VBE(1-2)-10mV max;hFE1/hFE2-1.0 max.	
88#	ZDT44	6 N-PL	Si L2d	PL-500mW/both sides);VBE(1-2)-10mV max;hFE1/hFE2-1.0 max.	
89#	ZDT45	6 N-PL	Si L2d	PL-500mW/both sides);VBE(1-2)-10mV max;hFE1/hFE2-1.0 max.	
90	I4N378	7 N	Si X69	Pd-50mW;ID-25nA max;IL-1mA min;tr-2usec max;VCE-30V;VEC-6V	
91	1N5722	7 N-PLA	Si X83d	Pt 50mW;IL 3.0mA max;ID25nA max;tr 2.5us max;tr 25us max.	
92	1N5723	7 N-PLA	Si X83d	Pt 50mW;IL 5.0mA max;ID25nA max;tr 2.5us max;tr 25us max.	
93	1N5724	7 N-PLA	Si X83d	Pt 50mW;IL 8.0mA max;ID25nA max;tr 2.5us max;tr 25us max.	
94	1N5725	7 N-P-A	Si X83d	Pt 50mW;IL 7.0mA min;ID25nA max;tr 2.5us max;tr 25us max.	
95	2N469	7 P-A	Ge X42	BVCBO-6.0V;hFE-5.0;tr-3.0KΩ;ICBO-15uA;Sens-1.1uA/FC;Cob-30pf.	
96	2N469A	7 P	Ge X42	A Sensitivity 14.9 uA per foot candle;Pc 50mW;BVCBO 20V min;CBO 8.0uA.	
97	2N986	7 N	Si X8	Pc-50W max; BVCBO-100V; Photo-Sens-3.1uA/tr max.	
98	JAN2N986	7 N	Si X8	Pc-500mW;BVCBO-100V max;Photo-Sens-3.0uA/fc;dark-0.1uAmax.	
99	2N2452	7 N	Si X8	Pc-50W max; BVCBO-100V; Photo-Sens-3.0uA/fc max.	
100	2N5777	7 NΔ	Si T092	B Darlington;IL 250mA max;Pt 200mW;ID 100nA max;tr 250uS max;tr 150uS max	
101	2N5778	7 NΔ	Si T092	B Darlington;IL 250mA max;Pt 200mW;ID 100nA max;tr 250uS max;tr 150uS max	
102	2N5779	7 NΔ	Si T092	B Darlington;IL 250mA max;Pt 200mW;ID 100nA max;tr 250uS max;tr 150uS max	
103	2N5780	7 NΔ	Si T092	B Darlington;IL 250mA max;Pt 200mW;ID 100nA max;tr 250uS max;tr 150uS max	
104#	BP101	7 N-PE	Si X8a	A Ø Pt-3.00mW;IC(L)-1.0mA max;Sens-130uA/mW/cm_sq.	
105#	BPX25	7 N-PLA	Si X8b	A Ø Pt-500mW;IC(L)-1.0mA max;Sens-100uA/mW/cm_sq.	
106#	BPX29	7 N-PE	Si X29	A Ø Pt-30W;IC(L)-1.0mA max;Sens-130uA/mW/cm_sq.	
107#	BPX30	7 NΔ	Si X8	A Ø Pt-500mW;IC(L)-1.0mA max;Sens-100uA/mW/cm_sq.	
108#	BPX38	7 N-PE	Si X29c	A Ø Pt-500mW;IC(L)-1.0mA min;VCEISAT); 300mV;Sens-1.0 lum max;VCE-25V.	
109#	BPX43	7 N-PE	Si X8a	A Ø Pt-300mW;IC(L)-1.0mA min;Sens-1.0 lum max;VCE-25V	
110#	BPX81	7 N-PE	Si	A Ø Pt 60mW;B 1000 Lux at IC 800uA to 2.5mA.	

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY	MIDWG #	L C	DESCRIPTION	
1# BPX82	7 N-PE	Si			2 Photo trans; Pt 50mW;B 1000 Lux at IC 500uA to 2.5mA	
2# BPX83	7 N-PE	Si			3 photo trans; Pt 50mW;B 1000 Lux at IC 600uA to 2.5mA	
3# BPX86	7 N-PE	Si			6 photo trans; Pt 50mW;B 1000 Lux at IC 600uA to 2.5mA	
4# BPX89	7 N-PE	Si			9 photo trans; Pt 50mW;B 1000 Lux at IC 600uA to 2.5mA	
5# BPY60	7 N-DPL	Si X8c	A	Ø	Pt-87W:Sens-250uA/mW/sq.cm,tr light-1.0usec max;tf light-10usec max	
6# BPY61/I	7 N-PL	Si X69			Pt-50mW;IC-50mA at B-1000lux;Spectral Sensitivity-1.0uM max	
7# BPY61/II	7 N-PL	Si X69	A		Pt-50mW;IC-1.5mA at B-1000lux;Spectral Sensitivity-1.0uM max	
8# BPY62/I	7 N-PE	Si X69	A		Pt-50mW;IC-3.0mA at B-1000lux;Spectral Sensitivity-1.0uM max	
9# BPY62/II	7 N-PE	Si X8a	A		Pt-20W;IC-1.0mAmin;atB-1000lux;Sens-1.0uM;VCE-15V	
10# BPY62/III	7 N-PE	Si X8a	A		Pt-20W;IC-2.0mAmin;atB-1000lux;Sens-1.0uM;VCE-15V	
11# BPY62/IV	7 N-PE	Si X8a	A		Pt-20W;IC-4.0mAmin;atB-1000lux;Sens-1.0uM;VCE-15V	
12# BPY65	7 N-DPL	Si X8	A	Ø	Pt-5W:Sens-250uA/mW/cm2,tr light-1.0usec max;tf light-10usec max	
13# BPY78	7 NAT	Si U75			Pt-100mW;IC(D)-100nA max;Sens-300uA/mW/cm2;tr-3.0usec	
14# CLT2010	7 N-PEA	Si X8g	A		Pd 250mW;BVCEO 80V;BVCEO 50V;IL 600mA max;ID 25nA max;tr 3.0u typ	
15# CLT2020	7 N-PEA	Si X8g	A		Pd 250mW;BVCEO 40V;BVCEO 15V;IL 3.0mA max;ID 25nA max;tr 3.0u typ;tf 3.0u typ	
16# CLT2030	7 N-PEA	Si X8g	A		Pd 250mW;BVCEO 40V;BVCEO 15V;IL 3.0mA max;ID 25nA max;tr 3.0u typ;tf 3.0u typ	
17# E1P	7 P	Ge			dark-10uA, light-10mA; Sens-30uA/lumen	
18# FF102*	7 N-ED	Si R150	DH		ID(light) 5nA/F.Cmns; ID(light) 15uA/F.C, tr 30ns, tf 50ns	
19# FF108*	7 N-ED	Si R150a	DH		ID(light) 3.0mAmin; ID(light) 15uA/F.C, tr 30ns, tf 50ns	
20# FF409	7 N-ED	Si R135a	DB		ID(light) 1.2mA/F.C, ID(light) 144uA/F.C, tr 25ns, tf 40ns	
21# FF411	7 N-ED	Si R135b	DB		ID(light) 1.5mAmin; ID(light) 144uA/F.C, tr 25ns, tf 50ns	
22# FF600*	7 N-ED	Si R150	DH		ID(light) 75nA/FC min; ID(light) 800uA/Fc, tr 30ns, tf 50ns	
23# FF617*	7 N-ED	Si R150a	DH		ID(light) 12.5mAmin; ID(light) 800uA/F.C, tr 30ns, tf 50ns	
24# GPT	7 P	Ge	DH		IDark-2.0mA max; light-50mA, Sens-30uA/lm	
25# GS101	7 N-PLA	Si X83			Pd 50mW;IL 1.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 3.5us,tf 20us	
26# GS103	7 N-PLA	Si X83			Pd 50mW;IL 5.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 3.5us,tf 20us	
27# GS161	7 N-PLA	Si U54			Pd 50mW;IL 1.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 2.0us,tf 8.0us	
28# GS163	7 N-PLA	Si U54			Pd 50mW;IL 5.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 800ns,tf 6.0us	
29# GS165	7 N-PLA	Si U54			Pd 50mW;IL 10.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 1.2us,tf 6.0us	
30# GS167	7 N-PLA	Si U54			Pd 50mW;IL 20mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 700ns,tf 7.0us	
31# GS201	7 N-PLA	Si X98a			Pd 50mW;IL 1.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 3.5us,tf 20us	
32# GS203	7 N-PLA	Si X98a			Pd 50mW;IL 5.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 3.5us,tf 20us	
33# GS261	7 N-PLA	Si X97a			Pd 50mW;IL 1.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 2.0us,tf 8.0us	
34# GS263	7 N-PLA	Si X97a			Pd 50mW;IL 5.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 800ns,tf 6.0us	
35# GS265	7 N-PLA	Si X97a			Pd 50mW;IL 10.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 1.2us,tf 6.0us	
36# GS287	7 N-PLA	Si X97a			Pd 50mW;IL 20mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 700ns,tf 7.0us	
37# GS300	7 N-PLA	Si X90a			Pt-50mW;IL-1.0mA min;ID-1.0nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max	
38# GS302	7 N-PLA	Si X90a			Pt-50mW;IL-10mA min;ID-1.0nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max	
39# GS370	7 N-PLA	Si X90a			Pt-50mW;IL-1.0mA min;ID-20nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max	
40# GS372	7 N-PLA	Si X90a			Pt-50mW;IL-10mA min;ID-20nA;VCE (SAT)-30V;tr-7.0us max;tf-40us max	
41# GS400	7 N-PLA	Si X90			Pt-50mW;IL-10mA min;ID-1.0nA;VCE (SAT)-30V;tr-5.0us max;tf-15us max	
42# GS403	7 N-PLA	Si X90			Pt-50mW;IL-50mA min;ID-1.0nA;VCE (SAT)-30V;tr-8.0us max;tf-12us max	
43# GS420	7 N-PLA	Si X90			Pt-50mW;IL-1.0mA min;ID-1.0nA;VCE (SAT)-30V;tr-2.0us max;tf-12us max	
44# GS422	7 N-PLA	Si X90			Pt-50mW;IL-5.0mA min;ID-1.0nA;VCE (SAT)-30V;tr-3.0us max;tf-8.0us max	
45# GS423	7 N-PLA	Si X90			Pt-50mW;IL-10mA min;ID-1.0nA;VCE (SAT)-30V;tr-1.5us max;tf-12us max	
46# GS470	7 N-PLA	Si X90			Pt-50mW;IL-1.0mA min;ID-20nA;VCE (SAT)-30V;tr-3.0us max;tf-12us max	
47# GS501	7 N-PLA	Si X97b	D		Pd 50mW;IL 1.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 3.5us,tf 20us	
48# GS503	7 N-PLA	Si X98b	D		Pd 50mW;IL 5.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 3.5us,tf 20us	
49# GS561	7 N-PLA	Si X97b	D		Pd 50mW;IL 1.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 2.0us,tf 8.0us	
50# GS563	7 N-PLA	Si X97b	D		Pd 50mW;IL 5.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 800ns,tf 6.0us	
51# GS565	7 N-PLA	Si X97b	D		Pd 50mW;IL 10.1mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 1.2us,tf 6.0us	
52# GS567	7 N-PLA	Si X97b	D		Pd 50mW;IL 20mA max;ID 1.0nA;BVCEO 50V min;BVCEO 12V min;tr 700ns,tf 7.0us	
53# GS600	7 N-PLA	Si X29d	A		Pt 400mW;IL 20mA min;ID 5.0nA;VCE(SAT)-300mV;tr 3.0us,tf 20us	
54# GS603	7 N-PLA	Si X29d	A		Pt 400mW;IL 5.0mA min;ID 5.0nA;VCE(SAT)-300mV;tr 3.0us,tf 20us	
55# GS606	7 N-PLA	Si X29d	A		Pt 400mW;IL 30mA min;ID 5.0nA;VCE(SAT)-300mV;tr 3.0us,tf 20us	
56# GS609	7 N-PLA	Si X29d	A		Pt 400mW;IL 50mA min;ID 5.0nA;VCE(SAT)-300mV;tr 3.0us,tf 20us	
57# GS610	7 N-PLA	Si X29			Pt 150mW;IL-1.0mA min;ID-1.0nA;VCE (SAT)-30V;tr-1.5us max;tf-40us max	
58# GS612	7 N-PLA	Si X29			Pt 150mW;IL-10mA min;ID-20nA;VCE (SAT)-30V;tr-2.0us max;tf-30us max	
59# GS670	7 N-PLA	Si X29			Pt 150mW;IL-1.0mA min;ID-20nA;VCE (SAT)-30V;tr-2.0us max;tf-30us max	
60# GS680	7 N-PLA	Si X29d	A		Pt 400mW;IL 20mA min;ID 5.0nA;VCE(SAT)-300mV;tr 3.0us,tf 20us	
61# GS683	7 N-PLA	Si X29d	A		Pt 400mW;IL 5.0mA min;ID 5.0nA;VCE(SAT)-300mV;tr 3.0us,tf 20us	
62# GS686	7 N-PLA	Si X29d	A		Pt 400mW;IL 30mA min;ID 5.0nA;VCE(SAT)-300mV;tr 3.0us,tf 20us	
63# HEP312s	7	Si U52			Pt-300mW;max;BVCEO 30V;BVCEO 5.0V;Pd 100mW;ICEO 1.0uA;SRCEO 100mA	
64# L14A502	7 N-PLA	Si U52	D		Pt 200mW;BVCEO 50V;BVCEO 50V;IL 300uA max;ID 100nA max;ton 6.0us max;toff 6.0us max	
65# L14E1	7 N-PLA	Si T092	D		Pt 200mW;BVCEO 50V;BVCEO 50V;IL 700uA max;ID 100nA max;ton 15us max;toff 10us max	
66# L14E2	7 N-PLA	Si T092	D		Pt 200mW;BVCEO 50V;BVCEO 50V;IL 1.0mA max;ID 100nA max;ton 20us max;toff 15us max	
67# L14E3	7 N-PLA	Si T092	D		Pt 200mW;BVCEO 50V;BVCEO 50V;IL 1.0mA max;ID 100nA max;ton 20us max;toff 15us max	
68# L14E4	7 N-PLA	Si T092	D		Pt 200mW;BVCEO 50V;BVCEO 50V;IL 1.0mA max;ID 100nA max;ton 20us max;toff 15us max	
69# LS400	7 N-PLA	Si X69			Pt-50mW;IL-3.0mA typ;ID-25nA max;tr-1.5us,tf-1.5us typ;BVCEO-50V;BVCEO-6.0V	
70# LS600	7 N-PLA	Si X83c			Pt-50mW;IL-1.0mA typ;ID-25nA max;tr-1.5us,tf-1.5us typ;BVCEO-50V;BVCEO-7.0V	
71# MEL11	7 NA	Si L39			Pt 360mW;BVCEO 40V; light-10mA; dark-50nA	
72# MEL12	7 NA	Si L39			Pt 360mW;BVCEO 60V; light-30uA; dark-50nA	
73# MEL31	7 N	Si R110	A		Pt 360mW;BVCEO 18V; light-2.0mA; dark-50nA	
74# MEL32	7 N	Si R110	A		Pt 360mW;BVCEO 60V; light-30uA; dark-50nA	
75# MRD14B	7 N	Si TO92	B		Darlington;Pt-200mW;BVCEO 18V; light-2.0mA; dark-50nA	
76# MRD100*	7 N-ANΔ	Si u43			Pd-50mW;BVCEO-80V;BVCEO-40V;ICEO(dark)-100nAmax;Sens Rad CEO-100nA/mW/sq.cm	
77# MRD150*	7 N-ANΔ	Si u43			Pd-50mW;BVCEO-80V;BVCEO-40V;ICEO(dark)-100nAmax;Sens Rad CEO-100nA/mW/sq.cm	
78# MRD200	7 N-AN	Si X83			Pt-05W;ICEO(dark)-25nA;BVCEO-50V;Sens-4.0uA/lum/ft.sq. min	
79# MRD210	7 N	Si X83a			BVCEO-50V;ICEO-25nA at 25deg C;SICE-4uA/lum/ft-2min;LS-8um typ	
80# MRD250	7 N	Si X83a			BVCEO-50V;ICEO-25nA at 25deg C;SICE-8uA/lum/ft-2min;LS-8um typ	
81# MRD300	7 N-AN	Si X8d	A		Pt-25W;ICEO(dark)-25nA;BVCEO-50V;Sens-4.0uA/lum/ft.sq. min	
82# MRD310	7 N	Si X83a			BVCEO-50V;ICEO-25nA at 25deg C;SICE-TuA/ft/ln/ft-2min;LS-8um typ	
83# MRD450*	7 N-ANΔ	Si u52			Pd-100mW;BVCEO-40V;ICEO(dark)-100nA max;Sens Rad CEO-100nA/mW/sq.cm	
84# MRD600	7 N	Si X83b			Detector;SRCE-40uA/mW/cm 2; ln-1.5m; 800uA min;Pd-50mW;VCEO-50V.	
85# MRD810	7 N-ANΔ	Si R152	C		Pd 250mW;BVCEO 35V;BVCEO 5.0V;Sens 200 A/mW/cm2;tr 5.0us max;tf 6.0us	
86# MRD3050	7 N-ANΔ	Si X8f	A		Pd 400mW;BVCEO 30V;BVCEO 5.0V;Rad.Sens 20uA/mW/cm2;tr 2.0us;tf 3.5us	
87# MRD3051	7 N-ANΔ	Si X8f	A		Pd 400mW;BVCEO 30V;BVCEO 5.0V;Rad.Sens 40uA/mW/cm2;tr 2.0us;tf 3.5us	
88# MRD3052	7 N-ANΔ	Si X8f	A		Pd 400mW;BVCEO 30V;BVCEO 5.0V;Rad.Sens 20uA/mW/cm2;tr 2.0us;tf 3.5us	
89# MRD3053	7 N-ANΔ	Si X8f	A		Pd 400mW;BVCEO 30V;BVCEO 5.0V;Rad.Sens 50uA/mW/cm2;tr 2.0us;tf 3.5us	
90# MRD3054	7 N-ANΔ	Si X8f	A		Pd 400mW;BVCEO 30V;BVCEO 5.0V;Rad.Sens 125uA/mW/cm2;tr 2.0us;tf 3.5us	
91# MRD3055	7 N-ANΔ	Si X8f	A		Pd 400mW;BVCEO 30V;BVCEO 5.0V;Rad.Sens 300uA/mW/cm2;tr 2.0us;tf 3.5us	
92# MRD3056	7 N-ANΔ	Si X8f	A		Pd 400mW;BVCEO 30V;BVCEO 5.0V;Rad.Sens 400uA/mW/cm2;tr 2.0us;tf 3.5us	
93# OCP70	7 P	Ge R9			Pt-25mW; BVCEO-25V; IC-20mA; Sens-30A/ln	
94# OCP71	7 P	Ge R9			VCE-20V max;IC-50mA max;Pt-15W;ID-250uA;IL-2.5mA at 500 Lux	
95# OS14	7 P-A	Ge X6			VCE-30V max;IC-20mA max;Pt-40W;ID-20uA;IL-50uA at 500 Lux	
96# OS18	7 N-D	Si X6			Pt-50W;BVCEO-80V min;BVCEO-7V min;Sens-20uA/mW/cm min	
97# P20	7 N-PL	Si X6			IGSS(dk)-10nA max;Sens-40uA/mW/cm2 min;tr-1f-10.1usec typ	
98# P21	7 N-PL	Si X8			Pt-87Wmax;BVCEO-80V min;BVCEO-7V min;Sens-20uA/mW/cm min	
99# P102*	7 P-DQ	Si X8			IGSS(dk)-10nA max;Sens-40uA/mW/cm2 min;tr-1f-10.1usec typ	
100# P236	7 N	Si X68	DH		Pt-300mW;Sens-3uA/mW/cm sq.;lg(DARK)-25nA;Vp-2V	
101# P237	7 N	Si X68	DH		Pt-300mW;Sens-3uA/mW/cm sq.;lg(DARK)-30nA;lg(DARK)-25nA;Vp-3V	
102# P238	7 N	Si X68	DH		Pt-300mW;Sens-3uA/mW/cm sq.;lg(DARK)-30nA;lg(DARK)-25nA;Vp-5V	
103# PH241N*	7 N-PEΔ	Si X8f	DB		Pt 300mW;IGSS(light)15nA/FC;D/light40uA/FC	
104# PH242N*	7 N-PEΔ	Si X8f	DB		Pt 300mW;IGSS(light)15nA/FC;D/light50uA/FC	
105# PH243N*	7 N-PEΔ	Si X8f	DB		Pt 300mW;IGSS(light)15nA/FC;D/light75uA/FC	
106# PH244N*	7 N-PEΔ	Si X8f	DB		Pt 300mW;IGSS(light)15nA/FC;D/light100uA/FC	
107# SP1	7 P-E	Si X69			Pt-50W;ID-100nA max;Sensitivity-50mA typ	
108# SP2	7 P-E	Si X69			Pt-50W;ID-100nA max;Sensitivity-1.5mA typ	
109# SP3	7 P-E	Si X69			Pt-50W;ID-100nA max;Sensitivity-3.0mA typ	
110# TIL58	7 NPLΔ	Si X69a			Pd-50mW;ID-25nAmax;IL-1.0mAmin;tr 10usec;BVCEO-50V;BVCEO-8.0V;tf-15usec	

**SYMBOLS AND CODES
EXPLAINED IN INTERPRETER**

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	1. CATEGORY		MDWG # A Y200 T s/a S TO200 E Ser	L C E O A D D E	DESCRIPTION
		U	STRUC- TURE			
1	TIL63	7	N-PLA	SI X99	ID 25nA max;IL 400uA min;VCEO 50V;VECO 7.0V;Pd 50mW;tr 1.5us;tf 1.5us.	
2	TIL64	7	N-PLA	SI X99	ID 25nA max;IL 400uA min;VCEO 50V;VECO 7.0V;Pd 50mW;tr 1.5us;tf 1.5us.	
3	TIL65	7	N-PLA	SI X99	ID 25nA max;IL 1.0mA min;VCEO 50V;VECO 7.0V;Pd 50mW;tr 1.5us;tf 1.5us.	
4	TIL66	7	N-PLA	SI X99	ID 25nA max;IL 2.5mA min;VCEO 50V;VECO 7.0V;Pd 50mW;tr 1.5us;tf 1.5us.	
5	TIL67	7	N-PLA	SI X99	ID 25nA max;IL 6.0mA min;VCEO 50V;VECO 7.0V;Pd 50mW;tr 1.5us;tf 1.5us.	
6	TIL601	7	N-PLA	SI X83c	Pt-50mW;IL-3.0mA max;tr-1.25nA max;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
7	TIL602	7	N-PLA	SI X83c	Pt-50mW;IL-5.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
8	TIL603	7	N-PLA	SI X83c	Pt-50mW;IL-7.0mA min;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
9	TIL604	7	N-PLA	SI X83c	Pt-50mW;IL-7.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
10	TIL605	7	N-PLA	SI u54a	Pt-50mW;IL-3.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
11	TIL606	7	N-PLA	SI u54a	Pt-50mW;IL-5.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
12	TIL607	7	N-PLA	SI u54a	Pt-50mW;IL-8.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
13	TIL608	7	N-PLA	SI u54a	Pt-50mW;IL-7.0mA min;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
14	TIL609	7	N-PLA	SI X97	Pt-50mW;IL-3.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
15	TIL610	7	N-PLA	SI X97	Pt-50mW;IL-5.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
16	TIL611	7	N-PLA	SI X97	Pt-50mW;IL-8.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
17	TIL612	7	N-PLA	SI X97	Pt-50mW;IL-7.0mA min;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
18	TIL613	7	N-PLA	SI X98	Pt-50mW;IL-3.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
19	TIL614	7	N-PLA	SI X98	Pt-50mW;IL-5.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
20	TIL615	7	N-PLA	SI X98	Pt-50mW;IL-8.0mA max;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
21	TIL616	7	N-PLA	SI X98	Pt-50mW;IL-7.0mA min;ID-25nA max;tr-1.5uS;tr-1.5uS;BVCEO-50V;BVECO 7.0V.	
22	TSR3	7	PE	SI X86	A Pt-20W;ID-100mA max;Spectral Sensitivity: 75μm max.	
23#	ZM100	7	N-PE	SI X29a	Pt-500mW;IL 1.0mA/lum/sq.ft;ID 1.0uA;ton 40usec;toff 100usec.	
24#	ZM110	7	N	SI X8d	A Pt-300mW;CDK1.0uA/l 180uA/lum/sq.ft 2.8usec;Pk Spectral Response .80um	
25	2N489	9	P	SI R33	Pt-45W;n-62 max;RBB-6.8k ohms max;IV-8.0mA min;Ip-200A max.	
26	2N489A	9	P	SI R33	Pt-45W;n-62 max;RBB-6.8k ohms max;IV-8.0mA min;Ip-15uA max.	
27	JAN2N489A	9	P	CA R33	Pt-60W;VB2E-60V;RBB-6.8kΩ max;n-62 max;Ip-12uA max.	
28	2N489B	9	P	SI R33	Pt-45W;n-62 max;RBB-6.8kohms max;IV-8.0mA min;Ip-50uA max.	
29	2N490	9	P	SI R33	Pt-45W;n-62 max;RBB-8.9-1kohms max;IV-8.0mA min;Ip-20uA max.	
30	2N490A	9	P	SI R33	Pt-45W;n-62 max;RBB-9.1kohms max;IV-8.0mA min;Ip-15uA max.	
31	JAN2N490A	9	P	SI R33	CA Pt-60W;VB2E-60V;RBB-9.1kΩ max;n-62 max;Ip-12uA max.	
32	2N490B	9	P	SI R33	Pt-45W;n-62 max;RBB-9.1kohms max;IV-8.0mA min;Ip-6.0uA max.	
33	2N490C	9	P	SI R33	Pt-45W;RBB-9.1kohms;n-51 min;VBB(sat) 4.0V max.	
34	2N491	9	P	SI R33	Pt-45W;n-68 max;RBB-6.8kohms max;IV-8.0mA min;Ip-20uA max.	
35	2N491A	9	P	SI R33	Pt-45W;n-68 max;RBB-6.8kohms max;IV-8.0mA min;Ip-15uA max.	
36	JAN2N491A	9	P	SI R33	CA Pt-60W;VB2E-60V;RBB-6.8kΩ max;n-68 max;Ip-12uA max.	
37	2N491B	9	P	SI R33	Pt-45W;n-68 max;RBB-6.8kohms max;IV-8.0mA min;Ip-6.0uA max.	
38	2N492A	9	P	SI R33	Pt-45W;n-68 max;RBB-9.1kohms max;IV-8.0mA min;Ip-20uA max.	
39	2N492A	9	P	SI R33	Pt-45W;n-68 max;RBB-9.1kohms max;IV-8.0mA min;Ip-15uA max.	
40	JAN2N492A	9	P	SI R33	CA Pt-60W;VB2E-60V;RBB-9.1kΩ max;n-68 max;Ip-12uA max.	
41	2N492B	9	P	SI R33	Pt-45W;n-68 max;RBB-9.1kohms max;IV-8.0mA min;Ip-6.0uA max.	
42	2N492C	9	P	SI R33	Pt-45W;RBB-9.1kohms;n-56 min;VBB(sat) 4.3V max.	
43	2N493	9	P	SI R33	Pt-45W;n-75 max;RBB-6.8kohms max;IV-8.0mA min;Ip-20uA max.	
44	2N493A	9	P	SI R33	Pt-45W;n-75 max;RBB-6.8kohms max;IV-8.0mA min;Ip-15uA max.	
45	JAN2N493A	9	P	CA R33	CA Pt-60W;VB2E-60V;RBB-6.8kΩ max;n-75 max;Ip-12uA max.	
46	2N493B	9	P	SI R33	Pt-45W;n-75 max;RBB-6.8kohms max;IV-8.0mA min;Ip-6.0uA max.	
47	2N494	9	P	SI R33	Pt-45W;n-75 max;RBB-9.1kohms max;IV-8.0mA min;Ip-20uA max.	
48	2N494A	9	P	SI R33	Pt-45W;n-75 max;RBB-9.1kohms max;IV-8.0mA min;Ip-15uA max.	
49	JAN2N494A	9	P	SI R33	CA Pt-60W;VB2E-60V;RBB-9.1kΩ max;n-75 max;Ip-12uA max.	
50	2N494B	9	P	SI R33	Pt-45W;n-75 max;RBB-9.1kohms max;IV-8.0mA min;Ip-6.0uA max.	
51	2N494C	9	P	SI R33	CC Pt-45W;RBB-9.1kohms;n-62 min;VBB 1.4.6V max.	
52	N1671	9	P	SI R33	Pt-45W;n-62 max;RBB-9.1kohms max;IV-8.0mA min;Ip-25uA max.	
53	N1671A	9	P	SI R33	Pt-45W;n-62 max;RBB-9.1kohms max;IV-8.0mA min;Ip-25uA max.	
54	N1671B	9	P	SI R33	Pt-45W;n-62 max;RBB-9.1kohms max;IV-8.0mA min;Ip-6.0uA max.	
55	N1671C	9	P	SI R33	CC Pt-450mW;VB2E 30V;VB2B1 35V;RBB 4.7 to 9 1KΩ;n-47 to 12;B2(mod) 6.8 to 22mA.	
56	N21670	9	P	SI R33	CC Pt-45W;VB2E-60V;RBB-9.1kΩ max;n-70mA;80 max;IP-25uA max.	
57	N2417	9	P	SI R149	CC Pt-300mW;RBB-6.8kΩ max;n-62 max;Ip-12uA max;B2(MOD) 22mA max.	
58	N2417A	9	P	SI R149	CC Pt-300mW;RBB-6.8kΩ max;n-62 max;VBB1(SAT) 5.0V max;IV 8.0mA min	
59	JAN2N2417A	9	P	SI T072	CA Pt-35W;VB2E-60V;RBB-6.8kΩ max;n-62 max;Ip-12uA max.	
60	2N2417B	9	P	SI R149	CC Pt-35W;VB2E-60V;RBB-6.8kΩ max;n-62 max;Ip-12uA max.	
61	2N2418	9	P	SI R149	CC Pt-300mW;RBB-9.1kΩ max;n-62 max;Ip-12uA max;B2(MOD) 22mA max.	
62	2N2418A	9	P	SI R149	CC Pt-300mW;RBB-9.1kΩ max;n-62 max;VBB1(SAT) 5.0V max;IV 8.0mA min.	
63	JAN2N2418A	9	P	SI T072	CA Pt-35W;VB2E-60V;RBB-9.1kΩ max;n-62 max;Ip-12uA max.	
64	2N2418B	9	P	SI R149	CC Pt-300mW;RBB-9.1kΩ max;n-62 max;Ip-6.0uA max;VBB1 3.0V min.	
65	2N2419	9	P	SI R149	CC Pt-300mW;RBB-6.8kΩ max;n-68 max;Ip-12uA max;B2(MOD) 22mA max.	
66	2N2419A	9	P	SI R149	CC Pt-300mW;RBB-6.8kΩ max;n-68 max;VBB1(SAT) 5.0V max;IV 8.0mA min.	
67	JAN2N2419A	9	P	SI T072	CA Pt-35W;VB2E-60V;RBB-6.8kΩ max;n-68 max;Ip-12uA max.	
68	2N2419B	9	P	SI R149	CC Pt-300mW;RBB-6.8kΩ max;n-68 max;Ip-6.0uA max;VBB1 3.0V min.	
69	2N2420	9	P	SI R149	CC Pt-300mW;RBB-9.1kΩ max;n-68 max;Ip-12uA max;B2(MOD) 22mA max.	
70	2N2420A	9	P	SI R149	CC Pt-300mW;RBB-9.1kΩ max;n-68 max;VBB1(SAT) 5.0V max;IV 8.0mA min.	
71	JAN2N2420A	9	P	SI T072	CA Pt-35W;VB2E-60V;RBB-9.1kΩ max;n-68 max;Ip-12uA max.	
72	2N2420B	9	P	SI R149	CC Pt-300mW;RBB-9.1kΩ max;n-68 max;Ip-6.0uA max;VBB1 3.0V min.	
73	2N2421	9	P	SI R149	CC Pt-300mW;RBB-6.8kΩ max;n-75 max;Ip-12uA max;B2(MOD) 22mA max.	
74	2N2421A	9	P	SI R149	CC Pt-300mW;RBB-6.8kΩ max;n-75 max;VBB1(SAT) 5.0V max;IV 8.0mA min.	
75	JAN2N2421A	9	P	SI T072	CA Pt-35W;VB2E-60V;RBB-6.8kΩ max;n-75 max;Ip-12uA max.	
76	2N2421B	9	P	SI R149	CC Pt-300mW;RBB-6.8kΩ max;n-75 max;Ip-6.0uA max;VBB1 3.0V min.	
77	2N2422	9	P	SI R149	CC Pt-300mW;RBB-9.1kΩ max;n-75 max;Ip-12uA max;B2(MOD) 22mA max.	
78	2N2422A	9	P	SI R149	CC Pt-300mW;RBB-9.1kΩ max;n-75 max;Ip-6.0uA max;VBB1 3.0V min.	
79	JAN2N2422A	9	P	SI T072	CA Pt-35W;VB2E-60V;RBB-9.1kΩ max;n-75 max;Ip-12uA max.	
80	2N2422B	9	P	SI R149	CC Pt-300mW;RBB-9.1kΩ max;n-75 max;Ip-6.0uA max;VBB1 3.0V min.	
81	2N2464	9	P	SI T072	CC Pt-30W;RBB-9.1kohms;Ip-2.0uA max;V-4.0mA min.	
82	2N2647	9	P	SI T072	CC Pt-30W;VB2E-30V;VBB 35V;Ip 10uA max;IV 70mA max.	
83	2N2840	9	P	SI T072	CA Pt-30W;RBB-9.1kohms;Ip-4.0mA max;V-4.0mA min;Ip-20uA max.	
84	2N3479	9	P	SI R33	GF Pt-40W;RBB-9.1kohms;max;n-75 max;Ip-4.0mA min;Ip-5.0uA max.	
85	2N3480	9	P	SI R33	GF Pt-40W;RBB-9.1kohms;max;n-75 max;Ip-4.0mA min;Ip-20uA max.	
86	2N3481	9	P	SI R33	GF Pt-40W;RBB-9.1kohms;max;n-85 max;Ip-4.0mA min;Ip-20uA max.	
87	2N3483	9	P	SI R33	GF Pt-40W;RBB-9.1kohms;max;n-75 max;Ip-4.0mA min;Ip-5.0uA max.	
88	2N3484	9	P	SI R33	GF Pt-40W;RBB-9.1kohms;max;n-85 max;Ip-4.0mA min;Ip-5.0uA max.	
89	2N3980	9	P	SI T072	CA Pt-36W;IE 50mA;RBB-8.0kohms;n-82 max;Ip-2.0uA max;IV 10mA min.	
90	2N4851	9	P	SI T072	CA Pt-30W;RBB-9.1kohms;max;n-75 max;Ip-2.0mA max;Ip-2.0uA max;E(DC)	
91	2N4852	9	P	SI T072	CA Pt-30W;RBB-9.1kohms;max;n-75 max;Ip-4.0mA max;Ip-2.0uA max.	
92	2N4853	9	P	SI T072	CA Pt-30W;RBB-9.1kohms;max;n-85 max;Ip-6.0mA max;Ip-40uA max.	
93	2N4870	9	P	SI T092	CA Pt-30W;VB2B1 35V;max;Ip 2.0mA;min;VBB1 3.0V min;n-75 max.	
94	N2N4871	9	P	SI T092	CB Pt-30W;VB2B1 35V;max;Ip 4.0mA;min;VBB1 5.0V min;n-85 max.	
95	2N4891	9	P	SI X55	CB Pt-360mW;max;rb-9.1kohms;max;n-82 max;Ip-5.0uA max.	
96	2N4892	9	P	SI X55	CB Pt-360mW;max;rb-9.1kohms;max;n-69 max;Ip-2.0uA max.	
97	2N4893	9	P	SI X55	CB Pt-360mW;max;rb-12kohms;max;n-82 max;Ip-2.0uA max.	
98	2N4894	9	P	SI X55	CB Pt-360mW;max;rb-12kohms;max;n-86 max;Ip-1.0uA max.	
99	2N4947	9	P	SI R33a	CC Pt-36W;RBB-9.1kohms;max;n-69 max;Ip-2.0uA max.	
100	JAN2N4947	9	P	SI R33a	CA Pt-360mW;RBB-9.1kΩ max;n-69 max;Ip-2.0uA max;VB2E-30V.	
101	2N4948	9	P	SI R33a	CC Pt-36W;RBB-12kohms;max;n-82 max;Ip-2.0uA max;VB2E-30V.	
102	JAN2N4948	9	P	SI R33a	CA Pt-360mW;RBB-12kΩ max;n-82 max;Ip-2.0uA max;VB2E-30V.	
103	2N4949	9	P	SI R33a	CC Pt-36W;RBB-12kohms;max;n-86 max;Ip-1.0uA max;VB2E-30V.	
104	JAN2N4949	9	P	SI R33a	CA Pt-360mW;RBB-8.5kΩ max;n-80 max;Ip-2.0mA min;Ip-400nA max.	
105	2N5431	9	P	SI R141	CA Pt-30W;n-80 max;RBB-8.5kohms;Ip-4.0uA max;IV 2.0mA min.	
106	JAN2N5431	9	P	SI R33a	CC Pt-300mA;RBB-8.5kΩ max;n-80 max;Ip-2.0mA min;Ip-400nA max.	
107#	ZSH11	9	N	SI T05	PC-450mW;N-58/75;VBB-4500ohms;le(DC)-50mA.	
108#	ZSH12	9	N	SI T05	PC-450mW;N-47/62;VBB-4500ohms;le(DC)-50mA.	
109#	ZSH13	9	P	SI T05	Pt-45W.	
110#	ZSH14	9	P	SI T05	Pt-45W.	

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	1. CATEGORY U S T E	M Dwg # A Y200 T s/a TO200 S.	L C O A D E	DESCRIPTION	
1#	ZSH20	9 N	Si TO18	CB	Pt .200mW;v .90 max;RBB 4.0kohms min;IV 2.0mA min;IP 8.0uA min.	
2#	ZSH22	9 N	Si TO18	CB	Pt .200mW;v .85 max;RBB 4.0kohms min IV 4.0mA min;IP 4.0uA min.	
3	D5E37	9 N	Si R33a	CA	Pt .30W;RBB 12kohms max;IV 4.0mA min;n .85 max;Ip .25uA max.	
4	D5E43	9 P	Si R141	CA	Pt .300mW;iv 6.0mA min;n .82 max;Ip .2.0uA;RBB 9.1kΩ max.	
5	D5E44	9 P	Si R141	CA	Pt .300mW;iv 4.0mA min;n .82 max;Ip .5.0uA;RBB 9.1kΩ max.	
6	D5E45	9 P	Si R141	CA	Pt .300mW;iv 8.0mA min;n .82 max;Ip .1.0uA;RBB 9.1kΩ max.	
7	D5K1	9 P-PL	Si R33a	CC	Pt .30W;RBB 8.2kohms max;IV 2.0mA typ;n .62 max.	
8	D5K2	9 P-PL	Si R33a	CC	Pt .20W;RBB 15kohms max;IV 2.0mA typ;n .62 max.	
9	D13T1	9 P-PL	Si T098	CE	Programmable;Pt .300mW;iv .50uAmax;Ip .5.0uAmax;Vf 1.5Vmax.	
10	D13T2	9 P-PL	Si T098	CB	Programmable;Pt .300mW;iv .25uAmax;Ip .1.0uAmax;Vf 1.5Vmax.	
11▼	HEP310\$	9	Si T092	CE	le .50mA;RBB 9.1kΩ;Pd .300mW;IEO at VBE of 30V is 1.0uA;iv 4.0mA at VBB	
12▼	HEPS9001\$	9	Si T092	CE	IT 200mA;IG±20mA;VGKF 40V;VGKR 5.0V;VAK40V;Pd .375mW;Adjustable.	
13#	MEU21	9 PA	Si R110c	CE	Pt .300mW;Ip .2.0uA max;Vf 7.5V max;Vo 6.0V min;tr 80ns max.	
14#	MEU22	9 PA	Si R110c	CE	Pt .300mW;Ip .150nA;Vf 1.5V max;Vo 6.0V min;tr 80ns max.	
15▼	MPU131	9 NT	Si T092	CE	Programmable;Pd .375mW;Ip .1.2uA;Vf 18uA;IT 200mA;tr 40ns.	
16▼	MPU132	9 NT	Si T092	CE	Programmable;Pd .375mW;Ip .190nA;Vf 18uA;IT 200mA;tr 40ns.	
17▼	MPU133	9 NT	Si T092	CE	Programmable;Pd .375mW;Ip .80nA;Vf 18uA;IT 200mA;tr 40ns.	
18▼	MPU231	9 N	Si T018	CE	Programmable;Pd .250mW;Ip .1.2uA;Vf 18uA;IT 200mA;tr 40ns.	
19▼	MPU232	9 N	Si T018	CE	Programmable;Pd .250mW;Ip .190nA;Vf 18uA;IT 200mA;tr 40ns.	
20▼	MPU233	9 N	Si T018	CE	Programmable;Pd .250mW;Ip .80nA;Vf 18uA;IT 200mA;tr 40ns.	
21	MU851	9 N-AN	Si u43	CB	Pt .200mW;VB2E .30V;VB2B1 .28V;RBB 9.1kohms max;Ip .2.0uA max.	
22	MU852	9 N-AN	Si u43	CB	Pt .200mW;VB2E .30V;VB2B1 .28V;RBB 9.1kohms max;Ip .2.0uA max.	
23	MU853	9 N-AN	Si u43	CB	Pt .200mW;VB2E .30V;VB2B1 .28V;RBB 9.1kohms max;Ip .400nA max.	
24	MU4891	9 PANt	Si X20d	CB	Pt .30W;n .82 max;RBB 9.1kohms;iv .2.0mA;Ip .5.0uA max;VEB1(sat)4V max	
25	MU4892	9 PANt	Si X20d	CB	Pt .30W;n .59 max;RBB 9.1kohms;iv .2.0mA;Ip .2.0uA max;VEB1(sat)4V max	
26	MU4893	9 PANt	Si X20d	CB	Pt .30W;n .82 max;RBB 12kohms;iv .2.0mA;Ip .2.0uA max;VEB1(sat)4V max	
27	MU4894	9 PANt	Si X20d	CB	Pt .30W;n .86 max;RBB 12kohms;iv .2.0mA;Ip .1.0uA max;VEB1(sat)4V max	
28#	ST20	9 P	Si T072	CA	Pt .200mW;VB2E .20V;VBB .10V;IV 20mA max;fab 20MHz	
29#	ST50	9 P	Si T072	CA	Pt .500mW;VB2E .30V;VB2B .20V;iv .50mA max;fab 200kHz	
30	2N941*	10 P-A	Si T018	A	Voff .1.0mV max;loff .1.0nA Amps.	
31	2N942*	10 P-A	Si T018	A	Voff .3.0mV max;loff .3.0nA Amps.	
32	2N943*	10 P-A	Si T018	A	Voff .2.0mV max;loff .1.0nA Amps;fab .1.0Mc min.	
33	2N944*	10 P-A	Si T018	A	Voff .3.0mV max;loff .1.5nA Amps;fab .1.0Mc min.	
34	2N945*	10 P-A	Si T018	A	Voff .4.0mV max;loff .2.0nA Amps;fab .1.0Mc min.	
35	2N946*	10 P-A	Si T018	A	Voff .4.0mV max;loff .2.0nA Amps;fab .1.0Mc min.	
36	2N1676*	10 P-A	Si T05	A	Voff .1.0mV max;VCE(SAT)-.10V at IC .5.0mA;ft .42Mc Typ.	
37	2N1677*	10 P-A	Si T05	A	Voff .3.0mV max;VCE(sat)-.10V at IC .5.0mA;ft .32Mc Typ	
38	2N1917*	10 P-A	Si T05	A	Voff .1.0mV max;loff .1.0nA Amps.	
39	2N1918*	10 P-A	Si T05	A	Voff .3.0mV max;loff .3.0nA Amps.	
40	2N1919*	10 P-A	Si T05	A	Voff .2.0mV max;loff .1.0nA Amps;fab .1.0Mc min.	
41	2N1920*	10 P-A	Si T05	A	Voff .3.0mV max;loff .1.5nA Amps;fab .1.0Mc min.	
42	2N1921*	10 P-A	Si T05	A	Voff .4.0mV max;loff .2.0nA Amps;fab .1.0Mc min.	
43	2N1922*	10 P-A	Si T05	A	Voff .4.0mV max;loff .2.0nA Amps;fab .1.0Mc min.	
44	2N2162*	10 P-PA	Si T05	A	Voff .2.0mV max;Rs .20 ohms;ft .14Mc min.	
45	2N2163*	10 P-PA	Si T05	A	Voff .2.0mV max;Rs .20 ohms;ft .14Mc min.	
46	2N2164*	10 P-PA	Si T05	A	Voff .1.5mV max;Rs .20 ohms;ft .24Mc min.	
47	2N2165*	10 P-PA	Si T05	A	Voff .3.0mV max;Rs .20 ohms;ft .10Mc min.	
48	2N2166*	10 P-PA	Si T05	A	Voff .3.0mV max;Rs .30 ohms;ft .10Mc min.	
49	2N2167*	10 P-PA	Si T05	A	Voff .2.5mV max;Rs .20 ohms;ft .16Mc min.	
50	2N2185*	10 P	Si T018	A	Voff .2.5mV max;ts .250ns max.	
51	2N2186*	10 P	Si T018	A	Voff .2.5mV max;ΔVoff .50uV max;ts .250ns max.	
52	2N2187*	10 P	Si T018	A	Voff .2.5mV max;ΔVoff .50uV max;ts .250ns max.	
53	2N2274*	10 P	Si T018	A	Voff .3.5mV max;ts .250ns.	
54	2N2275*	10 P	Si T018	A	Voff .3.5mV max;ΔVoff .100uV max;ts .250ns	
55	2N2276*	10 P	Si T018	A	Voff .2.5mV max;ts .250ns.	
56	2N2277*	10 P	Si T018	A	Voff .2.5mV max;ΔVoff .100uV max;ts .250ns.	
57	2N2278*	10 P	Si T018	A	Voff .2.25mV max;ts .250ns.	
58	2N2279*	10 P	Si T018	A	Voff .2.25mV max;ΔVoff .50uV max;ts .250ns	
59	2N2280*	10 P-E	Si T018	A	Voff .2.0mV max;ts .250ns;REC(sat).18 ohms max.	
60	2N2330*	10 N	Si T05	A	Aoff .75mV max;loff .1.0nA max;ft .100Mc min.	
61	2N2331*	10 N	Si T018	A	Aoff .75mV max;loff .1.0nA;ft .100Mc min.	
62	2N2356*	10 N	Si L6	A	Voff .80uVmax;IEBO1 or 2.10mAmax;rs .400Ω max;ΔIOFF .5nA max.	
63	2N2356A*	10 N	Si L6	A	Voff .50uV max;loff .2nA max;VFE .7.0V max.	
64	2N2432*	10 N	Si T018	A	Pc .800mW at 25 deg.C Case;VCE(ON)-.50mV;Ccb .12pF;fON .20 ohms	
65	2N2432A*	10 N	Si T018	A	Pc .600mW at 25 deg.C Case;ICES-10mA;hFE(INV)-3.0;VCE(ofs)-.70mV max.	
66	2N2569*	10 N-PE	Si T018	A	Pc .300mW/Voff .50mV;max;hFE .50 min;loff .2nA max	
67	2N2570*	10 N-PE	Si T018	A	Aoff .300mW;Voff .1.0mV max;hFE .50 min;loff .2nA max	
68	2N2944A	10 P	Si T046	A	Aoff .40mW;Vrec(on)-4.0ohms max;VCE(ofs)-.30mV max	
69	JAN2N2944A*	10 PΔ	Si T046	A	Voff .30mV;max;rec(on)-4.0Ω;max;hFE(inv)-.50 min;tr .100nsec	
70	JAN2N2945A	10 P	Si T046	A	Aoff .400mW;rec(on)-5.0ohms max;VCE(ofs)-.50mV max	
71	JAN2N2945A*	10 PΔ	Si T046	A	Voff .50mV;max;rec(on)-6.0Ω;max;hFE(inv)-.30 min;tr .100nsec	
72	JAN2N2946A*	10 P	Si T046	A	Pt .400mW;rec(on)-8.0Ω;max;VCE(ofs)-.80mV max	
73	JAN2N2946A*	10 PΔ	Si T046	A	Voff .80mV;max;rec(on)-8.0Ω;max;hFE(inv)-.20 min;tr .100nsec	
74	2N3217*	10 P-E	Si T046	A	Voff .1.0mV max;Rs .30 ohms max at IE .10mA;IB .1.0mA max.	
75	2N3218*	10 P-E	Si T046	A	Voff .2.0mV max;Rs .50 ohms max at IE .10mA;IB .1.0mA	
76	2N3219*	10 P-E	Si T046	A	Voff .3.0mV max;Rs .60 ohms max at IE .10mA;IB .1.0mA	
77	2N3317*	10 P	Si R98	A	Voff .1.75mV max at IB .50mA;S<20 ohms max at IB .1mA;IE .10mA	
78	2N3318*	10 P	Si R98	A	Voff .1.5mV max at IB .50mA;S<18 ohms max at IB .1mA;IE .10mA	
79	2N3319*	10 P	Si R98	A	Voff .1.5mV max at IB .50mA;S<18 ohms max at IB .1mA;IE .10mA	
80	2N3343*	10 PΔ	Si T05	A	Voff .1.2mV;max;hFE .min;R(at)-35 ohms max;loff .2.5usec max.	
81	2N3344*	10 PΔ	Si T05	A	Voff .1.2mV;max;hFC .1.5 min;R(at)-20 ohms max;loff .2.5usec max.	
82	2N3345*	10 PΔ	Si T05	A	Voff .3.0mV;max;hFC .1.2 min;R(at)-25 ohms max;loff .2.5usec max.	
83	2N3346*	10 PΔ	Si T05	A	Voff .1.2mV;max;hFC .1.5 min;R(at)-20 ohms max;loff .2.5usec max	
84	2N3401*	10 P	Si T05	A	Voff ..01V;max;hFE(inv)-.185 min;R(at)-50ohms	
85	2N3677	10 P	Si T046	A	Voff .1.0mV-.5.0 ohms max;hFE / at .1 Mc-5.0	
86	2N3840	10 P	Si T046	A	Aoff .400mW;BVBCO .50V;BVCEO .50V;hFE .50 min /IC .1.0mA	
87	2N3841	10 P	Si T018	A	Aoff .300mW;BVBCO .100V;BVCEO .100V;BVBEBO .80V;hFE .20 min /IC .1.0mA	
88	2N3842	10 P	Si T018	A	Aoff .300mW;BVBCO .120V;BVCEO .120V;BVBEBO .120V;hFE .20 min /IC .1.0mA	
89	2N3910*	10 P	Si T046	A	Aoff .1.2mV;max;rd .40ohms max;VCE(sat)-.30V;max;hFE(inv)-.5.0 min	
90	2N3911*	10 P	Si T046	A	Aoff .90mV;max;rd .25ohms max;VCE(sat)-.30V;max;hFE(inv)-.10 min	
91	2N3912*	10 P	Si T046	A	Aoff .60mV;max;rd .20ohms max;VCE(sat)-.30V;max;hFE(inv)-.15 min	
92	2N3913*	10 P	Si T018	A	Aoff .1.2mV;max;rd .40 ohms max;VCE(sat)-.3V;max;hFE(inv)-.5.0 min	
93	2N3914*	10 P	Si T018	A	Aoff .90mV;max;rd .25 ohms max;VCE(sat)-.3V;max;hFE(inv)-.10 min	
94	2N3915*	10 P	Si T018	A	Aoff .1.25mV;max;rd .20 ohms max;VCE(sat)-.10mV max	
95	2N3977*	10 P	Si T046	A	Aoff .1.25mV;max;rd .35 ohms max;VCE(sat)-.15mV max	
96	2N3978*	10 P	Si T046	A	Aoff .2.0mV;max;rd .20 ohms max;VCE(sat)-.10mV max	
97	2N3979*	10 P	Si T046	A	Aoff .3.0mV;max;rd .45 ohms max;VCE(sat)-.15mV max	
98	2N4980*	10 PΔ	Si T046	A	Aoff .1.2mV;rs(ON)-16 ohms max;hFE(inv)-.7-VECO .30V max	
99	2N4981*	10 PΔ	Si T046	A	Aoff .1.4mV;rs(ON)-18 ohms max;hFE(inv)-.6-VECO .50V max	
100	2N4982*	10 PΔ	Si T046	A	Aoff .1.6mV;rs(ON)-20 ohms max;hFE(inv)-.5-VECO .70V max.	
101	2N5066*	10 N	Si T046	A	Aoff .400mW;VCES .20V;Voff .1.0mV;max;rs(ON)-8.0 ohms max.	
102	2N5229*	10 P	Si T046	A	Aoff .80mV;hFE(inv)-15;rs(ON)-10 ohms;ccb .5.0pf	
103	2S320*	10 P	Si T046	A	Aoff .50mW;Voff .1.0mV;IEO .10nA max;rd .200 ohms max.	
104	2S2531*	10 P	Si T046	A	Aoff .80mV;hFE(inv)-15;rs(ON)-10 ohms;ccb .5.0pf	
105	2S306*	10 P-A	Si T05	A	Pc .50mW;Voff .1.0mV;IEBX .10nA max;rd .200 ohms max.	
106	2S307*	10 P-A	Si T05	A	Pc .50mW;Voff .1.0mV;IEBX .10nA max;rd .20 ohms max.	
107	2S326*	10 P-A	Si T05	A	Pc .50mW;Voff .1.0mV;IEO .10nA max;rd .200 ohms max.	
108	2S327*	10 P-A	Si R51	A	Pc .50mW;Voff .1.0mV;IEBX .10nA max;rd .20 ohms max.	
109	3N62	10 N	Si T072	G02	Voff .200uV max;rs(on).100n;VBE1E20 .6V;IE1E20 .005uA ton .250ns.	
110	3N63	10 N	Si T072	G02	Voff .100uV max;rs(on).100n;VBE1E20 .6V;IE1E20 .005uA ton .250ns.	

**SYMBOLS AND CODES
EXPLAINED IN INTERPRETER**

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY	DWG #	DESCRIPTION	L	C	E	O	A	D	E
					S	T	s/a	T0200	Ser.	D	E
1	3N84	10 N	Si T072	GD ₀ Voff 50uV max;rs(on) 100Ω;BVE1E20 8V;IE1E20 .005uA;ton 250ns.							
2	3N65	10 N	Si T072	GD ₀ Voff 200uV max;rs(on) 100Ω;BVE1E20 10V;IE1E20 .005uA;ton 20ns.							
3	3N86	10 N	Si T072	GD ₀ Voff 100uV max;rs(on) 100Ω;BVE1E20 10V;IE1E20 .005uA;ton 250ns.							
4	3N67	10 N	Si T072	GD ₀ Voff 50uV max;rs(on) 100Ω;BVE1E20 10V;IE1E20 .005uA;ton 250ns.							
5	3N68	10 N	Si T072	GD ₀ Voff 200uV max;rs(on) 50Ω;BVE1E20 10V;IE1E20 .005uA;ton 250ns.							
6	3N68A	10 N	Si T072	GD ₀ BVE1E2S 10V min;Voff 20mV max;IE1E2S 5nA max;ton .25us;toff .25us.							
7	3N89	10 N	Si T072	GD ₀ Voff 100uV max;rs(on) 50Ω;BVE1E20 10V;IE1E20 .005uA;ton 250ns.							
8	3N70	10 N	Si T072	GD ₀ Voff 50uV max;rs(on) 50Ω;BVE1E20 10V;IE1E20 .005uA;ton 250ns.							
9	3N71*	10 N	Si T072	GC ₀ Voff 50uV max;hFE(inv)2.5 min;BVE1E2S 8V min;IE1E20 5nA max.							
10	3N72*	10 N	Si T072	GC ₀ Voff 100uV max;hFE(inv) 2.5 min;BVE1E2S 8V min;IE1E20 5nA max.							
11	3N73*	10 N	Si T072	GC ₀ Voff 200uV max;hFE(inv) 1.5 min;BVE1E2S 8V min;IE1E20 5nA max.							
12	3N74*	10 N	Si T072	GC ₀ Voff 50uV max;IE1E2S 2nA max;BVE1E2S 18V max;ΔVoff/ΔT 75uV/C.							
13	JAN3N74*	10 N	Si T072	GC ₀ VE1E2(s)50uV max;re1e2(on)-10Ω min;Ce2b-5pf max.							
14	JAN75*	10 N	Si T072	GC ₀ Voff 100uV max;IE1E2S 2nA max;BVE1E2S 18V max;ΔVoff/ΔT 125uV/C.							
15	JAN3N75*	10 N	Si T072	GC ₀ VE1E2(s)100uV max;re1e2(on)-10Ω min;Ce2b-5pf max.							
16	3N76*	10 N	Si T072	GC ₀ Voff 200uV max;IE1E2S 2.0nA max;BVE1E2S 18V max;ΔVoff/ΔT 175uV/C.							
17	JAN3N76*	10 N	Si T072	GC ₀ VE1E2(s)200uV max;re1e2(on)-10Ω min;Ce2b-5pf max.							
18	3N77*	10 N	Si T072	GC ₀ Voff 50uV max;IE1E2S 5.0nA max;BVE1E2S 12V max;ΔVoff/ΔT 75uV/C.							
19	3N78*	10 N	Si T072	GC ₀ Voff 100uV max;IE1E2S 5.0nA max;BVE1E2S 12V max;ΔVoff/ΔT 125uV/C.							
20	3N79*	10 N	Si T072	GC ₀ Voff 200uV max;IE1E2S 10nA max;BVE1E2S 12V max;ΔVoff/ΔT 175uV/C.							
21	3N87*	10 N	Si T072	GC ₀ Voff 50uV max;IE1E2S 20pA max;BVE1E2S 10V max;ΔVoff/ΔT 100uV/C.							
22	3N88*	10 N	Si T072	GC ₀ Voff 100uV max;IE1E2S 20pA max;BVE1E2S 10V max;ΔVoff/ΔT 100uV/C.							
23	3N90*	10 PΔ	Si T072	GD ₀ Voff 50uV max;BVE1E20 50V;IE1E20 1.0nA max;ΔVoff/ΔT 75uV/C.							
24	3N91*	10 PΔ	Si T072	GD ₀ Voff 100uV max;BVE1E20 50V;IE1E20 1.0nA max;ΔVoff/ΔT 125uV/C.							
25	3N92*	10 PΔ	Si T072	GD ₀ Voff 200uV max;BVE1E20 50V;IE1E20 1.0nA max;ΔVoff/ΔT 175uV/C.							
26	3N93*	10 PΔ	Si T072	GD ₀ Voff 50uV max;BVE1E20 50V;IE1E20 1.0nA max;ΔVoff/ΔT 75uV/C.							
27	JAN3N93*	10 P	Si T072	GD ₀ Voff 50uV max;RE1E2-500 max;tr-20nsec max;ts-250nsec max.							
28	3N94*	10 PΔ	Si T072	GD ₀ Voff 100uV max;BVE1E20 50V;IE1E20 1.0nA max;ΔVoff/ΔT 125uV/C.							
29	3N95*	10 PΔ	Si T072	GD ₀ Voff 200uV max;BVE1E20 50V;IE1E20 1.0nA max;ΔVoff/ΔT 175uV/C.							
30	3N100	10 PΔ	Si T072	GC ₀ Pt .30W;Voff 50uV max;IC 50mA;BVCBO 20V;rs 50Ω max.							
31	3N101	10 PΔ	Si T072	GC ₀ Pt .30W;Voff 50uV max;IC 50mA;BVCBO 30V;rs 50Ω max.							
32	3N102	10 PΔ	Si T072	GC ₀ Pt .30W;Voff 50uV max;IC 50mA;BVCBO 40V;rs 50Ω max.							
33	3N103	10 PΔ	Si T072	GC ₀ Pt .30W;Voff 50uV max;IC 50mA;BVCBO 50V;rs 50Ω max.							
34	3N104	10 PΔ	Si T072	GC ₀ Pt .30W;Voff 50uV max;IC 50mA;BVCBO 60V;rs 50Ω max.							
35	3N105	10 PΔ	Si T072	GC ₀ Pt .30W;Voff 250uV max;IC 50mA;BVCBO 20V;rs 100Ω max.							
36	3N106	10 PΔ	Si T072	GC ₀ Pt .30W;Voff 250uV max;IC 50mA;BVCBO 40V;rs 100Ω max.							
37	3N107	10 PΔ	Si T072	GC ₀ Pt .30W;Voff 250uV max;IC 50mA;BVCBO 60V;rs 100Ω max.							
38	3N108	10 P	Si T072	GC ₀ VE1B0 50V;IE1E2 10nA max;re1e2(on) 50Ω max.							
39	JAN3N108*	10 P	Si T072	GC ₀ Pt-600mW case;IE1E2-10nA max;VE1E2-30V;re1e2(on)-50Ω max.							
40	3N109	10 P	Si T072	GC ₀ VE1B0 50V;IE1E2 10nA max;re1e2(on) 50Ω max.							
41	3N110	10 P	Si T072	GC ₀ VE1B0 30V;IE1E2 50nA max;re1e2(on) 50Ω max.							
42	3N111	10 P	Si T072	GC ₀ VE1B0 30V;IE1E2 50nA max;re1e2(on) 50Ω max.							
43	3N114*	10 P	Si T072	GD ₀ BVE1E20 12V;IE1E20 1.0nA max;ΔVoff/ΔT 75uV/C.							
44	3N115*	10 P	Si T072	GD ₀ Voff 100uV max;BVE1E20 12V;IE1E20 1.0nA max;ΔVoff/ΔT 125uV/C.							
45	3N116*	10 P	Si T072	GD ₀ Voff 200uV max;BVE1E20 12V;IE1E20 1.0nA max;ΔVoff/ΔT 175uV/C.							
46	3N117*	10 P	Si T072	GD ₀ Voff 50uV max;BVE1E20 20V;IE1E20 1.0nA max;ΔVoff/ΔT 75uV/C.							
47	3N118*	10 P	Si T072	GD ₀ Voff 100uV max;BVE1E20 20V;IE1E20 1.0nA max;ΔVoff/ΔT 125uV/C.							
48	3N119*	10 P	Si T072	GD ₀ Voff 200uV max;BVE1E20 20V;IE1E20 1.0nA max;ΔVoff/ΔT 175uV/C.							
49	3N120*	10 N	Si T072	GD ₀ BVE1E20 20V;Voff 10uV max;ΔVoff/ΔT 125Ω max.							
50	3N121*	10 N	Si T072	GD ₀ BVE1E20 20V;Voff 10uV max;ΔVoff/ΔT 20uV/C;rs 250Ω max.							
51	3N123*	10 P	Si T072	GD ₀ BVE1E20 25V;Voff .25mV max;IE1E20 1.0nA max;ΔVoff/ΔT 150uV/C.							
52	3N127*	10 N	Si T072	GB ₀ 10mA;IE-10mA;Ceb-2.0pf;Vo-10V							
53	JAN3N127*	10 N	Si GC2	GC ₀ VE1E2(s)-10uV max;re1e2(on)-1.0Ω min;Ce2b-2pf max.							
54	3N129*	10 PΔ	Si T072	GC ₀ VE1E2(s)/AT 10uV max;rs(on) 150Ω max;V(BR)E1E2 10V;VE1E2 30uV.							
55	3N130*	10 PΔ	Si T072	GC ₀ VE1E2/AT 10uV max;rs(on) 150Ω max;V(BR)E1E2 20V;VE1E2 30uV.							
56	3N131*	10 PΔ	Si T072	GC ₀ VE1E2/AT 10uV max;rs(on) 150Ω max;V(BR)E1E2 30V;VE1E2 30uV.							
57	3N132*	10 PΔ	Si T072	GC ₀ VE1E2/AT 10uV max;rs(on) 150Ω max;V(BR)E1E2 40V;VE1E2 30uV.							
58	3N133*	10 PΔ	Si T072	GC ₀ VE1E2/AT 10uV max;rs(on) 150Ω max;V(BR)E1E2 50V;VE1E2 30uV.							
59	3N134*	10 PΔ	Si T072	GC ₀ VE1E2/AT 25uV max;rs(on) 150Ω max;V(BR)E1E2 15V;VE1E2 100uV.							
60	3N135*	10 PΔ	Si T072	GC ₀ VE1E2/AT 25uV max;rs(on) 150Ω max;V(BR)E1E2 30V;VE1E2 100uV.							
61	3N136*	10 P	Si T072	GC ₀ VE1E2/AT 25uV max;rs(on) 150Ω max;V(BR)E1E2 50V;VE1E2 100uV.							
62	5	10 N-DM	Si L6	Matched pair; ICBO-10uA; BVCEO-20V; BVEO-5.0V.							
63	6	10 N-DM	Si X32	Matched pair; ICBO-10uA; BVCEO-20V; BVEO-5.0V.							
64	7	10 N-PE	Si X33	Matched pair; ICEO-2.0nA; BVCEO-45V; rs-30Mc.							
65	10	10 N-DM	Si OV13	Matched pair; ICEO-2.0nA; BVCEO-45V; rs-30Mc.							
66	12C101	10 N-PL	Si L1a	Pt-500mW; VCEO-20V; AVGH-100uV max; Δloff-2.0mA max.							
67	12C102	10 N-PL	Si L1a	Pt-500mW; VCEO-20V; AVGH-100uV max; Δloff-2.0mA max.							
68	20	10 P-A	Si OV13	Matched pair; ICBO-2.0uA; BVCEO-20V; BVEO-12V.							
69	30	10 P-A	Si X33a	Matched pair; ICBO-2.0uA; BVCEO-20V; BVEO-12V.							
70	40	10 P-A	Si X33c	Matched pair; ICBO-25nA; BVCEO-35V; BVCBO-40V.							
71	50	10 P-A	Si X33e	Matched pair; ICBO-3.0uA; BVCEO-25V; BVCBO-25V.							
72	60	10 P-A	Si X33b	Matched pair; ICBO-2.0uA; BVCEO-36V; BVEO-12V.							
73	70	10 P-A	Si X33d	Matched pair; ICBO-3.0nA; BVCEO-8.0V; BVEO-10V.							
74	A569	10 N	Si T018	A Matched Pair of 2N2569; Voff - ±50uV.							
75	A570	10 N	Si T018	A Matched Pair of 2N2570; Voff - ±100uV.							
76#	BFV34*	10 P-PE	Si u34b	Pt-15W;hFE(inv)-6.0 min;VEC(inv).30mV;rec(on)-20 ohms.							
77#	BFV35*	10 P-PE	Si u34b	Pt-15W;hFE(inv)-4.0 min;VEC(inv).50mV;rec(on)-35 ohms.							
78#	BFV36*	10 P-PE	Si u34b	Pt-15W;hFE(inv)-3.0 min;VEC(inv).80mV;rec(on)-45 ohms.							
79#	BFV37*	10 P-PE	Si u34b	Pt-15W;hFE(inv)-2.0 min;VEC(inv).50mV;rec(on)-20 ohms.							
80#	BFV38*	10 N-PE	Si u34b	Pt-15W;hFE(inv)-3.0 min;VEC(inv).40mV;rec(on)-15 ohms.							
81#	BFV39*	10 N-PE	Si u26a	B Pt-30W;hFE(inv)-2.0 min;VEC(inv).70mV;rec(on)-15 ohms.							
82#	BFV39A*	10 N-PE	Si T072	B Pt-30W;hFE(inv)-3.0 min;VEC(inv).70mV;rec(on)-15 ohms.							
83#	BSV22*	10 N-MOS*	Si T072	DW Pt 200mW;Voff 30uV max;Roff 10MΩ;Cob 4.0pf max.							
84#	BSK82*	10 N-MOS	Si T033	DW Pt 250mW;Voff 30uV max;Cob 4.0pf max;Doff 20MΩ.							
85#	BSY89*	10 N-PE	Si T018	A Pt Voff-1.0mV max;rs-20 ohms;cob-12pf;Rsat-40Mc min.							
86	C7076*	10 N-PE	Si T018	A Pt Voff-2.0mVmax;rs-201max;BVCEO-15min;IEBO-2.0nA max.							
87	LDS207*	10 N-PE	Si u34	Pt-36W;hFE(INV)-20mV;Voff-10mV max;rec(on)-4 ohms max.							
88	ME209*	10 N-PE	Si T018	A Pt-250uV max; Ioff-2.0 Ampera max; Rsat-15ohms.							
89	ME214*	10 N-PE	Si T018	A Pt-50uV max; Ioff-2.0 Ampera max; Rsat-15ohms.							
90#	UPA36A	10 N-PE	Si L6a	A Pt-200mW;VCEO-5.0V;VCR-5.0V;C-50mA;IE-50mA;Δoff-50uV max;Δloff-1.0nA max.							
91#	ZDT10	10 N-PE	Si L2h	A Pt-250uV max; VEC-2.0mV;IE1E2-10nA max;at VE1E2 5.0 to 5.0V;rs 15Ω.							
92#	ZDT30*	10 N-PE	Si T072	GC VE1E2 50uV at 1B 500uA;IE1E2 10nA at VE1E2 5.0 to 5.0V;rs 15Ω.							
93#	ZDT11*	10 N-PE	Si T072	GC VE1E2 50uV at 1B 500uA;IE1E2 10nA at VE1E2 5.0 to 5.0V;rs 15Ω.							

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	1. CATEGORY U STRUC- TURE E	DWG # A Y200 s/a TO200 Ser.	L C E O A D D E	DESCRIPTION	
1	2N3812*	11 P	SI L175	Pt-.35W:hFE-100 min. at IC-10uA, VCE-5.0V.		
2	2N3813*	11 P	SI L175	Pt-.35W:hFE-225 min. at IC-10uA, VCE-5.0V.		
3	2N3836	11 N-A	SI L35	Pt-1.0W:ton-500nsec;toff-1.0usec;BVCEO-80V;ICEX-500uA.		
4	2N3837	11 N-A	SI L35	Pt-1.0W:ton-500nsec;toff-1.0usec;BVCEO-100V;ICEX-500uA		
5	2N4017+	11 P	SI L17x	Pt-600mW:hFE-60 min. at VCE of 5.0V and IC of 1.0uA;hEBO-10nA max		
6	2N4018*	11 P	SI L17x	Pt-600mW:hFE-60 min. at VCE of 5.0V and IC of 1.0uA;hEBO-10nA max		
7	2N4019*	11 P	SI L17x	Pt-600mW:hFE-180 min. at VCE of 5.0V and IC of 1.0uA;hEBO-10nA max		
8	2N4939	11 P	SI L17x	Pt-60W:BVC1C2-200V max;hFE-50 min;BVCEO-50 max;IC-50mA max		
9	2N4942	11 P	SI L17d	Pt-.35W:BVCBO-50 max;hFE-50 min;ICBO-02uA max.		
10	2N4954*	11 N	SI L25	Pt-.45W:NF-4.5d ^o at 10kohms.		
11	2N5254*	11 P	SI L17t	Pt-.43W:hFE-50 min;BVCEO-40V;VEBO-5 0V;ft-40M min		
12	2N5305	11 N	SI L3f	Pt-.40W:BVC1-25V max;VCE-25V max;IC-2A max;hFE-7000 min;ft-60Mc min		
13	2N5306	11 N	SI L3f	Pt-4.4W:VCB1-25V max;VCE-25V max;IC-2A max;hFE-7000 min;ft-60Mc min		
14	2N5307	11 N	SI L3f	Pt-4.4W:VCB1-40V max;VCE-240V max;IC-2A max;hFE-2000 min;ft-60Mc min		
15	2N5308	11 N	SI L3f	Pt-4.4W:VCB1-40V max;VCE-240V max;IC-2A max;hFE-7000 min;ft-60Mc min		
16	2N5390	11 N	SI L35a	Pt-1W:VCB1-120V max;VCE-80V max;IC-2A max;hFE-2000 min;ft-40Mc min		
17#	2O26	11 P	Ge MD3	Pt-4.4W:VCB1-40V max;VCE-20V;ft-3.5APt-12W;hFE-20 min		
18#	2O30	11 P	Ge MD17c	Pt-4.4W:VCB1-32V;VCE-18V;IC-1.4A;pt-40W;hFE-32.		
19#	2V205*	11 P-DPE	SI L17a	Pt-.45W:ft-100Mc min;BVCEO-15V;hFE-55 at IC-10mA		
20#	2V435*	11 P-DPE	SI L17a	Pt-4.4W:ft-55Pt-100Mc min;ICBO-50nA;ton-50ns;toff-100ns		
21	3N189*	11 PMOSA	SI L58b	Pt-525mW:tr-30ns;td-15ns;toff-50ns		
22	3NT91*	11 PMOSA	SI L58b	Pt-525mW:tr-30ns;td-15ns;toff-50ns		
23	4JD12X009	11 N-PL	SI L42	Contains 3-2N1613 transistors and a 1N914 diode;Pt-300mW		
24	40675*	11 N-PE	SI L68	VCEO-35V;VEBO-3.5V;Pt-100W;IC-10A;ICES-30mA max;Cob-250pF max		
25#	BFV70	11	SI T084	Pt-4W:BVCBO-80V min;hFE-100 min;ft-200MHz min;toff-40ns max		
26#	BFV71	11	SI T084	Pt-4W:BVCBO-80V min;hFE-100 min;ft-350MHz min;toff-18ns max		
27#	BFV73	11	SI T084	Pt-4W:BVCBO-60V min;hFE-40 min;ft-350MHz min;toff-18ns max		
28#	BFV73N	11	SI MP126	Pt-4W:BVCBO-60V min;hFE-40 min;ft-350MHz min;toff-18ns max		
29#	BFV75	11	SI T089	Pt-4W:BVCEO-45V min;IC-30mA max;ft-30MHz min		
30#	BFV76	11	SI T089	Pt-4W:BVCEO-15V min;VCE(tr-500uV);Recton)-20 ohms.		
31#	BFV91	11	SI T084	Pt-4W:BVCEO-12V min;ft-400MHz min;toff-90us max		
32#	BFV91N	11	SI MP126	Pt-4W:BVCEO-12V min;ft-400MHz min;toff-90us max		
33#	BFV93A	11	SI T084	BVCBO-80V min;hFE-100 min;VCE(sat)-40V max		
34#	BFV93AN	11	SI MP126	BVCBO-80V min;hFE-100 min;VCE(sat)-40V max		
35#	BFV95	11	SI T084	BVCBO-60V min;hFE-40 min;VCE(sat)-40V max		
36#	BFV95N	11	SI MP126	BVCBO-60V min;hFE-40 min;VCE(sat)-40V max		
37#	BFX67	11 N	SI L4	Pc-.50W;hFE-7000 max. pulsed at IC-100mA and VCE-10V		
38#	F10049*	11 PDPLD	SI L18a	Pt-1.7W:max;IDSS-10nA;max;BVDS-30V;max;BVGS-25V max		
39	FT701	11 PDPL	SI L51a	Pt-80W:VDSS VSDS-30V;ID-200mA;IG-10mA		
40	FT4017	11 P-DPE	SI L17e	BVCBO-80V;BVCEO-80V;IC-200mA max;hFE-100 min at 10uA, 5.0V		
41	FT4018	11 P-DPE	SI L17e	BVCBO-60V;BVCEO-60V;IC-200mA max;hFE-100 min at 10uA, 5.0V		
42	FT4019	11 P-DPE	SI L17e	BVCBO-45V;BVCEO-45V;IC-200mA max;hFE-250 min at 10uA, 5.0V		
43	L148	11 N-PL	SI T098	B Photo-Darlington Amp;Pt-150mW;IL-100mA;VCEO-12V;VCEO-18V		
44	M106*	11 P-MOSA	SI L51b	FET-BVDS-30V;BVGS-30V;IGSS-100pA;DS-120n;Pt-500mW;Cgss-4.0pF		
45	M107*	11 P-MOS	SI L51b	FET-BVDS-30V;BVGS-30V;IGSS-100pA;DS-120n;Pt-500mW		
46	M108*	11 P-MOS	SI L51b	FET-BVDS-30V;BVGS-30V;IGSS-1.0pA;DS-120n;Pt-500mW		
47	M0708*	11 N-AN	SI L66a	Pt-400mW(both sides);ton-16ns max;off-30ns max;ts-25ns max		
48	M0708F*	11 N-AN	SI T089	Pt-350mW(both sides);ton-16ns max;off-30ns max;ts-25ns max		
49	MD918*	11 N-EA	SI L66a	Pt-400mW(both sides);VCEO-15V;hFE-50 min at 1.0mA and 5.0V		
50	MD918F*	11 N-EA	SI T089	Pd(both sides)-350mW;VCEO-15V;hFE-50 min at 1.0mA, 5.0V		
51	MD2218*	11 N-AN	SI L17k	Pt-600mW:td-20ns max;tr-40ns max;ts-280ns max;tf-70ns max		
52	MD2218A*	11 N-AN	SI R131b	Pt-600mW(both sides);td-15ns max;tr-30ns max;ts-250ns;tf-60ns		
53	MD2218AF*	11 N-AN	SI L17d	Pt-350mW:td-15ns max;tr-30ns max;ts-250ns max;tf-60ns max		
54	MD2218F*	11 N-AN	SI L17d	Pt-350mW:td-20ns max;tr-40ns max;ts-280ns max;tf-70ns max		
55	MD2219*	11 N-AN	SI L17k	Pt-800mW:td-20ns max;tr-40ns max;ts-280ns max;tf-70ns max		
56	MD2219A*	11 N-AN	SI L17k	Pt-600mW:td-15ns max;tr-30ns max;ts-250ns max;tf-60ns max		
57	MD2219AF*	11 N-AN	SI L17d	Pt-350mW:td-15ns max;tr-30ns max;ts-250ns max;tf-60ns max		
58	MD2219F*	11 N-AN	SI L17d	Pt-350mW:td-20ns max;tr-40ns max;ts-280ns max;tf-70ns max		
59	MD2369*	11 N-AN	SI L66a	Pt-600mW(both sides);ton-15ns max;off-20ns max;ts-13ns max		
60	MD2369F*	11 N-AN	SI T089	Pt-350mW(both sides);ton-15ns max;off-20ns max;ts-13ns max		
61	MD2904*	11 P-AN	SI L17k	Pt-600mW:td-12ns max;tr-35ns max;ts-100ns max;tf-40ns max		
62	MD2904A*	11 P-AN	SI L17k	Pt-600mW:td-12ns max;tr-35ns max;ts-100ns max;tf-40ns max		
63	MD2904AF*	11 P-AN	SI L17d	Pt-600mW:td-12ns max;tr-35ns max;ts-100ns max;tf-40ns max		
64	MD2904F*	11 P-AN	SI L17d	Pt-600mW:td-12ns max;tr-35ns max;ts-100ns max;tf-40ns max		
65	MD2905*	11 P-AN	SI L17k	Pt-600mW:td-12ns max;tr-35ns max;ts-100ns max;tf-40ns max		
66	MD2905A*	11 P-AN	SI L17k	Pt-600mW:td-12ns max;tr-35ns max;ts-100ns max;tf-40ns max		
67	MD2905AF*	11 P-AN	SI L17d	Pt-600mW:td-12ns max;tr-35ns max;ts-100ns max;tf-40ns max		
68	MD2905F*	11 P-AN	SI L17d	Pt-600mW:td-12ns max;tr-35ns max;ts-100ns max;tf-40ns max		
69	MD3133*	11 P-AN	SI L17c	Pd-600mW;ton-75ns max;off-150ns max;hFE-50 min at 1.0mA;10V		
70	MD3133F*	11 P-AN	SI T089	Pd-350mW;ton-75ns max;off-150ns max;hFE-25 min at 1.0mA;10V		
71	MD3134*	11 P-AN	SI L17c	Pd-600mW;ton-75ns max;off-150ns max;hFE-50 min at 1.0mA;10V		
72	MD3134F	11 P-AN	SI T089	Pd-350mW;ton-75ns max;off-150ns max;hFE-50 min at 1.0mA;10V		
73	MD3725*	11 N-AN	SI L21	Pt-500mW;ton-45ns;off-75ns;VCE(sat)-26V		
74	MD3726F*	11 N-AN	SI L21	Pt-350mW;ton-45ns;off-75ns;VCE(sat)-26V		
75	MD4957*	11 P-AN	SI L17k	Pt-400mW:hFE-150 max;NF-2.5 typ;tf-1000 min		
76	MEM550*	11 P	SI L53	A) Pt-112mW;VGST-6.0V max;BVDS-50V;BVGS-40V;ID-10mA;D-25mA		
77	MHM1001	11 N-PL	SI T05	B) Pt-1.34W;BVCEO-80V;BVCEO-40V;hFE-3000 min. at IC-100mA		
78	MHM1101	11 N-PL	SI T018	A) Pt-1.0W;BVCEO-60V;BVCEO-40V;hFE-3000 min. at IC-100mA		
79	MHM1201	11 N-PL	SI T047	Pt-260mW;BVCEO-60V min;VCEO-40V min;VEBO-12V min;1J-125deg.C		
80	MHM2001	11 N-PL	SI R89c	GG Pt-2.0W at 100°C;BVCEO-120V;IC-3.0A;hFE-0K min		
81	MHM2011	11 N-PL	SI R89a	GG Pt-2.0W max;BVCEO-60V min;BVCEO-40V min;BVCEO-15V min;IC-3.0A max		
82	MHM2012	11 N-PL	SI R89a	GG Pt-2.0W max;BVCEO-80V min;BVCEO-60V min;BVCEO-15V min;IC-3.0A max		
83	MHM2013	11 N-PL	SI R89a	GG Pt-2.0W max;BVCEO-100V min;BVCEO-80V min;BVCEO-15V min;IC-3.0A max		
84	MHM2014	11 N-PL	SI R89a	GG Pt-2.0W max;BVCEO-60V min;BVCEO-40V min;BVCEO-15V min;IC-3.0A max		
85	MHM2015	11 N-PL	SI R89a	GG Pt-2.0W max;BVCEO-80V min;BVCEO-60V min;BVCEO-15V min;IC-3.0A max		
86	MHM2016	11 N-PL	SI R89a	GG Pt-2.0W max;BVCEO-100V min;BVCEO-80V min;BVCEO-15V min;IC-3.0A max		
87	MHM2017	11 N-PL	SI R89a	GG Pt-2.0W max;BVCEO-60V min;BVCEO-40V min;BVCEO-15V min;IC-3.0A max		
88	MHM2101	11 N-PL	SI MT42a	Pt-12.5W at 100 deg.C;BVCEO-120V;IC-3.0A;hFE-1000 min		
89	MHM2111	11 N-PL	SI MT42	Pt-12.5W max;BVCEO-60V min;BVCEO-40V min;BVCEO-15V min;IC-3A max		
90	MHM2112	11 N-PL	SI MT42	Pt-12.5W max;BVCEO-80V min;BVCEO-60V min;BVCEO-15V min;IC-3A max		
91	MHM2113	11 N-PL	SI MT42	Pt-12.5W max;BVCEO-100V min;BVCEO-80V min;BVCEO-15V min;IC-3A max		
92	MHM2114	11 N-PL	SI MT42	Pt-12.5W max;BVCEO-60V min;BVCEO-40V min;BVCEO-15V min;IC-3A max		
93	MHM2115	11 N-PL	SI MT42	Pt-12.5W max;BVCEO-80V min;BVCEO-60V min;BVCEO-15V min;IC-3A max		
94	MHM2116	11 N-PL	SI MT42	Pt-12.5W max;BVCEO-100V min;BVCEO-80V min;BVCEO-15V min;IC-3A max		
95	MHM2117	11 N-PL	SI MT42	Pt-12.5W max;BVCEO-60V min;BVCEO-40V min;BVCEO-15V min;IC-3A max		
96	MHM2201	11 N-PL	SI MT53	GH Pt-12.5W at 100°C;BVCEO-120V;IC-3.0A;hFE-1000 min		
97	MHM2211	11 N-PL	SI MT53	GH Pt-12.5W max;BVCEO-80V;BVCEO-40V min;BVCEO-15V min		
98	MHM2212	11 N-PL	SI MT53	GH Pt-12.5W max;BVCEO-80V;BVCEO-60V min;BVCEO-15V min		
99	MHM2213	11 N-PL	SI MT53	GH Pt-12.5W max;BVCEO-100V;BVCEO-80V min;BVCEO-15V min		
100	MHM2214	11 N-PL	SI MT53	GH Pt-12.5W max;BVCEO-80V;BVCEO-40V min;BVCEO-15V min		
101	MHM2215	11 N-PL	SI MT53	GH Pt-12.5W max;BVCEO-80V;BVCEO-60V min;BVCEO-15V min		
102	MHM2216	11 N-PL	SI MT53	GH Pt-12.5W max;BVCEO-100V;BVCEO-80V min;BVCEO-15V min		
103	MHM2217	11 N-PL	SI MT53	GH Pt-12.5W max;BVCEO-80V;BVCEO-40V min;BVCEO-15V min		
104#	ML101A	11 P-MOS	SI L25	Single device;Rd(on) 850Ω max;VGSt(h) 6.0V max;ID 50mA max		
105#	ML101B	11 P-MOS	SI L25	Single device;Rd(on) 850Ω max;VGSt(h) 6.5V max;ID 50mA max		
106#	ML102A	11 P-MOS	SI L54	Matched pair of devices;Rd(on) 40Ω max;VGSt(h) 6.0V max;ID 50mA max		
107#	ML102B	11 P-MOS	SI L54	Matched pair of devices;Rd(on) 40Ω max;VGSt(h) 6.5V max;ID 50mA max		
108	MQ2218*	11 N-AN	SI L56	Four devices;Pt 500mW;td 20ns max;tr 40ns max;ts 280ns max;tf 70ns max		
109	MQ2219A*	11 N-AN	SI L56	Four devices;Pt 500mW;td 15ns max;tr 40ns max;ts 280ns max;tf 60ns max		
110	MQ2904*	11 N-AN	SI L56	Four devices;Pt 500mW;td 12ns max;tr 35ns max;ts 100ns max;tf 40ns max		

**SYMBOLS AND CODES
EXPLAINED IN INTERPRETER**

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY		DWG #	L C S E	DESCRIPTION
		U	S T R U C - T U R E			
1	MQ2905A*	11	P-AN	SI L58		Four devices:Pt 500mW;td 12ns max;tr 35ns max;ts 100ns max;tf 40ns max.
2	MQ3725*	11	N-ANA	SI L56c		Pt-500mW;ton-45ns;off-75ns;VCE(sat)-28V.
3	MQ3799*	11	P-EAO	SI L56c		Pt-50W;ft max-500MchFE-300 to 900 at IC-1.0mA.
4#	MTD2972	11	N-DPL	SI T082		BVCBO 45V min;Pt 140mW(both sides);hFE 60-240 at Ic 10uA;VCE 5.0V.
5#	MTD2973	11	N-DPL	SI T082		BVCBO 45V min;Pt 140mW(both sides);hFE 150-600 at Ic 10uA;VCE 5.0V.
6	RA1	11	N	SI TO12		Pc-3W;BVCEO-45V;TC-0.2%/deg.C at 0-70 deg.C;hFE-10min at .50mA
7	RA1A	11	N	SI TO12		Pc-3W;BVCEO-45V;TC-0.05%/deg.C at 0-70 deg.C;hFE-10min at .50mA
8	RA1B	11	N	SI TO12		Pc-3W;BVCEO-45V;TC-0.02%/deg.C at 0-70 deg.C;hFE-10min at .50mA
9	RA1C	11	N	SI TO12		Pc-3W;BVCEO-45V;TC-0.01%/deg.C at 0-70 deg.C;hFE-10min at .50mA
10	RA2	11	N	SI TO12		Pc-3W;BVCEO-45V;TC-0.2%/deg.C at 55-150 deg.C;hFE-40min at .50mA
11	RA2A	11	N	SI TO12		Pc-3W;BVCEO-45V;TC-0.05%/deg.C at 55-150 deg.C;hFE-40min at .50mA
12	RA2B	11	N	SI TO12		Pc-3W;BVCEO-45V;TC-0.02%/deg.C at 55-150 deg.C;hFE-40min at .50mA
13	RA3	11	N	SI TO12		Pc-3W;BVCEO-60V;TC-0.2%/deg.C at 55-150 deg.C;hFE-30min at .50mA
14	RA3A	11	N	SI TO12		Pc-3W;BVCEO-60V;TC-0.05%/deg.C at 55-150 deg.C;hFE-30min at .50mA
15	RA3B	11	N	SI TO12		Pc-3W;BVCEO-60V;TC-0.02%/deg.C at 55-150 deg.C;hFE-30min at .50mA
16	S708*	11	N-PE	SI		Dual Chip;BVCBO-55V;BVCEO-30V;Cob-6.0pf;Po-4.0W.
17	S715*	11	N-PE	SI T039		Dual Chip;BVCBO-55V;BVCEO-30V;Cob-6.0pf;Po-2.5W.
18	SP328F	11	P	SI T089		Pt-350mW(both sides);VEBO-20V;hFE-(9-22) at 3.0mA,500mV.
19	SP328QF	11	P	SI T086		Pt-500mW;VEBO-20V;hFE-(9-22) at 3.0mA,500mV.
20	SP329F	11	P	SI T089		Pt-350mW(both sides);VEBO-20V;hFE-(18-44) at 3.0mA,500mV.
21	SP329QF	11	P	SI T086		Pt-500mW;VEBO-20V;hFE-(9-22) at 3.0mA,500mV.
22	SP706F	11	N	SI T089		Pt-350mW(both sides);ts-60nS;hFE-20min at 10mA,1.0V.
23	SP708F	11	N	SI T089		Pt-350mW(both sides);ton-16nS;tr-30nS;ts-25nS.
24	SP918F	11	N	SI T089		Pt-350mW(both sides);VCEO-15V;hFE-20min at 3.0mA,1.0V.
25	SP929QF	11	N	SI T086		Pt-500mW;VCEO-45V;hFE-40min at 10uA,5.0V.
26	SP930QF	11	N	SI T086		Pt-500mW;VCEO-45V;hFE-100min at 10uA,5.0V.
27	SP1132F	11	P	SI T089		Pt-350mW(both sides);VCEO-30V;hFE-(30-90) at 150mA,10V.
28	SP171TF	11	N	SI T089		Pt-350mW(both sides);VCEO-75V;hFE-100min at 150mA,10V.
29	SP1890F	11	N	SI T089		Pt-350mW(both sides);VCEO-60V;hFE-(100-300) at 150mA,10V.
30	SP1893F	11	N	SI T089		Pt-350mW(both sides);VCEO-80V;hFE-(40-120) at 150mA,10V.
31	SP2218AF	11	N	SI T089		Pt-350mW(both sides);td-15nS;tr-30nS;ts-250nS;tf-60nS.
32	SP2218F	11	N	SI T089		Pt-350mW(both sides);td-20nS;tr-40nS;ts-280nS;tf-70nS.
33	SP2219AF	11	N	SI T089		Pt-350mW(both sides);td-15nS;tr-30nS;ts-250nS;tf-60nS.
34	SP2219F	11	N	SI T089		Pt-350mW(both sides);td-20nS;tr-40nS;ts-280nS;tf-70nS.
35	SP2221AF	11	N	SI T089		Pt-350mW(both sides);td-15nS;tr-30nS;ts-250nS;tf-60nS.
36	SP2221AQF	11	N	SI T086		Pt-500mW(both sides);td-15nS;tr-30nS;ts-265nS;tf-60nS.
37	SP2221F	11	N	SI T089		Pt-350mW(both sides);td-20nS;tr-40nS;ts-280nS;tf-70nS.
38	SP2221QF	11	N	SI T086		Pt-500mW;td-20nS;tr-40nS;ts-280nS;tf-70nS.
39	SP2222AF	11	N	SI T089		Pt-350mW(both sides);td-15nS;tr-30nS;ts-265nS;tf-60nS.
40	SP2222AQF	11	N	SI T086		Pt-500mW;td-15nS;tr-30nS;ts-265nS;tf-60nS.
41	SP2222F	11	N	SI T089		Pt-350mW(both sides);td-20nS;tr-40nS;ts-280nS;tf-70nS.
42	SP2222QF	11	N	SI T086		Pt-500mW;td-20nS;tr-40nS;ts-280nS;tf-70nS.
43	SP2368AF	11	N	SI T089		Pt-350mW(both sides);ton-12nS;tr-18nS;ts-13nS.
44	SP2369F	11	N	SI T089		Pt-350mW(both sides);ton-12nS;tr-18nS;ts-13nS.
45	SP24830F	11	N	SI T086		Pt-500mW;VCEO-60V;hFE-40min at 10uA,5.0V.
46	SP2484F	11	N	SI T089		Pt-350mW(both sides);VCEO-60V;hFE-100min at 10uA,5.0V.
47	SP2484QF	11	N	SI T086		Pt-500mW;VCEO-60V;hFE-100min at 10uA,5.0V.
48	SP26040F	11	P	SI T086		Pt-500mW;VCEO-45V;hFE-40min at 10uA,5.0V.
49	SP28050F	11	P	SI T086		Pt-500mW;VCEO-45V;hFE-100min at 10uA,5.0V.
50	SP29044F	11	P	SI T089		Pt-350mW(both sides);td-10nS;tr-40nS;ts-180nS;tf-50nS.
51	SP29044QF	11	P	SI T085		Pt-500mW;td-10nS;tr-40nS;ts-190nS;tf-50nS.
52	SP2904F	11	P	SI T089		Pt-350mW(both sides);td-10nS;tr-40nS;ts-180nS;tf-50nS.
53	SP2904QF	11	P	SI T086		Pt-500mW;td-10nS;tr-40nS;ts-190nS;tf-50nS.
54	SP2905AF	11	P	SI T089		Pt-350mW(both sides);td-10nS;tr-40nS;ts-180nS;tf-50nS.
55	SP2905AQF	11	P	SI T086		Pt-500mW;td-10nS;tr-40nS;ts-190nS;tf-50nS.
56	SP2905F	11	P	SI T089		Pt-350mW(both sides);td-10nS;tr-40nS;ts-180nS;tf-50nS.
57	SP2905QF	11	P	SI T086		Pt-500mW;td-10nS;tr-40nS;ts-190nS;tf-50nS.
58	SP2906AF	11	P	SI T089		Pt-350mW(both sides);td-10nS;tr-40nS;ts-80nS;tf-30nS.
59	SP2906AQF	11	P	SI T086		Pt-500mW;td-10nS;tr-40nS;ts-90nS;tf-30nS.
60	SP2906F	11	P	SI T089		Pt-350mW(both sides);td-10nS;tr-40nS;ts-80nS;tf-30nS.
61	SP2906QF	11	P	SI T086		Pt-500mW;td-10nS;tr-40nS;ts-90nS;tf-30nS.
62	SP2907AF	11	P	SI T089		Pt-350mW(both sides);td-10nS;tr-40nS;ts-80nS;tf-30nS.
63	SP2907AQF	11	P	SI T086		Pt-500mW;td-10nS;tr-40nS;ts-90nS;tf-30nS.
64	SP2907F	11	P	SI T089		Pt-350mW(both sides);td-10nS;tr-40nS;ts-80nS;tf-30nS.
65	SP2907QF	11	P	SI T086		Pt-500mW;td-10nS;tr-40nS;ts-90nS;tf-30nS.
66	SP2946F	11	P	SI T089		Pt-350mW(both sides);VEBO-40V;Vo-800uV max at IB-200uA.
67	SP3019F	11	N	SI T089		Pt-350mW(both sides);VCEO-80V;hFE-15min at 1.0A,10V.
68	SP3020F	11	N	SI T089		Pt-350mW(both sides);VCEO-80V;hFE-15min at 1.0A,10V.
69	SP3115F	11	N	SI T089		Pt-350mW(both sides);td-20nS;tr-75nS;ts-300nS;tf-100nS.
70	SP3116F	11	N	SI T089		Pt-350mW(both sides);td-20nS;tr-75nS;ts-300nS;tf-100nS.
71	SP3133F	11	P	SI T089		Pt-350mW(both sides);ton-75nS;tr-150nS;hFE-25min at 1.0mA,10V.
72	SP3134F	11	P	SI T089		Pt-350mW(both sides);ton-75nS;tr-150nS;hFE-50min at 1.0mA,10V.
73	SP3135F	11	P	SI T089		Pt-350mW(both sides);ton-75nS;tr-150nS;hFE-25min at 1.0mA,10V.
74	SP3136F	11	P	SI T089		Pt-350mW(both sides);ton-75nS;tr-150nS;hFE-50min at 1.0mA,10V.
75	SP32240D	11	N	SI T0116		Pt-800mW;ton-35nS;tr-60nS;hFE-10min at 1.0A,1.0V.
76	SP37240F	11	N	SI T086		Pt-500mW;ton-35nS;tr-60nS;hFE-10min at 1.0A,1.0V.
77	SP3725F	11	N	SI T089		Pt-350mW(both sides);ton-45nS;tr-75nS;hFE-30min at 500mA,2.0V.
78	SP37250D	11	N	SI T116		Pt-800mW;ton-35nS;tr-60nS;hFE-10min at 1.0A,1.0V.
79	SP37250F	11	N	SI T085		Pt-500mW;ton-35nS;tr-60nS;hFE-10min at 1.0mA,5V;ICBO-10nA max;NF-4.0db max.
80	SP10800	11	N-DPL	SI T089		BVCEO-45V;hFE-150min at 1.0mA-5V;ICBO-10nA max;Cobo-1Opf max.
81	SP10811	11	P-DPE	SI T089		BVCEO-15V;hFE-35 min at 10mA-1.0V;ICBO-10nA max;Cobo-1Opf max.
82	TD102*	11	N-PLT	SI L2u		Pt 400mW;hFE 100 min at VCE 5.0V and IC 10uA;tf 120MHz max;Vsat 200 max.
83	TD202*	11	N-PLT	SI L2z		Pt 400mW;hFE 100 min at VCE 5.0V and IC 10uA;tf 120MHz max;Vsat 200 max.
84	TD402*	11	P-PLT	SI L17m		Pt 400mW;hFE 100 min at VCE 5.0V and IC 10uA;tf 100MHz max;Vsat 200 max.
85	TD502*	11	P-PLT	SI L17w		Pt 400mW;hFE 100 min at VCE 5.0V and IC 10uA;tf 100MHz max;Vsat 200 max.
86	TD2219*	11	N-PLTΔ	SI L2u		Pt 400mW;hFE 35 min at VCE 10V and IC 100uA;Vsat 2.6Ω max.
87	TD2905*	11	P-PLTΔ	SI L17m		Pt 400mW;hFE 35 min at VCE 10V and IC 100uA;Vsat 2.6Ω max.
88	UC21739	11	N-PED	SI L21b		FET;BVDSs 30V;ID(on)-6.0mA;gm-750umhos.
89	UC2148	11	N-PED	SI L21b		FET;BVDSs 30V;ID(on)-15mA;gm-1000umhos.
90	UC2149	11	N-PED	SI L21b		FET;BVDSs 50V;ID(on)-2.0mA;gm-2000umhos.
91	UC2766*	11	P-MOSΔ	SI		Pt-252mW;td-18ns max;tr-36n max;off-60n max;IG-10pA max;VSDS-30V min.
92	UD30051	11	N-PED	SI L56a		BVCO-60V;BVCEO-40V;BVEB0-5.0V;hFE-100-300 at IC-150mA;tf-200Mc.
93	UD30061	11	N-PED	SI L56b		BVCO-60V;BVCEO-40V;BVEB0-5.0V;hFE-100-300 at IC-150mA;tf-200Mc.
94	ZN2451*	13	N-DPE	SI T045	A	Rad. Res. Switch; Irradiation-10kT nvt.
95	ZN5065*	13	N-PEDΔ	SI R83a	A	Pc-2.5W;hFE-19 typ. at VCE-50V;ton-15nsec max;off-35nsec max.
96	ZN5106*	13	N	SI T039	A	Post Rad. of 300T nvt;ICBO-100nAh;hFE-8.0 at VCE-10V;IC-150mA
97	ZN5107*	13	N	SI T018	A	Post Rad. of 300T nvt;ICBO-100nAh;hFE-8.0 at VCE-10V;IC-150mA
98	ZN5144*	13	N-Δ	SI T018	A	Post Rad. of 300T NVT;tr-35ns;td-10ns;ts-35ns;tf-30ns;MAX;ft-250MHz min.
99	ZN5145*	13	N-Δ	SI T039	A	Post Rad. of 300T NVT;tr-35ns;td-10ns;ts-35ns;tf-30ns;MAX;ft-250MHz min.
100	ZN5200*	13	N	SI T046	A	Pd-1.2W;Post Rad. of 300T nvt;hFE-10 min;ICES-0.5uA max.
101	ZN5201*	13	N	SI T046	A	Pd-1.2W;Post Rad. of 300T nvt;hFE-12 min;ICES-0.5uA max.
102	ZN5244*	13	P	SI T018	A	Pd-360mW;Post Rad-300T NVT;ICES-1.0A max;tr-40nS;ts-100ns;td-15nS;tf-50nS.
103	ZN5292*	13	P	SI T018	A	Max.Rad.Level-300T nvt;hFE-10min;tr-12ns;tf-15ns.
104	ZN5332*	13	P Δ	SI T045	A	Max.Rad.Level-1000T nvt;hFE-10 min;pulsed;tr-8ns;ts-70ns;tf-16ns.
105	JAN2N5332*	13	P Δ	SI T046	A	Ipp-25mA max;Radiation-1000TNVT;tr-8.0ns max;tf-16ns max.
106	ZN5399*	13	N	SI T046	A	Max.Rad-1000T nvt;Post Rad-hFE-12 min;ICES-0.5uA max.
107	JAN2N5399*	13	N	SI T046	A	Max.Rad.Level-500T NVT;hFE-15 min;pulsed;ICES-0.5uA max.
108	ZN5527*	13	N	SI T059	A	Max.Rad.Level-500T NVT;hFE-15 min;pulsed;ICES-0.5uA max.
109	ZN5528*	13	N	SI T061	A	Max.Rad.Level-500T NVT;hFE-15 min;pulsed;ICES-0.5uA max.
110	ZN5529*	13	N	SI T061	A	Max.Rad.Level-500T NVT;hFE-15 min;pulsed;ICES-0.5uA max.

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY	DWG #	L C	DESCRIPTION
1	2N5530*	13 N	SI T061	A	Max.Rad.Level-500T NVT:hFE-15 min.pulsed;ICBO-1mA;VCE(sat)-6.7 max.
2	2N5531*	13 N	SI R81j	A	Max.Rad.Level-500T NVT:hFE-7 min.pulsed;ICBO-1mA;VCE(sat)-1 max.
3	2N5532*	13 N	SI T059	A	Max.Rad.Level-500T NVT:hFE-7 min.pulsed;ICBO-1mA;VCE(sat)-1 max.
4	2N5533*	13 N	SI T061	A	Max.Rad.Level-500T NVT:hFE-7 min.pulsed;ICBO-1mA;VCE(sat)-1 max.
5	2N5534*	13 N	SI T061	A	Max.Rad.Level-500T NVT:hFE-7 min.pulsed;ICBO-1mA;VCE(sat)-1 max.
6	2N5535*	13 N Δ	SI T061	A	Max.Rad.Level-500T NVT:hFE-15 min.pulsed;ICBO-1mA;td-25ns;tf-300ns.
7	2N5536*	13 N Δ	SI T061	A	Max.Rad.Level-500T NVT:hFE-15 min.pulsed;ICBO-1mA;td-25ns;tf-300ns.
8	2N5537*	13 N Δ	SI T061	A	Max.Rad.Level-500T NVT:hFE-10 min.pulsed;ICBO-2mA;td-25ns;tf-300ns.
9	2N5538*	13 N Δ	SI T061	A	Max.Rad.Level-500T NVT:hFE-10 min.pulsed;ICBO-2mA;td-25ns;tf-300ns.
10*	2N5763*	13 PΔ	SI T018	A	Pt 1.8W;Post Rad 500T NVT;ICBO-25nA;tf 40ns max;td 10ns max;ts 200ns max;tf 50ns max.
11	2N5938*	13 N	SI U79	A	Max. Rad. Level 100T NVT:hFE 10 min.
12	2N5939*	13 N	SI T0111	A	Max. Rad. Level 100T NVT:hFE 10 min.
13	2N5940*	13 N	SI T0111	A	Max. Rad. Level 100T NVT:hFE 10 min.
14	BR1008*	13 N	SI MT27	A	Max. Rad. Level-500T nvt;Post Rad hFE-25;ICBO-1.0mA
15	BR100D*	13 N	SI T060	A	Max. Rad. Level-500T nvt;Post Rad hFE-25;ICBO-1.0mA
16	BR101B*	13 N	SI MT27	A	Max. Rad. Level-500T nvt;Post Rad hFE-15;ICBO-1.0mA
17	BR101D*	13 N	SI T060	A	Max. Rad. Level-500T nvt;Post Rad hFE-15;ICBO-1.0mA
18	[PPR]1006*	13 N	SI MT27	A	Post Rad hFE-15 at Ic 3.0A;VCE 5.0V.
19	[PPR]T007*	13 N	SI T060	A	Post Rad hFE-15 at Ic 3.0A;VCE 5.0V.
20	[PPR]1008*	13 N	SI MT27	A	Post Rad hFE-7.0 at Ic 3.0A;VCE 5.0V.
21	[PPR]1009*	13 N	SI T060	A	Post Rad hFE-7.0 at Ic 3.0A;VCE 5.0V.
22	[PPR]T010*	13 N	SI T061	A	Post Rad hFE-15 at Ic 10A;VCE 5.0V.
23	[PPR]T011*	13 N	SI T061	A	Post Rad hFE-15 at Ic 10A;VCE 5.0V.
24	[PPR]T012*	13 N	SI T061	A	Post Rad hFE-10 at Ic 10A;VCE 5.0V.
25	[PPR]T013*	13 N	SI T061	A	Post Rad hFE-10 at Ic 10A;VCE 5.0V.
26	PT12	14 N-PL	SI T046	A	Press 1.0psid nom,temp.coeff.±20°C;hFE 10 nom;BVCEO 120.
27	PT13	14 N-PL	SI T046	A	Press 1.0psid nom,temp.coeff.±0.5V/C;hFE 10 nom;BVCEO 120.
28	PT22	14 N-PL	SI T046	A	Press 2.0psid nom,temp.coeff.±20°C;hFE 10 nom;BVCEO 120.
29	PT23	14 N-PL	SI T046	A	Press 2.0psid nom,temp.coeff.±0.5V/C;hFE 10 nom;BVCEO 120.
30	PT52	14 N-PL	SI T046	A	Press 5.0psid nom,temp.coeff.±20°C;hFE 10 nom;BVCEO 120.
31	PT53	14 N-PL	SI T046	A	Press 5.0psid nom,temp.coeff.±0.5V/C;hFE 10 nom;BVCEO 120.
32	PT-H2	14 N-PL	SI T046	A	Press .50psid nom,temp.coeff.±20°C;hFE 10 nom;BVCEO 120.
33	PT-H3	14 N-PL	SI T046	A	Press .50psid nom,temp.coeff.±0.5V/C;hFE 10 nom;BVCEO 120.
34	PT-L2	14 N-PL	SI T046	A	Press .10psid nom,temp.coeff.±20°C;hFE 10 nom;BVCEO 120.
35	PT-L3	14 N-PL	SI T046	A	Press .10psid nom,temp.coeff.±0.5V/C;hFE 10 nom;BVCEO 120.
36	PT-M2	14 N-PL	SI T046	A	Press .25psid nom,temp.coeff.±20°C;hFE 10 nom;BVCEO 120.
37	PT-M3	14 N-PL	SI T046	A	Press .25psid nom,temp.coeff.±0.5V/C;hFE 10 nom;BVCEO 120.
38	M22P2	15 N-PL	SI u58a	T	BVCBO-25V;BVCEO-18V;BVEBO-5.0V;Ic-100mA;hFE-70min at Ic 2.0mA and VCE 4.5V.
39	M22P3	15 N-PL	SI u58a	T	BVCBO-25V;BVCEO-18V;BVEBO-5.0V;Ic-100mA;hFE-110min at Ic 2.0mA and VCE 4.5V.
40	M22P4	15 N-PL	SI u58a	T	BVCBO-25V;BVCEO-18V;BVEBO-5.0V;Ic-100mA;hFE-150min at Ic 2.0mA and VCE 4.5V.
41	M23P-X504	15 N-PE	SI u70	T	2N2219-22 chips
42	M23P-X509	15 N-PE	SI u70	T	2N3975 chip
43	M23P-X516	15 N-PE	SI u70	T	2N3976 chip.
44	M24P-X502	15 N-PE	SI u58a	T	2N2714 chip.
45	M26P-X504	15 N-PE	SI u59a	T	2N2484 chip.
46	M26P-X505	15 N-PE	SI u59a	T	2N930 chip.
47	M26P-X516	15 N-PE	SI u59a	T	2N3858 chip.
48	M26P-X517	15 N-PE	SI u59a	T	2N8232 chip.
49	M26P-X531	15 N-PE	SI u59a	T	2N929 chip.
50	M26P-X558	15 N-PE	SI u59a	T	2N5172 chip
51	M26P-X560	15 N-PE	SI u59a	T	2N3860 chip.
52	M28P-X507	15 N-PE	SI u59a	T	2N3855A chip.
53	M28P-X508	15 N-PE	SI u59a	T	2N3856A chip.
54	M32P-X503	15 N-PE	SI u71	T	2N3414 chip.
55	M32P-X506	15 N-PE	SI u71	T	2N3416 chip.
56	M32P-X608	15 N-PE	SI u71	T	2N3417 chip.
57	M32P-X509	15 N-PE	SI u71	T	2N3415 chip.
58	M63P-X503	15 N-PE	SI u72	T	2N918 chip.
59	M67P-X504	15 N-PE	SI u70	T	2N2905-07 chips.
60	M73P1	15 N-PE	SI u73	T	Darlington chip;BVCBO-18V;BVEBO-12V;hFE-3.0k at Ic-2.0mA and VCE-5.0V.
61	M73P-X502	15 N-PE	SI u73	T	2N5306 Darlington chip.
62	M82P-X500	15 N-PE	SI u74	T	2N708 chip.
63	TH95	15 P-PEΔ	SI u66	G	BVCBO50V;BVCEO50V;BVEBO50V;Ic100mAmax;hFE20min at Ic3.0mAandVCE500mV.
64	TH2192	15 N-PE	SI u64	T	BVCBO80V;BVCEO40V;BVEBO 0V;1.0mAmax;hFE100min at Ic50mAandVCE10V.
65	TH2221	15 N-PE	SI u48	T	2N222 chip;Aluminum Contacts;Gold Metallization on back.
66	TH2221A	15 N-PE	SI u48	T	2N2221A chip;Aluminum Contacts;Gold Metallization on back.
67	TH2222	15 N-PE	SI u48	T	2N2222 chip;Aluminum Contacts;Gold Metallization on back.
68	TH2222A	15 N-PE	SI u48	T	2N222A chip;Aluminum Contacts;Gold Metallization on back.
69	TH2369	15 N-PEΔ	SI u60	T	BVCBO40V;BVCEO15V;BVEBO4.5V;Ic500mAmax;hFE40min at Ic10mAand VCEVCE5.0V.
70	TR2906	15 P-PE	SI u48	T	2N2906 chip;Aluminum Contacts;Gold Metallization on back.
71	TH2906A	15 P-PE	SI u48	T	2N2906A chip;Aluminum Contacts;Gold Metallization on back
72	TH2907	15 P-PE	SI u48	T	2N2907 chip;Aluminum Contacts;Gold Metallization on back.
73	TH2907A	15 P-PE	SI u48	T	2N2907A chip;Aluminum Contacts;Gold Metallization on back.
74	TH2926	15 N-PE	SI u58	T	BVCBO18V;BVCEO50V;Ic100mAmax;hFE35min at Ic2.0mAandVCE10V.
75	TH2944	15 P-PEΔ	SI u67	T	BVCBO15V;BVCEO10V;BVEBO15V;Ic100mAmax;hFE80min at Ic1.0mAandVCE500mV.
76	TH2945	15 P-PEΔ	SI u67	T	BVCBO25V;BVCEO20V;BVEBO25V;Ic100mAmax;hFE40min at Ic1.0mAandVCE500mV.
77	TH2946	15 P-PEΔ	SI u67	T	BVCBO40V;BVCEO35V;BVEBO40V;Ic100mAmax;hFE30min at Ic1.0mAandVCE500mV.
78	TH3638	15 P-PE	SI u48	T	BVCBO25V;BVCEO25V;BVEBO40V;Ic500mAmax;hFE30min at Ic50mAandVCE10V.
79	TH3877	15 N-PE	SI u59	T	BVCBO70V;BVCEO70V;BVEBO4.0V;Ic50mAmax;hFE20min at Ic10mAandVCE4.5V.
80	TH3904	15 N-PE	SI u62	T	BVCBO60V;BVCEO40V;BVEBO8.0V;Ic200mAmax;hFE100min at Ic10mAandVCE5.0V.
81	TH3906	15 P-PE	SI u63	T	BVCBO40V;BVCEO40V;BVEBO5.0V;Ic200mAmax;hFE100min at Ic10mAandVCE5.0V.
82	TH4258	15 P-PEΔ	SI u61	T	BVCBO12V;BVCEO12V;BVEBO4.5V;Ic50mAmax;hFE30min at Ic10mAandVCE5.0V.
83	TH4384	15 N-PE	SI u48	T	2N4384 chip;Aluminum Contacts;Gold Metallization on back.
84	TH4386	15 N-PE	SI u48	T	2N4386 chip;Aluminum Contacts;Gold Metallization on back.
85	TH4413	15 P-PE	SI u48	T	2N4413 chip;Aluminum Contacts;Gold Metallization on back.
86	TH4415	15 P-PE	SI u48	T	2N4415 chip;Aluminum Contacts;Gold Metallization on back.
87	TH7500	15 P-PE	SI u65	T	BVCBO60V;BVCEO40V;BVEBO5.0V;Ic1.0mAmax;hFE100min at Ic50mAandVCE10V.
88	TH7501	15 P-PE	SI u65	T	BVCBO60V;BVCEO60V;BVEBO5.0V;Ic1.0mAmax;hFE100min at Ic50mAandVCE10V.
89	2N2723	16 N-PL	SI L4	I	hFE 1.5k-15k;BVCEO 60V.
90	2N2724	16 N-PL	SI L4	I	hFE 5.0k-60k;BVCEO 45V.
91	2N2725	16 N-PL	SI L55	I	Pt 800mW;BVCBO 40V;BVCEO 30V;BVEBO 10V;hFE 5000 min.
92	2N4974	16 P	SI L55	I	Pt 800mW;BVCBO 40V;BVCEO 30V;BVEBO 10V;hFE 1000 min.
93	2N4975	16 P	SI L55	I	Pt 800mW;BVCBO 60V;BVCEO 30V;BVEBO 5.0V;hFE 1000 min.
94#	BDY87	16 NΔ	SI	I	Pt 35W;BVCBO 20V;hFE 2.5k at Ic 4.0A;VCE 2.0V.
95#	BDY88	16 NΔ	SI	I	Pt 35W;BVCBO 40V;hFE 2.5k at Ic 4.0A;VCE 2.0V.
96#	BDY89	16 NΔ	SI	I	Pt 35W;BVCBO 60V;hFE 2.5k at Ic 4.0A;VCE 2.0V.
97*	D18P1	16 N-PE	SI L3h	F	BVCBO 18V;BVCEO 12V;BVEBO 12V;Pt 400mW;Ic 60MHz min;hfe 2000 min.
98*	D40C1	16 NA	SI X51c	F	Pd 1.2W;BVCEO 30V;BVEBO 13V;hFE 10k to 60k;f 75MHz;ts 350ns;tf 800ns.
99*	D40C2	16 NA	SI X51c	F	Pd 1.2W;BVCEO 30V;BVEBO 13V;hFE 40k min;f 75MHz;ts 350ns;tf 800ns.
100*	D40C4	16 NA	SI X51c	F	Pd 1.2W;BVCEO 40V;BVEBO 13V;hFE 40k min;f 75MHz;ts 350ns;tf 800ns.
101*	D40C5	16 NA	SI X51c	F	Pd 1.2W;BVCEO 40V;BVEBO 13V;hFE 40k min;f 75MHz;ts 350ns;tf 800ns.
102*	D40C7	16 NA	SI X51c	F	Pd 1.2W;BVCEO 50V;BVEBO 13V;hFE 10k to 60k;f 75MHz;ts 350ns;tf 800ns.
103*	HEPS9100*	16 N	SI T092	A	BVCBO 18V;BVCEO30V;BVEBO10V;Ic300V;Pd500mW;f200MHz;hFE20k;ICBO100mA;ALL MINIMUM.
104*	HEPS9120*	16 P	SI T092	A	BVCBO;BVCEO30V;BVEBO0.8V;Ic300V;Pd500mW;f175MHz;hFE50k;ICBO100mA;ALL MINIMUM.
105	MCH2005F	16	△ L76	I	Pd 500mW;hFE 1.0k min. at IC 1.0A;VCE 10V;BVCBO 50V;BVCEO 30V;Ic 350ns max.
106	MJ900	16 P	SI T03	C	BVCBO 60V;BVCEO 60V;BVEBO 50V;Pd 90W;ICBO 200u;hFE 1.0k min.
107	MJ901	16 P	SI T03	C	BVCBO 60V;BVCEO 60V;BVEBO 50V;Pd 90W;ICBO 200u;hFE 1.0k min.
108	MJ1000	16 N	SI T03	C	BVCBO 60V;BVCEO 60V;BVEBO 50V;Pd 90W;ICBO 200u;hFE 1.0k min.
109	MJ1001	16 N	SI T03	C	BVCBO 60V;BVCEO 60V;BVEBO 50V;Pd 90W;ICBO 200u;hFE 1.0k min.
110*	MJ2500	16 P	SI L78	C	Pd 150W;BVCBO 60V;BVCEO 60V;BVEBO 50V;ICBO 400uA max;hFE 1000 min.

SYMBOLS AND CODES
EXPLAINED IN INTERPRETER

13. MISCELLANEOUS TRANSISTORS

IN ORDER OF (1) CATEGORY & (2) TYPE No.

LINE No.	TYPE No.	CATEGORY	M'DWG #	L C	DESCRIPTION
1	MJ2501	16 P	Si L78	Pd 150W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 400uA max;hFE 1000 min.	
2	MJ3000	16 N	Si L78a	Pd 150W;BVCBO 60V;BVCEO 60V;BVEBO 5.0V;ICBO 400uA max;hFE 1000 min.	
3	MJ3001	16 N	Si L78a	Pd 150W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 400uA max;hFE 1000 min.	
4	MJ4000	16 N	Si L78a	Pd 75W;BVCBO 60V;BVCEO 60V;BVEBO 5.0V;ICBO 200uA max;hFE 1000 min.	
5	MJ4001	16 N	Si L78a	Pd 75W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 200uA max;hFE 1000 min.	
6	MJ4010	16 P	Si L78	Pd 75W;BVCBO 60V;BVCEO 80V;BVEBO 5.0V;ICBO 200uA max;hFE 1000 min.	
7	MJ4011	16 P	Si L78	Pd 75W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 200uA max;hFE 1000 min.	
8	MJ4030	16 P	Si L78	Pd 150W;BVCBO 60V;BVCEO 60V;BVEBO 5.0V;ICBO 1.0mA max;hFE 1000 min.	
9	MJ4031	16 P	Si L78	Pd 150W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 1.0mA max;hFE 1000 min.	
10	MJ4032	16 P	Si L78	Pd 150W;BVCBO 100V;BVCEO 100V;BVEBO 5.0V;ICBO 1.0mA max;hFE 1000 min.	
11	MJ4033	16 N	Si L78a	Pd 150W;BVCBO 60V;BVCEO 60V;BVEBO 5.0V;ICBO 1.0mA max;hFE 1000 min.	
12	MJ4034	16 N	Si L78a	Pd 150W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 1.0mA max;hFE 1000 min.	
13	MJ4035	16 N	Si L78a	Pd 150W;BVCBO 100V;BVCEO 100V;BVEBO 5.0V;ICBO 1.0mA max;hFE 1000 min.	
14	MJE1090	16 PT	Si L78b	Pd 70W;BVCBO 60V;BVCEO 60V;BVEBO 5.0V;ICBO 200uA max;hFE 750 min.	
15	MJE1091	16 PT	Si L78b	Pd 70W;BVCBO 60V;BVCEO 60V;BVEBO 5.0V;ICBO 200uA max;hFE 750 min.	
16	MJE1092	16 PT	Si L78b	Pd 70W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 200uA max;hFE 750 min.	
17	MJE1093	16 PT	Si L78b	Pd 70W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 200uA max;hFE 750 min.	
18	MJE1100	16 N1	Si L78c	Pd 70W;BVCBO 60V;BVCEO 60V;BVEBO 5.0V;ICBO 200uA max;hFE 750 min.	
19	MJE1101	16 N1	Si L78c	Pd 70W;BVCBO 60V;BVCEO 60V;BVEBO 5.0V;ICBO 200uA max;hFE 750 min.	
20	MJE1102	16 N1	Si L78c	Pd 70W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 200uA max;hFE 750 min.	
21	MJE1103	16 N1	Si L78c	Pd 70W;BVCBO 80V;BVCEO 80V;BVEBO 5.0V;ICBO 200uA max;hFE 750 min.	
22	MPSA12	16 N	Si TO92	A Pd 310mW;hFE 20k min. at IC 10mA,VCE 5.0V,BVCEO 20V,VCE(sat) 1.0V, max.	
23	RM3005	16 N	TO72	Pd 500mW;hFE 2.0k min, VCB 100V max	
24	RM3022	16 N-PL	Si TO18	A Pd 1.8W max;hFE 1.6k min. at IC 10mA;BVCBO 60V	
25#	SL305B	16 N-E*	Si L63	Pt 600mW;BVCBO 50V;hFE 600 typ. at IE 10mA, f 600MHz.	

14. TYPES WITH U.S. MILITARY SPECIFICATIONS

IN TYPE NUMBER
SEQUENCE

TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/	TYPE No.	MFRS	MIL-S-19500/
2N43A	GESY	6A	2N458B	none	217A	2N657	FSC	74E	2N1008B	MOTA	198A	2N1183B	KSC	143B
2N44A	GESY	6A			AMEND		GESY	Ø		AMEND	AMEND		RCA	2
2N78A	GESY	90A	2N461	GESY	1		TEC	AMEND		TII	2			EL
	USAF			MOTA	4SA		KSC	58D	2N1011	MOTA	67A	2N1184	KSC	143B
2N117	TII	2B			AMEND	2	MOTA	none	2N1016B	SEN	102A		RCA	2
2N118	TII	2B			USAF	70A		NAVY		SIL	Ø			EL
2N119	TII	2B			AMEND			99E		SPC				AMEND
2N123	none	30A	2N463	none	1		FSC	AMEND		WESY			KSC	143B
	USAF				NAVY		TSC	1		SEN	102A	2N1184A	RCA	AMEND
2N128	SPR	98			49C	2N696	FSC	99E		SPC			KSC	143B
2N158	KSC	24D			AMEND		TSC	AMEND		WESY			RCA	Ø
2N167A	GESY	11C	2N464	none	1			1		SEN	102A	2N1184B	KSC	143B
2N174A	DEL	13B			49C	2N697	FSC	1		SIL			RCA	143B
	MOTA	AMEND			AMEND		TSC	1		SPC				Ø
2N220	none	1A	2N465	MOTA	EL	2N700A	MOTA	123A	2N1016D	SEN	102A			AMEND
2N240	SPR	258			49C	AMEND	TII	153B		SIL			MOTA	2
2N297A	KSC	38C			AMEND	2N702	MOTA	153B		SPC				EL
	Ø				1		TII	AMEND		WESY				AMEND
2N326	KSC	40B	2N466M	GIC	51D	2N703	MOTA	none	2N1021A	KSC	217A	2N1197	none	71D
2N328A	CRY	110B	2N467	GIC	49C	AMEND	TII	153B	2N1022A	MOTA	217A	2N1224	APX	165
	NSC			MOTA	AMEND	1	MOTA	153B		AMEND	AMEND		RCA	SigC
	RAYN				EL	2N705	MOTA	86A	2N1025M	CRY	78B	2N1225	APX	189A
	SOD				EL		TII	AMEND	2N1026M	CRY	78B		RCA	AMEND
	SPR				Ø		FSC	120C	2N1039	SPR	89C	2N1234	CRY	1
2N329A	CRY	110B	2N489A	GESY	75B	2N706	TII	1		KSC	89C		SOD	165
	NSC			TII	AMEND		MOTA	Ø		TII	Ø			SigC
	RAYN		2N490A	GESY	75B		TEC			KSC	137B			1266
	SOD			TII	AMEND		TSC			TII	1			GIC
2N331	MOTA	40	2N491A	GESY	75B	2N708	FSC	312B	2N1042	KSC	137B			RCA
2N333	TEC	37C		TII	AMEND		ITT			TII	Ø			TII
	TII	AMEND		Ø	AMEND	2N708	MOTA			KSC	137B			GESY
2N333A	none	37C		Ø	AMEND		RAYN			TII	1			GIC
	1			1	AMEND		TEC			KSC	137B			RCA
2N335A	TEC	37C	2N492A	GESY	75B	2N718A	FSC	181C	2N1043	TII	137B			TII
2N335	TII	37C		TII	AMEND		MOTA	Ø		KSC	137B			GIC
	1			1	AMEND		RAYN	AMEND		TII	2			RCA
2N336A	TEC	37C	2N493A	GESY	75B	2N720A	TSC	182C	2N1044	KSC	137B			TII
	TII	37C		TII	AMEND		Ø			TII	Ø			GESY
2N336	TEC	37C	2N494A	GESY	75B	2N720A	FSC	273A	2N1045	TII	88	2N1305		1266
	TII	37C		TII	AMEND		TII	NAVY		SEN	176A			GIC
2N336A	none	37C	2N497	GESY	74E	2N744	FSC	273A	2N1046	SIL	176A	2N1306		1266
	1			TEC	AMEND	2N757A	TII	NAVY		SEN	176A			GIC
2N336A	none	37C	2N498	GESY	74E	2N759A	MOTA	none	2N1047A	SIL	176A	2N1307		1266
	1			TEC	AMEND	2N760A	Ø	none		SEN	176A			GESY
2N337	TEC	69D	2N499	MOTA	72C	2N869A	FSC	283B	2N1048A	SIL	176A			1266
	TII	69D		SPR	AMEND	2N890	MOTA	Ø	2N1049A	AMEND	176A			AMEND
2N338	TEC	69D	2N499A	MOTA	72C	2N910	FSC	274B	2N1050A	Ø	176A	2N1308		1266
	TII	69D		SPR	AMEND		TII	RAYN		SEN	176A			AMEND
2N341	TII	31B	2N501A	MOTA	82B	2N911	FSC	274B	2N1051	SIL	176A	2N1309		1266
2N342	TH	16E		Ø	AMEND		TII	RAYN		AMEND	176A			AMEND
2N342A	none	16E		Ø	AMEND		Ø	EL		Ø	176A			NAVY
2N343	TH	16E		Ø	AMEND		Ø	Ø		Ø	176A			136A
2N358A	GIC	63C	2N502A	MOTA	112C	2N912	FSC	274B	2N1072	Ø	176A	2N1310		1266
	TII	63C		SPR	AMEND		TII	RAYN		Ø	163	2N1358		1266
2N384	RCA	27E	2N502B	MOTA	112C	2N914	FSC	373	2N1094	Ø	163	2N1411		1266
2N388	GIC	65B		Ø	AMEND		TII	Ø		Ø	161	2N1412		1266
	RCA	65B		Ø	AMEND		MOTA	Ø		Ø	176C			AMEND
2N389	SEN	173A	2N526	GESY	60E	2N916	FSC	274B	2N1118	Ø	176A	2N1412A		1266
	SIL	Ø		MOTA	100A	AMEND	TII	Ø	2N1119	Ø	176A	2N1412A		1266
2N393	MOTA	77C	2N539	KSC	38C	2N918	FSC	301A	2N1120	MOTA	68A	2N1450M		1266
	SPR	AMEND		SOD	Ø		TII	Ø		Ø	Ø			AMEND
2N396A	GESY	64D	2N539A	KSC	38C		MOTA	Ø		Ø	Ø			NAVY
2N398A	MOTA	174A		SOD	Ø		Ø	Ø		Ø	Ø			1266
	RCA	AMEND		TEC	Ø		Ø	Ø		Ø	Ø			USAF
2N404	GIC	20B	2N545	Ø	AMEND		Ø	Ø		Ø	Ø			Ø
	RCA	20B		Ø	AMEND		Ø	Ø		Ø	Ø			Ø
2N404A	GIC	20B	2N559	MOTA	152C	2N929	FSC	253B	2N1131	FSC	177C	2N1469M		1266
	RCA	20B		Ø	AMEND		TII	Ø		MOTA	AMEND			Ø
2N416	GIC	56B	2N560	none	13	2N930	FSC	253B	2N1132	TII	177C	2N1481		1266
2N417	GIC	56B	2N574	SOD	46B		TII	Ø		MOTA	AMEND			Ø
2N422	none	66B	2N575	SOD	46B		TII	Ø		RAYN	Ø	2N1482		1266
2N424	SEN	173A	2N575A	SOD	46B	2N930	TII	Ø		TEC	Ø	2N1483		1266
	SIL	Ø		Ø	AMEND		MOTA	Ø		Ø	Ø			Ø
2N425	GIC	41B	2N598	GIC	197C	2N930	FSC	253B	2N1142	MOTA	87A	2N1483		1266
	AMEND	1		Ø	AMEND		TII	Ø		Ø	Ø			Ø
2N426	GIC	41B	2N599	GIC	186C	2N962	FSC	258A	2N1142	MOTA	178B	2N1485		1266
	AMEND	1		Ø	AMEND		TII	Ø		Ø	Ø			Ø
2N427	GIC	41B	2N600	GIC	197C	2N964	FSC	258A	2N1142	MOTA	178B	2N1485		1266
	AMEND	1		Ø	AMEND		TII	Ø		Ø	Ø			Ø
2N428	GIC	44D	2N604	none	221B	2N964	FSC	258A	2N1174	MOTA	Ø	2N1488		1266
	TII	44D		Ø	AMEND		TII	Ø		Ø	Ø			Ø
2N428	GIC	44D	2N650A	MOTA	175C	2N986	Ø	210B	2N1183	KSC	143B	2N1489		1266
	TII	44D		Ø	AMEND		Ø	NAVY		RCA	AMEND	2N1490		1266
2N458B	none	217A	2N651A	MOTA	175C	2N987	Ø	210B	2N1183	KSC	143B	2N1493		1266
	AMEND	1		Ø	AMEND		Ø	NAVY		RCA	AMEND	2N1493		1266
2N457B	none	217A	2N652A	MOTA	175C	2N987	Ø	267	2N1183A	KSC	143B	2N1499A		1266
	AMEND	1		Ø	AMEND		Ø	Ø		RCA	AMEND	2N1500		1266

T - Qualification included
TX Devices

S - NATO
Ø - USAF Preferred (TX Type Only)
Ø - Mil-Std-701 Device

14. TYPES WITH U.S. MILITARY SPECIFICATIONS

IN TYPE NUMBER
SEQUENCE

TYPE No.	MFRS MIL-S-19500/	TYPE No.	MFRS MIL-S-19500/	TYPE No.	MFRS MIL-S-19500/	TYPE No.	MFRS MIL-S-19500/	TYPE No.	MFRS MIL-S-19500/
2N1506A	none 265 Ø	2N2080	IFSC 270B Ø	2N2432	INSC 00 (cont.)	2N2904A	TTI 290B	2N331	Tnone 378A USAF
	AMEND 1		1MOTA EL	AMEND 1	TEC 313A	(cont.)	TSC 290B	2N332	Tnone 378A USAF
2N1549A	MOTA 332	2N2079A	ITSC 340	2N2432A	TTI 290B	2N2905	1MOTA 00	2N3375	1MOTA 3418 NSC
2N1550A	MOTA 332	2N2084	APX 213B	2N2481	IFCRY 268B	1NSC 1	AMEND 1	2N3418	1RCA 00
2N1551A	MOTA 332	2N2150	ITEC 277C		1MOTA 00	1NSC 1	AMEND 1		1none 393
2N1552A	MOTA 332	2N2151	ITEC 277C		1MOTA 00	1TEC 1	AMEND 1		Ø AMEND 4
2N1553A	MOTA 331	2N2218	IFSC 251E	2N2484	1RAYN 1	1TSC 1	NAVY 1	2N3419	USAF 393
	AMEND 1		1MOTA 00	2N2497	IFCRY 1	1TT 290B	AMEND 1		Ø AMEND 4
2N1554A	MOTA 331	2N2218A	IFSC 251E	2N2498	Tnone 378A	1TSC 291B	1none 393	2N3420	USAF 393
	Ø AMEND 1		1MOTA 00		USAF 378A	1MOTA 00	AMEND 1		Ø AMEND 4
2N1555A	MOTA 331	2N2219	IFSC 251E	2N2499	Tnone 378A	1NSC 1	AMEND 1	2N3421	USAF 393
	AMEND 1		1MOTA 00	2N2500	USAF 378A	1NSC 1	AMEND 1		Ø AMEND 4
2N1556A	MOTA 331	2N2219	IFSC 251E	2N2528	1RAYN 1	1TEC 1	AMEND 1	2N3421	AMEND 4
	Ø AMEND 1		1MOTA 00		USAF 309	1TII 291B	AMEND 1		AMEND 4
2N1557A	MOTA 330A	2N2219A	IFSC 251E	2N2553	KSC 89C	1TSC 291B	1none 393	RCA 368	AMEND 4
	AMEND 2		1MOTA 00	2N2553	TII 1	1MOTA 00	AMEND 1		AMEND 4
2N1558A	MOTA 330A	2N2219A	IFSC 251E	2N2555	KSC 89C	1NSC 1	AMEND 1	2N3439	RCA 368
	AMEND 2		1MOTA 00		USAF 378A	1TEC 1	AMEND 1		AMEND 4
2N1559A	MOTA 330A	2N2221	IFSC 255E	2N2557	KSC 89C	1TII 291B	1none 393	RCA 369	AMEND 4
	AMEND 2		1MOTA 00	2N2559	AMEND 1	1MOTA 00	AMEND 1		AMEND 4
2N1560A	MOTA 330A	2N2221	IFSC 255E	2N2604	KSC 89C	1TSC 291B	1none 393	RCA 370	AMEND 4
	AMEND 2		1MOTA 00		USAF 354	1MOTA 00	AMEND 1		AMEND 4
2N1613	IFSC 181C	2N2221A	IFSC 255E	2N2605	NSC RAYN	1TSC 291B	1none 393	MOTA 347	AMEND 1
	1MOTA 00		1MOTA 00		AMEND 1	1MOTA 00	AMEND 1		AMEND 1
2N1646	none 2238 USAF	2N2222	IFSC 255E	2N2606	SIX 292A	1TSC 291B	1none 393	MOTA 338	AMEND 1
	219A AMEND 4		1MOTA 00	2N2607	SIX 294A	1TSC 291B			AMEND 1
2N1651	none 2238 USAF	2N2222	IFSC 255E	2N2608	SIX 295A	1TSC 291B	1none 393	MOTA 338	AMEND 1
	219A AMEND 4		1MOTA 00		USAF 354	1TSC 291B			AMEND 1
2N1652	none 2238 USAF	2N2222	IFSC 255E	2N2639	NSC RAYN	1TSC 291B	1none 393	MOTA 338	AMEND 1
	219A AMEND 4		1MOTA 00		AMEND 1	1TSC 291B			AMEND 1
2N1653	MOTA 219A	2N2222A	IFSC 255E	2N2642	TII 292A	1TSC 291B	1none 393	MOTA 338	AMEND 1
	AMEND 4		1MOTA 00		AMEND 1	1TSC 291B			AMEND 1
2N1711	IFSC 225D	2N2222A	IFSC 255E	2N2708	MOTA 302A	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	1TSC 00		1MOTA 00		AMEND 1	1TSC 291B			AMEND 1
2N1714	TII 263A	2N2222A	IFSC 255E	2N2812	1PIR 415	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	AMEND 2		1MOTA 00		USAF 366A	1TSC 291B			AMEND 1
2N1715	TII 263A	2N2273	IFSC 255E	2N2814	1PIR 415	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	AMEND 2		1MOTA 00		USAF 366A	1TSC 291B			AMEND 1
2N1716	TII 263A	2N2369A	IFSC 317D	2N2857	1MOTA 343A	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	AMEND 2		1MOTA 00		AMEND 1	1TSC 291B			AMEND 1
2N1717	TII 263A	2N2369A	IFSC 317D	2N2858	Tnone 381	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	AMEND 2		1MOTA 00		AMEND 1	1TSC 291B			AMEND 1
2N1722	1SEN 262F	2N2377	CRY 288	2N2859	Tnone 381	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	1TEC 00		SPR 288		AMEND 1	1TSC 291B			AMEND 1
2N1724	1SEN 262F	2N2378	CRY 289	2N2876	Tnone 381	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	1TEC 00		SPR 289		AMEND 1	1TSC 291B			AMEND 1
2N1853	1SEN 262F	2N2417A	Tnone 758	2N2880	1FSC 315C	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	1TEC 00		AMEND 1		AMEND 1	1TSC 291B			AMEND 1
2N1854	RCA 171B	2N2417A	Tnone 758	2N2880	1PIR 315C	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	NAVY 172B		AMEND 1		AMEND 1	1TSC 291B			AMEND 1
2N1890	IFSC 225D	2N2418A	Tnone 758	2N2904	1SIL 315C	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	1TSC 00		AMEND 1		AMEND 1	1TSC 291B			AMEND 1
2N1893	IFSC 182C	2N2419A	Tnone 758	2N2904	1SOD 315C	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	1TSC 00		AMEND 1		AMEND 1	1TSC 291B			AMEND 1
2N2015	RCA 248A	2N2420A	Tnone 758	2N2904	1TII 290B	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	AMEND 1		AMEND 1		AMEND 1	1TSC 291B			AMEND 1
2N2016	RCA 248A	2N2421A	Tnone 758	2N2904A	1TII 290B	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	AMEND 1		AMEND 1		AMEND 1	1TSC 291B			AMEND 1
2N2034	Tnone 381	2N2422A	TCRY 313A	2N2904A	Tnone 381	1TSC 291B	1none 393	MOTA 366A	AMEND 1
	Ø EL		Ø EL		AMEND 1	1TSC 291B			AMEND 1
		2N2432 cont.next col.			AMEND 1	1TSC 291B			AMEND 1
					AMEND 1	1TSC 291B			AMEND 1

† - Qualification included
TX Devices

§ - NATO

□ - USAF Preferred (TX Type Only)

Ø - Mil-Std-701 Device

14. TYPES WITH U.S. MILITARY SPECIFICATIONS

IN TYPE NUMBER
SEQUENCE

TYPE No.	MFRS MIL-S-19500/	TYPE No.	MFRS MIL-S-19500/	TYPE No.	MFRS MIL-S-19500/	TYPE No.	MFRS MIL-S-19500/	TYPE No.	MFRS MIL-S-19500/	TYPE No.	MFRS MIL-S-19500/
2N3635	1MOTA 357B 02 AMEND 1	2N3867	Inone 350A 02	2N5237	Inone 394 02	55191/33	none 33				
2N3636	1MOTA 357B 02 EL 1 AMEND 1	2N3868	1MOTA 350A 02	1DEL 371A 02	2N5238	Inone 394 02	55191/34	none 34			
2N3637	1MOTA 357B 02 AMEND 1 EL 1	2N3902	1MOTA 399 02	1MOTA 399 02	2N5250	Inone 394 02	55191/36	none 36			
2N3700	1RAYN 391 02 AMEND 2 USAF 2	2N3997	1PIR 374 02	2N5241	Inone 414 02	USAF 380A 02					
2N3715	Inone 408A 02 AMEND 2 EL 2	2N3998	1PIR 374 02	1AMEND 2N5251	Inone 380A 02	AMEND 1					
2N3716	Inone 408A 02 AMEND 2 EL 2	2N3999	1PIR 374 02	1AMEND 2N5332 1	Inone 409A 02	USAF 410A 02					
2N3735	Inone 435 02 AMEND 2 EL 2	2N4091	Inone 431 02	2N5399 1	Inone 410A 02	USAF 425 02					
2N3737	Inone 395 02 AMEND 2 USAF 2	2N4092	Inone 431 02	2N5431 1	Inone 425 02	AMEND 1					
2N3739	Inone 402 02 AMEND 2 USAF 2	2N4093	Inone 431 02	2N5545 1	Inone 430 02	USAF 430 02					
2N3742	Inone 405 02 AMEND 1 EL 1	2N4150	Inone 394 02	2N5546 1	Inone 430 02	USAF 430 02					
2N3743	1MOTA 397 02 AMEND 1 EL 1	2N4416A	Inone 428 02	2N5547 1	Inone 423 02	AMEND 1					
2N3749	1PIR 315C 1SD 02	2N4440	1RCA 341B 02	2N5581 1	Inone 423 02	AMEND 1					
2N3763	Inone 396 02 AMEND 2 USAF 2	2N4449	Inone 317D 02	2N5682 1	Inone 423 02	AMEND 1					
2N3765	Inone 396 02 AMEND 2 USAF 2	2N4453	Inone 283B 02	2N5927 1	Inone 440 02	USAF 440 02					
2N3771	1MOTA 397 02 AMEND 1 USAF 1	2N4854	Inone 421 02	3N35 3N74	TII 80D TII 390 02	USAF 390 USAF 390 02					
2N3772	1RCA 413 AMEND 1 USAF 1	2N4856	Inone 385 02	3N75 3N76	TII 390 TII 390 02	USAF 390 USAF 390 02					
2N3791	Inone 396 02 AMEND 2 EL 2	2N4857	Inone 385 02	3N93 none	Inone 385 none	USAF 363 AMEND 1					
2N3792	Inone 379A 02 AMEND 2 EL 2	2N4858	Inone 385 02	3N108 3N127	TII 390 TII 390 02	USAF 361 NAVY 361 02					
2N3810	1MOTA 336 NSC 0 TII AMEND 2 NAVY 2	2N4860	Inone 385 02	3N127 Inone	TII 390 Inone	USAF 390 USAF 390 02					
2N3811	1MOTA 336 NSC 0 NAVY 2	2N4861	Inone 385 02	3N127 Inone	TII 390 Inone	USAF 390 USAF 390 02					
2N3821	TII 375A 1TSC 02	2N4947	Inone 388 02	3N127 Inone	TII 388 Inone	USAF 388 USAF 388 02					
2N3822	1TSC 375A 02	2N4948	1MOTA 388 TII 02	3N127 Inone	1MOTA 388 TII 02	USAF 388 USAF 388 02					
2N3823	TII 375A 1TSC 02	2N4949	1MOTA 388 TII 02	3N127 Inone	1MOTA 388 TII 02	USAF 388 USAF 388 02					
2N3838	Inone 421 AMEND 2 USAF 2	2N4957	Inone 426 02	3N127 Inone	1MOTA 388 TII 02	USAF 426 USAF 426 02					
2N3846	Inone 412 AMEND 1 USAF 1	2N5016	Inone 400 02	3N127 Inone	1MOTA 388 TII 02	USAF 400 USAF 400 02					
2N3847	Inone 412 AMEND 1 USAF 1	2N5156	Inone 416 02	3N127 Inone	1MOTA 388 TII 02	USAF 416 USAF 416 02					
2N3866	1MOTA 398 1RCA 02	2N5157	Inone 371A 02	3N127 Inone	1MOTA 388 TII 02	USAF 371A USAF 371A 02					

Department of Defense Index of Specifications
and Standards dated 1 July 1969, Supplement
dated 1 May 1970.

Device Manufacturers
Qualifications on Test Reference Letter.

MIL-S-19500E Military Specification, General
Specification for Semiconductor Devices, dated
1 April 1968, Amendment 3 dated 23 October
1970.

MIL-S-55191 (EL) Military Specification General
Specification for Semiconductor (Micro-Elements)
dated 7 May 1963 and Supplement 1 dated 7 May
1963.

MIL-STD-701G Military Standard, List of Standard
Semiconductor Devices dated 27 May 1968 and
Notice 4 dated 30 December 1969.

QPL-19500-41 Qualified Products List of Products
qualified under Military Specification MIL-S-19500,
dated 4 May 1970.

- Following Type No.
- * - No technical data tabulated
- ▼ - Spec. superseded but devices are being supplied for existing requirements.

- Under MIL-S-19500/No.
- † - Qualification included TX devices

∅ - Standard MIL-STD-701 Devices } For Additional Information See { \$ - NATO
USAF Preferred (TX Type Only) } MIL-STD-701 { √ - USAF Preferred (TX Type Only)

15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

THE PREFIX LETTERS OF THE OUTLINE DRAWING NUMBERS INDICATE THE FOLLOWING:

- L — MULTIPLE Lead Type
- MD — MOUNTED Type — DIAMOND Base
- MM — MOUNTED Type — MISCELLANEOUS
- MS — MOUNTED Type — SQUARE and
- MT — MOUNTED Type — THREADED
- OV — OVAL Case
- R — ROUND Case
- TO — JEDEC Type
- u — MICROMINIATURE Case
- x — MISCELLANEOUS Configuration including Phototransistor
- Y200/T0200 — JEDEC "200" Series
- ZA — DRAWING REFERENCE INFORMATION

NOTES:

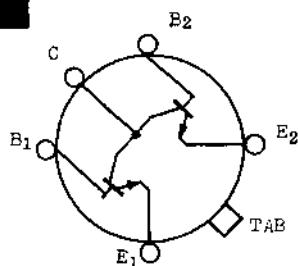
These outline drawings are intended as a guide for the user. They should not be used for construction purposes without first checking with the appropriate manufacturer.

These drawings are referenced in the Technical Sections of this D.A.T.A.BOOK in accordance with information supplied by the manufacturers.

The DO and TO drawings have been reproduced from JEDEC Publication No. 12E (May 1964) with the permission of the National Electrical Manufacturer's Association - Electrical Industries Associates. JEDEC designations are assigned only to outlines submitted by the JS-10 Committee on Mechanical Standardization. The procedure of assigning and announcing the JEDEC designation constitutes registration.

All drawings have circular symmetry unless indicated.

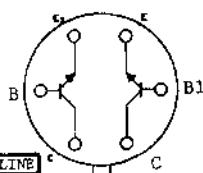
L1



L1 — T077 - DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION

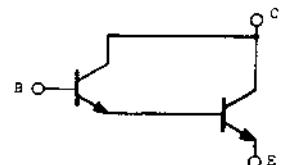
L1a — T071 - DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION

L2



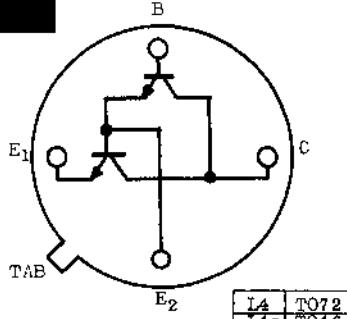
E1	B1	C1	E2	B2	G2	OUTLINE
L2	3	2	1	5	6	R131
L2b	3	2	1	5	6	T077
L2d	3	2	1	5	6	T078
L2f	2	1	9	4	5	T078
L2g	3	2	1	4	5	T078
L2h	1	2	3	7	6	R102
L2i	1	2	3	5	6	T071
L2m	3	2	1	5	6	T070
L2p	3	2	1	5	6	T071
L2r	3	2	1	5	6	R136
L2s	3	2	1	5	6	T137
L2t	3	2	1	5	6	T131c
L2u	1	3	2	4	6	R138
L2v	3	2	1	5	6	R131d
L2w	3	2	1	5	6	R131e
L2y	3	2	1	5	6	R131f
L2z	1	2	3	4	5	R138

L3



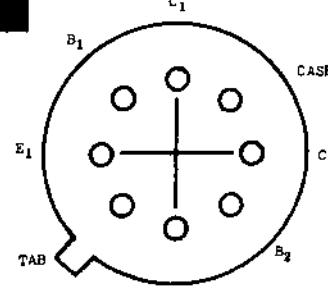
E	B	C	POLARITY	OUTLINE
L3	1	2	3	NPN T018
L3a	1	2	3	NPN T05
L3b	1	2	3	PNP T018
L3c	1	2	3	PNP T05
L3d	1	2	3	NPN T085
L3e	1	2	3	NPN T098
L3f	2	1	3	PNP T098
L3g	1	2	3	NPN R110c
L3h	1	3	2	PNP T098

L4



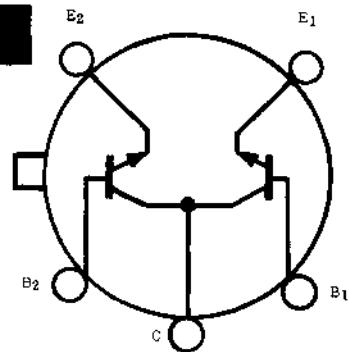
L4	T072
L4a	T046

L5



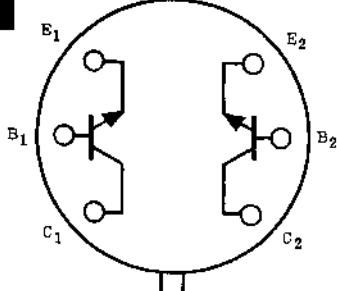
DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION

L6



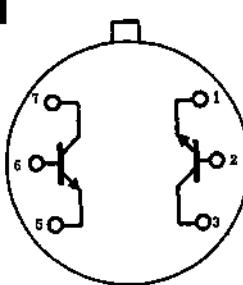
OUTLINE DRAWINGS
L6 T06 dimensions except for number of leads
L6a R144

L8



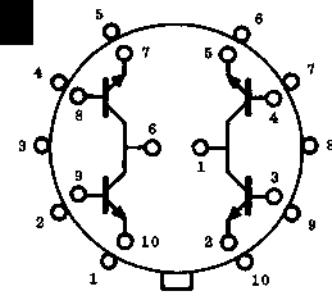
INTERNAL CONFIGURATION	OUTLINE DRAWING
L8	T033
L8a	R52

L10



T06
DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION

L11

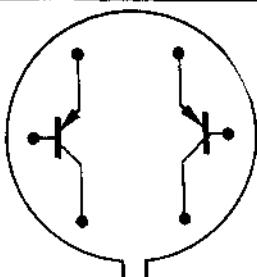


T05
DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION

15. OUTLINE DRAWINGS

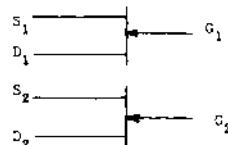
IN DRAWING NUMBER SEQUENCE

L 17



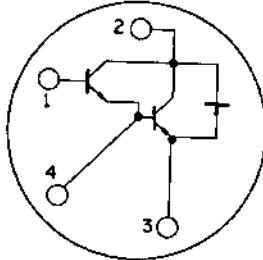
E1	B1	C1	E2	B2	C2	OUTLINE	
L17a	3	2	1	5	6	7	TO77
L17b	3	2	1	5	6	7	R52b
L17c	3	2	1	5	6	7	TO78
L17d	2	1	9	4	5	7	TO90
L17e	1	2	3	5	6	7	TO71
L17f	3	2	1	5	6	7	R62
L17g	3	2	1	5	6	7	R131b
L17h	3	2	1	4	5	6	R131a
L17i	3	2	1	5	6	7	R131
L17k	3	2	1	5	6	7	R131c
L17m	1	3	2	4	6	5	R138
L17s	2	1	9	4	5	7	X22
L17t	3	2	1	5	6	7	R137
L17u	1	6	7	2	5	3	TO71
L17v	3	2	1	4	5	6	R52a
L17w	1	2	3	4	5	6	R138
L17x	3	2	1	5	6	7	R131a

L 21



S1	D1	G1	S2	D2	G2	OUTLINE	
L21	1	2	3	5	6	7	TO71
L21a	1	2	3	5	6	7	TO76
L21b	1	2	3	4	5	6	R120
L21c	2	1	9	4	5	7	TO89
L21d	1	2	3	4	5	6	TO71
L21e	1	2	3	4	5	6	R148

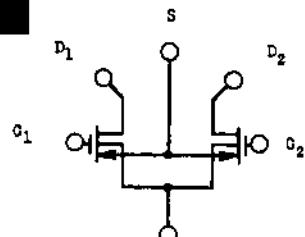
L 35



X19 DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION

B1	C1	E2	OUTLINE
L35	1	2	X19
L35a	3	4	12

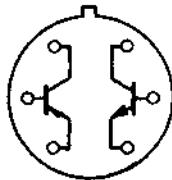
L 18



SUBSTRATE

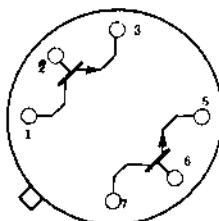
D1	G1	D2	G2	S	SUBSTRATE	OUTLINE	
L18	1	2	7	6	8	4	TO77
L18a	1	3	7	5	8	4	TO78
L18b	1	2	7	6	8	4	TO75
L18c	1	3	7	5	8	4	TO78

L 19



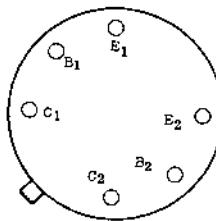
NPN		PNP					
E1	B1	C1	E2	B2	C2	OUTLINE	
L19	3	2	1	5	6	7	TO77
L19a	3	2	1	5	6	7	TO78
L19b	1	3	2	4	6	5	R138
L19c	2	1	9	4	5	7	TO89
L19d	1	2	3	4	5	6	R138
L19e	1	2	3	4	5	6	R52

L 22



TO18 Dimensions except for Lead configurations

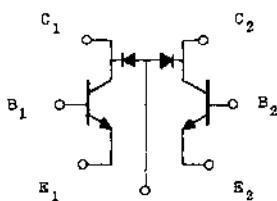
L 23



H33 Dimensions except for internal configurations

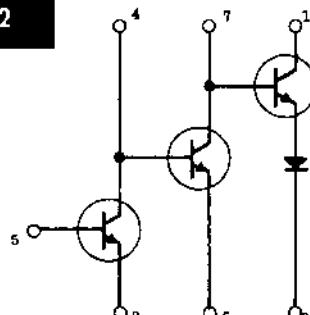
L 44

TOS DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION



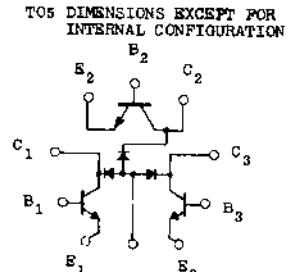
B1	B1	C1	E2	B2	C2	OUTLINE	
L44	1	2	3	7	6	5	TO5
L44a	1	2	3	7	6	5	TO78

L 42



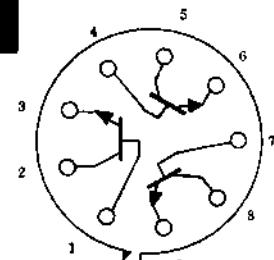
TO77 OUTLINE

L 43



E1	B1	C1	E2	B2	C2	E3	B3	C3	OUTLINE	
L43	1	2	3	4	5	6	7	8	9	TO5
L43a	1	2	3	4	5	6	7	8	9	TO78
L43b	2	3	4	14	13	12	5	6	7	X91

L 50

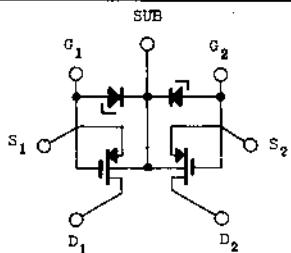


P129 OUTLINE AND DIMENSIONS

15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

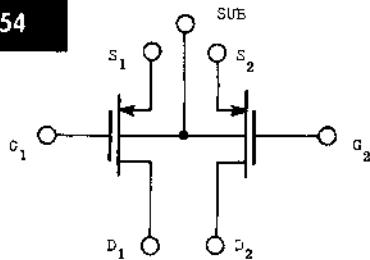
L 53



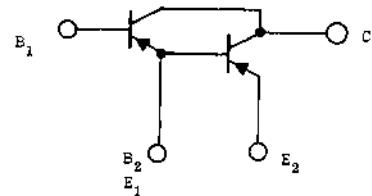
TO77 DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION

OUTLINE	D ₁	S ₁	G ₁	G ₂	S ₂	D ₂	SUBSTRATE
TO77	1	2	3	5	6	7	4

L 54



L 55



B ₁	B ₂ & E ₁	E ₂	C	OUTLINE
2	4	1	3	TO12

L 56

E ₁	B ₁	C ₁	C ₂	B ₂	E ₂	C ₃	B ₃	E ₃	C ₄	B ₄	E ₄	POLARITY	OUTLINE	
L56	3	2	1	7	6	5	8	9	10	11	12		PNP	TO86
L56a2	1	1	2	3	4	5	10	11	6	7	8		NPN	TO85
L56b2	1	1	2	3	4	5	10	11	6	7	8		PNP	TO85
L56c3	2	1	5	6	7	10	9	8	12	13	14		NPN	TO86
L56d1	3	5	6	7	10	9	8	12	13	14			PNP	TO84
L56e1	2	3	5	6	7	10	9	8	12	13	14		X84	
L56f1	2	3	5	6	7	10	9	8	12	13	14		NPN	TO84
L56g1	2	3	5	6	7	10	9	8	12	13	14		X84	
L56h4	3	2	6	5	4	9	10	4	13	12	1		NPN	TO84
L56i4	3	2	6	5	4	9	10	4	13	12	1		X84	

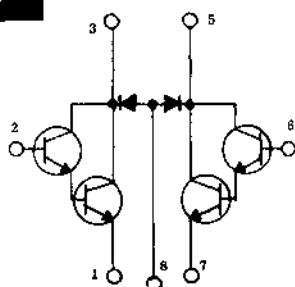
L 58

S ₁	D ₁	G ₁	S ₂	D ₂	G ₂	POLARITY	OUTLINE	
L58	1	2	3	4	5	6	N	TO21
L58a	1	2	3	4	5	6	S	RS2b
L58b	2	1	3	6	7	5	P	TO89

L 59

NPN				PNP				OUTLINE			
E ₁	B ₁	C ₁	E ₂	B ₂	C ₂	E ₃	B ₃	C ₃	E ₄	B ₄	C ₄
L59	2	1	13	4	3	12	11	10	5	9	8

L 63

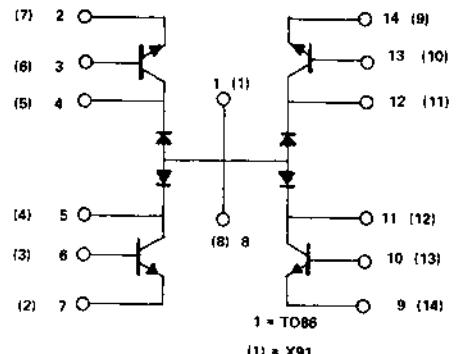


TO77 DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION

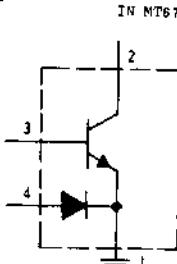
L 66

LEAD CONFIGURATION								OUTLINE
1	2	3	4	5	6	7	8	
C	B	E	OMIT	E	B	C	CNTL	
L66								TO99
L66a								TO99
L66b								TC99

L 67

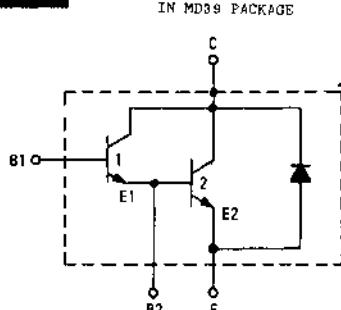


L 68



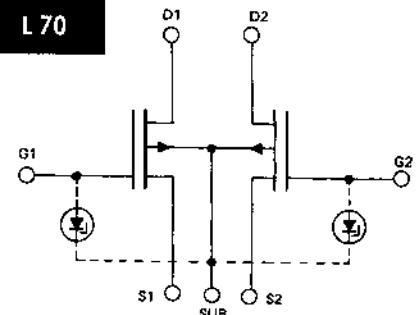
IN MT67B PACKAGE

L 69



IN MD39 PACKAGE

L 70



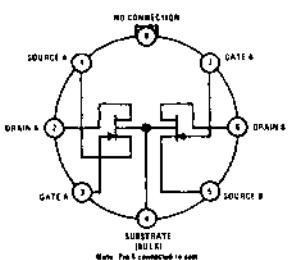
S ₁	G ₁	D ₁	S ₂	G ₂	D ₂	SUB	OUTLINE
L70 - ZENER DIODES OMITTED							

15. OUTLINE DRAWINGS

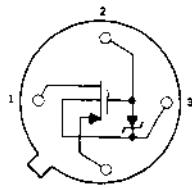
IN DRAWING NUMBER SEQUENCE

L74

TO99-OUTLINE

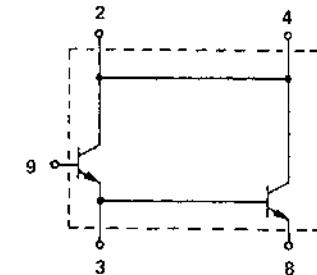


L75

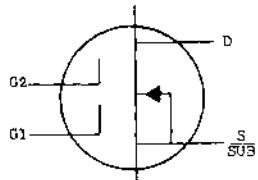


TO33 DIMENSIONS EXCEPT FOR INTERNAL CONFIGURATION

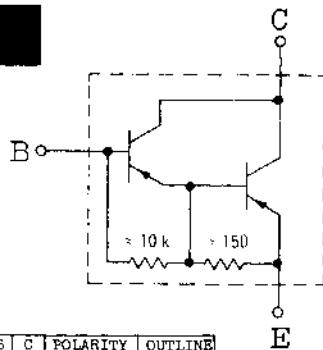
L76



L77

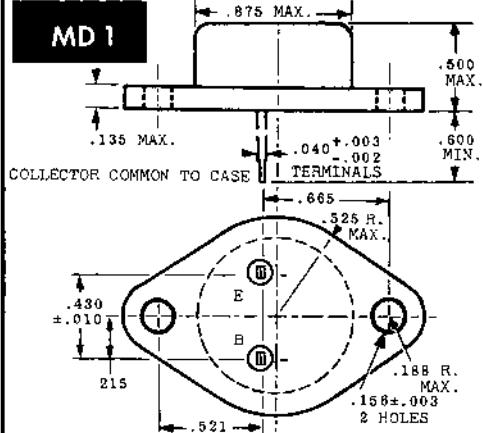


L78

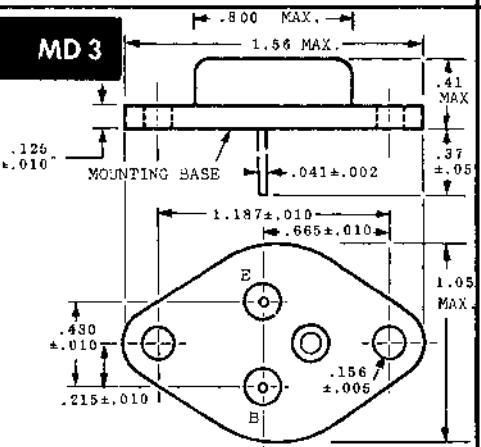


E	B	C	POLARITY	OUTLINE
178	2	1 3	PNP	TO3
178a	2	1 3	NPN	TO3
178b	1 3	2	PNP	X58a
178c	1 3	2	NPN	X58a

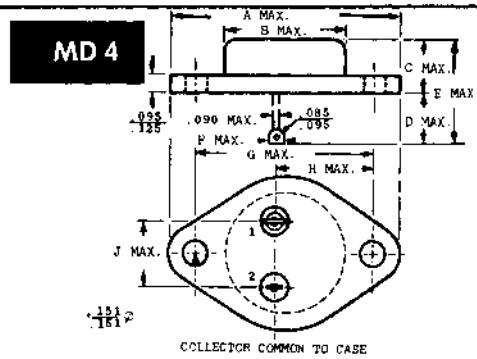
MD 1



MD 3

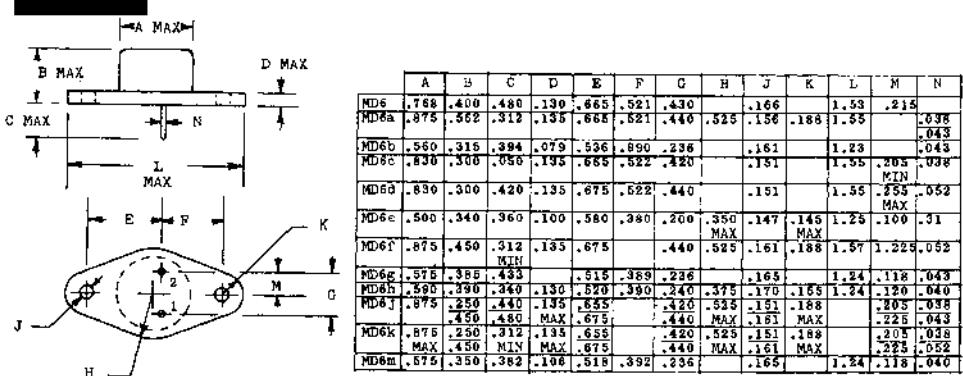


MD 4

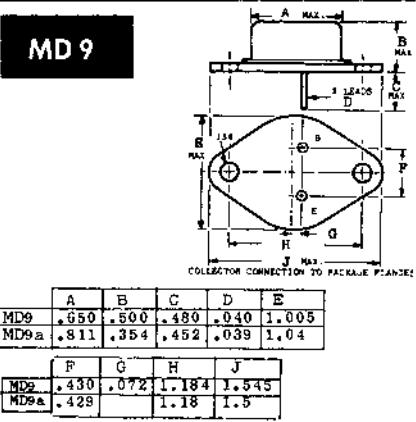


A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
MD4	1.431	.783	.380	.655	1.032	.146	1.192	.670	.460															
MD4a	.773	.338	.176	.376	1.038	.148	1.191	.672	.440															

MD 6



MD 9



D.A.T.A.

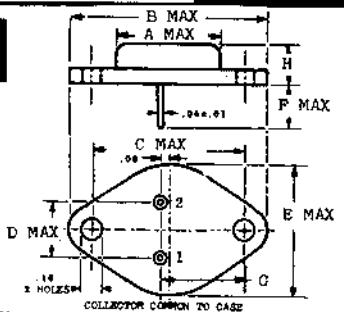
233

ALL DIMENSIONS IN INCHES

15. OUTLINE DRAWINGS

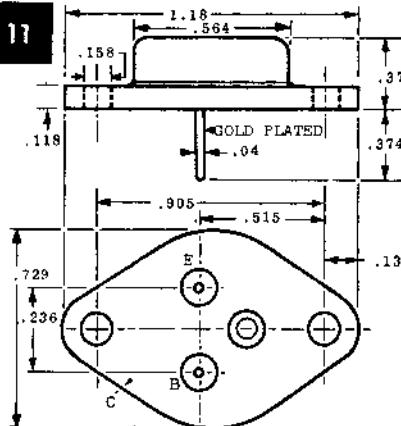
IN DRAWING NUMBER SEQUENCE

MD 10

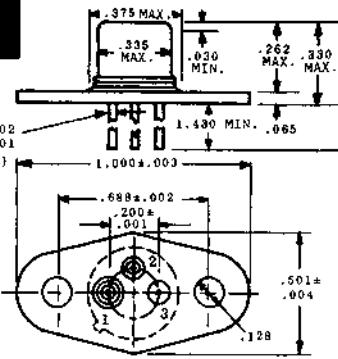


	A	B	C	D	E	F	G	H
MD10	.570	1.22	.949	.322	.785	.355		.295
MD10a	.590	1.22	.949	.322	.785	.355		.295
MD10b	.590	1.30	.949	.322	.785	.355		.295
MD10c	.551	1.22	.913	.244	.743	.413	.523	
MD10d	.551	1.22	.913	.244	.743	.413	.523	.263
MD10e	.500	1.22	.962	.210	.707	.360	.580	.341
MD10f	.492	1.26	.969	.201	.709	.394	.579	.315

MD 17

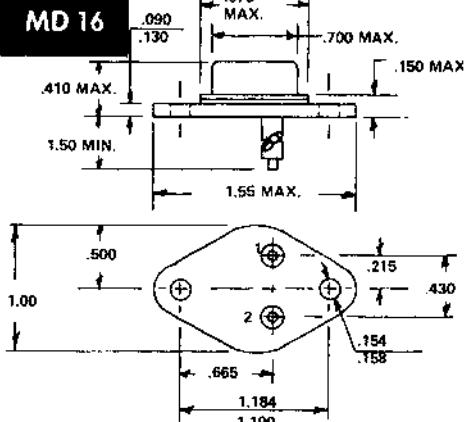


MD 14

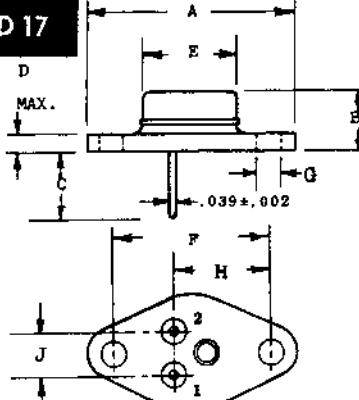


NOTE 1: Lead diameter is controlled in the zone between .050 and .250 from the base seat. Between .250 and end of lead a max. of .021 is held.

MP 16

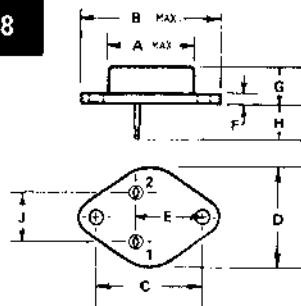


MD 17



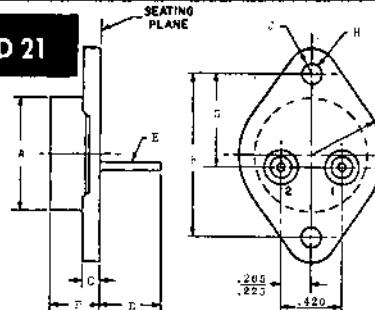
	A	B	C	D	E	F	G	H	J
MD17	1.18	.350	.350	.071	.562	.900	.157	.506	.226
			MIN			.910	.165	.526	.250
MD17a		.350	.382	.106	.562	.900	.157	.506	.226
				.428		.910	.165	.526	.250
MD17b	1.23	.315	.394	.079	.562	.800	.157	.506	.226
MD17c	1.23	.350	.354	.106	.574	.897	.157	.506	.226
		MAX	MAX			.913	.165	.526	.250
MD17d	1.56	.275	.400	.150	.900	1.18	.157	.506	.226
			MAX			.913	.165	.526	.250
MD17e	1.20	.281	.374	.078	.553	.901	.157	.506	.226
	1.23	.314	.413		.559	.909	.165	.526	.250
MD17f	1.48	.283	.472	.078	.790	1.18	1.61	.550	.424
	1.54	.345			.800			.580	.434

MD 18

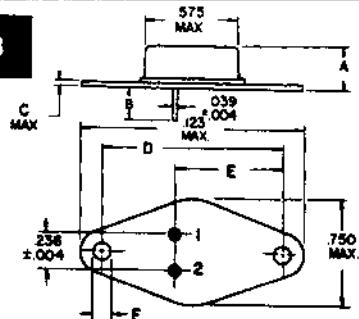


	A	B	C	D	E	F	G	H	J
MD18	1.30	2.09	1.69	1.41	.990	.146	.580	.450	.760
MD18a	1.22	2.32	1.81	1.54	.720	.138	.610	.517	.710

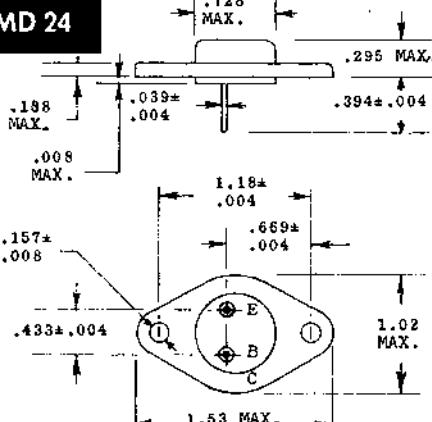
100



MD 23



MD 24



MD 25

NOTE 1: Index tab shown for 40255 or 40256 for lead orientation corresponding to that for MD-14 Outline. For lead identification refer to terminal diagram.

NOTE 2: Index tab shown for 40255 or 40256
for lead orientation corresponding to that
for TO-37 Outline.

NOTE 3: .070 MIN., .074 MAX. Dia.
Countersunk 90 degrees or Counterbored
.125 Dia. x .025 Deep.

This technical drawing shows a cross-sectional view of a mechanical part. Key dimensions include:

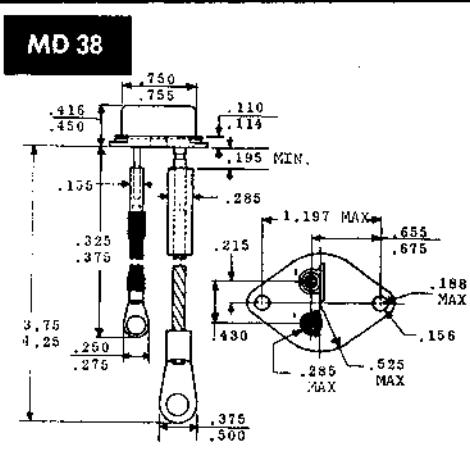
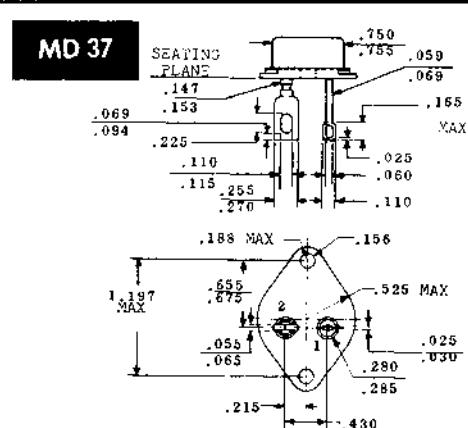
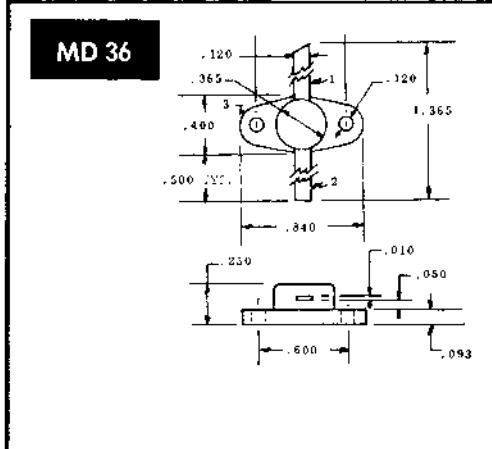
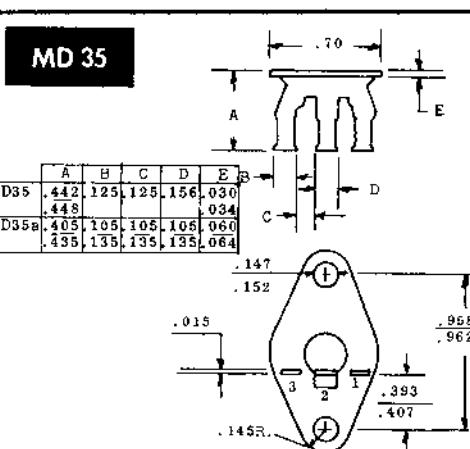
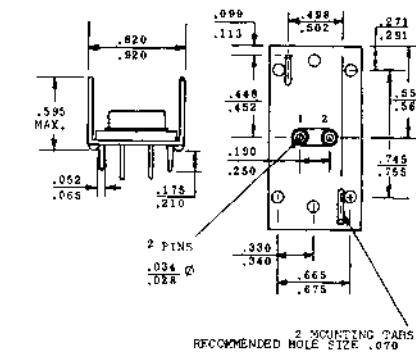
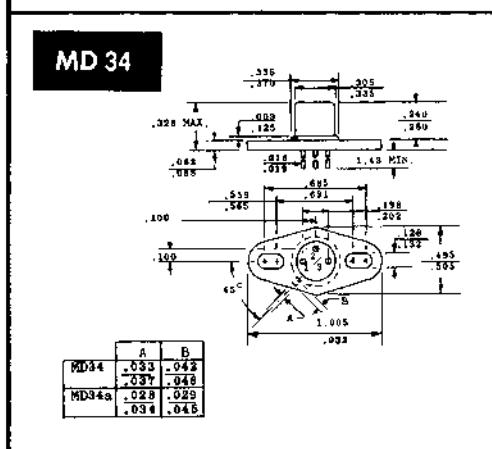
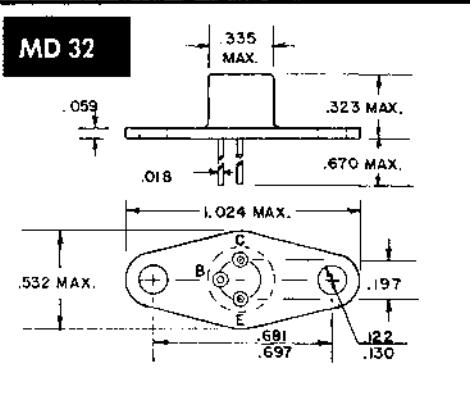
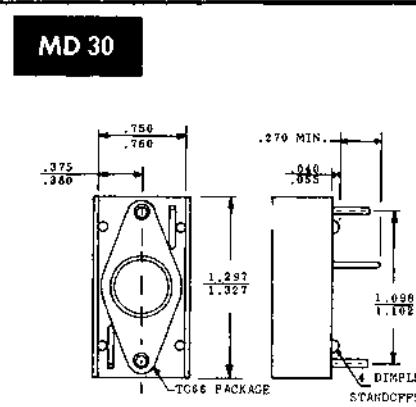
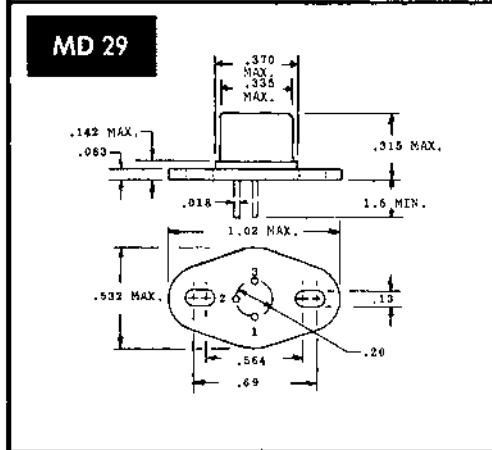
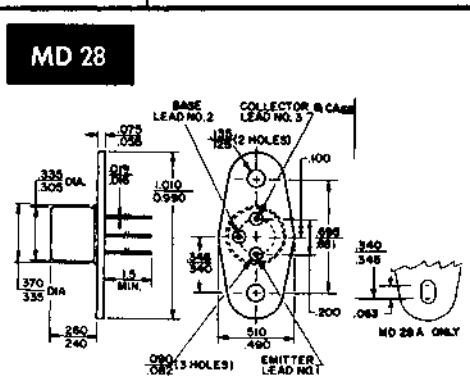
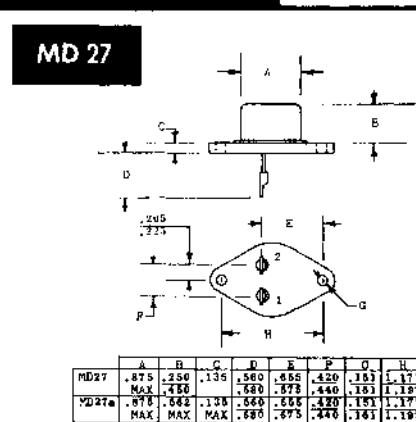
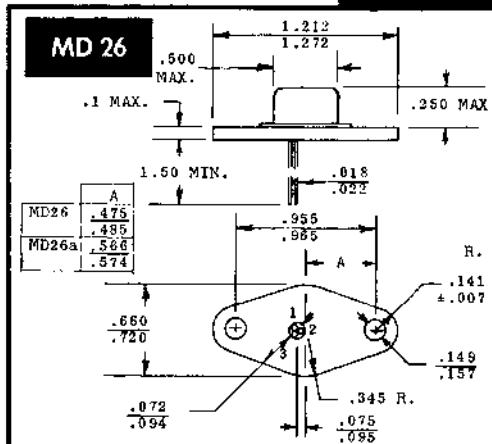
- Width: $.332 \pm .005$ MAX., $.335 \pm .005$ MAX.
- Height: $.242 \pm .020$, $.370$, $.335$
- Depth: $.065 \pm .005$, $.019$, $.016$
- Bottom hole diameter: $.688 \pm .003$
- Bottom hole distance from base: $.562 \pm .003$, $.200 \pm .002$
- Bottom hole distance from top: 1.43 MIN.
- Bottom hole distance from left edge: $.500 \pm .005$
- Bottom hole angle from horizontal: 45°
- Bottom hole diameter tolerance: $.035 \pm .002$
- Bottom hole center distance from bottom edge: $.044 \pm .002$
- Bottom hole center distance from left edge: $1.000 \pm .005$

Notes:

- NOTE 1: Points to the bottom hole area.
- NOTE 2: Points to the right edge of the part.
- NOTE 3: Points to the text "bottom 4 HOLES".

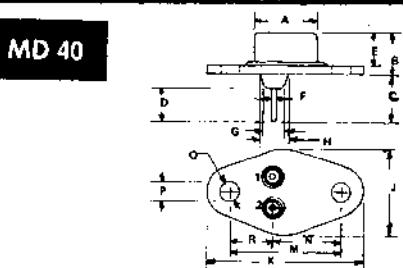
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE



15. OUTLINE DRAWINGS

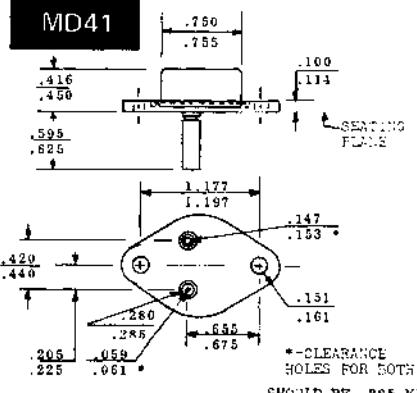
IN DRAWING NUMBER SEQUENCE

MD 40


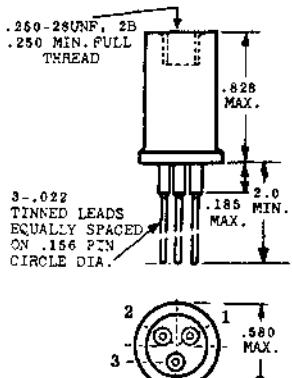
	A	B	C	D	E	F	G	H
MD40	.844	.354	.354	.197	.076	.037	.137	.137
	.570	.MAX.	.393	.MAX.	.086	.041	.177	
MD40a	.744	.346	.453	.157	.033	.037	.167	.177

	J	K	X	N	P	Q	R
MD40	.789	1.26	.897	.603	.228	.152	
	.MAX.	.913	.527	.244	.165		
MD40a	1.021	.57	1.118	.437	.150	.052	

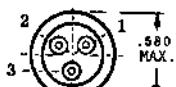
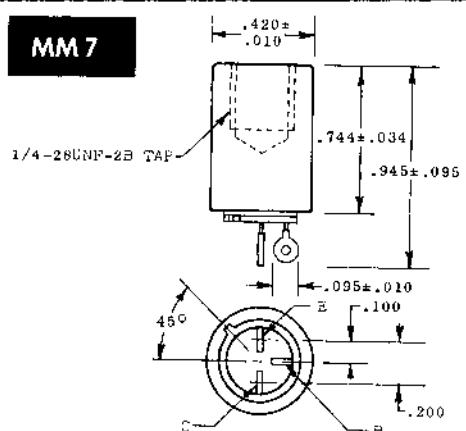
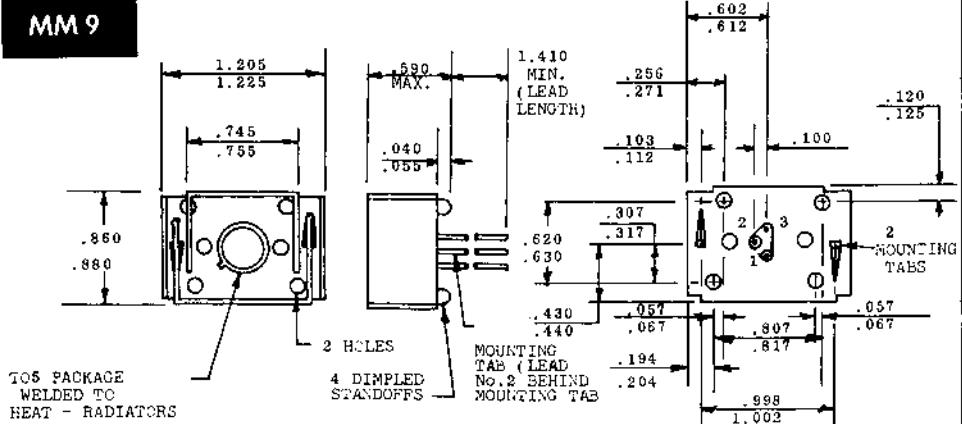
	M	N	P	Q	R
MD40	.783	.486	.479	.MAX.	.053
	.783	.486	.479	.041	.077

MD41


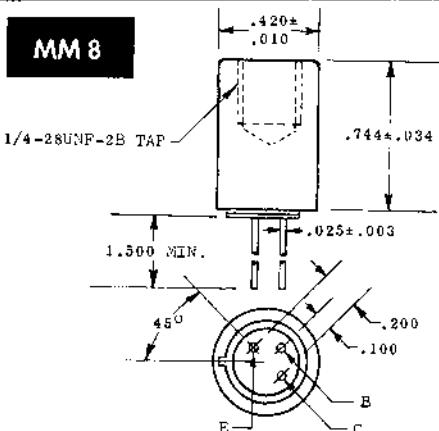
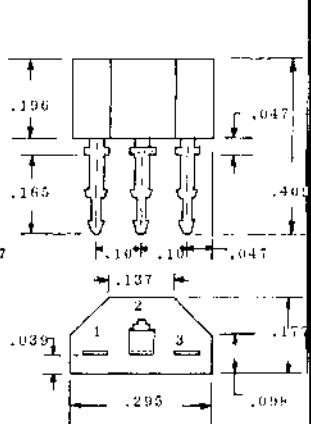
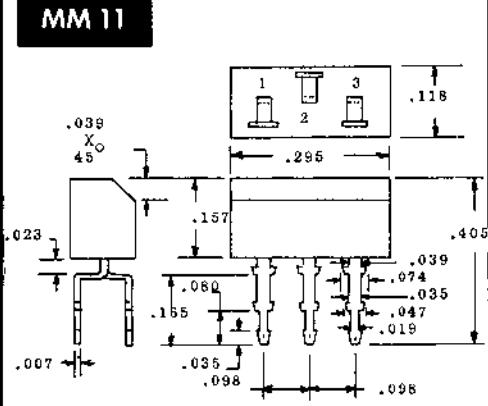
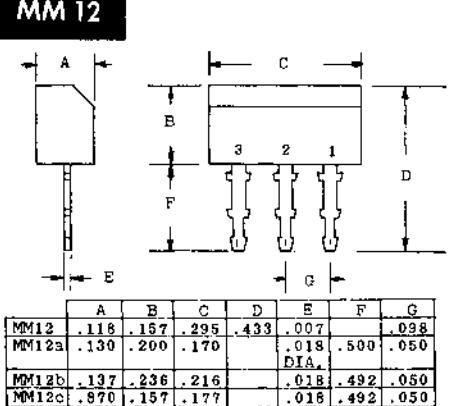
*-CLEARANCE
HOLES FOR BOTH PINS
SHOULD BE .265 MIN. DIA

MM3


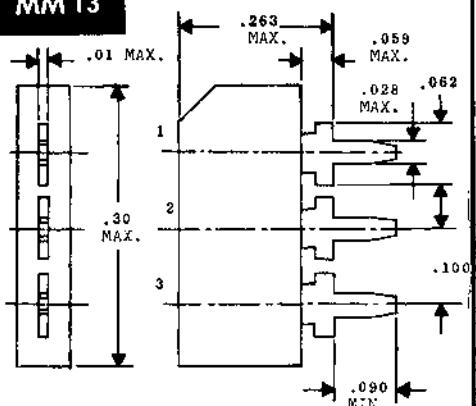
3-.022
TINNED LEADS
EQUALLY SPACED
ON .156 PIN
CIRCLE DIA.


MM 7

MM 9


TOS PACKAGE
WELDED TO
HEAT - RADIATORS

MM 8

MM 10

MM 11

MM 12


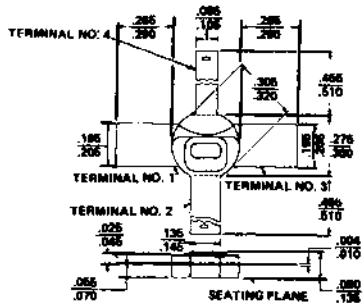
A	B	C	D	E	F	G
MM12	.118	.157	.295	.433	.007	.098
MM12a	.130	.200	.170		.018	.500
					DIA.	
MM12b	.137	.236	.216		.018	.492
MM12c	.870	.157	.177		.018	.050

MM 13


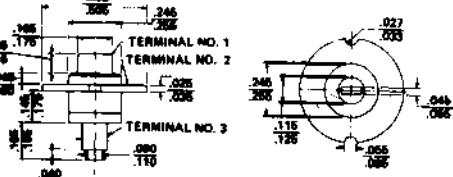
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

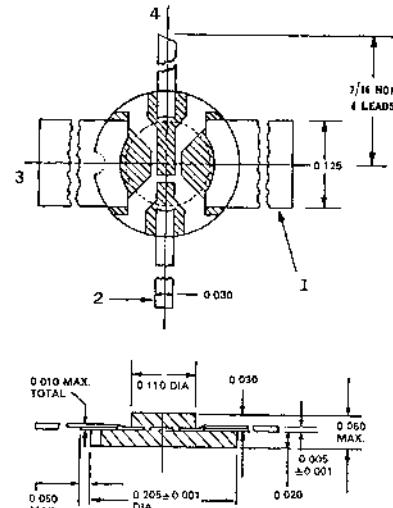
MM 14



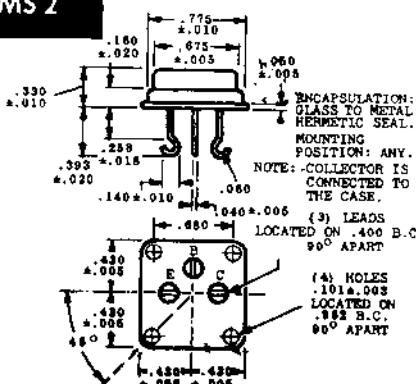
MM 15



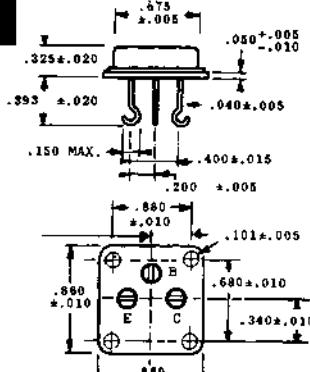
MM16



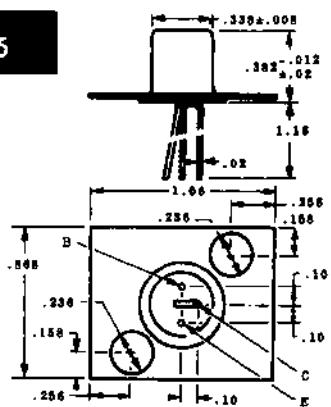
MS 2



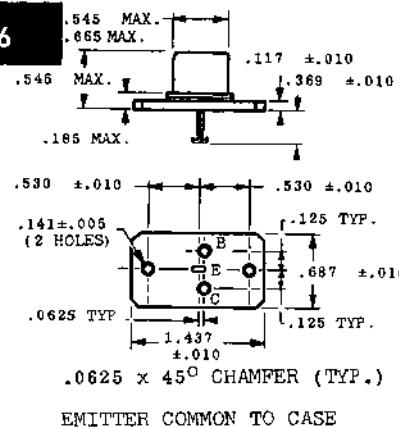
MS 3



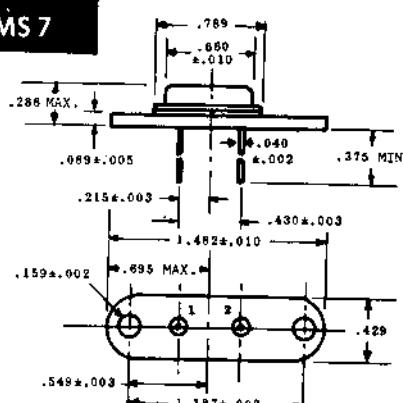
MS 5



MS 6



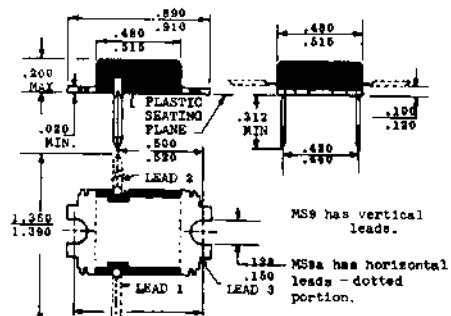
MS 7



MS 8

SAME AS T053
COLLECTOR ISOLATED FROM CASE

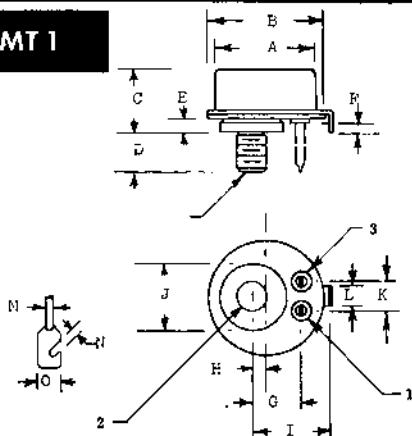
MS 9



15. OUTLINE DRAWINGS

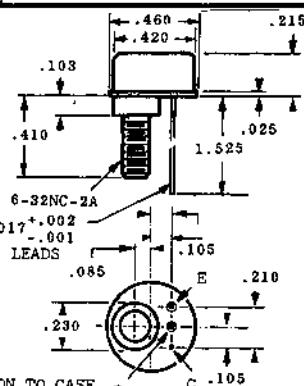
IN DRAWING NUMBER SEQUENCE

MT 1



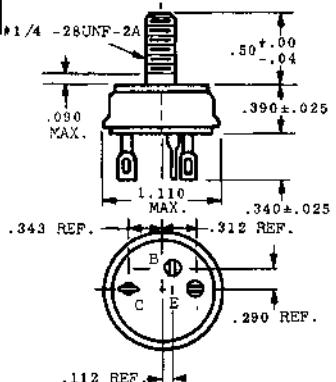
MT1	MT1a	MT1b
A .1.046	.1.046	1.130 MAX.
B .1.281	.1.281	1.280-.1.240
C .348 MAX.	.548 MAX.	.560 MAX.
D .562	.562	.580-.550
E .125	.125	.140 MAX.
F .020	.020	.190-.130
G .500	.500	.620-.480
H .156	.156	.170-.140
I .828	.828	.850-.810
J .750	.750	.770-.730
K .375	.375	.380-.400
L .156	.156	.170-.140
M .060±.005	.060±.005	.055-.083
N .055 hole	.062±.008	.055-.075
O .120±.010	.110±.010	.110-.166

MT 5

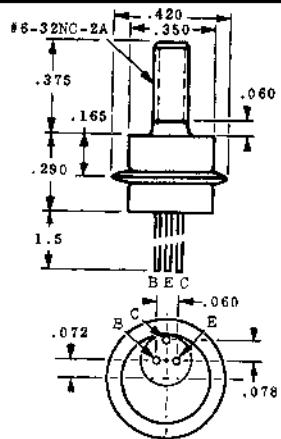


COLLECTOR COMMON TO CASE
DIMENSIONS ARE MAXIMUM
UNLESS OTHERWISE STATED

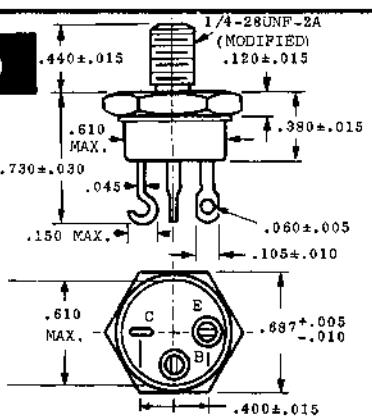
MT 7



MT 9



MT 10



MT10 COLLECTOR COMMON TO CASE
MT10a COLLECTOR ISOLATED FROM CASE

NOTES FOR MT-13:

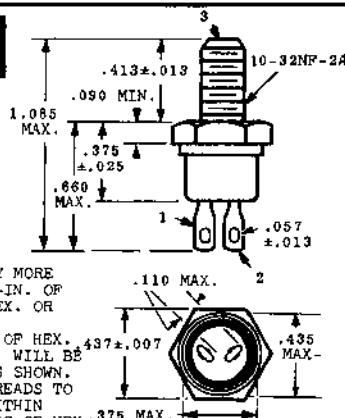
1. The specified lead diameter applies in a zone between .050 and .250 from the base seat. Between .250 and 1.5 a maximum of .021 diameter is held. Outside of these zones the lead diameter is not controlled.

2. Leads having maximum diameter (.019) measured in gaging plane .054+.001 below base seat of the device shall be within .007 of their true location relative to the maximum diameter (.510) circumscribing the hex.

3. The position of the leads in relation to the hex flats is not controlled.

4. The collector is electrically connected to the case.

MT 11



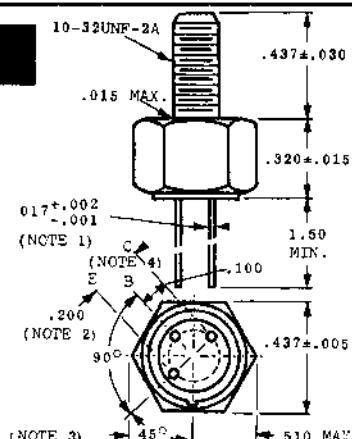
NOTES:

1. DO NOT APPLY MORE THAN 15 LB.-IN. OF TORQUE TO HEX. OR TO NUT.

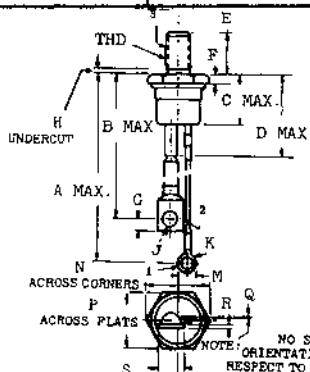
2. BOTTOM EDGE OF HEX. .437±.007 (LOWER SIDE) WILL BE CHAMFERED AS SHOWN.

3. COMPLETE THREADS TO EXTEND TO WITHIN 2 1/2 THREADS OF HEX. .375 MAX.

MT 13

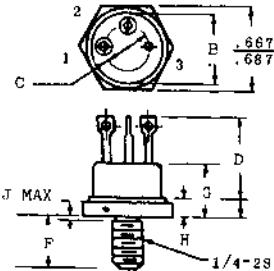


MT 14



NOTE: NO SPECIFIC
ORIENTATION WITH
RESPECT TO THE BASE HEX.

	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	THD
MT14	.7.12	.6.37	1.12	1.75	.812	.187	.375	.093 MAX.	.265	.140	.250	1.21	1.06	.031	.038	.562	1/2-20UNS
MT14a	8.25	8.25	1.75	2.25	1.06	.230	.340	.080 MIN.	.260	.145	.300	1.25	.032	.070	.755	.374-16UNS	



	B	C	D	F	G	H	J
MT16	.580	.345	.710	.410	.370	.090	.060
	.600	.365	.850	.450	.430	.170	

	B	C	D	F	G	H	J
MT16a	.570	.340	.640	.422	.325	.090	.090
	.610	.416	.875	.455	.460	.150	

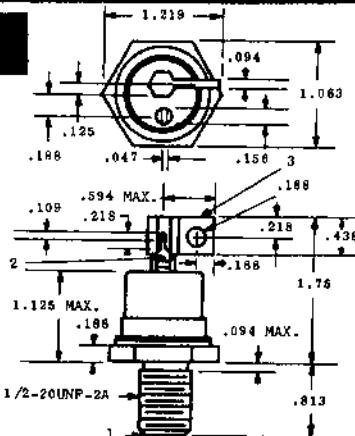
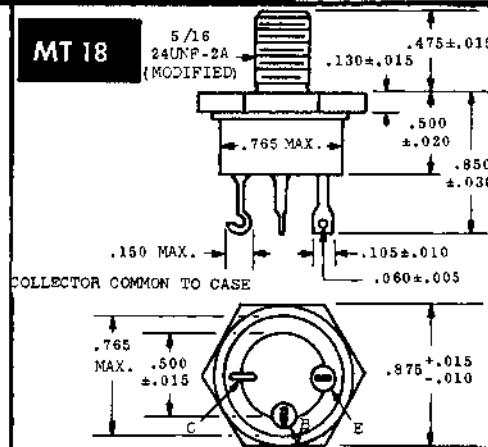
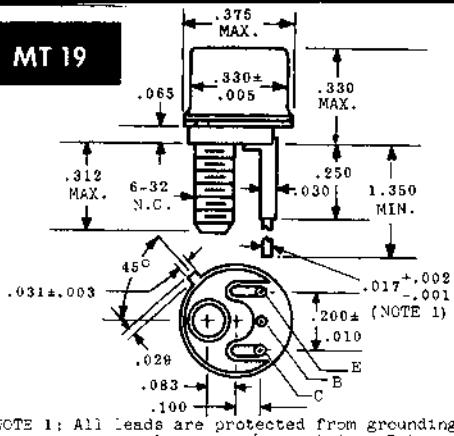
D.A.T.A.

238

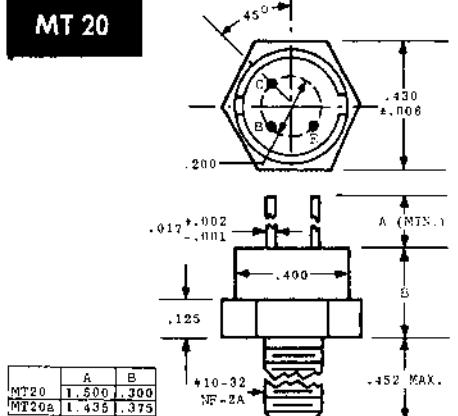
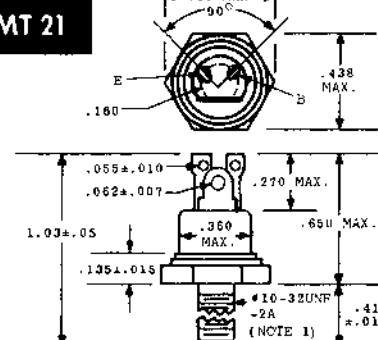
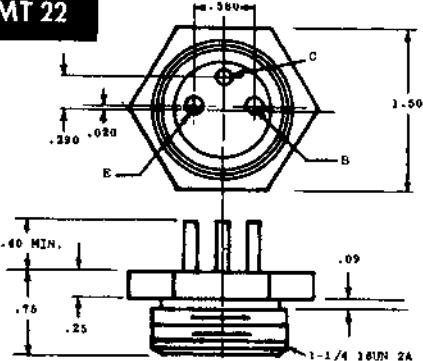
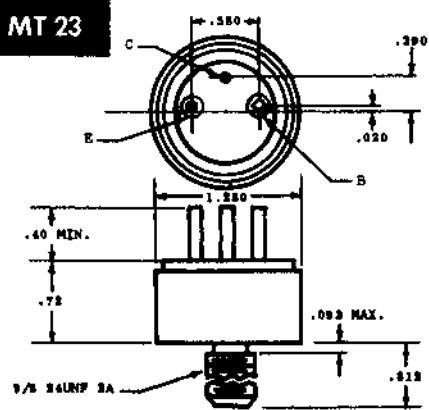
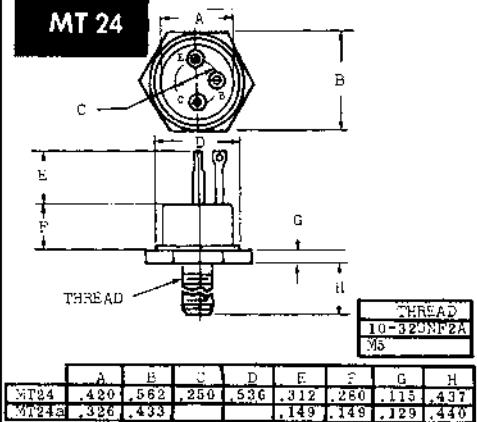
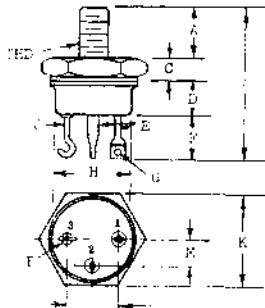
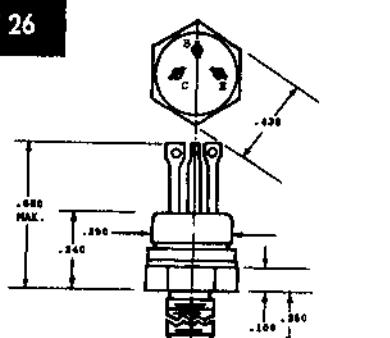
ALL DIMENSIONS IN INCHES

15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

MT 17

MT 18

MT 19


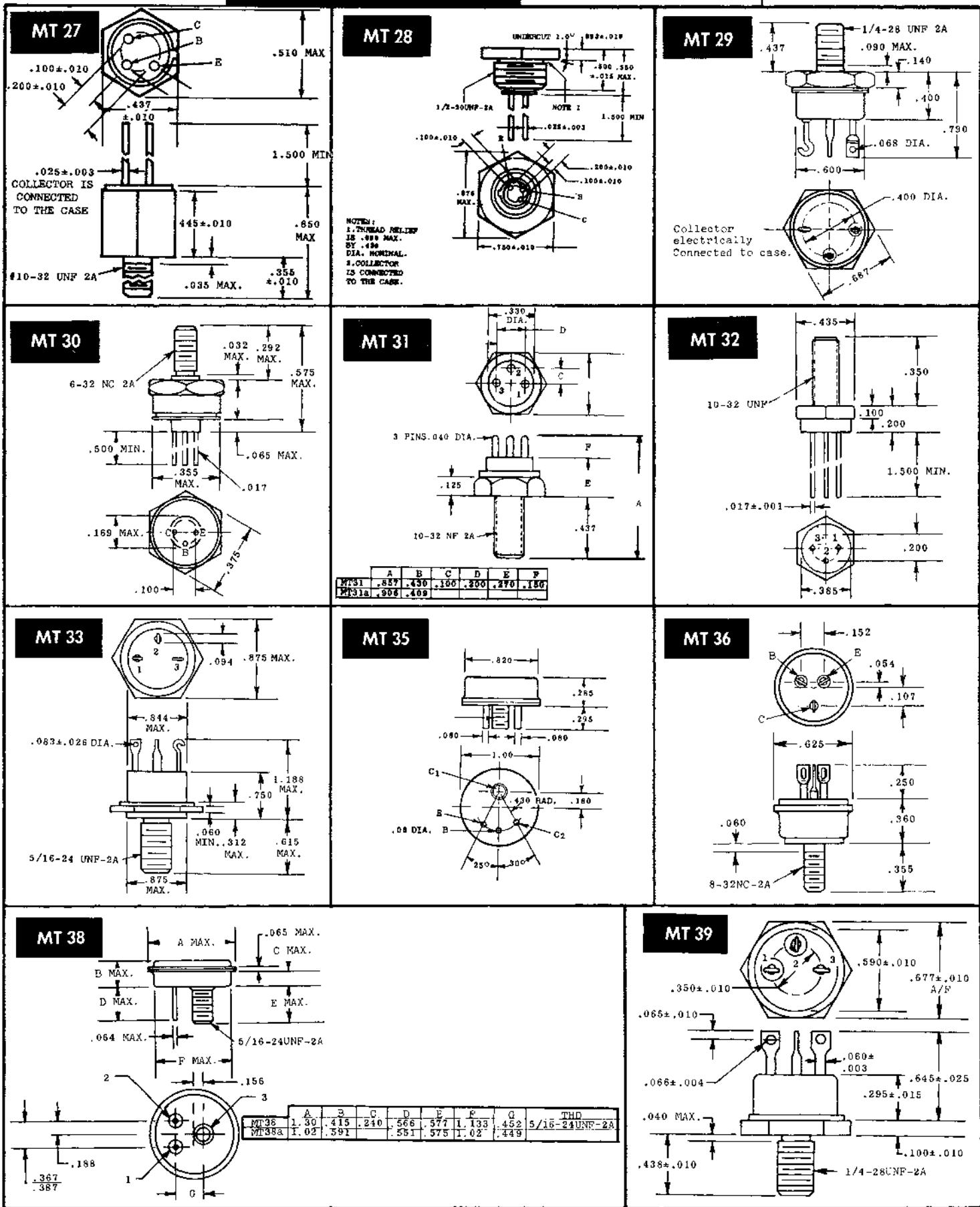
NOTE 1: All leads are protected from grounding on mounting panel up to 1/4 in. thick. Between .250 and end of lead a max. of .021 is held.

MT 20

MT 21

MT 22

MT 23

MT 24

MT 25

MT 26


	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	THD
MT25	.400	1.04	.090	.232	.051	.250	.052	.323	.040	.424	.100	.195	.092	10-32UNF-2B		
	.456	1.06	.156	.314		.294		.375		.436		.205				
MT25a	.400	1.04	.090	.232	.051	.250	.052	.323	.040	.424	.100	.195	.092	10-32UNF-2		
	.456	1.06	.156	.314		.294		.375		.436		.205				
MT25b	.400	.97	.260	.218		.250	.040	.318		.423	.090	.183	.040	10-32UNF-2		
	.456	1.21 MAX.				.295	.065	.330		.438	.110	.215	.070			

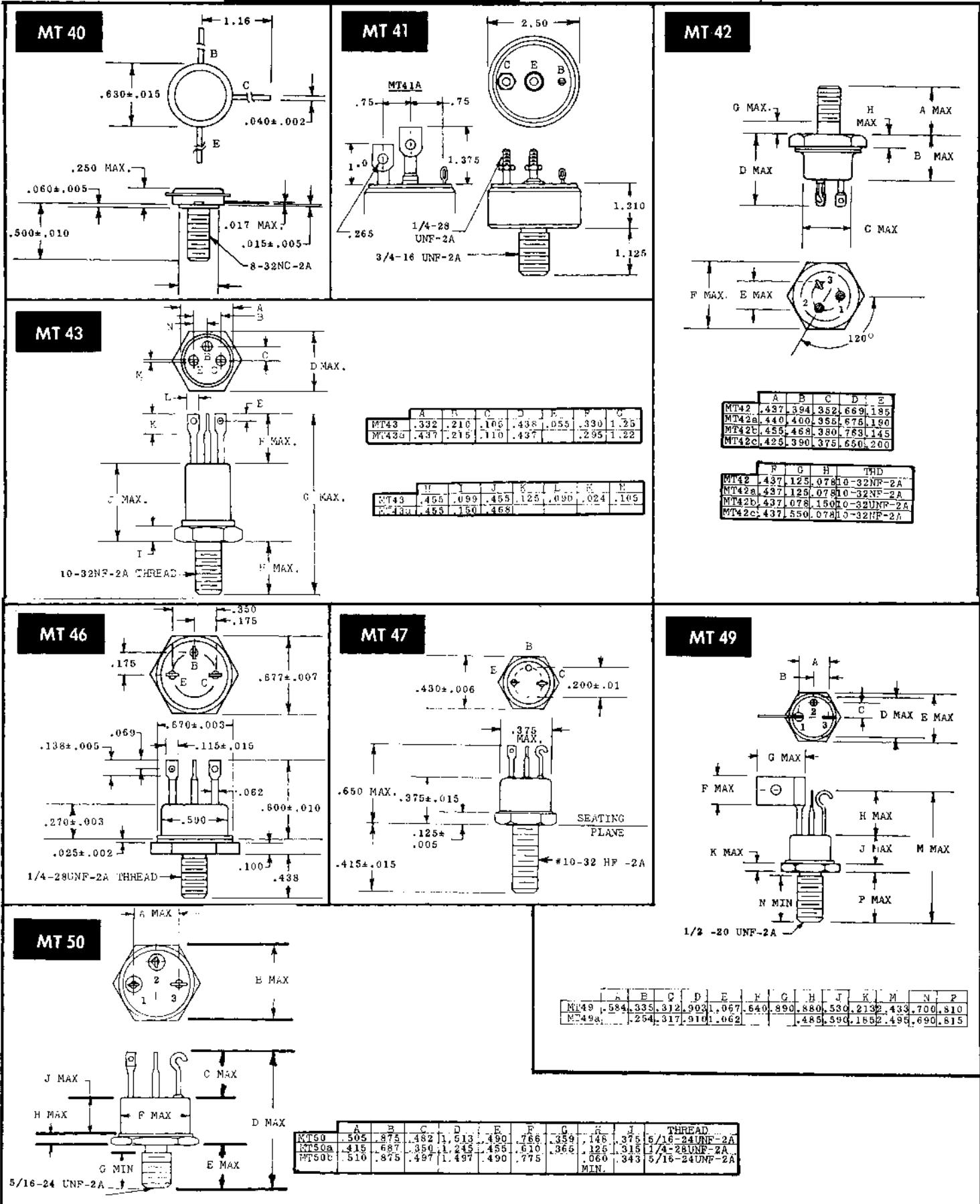
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE



15. OUTLINE DRAWINGS

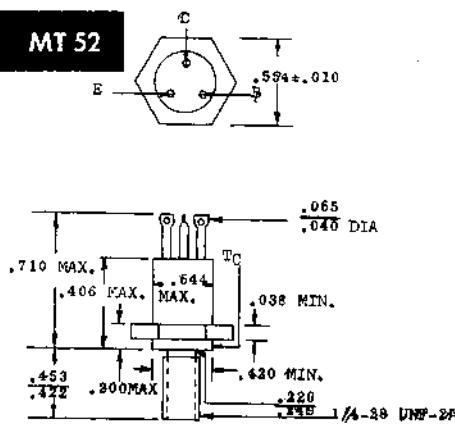
IN DRAWING NUMBER SEQUENCE



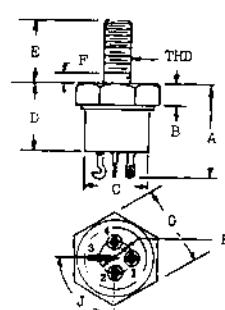
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

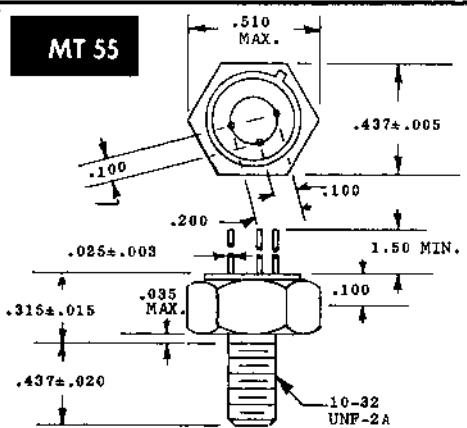
MT 52



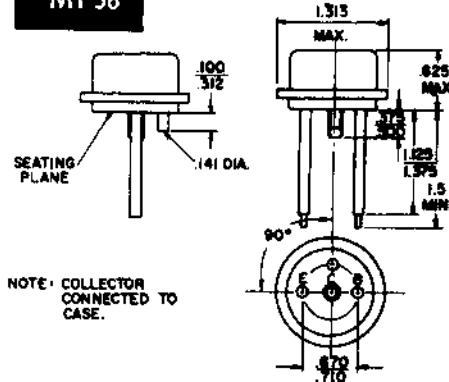
MT 53



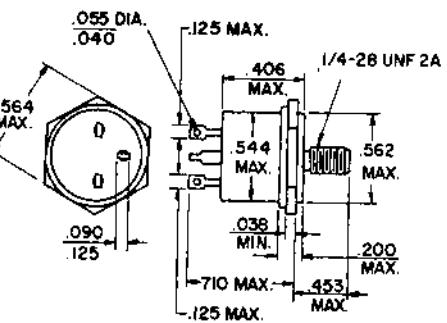
MT 55



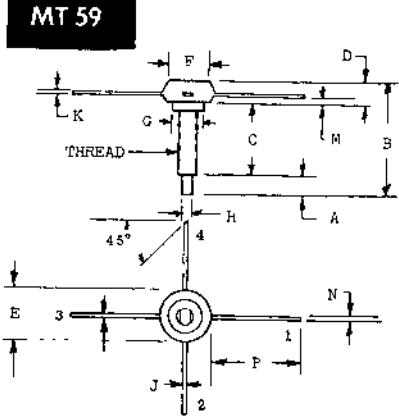
MT 56



MT 58



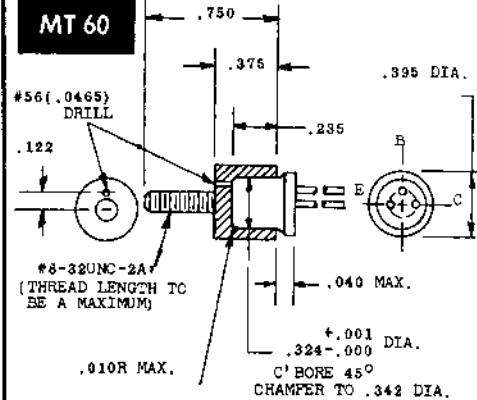
MT 59



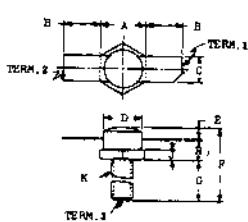
A	B	C	D	E	F	G
MT59	.125	.655	.500	.155	.375	
MT59b	.118	.655	.500	.156	.375	
MT59c	.145	.655	.500	.155	.375	
MT59d	.115	.787	.626	.614	.394	.378, 276
MT59e	.145	.641	.489	.157	.394	.378
MT59f	.145	.615	.355	.160	.366	.365, .250
MT59g	.145	.670	.385	.155	.365	.250

H	J	K	L	M	N	P	THREAD
.060	.030	.015	.055	.030	.450	.295	8-32UNC-2B
.060	.030	.015	.055	.030	.450	.295	8-32UNC-2B
.060	.030	.015	.055	.030	.450	.295	8-32UNC-2B
.079	.079	.0039	.053	.118	.450	.320	8-32UNC-2B
.033	.016	.076	.033	.250	.450	.250	8-32UNC-2B
.060	.223	.006	.070	.223	.375	.223	8-32UNC-2A
.060	.030	.015	.055	.280	.250	.280	8-32UNC-2A
.078	.031	.020	.125	.031	.275	.275	8-32
MAX.	YAX	MAX.	MAX.	MAX.	MAX.	MAX.	
.060	.030	.014	.055	.500	.300	.300	8-32UNC2A
			.016	MIN.			

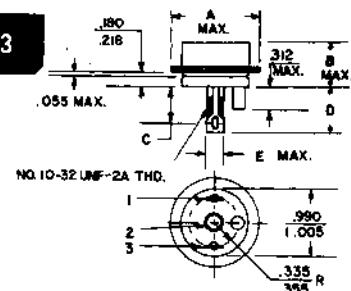
MT 60



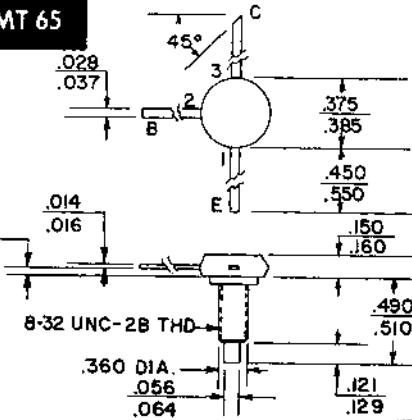
MT 62



MT 63



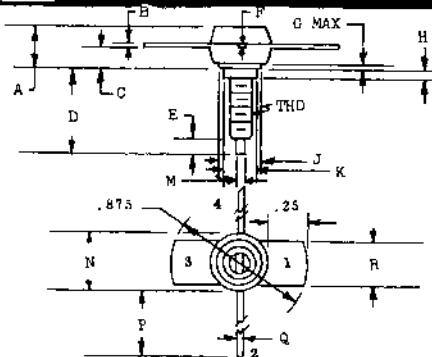
MT 65



15. OUTLINE DRAWINGS

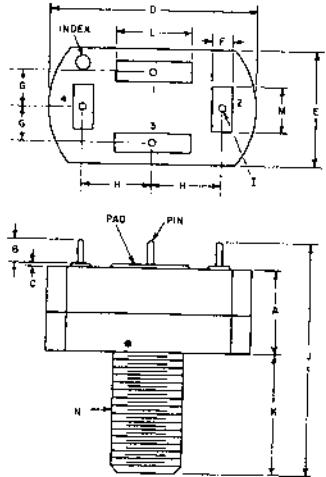
IN DRAWING NUMBER SEQUENCE

MT 66

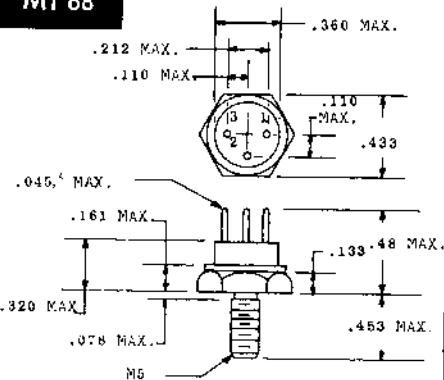


A	B	C	D	E	F	G	H	J	K	M	P	Q	R	THD
MT66 .165	.015	.055	.515	.145	.015	.020	.060	.285	.250	.060	.375	.500	.030	.290 8-32UNC2A
MT66a .220	.003	.106	.512	.118	.007		.323	.275	.079	.433	.075	.079	.116	.116
MT66c .200	.008	.110	.435	.017			.280			.060	.400	.400	.028	.290 8-32UNC2A

MT 67



MT 68

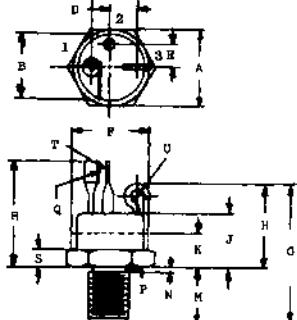


A	B	C	D	E	F	G	H	I	J
MT67 .218	.072	.015	.469	.337	.055	.089	.140	.021	.655
	.234	.085	MAX	.490	.345		.105	.150	.023

K	L	M	N
MT67 .360	.145		10-32UNF-2A
	.390		
MT67a .420	.235	.135	1/4-28UNF-2A
	.460	.250	.150

A	B	C
MT68 .212	.453	M5
MAX		
MT68a .185	.250	10-32
.215	.270	UNF-2A

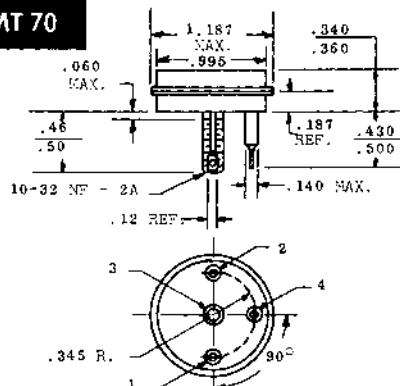
MT 69



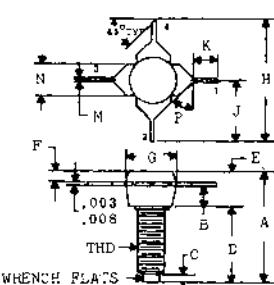
A	B	C	D	E	F	G	H	J	K
MT69 1.04	.885	.531	.219	.281	.915	.182	.148	.688	.375
1.07	.915	.608	.268	.328	1.08	.214	.131	.797	MAX
MT69a 1.03						1.62			.690
						2.57			
MT69b 1.04	.890		.234	.297		1.93	1.15		.720
1.06	.910		.254	.317		2.07	1.26		
MT69c 1.04	.885		.219	.261		1.82	1.04		.688
1.07	.915		.265	.328		2.13	1.31		

M	N	P	Q	R	S	T	U
MT69 .781	.156	.425	.180	1.35	.090	.078	.234
	.828	MAX	.500	.210	1.75	.270	.109
MT69a .781	.156	.425		1.04			.234
	.828	MAX	.500		1.75		.281
MT69b .785	.125			1.58	1.65	.084	.245
	.815	MAX			1.68	1.83	.104
MT69c .781	.156		.180	1.35		.078	
	.828	MAX		.210	1.75		.109

MT 70



MT 71

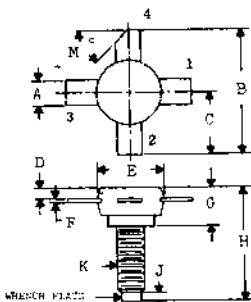


A	B	C	D	E	F	G	H	J	K	M	N	P	THD
MT71 .675		.120	.360	.195	.065	.365	1.055	.520	.160	.025	.220		8-32N.C.2A
	.695	.130	.350	.215	.085	.385	1.065	.540	TYP	.035	TYP		
MT71a .597	.065	.137	.393	.149	.065	.396	1.106	.335		.036	.220		8-32UNC
	.680	MAX		.531	MAX	MAX	MAX	.355		.036	.230		
MT71b .710		.100	.465	.245	.080	.365	1.055	.520	.220	.025	.215	.35	8-32N.C.3A
	.750		.130	.475	.275	.100	.365	.540	.230	.035	.225		
MT71c .710		.100	.465	.245	.080	.365	1.055	.524	.175	.025	.215	.45*	8-32N.C.3A
	.750		.130	.475	.275	.100	.325	.540	.185	.035	.225		
MT71d .610		.115	.492	.178	.055	.278	1.05	.525	.225	.025	.225	.35	8-32N.C.3A
	.650		.145	.512	.198	.065	.286	.535	.105	.035			

15. OUTLINE DRAWINGS

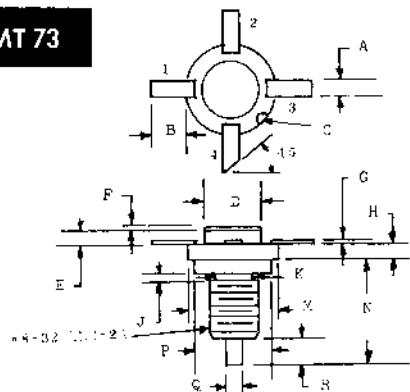
IN DRAWING NUMBER SEQUENCE

MT 72



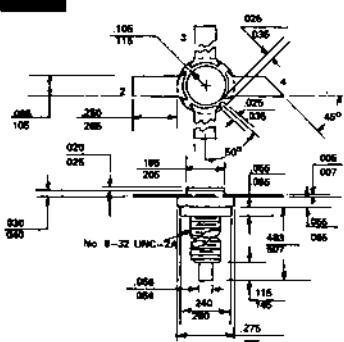
A	B	C	D	E	F	G	H	J	K	M
MT72 .220	.1.055	.520	.065	.465	.008	.240	.710	.120	8-32NC2A	45°
	.230	1.065	.540	.085	.008	.260	.730	.130		
MT72a	.225	1.0			.390	.005	.195	.640	.115	8-32UNC24THD 45°
MT72b	.120				.358		.220	.008	.200	
	.125				.378		.240		.MAX	
MT72c	.146	.984		.571	.162	.375	.005	.228	.687	.134 8-32UNC
					.1.142			.MAX		
MT72d	.223				.045	.355	.006	.155	.595	.130 8-32UNC2A
						TYP	.375	.165	.635	45°
MT72e	.225				.104	.420	.006	.260	.700	.120 8-32UNC2A
						TYP	.510	.280	.750	45°
MT72f	.078	.866				.225	.003	.242	.274	.118 JSCM3
							.365	.004	.205	45°
MT72g	.220	1.095				.365	.004	.205	.630	8-32UNC24THD 45°
	.230	MNT							.750	
MT72h	.220	1.055	.520	.080	.365	.004	.245	.710	.100	8-32NC3A
	.230	1.065	.540	.100	.385	.007	.275	.750	.130	45°
MT72j	.031							.157	.484	8-32UNC2A

MT 73

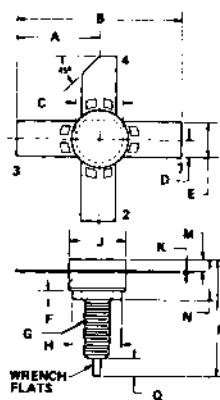


I	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
X73	.060	.100	NA	.200	.025	.010	.005	.070	.078	.120	.276	.483	.243	.060	.115		
									MAX	.163	.286	.527	.255	over	.145		
														Flats on	a .120		
														dia.			
73a	.095	.250	.025	.195	.030	.020	.005	.055	NA	NA	.275	.483	.240	.066	.115		
	.105	.260	.035	.205	.040	.025	.007	.065			.265	.527	.260	over	.145		
														Flats on	a .115		
														.120 dia.			

MT 74



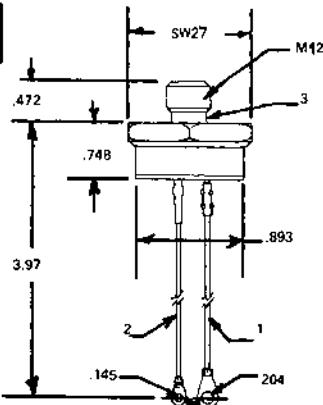
MT 75



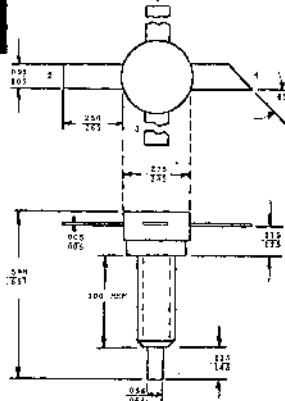
A	B	C	D	E	F	G		
MT75 .520	1.05	.325	.110	.220	.075	10-32NC3A		
	.540	1.06	.115	.230				
MT75a	.515	1.05		.110	.220	.080	8-32KC3A	
MT75b	.520	1.05	.420	.110	.220	.080	10-32NC3A	
	.530	1.06		.115	.230	.100		
MT75c						.071	.075	
MT75d	.525	1.05		.112	.225	.060	8-32NC2A	
	.535	1.06						
MT75e	.520	1.05		.112	.220		8-32NC3A	
	.540	1.06						

H	J	K	M	N	P	Q	
MT75 .305	.365	.005	.080	.245	.710	.100	
	.385		.100	.275	.750	.130	
MT75a	.321	.365	.005	.080	.245	.600	
	.329	.365		.100	.275	.640	
MT75b	.490	.005	.080	.245	.835	.110	
	.510		.100	.275	.750	.130	
MT75c	.295	.003		.193	.716	.115	
	MAX			.215		.121	
MT75d	.246	.278	.005	.055	.178	.610	.115
	.254	.265		.065	.198	.650	.145
MT75e	.465			.240	.710		
	.485			.260	.730		

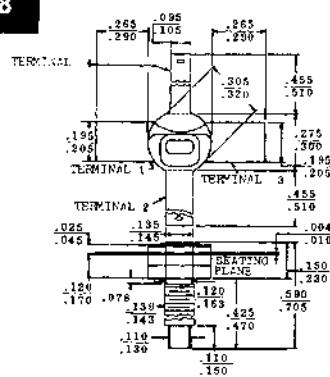
MT 76



MT 77



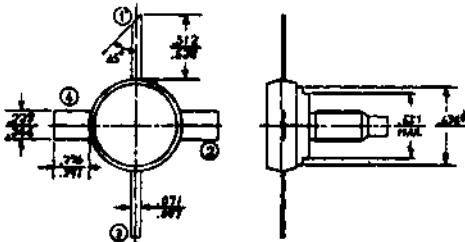
MT 78



15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

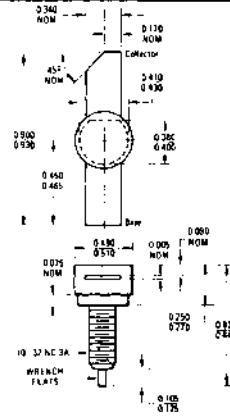
MT 79



Terminal Connection

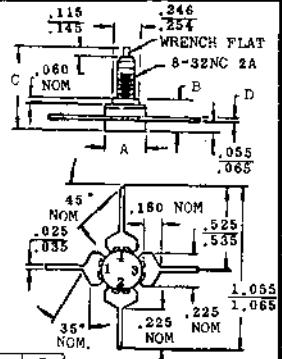
- Ⓛ Collector
 - Ⓜ Emitter
 - Ⓝ Bone
 - Ⓞ Emitter

MT 80



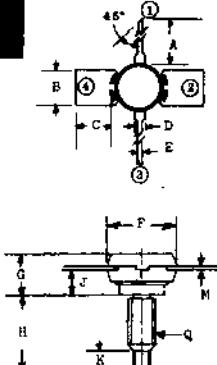
Emitter Connected to Stud

MT 81



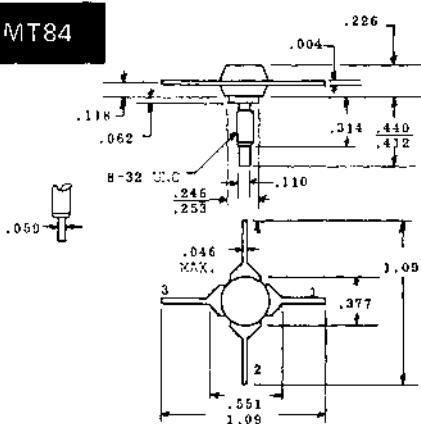
	A	B	C	D
MT81	.278	.178	.610	2A
	.286	.198	.650	
MT81a	.365	.245	.835	3A
	.385	.275	.845	

MT83

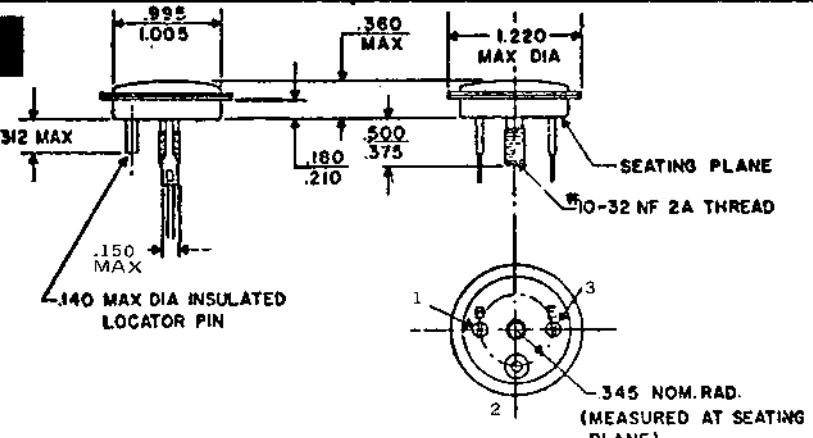


	F	F'	G	H	H'	J	K	M	F	S
Wt633	.516	.511	.246	.077	.051	.374	.290	.421	.112	.110
	.531	.515	.256	.061	.049	.365	.240	.435	.124	.113
Wt634	.507	.501	.256	.061	.047	.362	.216	.378	.084	.118
	.522	.506	.269	.069	.047	.401	.234	.382	.011	.101
Wt635	.547	.515	.115	.095	.374	.399	.767	.412	.177	.088
	.361	.121	.101	.054	.364	.399	.438	.104	.177	.065

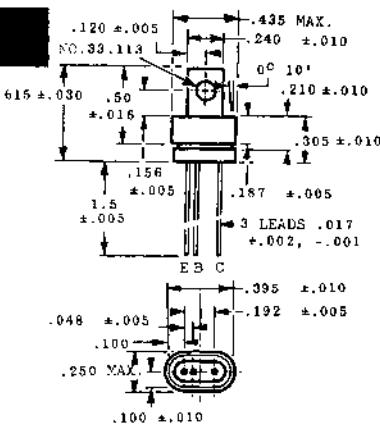
MT84



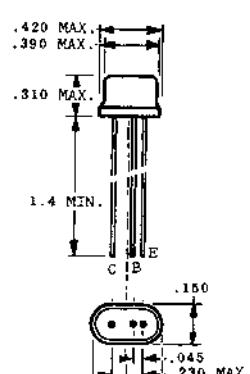
MT85



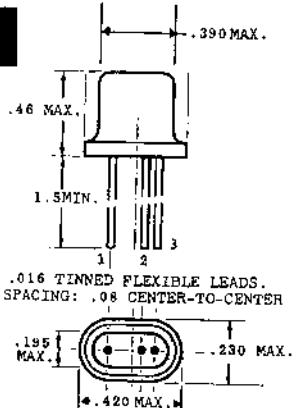
ov 1



9v3



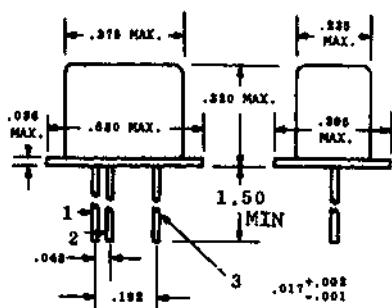
OV 4



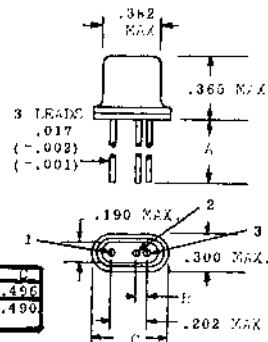
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

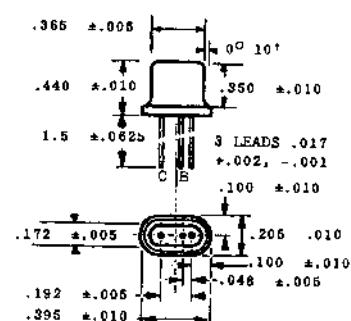
OV 5



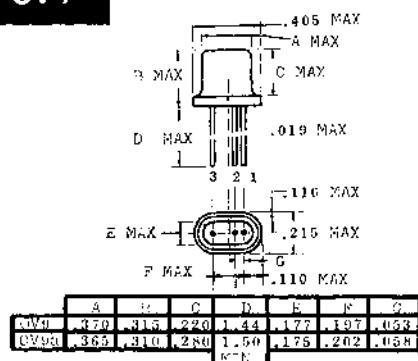
OV 6



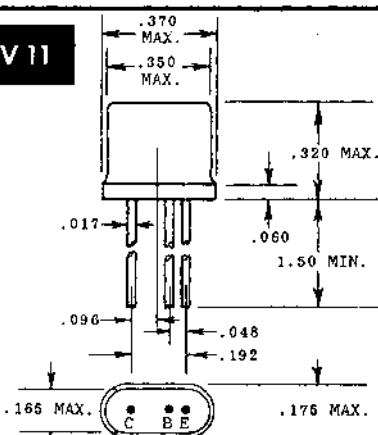
OV 7



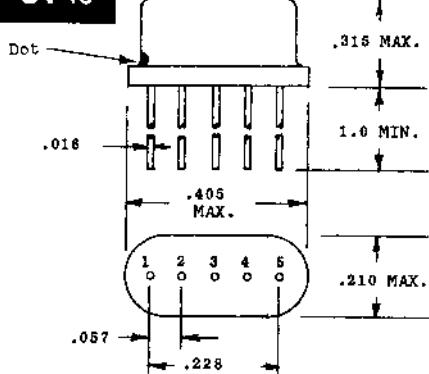
OV 9



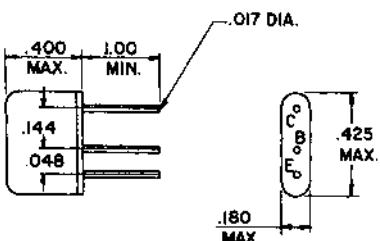
OV 11



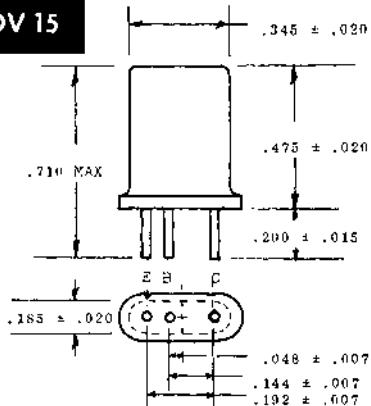
OV 13



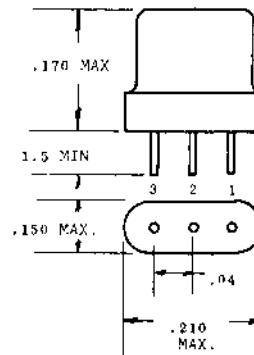
OV 14



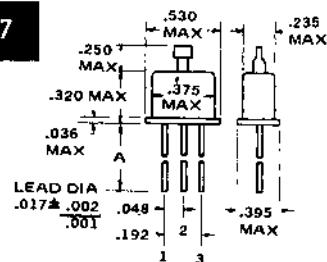
OV 15



OV 16

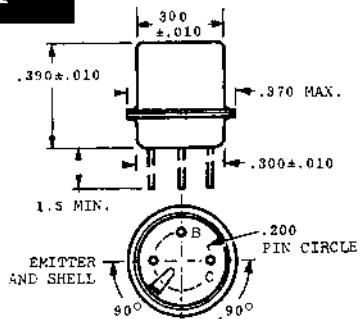


OV 17

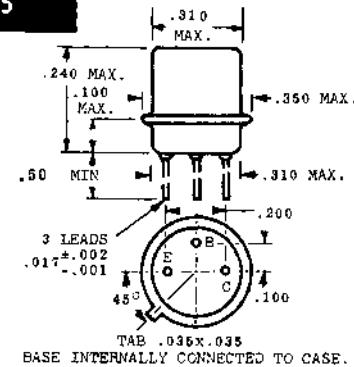


A	B
OV17	1.00 MIN
OV17a	1.50 MIN

R 2

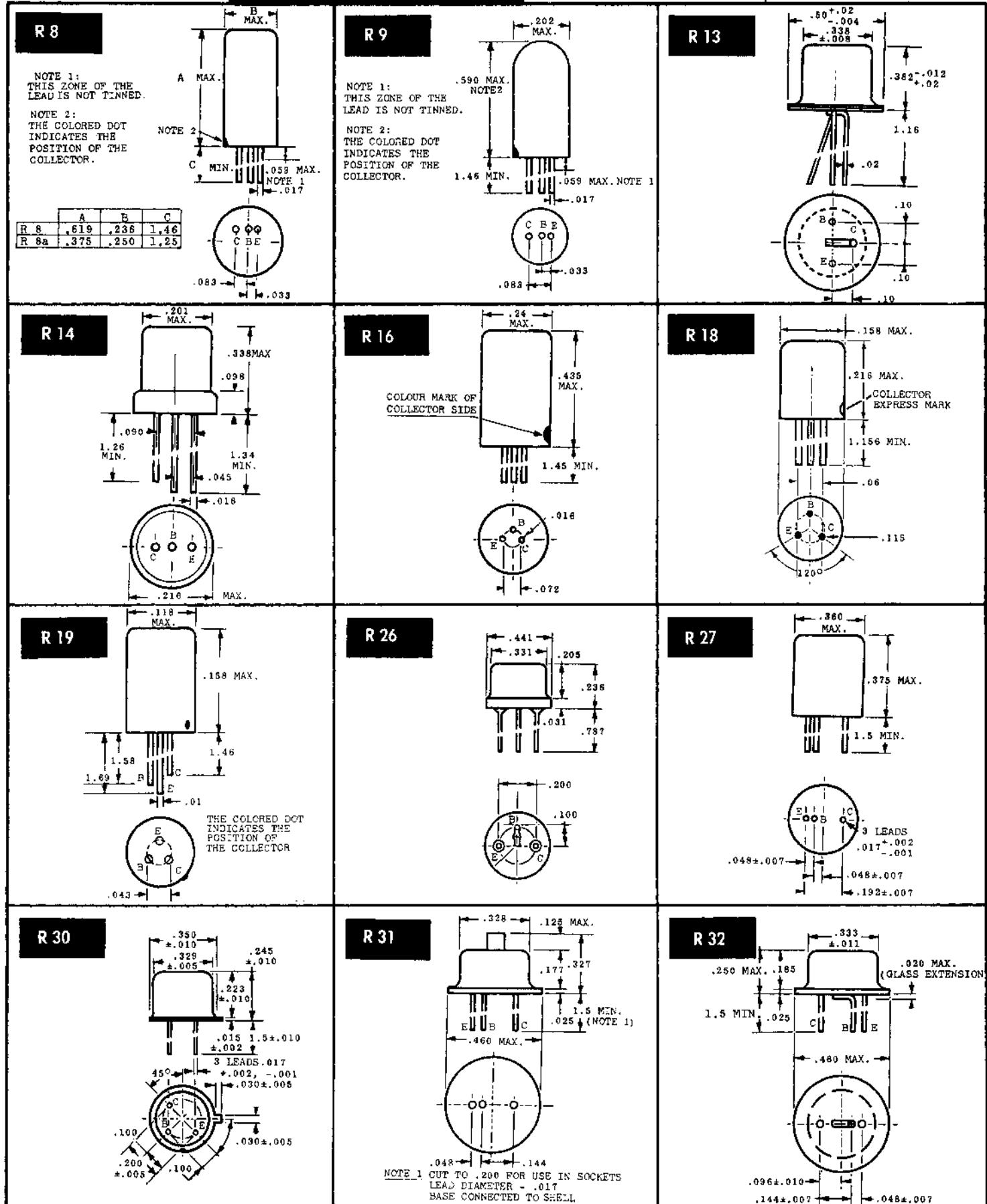


R 5



15. OUTLINE DRAWINGS

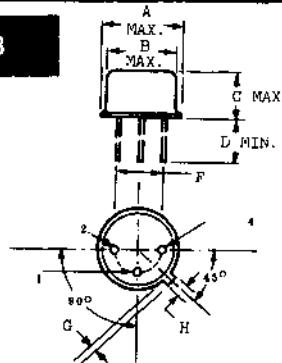
IN DRAWING NUMBER SEQUENCE



15. OUTLINE DRAWINGS

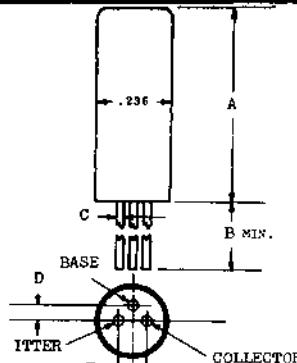
IN DRAWING NUMBER SEQUENCE

R 33



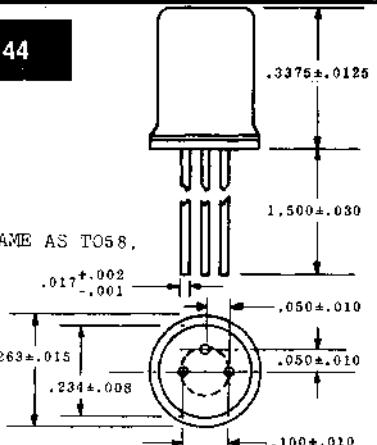
	A	B	C	D	E	F	G	H
R 33	.370	.335	.260	1.5	.200	.028	.033	
R 33a	.230	.195	.210	.500	.100	.038	.056	

R 43



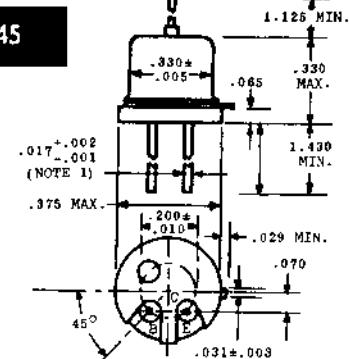
	A	B	C	D	E
R 43	.61	1.45	.018	.043	.057
R 43a	.236	.50	.015	.035	.070

R 44



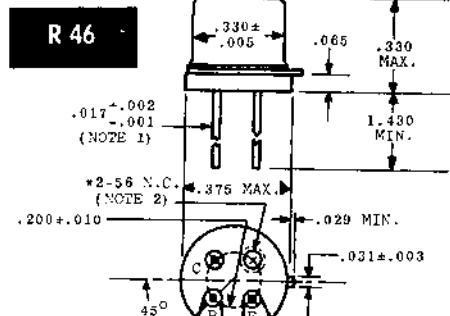
SAME AS TO58,

R 45



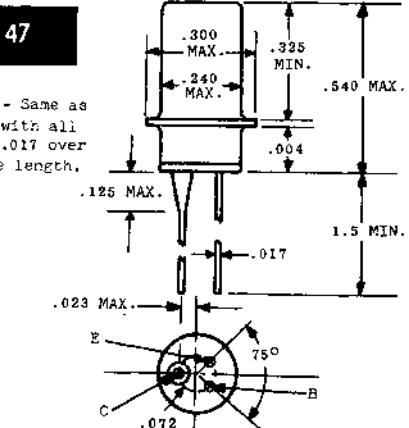
NOTE 1: Lead diameter is controlled in the zone between .050 and .250 from the cap or base seat. Between .250 and 1.125 or 1.430 a max. of .021 is held.

R 46



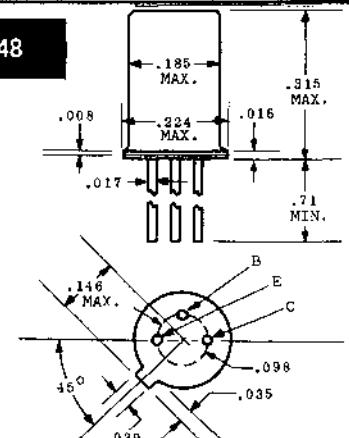
NOTE 1: Lead diameter is controlled in the zone between .050 and .250 from the base seat. Between .250 and end of lead a max. .021 is held.
NOTE 2: Do not attempt to insert a #2-56 stud in excess of .045.

R 47

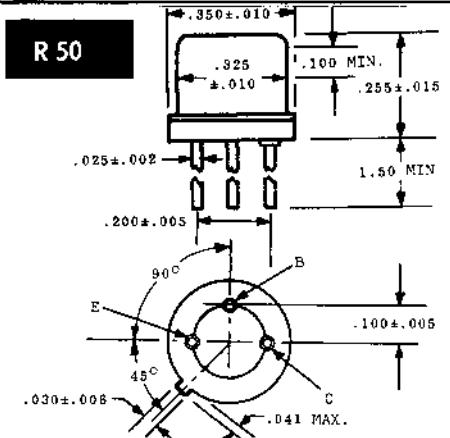


RC47a - Same as
R 47 with all
leads .017 over
whole length.

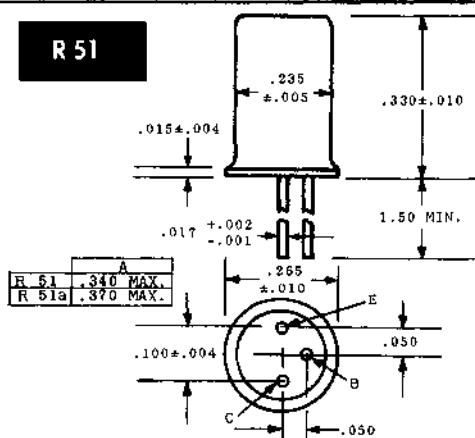
R 48



R 50

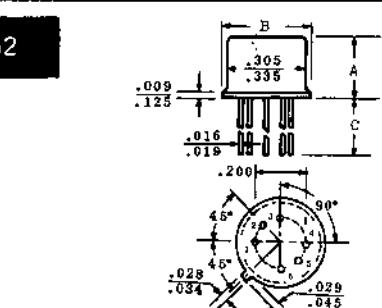


R 51

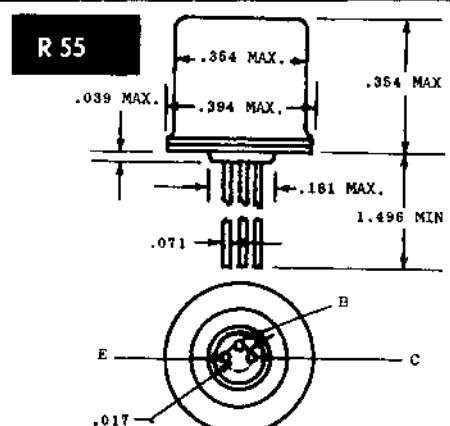


	A
R 51	.340 MAX.
R 51a	.370 MAX.

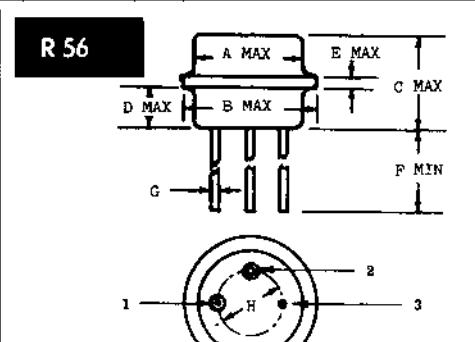
R 52



R 55



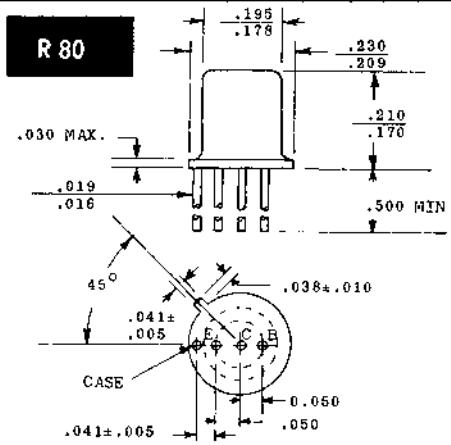
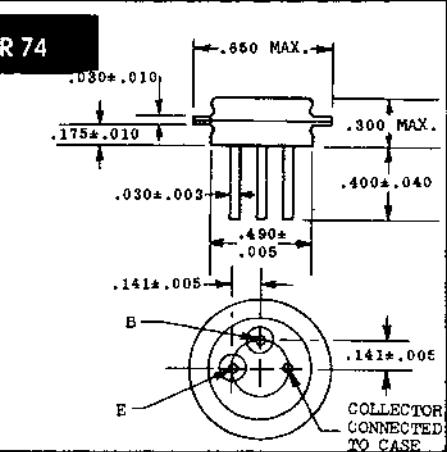
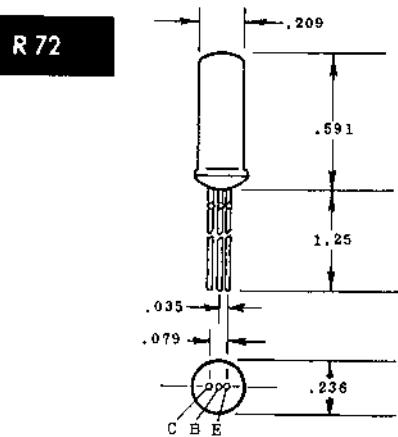
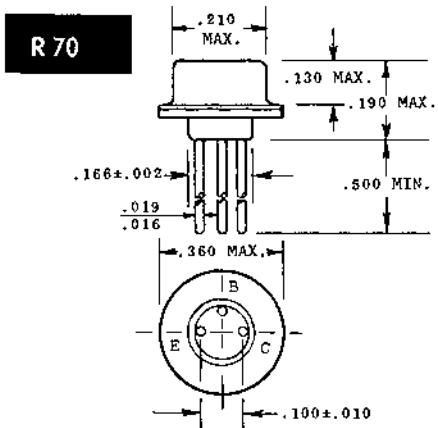
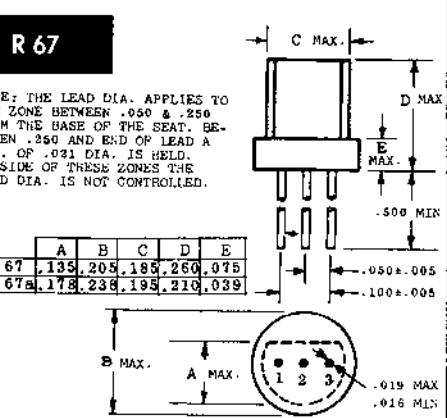
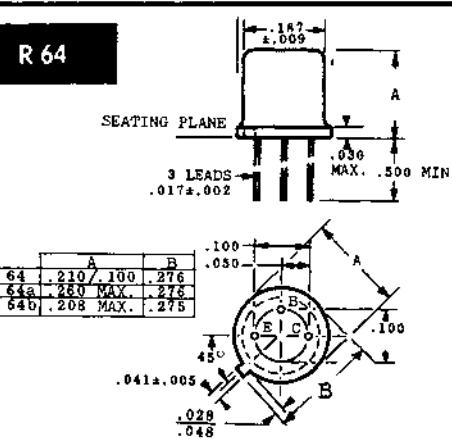
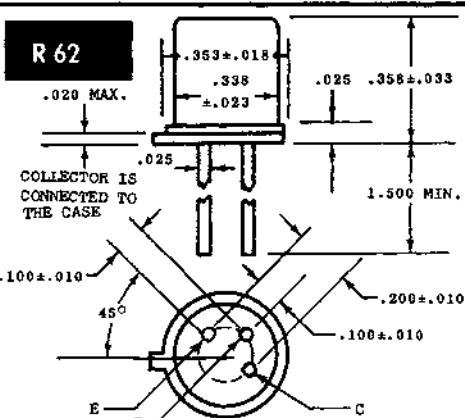
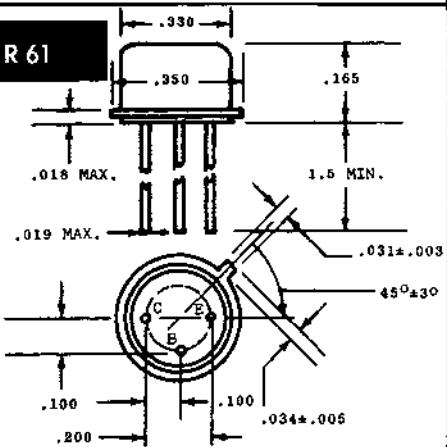
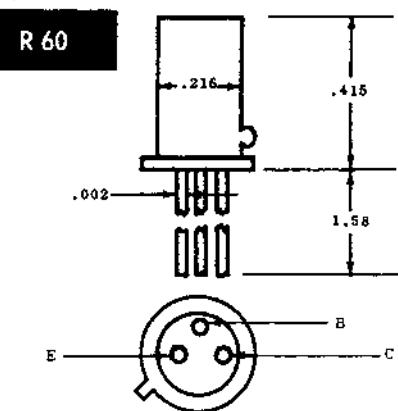
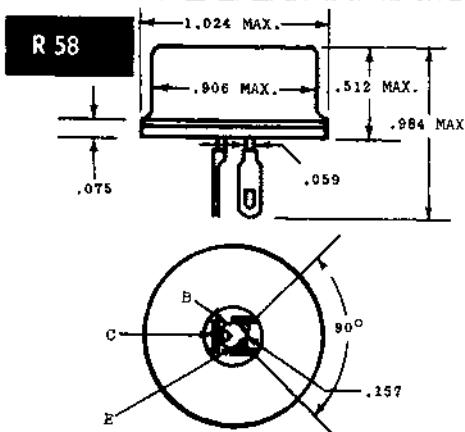
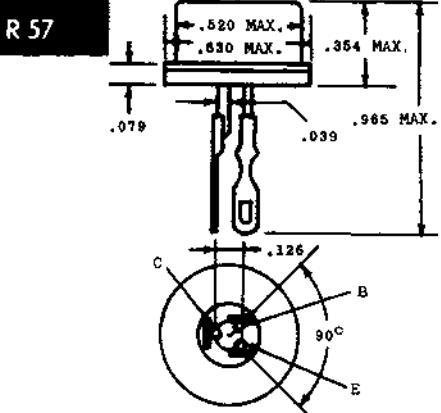
R 56



	A	B	C	D	E	F	G	H
R 56	.441	.543	.366	.169	.035	.378	.020	.276
R 56a	.310	.370	.260	.125		.1.500	.017	.260
R 56b	.520	.640	.310				.370	.030
								.282

15. OUTLINE DRAWINGS

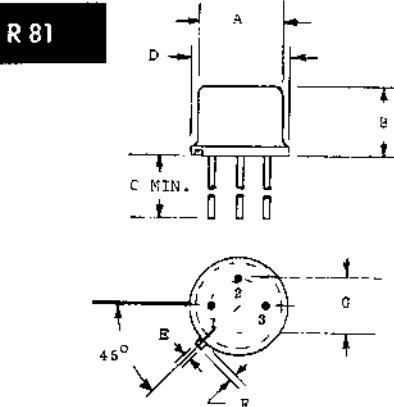
IN DRAWING NUMBER SEQUENCE



D.A.T.A.

15. OUTLINE DRAWINGS

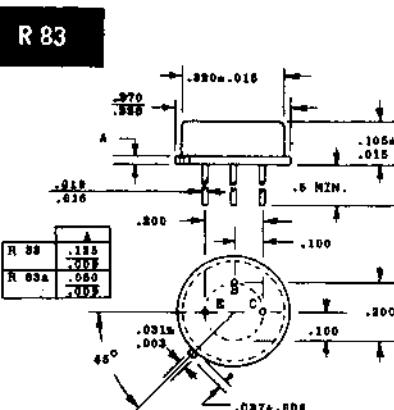
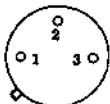
IN DRAWING NUMBER SEQUENCE



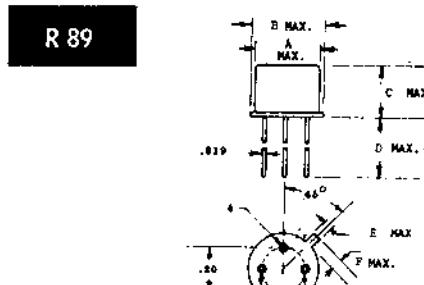
	A	B	C	D	E	F	G
R81	.305	.249	1.50	.370	.028	.029	.200
	.330	.280		.335	.034	.045	
R81a	.335	.200	.500	.370	.028	.029	.200
	.276	.260		.335	.024	.045	
R81b	.305	.150	1.50	.270	.028	.029	.200
	.335	.200		.335	.024	.045	
R81c	.310	.249	1.50	.370	.028	.029	.200
	.340	.330		.335	.034	.045	
R81d	.320	.240	.500	.370	.028	.029	.200
	.330	.260		.335	.034	.045	
R81e	.305	.150	.500	.370	.028	.029	.200
	.335	.180		.335	.034	.045	
R81f	.330	.255	1.00	.370	.028	.029	.200
				.335	.034	.045	
R81g	.310	.240	1.00	.370	.028	.029	.200
	.330	.280		.335	.034	.045	
R81h	.305	.240	.300	.370	.028	.029	.200
	.335	.260		.335	.034	.045	
R81j	.305	.240	1.50	.370	.028	.029	.200
	.335	.270		.335	.034	.045	
R81k	.181	.065	1.50	.210	.041	.042	.100
	.193	.065	MIN	.230			
R81p	.275	.200	1.50	.280	.028	.029	.151
	.315	.250		.370	.034	.045	.141



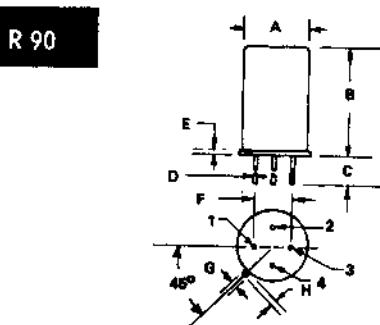
SAME AS T05 EXCEPT FOR
LEAD DESIGNATION



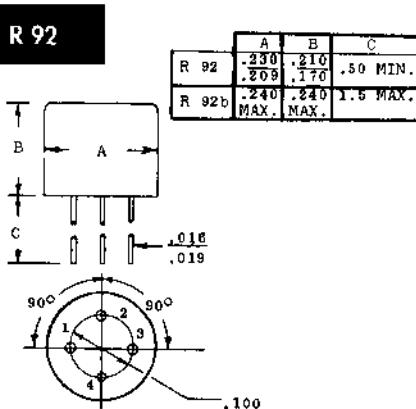
R 63a .060



	A	B	C	D	E	P
R59	.335	.370	.360	.593	.034	.840
R59a	.328	.368	.370	1.00	.031	.029
R65B	.330	.378	.380	.500	.034	.058
R89C	.315	.375	.310	1.00	.033	.028
				MIN		MIN

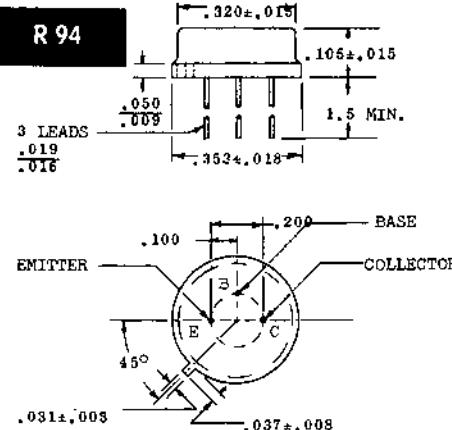


	A	B	C	D	E	F	G	H
R80	.180	.380	.400	.017	.011	.100	.041	.038
	MAX	MAX	MIN					
R80m	.210	.266	.583	.017	.011	.167	.035	.038
	.312	.383		.021	.019		.043	.042



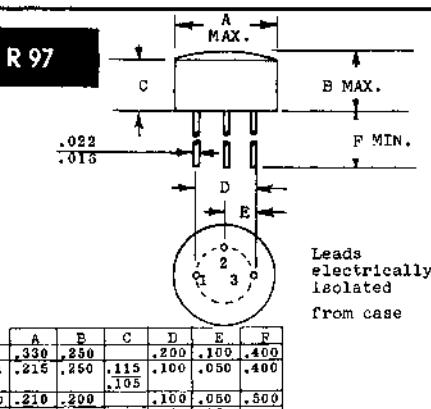
R 92

	A	B	C
R 92	.230 .209	.210 .170	.50 MIN.
R 92b	.240 MAX.	.240 MAX.	1.5 MAX.

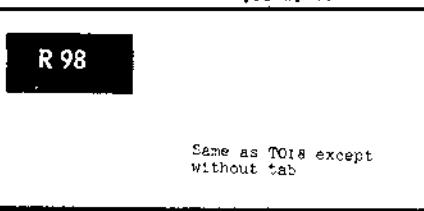


R 96

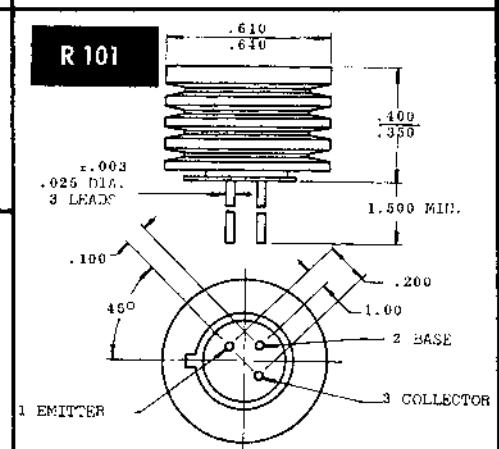
	A	B	C	D	E
R 96	.346	.030	.230	.195	.100
R 96a	.085	.040	.230	.195	.100
R 96C	.183		.362	.338	.300
R 96C	.085		.212	.183	.100
R 96d	.210	.030	.230	.195	.100



A	B	C	D	E	F
.330	.250		.200	.100	.400
.215	.250		.115	.100	.050
			.105		.400
.210	.200			.100	.050
.215	.200			.100	.050
.215	.250			.100	.050
.320	.220			.200	.100



Same as TOIs except without tab

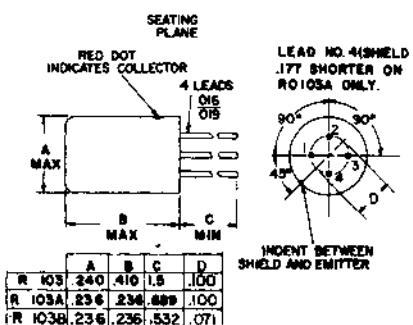


D.A.T.A.

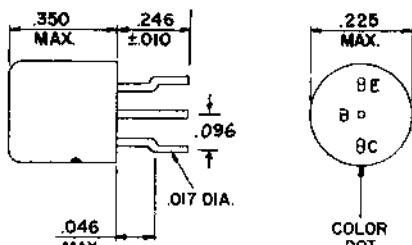
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

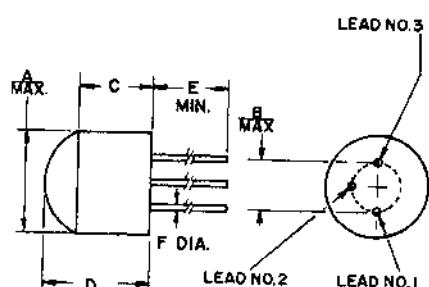
R 103



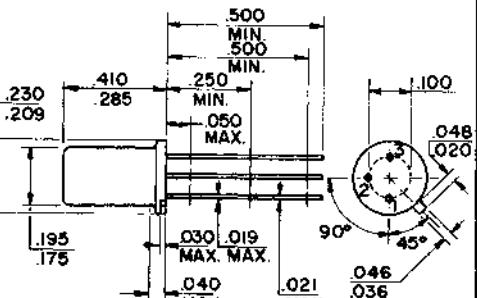
R 108



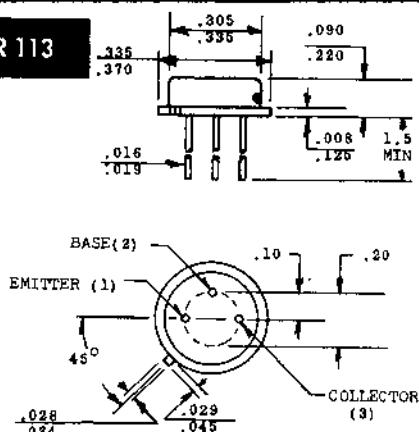
R 110



R 111

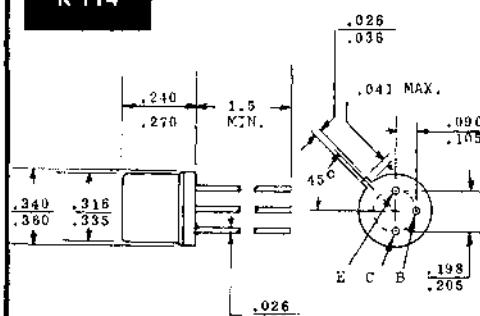


R 113

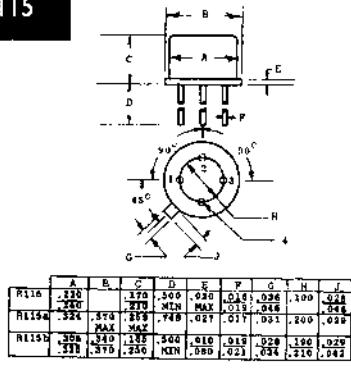


	A	B	C	D	E	F
R110	.310	.165	.100	.140	.400	.018
R110a	.330	.200	.100	.140	.400	.018
R110b	.250	.160		.380	.500	.018
R110c	.210	.100		.380	.420	.018
R110d	.310	.200		.380	.500	.018

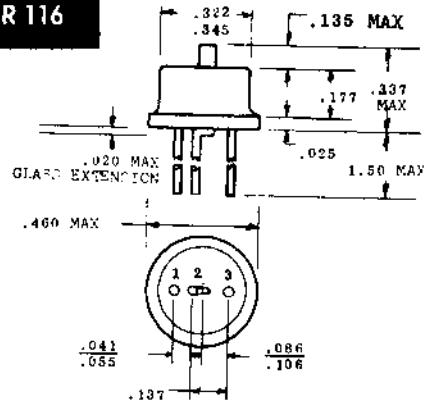
R 114



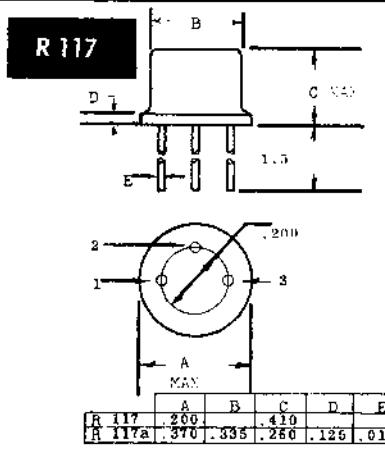
R 115



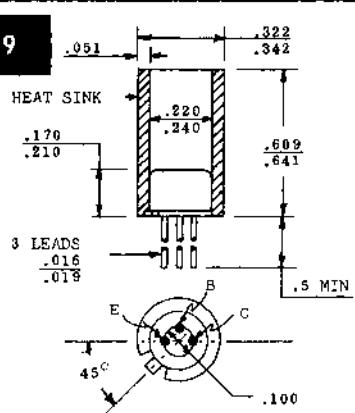
R 116



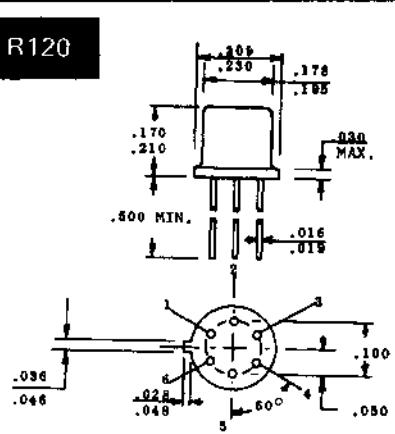
R 117



R 119



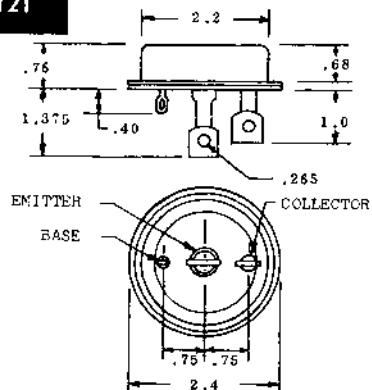
R 120



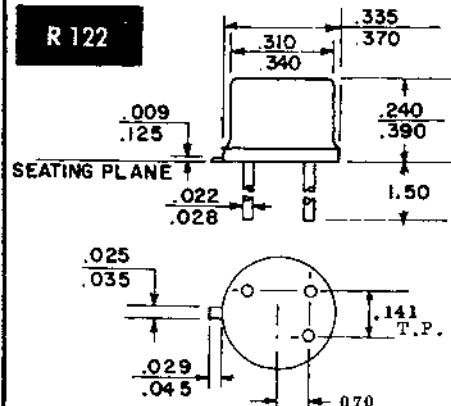
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

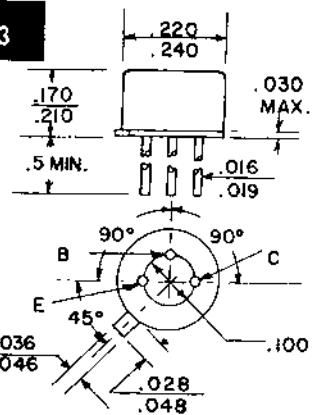
R 121



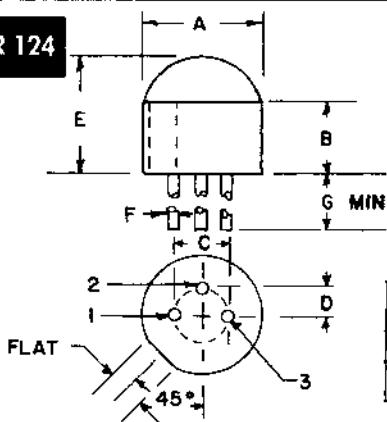
R 122



R 123

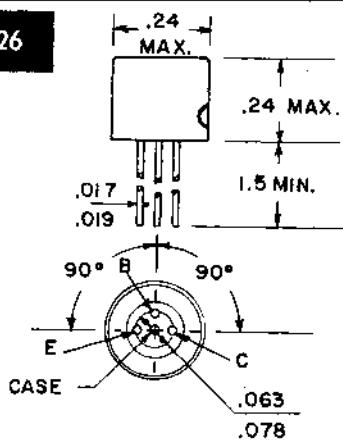


R 124

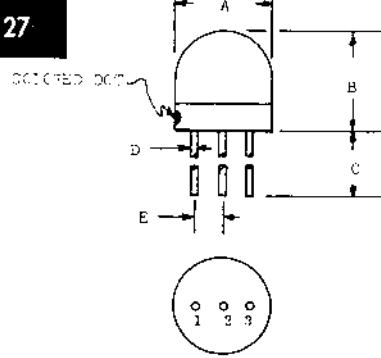


	A	B	C	D	E	F	G	FLAT
R124	.215	.120	.100	.050	.250	.016	.400	.080
R124b	.350	.115	.200	.100	.250	.016	.400	.090
R124c	.325		.105		.240	.016	.500	
R124d	.330		.080	.200	.220	.016	.500	
	MAX.				MAX.	.018		
							.019	

R 126

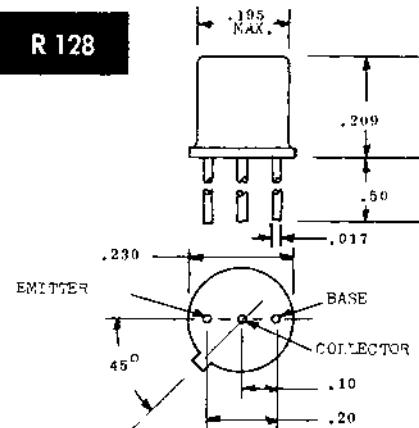


R 127

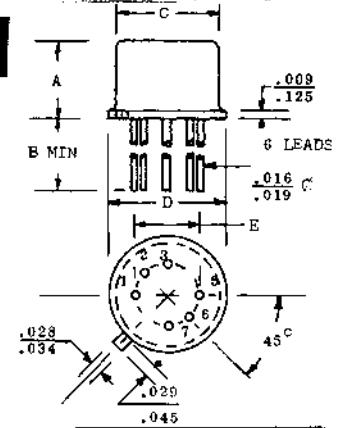


	A	B	C	D	E
R127	.193	.197	.472	.016	.051
R127a	.200	.175	.500	.018	.050

R 128

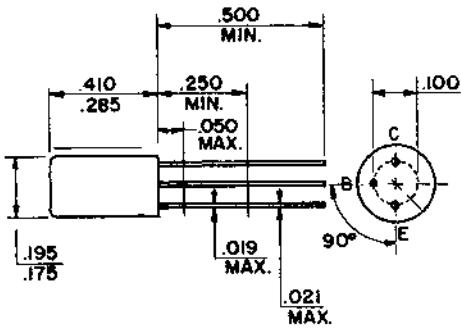


R 131

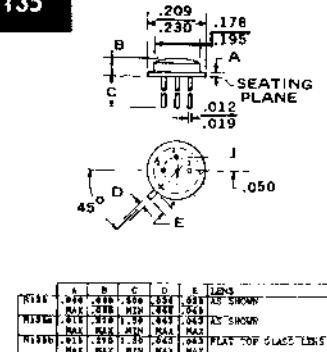


	A	B	C	D	E
R 131	.240	1.50	.305	.335	.200
	.260		.335	.370	
R 131a	.150	1.50	.305	.335	.200
	.180		.335	.370	
R 131b	.150		.305	.335	.200
	.280		.335	.370	
R 131c	.140	.500	.305	.335	.200
	.260		.335	.370	
R 131d	.140	.150	.305	.335	.200
	.260		.335	.370	
R 131e	.170	.500	.178	.209	.100
	.210		.195	.230	

R 134

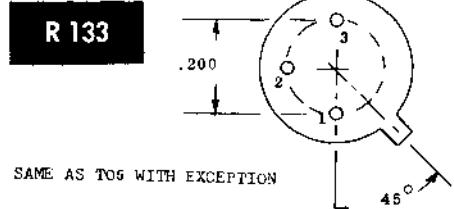


R 135



	A	B	C	D	E	LEADS
R135	.040	.005	.050	.050	.012	.009
	.040	.005	.050	.050	.012	.125
R135a	.040	.005	.050	.050	.012	.035
	.040	.005	.050	.050	.012	.370
R135b	.040	.005	.050	.050	.012	.035
	.040	.005	.050	.050	.012	.370
R135c	.040	.005	.050	.050	.012	.035
	.040	.005	.050	.050	.012	.370
R135d	.040	.005	.050	.050	.012	.035
	.040	.005	.050	.050	.012	.370
R135e	.040	.005	.050	.050	.012	.035
	.040	.005	.050	.050	.012	.370

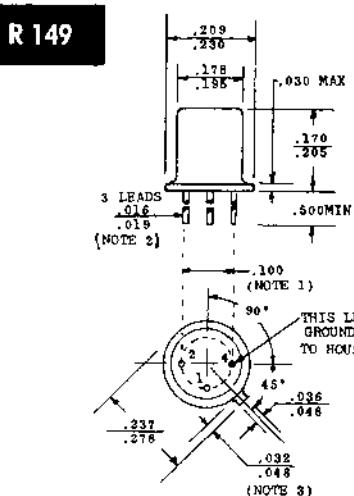
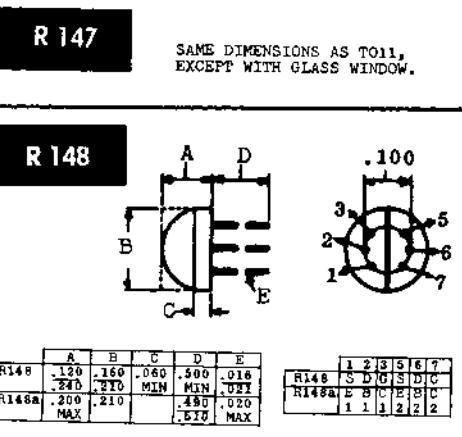
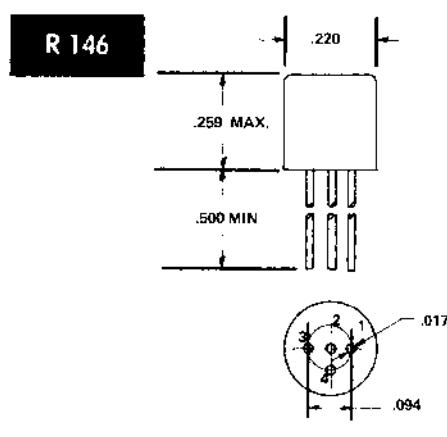
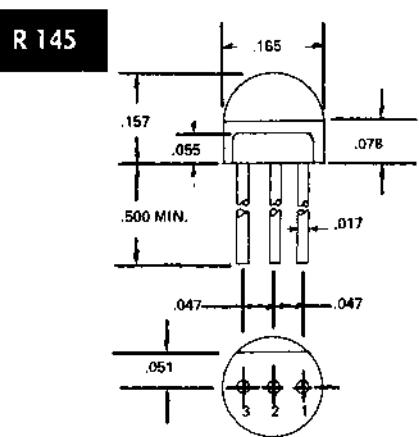
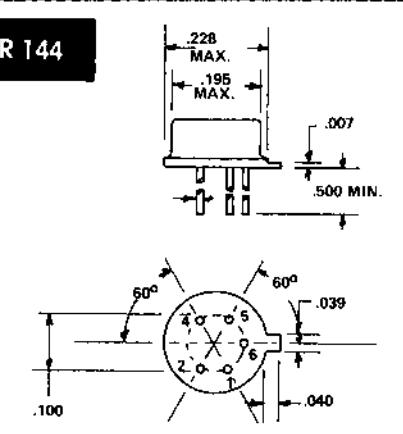
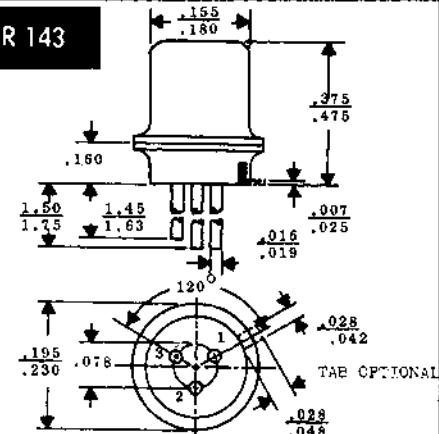
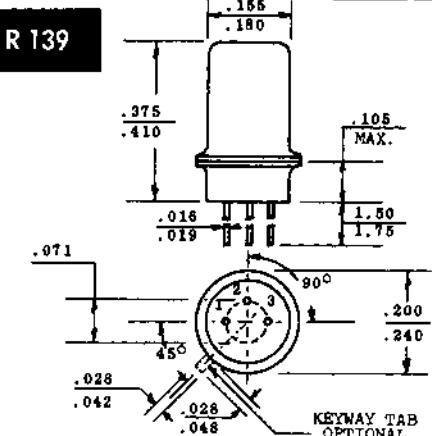
R 133



SAME AS TOG WITH EXCEPTION

15. OUTLINE DRAWINGS

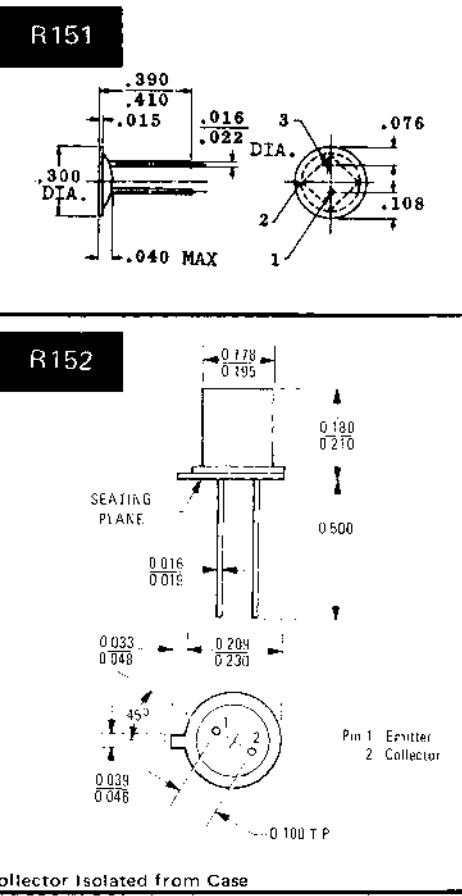
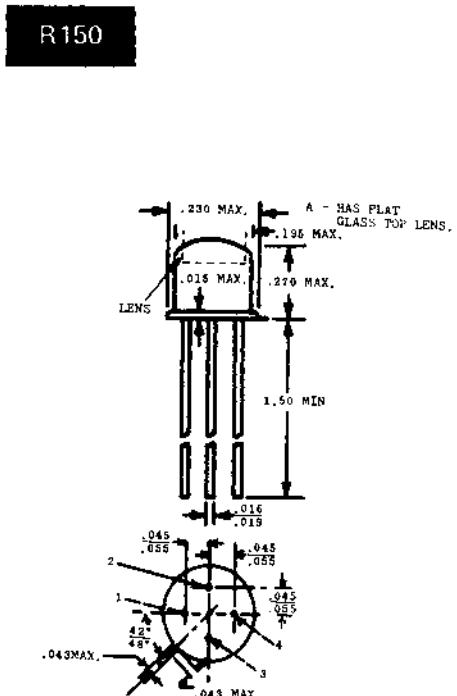
IN DRAWING NUMBER SEQUENCE



NOTE 1: Max diameter leads at a gaging plane .054-.001-.000 below base seat to be within .007 of their true location relative to max. width tab and to the max. .230 diameter measured with a suitable gate. When gage is not used, measurement will be made at base seat.

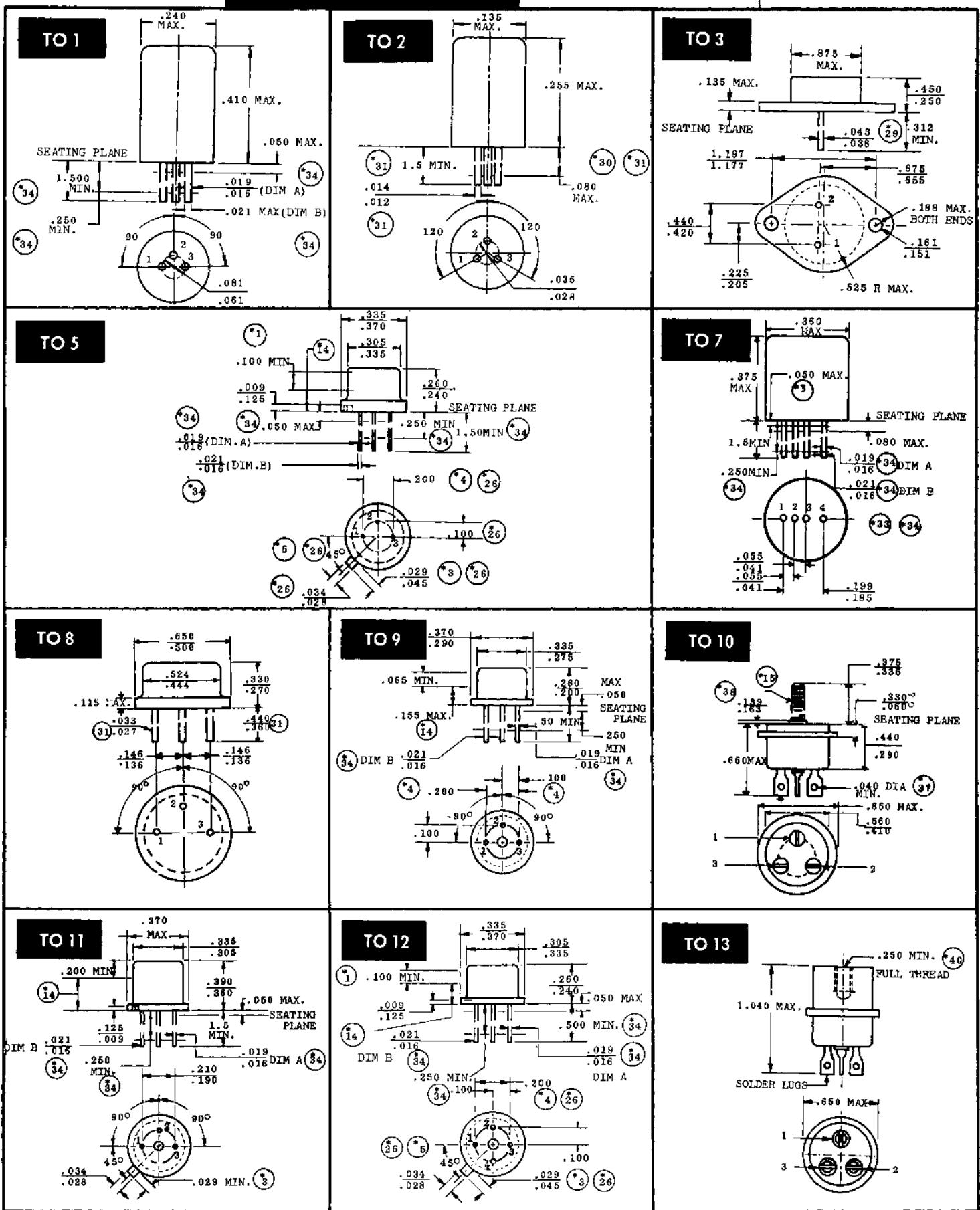
NOTE 2: Lead diameter is controlled in the zone between .030 and .250 from the base seat. Between .250 and end of lead a max. of .021 is held.

NOTE 3: Calculated by measuring flange diameter. Including tab and excluding tab and subtracting the smaller diameter from the larger diameter.



15. OUTLINE DRAWINGS

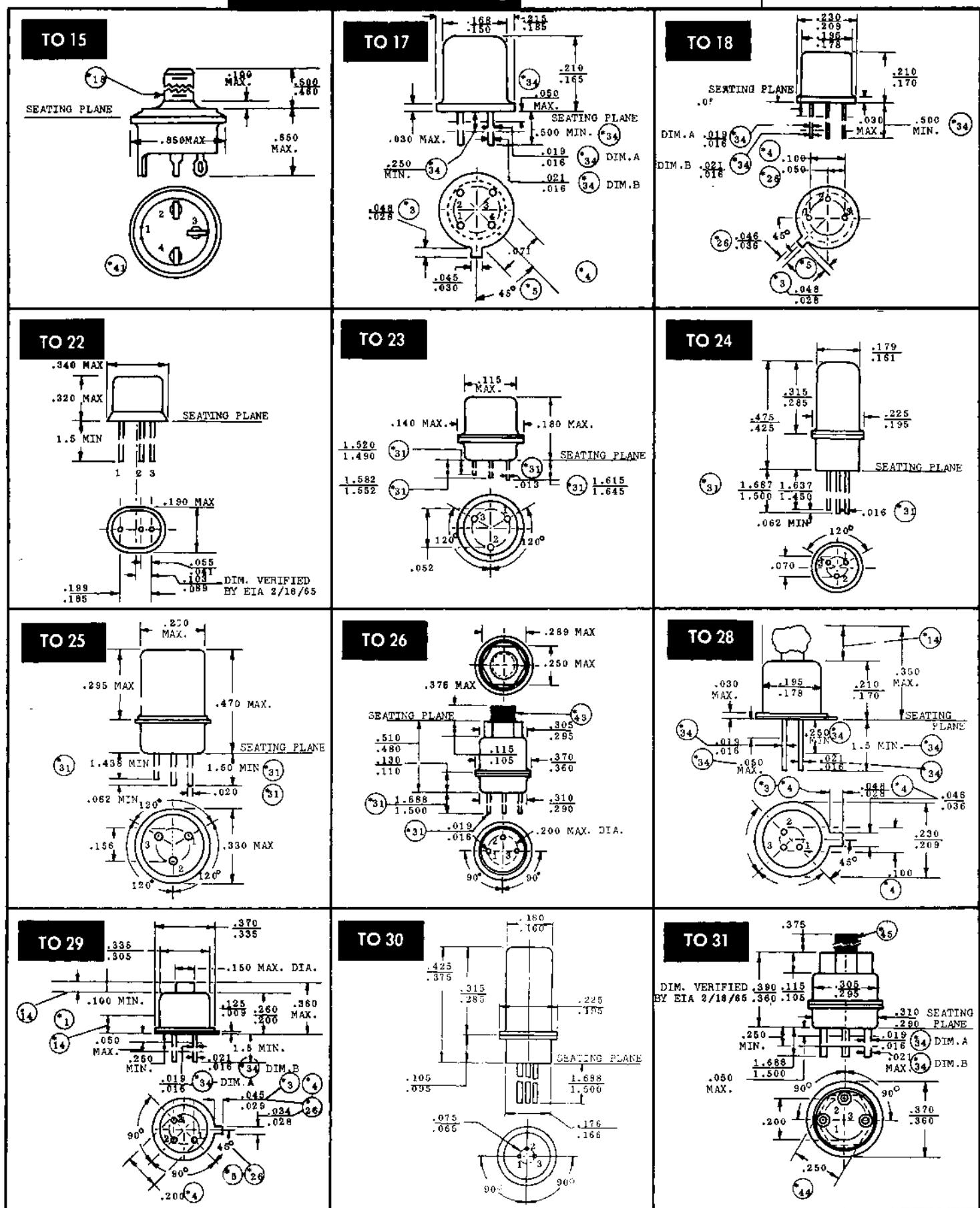
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D.A.T.A.

15. OUTLINE DRAWINGS

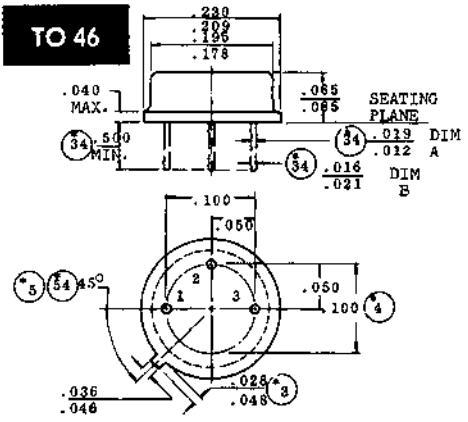
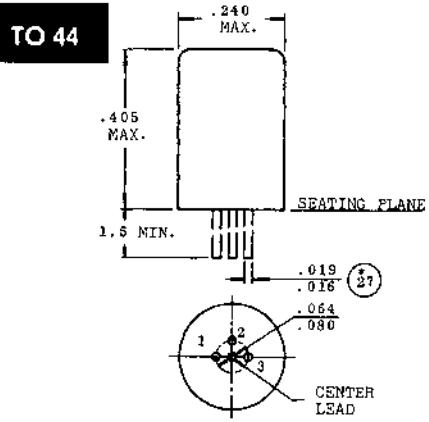
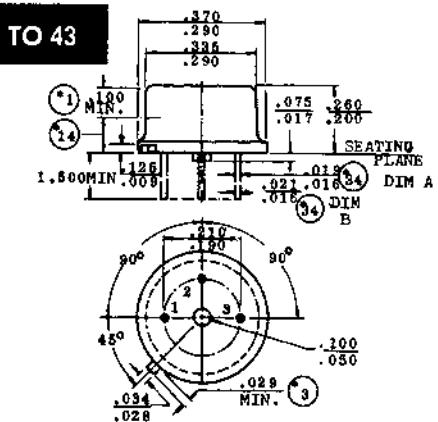
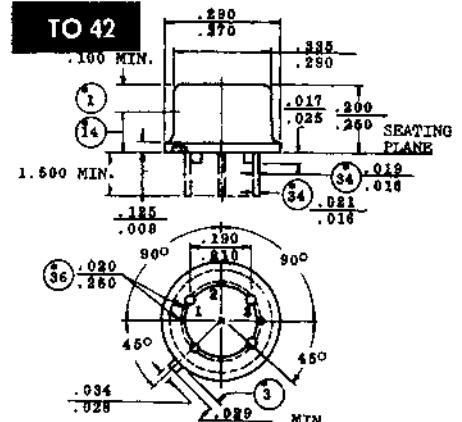
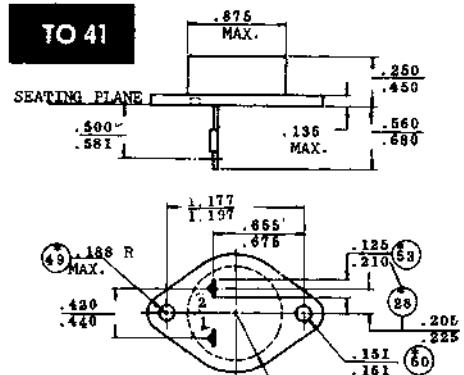
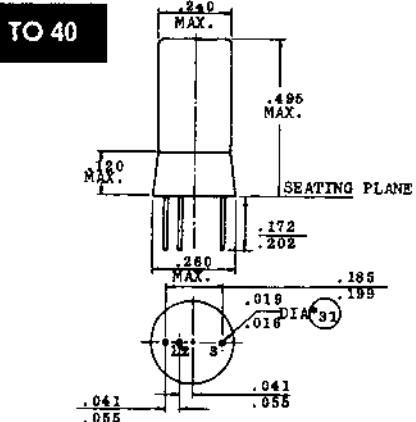
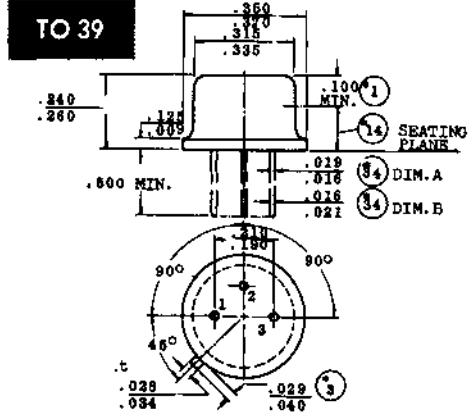
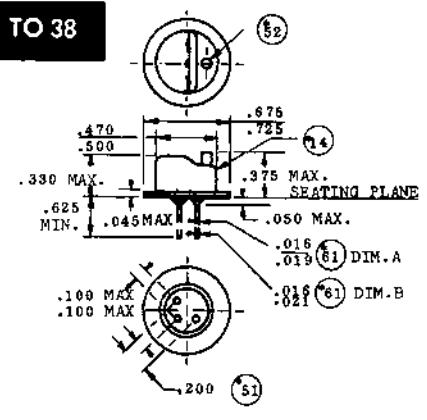
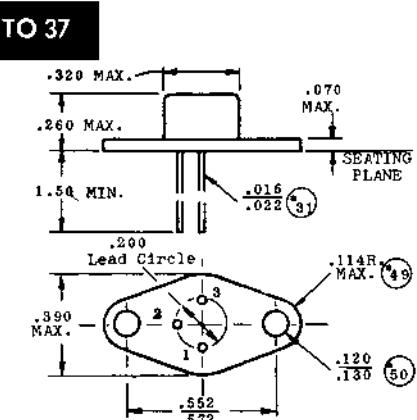
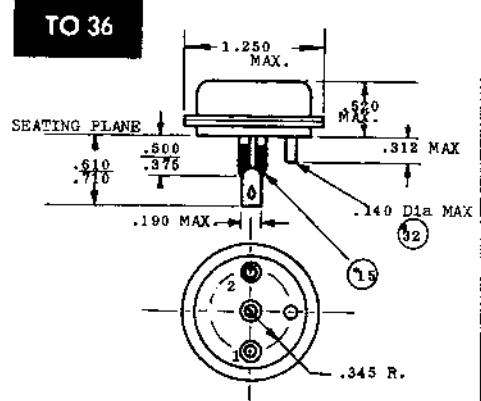
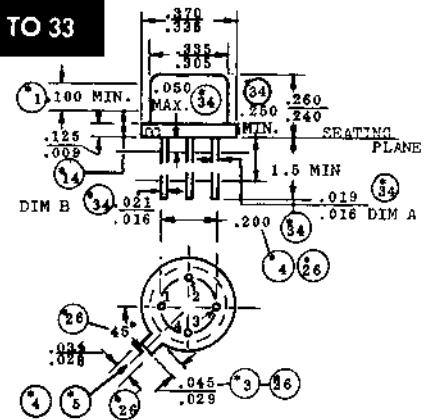
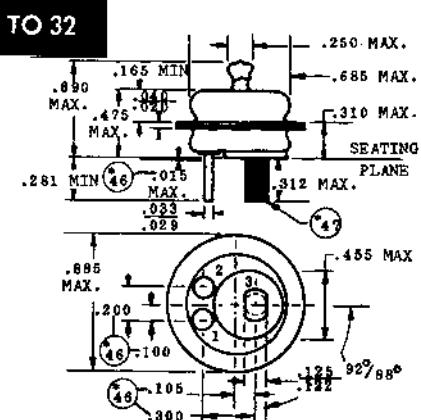
IN DRAWING NUMBER SEQUENCE



D.A.T.A.

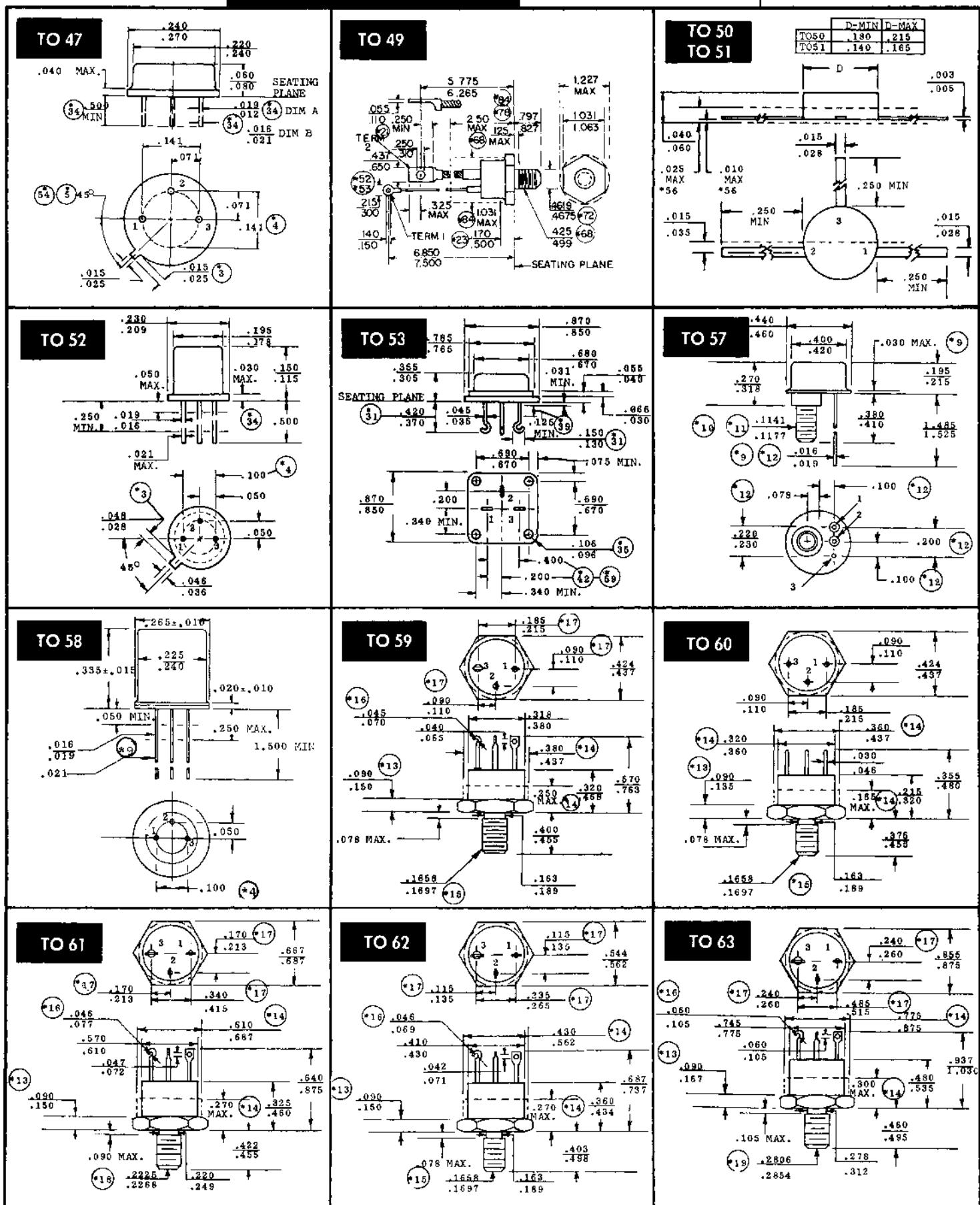
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE



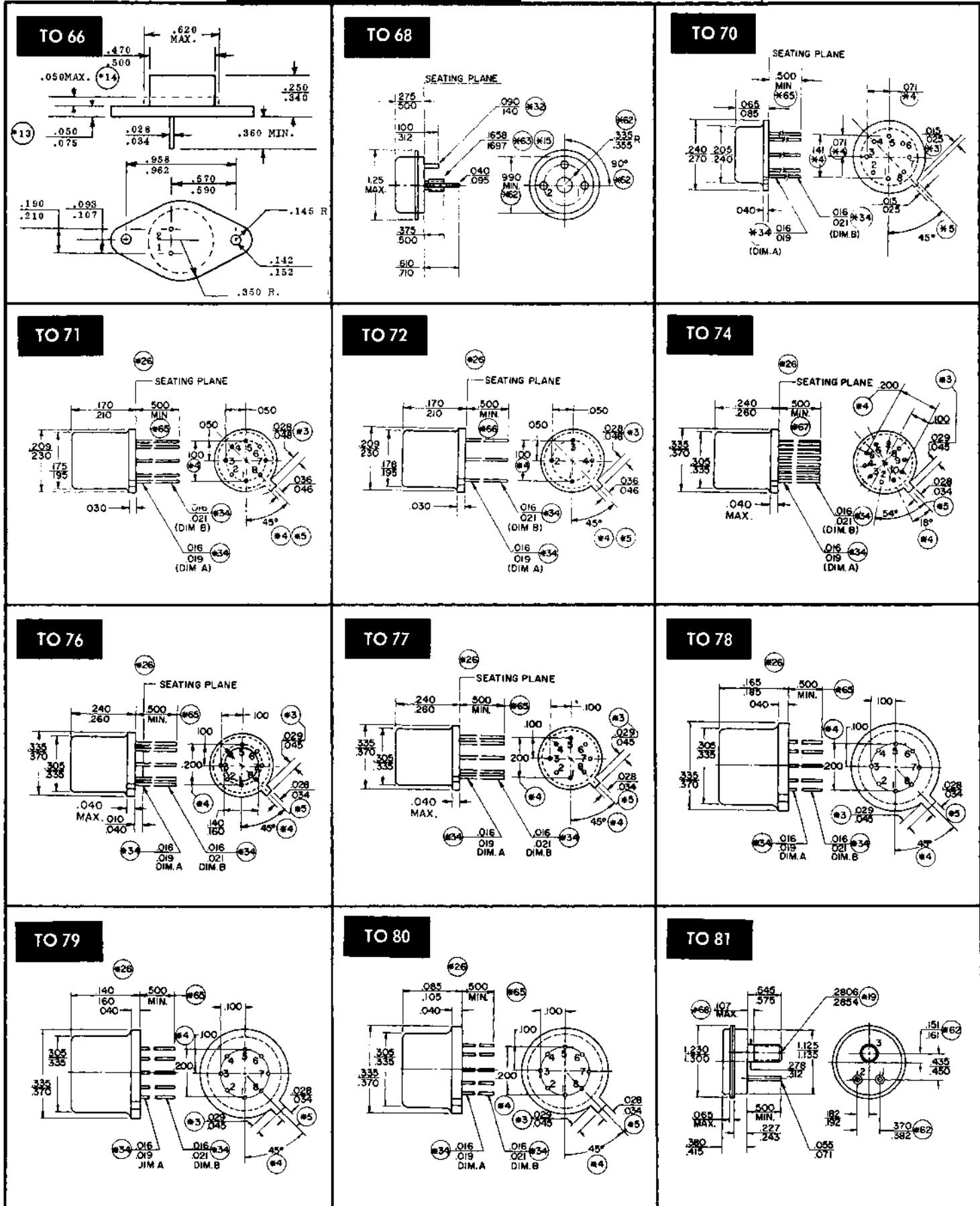
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE



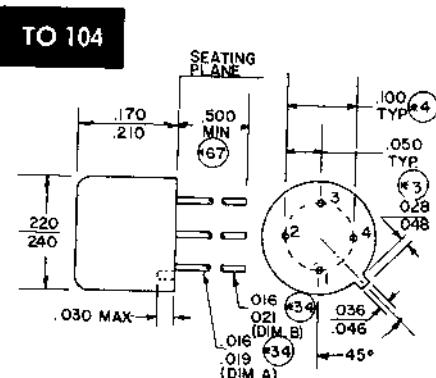
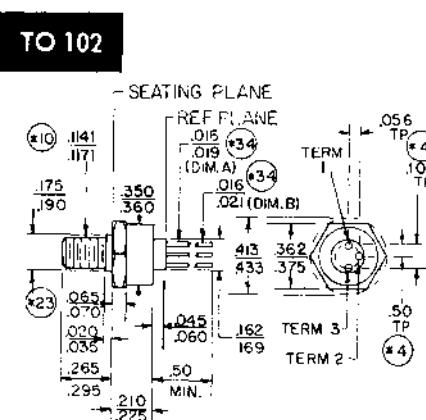
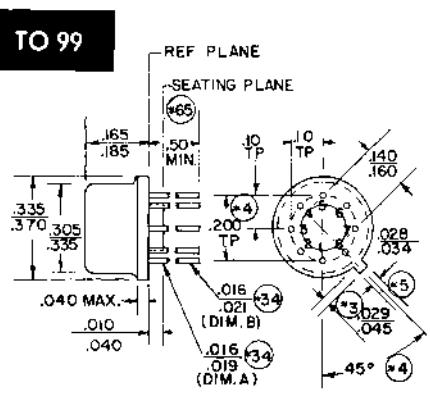
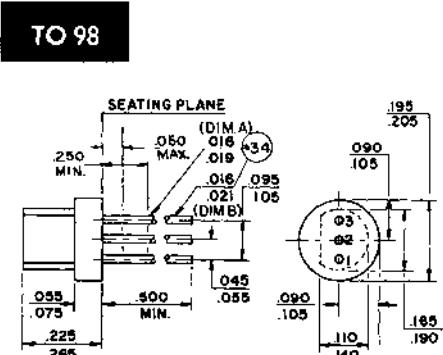
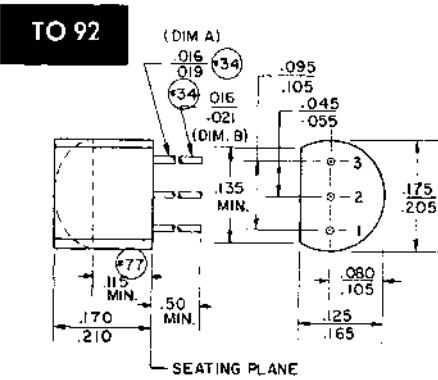
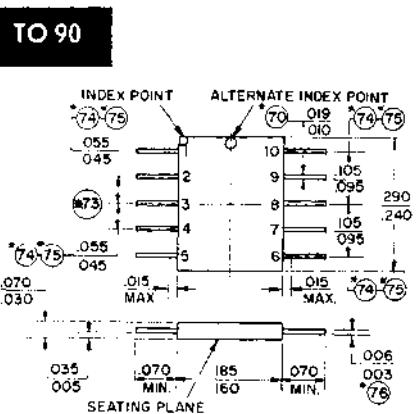
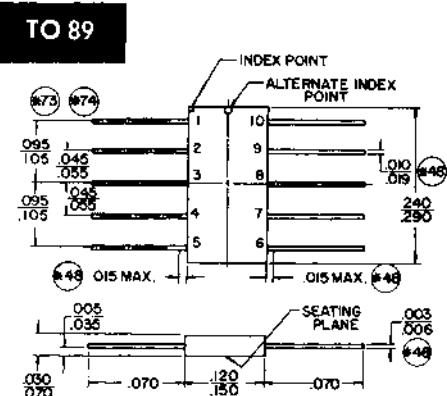
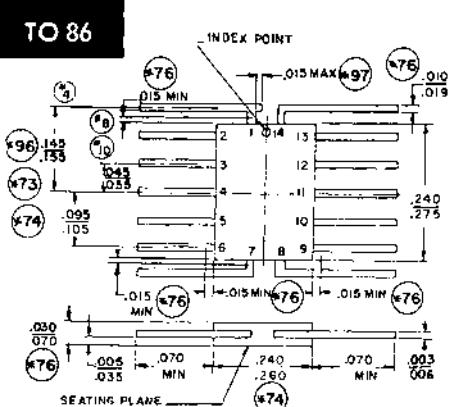
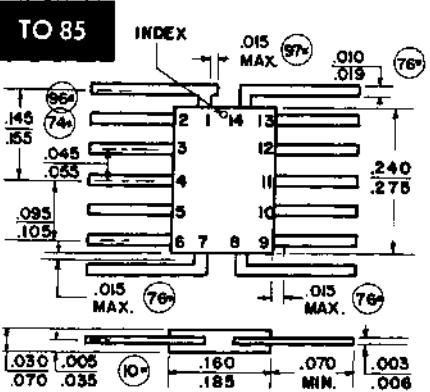
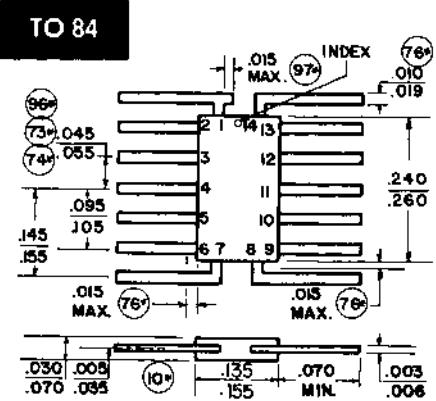
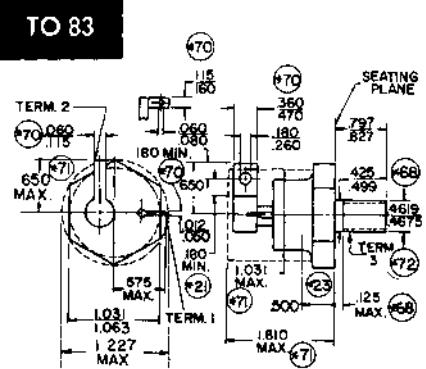
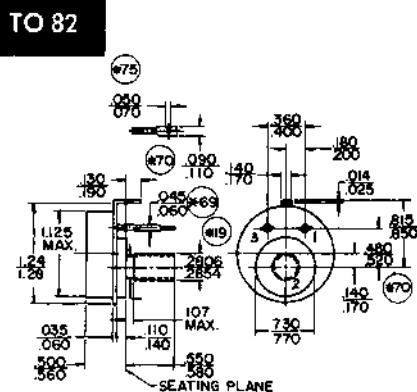
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE



15. OUTLINE DRAWINGS

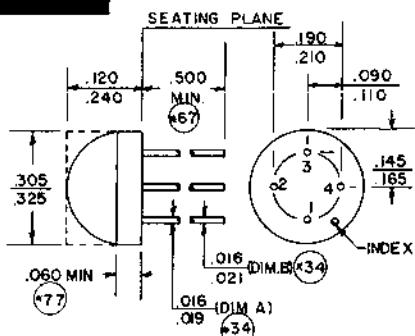
IN DRAWING NUMBER SEQUENCE



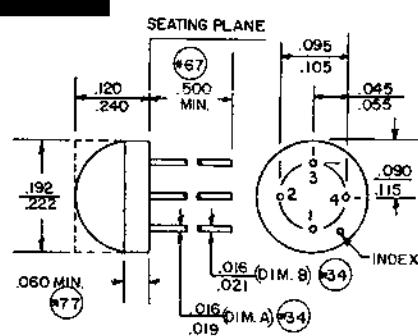
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

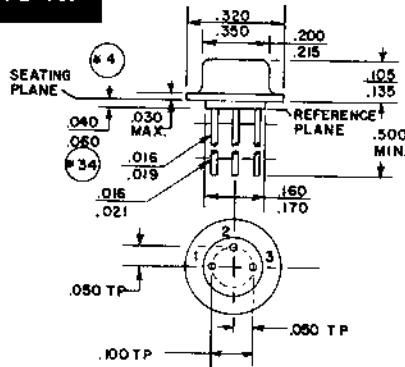
TO 105



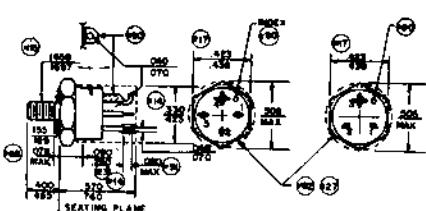
TO 106



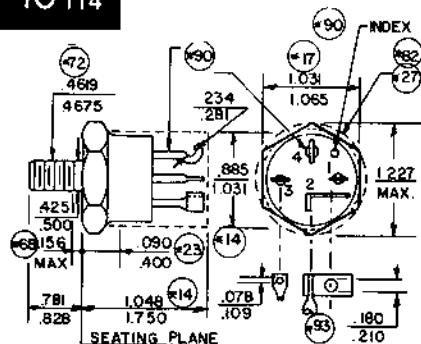
TO 107



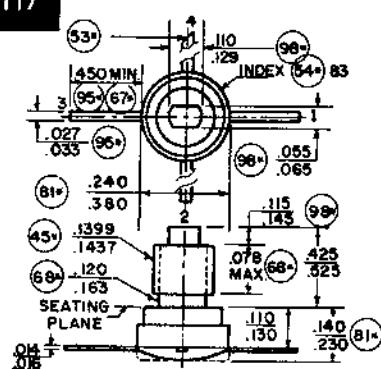
TO 111



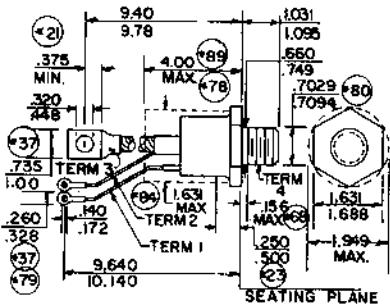
TO 114



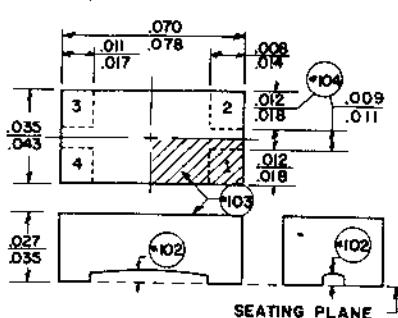
TO 117



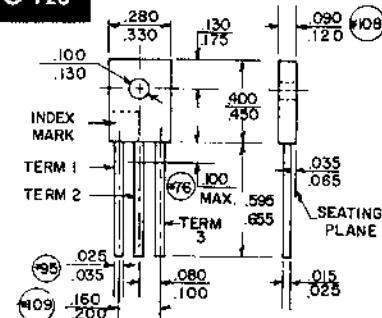
TO 118



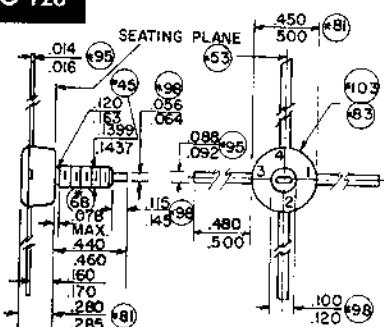
TO 122



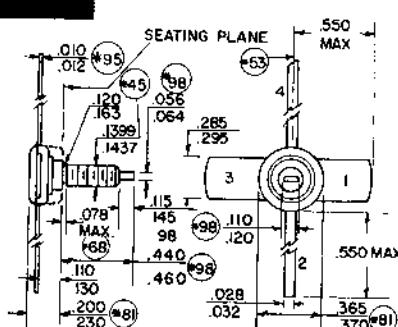
TO 126



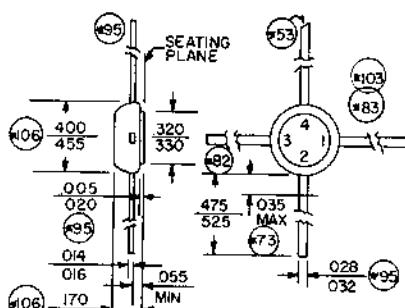
TO 128



TO 129



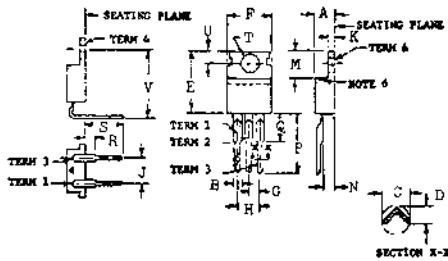
TO 130



15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

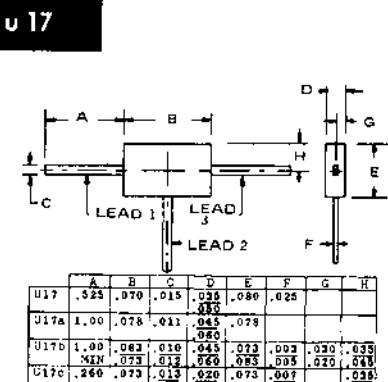
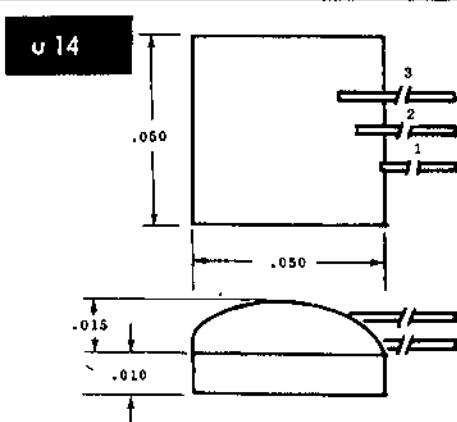
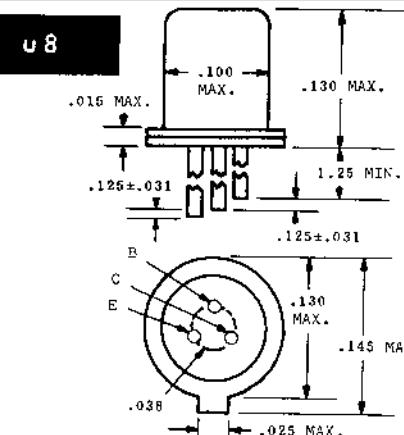
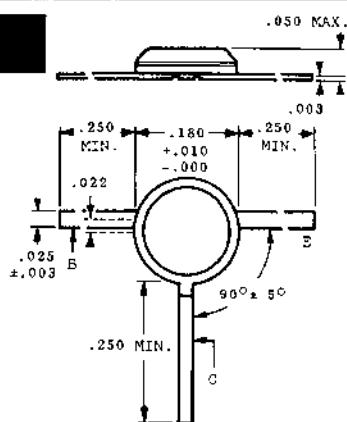
Y220/T0220



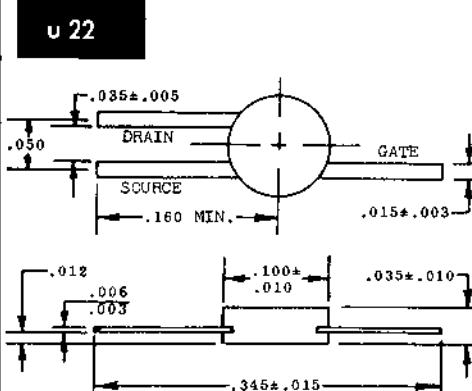
NOTES:

1. Refer to rules for dimensioning semiconductor product outlines included in Publication No. 76.
 2. Figure "A", Axial Terminal Configuration, applicable.
 3. Figure "B", Peripheral Terminal Configuration, applicable.
 4. Alternate lead configurations allowed within C and D.
 5. Tab contour optional within M and F.
 6. Chamfer optional.
 7. Position of lead to be measured .050 - .055 below seating plane.
 8. Position of lead to be measured .250 - .255 from bottom of dimension E.

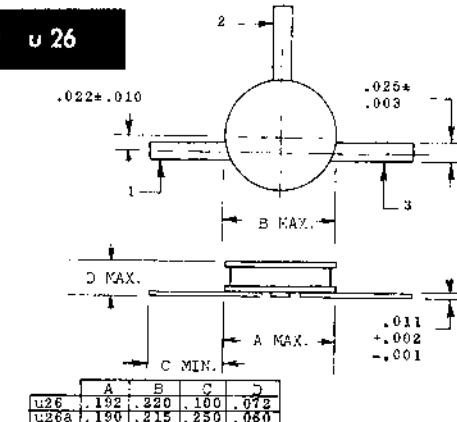
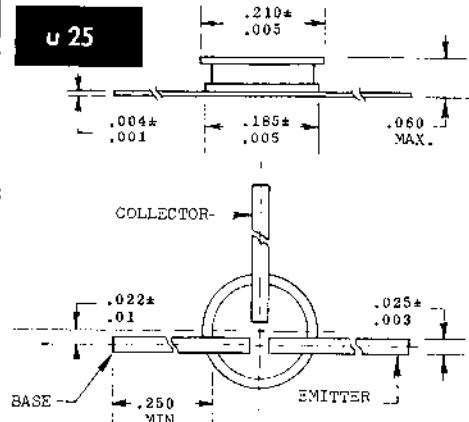
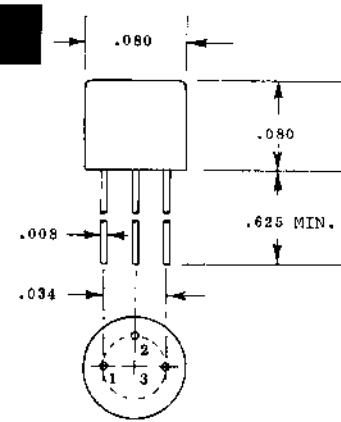
	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T	U	V
Y220a/	.140	.045	.920	.012	.560	.380			.190	.020	.230	.080			.050	.380	.139	.160	.580
T0220AA	.150	.070	.045	.045	.625	.420			.210	.055	.270	.115			MAX	.422	.147	.120	.610
Y220/b	.140	.045	.020	.012	.560	.380	.090	.190		.020	.230	.080	.560	.250			.139	.160	
T0220A3	.150	.070	.045	.045	.625	.420	.110	.210		.055	.270	.115	.562	MAX			.147	.120	



	A	B	C	D	E	F	G	H
U17	.525	.070	.015	.035	.080	.025		
				.035				
U17a	1.00	.078	.011	.045	.078			
				.060				
U17b	1.00	.063	.010	.045	.073	.003	.030	.035
	MIN	.075	.012	.060	.085	.020	.020	.018
U17c	.260	.073	.013	.020	.073	.007	.028	
				.020		.004		



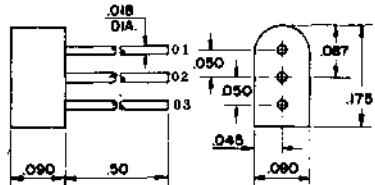
	A	B	C	D	E	F	1	2	3
u23	.138	.078	.158	.024	.003	.024	B	E	C
u23a	.150	.078	.158	.024	.003	.024	B	E	C
u23b	.138	.057	.181	.025	.005		S	D	G
u23c	.092	.058	.114	.016	.006				



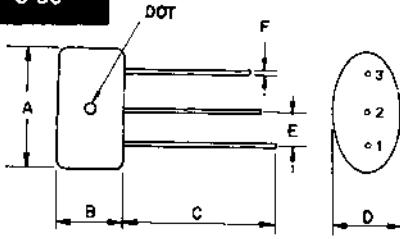
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

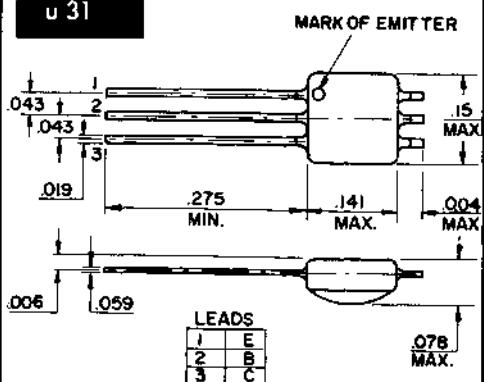
u 29



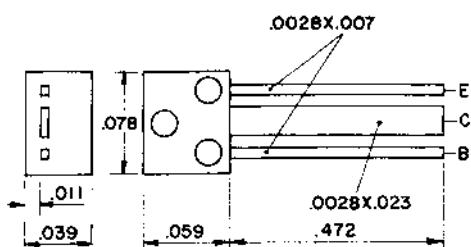
u 30



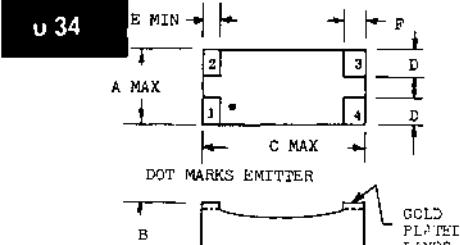
u 31



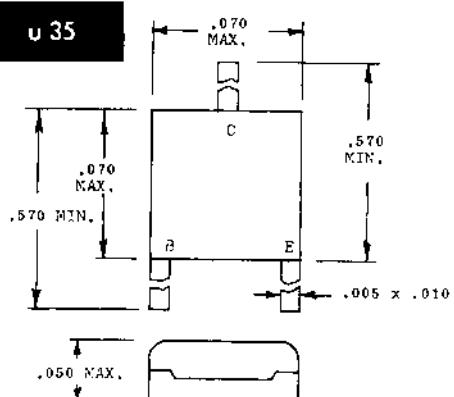
u 32



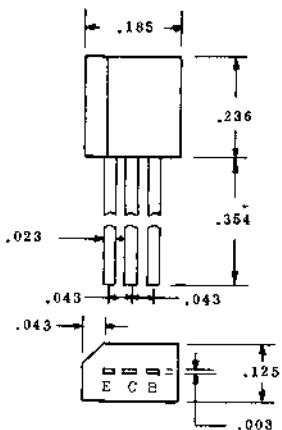
u 34



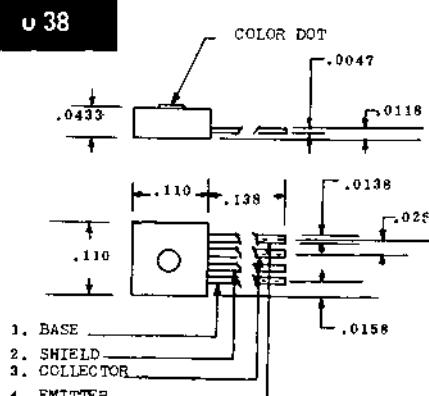
u 35



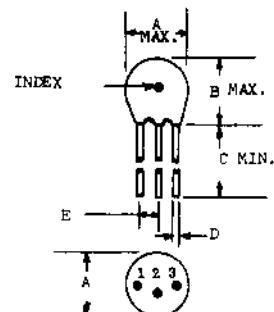
u 37



u 38

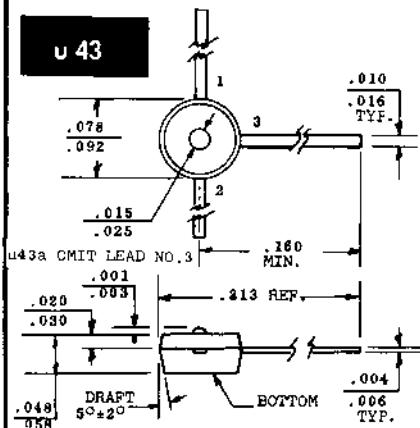


u 40

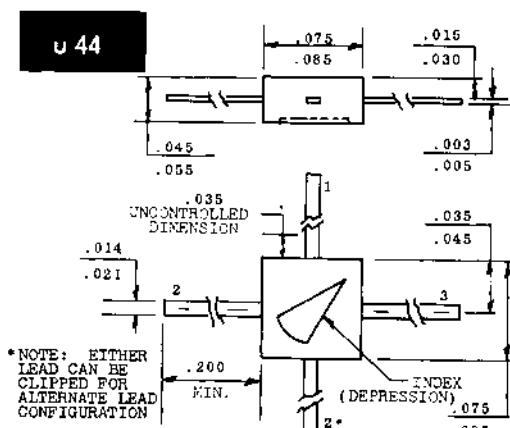


A	B	C	D	E
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.140a	.071	.078	.703	.008 .024
.140b	.070	.105	.400	.005 .025

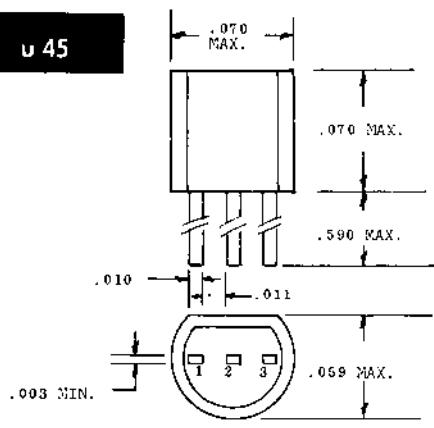
u 43



u 44

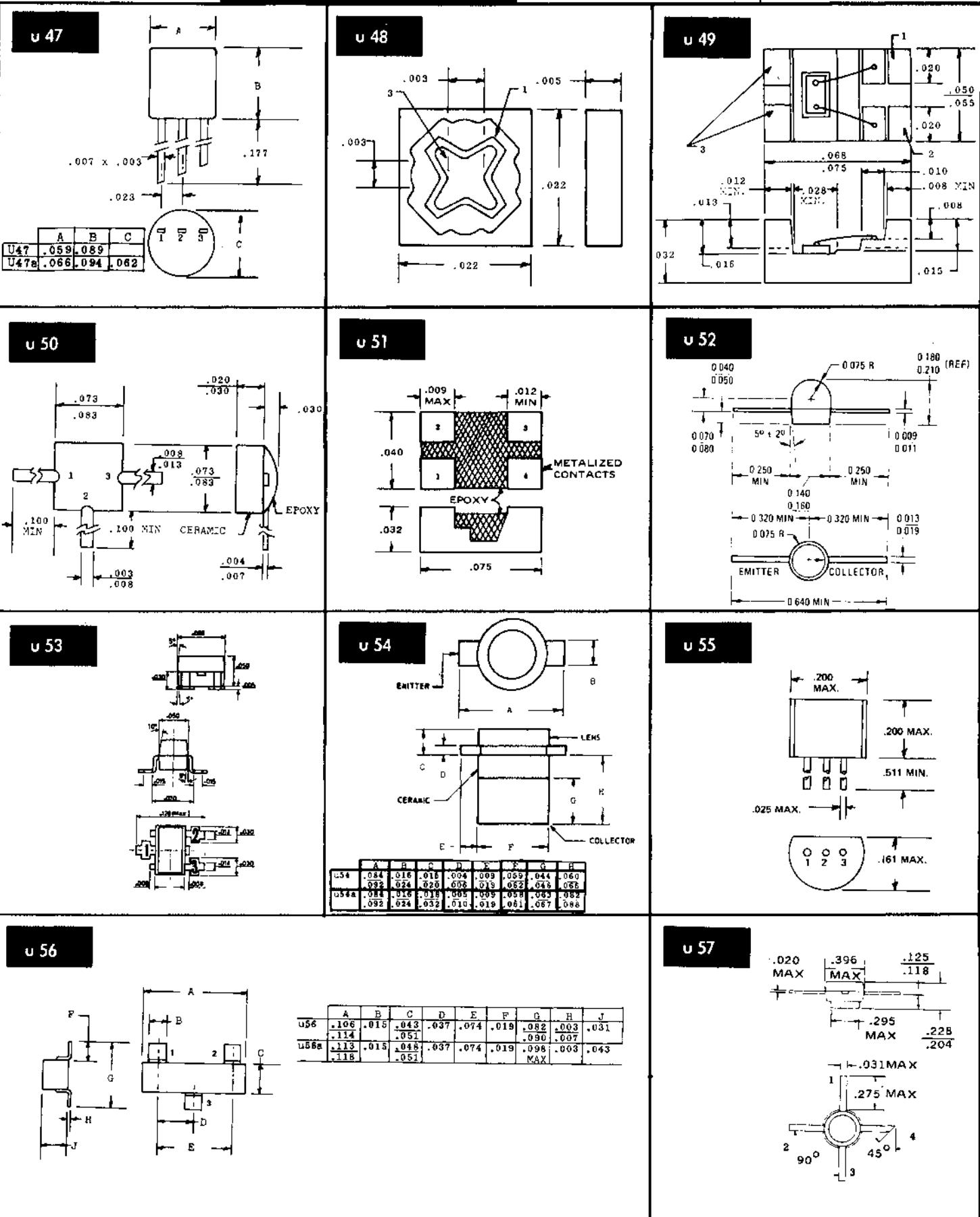


u 45



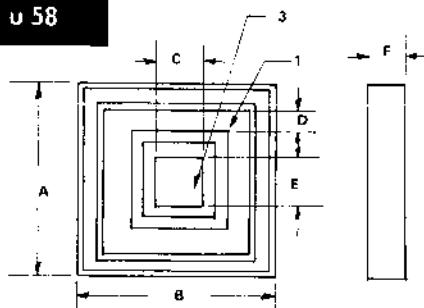
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

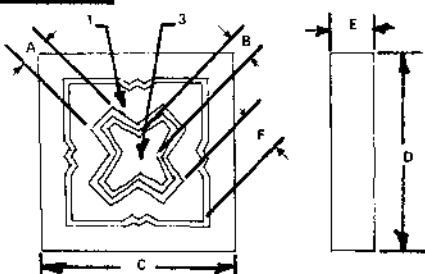


15. OUTLINE DRAWINGS

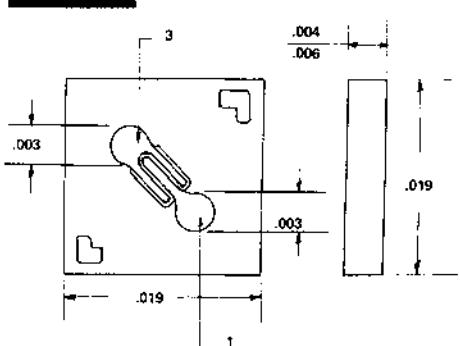
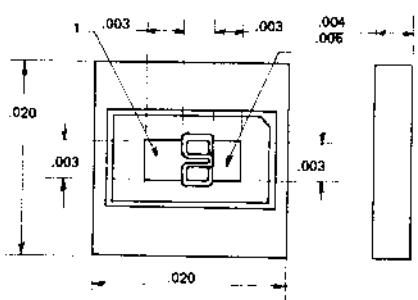
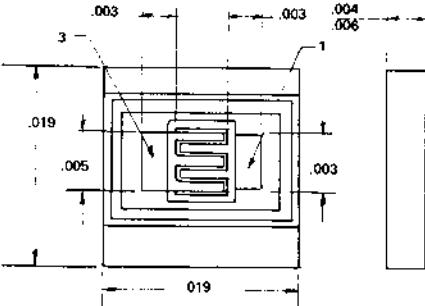
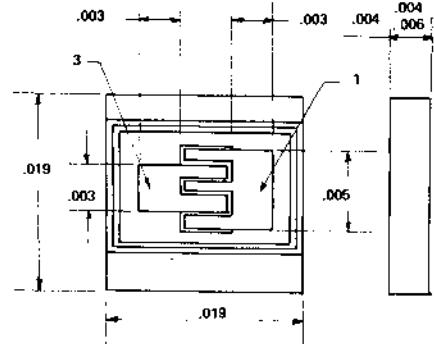
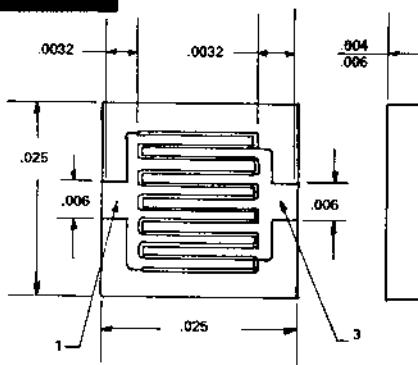
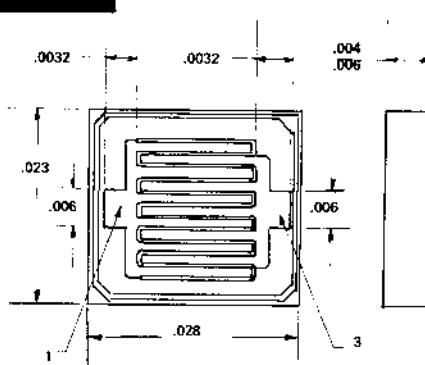
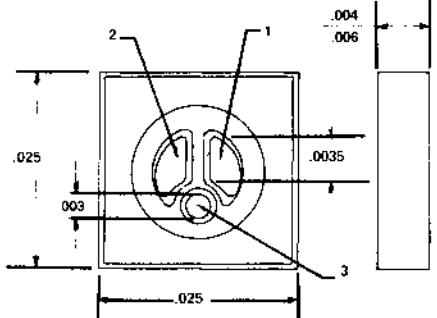
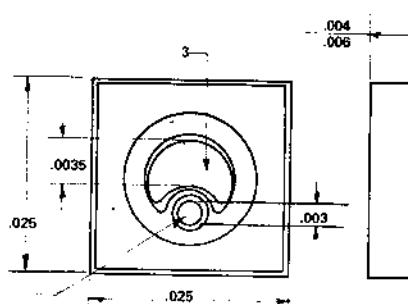
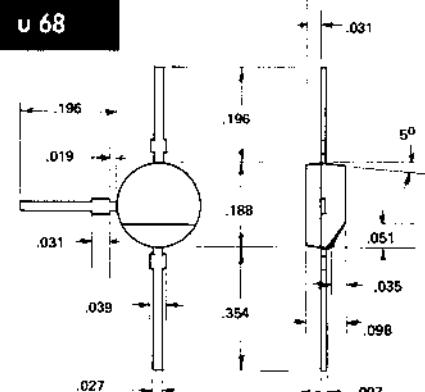
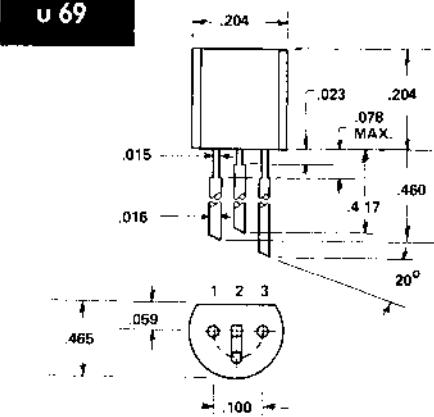
IN DRAWING NUMBER SEQUENCE

u 58


	A	B	C	D	E	F
u58	.023	.023	.006	.002	.006	.004
	.866	.866	.236	.078	.236	.212

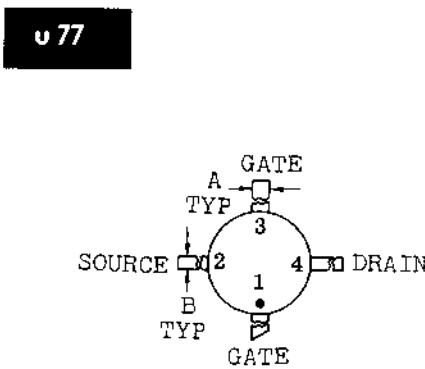
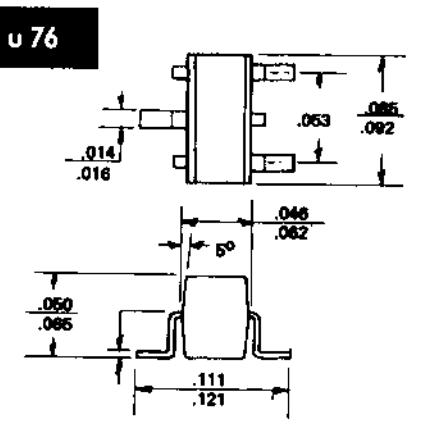
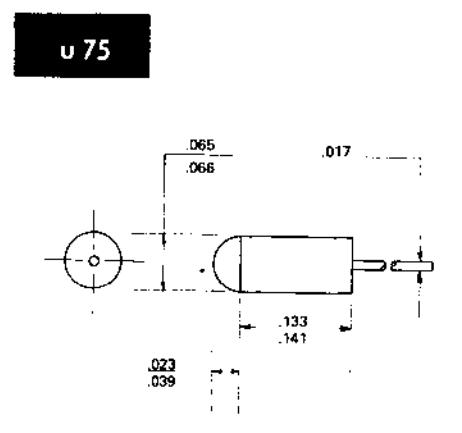
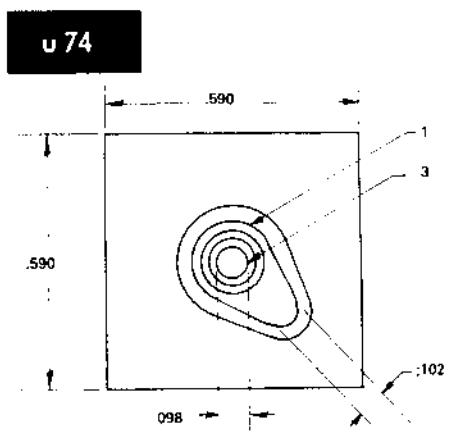
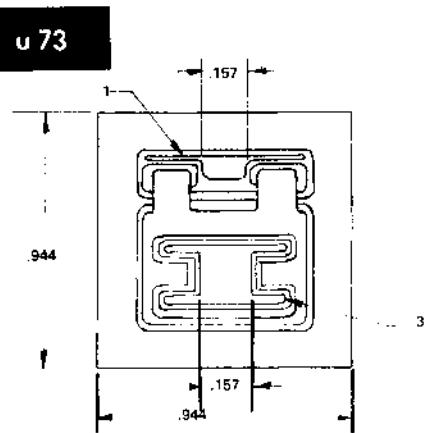
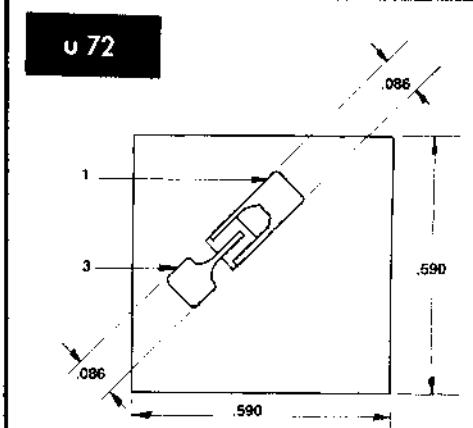
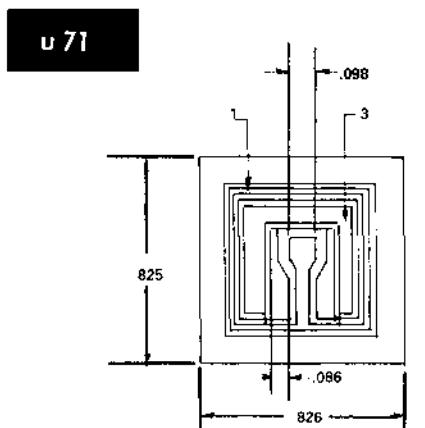
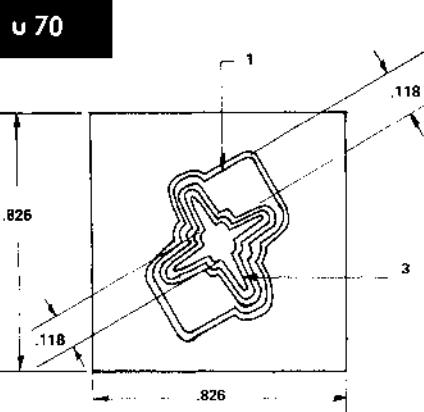
u 59


	A	B	C	D	E	F
u59	.004	.003	.019	.019	.004	.006
	.118	.708	.708	.212	.098	

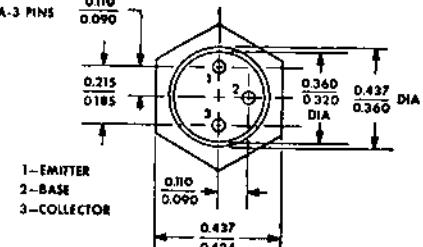
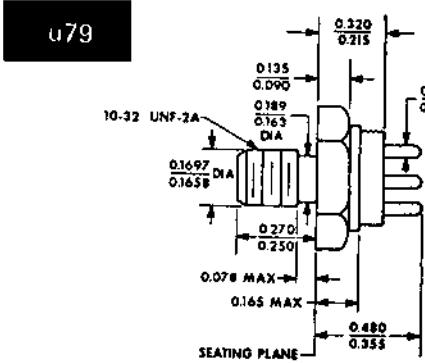
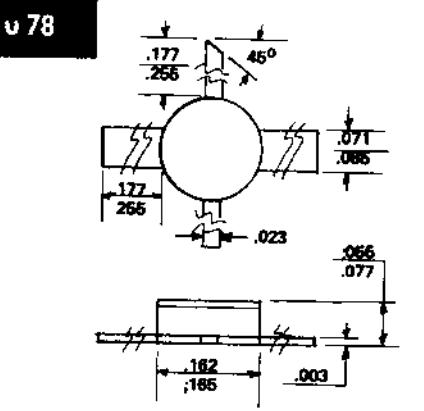
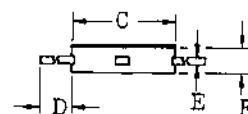
u 60

u 61

u 62

u 63

u 64

u 65

u 66

u 67

u 68

u 69


15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

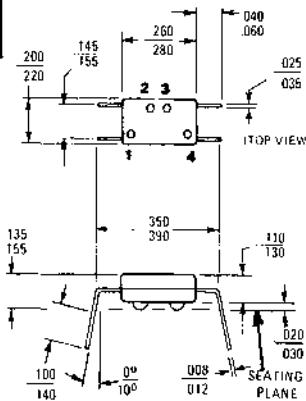


	A	B	C	D	E	F
U77	.020	.024	.140	.196 MIN	.002	.030
U77a	.024	.020	.140	.180 MIN	.002	.030
U77b	.020	.024	.145	.200 MIN	.002	.040
U77c	.020	.040	.070	.250 MIN	.002	.040
U77d	.024	.020	.140	.250 MAX	.002	.040
U77e	.030	.050	.137	.250	.004	.045

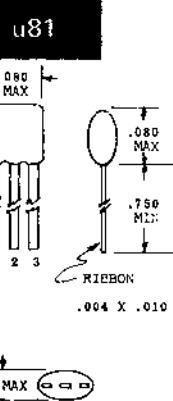


15. OUTLINE DRAWINGS IN DRAWING NUMBER SEQUENCE

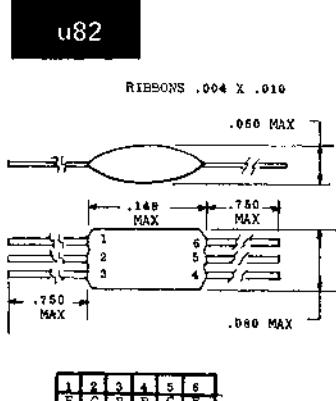
u80



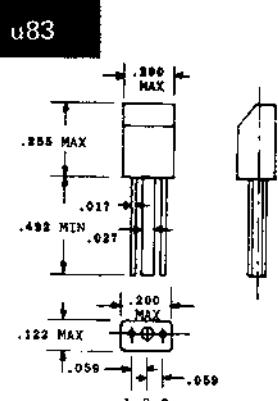
u81



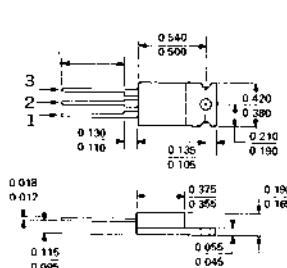
u82



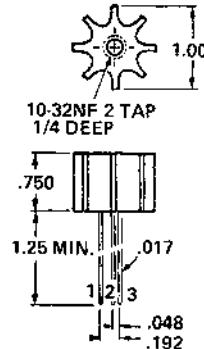
u83



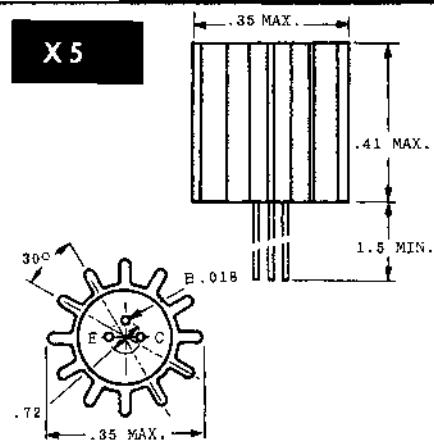
u84



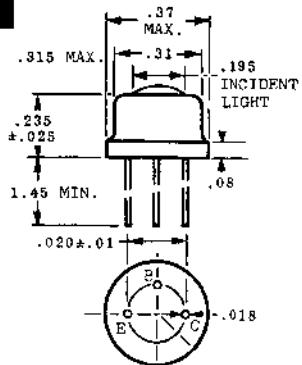
X 4



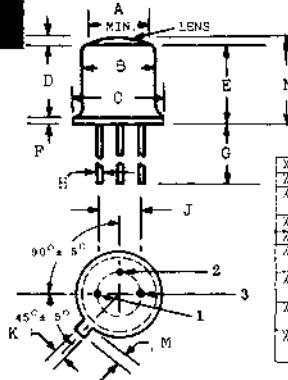
X 5



X 6

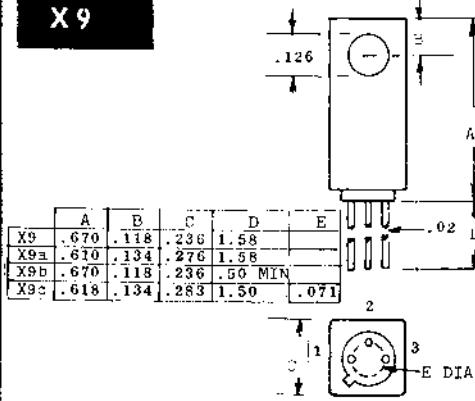


X 8

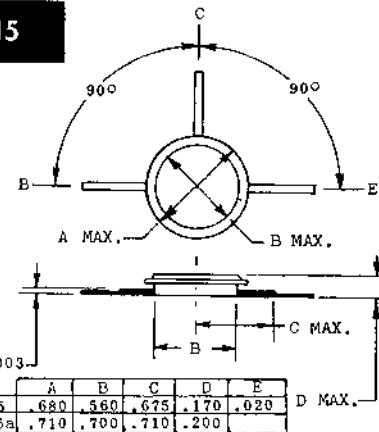


	A	B	C	D	E	F	G	H	I	K	M	N
X8	.110	.186	.220	.020	.190	.030	.500	.017	.160	.040	.038	
Z8	.185	.218			.240		.531	.015	.098			
X8L	.186	.209			.291		.500	.017	.100			
Z8C	.228	.384	.370	.039	.260	.010	.500	.015	.100	.031	.043	
Z8G	.187	.220			.190	.030	.500	.019	.100	.041	.042	
Z8A	.169						.492	.017	.057			
Z8F	.120	.178	.209	.160	.170	.030	.500	.015	.100	.036	.028	
Z8E	.178	.230	.260	.210			.500	.010		.046	.048	
Z8C	.150	.198	.205	.185	.190	.025	.500	.015	.100	.035		.220
Z8h	.199	.230			.210		.500	.019		.045		.220
Z8g	.MAX						.500	.100		.046	.046	

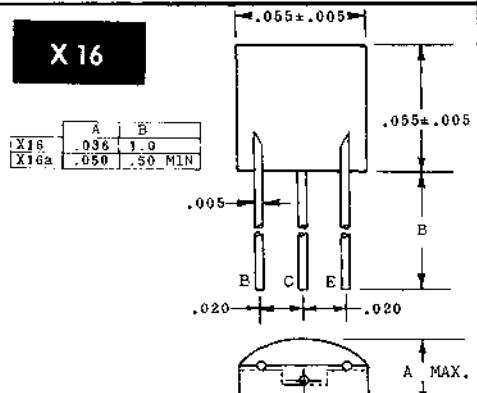
X 9



X 15



X 16

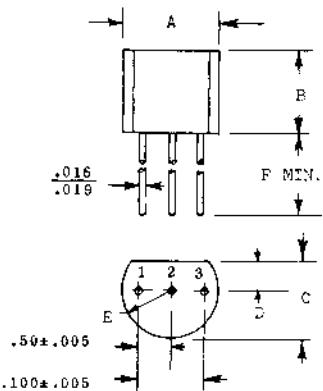


NOTE: FOR X16a - DIMENSION B IS FOR B LEAD ONLY.
ADD .128 FOR COLLECTOR AND Emitter LEADS.

15. OUTLINE DRAWINGS

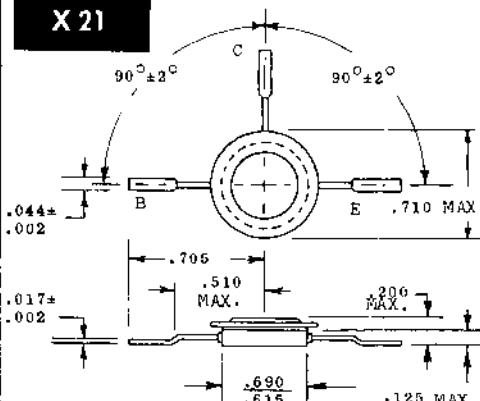
IN DRAWING NUMBER SEQUENCE

x 20

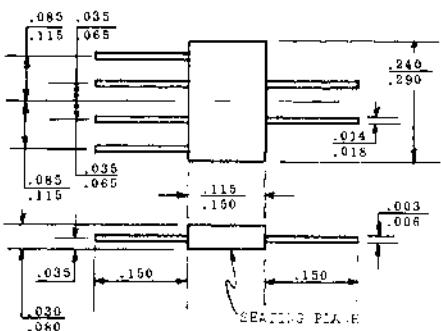


	A	B	C	D	E	F
X20	.200	.180	.160	.095	.095	.500
		.210		.105	.105	
X20a	.200	.180	.160	.065	.095	.500
& b		.210		.065	.105	
X20c		.175		.045	.085	.500
		.185		.065	.095	
X20e	.221	.241	.170	.050		.500
X20f	.175	.170	.125		.020	.450
	.205	.210	.165		.105	

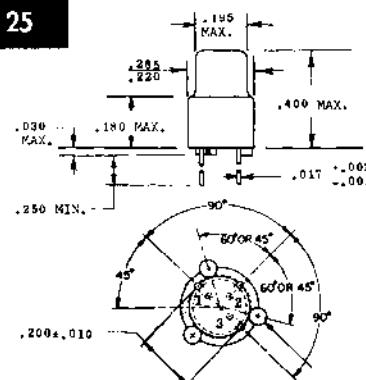
x21



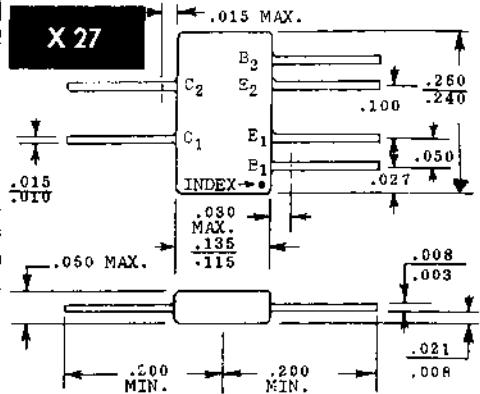
x 22



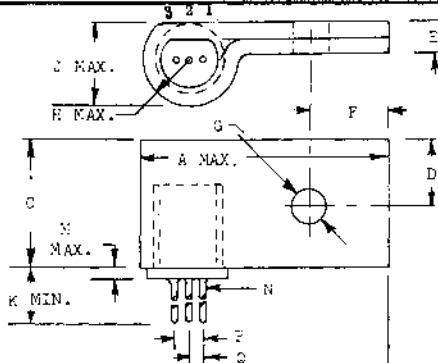
x 25



x27

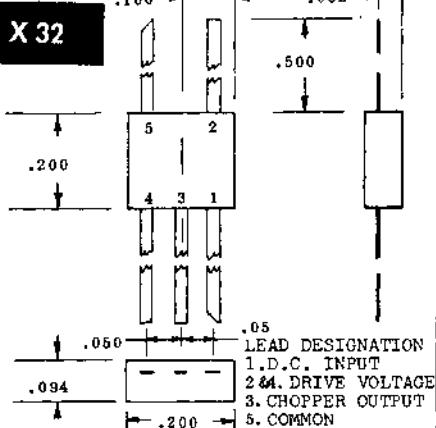


x 28

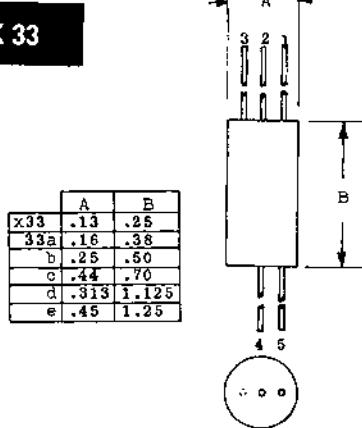


A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q
X28	.676	520	407	.156	.127	.187	.122	.156	.263	.500	.075	.017	.100	.050	
X28a	728	551	324	.187	.125	.118	.122	.295	.282		.016	.100	.050		

x 32



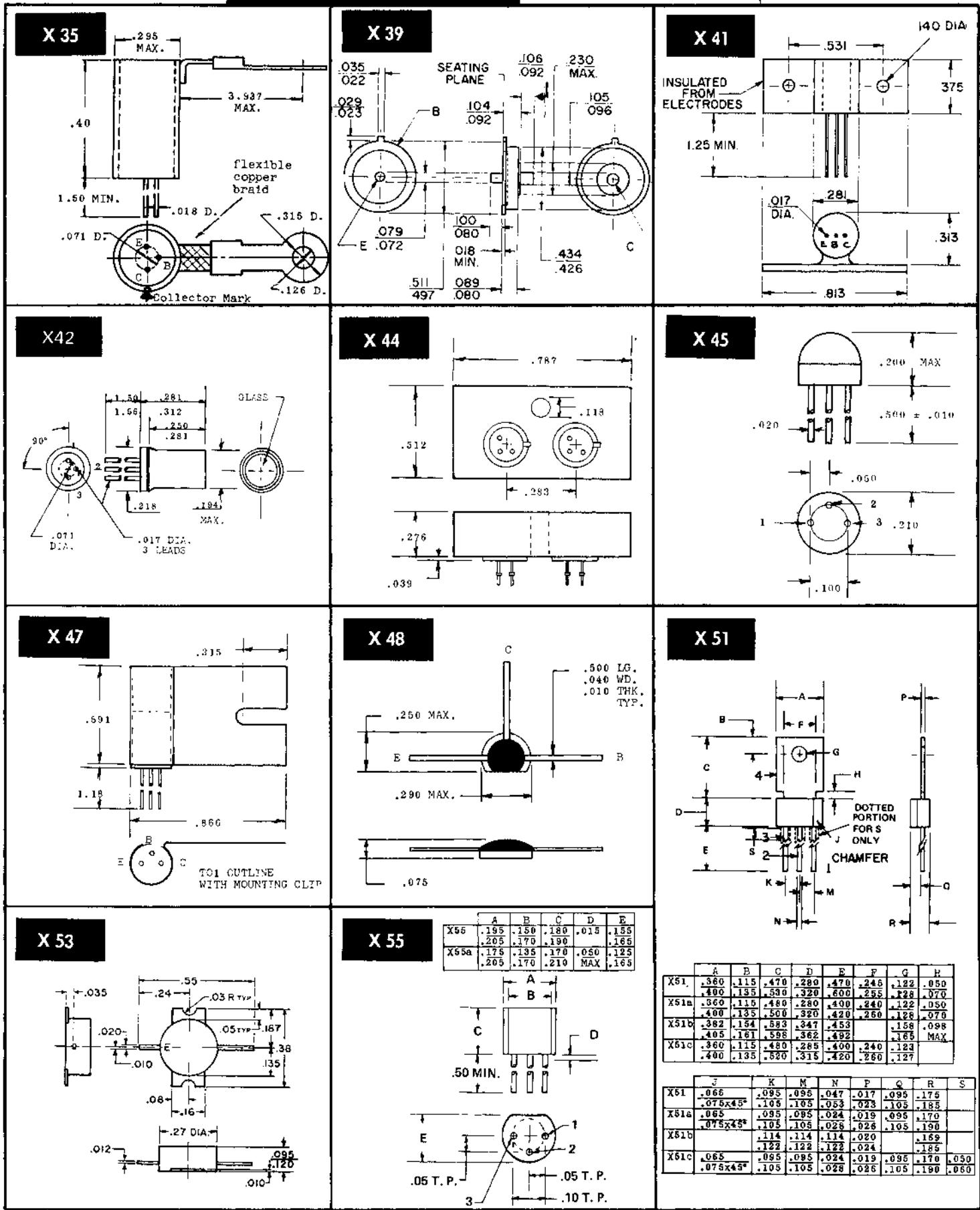
x 33



	A	B	C	D	E
X29	.117	.208	.194	.013	.500
	.123	.220	.202		MIN
X29a	.117	.208	.194	.013	.500
	.123	.220	.202		MIN
X29b	.100	.208	.271		.500
		.230			.590
X29c			.204		.492
					.570
X29d		.209	.170	.030	.500
		.230	.210	MAY	MTN

15. OUTLINE DRAWINGS

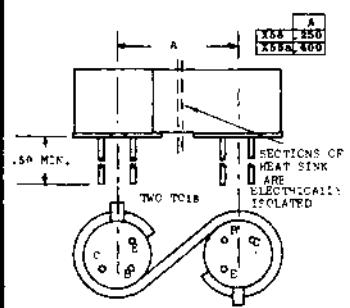
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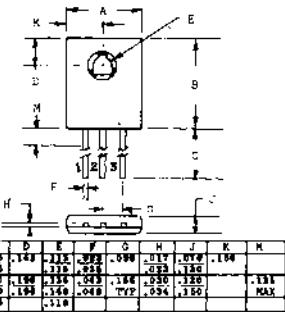
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

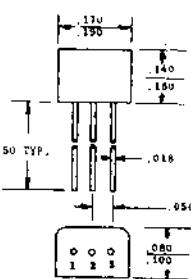
X 56



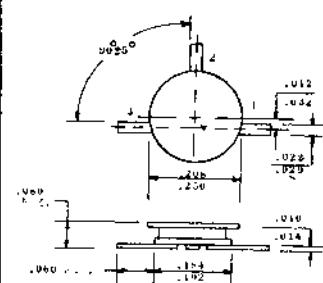
X 58



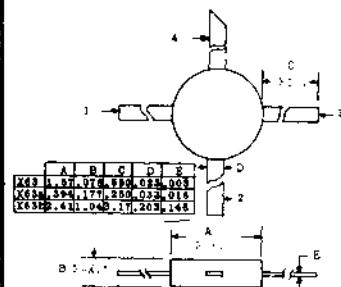
X 59



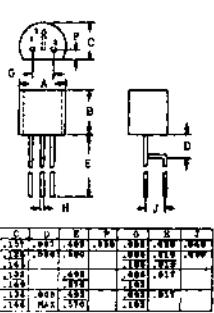
X 60



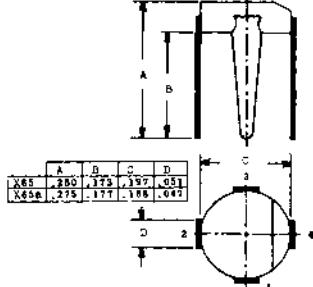
X 63



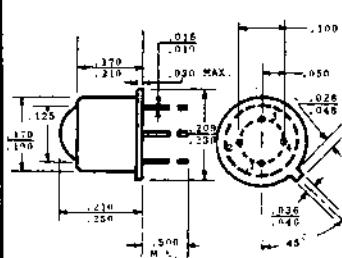
X 64



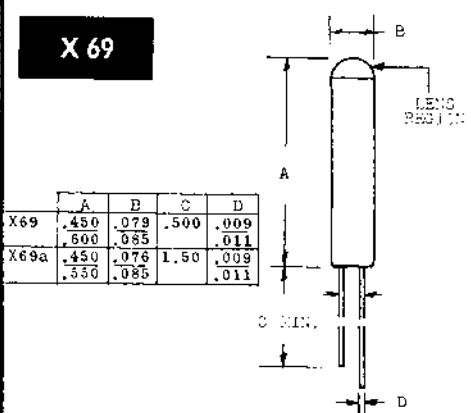
X 65



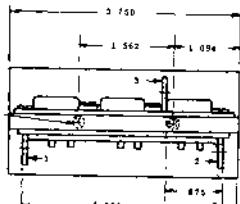
X 68



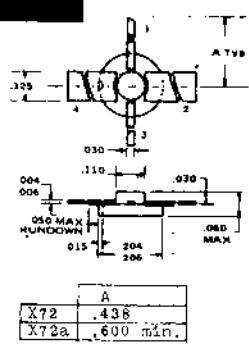
X 69



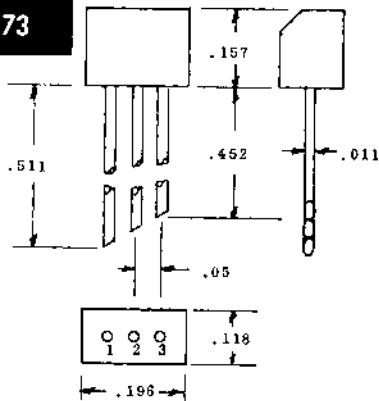
X 71



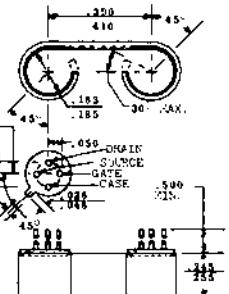
X 72



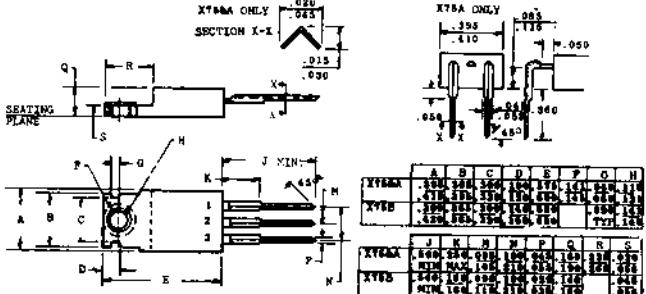
X 73



X 74



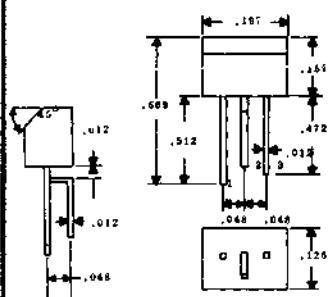
X 75



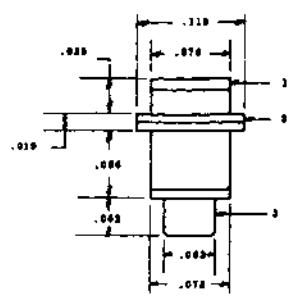
15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE

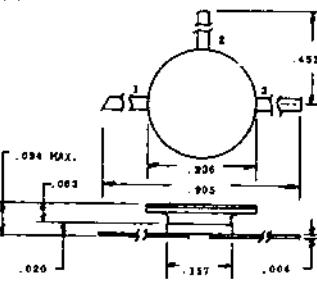
X 76



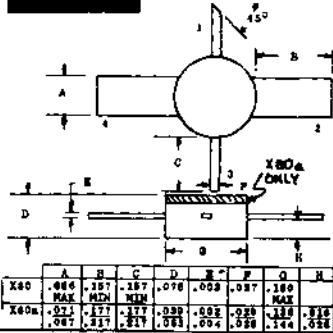
X 77



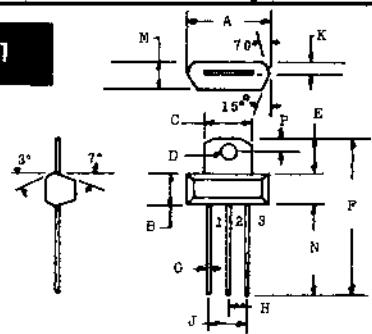
X 79



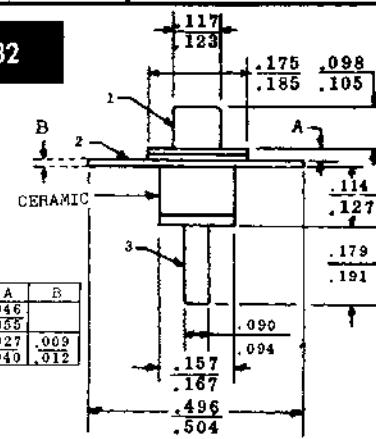
X 80



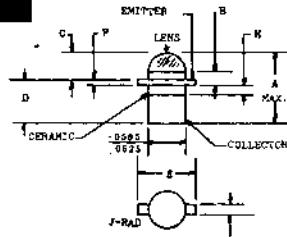
X 81



X 82

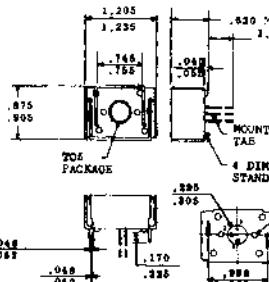


X 83

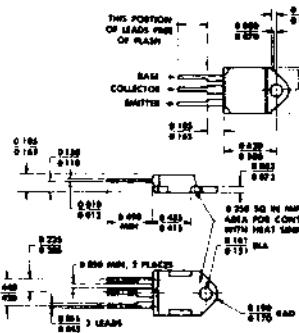


	A	B	C	D	E	F	G	H	J
X83	.114	.055	.281	.085	.055	.054	.015	.014	NA
X83a	.018	.046	.244	.072	.055	.054	.008	.010	
	.135	.055	.281	.085	.055	.054	.015	.014	NA
X83C	.110	.055	.281	.085	.055	.054	.015	.014	NA
X83D	.102	.055	.281	.085	.054	.054	.015	.014	NA
	.117	.055	.281	.085	.054	.054	.015	.014	

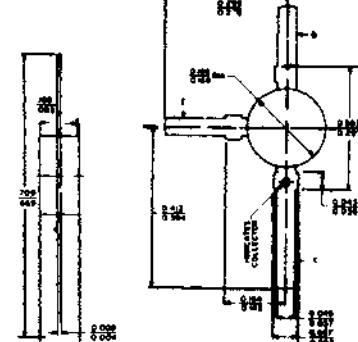
X 84



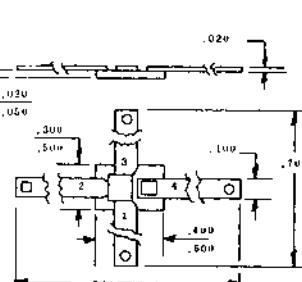
X 86



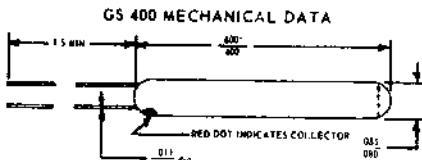
X 87



X 89

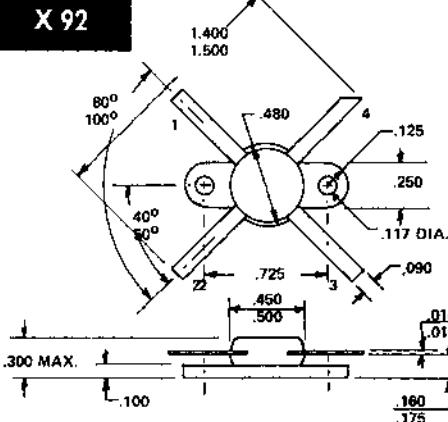


X 90



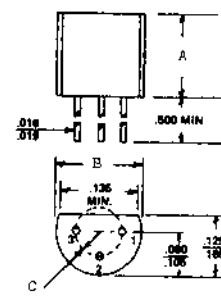
* Devices May Be Fabricated to Longer or Shorter Lengths
"A IS WITHOUT LENS"

X 92



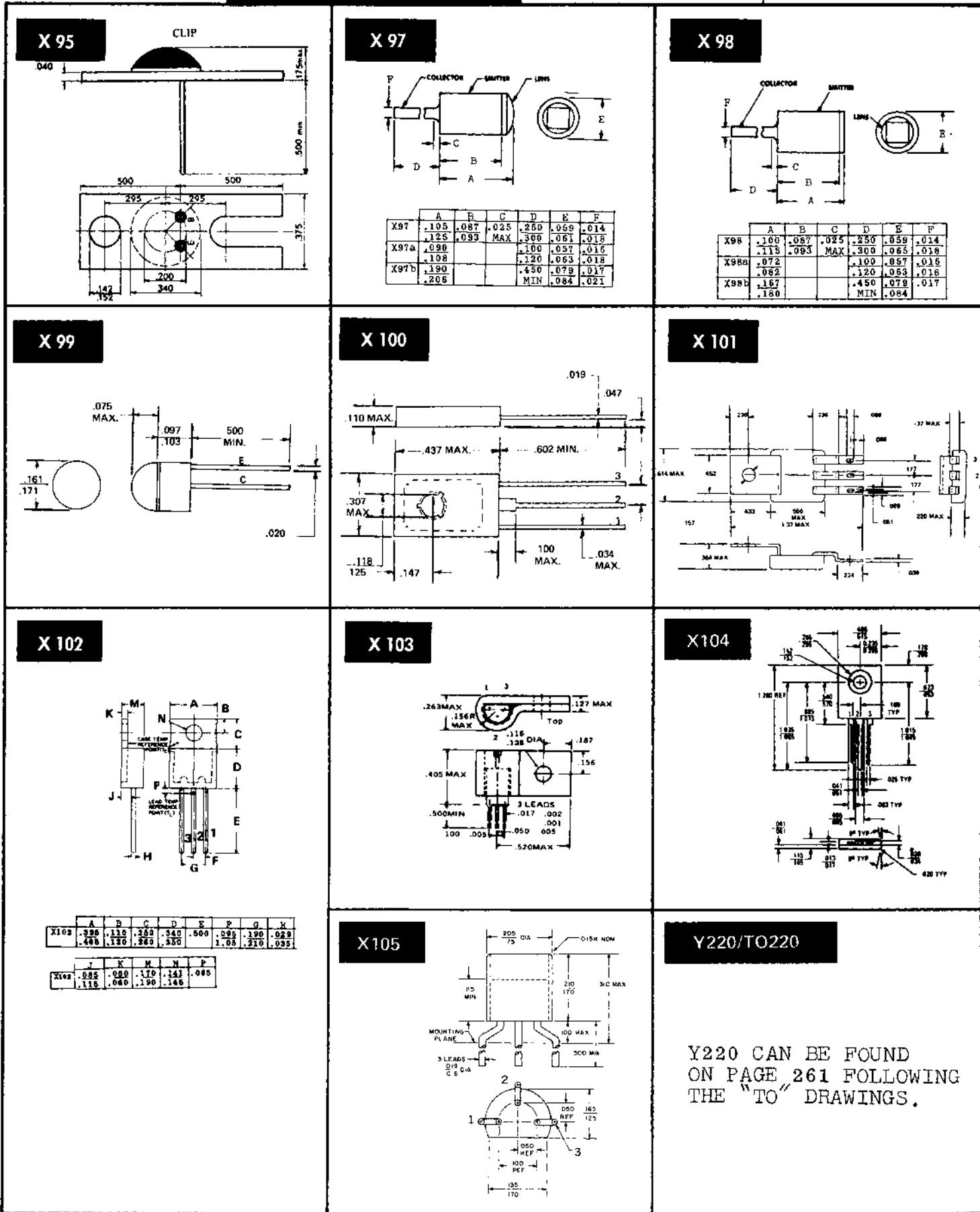
X 93

	A	B	C
X93	.170	.175	.090
X93a	.210	.205	.110



15. OUTLINE DRAWINGS

IN DRAWING NUMBER SEQUENCE



D.A.T.A.

ZA NOTES

1. The outline drawing for this device may be either MT6 or MT26. Consult manufacturer.
4. Same as T036 outline except 5mm (metric) thread.
8. Outline available in different package styles. Consult manufacturer for details.
9. Device available with more than one outline.

Suffix	Outline
a	u30
b	u30a
11. Device also available R51 outline.
17. The outline drawing for this device may be either L3b (with reduced dissipation) or L3c. Consult manufacturer.
22. The outline drawing for this device may be either TO5, TO13, or ZA23. Consult manufacturer.
23. The outline drawing for this device is identical with a TO13 outline with .022 x 2.5 long tin nickel leads welded to each terminal.
24. The outline drawing for this device may be either TO13 or ZA23. Consult manufacturer.
25. For the outline drawing, refer to the individual slash numbers.
26. Type number with slash S same as X56 outline. Type number with slash L same as X56a outline.
27. The outline drawing for this device may be either R81 or R3a. Consult manufacturer.
29. Type number with R suffix indicates a TO18 package; type number with a S suffix indicates a TO5 package.
30. The outline drawing for this device may be either MT25b or MT42b. Consult manufacturer.

JEDEC "TO" DRAWING NOTES

1. This zone is controlled for automatic handling. The variation in actual diameter within the zone shall not exceed 0.010 (.25MM).
2. (All leads) Diameter is uncontrolled to .020 from seating plane and beyond minimum tolerance of lead length (1.5 or .5) from seating plane. Dim. A applies between .020 and .250 from seating plane. Dim B applies between .250 and minimum tolerance of lead length.
3. Measured from maximum diameter of the actual device.
4. Leads having maximum diameter .019 (.483MM) measured in gaging plane .054 - .001 (1.37MM - .025MM - .000MM) below the seating plane of the device shall be within .007 (.178MM) of their true locations.
5. Tab centerline.
6. Diameter (a) concentric within 0.006 total indicator reading. Cap flange shall never extend beyond header periphery. 0.005 max burr or weld flash.
7. Diameter (a) concentric within 0.006 total indicator reading.
8. Applies to thickness of tab.
9. (Three leads), the specified lead diameter applies to the zone between .050 (1.27MM) and .250 (6.35 MM) from the reference plane. Between .250 (6.35MM) and end of lead, a maximum of .021 (.533MM) is held. Outside of the zones the lead diameter is not controlled.

JEDEC "TO" DRAWING NOTES

10. 6-32NC-2A. Maximum pitch diameter of plated threads shall be basic pitch diameter (.1177, 2.98MM). Reference (screw thread standards for federal services 1957) handbook H28-part 1.
11. Complete threads shall extend to within three threads of the seating plane and shall remain within tolerances to within two threads tip of stud.
12. Maximum (.019, .483MM) diameter leads and maximum (.230, 5.84MM) stud shoulder to within .007 (.178MM) radius of true location relative to the (.460, 11.68MM) diameter flange at a gauging plane .054 (1.37 MM) .001 (.025MM), - .000 (.000MM), from the reference plane.
13. Dimension does not include sealing flanges.
14. The outline contour with exception of hexagon is optional within zones or dimension specified.
15. Pitch diameter of 10-32 UNF-2A (coated) threads. (ASA B1.1-1960).
16. This terminal can be flatten and pierced or hook type.
17. Position of leads in relation to the hexagon is not controlled.
18. Pitch diameter - thread 1/4-28 UNF-2A (coated). Reference screw thread standards for federal services - handbook H-28 or ASA B1.1 - 1960.
19. Pitch diameter - thread 5/16-24 UNF-2A (coated). Reference (screw thread standards for federal services - handbook H-28 or ASA B1.1 - 1960).
20. Contour and orientation of fixed terminal lugs are optional.
21. Minimum flat.
22. Minimum diameter of seating plane.
23. A chamfer (or undercut) on one or both ends of hexagonal portion is optional.
24. Minimum difference in terminal lengths to establish datum line for numbering terminals.
25. Minimum spacing between terminals.
26. The device may be measured by direct methods or by the gage and gaging procedure described on gage drawing GS-1.
27. Four leads.
28. These dimensions should be measured at points .050 to .055 below seating plane. When gage is not used, measurement will be made at seating plane.
29. Two leads.
30. Insulation rundown.
31. Three leads.
32. (Insulated) locator pin.
33. Externally coated devices shall not have coating on the leads beyond this zone.
34. (All leads) Diameter is uncontrolled to .050 from seating plane and beyond minimum tolerance of lead length (1.5 or .5) from seating plane. Dim A applies between .050 and .250 from seating plane. Dim B applies between .250 and minimum tolerance of lead length from seating plane.
35. Four holes.
36. Four equally spaced feet to lie within this zone. Minimum distance between a lead and a foot .031.
37. Angular orientation of individual terminals is undefined.

JEDEC "TO" DRAWING NOTES

38. Complete threads shall extend to within 2-1/2 threads of the seating plane.
39. The leads shall be essentially straight within this zone.
40. 1/4-28 UNF-2B.
41. Terminals may be referred to by number as follows: Terminal No. 1 is the odd terminal and connected to the case. Other terminals are numbered clockwise from No. 1.
42. Leads having maximum diameter .045 measured in gage plane .031, .001, .000 below the seating plane of the device shall be within .010 of their true position relative to minimum diameter .096 holes in the mounting flange.
43. 8-32 UNF-2A.
44. Hex for standard 1/4 ignition wrench.
45. Pitch diameter of 8-32 UNC-2A (coated) threads (ASA B1.1-1960).
46. Maximum size leads and stud must be within .0055 of the exact positions shown with respect to the .885 maximum diameter measured at points .015 maximum below seating plane.
47. .190-32 UNF-2A. Maximum pitch diameter of plated threads shall be basic pitch diameter .190 reference (screw thread standards for federal services 1957) handbook H28 1957 P1.
48. Lead diameter in this area unrestricted.
49. Both ends.
50. Two mounting holes.
51. Maximum diameter leads measured at a gaging plane .054, .001, .000 below the seating plane shall be within .010 of their true positions with respect to the .725 diameter.
52. Angular orientation of edge optional.
53. Square, radius or diagonal on end of terminal is optional.
54. Index tab for visual orientation only.
56. Leads shall emerge from the body diameter dimension within the limits indicated by the .015/.035, .010 & .025 dimensions.
57. Minimum and Maximum dimensions both apply to the major (largest) diameter only.
58. Radius at corners of mounting flange optional.
59. Angular orientation of terminal ends as shown \pm 15 deg.
60. A .075 clearance from hole centers to .765/.785 diameter for mounting fasteners.
61. (All leads) Diameter is uncontrolled beyond .625 from seating plane. Dim A applies between .050 and .250 from seating plane. Dim B applies between .250 and .625 from seating plane.
62. Measured at seating plane.
63. Complete threads to extend to within 3-1/2 threads of seating plane.
64. Leads having maximum diameter .019 (.483MM) measured in gaging plane .025 (.635MM) .001 (.025MM) - .000 (.000MM) below the seating plane of the device shall be within .007 (.178MM) of their true positions.
65. (Eight leads). Maximum number of leads omitted in this outline, three (3). The number and position of leads actually present are indicated in the product registration. Outline designation determined by the location and minimum angular spacing of any two adjacent leads.

JEDEC "TO" DRAWING NOTES

66. (Four leads). Maximum number of leads omitted in this outline, none (0). The number and position of leads actually present are indicated in the product registration. Outline designation determined by the location and minimum angular or linear spacing of any two adjacent leads.
67. (Four, six, ten, or twelve leads). Maximum number of leads omitted in this outline, one (1). The number and position of leads actually present are indicated in the product registration. Outline designation determined by the location and minimum angular spacing of any two adjacent leads.
68. Length of incomplete or undercut threads.
69. Lead diameter uncontrolled above the seating plane.
70. Contour and orientation of terminal flats are undefined.
71. The body and terminals of the device, with the exception of the extended lug length, lies within the cylinder defined by the dotted outline.
72. Pitch diameter of 1/2-20 UNF-2A (coated) threads (ASA-B1.1).
73. Leads missing from their designated positions shall also be counted when numbering leads for specific applications.
74. Lead spacing shall be measured within .030 (.762MM) from the point of emergence from the body.
75. Diameter of hole or width of slot out either side of terminals.
76. Lead dimensions uncontrolled in this zone to allow for body and lead finish irregularities.
77. Contour of the package beyond this zone is uncontrolled.
78. Seated height with lead bent at right angles.
79. Flexible leads for terminals 1 and 2 are identified by color coding for specific applications.
80. Pitch diameter of 3/4-16 UNF-2A (coated) threads (ASA B1.1).
81. Irregularity in body outline not controlled in this zone.
82. Terminal configurations optional between the body of the device and the flats on the terminals.
83. Visual or mechanical index is optional if one lead is omitted.
84. The body of the device with exception of the hexagon, thread, and flexible lead extensions lies within the cylinder defined by the dotted outline.
85. Pitch diameter of 1-12 UNF-2A (coated) threads. (ASA Bul. 1-1960)
86. The body of the device with the exception of heat sink and flexible leads lies within the cylinder defined by the dotted outline.
87. Pitch diameter of threads - 1/2-20 UNF2B (ASA Bul. 1-1960).
88. Parallel, twisted or coaxial flexible leads for terminals 1 and 2 are indentified by color for specific applications. Coaxial shielded lead has shield as terminal 2.
89. When dimensions less than .180 (4.58mm) are used, clearance in the second fin will be provided.

JEDEC "TO" DRAWING NOTES

90. The use of either a hook, short tab, or tall tab terminal contour is optional. An index point is required when the tall tab terminal contour (identical to the adjacent terminals) option is used.
91. Elongated hole in tab is optional.
92. With the device seated in a .165 (.4.20mm) .010 (.25mm) - .000 (.00mm) hole a maximum force of 20 grams on each of the terminals shall cause the flats of the terminals to contact the seating plane.
93. Use of tab extension is optional
94. Pitch of diameter 5/8-18 UNF-2A (coated) threads (ASA Bul. 1-1960).
95. All terminals.
96. Spacing and angle of the end leads at the point of emergence of body is not controlled.
97. Mechanical index, optional.
98. Orientation of flats not controlled in relation to the leads.
99. Measured from intersection of lead axis and body surface of diameter
100. Dimensions, configurations, and position of leads optional in this zone.
101. Leads shall emerge from the body within the limits of .030 (.76mm) max. above the seating plane and .035 (.88mm) max from the center line.
102. Details of the outline in this zone are optional except that the outline shall not extend beyond the seating plane.
103. An index mark shall be located on the top surface in the quadrant above terminal one.
104. These tolerances are non cumulative.
105. The cross section of each lead having a maximum diameter of .019 (.482 MM) and measured in a gaging plane .054 (1.372 MM) ± .001 (.025 MM) - .000 (.000MM) below the seating plane lies in a circle having a diameter of .033 (.838 MM) centered at the true position of the lead axis at its point of exit relative to the maximum body diameter shown.
106. Configuration of package optional within zone specified.
107. This dimension applies to leads 1 and 3 only.
108. Maximum radius of .050 in. (1.27 MM) on all body edges and corners.
109. Lead spacing to be measured between .100 in. (2.54 MM) and .125 in. (3.17 MM) from the point of emergence from the body.

D.A.T.A. LEAD CODE IDENTIFICATION GUIDE

LEAD CODE EXPANDER

- Emitter or Source tied to case
- Base or Drain tied to case
- Collector or Gate tied to case

LEAD CODE	LEAD CONFIGURATION			
	1	2	3	4
A	E	B	C	
B	E	C	B	
C	B	E	C	
D	B	C	E	
E	C	E	B	
F	C	B	E	
G	E	B	C	CASE
H	E	B	CASE	C
J	B	E	C	CASE
K	B	E	CASE	C
L	E	C	B	C
M	B	C	CASE	E
N	C	B	E	E
P	E	B	C	C
R	E	B	E	C
S	E	C	E	B
T	B		E	
U	C	B	E	B
V	C	E	B	E
W	E		C	
X	B	C	E	CASE
	1	2	3	4
Y	B	E	C	E
Z	B	E	B	C
CA	E	B1		B2
				CASE
CB	B1	E	B2	
CC	E	B1		B2
CD	E	B2	B1	
CE	K	G	A	
DA	S	G	D	
DB	S	D	G	
DC	D	G	S	
DD	D	S	G	
DE	G	S	D	
DF	G	D	S	
DG	S	G	D	CASE
DH	S	D	G	CASE
DJ	D	S	G	CASE
DK	D	G	S	CASE

LEAD CODE	LEAD CONFIGURATION			
	1	2	3	4
DM	D	G	SUB CASE	S
DN	S	G	D	SUB CASE
DP	D	G	S	SUB CASE
DQ	S	D	G	
DR	S	G	D	SUB CASE
DS	D	G	SUB	S
DT	D	G	S	SUB
DU	S	G1	D	G2 CASE
DV	S	G1	D	G2-SUB CASE
DW	D	S	G	SUB CASE
DX	D	G2	G1	S SUB
DY	S	D	G2 CASE	G1
DZ	G	D	SUB CASE	S
EA	S	G2	D	S
EB	D	D	G	G
EC	G1	S	G1	G2 SUB
ED	G	S1	D	S2
EE	G1	S	G2	D
EF	S1	G	S2	D
GA	E	B1	C	B2
GB	C	B1	E	B2
GC	E1	B	C	E2
GD	E1	B	E2	C
GE	C	E1	B	E2
GG	E2	E1	B	C
GH	E2	B	E1	C
GJ	B	E1	C	E2
GK	B1	E	C	B2
GM	B1	C	E	B2
GN	E	B2	B1	C
GP	E1	E2	B	

ABBREV.	TERM
A	Anode
E	Emitter
B	Base
C	Collector
S	Source
D	Drain
G	Gate
K	Cathode
Sub	Substrate
Case	Case/Shield

A—BZ Bipolar
CA—CZ UJT
DA—FZ FET
GA— Multi Element Bipolar



SECTION 17

TRANSISTOR

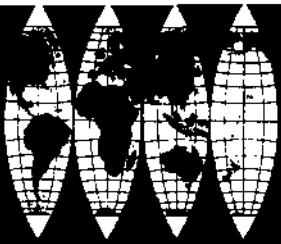
Manufacturer's Local Offices

Since this D.A.T.A. BOOK provides only basic technical data for initial selection purposes, this section of Manufacturers' Local Offices will facilitate your requesting complete data sheets and application information from a nearby office.

TFKG – ALLGEMEINE ELEKTRICITAETS GESELLSCHAFT, AEG–TELEFUNKEN

APX – AMPEREX ELECTRONIC CORPORATION

		Zip Code	Telephone No.	TWX
Providence Pike, Slatersville, Rhode Island.....		02876	401-762-9000	710-387-1591
CALIFORNIA Palo Alto	Amperex Electronic Corporation	94303	415-327-0461	910-373-1211
	801 East Charleston Road			
ILLINOIS Northlake	Amperex Electronic Corporation.....	60164	312-261-7877	910-226-1968
	360 East North Avenue		312-261-7878-9	
NEW YORK Hicksville	Amperex Electronic Corporation	11802	516-931-6200	516-433-9045
	230 Duffy Avenue			



Manufacturers' Local Offices

ATEI - ATES COMPONENTI ELETTRONICI S.p.A.

2 Via Tempesta - 20149, Milan, Italy	Telephone No. 4695651	Telex 31481
ENGLAND..... London, W5..... Ates Electronics Limited	01-998-6171	262401

BNT - BURNS & TOWNE, INC.

18-36 Granite Street, Haverhill, Massachusetts Zip Code 01830 Telephone No. 617-373-1501

NATIONAL SALES OFFICE

NEW YORK..... Hicksville Burns & Towne, Inc. 11801 516-935-0522
550 Old Country Road

ALABAMA..... Huntsville Space Engineering Sales 35805 205-837-6060
4306 Governors Drive S. W.
Suite R

ARIZONA..... Scottsdale..... Vinson Associates, Inc. 85251 602-947-7371
44 E. Indian School Road

CALIFORNIA Los Angeles S. A. Shaw & Company 90049 213-472-9691
2050 Westridge Road

Redwood City..... Carson Electronics Products 94061 415-365-4620
2334 Vera Avenue
Post Office Box 1216

COLORADO..... Englewood..... Vinson Associates, Inc. 80110 303-789-2203
3600 South Lincoln

CONNECTICUT Great Neck..... Cooper-Simon & Co., Inc. 11021 516-487-1142
(New York) 38 Middle Neck Road

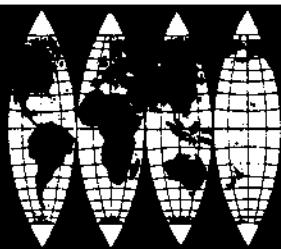
FLORIDA Orlando Space Engineering Sales, Inc. 32803 305-841-2271
999 Woodcock Road
Suite 216

IDAHO Bellevue..... The Al Smith Company 98004 206-746-6770
(Washington) 405 166th Street, S.E.

ILLINOIS..... Chicago J. Rinaldi, Inc. 60646 312-763-4848
6319 North Central Avenue

INDIANA Chicago..... J. Rinaldi, Inc. 60646 312-763-4848
(Illinois) 6319 North Central Avenue

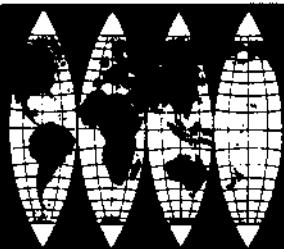
MARYLAND Rockville Quality Components, Inc. 20851 301-933-1623
Post Office Box 711



Manufacturers' Local Offices

BNT — BURNS & TOWNE, INC. (Cont'd)

		Zip Code	Telephone No.
18-36 Granite Street, Haverhill, Massachusetts		01830	617-373-1501
MASSACHUSETTS	Needham	02192	617-444-2484
	1116 Great Plain Avenue		
MICHIGAN	Detroit	48235	313-863-2665
	Hufferd Company 16257 Meyers Road		
MINNESOTA	Minneapolis	55416	612-922-7011
	Charles E. Bohlig Associates 3925 Monterey Avenue South		
MISSOURI	St. Louis	63141	314-542-3399
	Coombs Associates 11734 Lackland Industrial Drive		
NEW MEXICO	Albuquerque	87110	505-298-7442
	Vinson Associates, Inc. Post Office Box 3295-Station D		
NEW YORK	Great Neck	11021	516-487-1142
	Cooper-Simon & Co., Inc. 38 Middle Neck Road		
	North Chili	14514	716-594-9683
	E. M. C. Sales Company 2450 Westside Drive		
NORTH CAROLINA ...	Greensboro	27410	919-299-0987
	Space Engineering Sales, Inc. P.O.Box 8298		
OHIO	Twinsburg	44087	216-425-4209
	Bridgefield Supply Co. 2107 Enterprise Pkwy.		
OREGON	Bellevue	98004	206-746-6770
	(Washington)	405 166th Street, S.E.	
PENNSYLVANIA	Philadelphia	19111	215-728-5802
	KVA Sales Company	7208 Rising Sun Avenue	
TEXAS	Dallas	75234	214-350-2476
	Stevens Sales Company P.O. Box 34493		
VIRGINIA	Rockville	20851	301-933-1623
	(Maryland)	Post Office Box 711	
WASHINGTON	Bellevue	98004	206-746-6770
	The Al Smith Company	405 166th Street, S.E.	



Manufacturers' Local Offices

BNT — BURNS & TOWNE, INC. (Cont'd)

	Zip Code	Telephone No.
18-36 Granite Street, Haverhill, Massachusetts01830	617-373-1501

INTERNATIONAL

CANADA	Ontario	Cartwright Agencies	416-528-0294
		153 Main Street	
		West Hamilton 10	

DENMARK	Copenhagen 2100	E. V. Johanssen A/S	(01)29-56-22	Telex 2771
SWEDEN		Scherfigsvej 1		

ENGLAND	London W3	Auriema Ltd.	01 993 1461
		23-31 King Street	

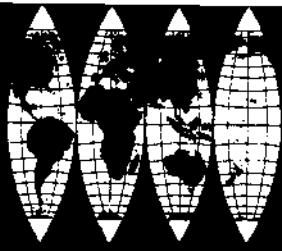
GERMANY	Munich 8000	Auriema Ltd.	0811-53-0448
AUSTRIA		Theresienhohe 13/820	
SWITZERLAND			

CSI — CARTER SEMICONDUCTOR INC.

374 Bay View Avenue, Amityville, Long Island, New York	Zip Code 11701	Telephone No. 516-598-0660	TWX 510-224-6691
			Telex 96-7838

CNS — CONTINENTAL SEMI-CONDUCTOR INC.

59 Central Avenue, Farmingdale, New York	Zip Code 11735	Telephone No. 516-694-3404	Telex 510-224-6444
--	-------------------	-------------------------------	-----------------------



Manufacturers' Local Offices

DEL – DELCO ELECTRONICS DIVISION General Motors Corporation

		Zip Code	Telephone No.	TWX
700 East Firmin Street, Kokomo, Indiana		46901	317-457-8461	DLRA
			317-459-2175	3174525747
ILLINOIS	Chicago*	60656	312-775-5411	
	General Motors Corporation 5151 North Harlem Avenue			
NEW JERSEY	Union*	07083	Union	
	General Motors Corporation Box 1018 Chestnut Station		201-687-3770	
			N. Y. C. Area	
			212-962-6622	

*Office includes field lab and resident engineer for applications assistance

ETC – ELECTRONIC TRANSISTORS CORPORATION

		Zip Code	Telephone No.
153-13 Northern Boulevard, Flushing, New York		11354	212-539-6700
CALIFORNIA	Van Nuys.....Tim-Co Sales Company..... (Southern) 16024 Sherman Way	91406	213-873-4940
OHIO.....	Dayton.....Lionel S. Fedotin 3680 Dorset Drive	45405	513-275-9345

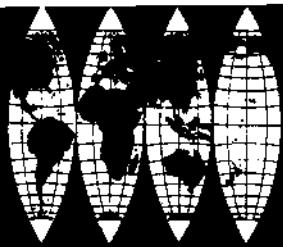
EMLS – EMIHUS MICROCOMPONENTS LIMITED

Glenrothes, Fife, Scotland

Telephone No. Telex
Glenrothes 4311

ENGLAND.....Middlesex.....Emihus Microcomponents Ltd.
Clive House
1218 Queens Road
Weybridge

Weybridge 47262 23613



Manufacturers' Local Offices

FSC – FAIRCHILD SEMICONDUCTOR

Division of Fairchild Camera & Instrument Corporation, 313 Fairchild Drive,.....
Mountain View, California Zip Code 94040 Telephone No. 415-962-5011 TWX
910-379-6435
Cable Address:
Fairsemco

INTERNATIONAL

FRANCE	75 Paris 13	Fairchild Semiconducteurs S.A. 87 Avenue d'Italie	588 37 85	20614
GERMANY	6200 Weisbaden..... (European Headquarters)	Fairchild Halbleiter GmbH, Aarstrasse 1	06121/524011	04186588
	6200 Weisbaden	Fairchild Halbleiter GmbH, Wilhelmstrasse 40	06121/371061	04186771
	3000 Hanover	Fairchild Halbleiter GmbH, Konigsworther Strasse 23	0511/17844	0922922
	8000 Munchen 2	Fairchild Halbleiter GmbH, Bayerstrasse 15	0811/593632	0524831
	7000 Stuttgart-Nord.	Fairchild Halbleiter GmbH, Parler Strasse 65	0711/223575	
ITALY	20133 Milan	Fairchild Semiconduttori S.p.A. Via Giovanni Pascoli 60	236 65 35	34338
SWEDEN	11626 Stockholm ...	Fairchild Semiconductor AB..... Kvarngstan14	40 52 53	17759
UNITED KINGDOM ...	Hertfordshire	Fairchild Semiconductor Ltd. Kingmaker House-Enfield Road New Barnet	440 73 11	262835

FERB – FERRANTI LIMITED

Gem Mill, Chadderton, Oldham, Lancaster, England		Telephone No. 061-624-6661	Telex 668038
AUSTRALIA	Sydney N.S.W.	Noyes Bros. Pty. Ltd. General Post Office Box 1587	43-0466 AA20745
CANADA	Ontario	Ferranti Electronics, A Division of Ferranti-Packard Electric Ltd. Industry St., Toronto 15	416-762-3661 TWX 610-491-1434



Manufacturers' Local Offices

FERB — FERRANTI LIMITED (Cont'd)

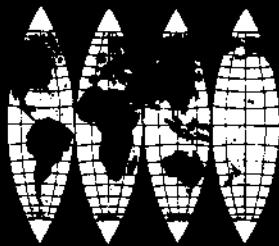
			Telephone No.	Telex
GEM MILL, Chadderton, Oldham, Lancashire, England			061-624-6661	668038
DENMARK	Copenhagen F.	Fredslund Pedersen..... Finsensvej 39	GODTHAB (0136)9050	5052
ENGLAND	London S.W.1	Ferranti Ltd. Millbank Tower Millbank	01 834 6611	264055
FRANCE	Paris 15e	CERAM .. 31, Rue du Docteur Finlay	273-07-20	65374
GERMANY	5 Cologne	Anglia Elektrotechnik .. Apostelnstrasse 1-3	RUF(0221)211042 8-882897	
	8 Munich 2	Neumuller and Co. GmbH .. Karlstrasse, 55	59 24 21	5-22106
ITALY	20122 Milano.....	Messrs. Mottola .. Piazzetta U. Giordano 2	780-231	31317
SWEDEN	Stockholm	Sonab Development A.B. Fack S-171 20 Solna	08/382660	88289
U. S. A.	New York 11803 ...	Ferranti Electric Inc. East Bethpage Road Plainview, Long Island	516-293-8383	510-224-6483 TWX

GIC — GENERAL INSTRUMENT CORPORATION

		Zip Code	Telephone No.	TWX
Semiconductor Products Group, Sales Headquarters	600 West John Street, Hicksville, Long Island, New York	11802	516-733-3333	510-221-1866
CALIFORNIA.....	Tarzana	91356	213-873-6500	910-493-1243
	General Instrument Corporation .. 18455 Burbank Boulevard			
ILLINOIS.....	Chicago	60646	312-774-7800	910-223-4545
	General Instrument Corporation .. 7366 North Lincoln			

IDC — INTERNATIONAL DIODE CORPORATION

	Zip Code	Telephone No.
90 Forrest Street, Jersey City, New Jersey	07304	201-432-7151



Manufacturers' Local Offices

ITT – ITT SEMICONDUCTORS

		Zip Code	Telephone No.	Telex
3301 Electronics Way, West Palm Beach, Florida		33407	305-842-2411	513410
ENGLAND	Kent	ITT Semiconductors Ltd. Footscray, Sidcup	Footscray 3333	21836
FRANCE	92, Levallois	Intermetall Dep. Semiconductors	270 4200	626 27
		de la SPI-ITT 86, rue du President Wilson		
GERMANY	78, Freiburg	Intermetall Halbleiterwerk..... der Deutsche ITT Ind. GmbH Post Office Box 840	5171	72 716
ITALY.....	Milano	ITT-S Filiale Italiana..... Piazza De Angeli Nr. 7	46 96 183/198 /202	32 351

KMC – KMC SEMICONDUCTOR CORPORATION

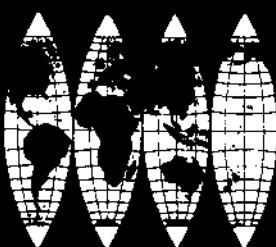
		Zip Code	Telephone No.	TWX
Parker Road, Long Valley, New Jersey		07853	201-876-3811	510-235-3350
CALIFORNIA	Inglewood	KMC Semiconductor Corp.	90302	213-673-3004

LUCB – JOSEPH LUCAS (ELEC.) LTD.

		Telephone No.	Telex
Mere Green Road, Four Oaks, Sutton Coldfield, Warwickshire, England		021-308-3501	338461
FRANCE.....	Paris	Lucas Service Europe	204-54-65
		Boite Postal 85 96 Boulevard du General Leclerc 92-Nanterre	25906 NANTR.
GERMANY.....	Kolin	Joseph Lucas (Germany) G.m.b.H..... 505 Porz b. Kolin Postfach 609	5.50.45
			LUCA D 887431

MEHK – MICROELECTRONICS LTD.

		Telephone No.	Telex
Post Office Box 9477, Kwun Tong, Kowloon, HongKong, B. C. C.....		K-892423	HX3510
ENGLAND	Middlesex	01-903-2721	934263
	York House		
	Empire Way		
	Wembley		



Manufacturers' Local Offices

MST – MS TRANSISTOR CORPORATION

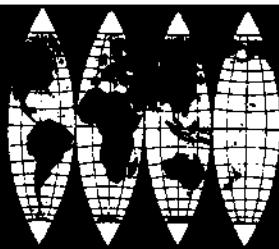
East Gate Boulevard, Garden City, New York **Zip Code** **Telephone No.** **TWX**
11530 **212-478-3134** **510-222-8258**

MULB – MULLARD LIMITED

Mullard House, Torrington Place, London W.C. 1, England	Zip Code	Telephone No.	Telex
		01-580-6633	264341
			Cable
			Mullelectron
			London WC1
U. S. A. New York Mullard, Inc. 11735	516-694-8989	961455	
100 Finn Court			
Farmingdale, Long Island			

NSC – NATIONAL SEMICONDUCTOR

		Zip Code	Telephone No.	TWX
2900 Semiconductor Drive, Santa Clara, California		95051	408-732-5000	910-339-9240
CALIFORNIA.....Mountain View	National Semiconductor	94040	415-961-4740	910-379-6432
	2680 Bayshore Frontage Road Suite 112			
Sherman Oaks	National Semiconductor.....	91403	213-783-8272	910-495-1773
	Valley Freeway Center Building 15300 Ventura Boulevard Suite 305			
FLORIDA.....Pompano Beach	National Semiconductor	33060	305-942-5850	
	1010 East Atlantic Boulevard Suite 12			
ILLINOIS	Chicago	National Semiconductor	60631	312-613-2660
		8550 West Bryn Mawr Suite 302		
MARYLAND	Towson.....	National Semiconductor	21204	301-823-2151
		660 Kenilworth Drive		710-232-1848
MASSACHUSETTS.....Waltham	National Semiconductor	02154	617-891-0510	710-326-7578
	391 Totten Pond Road			
NEW JERSEY	Fort Lee	National Semiconductor.....	07024	201-461-6111
	West Cliffs House 2375 Hudson Terrace			710-991-9795



Manufacturers' Local Offices

NSC - NATIONAL SEMICONDUCTOR (Cont'd)

2900 Semiconductor Drive, Santa Clara, California	Zip Code 95051	Telephone No. 408-732-5000	TWX 910-339-9240
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NEW YORK Rochester National Semiconductor 14607 716-461-1070
99 Park Avenue

TEXAS Garland National Semiconductor 75040 214-212-0518 910-860-5097
400 Forrest Gate Drive

INTERNATIONAL

DENMARK 2110 Copenhagen ... National Semiconductor
OE Vordengborggade 22 0192-5610 Telex
6827 Magna

ENGLAND Hertfordshire National Semiconductor
The Precinct Broxbourne Hoddesdon 69571 267-204

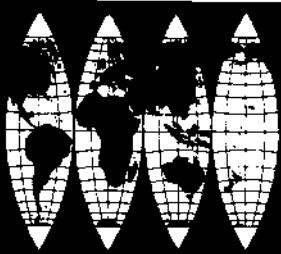
FRANCE Paris National Semiconductor
63, Route de la Garenne 736-6625 25956
92, Clamart

GERMANY 891 Landsberg National Semiconductor
/Lech Lechstrasse 255 08191-3573 527-223

8 Munich 22 National Semiconductor
Herzog-Rudolfstrasse 3/1 220702

JAPAN Tokyo Electro-Marketing Corporation
Seiwa Building 3-7-11 Akasaka 359-4521 ELEMART TK4952
Minato-ku

SCOTLAND Greenock National Semiconductor
Larkfield Industrial Estate 33251 778632



Manufacturers' Local Offices

PHIC — PHILIPS ELECTRON DEVICES

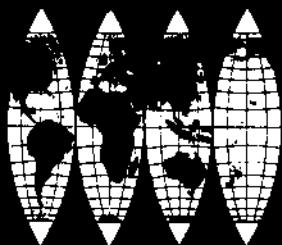
Semiconductor Tube and Component Division of Philips Electronics Industries Ltd.
116 Vanderhoof Avenue, Toronto 17, Ontario, Canada.....

Telephone No. Telex
416-425-5161 02-2513

PHIN — PHILIPS GLOEILAMPENFABRIEKEN

Eindhoven, Netherlands	Telephone No.	Cable
	040-60000	PHILIPS EINDHOVEN
ARGENTINA Buenos Aires Fapesa I.y.C. Melincue 2594	50-9941/8155	
AUSTRALIA Artarmon N.S.W. Philips Industries Ltd. Miniwatt Electronics Div. 20, Herbert Street	43-2171	
AUSTRIA 1072 Wien Wiveg Zieglergasse 6	93 26 22	
BELGIUM Brussels M.B.L.E. 80 Rue des Deux Gares	23 00 00	
BRAZIL Sao Paulo Ibrape S. A. Av. Paulista 2073-S/Loja	93-5141	
CANADA Toronto 17 Philips Electron Devices (PHIC)* (Ontario) 116 Vanderhoof Ave.	425-5161	
CHILE Santiago..... Philips Chilena S. A. Av. Santa Maria 0760	39 40 01	
DENMARK Kobenhavn NV Miniwatt A/S Emdrupvej 115A DK-2400	(01)69 16 22	
FINLAND Helsinki 10 Oy Philips A. B. Elcoma Division Kaivokatu 8	10 915	
FRANCE Paris 11 R. T. C. (RADF)* La Radiotechnique Compelec Avenue Ledru Rollin 130	797-99-30	
GERMANY 2 Hamburg 1 Valvo GmbH (VALG)* Valvo Haus Burchardstrasse 19	(0411)33 91 31	

* Manufacturer Code inside () can be found in Section 20
Manufacturers Code Names & Addresses

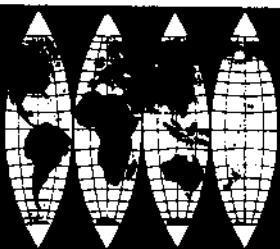


Manufacturers' Local Offices

PHIN — PHILIPS GLOEILAMPENFABRIEKEN (Cont'd)

		Telephone No.	Cable
Eindhoven, Netherlands		040-60000	PHILIPS EINDHOVEN
GREAT BRITAIN London W.C.1	Mullard Ltd. (MULB)* Mullard House Torrington Place	01-580-6633	
HONG KONG	Hong Kong Philips Hong Kong Ltd. Components Dept. St. George Bldg., 21st Floor	K-42 82 05	
INDIA	Bombay 18(WB) Inbelec Div. of Philips India Ltd. Bandbox Bldg. 254-D, Dr. Annie Besant Road Worli	45 33 86 45 64 20 45 29 86	
ITALY	Milano Philips S.p.A. Sezione Elcoma Piazza IV Novembre 3	6994	
JAPAN	Tokyo Nihon Philips 32nd Fl. World Trade Center Bldg. 5,3-chome, Shiba Hamamatsu-cho Minato-ku	(435)5204-5	
MEXICO	Mexico 6, D.F. Electronica S. A. de C. V. Varsovia No. 36	5-33-11-80	
NETHERLANDS	Eindhoven Philips Nederland N. V. Afd. Elenco Boschdijk, VB	(040)43 33 33	
NORWAY	Oslo 3 Electronica A/S..... Middeithunsgate 27	46 39 70	
SOUTH AFRICA	Johannesburg EDAC(Pty.) Ltd. South Park Lane New Doornfontein	24/6701-2	
SPAIN	Barcelona Copresa S. A. Balmes 22	2 32 03 00	
SWEDEN	10250 Stockholm 27 Elcoma A. B. Lidingovagen 50	08/67 97 80	
SWITZERLAND	Zuerich Philips A. G. Edenstrasse 20 CH-8027	051/44 22 11	

* Manufacturer Code inside () can be found in Section 20
Manufacturers Code Names & Addresses



Manufacturers' Local Offices

PHIN — PHILIPS GLOEILAMPENFABRIEKEN (Cont'd)

Eindhoven, Netherlands	Telephone No.	Cable
	040-60000	PHILIPS EINDHOVEN
TAIWAN Taipei	Philips Taiwan Ltd.....	55 97 42
	Elcoma Division	
	Plastic Bldg.-10th Fl., No.1, Sec.2	
	Nanking East Road	
UNITED STATES Rhode Island 02876	Amperex Electronic Corp. (APX)*	401-762-9000
	Sem and Microcircuits Div.	
	Providence Pike, Slatersville	

* Manufacturer Code inside () can be found in Section 20
Manufacturers Code Names & Addresses

PIR — PIRGO ELECTRONICS

130 Central Avenue, Farmingdale, Long Island, New York	Zip Code	Telephone No.
	11735	516-694-9880-1
		516-694-9882-3

This is an affiliate company to Sprague Electric Company—See location of field offices listed under
Sprague Electric Company.

PPC — POWER PHYSICS CORPORATION

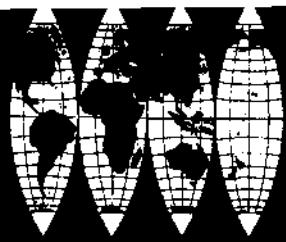
Industrial Way West, Post Office Box 626, Eatontown, New Jersey	Zip Code	Telephone No.
	07724	201-542-1393
CALIFORNIA Newport Beach	Power Physics Corporation	92662 714-675-1881
	301 Marine Avenue	
INTERNATIONAL	Post Office Box 381	
GERMANY Wiesbaden	Power Physics GmbH	Telephone No.
	Nerotal 46A	52 22 97

PTI — POWERTECH INC.

9 Baker Court, Clifton, New Jersey	Zip Code	Telephone No.	TWX
	07011	201-478-6205	710-989-7057

QDC — QUALIDYNE CORPORATION

3699 Tahoe Way, Santa Clara, California	Zip Code	Telephone No.	TWX
	95051	408-738-0120	910-339-9273



Manufacturers' Local Offices

SCA — SEMICOA

		Zip Code	Telephone No.	TWX
940 South Ajax Avenue, City of Industry, California		91744	213-965-2496	
CALIFORNIA	San Leandro	Wm. Parks Associates	94579	415-357-4240
(Northern)		15102 Chapel Court		
(Southern).....	Costa Mesa.....	Rical Associates	92626	714-557-6543
		260 Nassau Road		
ILLINOIS.....	Chicago.....	G. McL. Cole Company.....	60656	312-774-3535
		6514 West Higgins Road		910-221-2929
MASSACHUSETTS.....	Lexington.....	Contact Sales Company	02173	617-861-1550
		49 Waltham Street		
		P.O. Box 507		

SES — SEMITRONICS CORPORATION

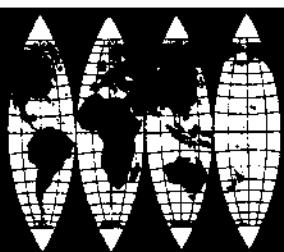
		Zip Code	Telephone No.	TWX
265 Canal Street, New York, New York.....		10013	212-226-5400	710-581-3978
PENNSYLVANIA.....	Philadelphia.....	David Linz	19111	215-379-0734
238 Shelmire Street				
INTERNATIONAL				
GERMANY.....	46 Dortmund	Semitronics Corporation	0231-528065	Telex HOBAR 822832
		26 Bruderweg		

SEN — SENSITRON SEMICONDUCTOR

		Zip Code	Telephone No.
DIV. RSM ELECTRON POWER CORPORATION		11729	516-586-7600

SHWG — SIEMENS AKTIENGESELLSCHAFT

		Zip Code	Telephone No.	Telex
Balanstrasse 73, 8000 Munich 80, Germany		0811-45901	05-22961	
CANADA	Montreal	Siemens Canada, Limited	514-695-7300	05-26-7300
		Post Office Box 7300		
		Pointe-Claire P. Q.		
ENGLAND	London	Siemens U.K. Ltd.	01-686-7581	22438
		36 Church Road		
		Croydon CR0 ASG		
U. S. A.	New Jersey	Siemens Corporation	08830	201-494-1000
		186 Wood Avenue South		844491
		Iselin		TWX
				710-998-0588



Manufacturers' Local Offices

ESMF – SOCIETE EUROPEENNE DES SEMICONDUCTEURS ET DE MICROELECTRONIQUE

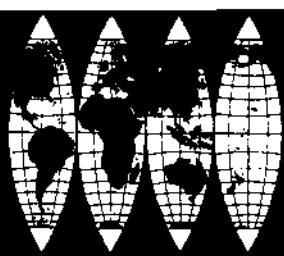
			Telephone No.	Telex
101 Bd. Murat, 75 Paris 16e, France			525-75-75	28060
ARGENTINA Buenos Aires Corte Et Mon	San Juan 1 301		27.01.01	012-19.92
AUSTRALIA South Melbourne Pantechna Pty. Ltd.	8-12 Eastern Road		69.26.29	Pantechna
AUSTRIA A 1010-Wien Transalpina Electronica Ltda	Elisabethstrasse 8		56.15.71	Inland 12 717
BELGIUM B 1050 Bruxelles 5 ..Thomson S.A.-N.V.	Avenue Louise 196A		49.29.54	23 113
BRAZIL Sao Paulo	Thomson CSF	Componentes de brasil	61.64.83	Tesafibra
		Avenue Ibirapuera 2572		Sao Paulo
CANADA Ontario	E. G. Lomas Ltd.	227 Laurier Avenue West	232 71 06	013263
		Ottawa 4		
CHILE Santiago	Agencias Unidas Ltd.	Huerfanos 1078	88 914	Agenidas
		Casella 119D		Santiago
DENMARK Copenhagen	EV. Johanssen A/S	Scherfigsvej 1	29.56.22	2771
ENGLAND London W5	Thomson-CSF (U.K.) Ltd.	Bilton House	579 18 57	Tesafi 25 659
		Uxbridge Road		
		Ealing		
FINLAND Helsinki 25	OY Supra AB	Ruusulankatu 20 A 12	49.01.37	Pierrejoly
FRANCE 13-Aix-en-Provence	Sescosem	Service commercial	(91)275772	41.665
		15, rue Camille		
		Pelletan		
93-Bagnolet	Cedirel	105, rue Sadi-Carnot	287.49.99	



Manufacturers' Local Offices

ESMF — SOCIETE EUROPEENNE DES SEMICONDUCTEURS ET DE MICROELECTRONIQUE (Cont'd)

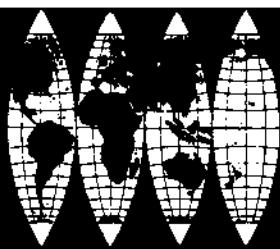
		Telephone No	Telex
	101 Bd. Burat, 75 Paris 16e, France	525-75-75	28060
FRANCE	25-Besancon CEPMA (Total Television) 11, rue de Polygone	(81)83.66.79	
	92-Boulogne Les Composants Electroniques 160, Route de la Reine	604.10.20	
	29N-Brest Bellion et Cie 40, Quai de l'Ouest	(98)44.88.00	
	63-Clermont- Ferrand Centre Electronique Diffusion Rue Bernard-Brunhes	(73)92.14.77	39.926
	92-Courbevoie Cife 50, rue J.P. Timbaud	333.37.50	
	38-Grenoble Radialex 3, rue Moyrand	(76)87.35.97	
	69-Lyon (6e) Radialex 74, rue Vendome	(78)24.51.78	30.238
	(78)24.12.35		
	13-Marseille (6e) ... Cabus et Raulot 49, rue de Village	(91)47.58.10	
	93-Montreuil S/Bois..Thomson-CSF Composants Export 128, rue de Paris	287.80.90	20.936
	75-Paris (2e) Cie Continentale 33, rue Vivienne	508.12.42	
	64-Pau..... Societe Sadige 11, Avenue du Corps Franc Pommies	(59)27.87.95	
	76-Rouen Electrotechnique de Normandie 8, rue de la Croix d'Yonville	(35)70.05.75	
	38-Saint-Egreve Sescosem Service Commercial	(76) 88.40.61	
	42-Saint-Etienne Teissier J. J. S. A. 2, rue Basse des Rives	(77)33.12.34	33.666



Manufacturers' Local Offices

ESMF — SOCIETE EUROPEENNE DES SEMICONDUCTEURS ET DE MICROELECTRONIQUE (Cont'd)

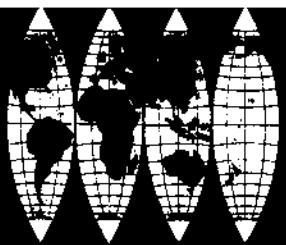
			Telephone No.	Telex
101 Bd. Murat, 75 Paris 16e, France			525-75-75	28060
FRANCE	59-Seclin	Side	(20)59.69.49	
(Cont'd)		Zone industrielle		
	67-Strasbourg	Selfco	(88)32.59.33	
		31, rue du Fosse des Treize		
	83-Toulon	Dimel	(94)92.37.93	
		39, Avenue Marceau		
	31-Toulouse	Sodimep	(61)22.40.12	
		8, rue Jean-Suau	(61)22.41.88	
GERMANY	Berlin 31	Thomson-CSF Bureau	216.30.38	182.665
(East)		Emserstrasse 2		
		Ecke Hohenzollerndamm		
(West)	8000 Munchen 25	Sescosem Halbleiter GmbH	811.73.10.42	522.916
		Fallstrasse 42		
GREECE	Athenes 125	Gilbert A Baven	228.234	
		29 Lekka Street		
INDIA	Bombay 9	N. J. International Corporation	328.509	PROMPTDEAL
		65, Ashok Chambers		Bombay
		Broach Street		
	Madras 28	Southern Electronic	76.510	PROMPTDEAL
		20/1 Greenways Road		
ISRAEL	Tel-Aviv	Cidev	621.526	628
		47, Rothschild Boulevard	225.588	
		P.O. Box 2024		
ITALY	20.125 Milano	Mistral S.p.A.	68.84.103	Ducati 31.042
		Via Melchiorre Gioia, 72		
MEXICO	Mexico 6 D-F	Thomson-CSF de Mexico	11.35.08	017.73.911
		Hamburg 108.301		
MOROCCO	Casablanca	Societe de Fabrications Radioelectriques ...	921.23	21.924
		Marocaines		
		32, Boulevard de la Resistance		
		Palais Mirabeau		



Manufacturers' Local Offices

ESMF — SOCIETE EUROPEENNE DES SEMICONDUCTEURS ET DE MICROELECTRONIQUE (Cont'd)

			Telephone No.	Telex
101 Bd. Murat, 75 Paris 16e, France			525-75-75	28060
NORWAY	Oslo 4	Feiring AS	21.82.12	16 435 feiring 0
		Sandakervein 46 B Box 4376, Tørshov		
PERU	Lima	Aristides Lozano		ALOZANO
		Domingo Ponte 565		
PORTUGAL	Lisboa	Sd. Com. Rualdo		Rualdo Lisbonne
		Rua S. Jose 15		
SOUTH AFRICA	Dunswart	Allied Electric Pty..... P. O. Box 90	52.43.41	Solidstate Dunswart
	Alberton	Comtek	869.57.86	J-4376 34
	(transvaal)	P. O. Box 57		
SPAIN	San Juan Despi	Componentes Electronicos S.A. Poligono Industrial, Fontsanta Calle H.S/N	319.46.50	52.077
SWEDEN	17 103 Solna 3	Elektrholm AB	82.02.80	19.389
		Dalvagen 12 S P. O. Box 305		
SWITZERLAND	CH 3000 Berne 9 ...	Modulator S.A. Fischerweg 11.13	23.77.85	32.431
THE NETHERLANDS..	La Haye	C.G.E. Compagnie Generale d'Electricite N.V. Koninginnegracht 64	60.88.10	31.045
U. S. A.	California 91303 ...	Nucleonic Products Company Inc. 6660 Variel Avenue Canoga Park	(213)887-1010	651.479



Manufacturers' Local Offices

SGS - SOCIETA GENERALE SEMICONDUTTORI S.p.A.

		Telephone No.	Telex
Agrate Brianza, Via C. Olivetti, 1		65341/4	31436
ENGLAND	Aylesbury Bucks SGS (United Kingdom) Ltd..... Walton Street	5977	83245
FRANCE.....	Paris 13e..... SGS France SA..... 45 Rue Eugene Oudine	336 36 30	25938
GERMANY.....	809 Wasserburg SGS Deutschland GmbH	08071/721	525743
	Inn Post Box 1269		
ITALY	Milano..... Societa Generale Semiconduttori Spa	31 57 49	
	Via Colonna, 9		
SWEDEN	19501 Marsta SGS Semiconductor AB..... Postbox	0760/40120	10932
U. S. A.	California 90404 Varadyne Inc..... 1805 Colorado Avenue Santa Monica	213-888-8386	652462

SSI - SOLID STATE DEVICES, INC.

		Zip Code	Telephone No.	TWX
12741 Los Nietos Road, Santa Fe Springs, California		90670	213-698-0529	910-586-1881
ALABAMA	Birmingham, Technical Marketing	35209	205-871-5431	
	Post Office Box 5971			
ARIZONA	Phoenix..... C. G. Associates	85018	602-947-6480	
	Post Office Box 15566			
CALIFORNIA	Mt. View..... Nor-Cal Associates	94040	415-961-8121	910-379-6497
	2680 Bayshore Frontage Road Suite 404			
	Pasadena	91105	213-682-1377	
	William Kath Associates, 255 West State Street			
	San Diego	92111	714-278-5441	
	Earle & Associates, 4433 Convoy Street Suite A			
	Tustin..... RMS Associates	92680	714-832-0878	
	13652 Fairmont Way			



Manufacturers' Local Offices

SSI — SOLID STATE DEVICES, INC. (Cont'd)

			Zip Code	Telephone No.	TWX
12741 Los Nietos Road, Santa Fe Springs, California			90670	213-698-0529	910-586-1881
COLORADO	Boulder	J. Smith & Associates	80303	303-449-7509	
		310 Seminole Drive Post Office Box 3257			
FLORIDA	Orlando	Technical Marketing	32801	305-843-2500	810-850-0161
		1511 East Robinson			
	Hallandale	Technical Marketing	33009	305-563-8585	
		Post Office Box 127			
	St. Petersburg	Technical Marketing	33733	305-843-2500	
		Post Office Box 12196			
GEORGIA	Marietta	Technical Marketing	30060	404-435-0079	
		Post Office Box 1152			
ILLINOIS	Chicago	Communications Engineers	60645	312-761-0548	910-221-5004
		7106 North Western Avenue			
INDIANA	Fort Wayne	Communications Engineers	46802	219-743-9866	
		418 East Berry Street			
MASSACHUSETTS	Brookline	Technology Products Group	02146	617-731-0858	
		233 Harvard Street			
MINNESOTA	Minneapolis	Murphy Associates, Inc.	55415	612-333-4511	910-576-3417
		730 Chicago Avenue			
NEW JERSEY	Riverdale	Comp-Tech Sales	07457	201-835-0332	
		Post Office Box 50			
NEW MEXICO	Albuquerque	J. Smith & Associates	87108	505-255-2111	
		401-B San Pedro, N.E. Post Office Box 8412			
NEW YORK	Lynbrook	Comp-Tech Sales	11563	516-593-2628	
		Post Office Box 384			
	Manlius	Arthur L. Perkins Co.	13104	315-682-5005	
		Post Office Box 217			
NORTH CAROLINA....	Greensboro	Technical Marketing	27405	919-274-2570	
		Post Office Box 6664			



Manufacturers' Local Offices

SSI — SOLID STATE DEVICES, INC. (Cont'd)

		Zip Code	Telephone No.	TWX
12741 Los Nietos Road, Santa Fe Springs, California		90670	213-698-0529	910-586-1881

OHIO Dayton Communications Engineers 45540 513-434-6871
4809 Archmore Drive

PENNSYLVANIA Philadelphia Schibley Associates, Inc. 19116 215-676-9885
11110 Autobonn Avenue
Post Office Box 11598

VIRGINIA Fairfax Schibley Associates Inc. 22030 710-833-0697
10604 Warwick Avenue

WASHINGTON Lynnwood Fred Broom Sales Co. 98036 206-774-6361
Post Office Box 177 AM

INTERNATIONAL

CANADA Montreal Future Electronics Corp. 251 514-735-5775 610-421-3251
6655 Cote Des Neiges
Suite 310

ENGLAND London A. Marshall & Son 01-452-0161/2 Telex
28 Cricklewood Broadway 21492
(COINST LDN)

FRANCE Billancourt Young Electronics 604 1050 Telex
117 Rue Daguesseau 20740
92 Boulogne

GERMANY Offenbach 605 (West) Neutron GmbH (0611)853636
Bieberer Street 251

INDIA Bombay 20 Vejay Randery
Lily Court-3rd Floor
Church Gate

ISRAEL Tel-Aviv Technical Development Co., Ltd. 31875
8, Tayassim Road
Post Office Box 14145

JAPAN Tokyo 160 MTT International, Inc. (03)359-4648
401 Onoshow Bldg. 6
Samon-cho, Shinjuku-ku

PAKISTAN Karachi 4 Mesco Engineering Consultants 514302
67, Farid Chambers
Abdullah Haroun Road
Post Office Box 3966



Manufacturers' Local Offices

SOD – SOLITRON DEVICES, INC.

		Zip Code	Telephone No.	TWX
Corporate Offices, 256 Oak Tree Road, Tappan, New York		10983	914-359-5050	710-576-2654
CALIFORNIA.....Canoga Park.....	Solitron Devices, Inc.	91303	213-883-3822	910-494-1238
	20944 Sherman Way			
San Diego.....	Solitron Devices, Inc.	92123	714-278-8780	910-335-1221
	8808 Balboa Avenue			
FLORIDA.....Riviera Beach	Solitron Devices, Inc.	33404	305-848-4311	510-952-6676
	1177 Blue Heron Blvd.			
ILLINOIS.....Des Plaines	Solitron Devices, Inc.	60018	312-824-8127	910-233-2634
	2720 Des Plaines Avenue			
MARYLANDBaltimore.....	Solitron Devices, Inc.	21218	301-243-0060	
	2530 N. Charles Street			
MASSACHUSETTS.....Needham.....	Solitron Devices Inc.	92192	617-444-1152	710-325-7514
	52 Pickering Street			
TEXASDallas.....	Solitron Devices, Inc.	75238	214-341-1180	910-861-4296
	10511 Church Street			

INTERNATIONAL

ENGLAND	Kent.....	Solidev Ltd.....	(0732) 57541	Telex 95378
		Tubbs Hill House		
		North Entrance, London Road		
		Sevenoaks		

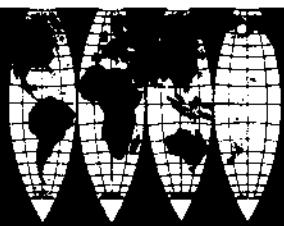
SONY – SONY CORPORATION

7-35, Kitashinagawa-6, Shinagawa-Ku, Tokyo, Japan

Mail Address: Post Office Box 10

Tokyo Airport Post Office

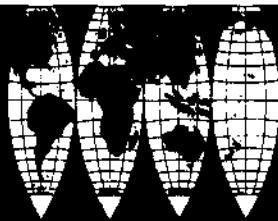
Telephone No. Telex
Tokyo 442-5111 SONYCOP TK2262



Manufacturers' Local Offices

SPR — SPRAGUE ELECTRIC COMPANY

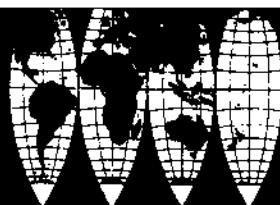
		Zip Code	Telephone No.	Telex
Semiconductor Division, 115 Northeast Cutoff, Worcester, Massachusetts	01606	617-853-5000	920467
ALABAMA..... Huntsville Write to St. Ann, Missouri Office..... or call Operator and ask for WX4000		WX 4000 No charge for WX calls	442416
ARIZONA Tempe	Sprague Electric Company	85281	602-279-5435	667384
CALIFORNIA San Francisco	William J. Purdy of California..... 770 Airport Boulevard Burlingame	94010	415-347-7701	
(Northern)				
(Southern)..... Los Angeles	Sprague Electric Company	90066	L.A.213-870-0161 677579 S.M.213-391-0611	
	12870 Panama Street			
	KCE Corporation	90066	213-391-0586	
(San Diego Cty) San Diego	KCE Corporation	92123	714-278-7640	
COLORADO Denver	Sprague Electric Company	80222	303-756-3611	45571
	1780 South Bellaire Street Suite 102			
CONNECTICUT Trumbull	Sprague Electric Company	06611	203-261-2551	964267
	935 White Plains Road			
D. C. Washington	Sprague Electric Company	20016	202-244-6006	892410
	3900 Wisconsin Ave., N.W.			
FLORIDA Orlando	Sprague Electric Company	32802	305-831-3636	564456
	Post Office Box 530			
ILLINOIS Schiller Park	Sprague Electric Company	60176	312-678-2262	254697
(Northern)	9950 W. Lawrence Avenue			
(Southern)	Sprague Electric Company.....	63074	314-291-2500	442416
	500 Northwest Plaza St. Ann, Missouri			
INDIANA Indianapolis	Sprague Electric Company	46205	317-253-4247	27452
	2421 Willowbrook Parkway			
KANSAS Kansas City	Al Gowler & Assoc.	66206	913-649-8050	
	Post Office Box 6007 Leawood			



Manufacturers' Local Offices

SPR - SPRAGUE ELECTRIC COMPANY (Cont'd)

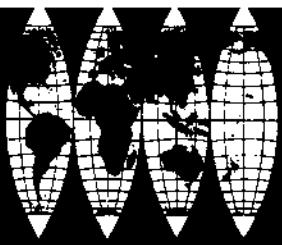
		Zip Code	Telephone No.	Telex
Semiconductor Division, 115 Northeast Cutoff, Worcester, Massachusetts		01606	617-853-5000	920467
MASSACHUSETTSBoston	Sprague Electric Company.....	02158	617-969-2520	
	343 Washington Street Newton			
North Adams	Sprague Electric Company.....	02147	413-664-4411	926415
	Marshall Street			
MICHIGAN	Jackson	Sprague Electric Company	49203	517-787-3934
		515 South West Avenue		
MINNESOTA	Minneapolis	H. M. R. Inc.....	55404	612-335-7734
		9 East 22nd Street		
MISSOURI	St. Ann	Sprague Electric Company.....	63074	314-291-2500 442416
		500 Northwest Plaza		
	St. Louis	Al Gowler & Assoc.	63011	314-227-2020
		7 Trails West 390 Newbury Drive Ballwin		
NEW JERSEY.....	Wayne	Sprague Electric Company.....	07470	201-696-8200 133409
(Northern)		1479 Route 23		
(Southern).....	Cherry Hill	Sprague Electric Company.....	08034	609-667-4444 834598
		1050 North Kings Highway		215-467-5252(Phila.)
		Trinkle Sales, Inc.	08034	609-667-3500
		500 North Kings Highway		
NEW MEXICO	Albuquerque	C. T. Carlberg & Associates.....	87110	505-265-1579
		Post Office Box 3177 Station D		
NEW YORK	New York City	Sprague Electric Company	11746	516-549-4141 961378
		60 Broad Hollow Road Melville		
	Mamaroneck	William Rutt, Inc.	10543	914-381-2030
		324 Mt. Pleasant Ave.		
	Syracuse	Sprague Electric Company	13206	315-437-7311
		2002 Teall Avenue		
		Mar-Com Associates	13206	315-437-2843
		2002 Teall Ave.		
NORTH CAROLINA ...	Winston Salem	Electronic Marketing Assoc.	27101	919-722-5151 806422
		928 Burke Street		



Manufacturers' Local Offices

SPR — SPRAGUE ELECTRIC COMPANY (Cont'd)

		Zip Code	Telephone No.	Telex
Semiconductor Division, 115 Northeast Cutoff, Worcester, Massachusetts		01606	617-853-5000	920467
OHIO(Northern) Cleveland	Sprague Electric Company.....	44022	216-247-6488	
	24 North Main Street Chagrin Falls, Ohio			
(Southern) Dayton	Sprague Electric Company	45414	513-278-0781	
	4977 Northcott Place			
PENNSYLVANIA.....(Eastern)	Sprague Electric Company	08034	215-467-5252(Phila.)	
	1050 North Kings Highway Cherry Hill, New Jersey		609-667-4444(Cherry Hill)	
			834598	
(Western)	Sprague Electric Company.....	44022	216-247-6488	
	24 North Main Street Chagrin Falls, Ohio			
TEXAS Dallas	Sprague Electric Company.....	75080	214-235-1256	732399
	First Bank and Trust Bldg. Richardson, Texas			
WASHINGTON Seattle	Sprague Electric Company.....	98103	206-632-7761	32367
	4601 Aurora Avenue North			
CANADA Ontario	Sprague Electric of Canada, Ltd.		416-766-6123	0229930
	10 Bertal Road Toronto 15			
Quebec	Sprague Electric of Canada, Ltd.		514-747-7811	
	860 Decarie Boulevard Ville St. Laurent, Montreal 9			
EUROPE England	Sprague Electric (U.K.) Ltd.		West Drayton 4627	
	159 High Street Yiewsley, Middlesex		261524	
France	Sprague France S.A.R.L.....		655-19-19	Sprague 25697F
	2 Avenue Aristide Briand 94-Arcueil			
West Germany	Sprague GmbH.....		0611-439407	414008
	Friedberger Anlage 24 6000 Frankfurt am Main			



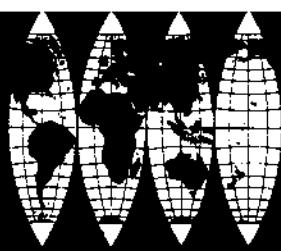
Manufacturers' Local Offices

SPR — SPRAGUE ELECTRIC COMPANY (Cont'd)

		Zip Code	Telephone No.	Telex
Semiconductor Division, 115 Northeast Cutoff, Worcester, Massachusetts		01606	617-853-5000	920467
Italy	Sprague-Italiana S.p.A. Viale Legioni Romane, 27 20147 Milano		40-34-245	32012
	Sprague-Italiana S.p.A. Via Costantino Maes 82 Int. 2-B Palazzino 00162 Rome		83-33-96	
Switzerland	Sprague World Trade Corporation		(051) 47-01-33	53876
	Farberstrasse 6 8008 Zurich			
FAR EAST.....Hong Kong	Sprague World Trade Corporation		70-5254	780-3395
	Post Office Box 14289			

TADI — TADIRAN

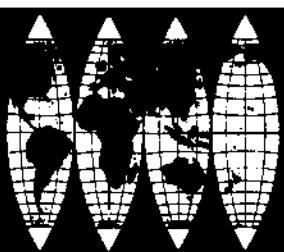
Israel Electronics Industries Limited	3 Hashalom Rd., Post Office Box 648, Tel-Aviv, Israel	Telephone No. 25422	Cable TADIRAN TEL AV Telex 03-537
BELGIUM	Bruxelles	Neotron Electronics	386173
		37 Rue de Florence	CETREL Telex 24088
ENGLAND	London W3.....	Impecktron Limited	01-992-5388
		Impecktron House 23-31 King Street	IMPECTRON LONDON Telex 25864
FRANCE.....	Paris 16	JMCO	2883267
		59 Rue Chardon Lagache	
HOLLAND	Amsterdam-C	Mijnssen & Co., N.V. Technische Handelsen serviceonderneming Keizersgracht 369 Postbus 123	020-239543
ITALY	20133 Milano	Compelet	7384394
		10 Via Calzecchi	
SOUTH AFRICA	Johannesburg	Indentronics Proprietary Ltd. 16 Webber Street Selby	834-4971/2/3
SWITZERLAND	Zurich	Metronic-AG	051/41 84 84
		CH 8051 Zurich Postfach Dubendorfstr. 333	METRONIC Z. Telex 53887



Manufacturers' Local Offices

TSC – TELEDYNE SEMICONDUCTOR

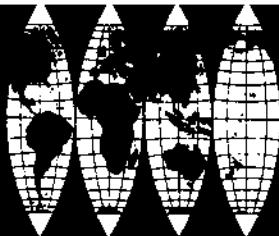
		Zip Code	Telephone No.	TWX
12515 Chadron Avenue, Hawthorne, California (Bi-Polar devices)		90250	213-772-4551	910-325-6217 Telex 65-3422
1300 Terra Bella Avenue, Mountain View, California (Field-effect devices)		94040	415-968-9241	910-478-6494 Telex 34-8416
CALIFORNIA	Hawthorne	Teledyne Semiconductor 12515 Chadron Avenue	90250	213-772-4551
	Palo Alto	Teledyne Semiconductor 800 San Antonio Road	94303	415-321-4681
FLORIDA	Winter Park	Teledyne Semiconductor 124 E. Morse Blvd.	32789	305-647-7813
ILLINOIS	Des Plaines	Teledyne Semiconductor 6600 N. Mannheim Road	60018	312-299-6196
MARYLAND	Lutherville	Teledyne Semiconductor 1524 York Road	21093	301-825-1920
MASSACHUSETTS	Westwood	Teledyne Semiconductor 805 W. High Street	02090	617-326-6600
NEW JERSEY	Little Falls	Teledyne Semiconductor 19 E. Main Street	07424	201-256-8557
NEW YORK	Liverpool	Teledyne Semiconductor 312 Rivergen Road	13088	315-622-3413
	Wappingers Fall	Teledyne Semiconductor 895 South Road, Suite 7	12590	914-297-4316
OHIO	Dayton	Teledyne Semiconductor 3481 Office Park Drive	45439	513-298-7207
TEXAS	Dallas	Teledyne Semiconductor 6115 Denton Drive	75235	214-357-0259
INTERNATIONAL				
WEST GERMANY	6200 Wiesbaden	Teledyne Semiconductor 56 Schone Aussicht No. 56	06121-372820	8414186581
HONG KONG	Kowloon	Teledyne Semiconductor 10 Sam Chuk Street, First Floor San Po Kong	K207764	7803549



Manufacturers' Local Offices

TII – TEXAS INSTRUMENTS INCORPORATED

		Zip Code	Telephone No.
Components Group, 13500 North Central Expressway, Post Office Box 5012, Dallas, Texas		75222	214-238-2011
ALABAMA.....Huntsville.....	Texas Instruments..... Sahara Office Park Building Suite 111, 3313 Memorial Parkway, S. W.	35801	205-881-4061
ARIZONA.....Phoenix	Texas Instruments United Bank Bldg. 3550 N. Central Avenue Suite 1702	85012	602-279-5531
CALIFORNIA,Hollywood	Texas Instruments 1800 North Argyle Avenue	90028	213-466-7251
	Inglewood,Texas Instruments..... 5005 West Century Boulevard Suite 208	90301	213-673-3943
Palo Alto	Texas Instruments 230 California Avenue Suite 201	94306	415-326-6770
Santa Ana	Texas Instruments 1505 East 17th Street Suite 201	92701	714-547-6506
San Diego.....	Texas Instruments..... 5252 Balboa Avenue Suite 805	92117	714-279-2622
COLORADO,Denver.....	Texas Instruments 2186 South Holly Street Suite 205	80222	303-758-2151
CONNECTICUT.....Woodbridge	Texas Instruments..... 300 Amity Road	06525	203-389-4521



Manufacturers' Local Offices

TII – TEXAS INSTRUMENTS INCORPORATED (Cont'd)

Components Group, 13500 North Central Expressway, Zip Code 75222 Telephone No. 214-238-2011
Post Office Box 5012, Dallas, Texas

FLORIDA.....	Fort Lauderdale.....	Texas Instruments	33311	305-566-3294
		601 West Oakland Park Blvd.		
	Orlando.....	Texas Instruments	32810	305-644-3535
		Orlando Executive Park		
		5400 Diplomat Circle		
		Diplomat Building		
		Suite 252		
	St. Petersburg	Texas Instruments	33713	813-898-0807
		300 Bldg. West, Suite 204		
		3151 3rd Avenue North		
ILLINOIS.....	Chicago	Texas Instruments.....	60646	312-286-1000
		Executive Towers		
		Suite 205		
		5901 North Cicero Avenue		
MASSACHUSETTS.....	Waltham.....	Texas Instruments.....	02154	617-891-8450
		60 Hickory Drive		
MICHIGAN.....	Southfield.....	Texas Instruments.....	48075	313-352-5720
		Suite 706 West		
		Northland Towers Bldg.		
		15565 Northland Drive		
MINNESOTA.....	Edina	Texas Instruments	55435	612-941-4384
		7615 Metro Blvd.		
		Suite 202, A. I. C. Bldg.		
NEW JERSEY.....	Springfield	Texas Instruments.....	07081	201-376-9400
		25 U. S. Highway No. 22		
		Post Office Box 366		
NEW MEXICO	Albuquerque	Texas Instruments	87110	505-265-8491
		Suite 9, Marberry Plaza		
		6101 Marble Avenue, N.W.		
NEW YORK.....	Endicott.....	Texas Instruments	13760	607-785-9987
		112 Nanticoke Avenue		
		Post Office Box 618		
	Fishkill.....	Texas Instruments.....	12524	914-896-6793
		167 Main Street		
	New Hyde Park.....	Texas Instruments	11040	516-488-2200
		4 Nevada Drive		
	Syracuse.....	Texas Instruments	13206	315-463-9291
		6563 Ridings Road		



Manufacturers' Local Offices

TII – TEXAS INSTRUMENTS INCORPORATED (Cont'd)

		Zip Code	Telephone No.
Components Group, 13500 North Central Expressway, Post Office Box 5012, Dallas, Texas		75222	214-238-2011
NORTH CAROLINA ... Greensboro	Texas Instruments 4310 Starmount Drive	27410	919-299-9112
OHIO Cleveland	Texas Instruments 23811 Chagrin Boulevard Suite 100	44122	216-464-1192
	Texas Instruments Dayton Paul Welch Building Suite 205 3300 South Dixie Drive	45439	513-298-7513
PENNSYLVANIA Jenkintown	Texas Instruments Benjamin Fox Pavilion Suite 424 Foxcroft Square	19046	215-885-3454
TEXAS..... Dallas	Texas Instruments MS-366 SRO Department 2620 Nova Drive, Post Office Box 5012 Mail Station 366	75222	214-238-6771
	Texas Instruments MS-288 TIEG Department Post Office Box 5012 Mail Station 288	75222	214-238-2616
Houston	Texas Instruments 3609 Buffalo Speedway	77006	713-526-3268
WASHINGTON Seattle	Texas Instruments 5801 Sixth Avenue South	98108	206-762-4240
WASHINGTON D. C	Texas Instruments 1875 Connecticut Avenue, N. W. Suite 913	20009	202-234-9320
CANADA Ontario	Texas Instruments 280 Centre Street West Richmond Hills		416-889-7373
Ontario	Texas Instruments 5F Caesar Avenue		613-825-3716
Quebec	Texas Instruments 723 Halpern, Dorval		514-631-6010



Manufacturers' Local Offices

TAGS — TRANSISTOR AG

Hohlstrasse 610, Zurich, Switzerland Zip Code 8048 Telephone No. 62 5611 Telex 53809

ECD — UNISEM CORPORATION

Post Office Box 11569, Philadelphia, Pennsylvania Zip Code 19116 Telephone No. 215-355-5000

CALIFORNIA Burbank Unisem Corporation 91503 213-843-6566

99 East Magnolia Blvd.
Suite 210

Mountain View Unisem Corporation 94040 415-967-7031
99 East Middlefield Road
Suite 6C

FLORIDA Apopka Unisem Corporation 32703 305-886-1414
Drawer 989

NEW JERSEY Plainfield Unisem Corporation 07069 201-754-0262
Room 9
203 Park Avenue

TEXAS Denton Unisem Corporation 76201 817-387-9331
Post Office Box 1494

UPI — UNITED-PAGE, INC.

481 Getty Avenue, Paterson, New Jersey Zip Code 07503 Telephone No. N.J. 201-279-7500 Cable N.Y. 212-736-9351 UNIPAGE

CALIFORNIA Los Angeles Alta-Electronic Sales 90028 213-462-6029
(Southern)
3349 Cahyenga Blvd.

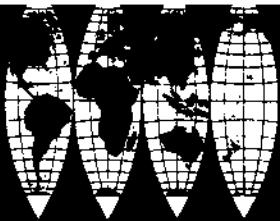
FLORIDA Orlando Scott & Assoc. Inc. 32803 305-841-4840
1010 Executive Center Dr.
Suite 128

GEORGIA Tucker Bill Brown Co. 30084 404-939-7075
ALABAMA
SO. CAROLINA

HAWAII Honolulu Gene Piety Factors 96802 808-841-0185 Telex 723-423
Post Office Box 2903
160 Mokaua Street

ILLINOIS Des Plaines S. Sterling 60018 312-298-4830 TWX 910-233-5980
1001 East Touhy Drive

MINNESOTA St. Paul Fred Wagner Corporation 55116 612-698-0331
SOUTH DAKOTA
WISCONSIN



Manufacturers' Local Offices

UNI - UNITRODE CORPORATION

		Zip Code	Telephone No.	TWX
580 Pleasant Street, Watertown, Massachusetts		02172	617-926-0404	710-327-1296
CALIFORNIA	Sherman Oaks	91403	213-783-1301	910-495-1769
	15300 Ventura Blvd.			
	Suite 410			
NEW YORK.....	Union, N.J.	07083	201-687-0500	
	420 Chestnut Street			
	Suite 9			
OHIO	West Carrollton	45449	513-859-5872	
	440 East Dixie Drive			

WESY - WESTINGHOUSE ELECTRIC CORPORATION

		Zip Code	Telephone No.
Semiconductor Division, Youngwood, Pennsylvania.....		15697	412-925-7272
CALIFORNIA	Los Angeles	90017	213-482-9660
	600 St. Paul Avenue		
	Sunnyvale	94088	408-735-2191
	Westinghouse Electric Corporation		
	Building 73		
	Handy Avenue		
FLORIDA.....	Orlando.....	32184	305-84- ²¹
	Westinghouse Electric Corporation		
	1010 Executive Center Drive		
ILLINOIS	Chicago	60604	312-461-720
	Westinghouse Electric Corporation		
	10 South Riverside Plaza		
MASSACHUSETTS.....	Boston.....	02199	617-54- ¹⁰
	Westinghouse Electric Corporation		
	800 Boylston Street		
MINNESOTA	Minneapolis	55416	61- ⁵⁵¹
	Westinghouse Electric Corporation		
	3501 South Highway 100		
NEW YORK.....	Mineola	11501	.48-9810
	Westinghouse Electric Corporation		
	1501 Franklin Avenue		
			/6-579-2174
OHIO	Cleveland	44	513-461-3720
	Westinghouse Electric Corporation		
	55 Public Square		
	Dayton		
	Westinghouse Electric Corporation		
	1306 Farr Drive		

SECTION 18

SEMICONDUCTOR MOUNTING HARDWARE AVAILABILITY

Manufacturer's Capability Grid

Company Name & Address	FSCM No.	Free Convection Dissipators	Forced Convection Dissipators	Thermal Connector Dissipator	Sockets	ASSOCIATED HARDWARE
Aavid Engineering Inc. 43 Porter Street Melrose, Massachusetts 02176		X		X		
Accel Industrial Heat Sink Corp. 3040 N. San Gabriel Blvd. So. San Gabriel, California 91777	26701	X				
Admiral Plastics Corp. 3462 San Fernando Road Los Angeles, California 90065						Conversion Pads
Alpha Components Corp. 4087 Glencoe Avenue Venice, California 90291		X		X		
Amaton Electronic Hardware Co., Inc. 81 Rockdale Avenue New Rochelle, New York 10802				X		
AMP Inc. Box 3608 Harrisburg, Pennsylvania 17105						Mounting Hardware Lead Sockets Mounting Tools
Astrodyne Inc. 207 Cambridge Street Burlington, Massachusetts 01803	28023	X	X	X		Mounting Hardware
Atlee Corp. 2 Lowell Avenue Winchester, Massachusetts 01890	99378			X		
Augat Inc. 33 Perry Avenue Attleboro, Massachusetts 02703	91506	X		X	X	Insulator Pads Lead Sockets Mounting Tools
Barnes Corporation Langdowne Avenue Langdowne, Pennsylvania 19050	99779				X	Mounting Hardware Lead Sockets
T. J. Birtcher Co. Industrial Division 74 Monterey Pass Road Post Office Box D Monterey Park, California 91754	07387	X		X		
Brush Metal Alum Co. Metalside Division Elmore, Elmore 43416						Insulator Pads
Cambion Cambridge 445 Condomic Corp. Cambridge					X	Mounting Tools
Chemlac Pro 8 Fellowship Cherry Hill, N.J.						
Cinch-Monadnock Div. of United-Cin 530 Main Street Fort Lee, New Jersey	1034				X	
Manufacturers shown in offices which are included in D.A.T.A.BOOK					X	Insulator Pads

SECTION 18
SEMICONDUCTOR MOUNTING HARDWARE AVAILABILITY
Manufacturer's Capability Grid

Company Name & Address	FSCM No.	Free Convection Dissipators	Forced Convection Dissipators	Thermal Connector Dissipater	Sockets	ASSOCIATED HARDWARE
Carl Cordover and Co. 104 Liberty Avenue Mineola, New York 11501		X				
Daburn Electronics & Cable Co. 2360 Hoffman Street Bronx, New York 10458				X		Insulator Pads
Daedalus Co. 1338 S. Atlantic Blvd. Los Angeles, California 90022		X		X		
Data Device Corp. 100 Tec Street Hicksville, New York 11801					X	
Delbert Blinn Co. P. O. Box 2007 Pomona, California 91766	08289	X		X		Hardware Kits Mounting Hardware Insulator and Conversion Pads
Delco Radio Division General Motors Corp. 700 E. Firmin Street Komomo, Indiana 46901	16758	X				Hardware Kits Insulator Pads
Eby, Hugh H., Co. Division of Redm, Corp. 4701 Germantown Avenue Philadelphia, Pennsylvania 19144	72825				X	
Elco Corporation Maryland Rd. & Computer Avenue Willow Grove, Pennsylvania 19090	91662				X	
Electronic Molding Corp. 44 Church Street Pawtucket, Rhode Island 02860	17117				X	
Fabri-Tek Inc. National Connector Division 9210 Science-Center Drive Minneapolis, Minnesota 55428					X	
General Electric Co. Silicone Products Division Waterford, New York 12188						Thermal Joint and Potting Compound
Globe Plastics 1342 So. Signal Drive Pomona, California 91766						Conversion Pads
Grayhill, Inc. 561 Hillgrove Avenue LaGrange, Illinois 60525	81073				X	
IFE Division of Plastic Molding & Engineering Co. 25 Tripps Lane E. Providence, Rhode Island 02914					X	

Manufacturers shown in bold print have local offices which are included in Section 19 of this D.A.T.A.BOOK

SECTION 18

SEMICONDUCTOR MOUNTING HARDWARE AVAILABILITY
Manufacturer's Capability Grid

Company Name & Address	FSCM No.	Free Convection Dissipators	Forced Convection Dissipators	Thermal Connector Dissipator	Sockets	ASSOCIATED HARDWARE
Industrial Electronic Hardware Corp. 109 Prince Street New York, New York 10012	97913				X	Mounting Hardware
International Electronic Research Corp. 135 W. Magnolia Blvd. Burbank, California 91502	98978	X	X	X		Mounting Hardware
Loranger Manufacturing Corporation Post Office Box 948 Warren, Pennsylvania	11535				X	Mounting Hardware
MacDonald and Co. 213 South Brand Blvd. Glendale, California 91204	13102					Mounting Tools
Mauratron Inc. 1333 N. Central Expwy. Dallas, Texas 75231				X		
Modular Devices Inc. 1265 West 135th Street Gardenia, California 90247		X				
Precision Bipbrazz Tor 14715 Armita Street Van Nuys, California 91402	15957	X	X	X		Custom Precision Molding
Reliance Mica Co., Inc. 341 39th Street Brooklyn, New York 11232	08530					Insulator Pads
Risk, George Industries 672 15th Avenue Columbus, Nebraska 68601	24229	X		X		Insulator Pads Joint Compound
Robinson-Nugent Inc. 802 East 8th Street New Albany, Indiana 47150	06776				X	Conversion Pads Mounting Tools
Robison Electronics Inc. 2134 West Rosecrans Avenue Gardenia, California 90249						Conversion Pads
Ross, The Milton, Co. 511 Second Street Pike South Hampton, Pennsylvania 18966	07047				X	Lead Sockets
Space Products Inc. 6631 Sarnia Avenue Long Beach, California 90805	10012					Conversion Pads
The Staver Company, Inc. 41 No. Saxon Avenue Bay Shore, New York 11706	04232	X		X		Insulator Pads
Stauffer-Walker Silicone Corp. Silicone Division 299 Park Avenue New York, New York 10017						Thermal Joint Compound

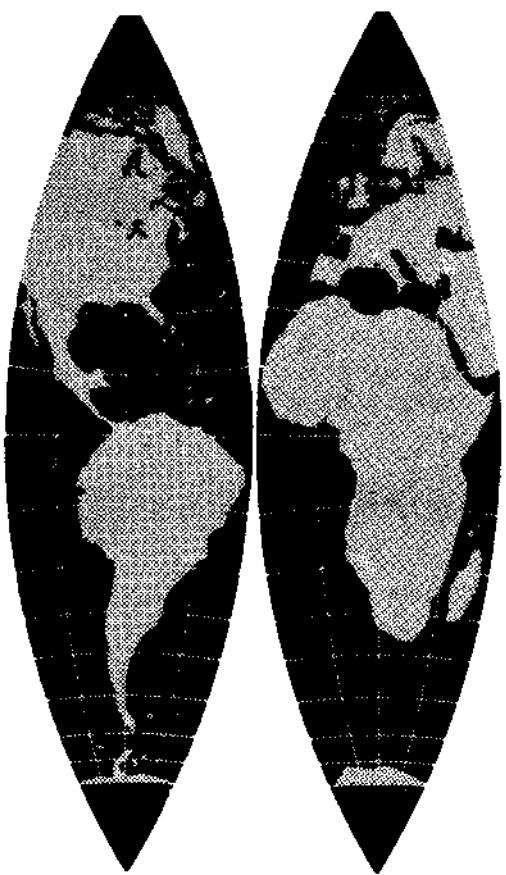
SECTION 18

SEMICONDUCTOR MOUNTING HARDWARE AVAILABILITY

Manufacturer's Capability Grid

Company Name & Address	FSCM No.	Free Convection Dissipators	Forced Convection Dissipators	Thermal Connector Dissipator	Sockets	ASSOCIATED HARDWARE
Thermalloy Company 8719 Diplomacy Row Dallas, Texas 75247	13103	X	X	X		Insulator Pads
UID Electronics Corp. 4105 Pembroke Road Hollywood, Florida 33021	22753				X	
U. S. Terminals Inc. 7502 Camargo Road Cincinnati, Ohio 45243					X	
Vector Electronic Co., Inc. Flower and Grandview Glendale, California 91201	82893				X	Mounting Tools
Wakefield Engineering Teal & Audubon Roads Wakefield, Massachusetts 01880	05820	X	X	X		Mounting Hardware Insulator Pads Thermal Adhesives and Joint Compounds Mounting Tools
Waldom Electronics Inc. 4633 West 53rd Street Chicago, Illinois 60632	92219				X	
Waterbury Pressed Metal Co. 407 Brookside Road Waterbury, Connecticut 06720				X		

Manufacturers shown in bold print have local offices which are included in Section 19 of this D.A.T.A.BOOK



SECTION 19

MOUNTING HARDWARE

Manufacturer's Local Offices

Since mounting hardware is so closely related to the use of solid-state devices, this section of Mounting Hardware Manufacturers Local Offices will provide you with nearby sources of product information.

DELBERT BLINN COMPANY, INC.

Post Office Box 2007, 1678 East Mission Boulevard, Pomona, California.....
Zip Code Telephone No.
91756 714-623-1257

SECTION 20 MANUFACTURERS CODES, NAMES & ADDRESSES



(Manufacturers in order of **D.A.T.A.** code letters)

	AEIL	★ A.E.I. Semiconductors Limited, Carholme Road, Lincoln, England
	AKER	— A/S Akers Electronics, Forskningsvn, 1, Horten, Norway
CDGW— 73445—	APX	— Amperex Electronic Corp., Semiconductor and Receiving Tube Division, Statersville, Rhode Island 02876
CCYS —	ASC	— American Semiconductor Corp., 4 North Hickory Avenue, Arlington Heights, Illinois 60004
	ATEI	— (ATES) Componetti Electronici S.p.A., Via Tempesta 2, Milano, Italy
	AVA	★ Avantek, Inc., 2981 Copper Road, Santa Clara, California 95051
	BELI	— Bharat Electronics Limited, Jalahalli PO, Bangalore, 13, South India
	BNT	— Burns & Towne Inc., 18-36 Granita Street, Haverhill, Massachusetts 01830
12549—	CDLF	— Compagnie Industrielle Francaise Des Tubes Electroniques, 50 Rue J. P. Timbaud, Courbevoie 92, France
	CLA	★ Clairex Electronics, Division of Clairex Corporation, 560 South 3rd Avenue, Mt. Vernon, New York 10550
	CNS	— Continental Semi-Conductor Inc., 59 Central Avenue, East Farmingdale, New York 11735
CCZX — 12498—	CRY	— Crystalonics Division, Teledyne Inc., 147 Sherman Street, Cambridge, Massachusetts 02140
	CSI	— Carter Semiconductor, Inc., 374 Bay View Avenue, Amityville, Long Island, New York 11701
CGM — 16758—	DEL	— Delco Electronic Division, General Motors Corp., 700 East Firmin Street, Kokomo, Indiana 46901
	DETM	— Delsa-Toshiba, S. A. Calzada Aurora No. 303, Cuautitlan, Edo de Mexico
CCZL — 12954—	DIC	— Dickson Electronics Corporation, Post Office Box 1390, Scottsdale, Arizona 85252
	ECD	— Unisem Corporation, Trevose, Pennsylvania 19047
	EMLS	— Emihus Microcomponents Limited, Glenrothes, Fife, Scotland
	ESMF	— Societe Europeenne De Semiconducteurs, Et De Microelectronique, 101 Boulevard Murat, Paris 16e, France
12045—	ETC	— Electronic Transistors Corporation, 153-13 Northern Boulevard, Flushing, New York 11354
26611—	FCAJ	— Fujitsu Ltd., No. 1015 Kamikodanaka, Kawasaki, Japan
12264—	FERB	— Ferranti Ltd., Gem Mill, Chadderton, Oldham, Lancaster, England
CFJ — 07263—	FSC	— Fairchild Semiconductor Corporation, 440 Middlefield Road, Mountain View, California 94041
CG — 03508—	GESY	— General Electric Co., Semicon. Prod. Dept., Electronic Comp. Div., Northern Concourse Bldg., Northern Lights, N.Y. 13212
CAKK — 14936—	GIC	— General Instrument Corporation, Post Office Box 600, Hicksville, New York 11802
	GSE	★ General Semiconductor Industries, Inc., 230 West 5th Street, Tempe, Arizona 85281
	GSI	— General Sensors, Inc., Post Office Box 231, Athens, Texas 75751
92645—	HITJ	— Hitachi Ltd., Electronic Devices & Lightning Apparatus Div., Nippon Building No. 8, 2-chome, Otemachi, Chiyoda-ku, Tokyo, Japan
	HSC	— Helios Semiconductor, 11762 Western Avenue, Post Office Box 293, Stanton, California 90680
	IDC	— International Diode Corporation, 90 Forrest Street, Jersey City, New Jersey 07304
17884—	INTG	— Intermettal, Halbleiterwerk der, Deutsche ITT Industries GmbH, 78 Frieburg im Breisgau, Hans-Bunte Strasse 19, Germany
CCUX — 08225—	ITC	— Industro Transistor Corporation, 35-10 36th Avenue, Long Island City, New York 11106
CIT — 15238—	ITT	— ITT Semiconductors, 3301 Electronics Way, West Palm Beach, Florida 33407
	ITT8	— ITT Semiconductors, Footscray, Sidcup, Kent, England
	KER	— Kertron, Inc., 7516 Central Industrial Drive, Riviera Beach, Florida 33407
20754—	KMC	— KMC Semiconductor Corporation, Parker Road, R.D. 2, Long Valley, New Jersey 07853
CD8S — 14805—	KSC	— KSC Semiconductor Corporation, KSC Way (Katrina Road), Chelmsford, Massachusetts 01824
18822—	LTTF	— Lignes Telegraphiques and Telephoniques, Conflans-Sainte-Honorine (Seine Et Oise), France
	LUCB	— Joseph Lucas (ELEC.) Ltd., Mere Green Works, Mere Green Road, Four Oaks, Sutton Coldfield, Warwickshire, England
01619—	MATJ	— Matsushita Electronics Corp., Saiwaicho 1-1 Takatsuki, Osaka, Japan
	MEHK	— Micro Electronics Ltd., Kwun Tong, Hong Kong
	MINA	— Miniwatt, Div. of Philips Electrical Pty., Ltd., 20 Herbert Street, Artarmon, N.S.W., Australia
	MISI	— Mistral S.p.A., Via Melchiorre Gioia, 72, 20125 Milano, Italy
90144—	MITJ	— Mitsubishi Electric Corporation, 2-12 Marumouchi, Chiyoda-ku, Tokyo, Japan
CGG — 04713—	MOTA	— Motorola Semiconductor Products, 5005 East McDowell Road, Phoenix, Arizona 85008
24433—	MST	— MS Transistor Corporation, East Gate Boulevard, Garden City, New York 11530
CCWV— 92726—	MULB	— Mullard Limited, Mullard House, Torrington Place, London W.C. 1, England
94091—	NECJ	— Nippon Electric Co., Ltd., 1753 Shimounumaba, Kawasaki City, Japan
	NJS	— New Jersey Semiconductor Products, Inc., 20 Commerce Street, Springfield, New Jersey 07081
08257—	NPC	— Nucleonic Products, Co., Inc., Nucleonic Components Devices Division, 6660 Varie Avenue, Canoga Park, California 91303
CCXP — 12040—	NSC	— National Semiconductor Corporation, 2900 Semiconductor Drive, Santa Clara, California 95051
	NTLB	— Newmarket Transistors Ltd., Exning Road, New Market, Cambridge, England
36204—	PHIC	— Philips Electron Devices, Ltd., 116 Vanderhoof Avenue, Toronto 17, Ontario, Canada

★ New Manufacturers

SECTION 20 MANUFACTURERS CODES, NAMES & ADDRESSES



(Manufacturers in order of **D.A.T.A.** code letters)

CDGW - 08967 -	PHIN	- N. V. Philips Gloeilampenfabrieken, Bldg. B.F., Eindhoven, Netherlands
	PIR	- Pirgo Electronics Inc., 130 Central Avenue, Farmingdale, Long Island, New York 11735
33178 -	PPC	- Power Physics Corporation, Industrial Way West, Post Office Box 626, Eatontown, New Jersey 07724
	PTI	- Power Tech, Inc., 9 Baker Court, Clifton, New Jersey 07011
	QDC	- Qualidyne Corporation, 3699 Tahoe Way, Santa Clara, California 95051
	RADF	- R. T. C. La Radiotecnique Compelec, Division Tubes Electroniques, 130 Ave. Ledru-Rollin, 75 Paris XI, France
CRP - 07933 -	RAYN	- Raytheon Company, Semiconductor Division, 350 Ellis Street, Mountain View, California 94040
CRC - 02735 -	RCA	- RCA Corporation, Electronic Components, Commercial Engrg. Activity, Harrison, New Jersey 07029
	ROSG	- Dr. Ing. Rudolph Rost, Ubbenstrasse 21, Hanover 1, Germany
	SAKJ	- Sanken Electric Co., Ltd., 1-22-8 Nishi-Ikebukuro, Toshima-ku, Tokyo, Japan
	SCA	- Semicoa, 940 South Ajax Avenue, City of Industry, California 91744
	SELB	- Plessey Microelectronics, Cheney Manor, Swindon, Wiltshire, England
CON - 21873 -	SEN	- Sensitron Semiconductor, 221 West Industry Court, Deer Park, New York 11729
	SERA	- Servex Semiconductor Division, P.O. Box 26, Oakleigh, Victoria 3166, Australia
	SES	- Semitronics Corporation, 265 Canal Street, New York, New York 10013
	SGSI	- Societa Generale Semiconduttori S.p.A., SGS, Via C. Olivetti 1, Agrate, Milano, Italy
	SHEJ	- Shindengen Electric Mfg. Co., Ltd., 4,2-chome, Ohtemachi, Chiyoda-ku, Tokyo, Japan
92346 -	SHWG	- Siemens Aktiengesellschaft, Semiconductor Division, Rosenheimerstrasse 139, 8000 Munich 80, West Germany
CCSX - 07256 -	SIL	- Silicon Transistor Corporation, East Gate Boulevard, Garden City, New York 11530
CDBN - 17856 -	SIX	- Siliconix, Inc., 2201 Laurelwood Road, Santa Clara, California 95054
	SLCB	- Semitron Limited, Cricklade, Wiltshire, England
CDCD - 13327 -	SOD	- Solitron Devices, Inc., 1177 Blue Heron Boulevard, Riviera Beach, Florida 33304
	SODI	- Solitron Devices, Inc., 8808 Balboa Avenue, San Diego, California 92123
16402 -	SOIF	- Societe Industrielle De Liaisons Electriques, 122 Rue Nollet, Paris XVII, France
18175 -	SONY	- SONY Corporation, Atsuigi Plant, 14-1 Asahi-sho 4, Atsuigi-shi, Kanagawa-ken, 243 Japan
	SPC	- Solid Power Corporation, 440 Eastern Parkway, Farmingdale, New York 11735
CSF - 56289 -	SPR	- Sprague Electric Company, North Adams, Massachusetts 01247
11911 -	SSE	- Solid State Electronics Co., 15321 Rayen Street, Sepulveda, California 91343
38043 -	SSI	- Solid State Devices, Inc., 12741 Los Nietos Road, Santa Fe, California 90670
	SSS	- Solid State Scientific Inc., Montgomeryville Industrial Center, Montgomeryville, Pennsylvania 18936
	STL	- Stow Laboratories, Inc., Kane Industrial Drive, Hudson, Massachusetts 01749
	TADI	- Tadiran, Israel Electronics Industries, Ltd., 3 Derech Hashalom (P.O. Box 648), Tel-Aviv, Israel
	TAGS	- Transistor AG, Hohlstrasse 610, 8048 Zurich, Switzerland
CCAB - 03877 -	TEC	- Transitron Electronic Corporation, 168 Albion Street, Wakefield, Massachusetts 01880
	TEK	- Trans-Tek Manufacturing Company, 4405 South Clinton Avenue, South Plainfield, New Jersey 07080
	TFKG	- AEG-Telefunken, 71 Heilbronn (Neckar), Postfach 940, West Germany
CGO - 02195 -	TII	- Texas Instruments Inc., Components Group, Mail Station 49, P.O. Box 5012, Dallas, Texas 75222
CGO - 02195 -	TIIB	- Texas Instruments Ltd., Manton Lane, Bedford, England
	TIIF	- Texas Instruments France, 8050 Freising, Haggarty Strasse, Germany
18657 -	TOSJ	- Tokyo Shibaura Electric Co., 1 Komukaitoshiwa Cho, Kawasaki, Japan
CCNL - 02181 -	TRW	- TRW Semiconductors, Inc., 14520 Aviation Blvd., Lawndale, California 90260
	TSAJ	- Tokyo Sanyo Electric Co., Ltd., Semiconductor Division, Oizumimachi, Oizumi Gunma, Japan
	TSC	- Teledyne Semiconductor, 12515 Chadron Avenue, Hawthorne, California 90250, (Bi-Polar Devices)
		1300 Terra Bella Avenue, Mountain View, California 94040, (FET Devices)
CDAS -	UNI	- Unitrode Corporation, 580 Pleasant Street, Watertown, Massachusetts 02712
34428 -	UPI	- United Page Inc., 481 Getty Avenue, Paterson, New Jersey 07503
17895 -	VALG	- Valvo GmbH, Burchardstrasse 19, Hamburg 1, Germany
CAY - 05277 -	WESY	- Westinghouse Electric Corporation, Semiconductor Dept., Youngwood, Pennsylvania 15697

★ New Manufacturers

Manufacturers shown in bold print have local offices which are included in Section 17

SYMBOLS & CODES

SYMBOLS & CODES COMMON TO MORE THAN ONE SECTION

LINE No.

- ▼ - New Type
- ◆ - Revised Specifications
- # - Non-JEDEC Type manufactured outside U.S.A.

LEAD CODE

See Lead Code Identification Guide at end of Section 15.

FOLLOWING TYPE No.(ALL SECTIONS EXCEPT 12)

- △ - Each symbol (assigned by D.A.T.A.) indicates an individual manufacturer of a type number when two or three manufacturers inadvertently assigned the same non-JEDEC type number to non-identical types.
- † - Switching type, also listed in Section 12
- ∅ - Chopper, also listed in Section 13, Category 10
- * - These types also included elsewhere with other characteristics. See Type No. Cross Index for alternate line no.
- § - Radiation Resistant Devices, also listed in Section 13, Category 13.
- ∅ - Replacement Type; consult manufacturer.

STRUCTURE (All Sections Except 6 & 7)

A	- Alloy
AN	- Annular
D	- Diffused or drift
DM	- Diffused mesa
E	- Epitaxial
EA	- Epitaxial annular
EM	- Epitaxial mesa
F	- Fused
G	- Grown
H	- Hometaxial
MA	- Mico alloy
MD	- Micro alloy diffused
ME	- Mesa
MOS	- Metal oxide silicon
PA	- Precision alloy
PC	- Point contact
PD	- Precision alloy diffused
PE	- Planar epitaxial
PL	- Planar
S	- Surface barrier
*	- Matched pair
△	- Switching, other uses
∅	- Chopper, other uses
—	- Noise figure 8db or below
†	- Plastic package

2. GERMANIUM PNP | 3. GERMANIUM NPN | 4. SILICON PNP | 5. SILICON NPN -- Low Power Transistors

LINE No	TYPE No.	1 MAX. COLL. DISS. @25°C (W)	2 DERATE: IN FREE AIR W/C	T ABS MAX RATINGS @25°C				MAX. ICBO @MAX Vcb Vcb (A)	TYPICAL "H" PARAMETERS				COMMON Emitter Ic Ie Ih Ihe (mA) (mA) (mA) (mA)	Cob	STRUCTURE	DWG # Y200 TO200 Ser	AL C E O D E
				M E	BVCBO	BVCeo	BVCbo		5	6	7	8	9	10			
				1	2	3	4										

∅ - With infinite heat sink
Following symbols indicate temperature at which derating starts:
† - 40°C ▽ - 60°C § - 100°C
* - 45°C § - 70°C ◆ - Min.
- 50°C △ - 85°C

† - $f_{\alpha e}$
§ - Gain bandwidth product (f_T)
* - Maximum frequency of oscillation
∅ - Figure of merit (frequency for unity power gain)
△ - Minimum
∅ - Maximum

∅ - With infinite heat sink
* - 50-65°C A - Ambient
∅ - 70-80°C C - Case
- 85-100°C J - Junction
◆ - 110-125°C S - Storage
† - 130-135°C
§ - 140-165°C
§ - 170-200°C
- Over 200°C

∅ - I_C △ - I_B

∅ - V_{CE}

∅ - At $V_{CB} < \text{Max. } V_{CB}$ (See Mfr. Spec.)
- I_{CEX} § - Typical
§ - I_{CES} * - I_{CER}
† - At Temp. > 25°C △ - I_{CEO}
◆ - At Temp. 25°C Case

- Pulsed or Peak
§ - Minimum

- BV_{CEX} or punch-through
∅ - BV_{CES} □ - $BV_{ceo(sus)}$
§ - BV_{CER} * - Pulsed
§ - Indicates min. values given for BV_{cbo} , BV_{ceo} , and BV_{ebc} .

11 b - h parameters are
12 h_{ob} , h_{ib} , h_{rb}
13 □ - Maximum

† - h_{FE} △ - Minimum
- Pulsed □ - Maximum
§ - h_{FC}
* - Available in selected ranges

§ - Maximum \$ - C_{cb} † - C_{re}

\$ - Tetrode

- Radiation Resistant Device
(Also See Above)

6. "P" Channel

7. "N" Channel — SILICON FIELD EFFECT TRANSISTORS

LINE No.	TYPE No.	MAX DEVICE	MAX V _{DSS}	ABS MAX RATINGS @ 25°C	MAX. I _D (ON)@ V _{GSS} =0	MAX. I _{GS} @ V _{GSS} >V _P	TEST COND	PARAMETERS @ 25°C	DERATE	DWG #						
		DISS @ 25°C d=0	V _{DSS}	V _{DSS}	I _D	I _G	V _{DSS} >V _P & V _{DSS} =0	COMMON SOURCE Rds	C _{DS} IN AIR	C						
		(W)	(V)	(V)	(A)	(A)	(V)	(Ω)	(W/C)	E						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

▼ — Matched Type, also listed in Section 13, Category 6
 ♦ — Phototransistor, also listed in Section 13, Category 7 (See Above Also)

△ — With infinite heat sink
 † — Above 25°C; For additional information, consult manufacturer.

† — V_{GS} (Cut Off)
 △ — V_{GST} (Threshold)
 % — Typical

△ — Depletion Mode, Type A
 \$ — Depletion-Enhancement Mode, Type B
 * — Enhancement Mode, Type C

△ — BV_{DSO}
 † — BV_{DSX}

△ — BV_{DGO}

△ — Typical § — g_{fg}
 † — Pulsed
 % — High Frequency f_T, f_{TS}

△ — Y_{IS} § — Y_{OG}
 † — Not at given test conditions
 % — Maximum
 * — Pulsed

△ — V_{GD}
 † — V_{DG}

% — Maximum
 △ — Not given at test conditions
 † — R_{DS(on)} at V_{DS} = 0

∅ — I_D in mA

△ — I_{GDO}

△ — I_{DSS} @ V_{GS} = 0 and V_{DS} ≈ V_P

∅ — V_{GS} > 0

— Minimum
 * — Typical
 % — Pulsed

— C_{iss} (Output Shorted)
 △ — C_{dgs}

† — C_{gss}
 % — Not given at test conditions
 * — Typical

∅ — C_{dss}
 ∅ — C_{dgo}

§ — C_{igs}

A — Ambient J — Junction
 C — Case S — Storage

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16

17

8. GERMANIUM PNP

9. GERMANIUM NPN

10. SILICON PNP

11. SILICON NPN — High Power Transistors

LINE No.	TYPE No.	MIN. I _C	MAX. I _C	P _{DM}	M _E	A _E	ABSOLUTE MAX. RATINGS @ 25°C	MAX. I _{CE}	h _{FE}	MIN. I _C	MAX. I _C	MIN. I _E	MAX. I _{SAT.}	RES.	tr	STRUCTURE	DWG #
		(W/C)	(W)	(W)	(A)	(V)	(V)	(A)	(Hz)	(A)	(A)	(A)	(A)	(s)	(s)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	

† — 40°C
 * — 45°C
 # — 50°C
 ∅ — 60°C
 § — 75°C
 △ — > 100°C
 Symbols indicate temperature at which derating starts.

∅ — With infinite heat sink
 Following symbols indicate temp. at which derating starts:

† — 40°C □ — 60°C ♦ — 80°C
 * — 45°C § — 70°C △ — Pulsed
 # — 50°C ∅ — 100°C % — Min.

* — 50-65°C A — Ambient
 ∅ — 70-80°C C — Case
 # — 85-100°C J — Junction
 ♦ — 110-125°C S — Storage
 \$ — 130-135°C
 § — 140-165°C
 § — 170-200°C
 ▽ — Over 200°C

∅ — I_E § — Minimum
 # — Pulsed or Peak
 † — At temperature 25°C Case

∅ — At V_{CB} < Max. V_{CB} (see infr. spec.)

— I_{CEx} * — I_{cer} △ — I_{CEO}
 § — I_{CES} ♦ — At Temp. 25°C Case
 \$ — Typical † — At Temp. > 25°C

— BV_{CEx} or punch-through
 ∅ — BV_{CES} * — Pulsed
 § — BV_{CER} □ — BV_{ceo(SUS)}
 \$ — Minimum

† — At Temp. 25°C Case
 § — Minimum

∅ — I_E * — Available to selected range narrower than indicated
 # — Pulsed
 \$ — Minimum

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1

SYMBOLS & CODES CONTINUED

SYMBOLS & CODES COMMON TO MORE THAN ONE SECTION

LINE No.

- ▼ — New Type
- ◆ — Revised Specifications
- # — Non-JEDEC type manufactured outside U.S.A.

LEAD CODE
See Lead Code Identification Guide at end of Section 15.

FOLLOWING TYPE No.(ALL SECTIONS EXCEPT 12)

- △ } Each symbol (assigned by D.A.T.A.) indicates an individual manufacturer of a type number when two or three manufacturers inadvertently assigned the same non-JEDEC type number to non-identical types.
- } — Switching type, also listed in Section 12
- % } — Chopper, also listed in Section 13, Category 10
- * — These types also included elsewhere with other characteristics. See Type No. Cross Index for alternate line number.
- § — Radiation Resistant Devices, also listed in Section 13, Category 13.
- \$ — Replacement Type: consult manufacturer.

STRUCTURE (All Sections)	
A	— Alloy
AN	— Annular
D	— Diffused or drift
DM	— Diffused mesa
E	— Epitaxial
EA	— Epitaxial annular
EM	— Epitaxial mesa
F	— Fused
G	— Grown
H	— Heterojunction
MA	— Micro alloy
MD	— Micro alloy diffused
ME	— Mesa
MOS	— Metal oxide silicon
PA	— Precision alloy
PC	— Point contact
PD	— Precision alloy diffused
PE	— Planar epitaxial
PL	— Planar
S	— Surface barrier
*	— Matched pair
△	— Switching, other uses
□	— Chopper, other uses
%	— Noise figure 8db or below
\$	— Plastic package

12. SWITCHING TRANSISTORS

* THESE TYPES ALSO INCLUDED ELSEWHERE WITH OTHER CHARACTERISTICS
SEE TYPE NO. CROSS INDEX FOR ALTERNATE LINE NO.

LINE No.	TYPE No	fab	1 MAX RISE TIME tr (Hz)	2 MAX DELAY TIME td (s)	3 MAX STORE TIME ts (s)	4 MAX FALL TIME tf (s)	5 MAX PC IN FREE AIR @ 25°C (W)	6 BIAS Vcb (V)	7 le (A)	8 hfe	9 MAX SAT. RES (Ω)	10 Cob (F)	11 rbb X Cob (s)	12 STRUCTURE M MAX A TEMP DWG AD	13 T (°C)	14 C O E
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† — $f \propto e$
§ — Gain bandwidth product (f_T)
* — Maximum frequency of oscillation
∅ — Figure of merit (frequency for unity power gain)
△ — Minimum □ — Maximum

\$ — Charge storage time constant
▼ — Stored base charge — picocoulomb
↓ — Total switching time
∅ — $T_{ON} = t_r + t_d$
† — Typical Value

∅ — $T_{OFF} = t_s + t_f$
† — Typical Value
* — $T_{on} + T_{off} = t_d + t_r + t_f + t_s$

∅ — V_{CE}
∅ — I_c
△ — I_B
† — h_{fe}
— Pulsed
△ — Minimum
□ — Maximum
* — Available to selected range narrower than indicated
§ — Y_{fs} in millimho (FET's only). Bias values are V_{DS} & I_D

∅ — With infinite heat sink
Following symbols indicate temperature at which derating starts:
† — 40°C § — 70°C
* — 45°C § — 100°C
— 50°C ↓ — 80°C
□ — 60°C △ — Pulsed

□ — Maximum
∅ — C_{ob}
§ — C_{iss} (FET's only)

§ — R_{on} (FET's only)
— Pulsed

A — Ambient
C — Case
J — Junction
S — Storage

13. MISCELLANEOUS TRANSISTORS

LINE No	2 TYPE No	1 CATEGORY	3 STRUCTURE	4 DESCRIPTION
---------	-----------	------------	-------------	---------------

1 — Avalanche Mode
2 — Bi-directional
4 — Hook Collector
5 — Complementary Symmetry (PNP & NPN) Matched Pair
6 — Matched Pair
7 — Phototransistor
9 — Unijunction N-N-type emitter P-P-type emitter

10 — Chopper
11 — Composite
12 — Cryogenic
13 — Radiation Resistant Devices
14 — Pressure Sensitive
16 — Darlington

Ge — Germanium
Si — Silicon

N — NPN or N Channel
P — PNP or P Channel
(See above also)

See "TECHNICAL TERM DEFINITIONS" Section on back of last Interpreter Card.

TECHNICAL TERM DEFINITIONS

B	— Illumination intensity.	h_{fe}	— Small signal forward current transfer ratio, common emitter.	P_d	— Power Dissipation.
V_{BVCBO}	— Breakdown voltage, collector-to-base; emitter open-circuit.	h_{ib}	— Small signal value of the short-circuit input impedance, common base.	P_t	— Total power dissipation.
$V_{(BR)CEO}$	— Breakdown voltage, collector-to-emitter; base open-circuit.	h_{ie}	— Small signal value of the short-circuit input impedance, common emitter.	R_{BSO}	— Interbase resistance, with emitter open-circuit.
$V_{(BR)CER}$	— Breakdown voltage, collector-to-emitter; with specified base-to-emitter resistance.	h_{ob}	— Small signal value of the open-circuit output admittance, common base.	r_(d)	— Drain-to-source bulk resistance (FET).
$V_{(BR)CES}$	— Breakdown voltage, collector-to-emitter; with base short-circuit to emitter.	h_{oe}	— Small signal value of the open-circuit output admittance, common emitter.	t_d	— Delay time.
$V_{(BR)CEX}$	— Breakdown voltage, collector-to-emitter; with specified circuit between base and emitter.	h_{re}	— Small signal value of the open-circuit reverse voltage transfer ratio, common base.	t_f	— Fall time.
$V_{(BR)DCG}$	— Breakdown voltage, drain-to-gate; source open circuit (FET).	I_b	— Base current, DC.	t_{off}	— Turn-off time = t _s + t _f .
$V_{(BR)DSX}$	— Breakdown voltage, drain-to-source; with specified circuit between gate and source (FET).	I_{B(Sat)}	— Base saturation current.	t_{on}	— Turn-on time = t _d + t _r .
$V_{(BR)EBO}$	— Breakdown voltage, emitter-to-base; collector open-circuit.	I_{E2(mod)}	— Interbase modulated current (UJT).	t_r	— Rise time.
$V_{(BR)GDG}$	— Breakdown voltage, gate-to-drain (FET).	I_c	— Collector current, DC.	t_s	— Storage time.
$V_{(BR)GDS}$	— Breakdown voltage, gate-to-drain; with source short-circuit to drain (FET).	I_{C(Sat)}	— Collector saturation current.	S_{RCE}	— Collector-emitter radiation sensitivity.
$V_{(BR)GSS}$	— Breakdown voltage, gate-to-source, with drain short-circuit to source (FET).	I_{CBO}	— Collector cutoff current, DC, emitter open-circuit.	S_{ICE}	— Collector-emitter illumination sensitivity.
C_{ab}	— Output capacitance with input AC open-circuit, common base.	I_{ces}	— Collector cutoff current, DC, with base shorted to emitter.	V_{BE}	— Base-to-emitter voltage, DC.
C_{iss}	— Small-signal, short-circuit input capacitance, common source (FET).	I_{ceX}	— Collector cutoff current, DC, with specified circuit between base and emitter.	V_{B2E}	— Base-two-to-emitter voltage, DC (UJT).
C_{rss}	— Magnitude of small-signal, short-circuit reverse transfer capacitance, common source (FET).	I_d	— Drain current, DC (FET).	V_{B2B1}	— Interbase voltage, DC (UJT).
f_{α_b}	— Small signal short-circuit forward current transfer ratio cut off frequency, common base (alpha cut off frequency).	I_{D(on)}	— "On" drain current (FET).	V_{BE(Sat)}	— Base-to-emitter saturation voltage.
f_{α_e}	— Small signal short-circuit forward current transfer ratio cut off frequency, common emitter (beta cut off frequency).	I_{DSS}	— Drain current at zero gate voltage (FET).	V_{CB}	— Collector-to-base voltage, DC.
f_f	— Extrapolated unity gain frequency (gain bandwidth product). Product of the common-emitter current transfer ratio and the frequency of measurement at a frequency where the current gain is decreasing at the rate of 6 db per octave. This frequency is also known as the Transition Frequency.	I_e	— Emitter current, DC.	V_{CE(Sat)}	— Collector-to-emitter saturation voltage.
g_{fs}	— Common source forward transconductance (FET).	I_{E20}	— Emitter reverse current, base-one open-circuit, DC (UJT).	V_{CEO}	— Collector-to-emitter voltage, DC, base open.
h_{FE}	— DC forward current transfer ratio, common emitter.	I_G	— Gate current, DC (FET).	V_{DS}	— Drain-to-source voltage (FET).
		I_{GS}	— Gate source reverse current at zero drain-to-source voltage (FET).	V_{E81}	— Emitter-to-base one voltage, DC (UJT).
		I_{off}	— Offset current, DC (FET).	V_{EBO}	— Emitter-to-base voltage, DC, collector open.
		I_p	— Peak point emitter current (UJT).	V_{E81(Sat)}	— Emitter saturation voltage (UJT).
		I_v	— Valley point emitter current (UJT).	V_{GS}	— Gate-to-source voltage, DC (FET).
		n	— Intrinsic standoff ratio (UJT).	V_{GS(off)}	— Gate-to-source cutoff voltage (FET).
		NF	— Noise factor or noise figure.	V_{OB1}	— Base-one peak pulse voltage (UJT).
		X	— Wave length of maximum sensitivity	V_{off}	— Offset voltage.
		P_c	— Collector power dissipation.	V_p	— Peak point emitter voltage (UJT).

MATCHED PAIRS

a. For all matching parameter ratios one (1) is always the smaller of the two (2) value of the parameter.

NOTE: b. For differential values, if one (1) is always the smaller of the two (2) value, the differential is a negative number.

h_{FE1}/h_{FE2} — DC current gain ratio.

$V_{BE1} - V_{BE2}$ — Base-emitter differential voltage.

$\Delta V_{BE1} - V_{BE2}/\Delta T$ — Base-emitter differential voltage change due to a change in temperature.

I_{DSS1}/I_{DSS2} — Zero gate voltage - drain current ratio.

g_m1/g_m2 — Transconductance ratio.

$|V_{GS1} - V_{GS2}|$ — Gate-source differential voltage.

$\Delta V_{GS1} - V_{GS2}/\Delta T$ — Gate-source differential voltage change due to a change in temperature.

FOR DOUBLE EMITTER CHOPPER DEVICES

V_{E180} or V_{E280} — Emitter-to-base voltage, DC, collector open.

V_{E1CO} or V_{E2CO} — Emitter-to-collector voltage, DC, base open.

V_{E1E2} or V_{E2E1} — Emitter one-emitter two offset voltage.

I_{E1E20} — Emitter cutoff current.

CHOPPERS

$V_{(off)}$ — Emitter offset voltage.

$I_{(off)}$ — Emitter offset current.

$h_{FE \text{ (inv)}}$ — DC current gain, inverted connection.

R_d — Inverted dynamic saturation resistance.

r_(slon) — "On" series resistance.

DOUBLE COLLECTOR DEVICES

V_{C1C2} — Collector one-collector two voltage.

TRANSISTOR

D.A.T.A.BOOK

D.A.T.A.

