



东莞市华远电子有限公司

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TO-92 Plastic-Encapsulate Transistors

2SC1959

TRANSISTOR (NPN)

FEATURE

Power dissipation

$P_{CM} : 0.5 \text{ W (Tamb=25)}$

Collector current

$I_{CM} : 0.5 \text{ A}$

Collector-base voltage

$V_{(BR)CBO} : 35 \text{ V}$

Operating and storage junction temperature range

$T_{stg} : -55 \text{ to } +150$

$T_J : 150$

TO-92

1.EMITTER

2. COLLECTOR

3. BASE



ELECTRICAL CHARACTERISTICS (Tamb=25 unless otherwise specified)

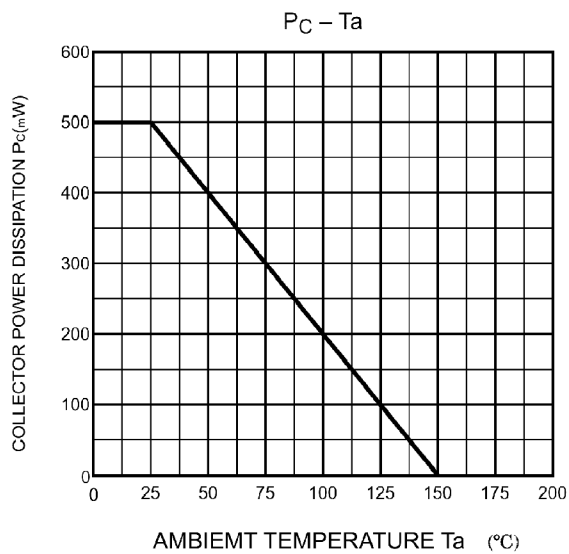
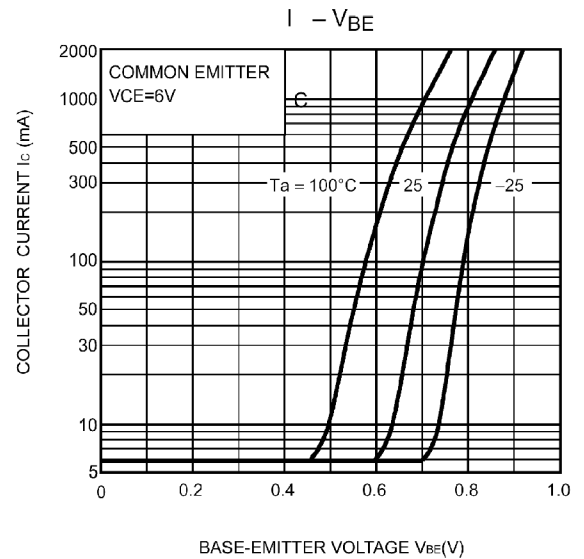
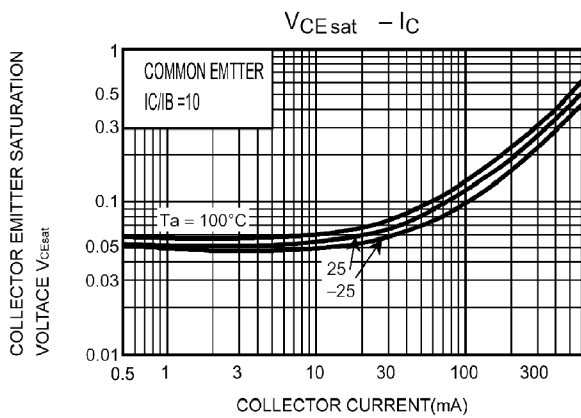
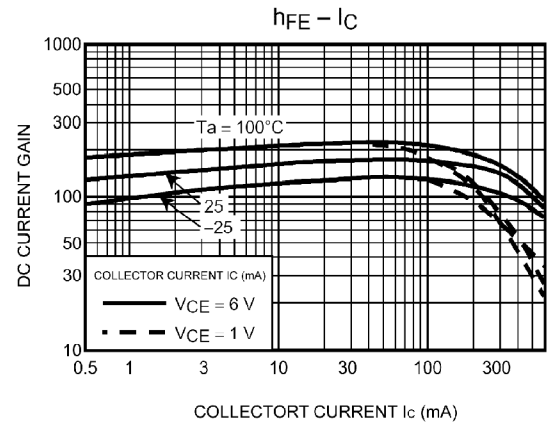
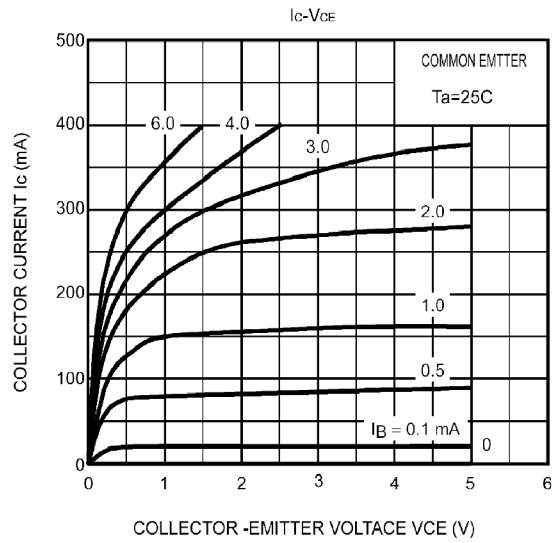
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100 \mu A, I_E = 0$	35			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100 \mu A, I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 35V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 1V, I_C = 100mA$	70		400	
	$h_{FE(2)}$	$V_{CE} = 6V, I_C = 400mA$	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$			0.25	V
Base-emitter voltage	V_{BE}	$V_{CE} = 1V, I_C = 100 \text{ mA}$			1.0	V
Transition frequency	f_T	$V_{CE} = 12V, I_C = 2mA$	200			MHz

CLASSIFICATION OF h_{FE}

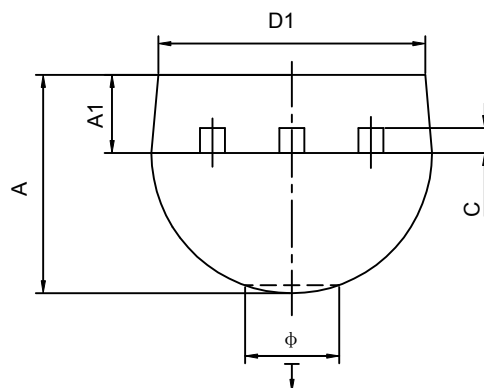
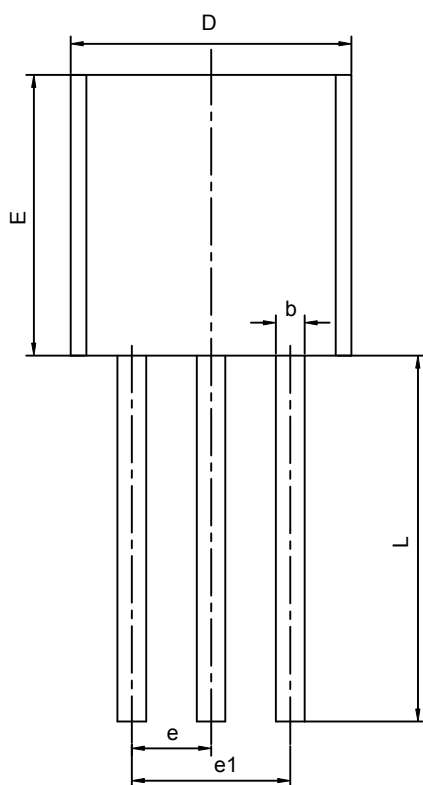
Rank		O	Y	GR
Range	$h_{FE(1)}$	70-140	120-240	200-400
	$h_{FE(2)}$	25(min)	40(min)	

Typical Characteristics

2SC1959



TO-92 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270TYP		0.050TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Ö		1.600		0.063
\downarrow	0.000	0.380	0.000	0.015