NEC

SILICON TRANSISTOR
2SC1623

AUDIO FREQUENCY GENERAL PURPOSE AMPLIFIER
NPN SILICON EPITAXIAL TRANSISTOR
MINI MOLD

FEATURES

- High DC Current Gain: h_{FE} = 200 TYP.
  (V_{CE} = 6.0 V, I_C = 1.0 mA)
- High Voltage: V_{CEO} = 50 V

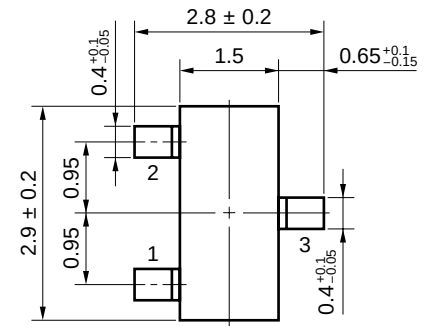
ABSOLUTE MAXIMUM RATINGS

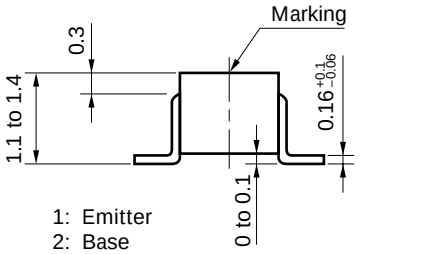
Maximum Voltages and Current (TA = 25 ˚C)

Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current (DC)	I_C	100	mA
Maximum Power Dissipation			
Total Power Dissipation			
at 25 ˚C Ambient Temperature	P_T	200	mW
Maximum Temperatures			
Junction Temperature	T_j	150	˚C
Storage Temperature Range	T_{stg}	–55 to +150	˚C

PACKAGE DIMENSIONS

in millimeters





1: Emitter
2: Base
3: Collector

ELECTRICAL CHARACTERISTICS (T_A = 25 ˚C)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	I_{CBO}			0.1	μA	V_{CB} = 60 V, I_E = 0
Emitter Cutoff Current	I_{EBO}			0.1	μA	V_{EB} = 5.0 V, I_C = 0
DC Current Gain	h_{FE}	90	200	600		V_{CE} = 6.0 V, I_C = 1.0 mA*
Collector Saturation Voltage	$V_{CE(sat)}$		0.15	0.3	V	I_C = 100 mA, I_B = 10 mA*
Base to Saturation Voltage	$V_{BE(sat)}$		0.86	1.0	V	I_C = 100 mA, I_B = 10 mA*
Base Emitter Voltage	V_{BE}	0.55	0.62	0.65	V	V_{CE} = 6.0 V, I_C = 1.0 mA*
Gain Bandwidth Product	f_T		250		MHz	V_{CE} = 6.0 V, I_E = –10 mA
Output Capacitance	C_{ob}		3.0		pF	V_{CB} = 6.0 V, I_E = 0, f = 1.0 MHz

* Pulsed: PW ≤ 350 μs, Duty Cycle ≤ 2 %

h_{FE} Classification

Marking	L4	L5	L6	L7
h_{FE}	90 to 180	135 to 270	200 to 400	300 to 600

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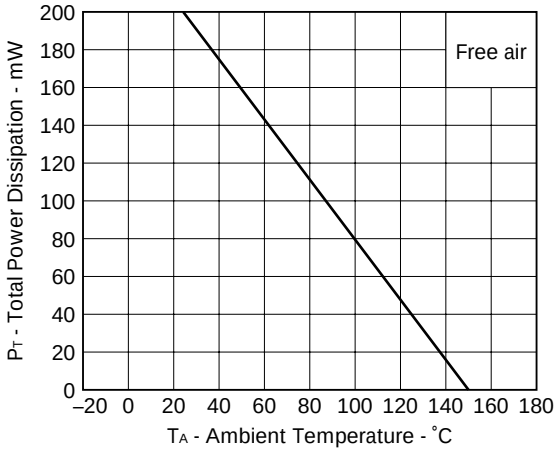
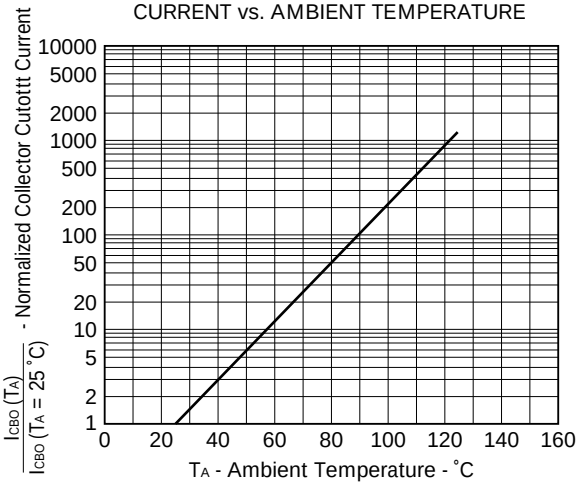
TYPICAL CHARACTERISTICS (T_A = 25 °C)

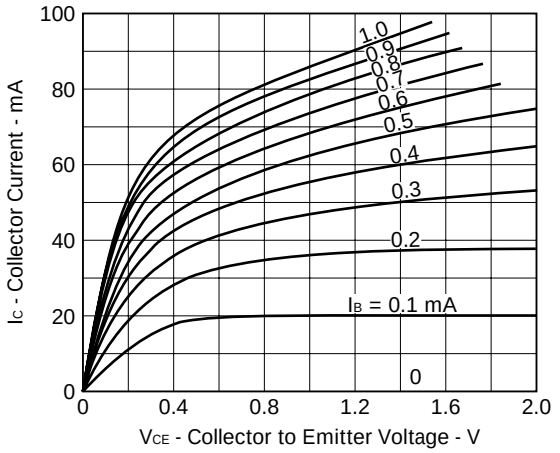
TOTAL POWER DISSIPATION vs.
AMBIENT TEMPERATURE



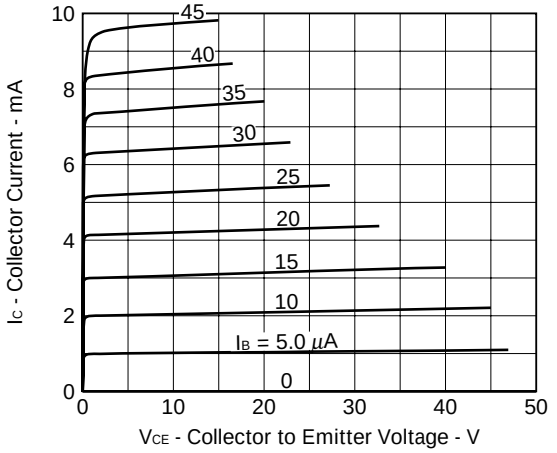
NORMALIZED COLLECTOR CUTOFF
CURRENT vs. AMBIENT TEMPERATURE



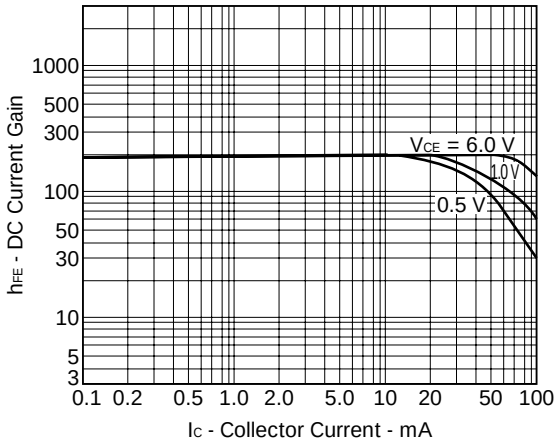
COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE



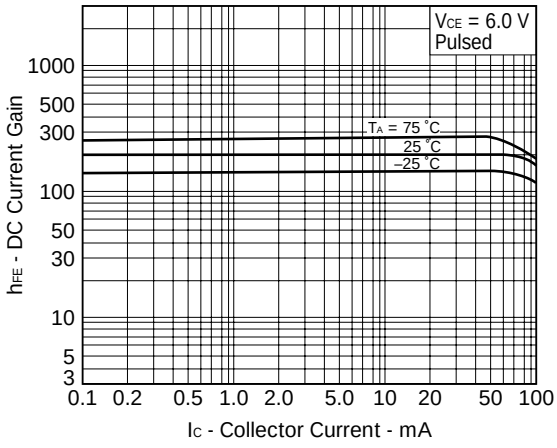
COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE



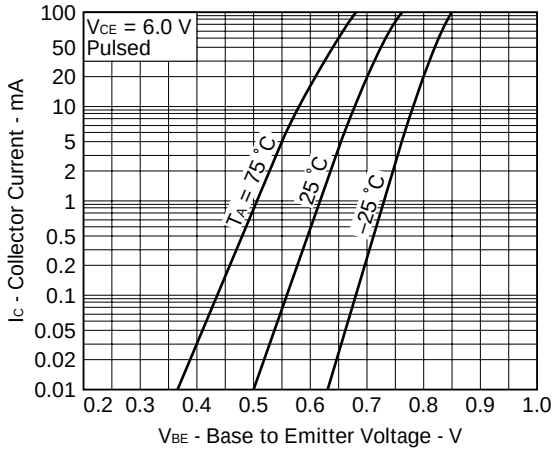
DC CURRENT GAIN vs.
COLLECTOR CURRENT



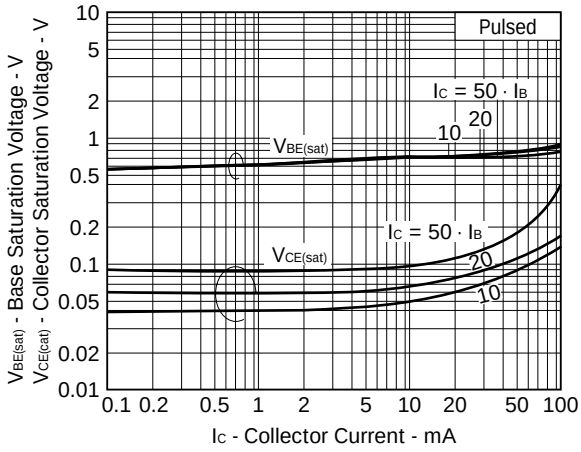
DC CURRENT GAIN vs.
COLLECTOR CURRENT



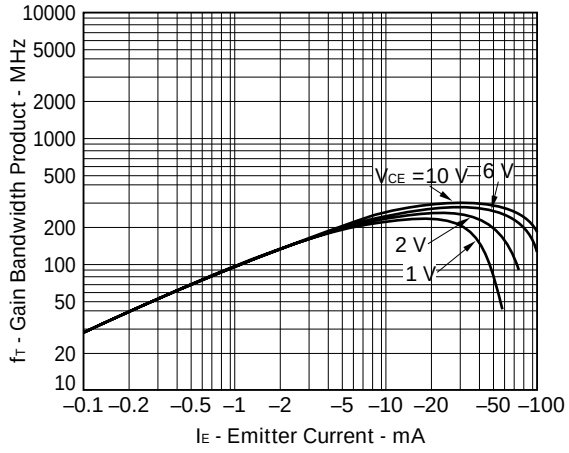
COLLECTOR CURRENT vs.
BASE TO EMITTER VOLTAGE



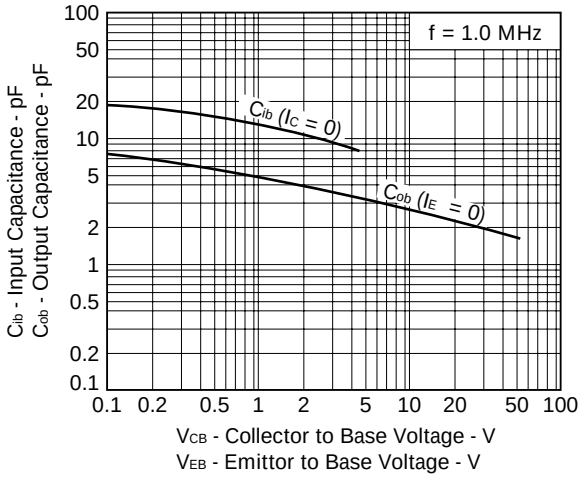
COLLECTOR AND BASE SATURATION
VOLTAGE vs. COLLECTOR CURRENT



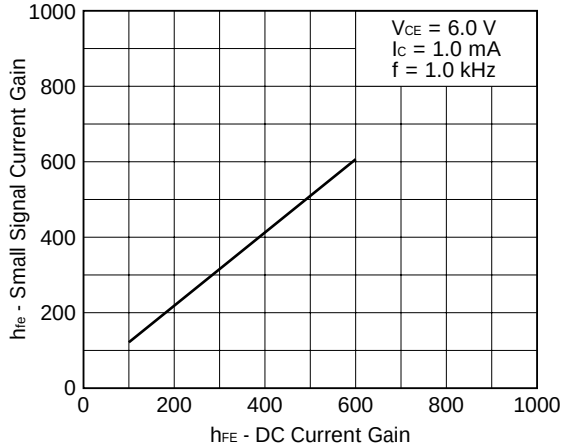
GAIN BANDWIDTH PRODUCT vs.
EMITTER CURRENT



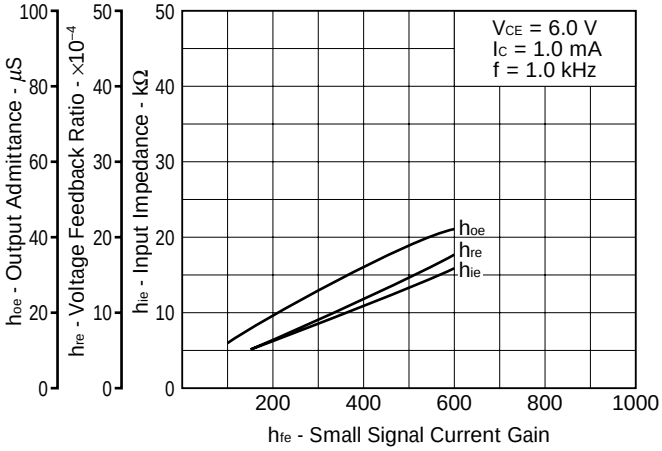
INPUT AND OUTPUT CAPACITANCE
vs. REVERSE VOLTAGE



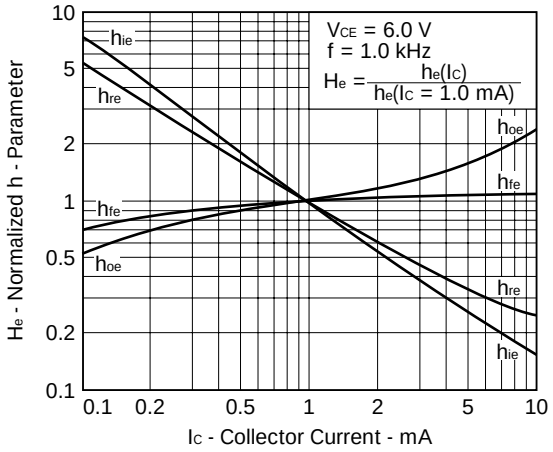
SMALL SIGNAL CURRENT GAIN vs.
DC CURRENT GAIN



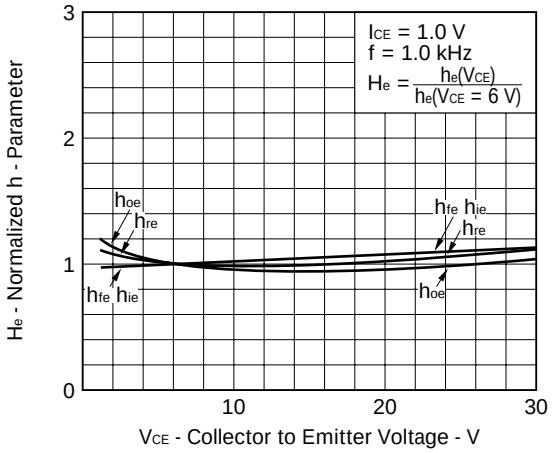
INPUT IMPEDANCE VOLTAGE FEEDBACK
RATIO AND OUTPUT ADMITTANCE vs.
SMALL SIGNAL CURRENT GAIN



NORMALIZED h-PARAMETER vs.
COLLECTOR CURRENT



NORMALIZED h-PARAMETER vs.
COLLECTOR TO EMITTER VOLTAGE



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