Features

- Halogen Free. “Green” Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

PNP Plastic-Encapsulate Transistors

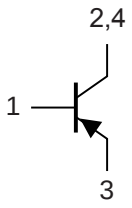
Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55℃ to +150℃
- Storage Temperature Range: -55℃ to +150℃
- Thermal Resistance: 250℃/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-45	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1	A
Base Current	I_B	-100	mA
Peak Base Current	I_{BM}	-200	mA
Power Dissipation	P_D	500	mW

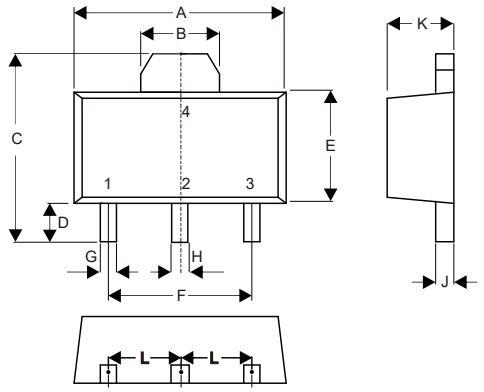
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



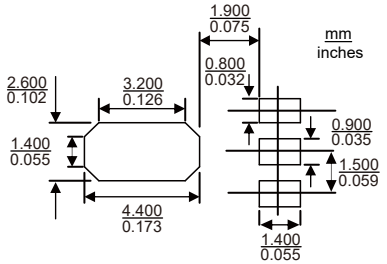
1.BASE
2,4.COLLECTOR
3.EMITTER

SOT-89



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.169	0.185	4.30	4.70	
B	0.061		1.55		TYP.
C	0.154	0.171	3.91	4.35	
D	0.031	0.047	0.80	1.20	
E	0.089	0.104	2.25	2.65	
F	0.118		3.00		TYP.
G	0.013	0.020	0.33	0.52	
H	0.015	0.021	0.38	0.53	
J	0.014	0.017	0.35	0.44	
K	0.055	0.063	1.40	1.60	
L	0.059		1.50		TYP.

Suggested Solder Pad Layout



Electrical Characteristics @ T_A=25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-45			V	I_C=-100μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-45			V	I_C=-1mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	I_E=-10μA, I_C=0
Collector-Base Cutoff Current	I_{CBO}			-0.1	μA	V_{CB}=-30V, I_E=0
Emitter-Base Cutoff Current	I_{EBO}			-0.1	μA	V_{EB}=-5V, I_C=0
DC Current Gain	$h_{FE(1)}$	63		250		V_{CE}=-2V, I_C=-150mA
	$h_{FE(2)}$	63				V_{CE}=-2V, I_C=-5mA
	$h_{FE(3)}$	40				V_{CE}=-2V, I_C=-500mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.5	V	I_C=-500mA, I_B=-50mA
Base-Emitter Voltage	$V_{BE(on)}$			-1.0	V	I_C=-500mA, V_{CE}=-2V
Transition Frequency	f_T	50			MHz	V_{CE}=-5V, I_C=-10mA,f=100MHz

Classification of $h_{FE(1)}$

Rank	BCX51	BCX51-10	BCX51-16
Range	63~250	63~160	100~250
Marking	AA	AC	AD

Curve Characteristics

Fig. 1 - Static Characteristics

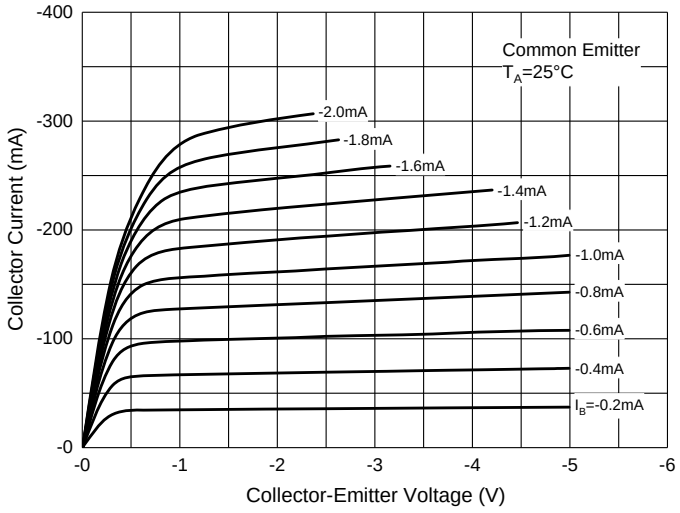


Fig. 2 - DC Current Gain Characteristics

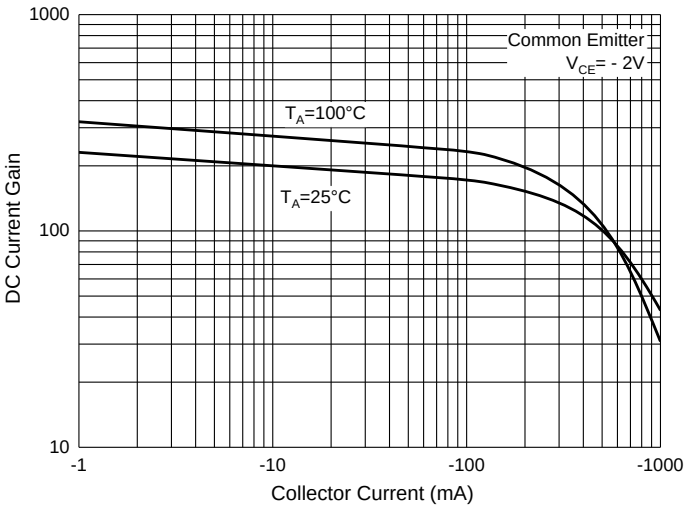


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

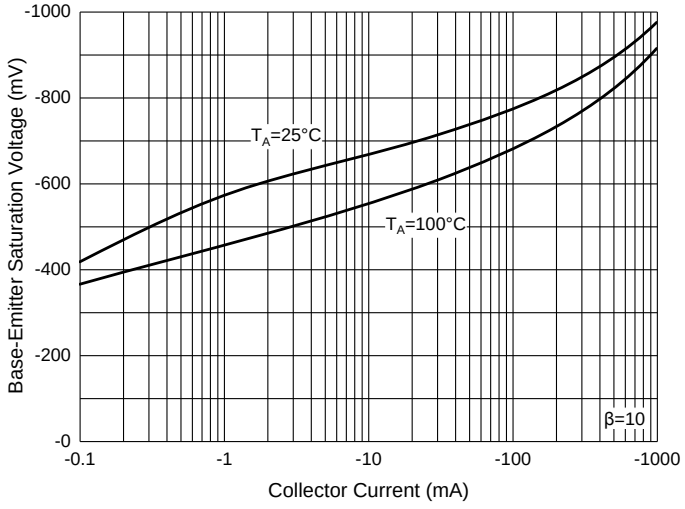


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

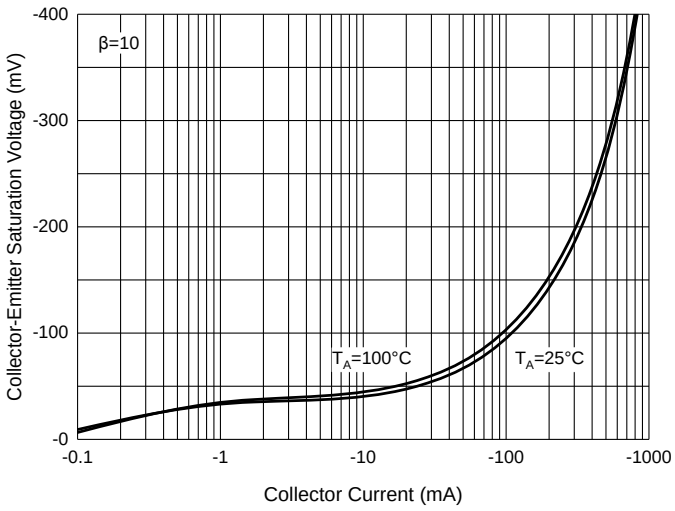


Fig. 5 - Base-Emitter Voltage Characteristics

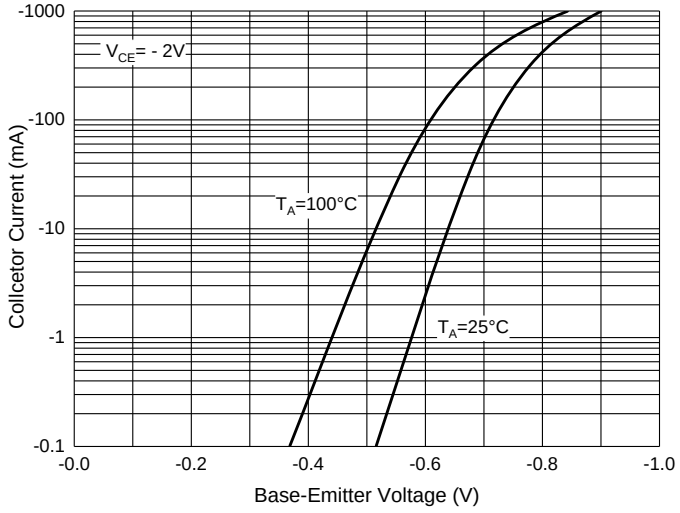


Fig. 6 - Collector Power Derating Curve