

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)

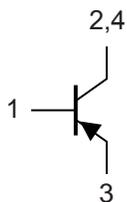
Maximum Ratings @ 25°C Unless Otherwise Specified

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 250°C/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.

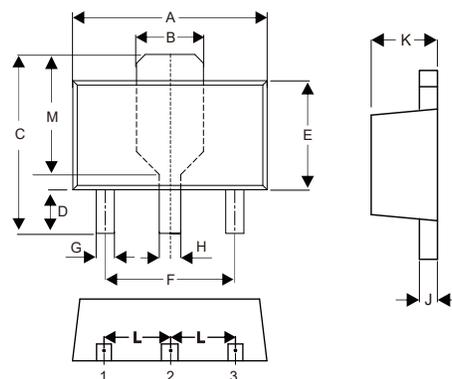
Internal Structure



1.BASE
2,4.COLLECTOR
3.EMITTER

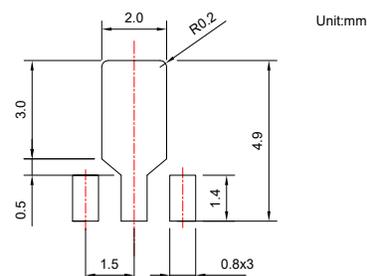
PNP Plastic-Encapsulate Transistors

SOT-89



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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.
M	0.108		2.75		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

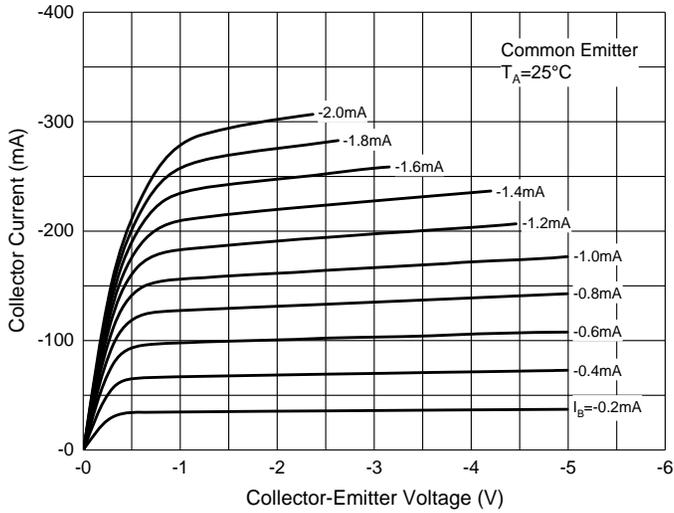


Fig. 2 - DC Current Gain Characteristics

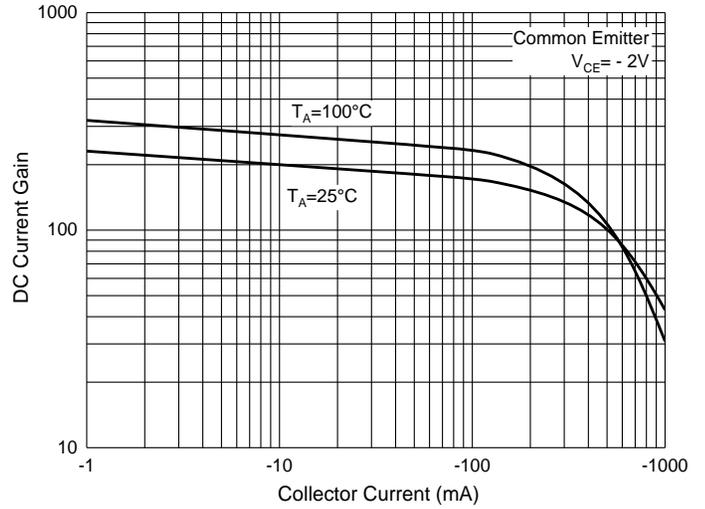


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

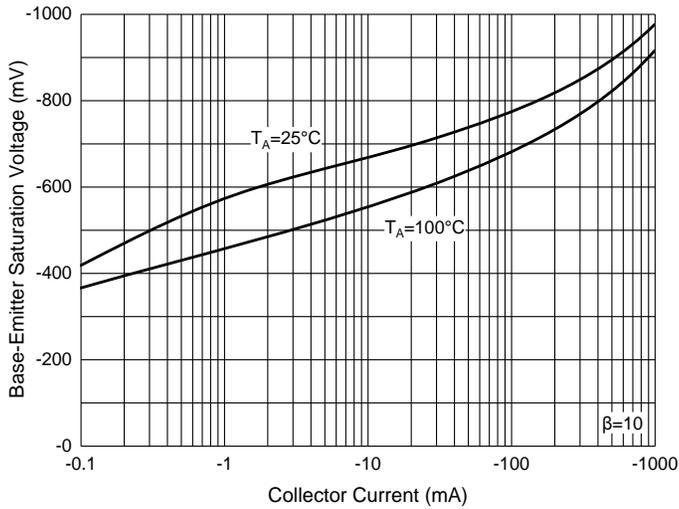


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

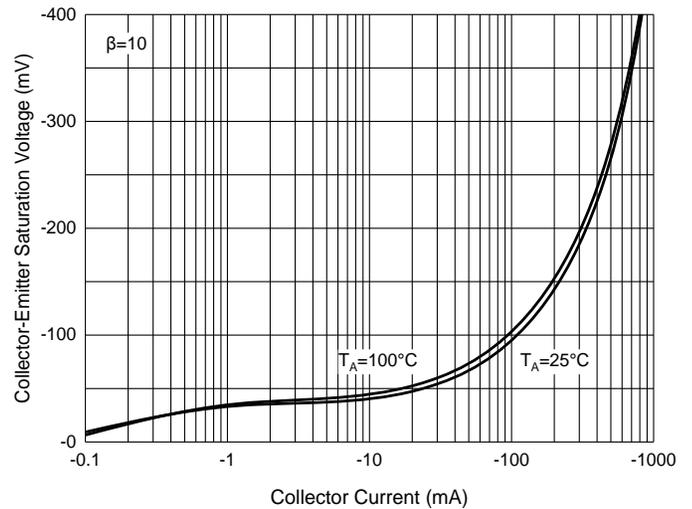


Fig. 5 - Base-Emitter Voltage Characteristics

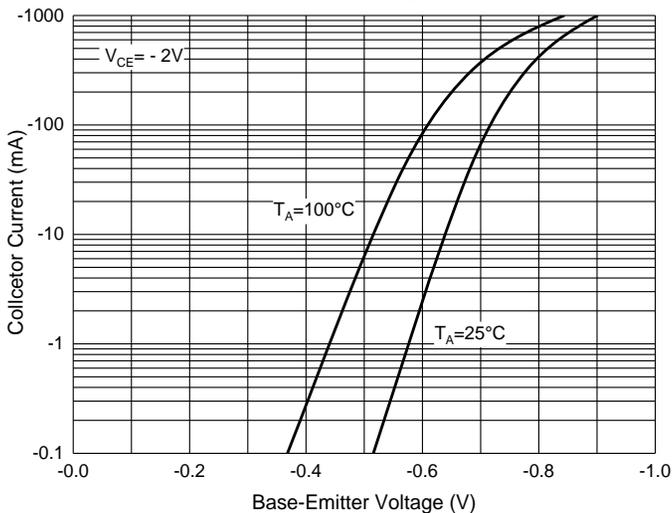
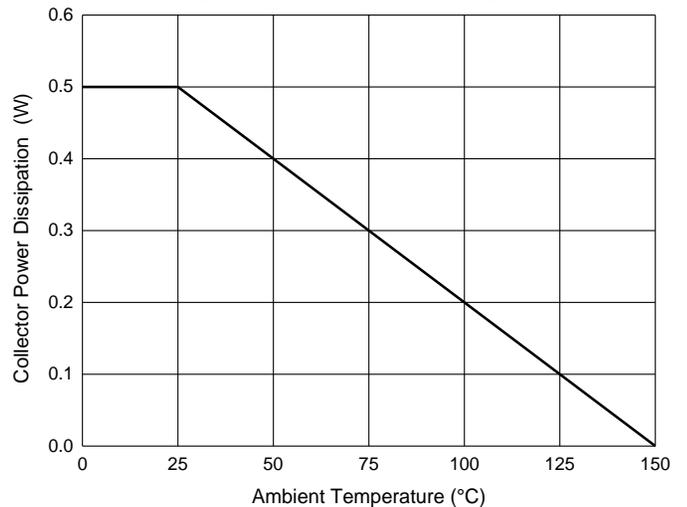


Fig. 6 - Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 1Kpcs/Reel

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