

Features

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

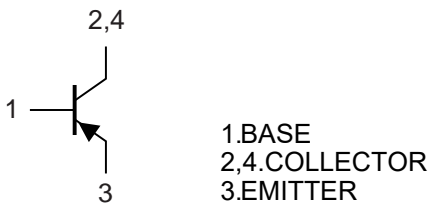
Maximum Ratings @ 25°C Unless Otherwise Specified

- 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}	-160	V
Collector-Emitter Voltage	V_{CEO}	-150	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-0.5	A
Collector Power Dissipation	P_C	500	mW

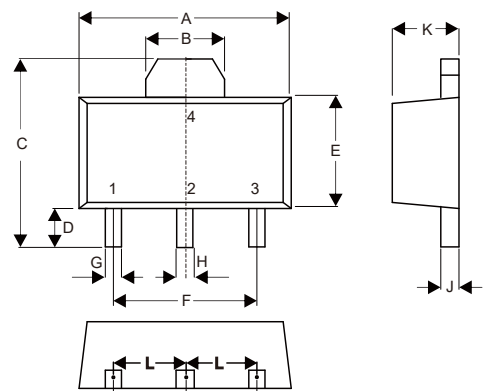
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



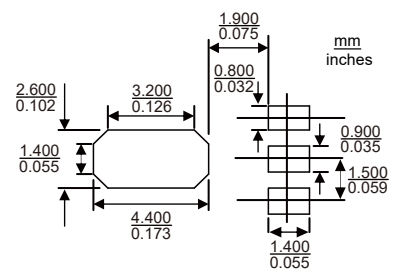
**PNP
Plastic Encapsulate
Transistors**

SOT-89



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 @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-160			V	$I_C = -100\mu A, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-150			V	$I_C = -1mA, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -10\mu A, I_C = 0$
Collector-Base Cutoff Current	I_{CBO}			-50	nA	$V_{CB} = -120V, I_E = 0$
Emitter-Base Cutoff Current	I_{EBO}			-50	nA	$V_{EB} = -3V, I_C = 0$
DC Current Gain	$h_{FE(1)}$	50				$V_{CE} = -5V, I_C = -1mA$
	$h_{FE(2)}$	60		300		$V_{CE} = -5V, I_C = -10mA$
	$h_{FE(3)}$	50				$V_{CE} = -5V, I_C = -50mA$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.2	V	$I_C = -10mA, I_B = -1mA$
				-0.5	V	$I_C = -50mA, I_B = -5mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1	V	$I_C = -10mA, I_B = -1mA$
				-1	V	$I_C = -50mA, I_B = -5mA$
Transition Frequency	f_T	100		300	MHz	$V_{CE} = -10V, I_C = -10mA, f = 100MHz$
Output Capacitance	C_{ob}			6	pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$
Noise Figure	NF			8	dB	$V_{CE} = -5V, I_C = -200\mu A, R_S = 10\Omega$ $f = 10Hz$ to $15.7KHz$

Curve Characteristics

Fig. 1 - Static Characteristics

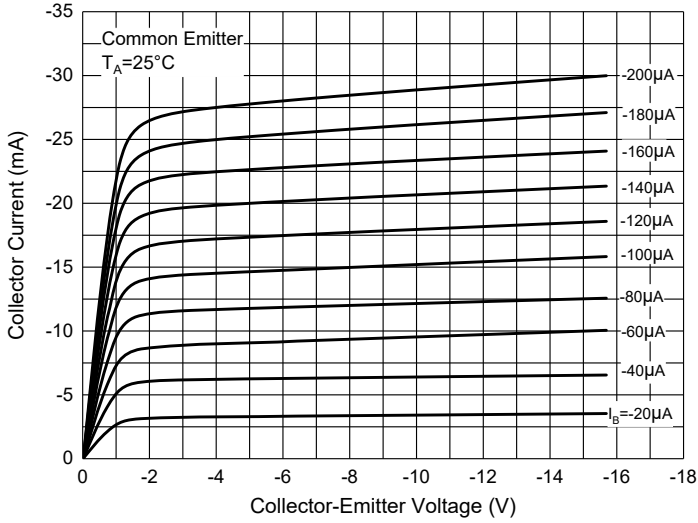


Fig. 2 - DC Current Gain Characteristics

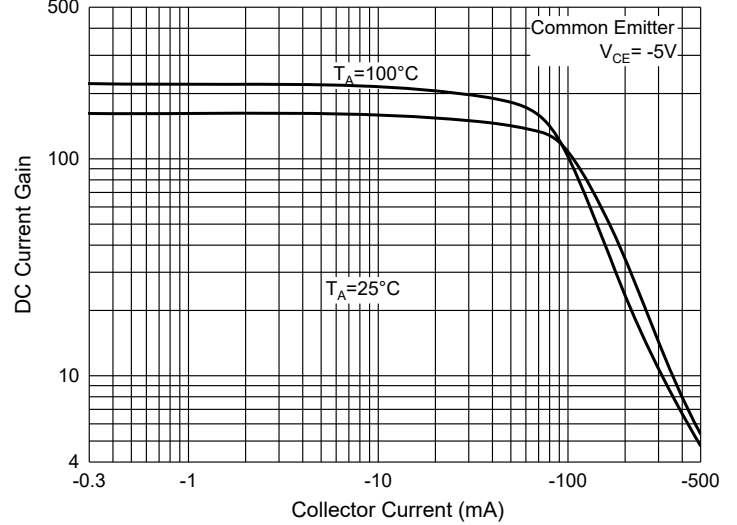


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

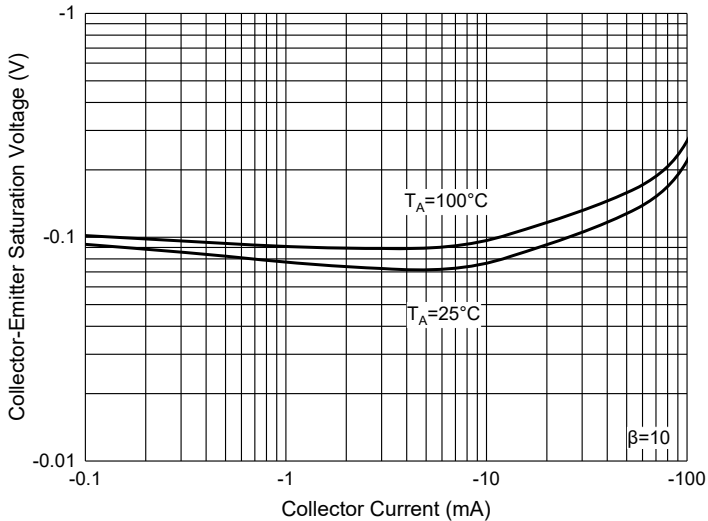


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

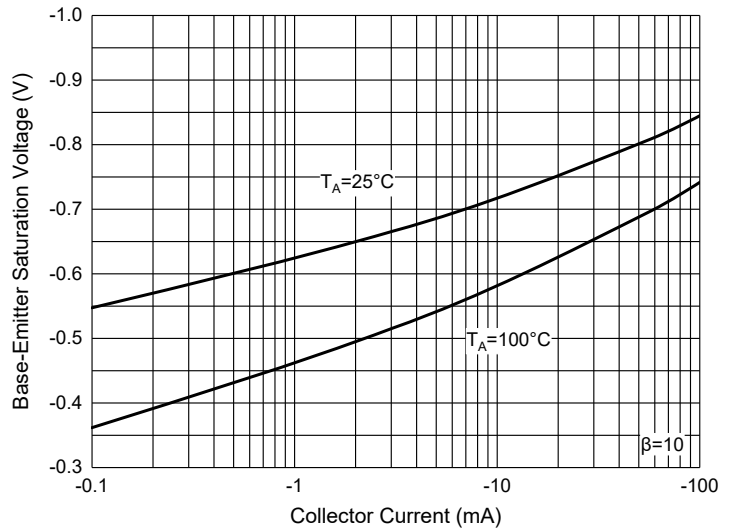


Fig. 5 - Transition frequency Characteristics

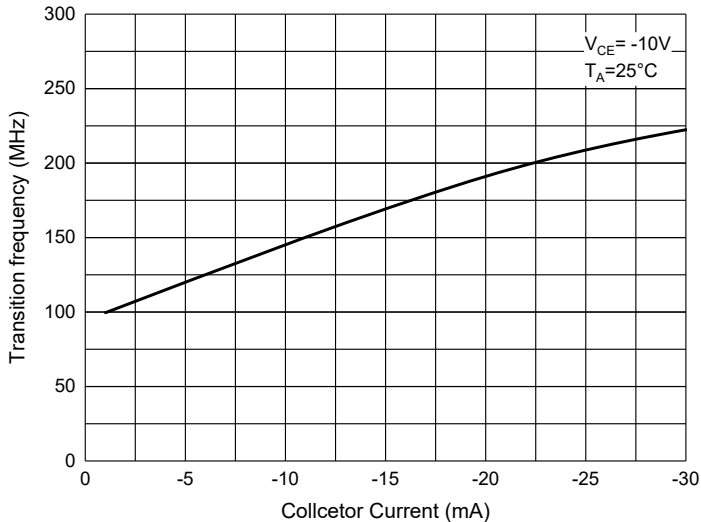
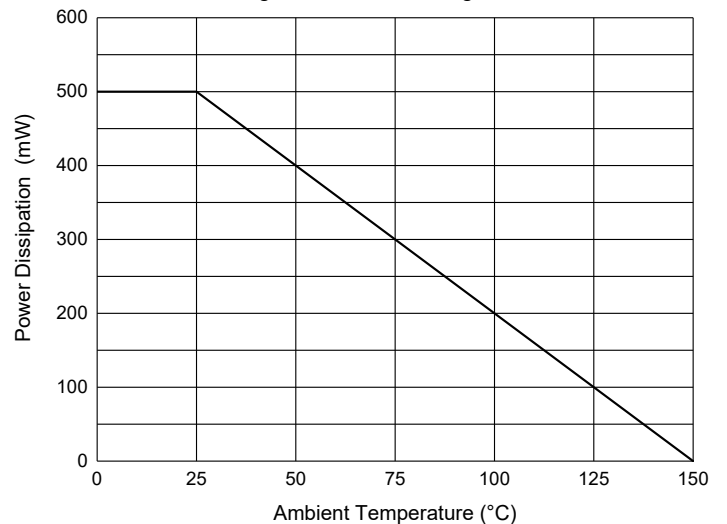


Fig. 6 - Power Derating Curve



Ordering Information

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

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