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 General Purpose Amplifier

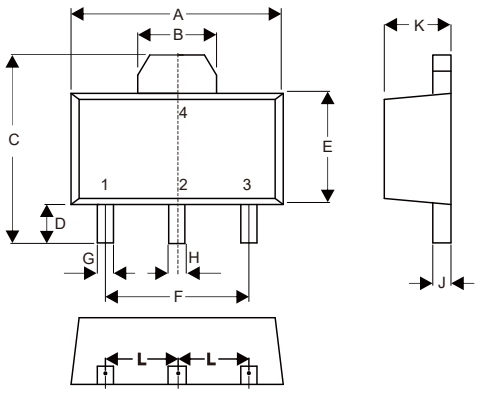
Maximum Ratings @ 25°C Unless Otherwise Specified

- 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}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-6	V
Maximum Collector Current	I_{CM}	-0.2	A
Power Dissipation	P_D	0.5	W

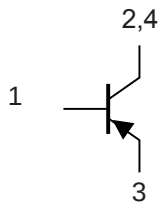
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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.

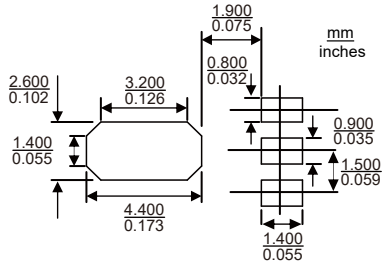
Internal Structure



1.BASE
2,4.COLLECTOR
3.EMITTER

Marking: 2A

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40			V	I_C=-10μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-40			V	I_C=-1mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-6			V	I_E=-10μA, I_C=0
Collector-Base Cutoff Current	I_{CBO}			-50	nA	V_{CB}=-30V, I_E=0
Emitter-Base Cutoff Current	I_{EBO}			-50	nA	V_{EB}=-6V, I_C=0
DC Current Gain (Note2)	$h_{FE(1)}$	100		300		V_{CE}=-1V, I_C=-10mA
	$h_{FE(2)}$	60				V_{CE}=-1V, I_C=-50mA
	$h_{FE(3)}$	30				V_{CE}=-1V, I_C=-100mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.25	V	I_C=-10mA, I_B=-1mA
				-0.4	V	I_C=-50mA, I_B=-5mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-0.65		-0.85	V	I_C=-10mA, I_B=-1mA
				-0.95	V	I_C=-50mA, I_B=-5mA
Transition Frequency	f_T	250			MHz	V_{CE}=-20V, I_C=-10mA, f=100MHz
Output Capacitance	C_{cbo}			4.5	pF	V_{CB}=-5V, I_E=0, f=1MHz
Input Capacitance	C_{ibo}			10	pF	V_{EB}=-0.5V, I_C=0, f=1MHz
Noise Figure	NF			4	dB	V_{CE}=-5V, I_C=0.1mA, R_S=1KΩ, f=1KHz
Delay Time	t_d			35	ns	V_{CC}=-3V, I_C=-10mA
Rise Time	t_r			35	ns	V_{CE}=-0.5V, I_{B1}=-1mA
Storage Time	t_s			225	ns	V_{CC}=-3V, I_C=-10mA
Fall Time	t_f			75	ns	I_{B1}=I_{B2}=-1mA

Note: 2.Pulse Width ≤ 300μs, Duty Cycle≤2.0%

Curve Characteristics

Fig. 1 - Static Characteristics

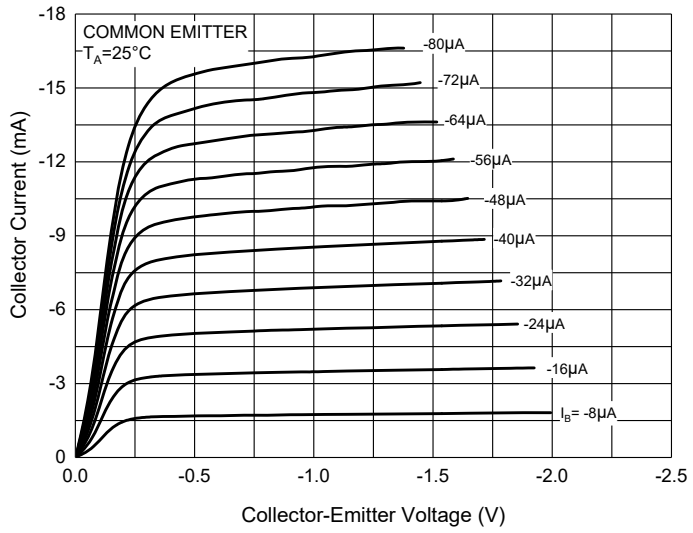


Fig. 2 - DC Current Gain Characteristics

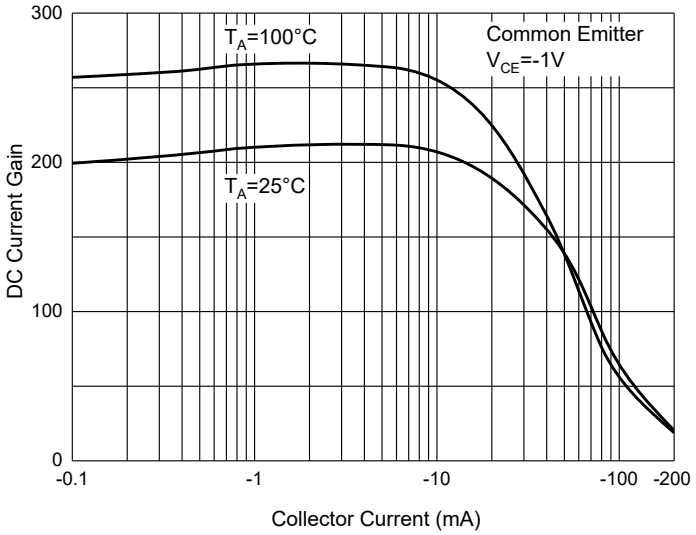


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

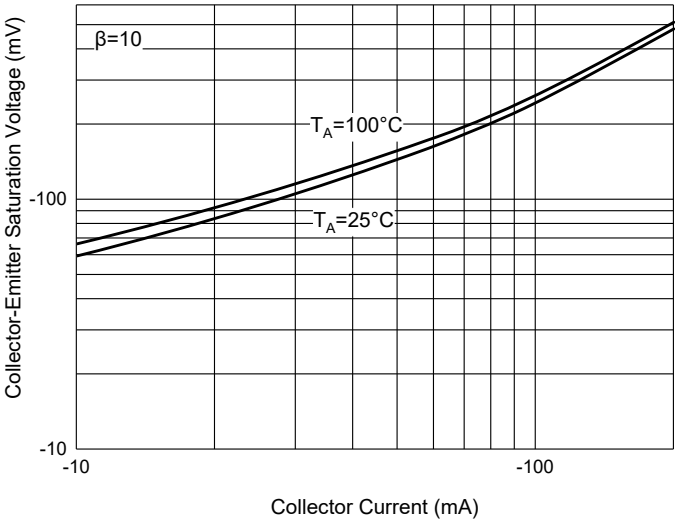


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

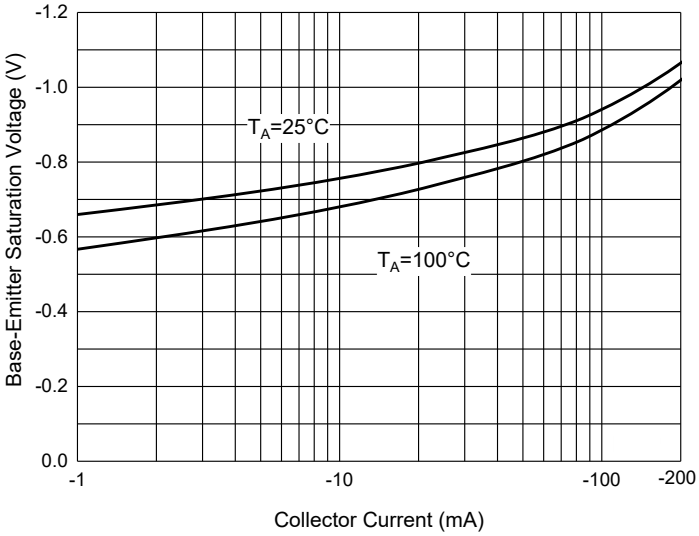


Fig. 5 - Base-Emitter Voltage Characteristics

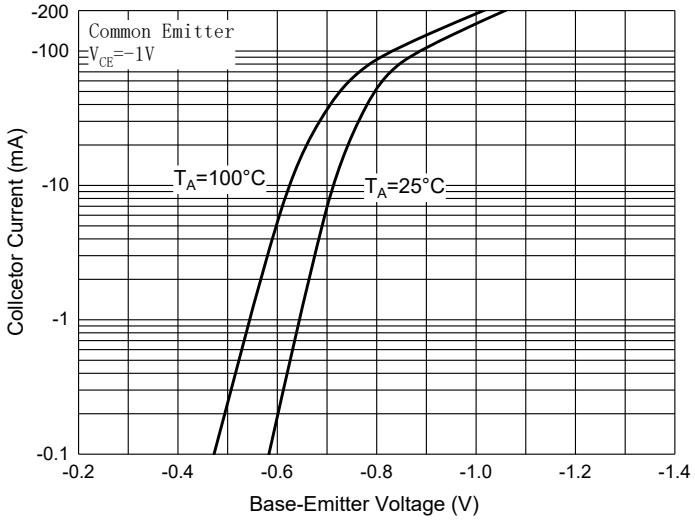


Fig. 6 - Collector Power Derating Curve