

#### **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 Transistor

# Maximum Ratings @ 25°C Unless Otherwise Specified

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CBO</sub>	-50	V
Collector-Emitter Voltage	$V_{CEO}$	-50	V
Emitter-Base Voltage	$V_{EBO}$	-6	V
Collector Current	I <sub>C</sub>	-7	Α
Power Dissipation	P <sub>D</sub>	0.5	W

### Thermal characteristics

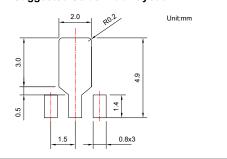
Parameter	Symbol	Rating	Unit
Junction Temperature Range	T <sub>J</sub>	-55~+150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~+150	°C
Thermal Resistance from Junction to Ambient <sup>(Note2)</sup>	Rth <sub>(J-A)</sub>	250	°C/W

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

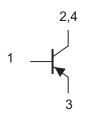
# SOT-89

DIMENSIONS						
DIM	DIM INCHES		М	M	NOTE	
DIIVI	MIN	MAX	MIN MAX		NOTE	
Α	0.169	0.185	4.30	4.70		
В	0.061		1.55		TYP.	
С	0.154	0.171	3.91	4.35		
D	0.031	0.047	0.80	1.20		
Е	0.089	0.104	2.25	2.65		
F	0.118		3.00		TYP.	
G	0.013	0.020	0.33	0.52		
Н	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

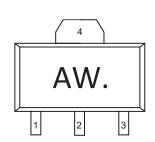


## **Internal Structure**



1.BASE 2,4.COLLECTOR 3.EMITTER

# **Marking Code**



<sup>2.</sup>Part mounted on FR-4 board with recommended pad layout.

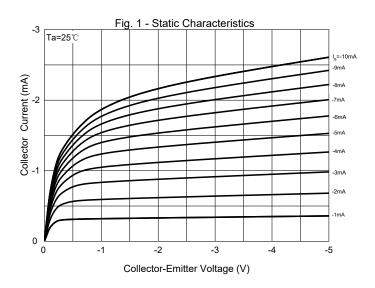


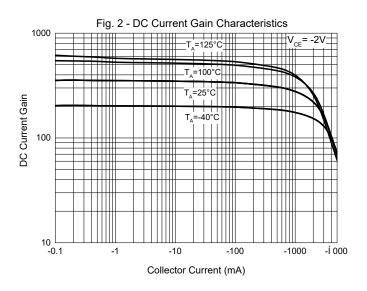
# Electrical Characteristics @ 25°C Unless Otherwise Specified

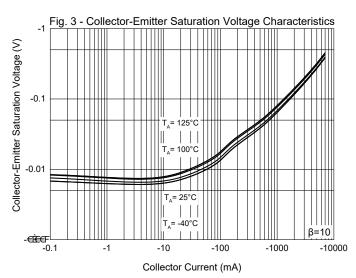
Parameter	Symbol	Min	Тур	Max	Units	Conditions
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	-50			V	I <sub>C</sub> =-50uA, I <sub>E</sub> =0
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	-50			V	$I_C=-1mA$ , $I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-6			V	I <sub>E</sub> =-50uA, I <sub>C</sub> =0
Collector-Base Cutoff Current	I <sub>CBO</sub>			-0.1	uA	$V_{CB}$ =-40V, $I_{E}$ =0
Emitter-Base Cutoff Current	I <sub>EBO</sub>			-0.1	uA	$V_{EB}$ =-4V, $I_C$ =0
DC Current Gain	h <sub>FE</sub>	200		560		$V_{CE}$ =-2V, $I_{C}$ =-0.5A
Callegates Fraittes Cationation Voltage	V <sub>CE(sat)1</sub>			-0.39	V	I <sub>C</sub> =-3.5A, I <sub>B</sub> =-175mA
Collector-Emitter Saturation Voltage	V <sub>CE(sat2)</sub>			-0.4	V	I <sub>C</sub> =-2A, I <sub>B</sub> =-40mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.2	V	I <sub>C</sub> =-2A, I <sub>B</sub> =-40mA
Transition Frequency	f <sub>T</sub>		290		MHz	V <sub>CE</sub> =-10V, I <sub>C</sub> =-0.5A
Output Capacitance	C <sub>ob</sub>		28		pF	V <sub>CB</sub> =5V, I <sub>E</sub> =0, f=1MHz

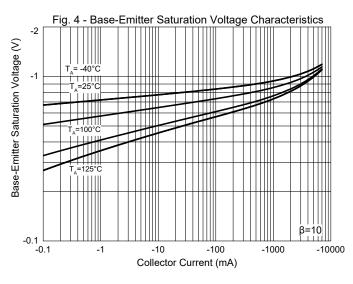


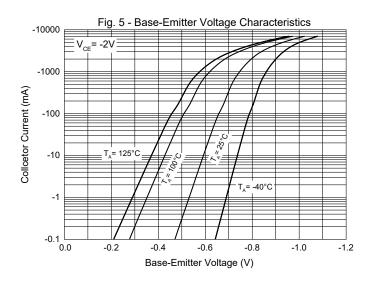
# **Curve Characteristics**

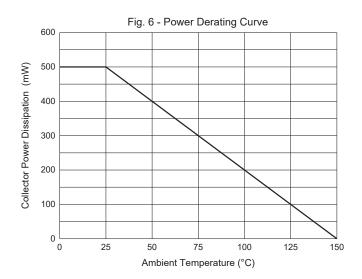














# **Ordering Information**

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

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