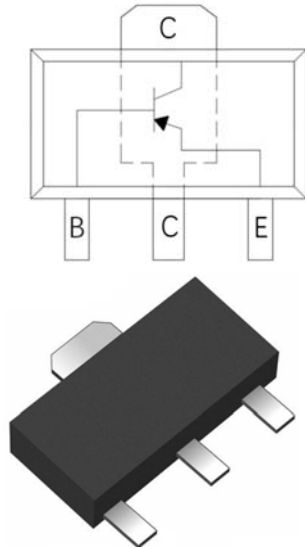


## PNP General Purpose Amplifier

### SOT-89



#### Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for automatic insertion

#### Application

- Signal amplification
- Switching circuit

#### Mechanical data

- **Package:** SOT-89
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

#### ■ Maximum Ratings ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				A94
Collector-base voltage	$V_{CBO}$	V	$I_C=100\mu\text{A}$ , $I_E=0$	-400
Collector-emitter voltage	$V_{CEO}$	V	$I_C=1\text{mA}$ , $I_B=0$	-400
Emitter-base voltage	$V_{EBO}$	V	$I_E=100\mu\text{A}$ , $I_C=0$	-5
Collector current	$I_C$	A		-0.2
Peak Collector current	$I_{CM}$	A	single pulse; $t_p \leq 1\text{ ms}$	-0.3
Power dissipation	$P_D$	mW		500
Junction temperature	$T_J$	$^{\circ}\text{C}$		-55 to +150
Storage temperature	$T_{STG}$	$^{\circ}\text{C}$		-55 to +150

■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	V	I <sub>C</sub> =-100μA, I <sub>E</sub> =0	-400		
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	V	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-400		
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	V	I <sub>E</sub> =-100μA, I <sub>C</sub> =0	-5		
Collector-base cut-off current	I <sub>CBO</sub>	nA	V <sub>CB</sub> =-400V			-100
Emitter-base cut-off current	I <sub>EBO</sub>	nA	V <sub>EB</sub> =-4V			-100
DC current gain	h <sub>FE</sub>		V <sub>CE</sub> =-10V I <sub>C</sub> =-1mA	70		
			V <sub>CE</sub> =-10V I <sub>C</sub> =-10mA	80		300
			V <sub>CE</sub> =-10V I <sub>C</sub> =-50mA	80		
			V <sub>CE</sub> =-10V I <sub>C</sub> =-100mA	60		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	V	I <sub>C</sub> =-10mA I <sub>B</sub> =-1mA			-0.2
			I <sub>C</sub> =-50mA I <sub>B</sub> =-5mA			-0.3
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	V	I <sub>C</sub> =-10mA I <sub>B</sub> =-1mA			-0.75

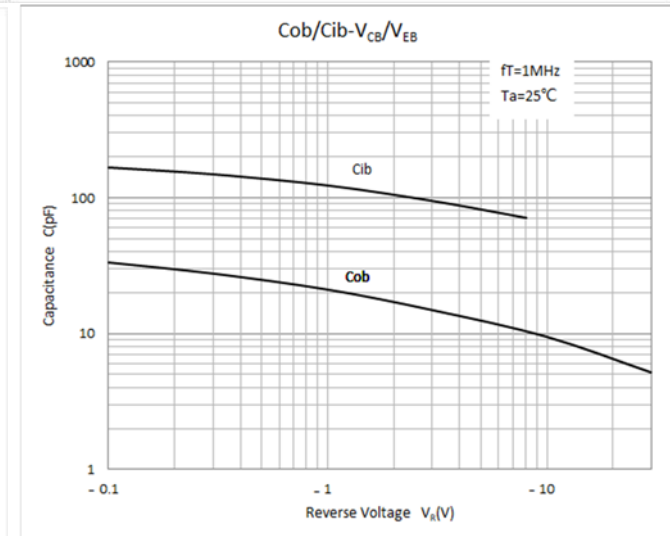
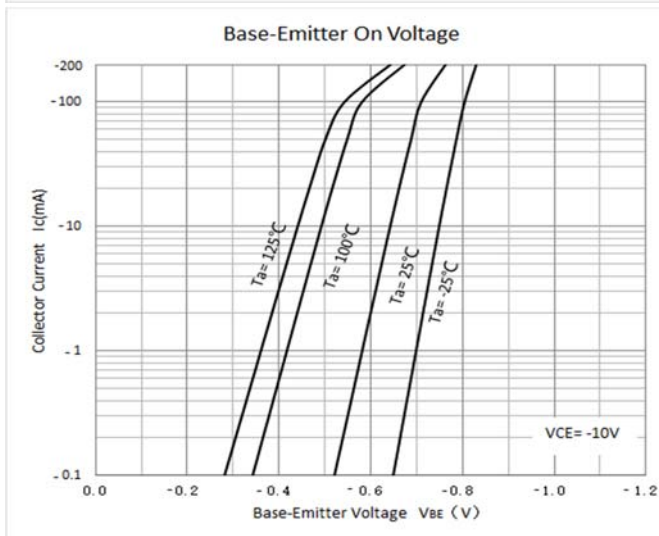
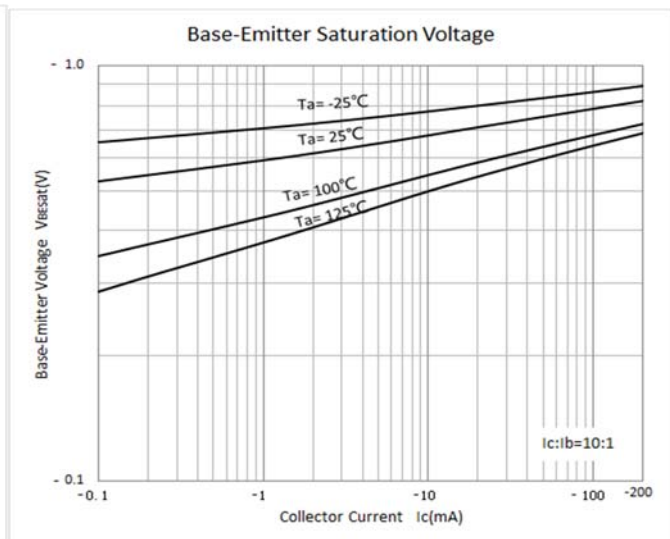
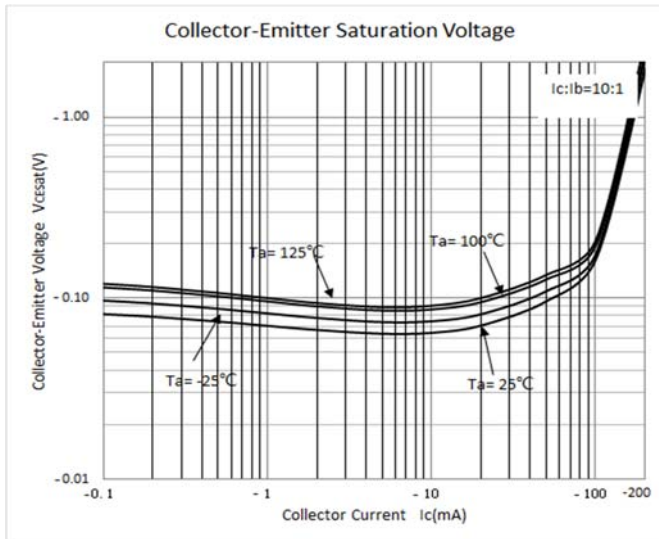
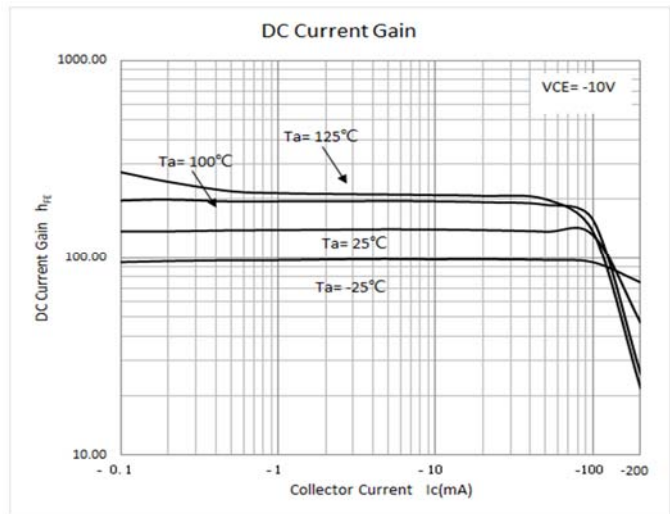
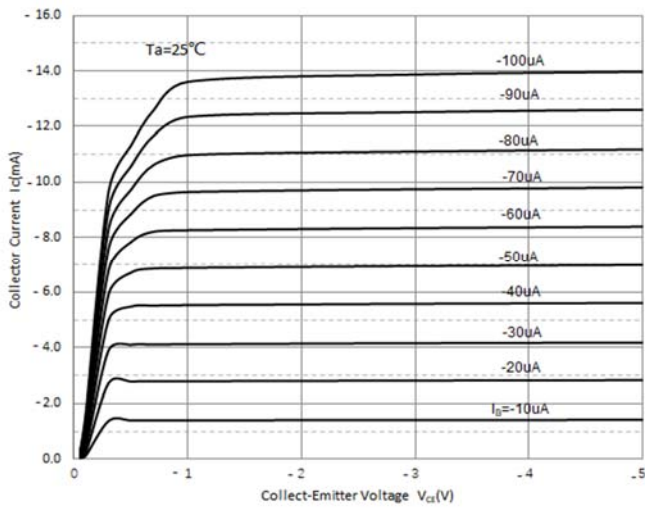
## ■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R <sub>θJ-A</sub> <sup>(1)</sup>	°C/W	250
Thermal resistance, junction-to-case	R <sub>θJ-C</sub> <sup>(1)</sup>	°C/W	50

Note: The device is installed and tested on 25.4 \* 25.4 \* 1.5mm P.C.B.



■ Characteristics

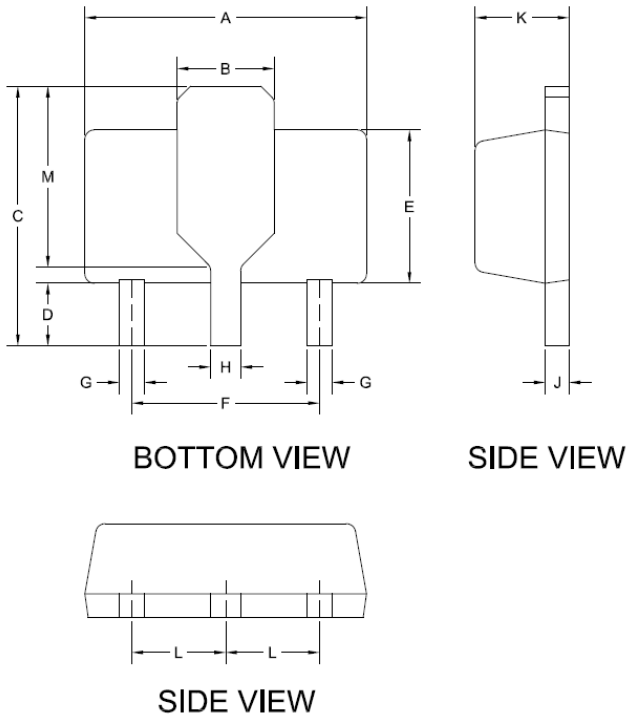




■ Ordering Information

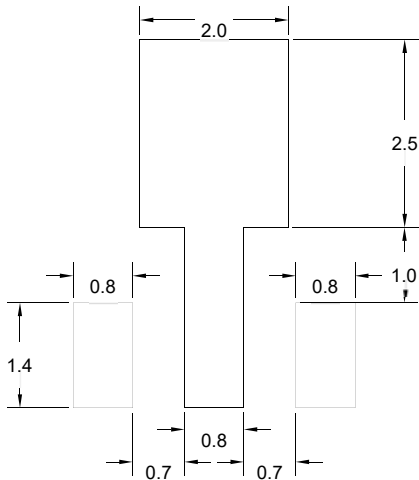
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
PXTA94	F2	Approximate 0.055	1000	8000	32000	7" reel

■ Outline Dimensions



DIM	DIMENSIONS			
	INCHES		MM	
	MIN.	MAX.	MIN.	MAX.
A	0.173	0.181	4.400	4.600
B	0.061 TYP.		1.550 TYP.	
C	0.155	0.167	3.940	4.250
D	0.031	0.047	0.800	1.200
E	0.094	0.102	2.400	2.600
F	0.118 TYP.		3.00 TYP.	
G	0.014	0.019	0.360	0.480
H	0.017	0.022	0.440	0.560
J	0.014	0.017	0.350	0.440
K	0.055	0.063	1.400	1.600
L	0.059 TYP.		1.500 TYP.	
M	0.108 TYP.		2.750 TYP.	

■ Suggested Pad Layout



UNIT:MM



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