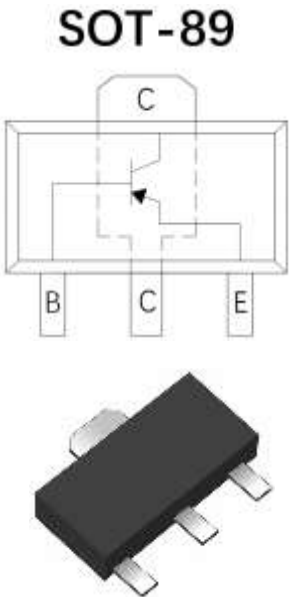
PNP General Purpose Amplifier



Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for auto matic 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℃ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Device marking code				5N
Collector-base voltage	V_{CBO}	V	I_C=-100uA, I_E=0	-100
Collector-emitter voltage	V_{CEO}	V	I_C=-1mA, I_B=0	-100
Emitter-base voltage	V_{EBO}	V	I_E=-100uA, I_C=0	-5
Collector current	I_C	A		-3.7
Power dissipation	P_D	mW		500
Junction temperature	T_J	℃		-55 to +150
Storage temperature	T_{STG}	℃		-55 to +150

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	I_C=-100uA, I_E=0	-100		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	I_C=-1mA, I_B=0	-100		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	I_E=-100uA, I_C=0	-5		
Collector-base cut-off current	I_{CBO}	nA	V_{CB}=-80V I_E=0			-100
Emitter-base cut-off current	I_{EBO}	nA	V_{EB}=-5V I_C=0			-100
Collector Cutoff Current	I_{CES}	uA	V_{CE}=-80V V_{BE}=0			-5
DC current gain	h_{FE}		V_{CE}=-2V I_C=-0.5A	200		
			V_{CE}=-2V I_C=-1A	150		
			V_{CE}=-2V I_C=-2A	100		
			V_{CE}=-2V I_C=-4A	25		
Collector-emitter saturation voltage	$V_{CE(sat)}$	mV	I_C=-0.5A I_B=-50mA			-60
			I_C=-1A I_B=-50mA			-130
			I_C=-4A I_B=-400mA			-300
Collector-emitter saturation resistance	$R_{CE(sat)}$	mΩ	I_C=-4A I_B=-400mA			75
Base-emitter saturation voltage	$V_{BE(sat)}$	V	I_C=-1A I_B=-100mA			-0.9
			I_C=-4A I_B=-400mA			-1.05
Base-emitter turn-on voltage	V_{BE}	V	V_{CE}=-2V I_C=-2A			-0.85

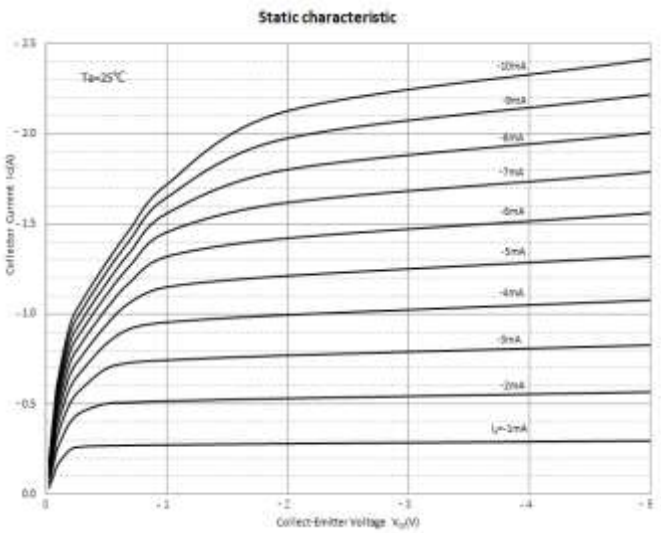
■ Thermal Characteristics

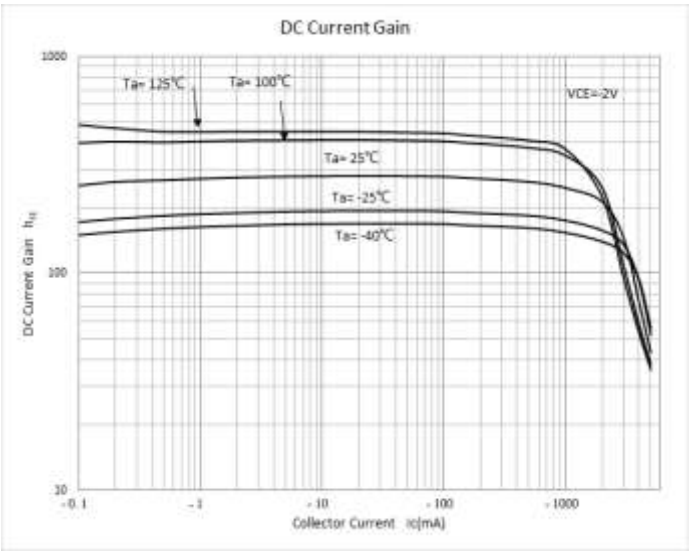
Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	250
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	50

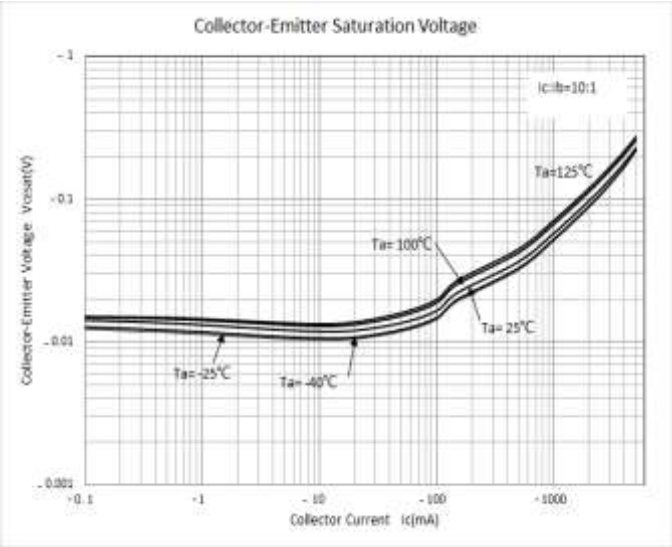
Note: The device is installed and tested on 25.4 * 25.4 * 1.5mm P.C.B.

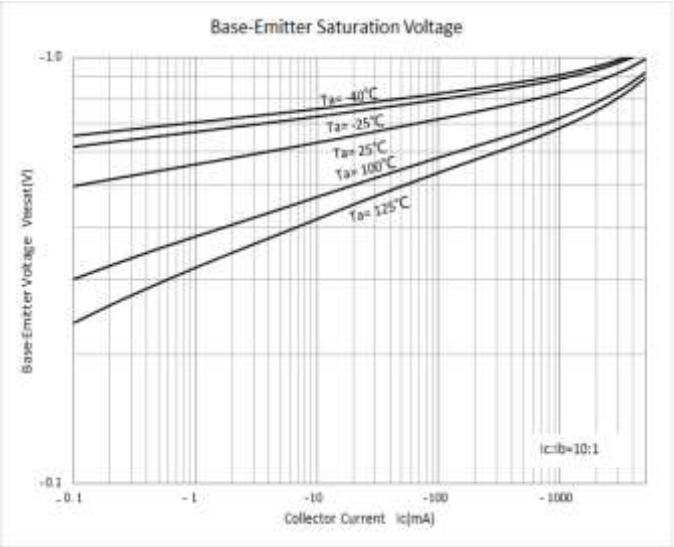
■Ordering Information

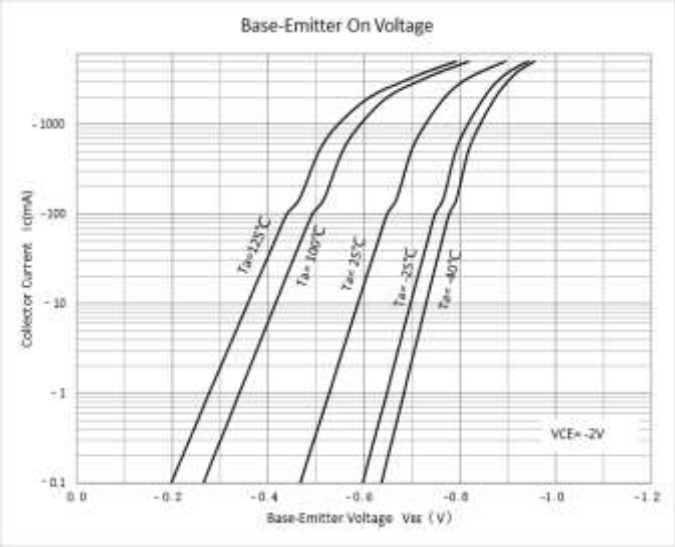
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
PBSS306PX	F2	Approximate 0.055	1000	8000	32000	7” reel

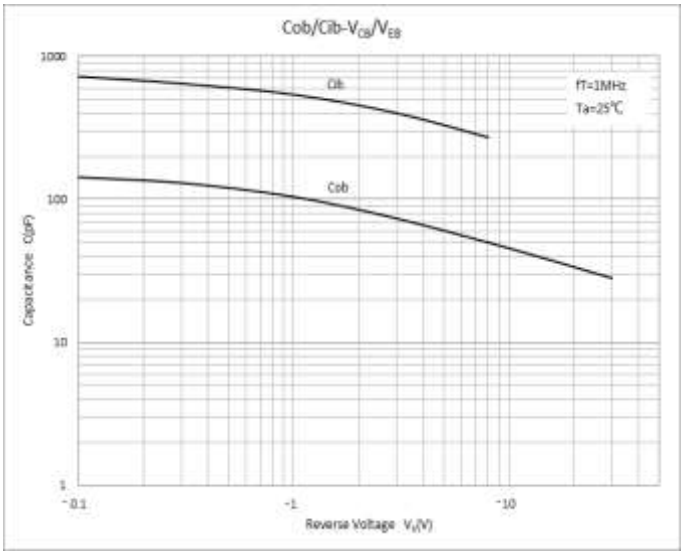

Static characteristic
Ta=25℃
-10mA
-9mA
-8mA
-7mA
-6mA
-5mA
-4mA
-3mA
-2mA
-1mA
Collector Current Ic(A)
Collect-Emitter Voltage Vce(V)


DC Current Gain
Ta= 125℃
Ta= 100℃
VCE=-2V
Ta= 25℃
Ta= -25℃
Ta= -40℃
DC Current Gain hFE
Collector Current Ic(mA)

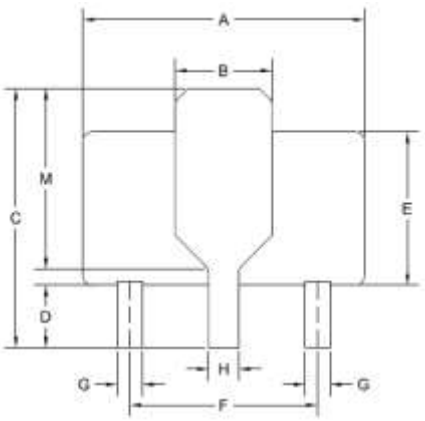

Collector-Emitter Saturation Voltage
Ic/Ib=10:1
Ta=125℃
Ta= 100℃
Ta= 25℃
Ta= -25℃
Ta= -40℃
Collector-Emitter Voltage Vcesat(V)
Collector Current Ic(mA)


Base-Emitter Saturation Voltage
Ta= -40℃
Ta= -25℃
Ta= 25℃
Ta= 100℃
Ta= 125℃
Ic/Ib=10:1
Base-Emitter Voltage Vbesat(V)
Collector Current Ic(mA)

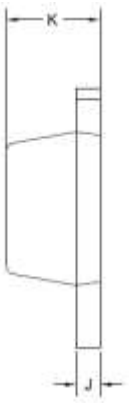

Base-Emitter On Voltage
Ta=125℃
Ta= 100℃
Ta= 25℃
Ta= -25℃
Ta= -40℃
VCE= -2V
Collector Current Ic(mA)
Base-Emitter Voltage Vbe (V)


Cob/Cib-VCB/VEB
Cib
Cob
fT=1MHz
Ta=25℃
Capacitance C(pF)
Reverse Voltage VR(V)

■ Outline Dimensions



BOTTOM VIEW



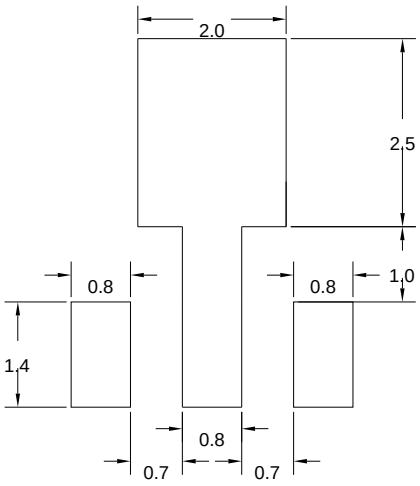
SIDE VIEW



SIDE VIEW

DIMENSIONS				
DIM	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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