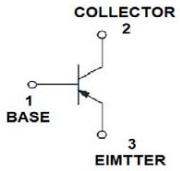
PBSS306PX-Q1

PNP General Purpose Amplifier

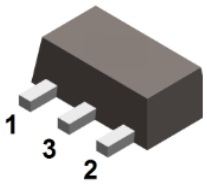
Features

- Surface mount package ideally suited for automatic insertion
- Compliant to Halogen-free
- Suffix “-Q1” for AEC-Q101



Application

- Signal amplification
- Switching circuit



SOT-89

Mechanical Data

- Package: SOT-89
- Terminals: Tin plated lesds; solderable per J-STD-202 and JESD22-B102
- Marking Code: 5N

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
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

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

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

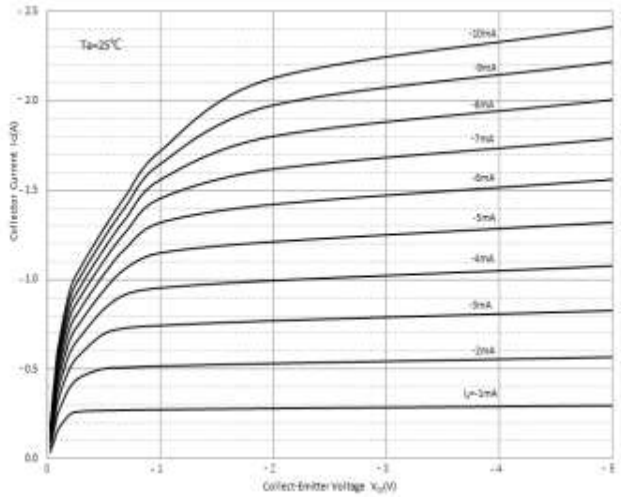
Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	RθJ-A(1)	℃/W	250
Thermal resistance, junction-to-case	RθJ-C(1)	℃/W	50

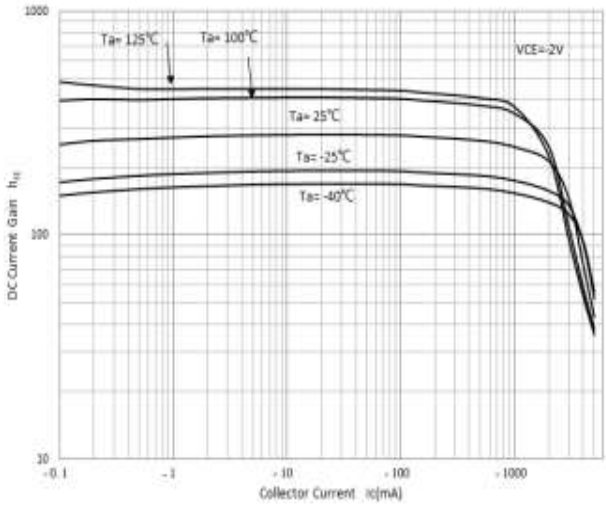
Note: The device is installed and tested on 25.4 * 25.4 * 1.5mm P.C.B.

Ratings and Characteristic Curves

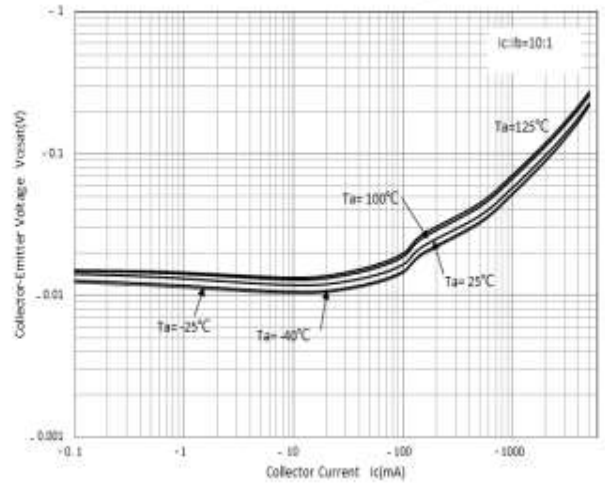
Static characteristic



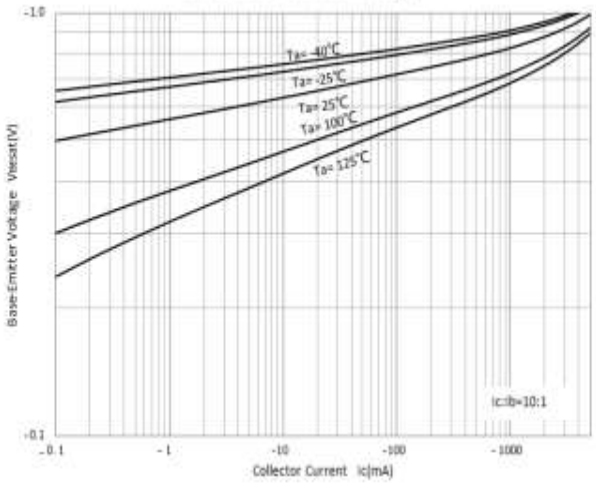
DC Current Gain



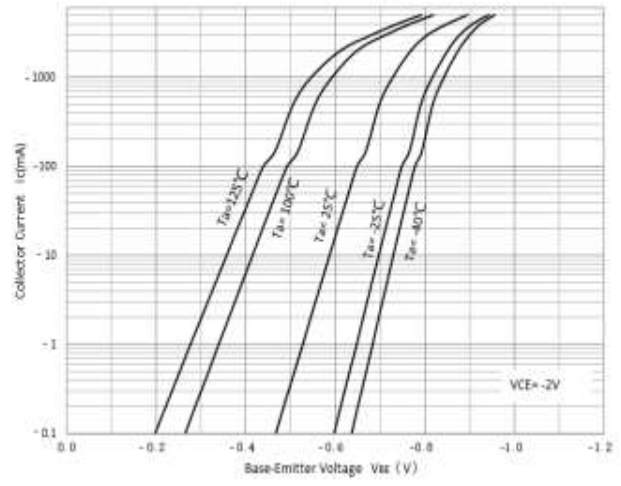
Collector-Emitter Saturation Voltage



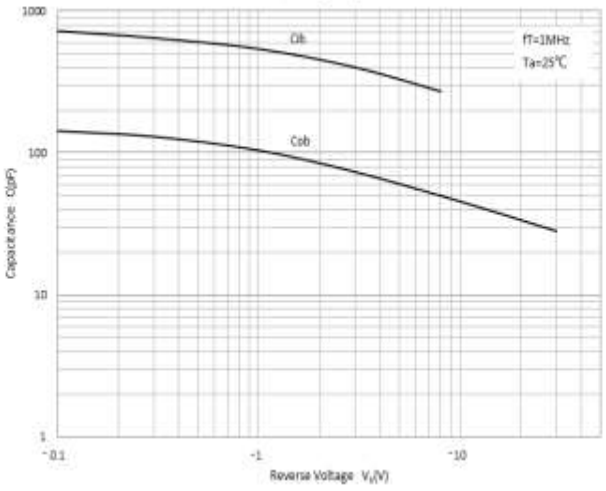
Base-Emitter Saturation Voltage



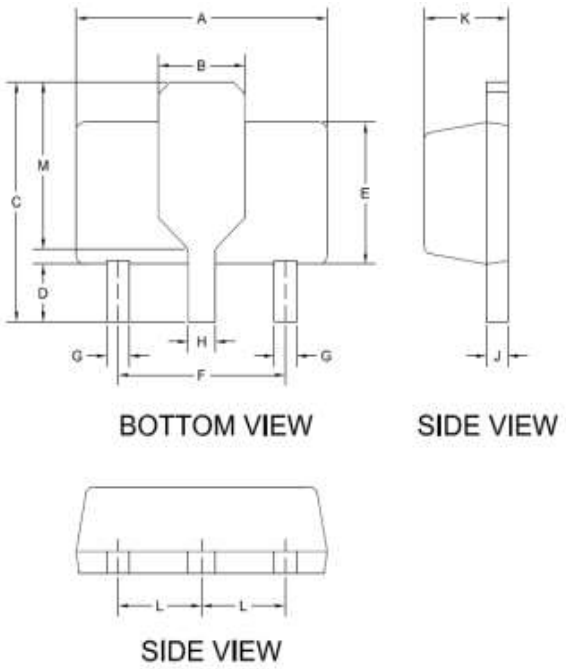
Base-Emitter On Voltage



Cob/Cib-V_{CB}/V_{EB}



Package Outline Dimensions



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.		3.000 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.	

Mounting Pad Layout (Unit: mm)

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