

## PNP General Purpose Amplifier

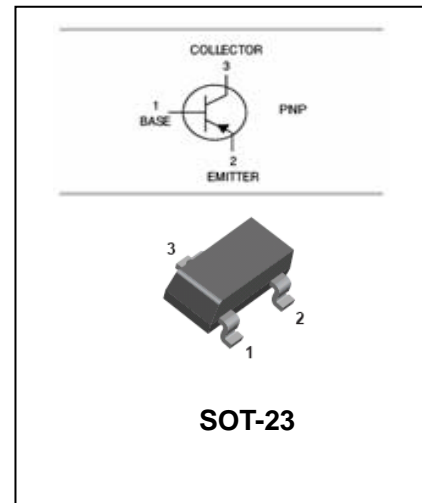
## BC807-16/-25/-40

### FEATURES

- Ideally suited for automatic insertion.
- Complementary NPN type available  
BC817
- Epitaxial planar die construction.



Lead-free



### APPLICATIONS

- This device is designed for general purpose amplifier and switching applications at currents to 1.0A.

### ORDERING INFORMATION

Type No.	Marking	Package Code
BC807-16	5A	SOT-23
BC807-25	5B	SOT-23
BC807-40	5C	SOT-23

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	-50	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-45	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-500	mA
P <sub>D</sub>	Total Device Dissipation	300	mW
R <sub>θjA</sub>	Thermal Resistance Junction to Ambient	417	°C/W
T <sub>j</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-55 to+150	°C

**PNP General Purpose Amplifier****BC807-16/-25/-40****ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A$ $I_E=0$	-50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA$ $I_B=0$	-45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-1\mu A$ $I_C=0$	-5		$\mu V$
Collector cut-off current	$I_{CBO}$	$V_{CB}=-45V$ $I_E=0$		-0.1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE}=-40V$ $I_B=0$		-0.2	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{CE}=-4V$ $I_C=0$		-0.1	$\mu A$
DC current gain	807-16 807-25 807-40	$h_{FE}$ $V_{CE}=-1V$ $I_C=-100mA$	100 160 250	250 400 600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500mA$ $I_B=-50mA$		-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-500mA$ $I_B=-50mA$		-1.2	V
Output capacitance	$C_{obo}$	$V_{CB}=-10V, f=1.0MHz$		10	pF
Transition frequency	$f_T$	$V_{CE}=-5V, I_C=-10mA$ $f=100MHz$	100		MHz

**TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

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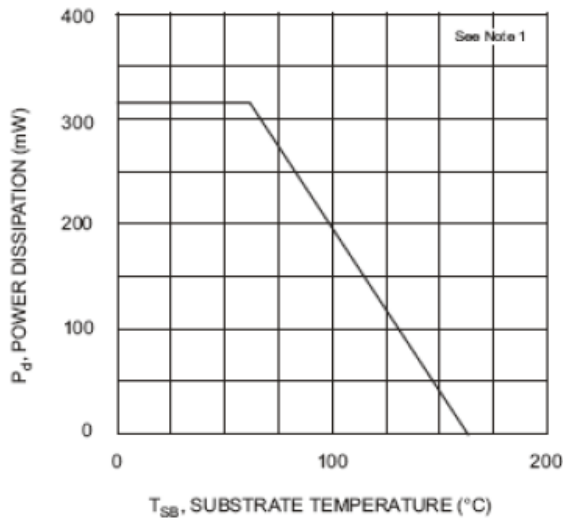


Fig. 1, Power Derating Curve

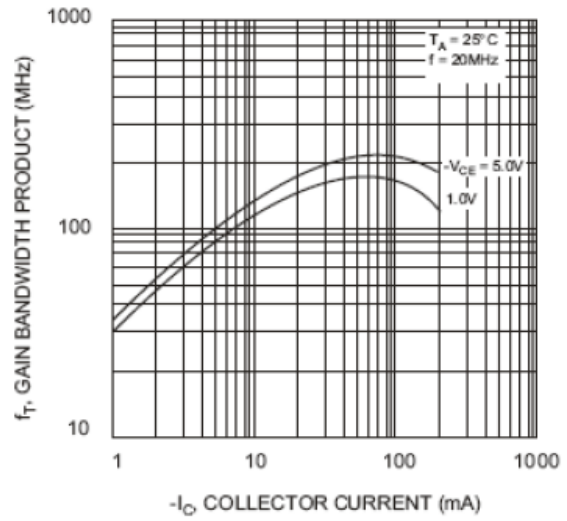


Fig. 2, Gain-Bandwidth Product vs Collector Current

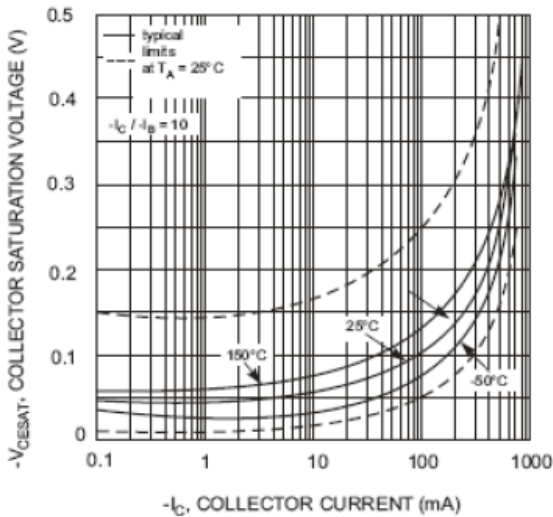


Fig. 3, Collector Sat Voltage vs Collector Current

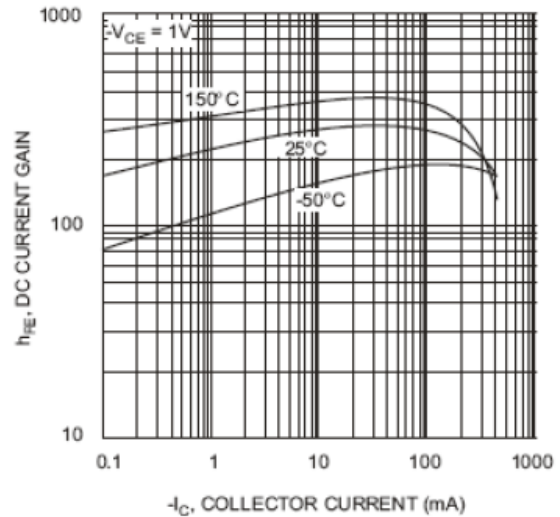


Fig. 4, DC Current Gain vs Collector Current

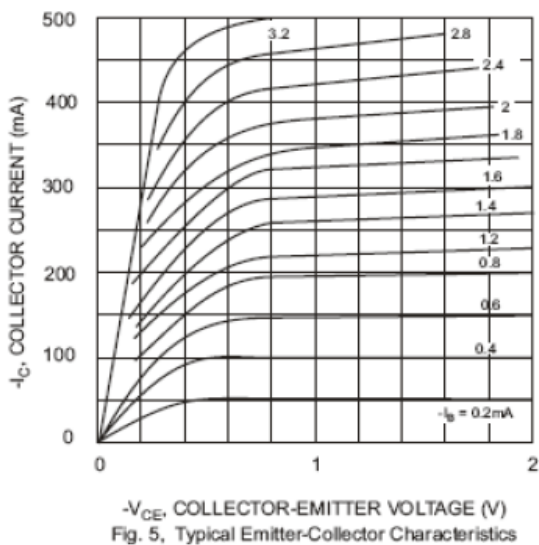


Fig. 5, Typical Emitter-Collector Characteristics

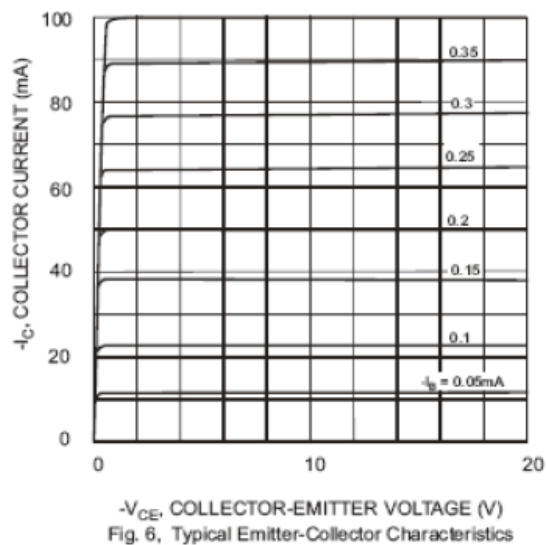


Fig. 6, Typical Emitter-Collector Characteristics

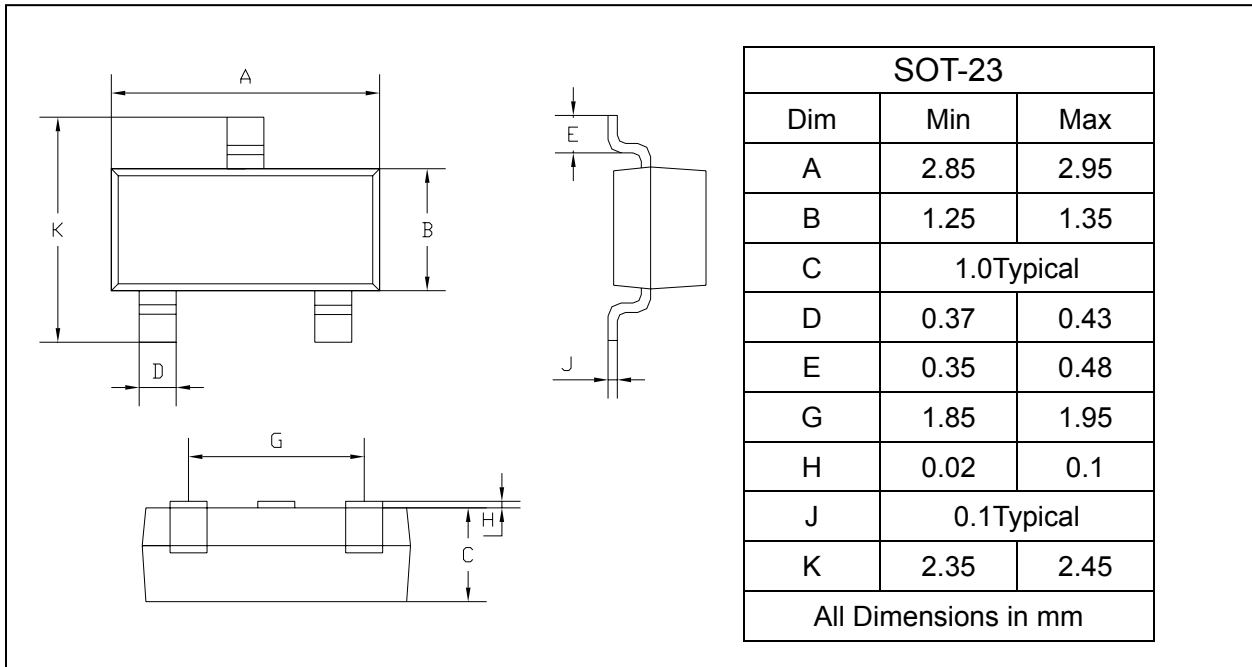
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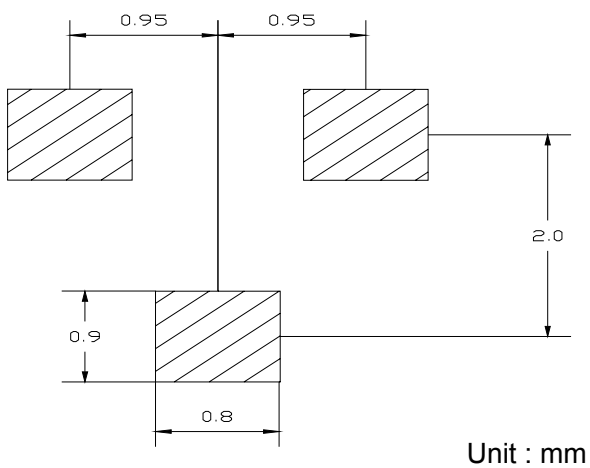
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
BC807-16/-25/-40	SOT-23	3000/Tape&Reel