

PNP General Purpose Amplifier

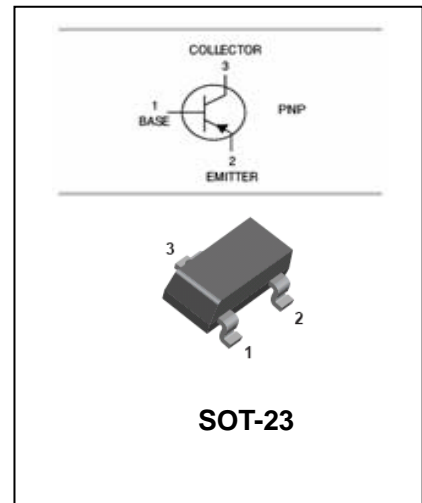
BC807-16/-25/-40

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 _{CBO}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-45	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-500	mA
P _D	Total Device Dissipation	300	mW
R _{θjA}	Thermal Resistance Junction to Ambient	417	°C/W
T _j , T _{stg}	Junction and Storage Temperature	-55 to +150	°C

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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		μV
Collector cut-off current	I_{CBO}	$V_{CB}=-45V$ $I_E=0$		-0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=-40V$ $I_B=0$		-0.2	μA
Emitter cut-off current	I_{EBO}	$V_{CE}=-4V$ $I_C=0$		-0.1	μA
DC current gain	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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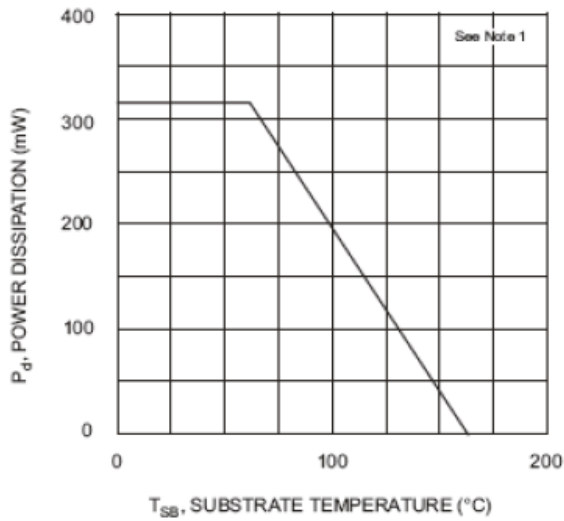


Fig. 1, Power Derating Curve

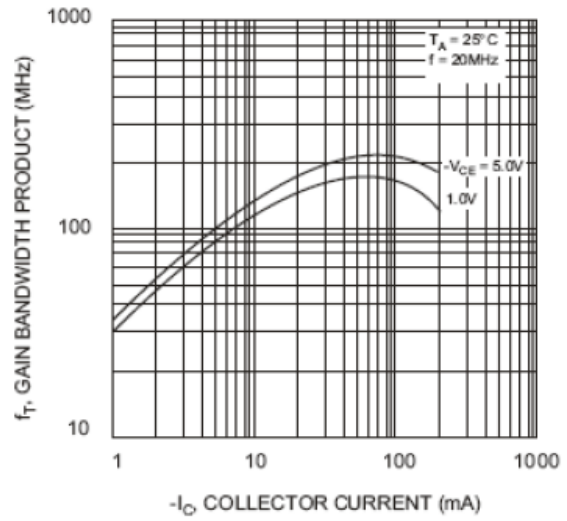


Fig. 2, Gain-Bandwidth Product vs. Collector Current

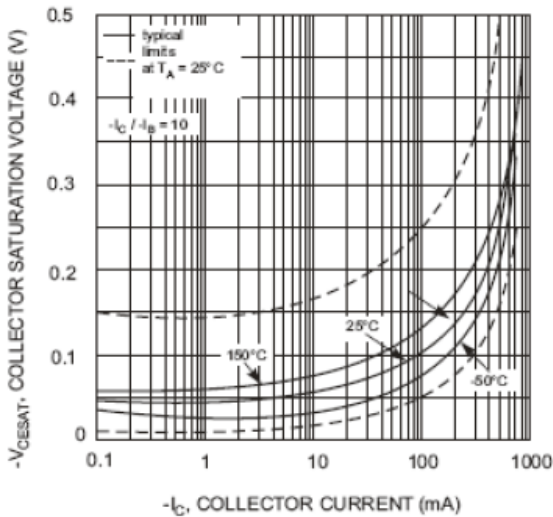


Fig. 3, Collector Sat. Voltage vs. Collector Current

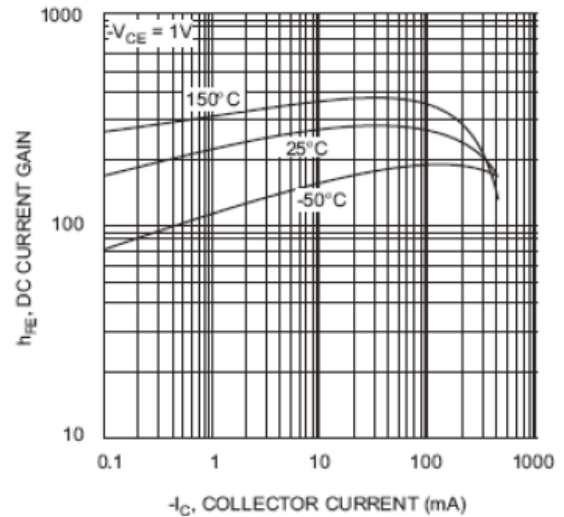


Fig. 4, DC Current Gain vs. Collector Current

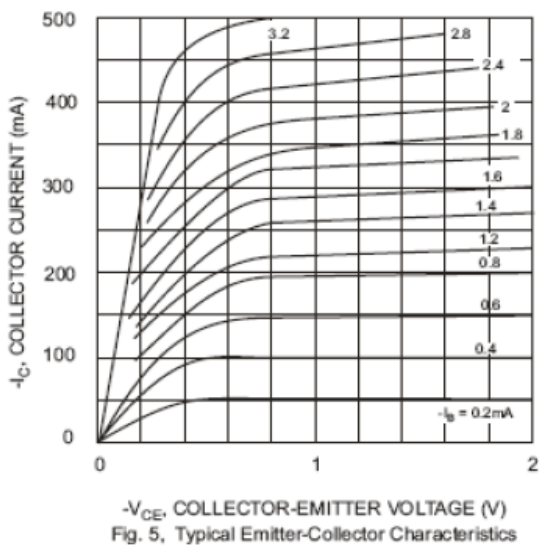


Fig. 5, Typical Emitter-Collector Characteristics

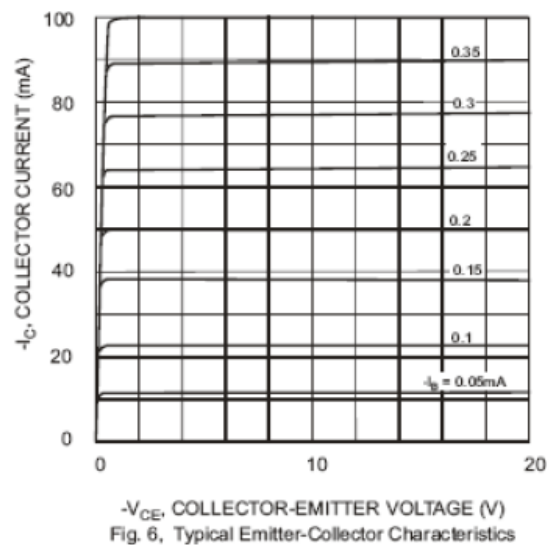


Fig. 6, Typical Emitter-Collector Characteristics

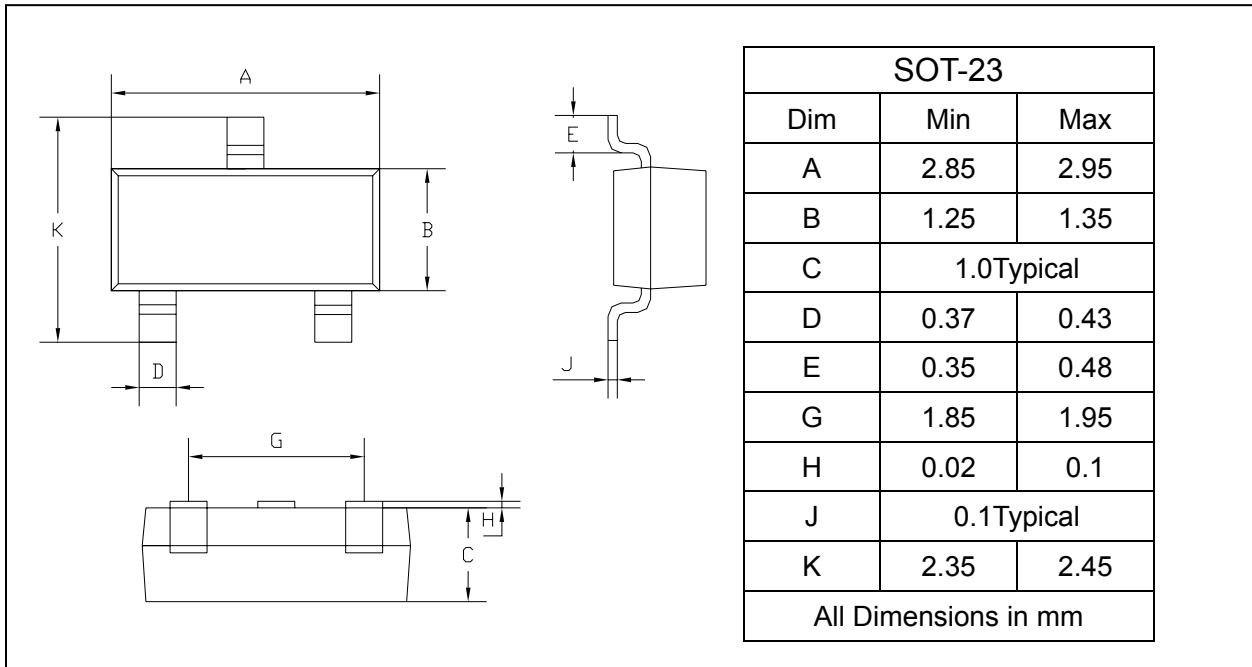
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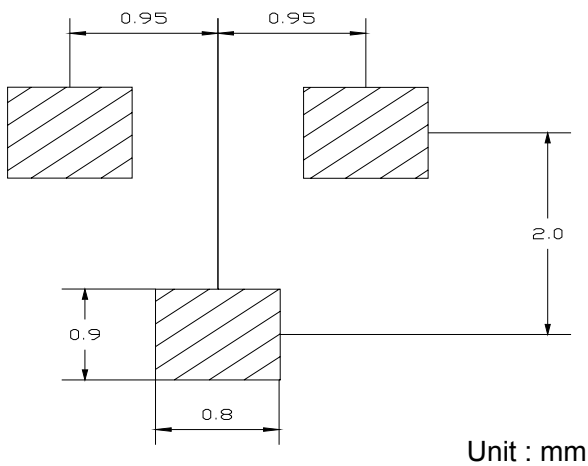
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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