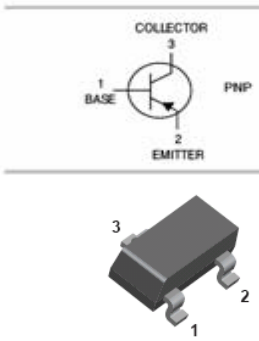
PNP General Purpose Amplifier BC807-16/-25/-40

FEATURES

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

Lead-free



SOT-23

APPLICATIONS

- This device is designed for general purpose amplifier and switching applications at currents to1.0A.

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℃ 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
$R_{\theta jA}$	Thermal Resistance Junction to Ambient	417	℃/W
T_j, T_{stg}	Junction and Storage Temperature	-55 to+150	℃

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA 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=-1μA I_C=0	-5		μ V
Collector cut-off current	I_{CBO}	V_{CB}=-45V I_E=0		-0.1	μ A
Collector cut-off current	I_{CEO}	V_{CE}=-40V I_B=0		-0.2	μ A
Emitter cut-off current	I_{EBO}	V_{CE}=-4V I_C=0		-0.1	μ 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℃ unless otherwise specified

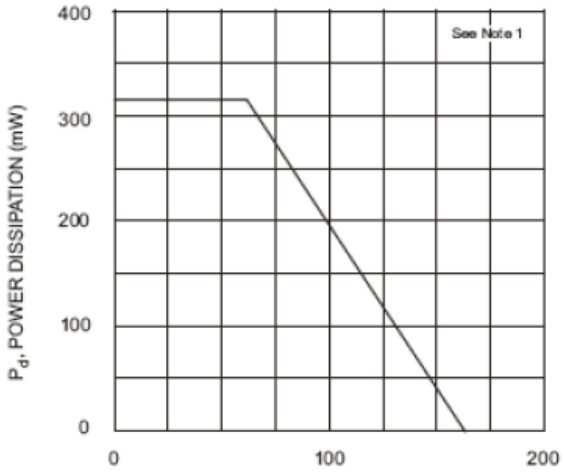


Fig. 1, Power Derating Curve

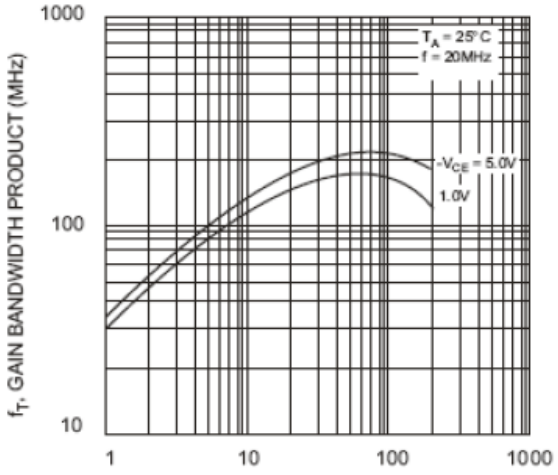


Fig. 2, Gain-Bandwidth Product vs Collector Current

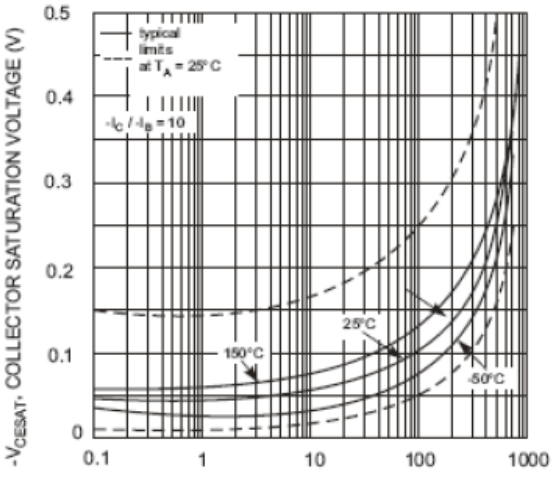


Fig. 3, Collector Sat. Voltage vs Collector Current

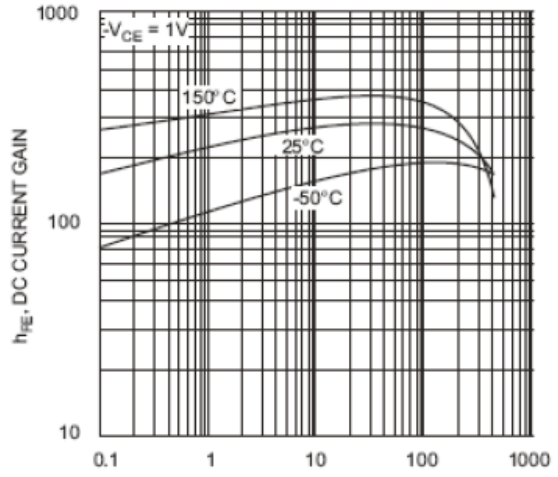


Fig. 4, DC Current Gain vs Collector Current

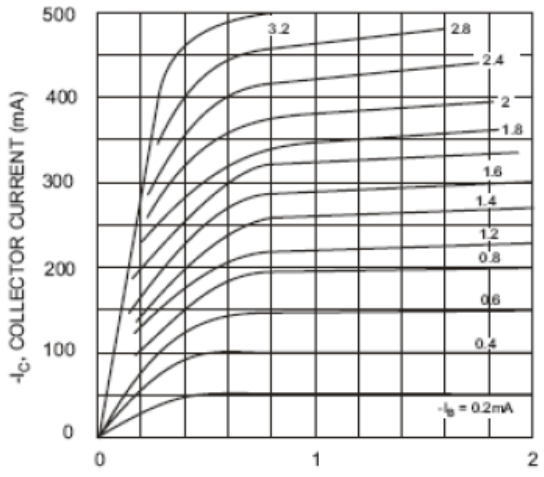


Fig. 5, Typical Emitter-Collector Characteristics

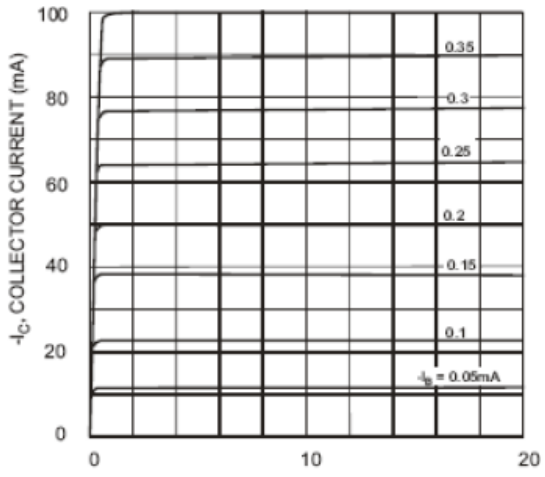
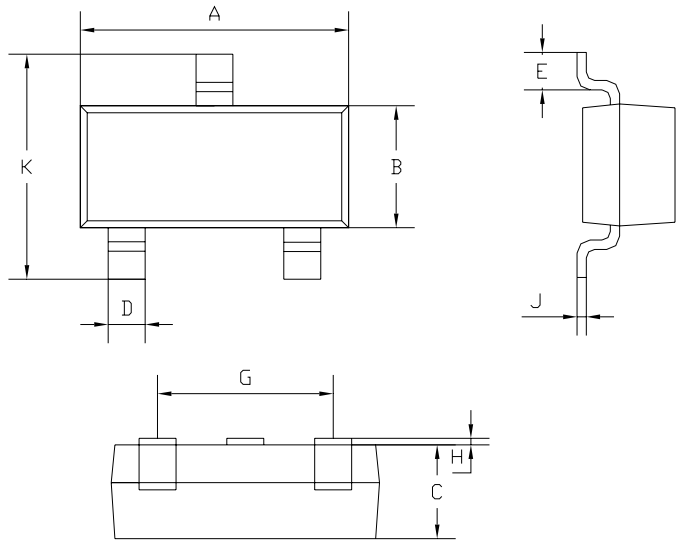


Fig. 6, Typical Emitter-Collector Characteristics

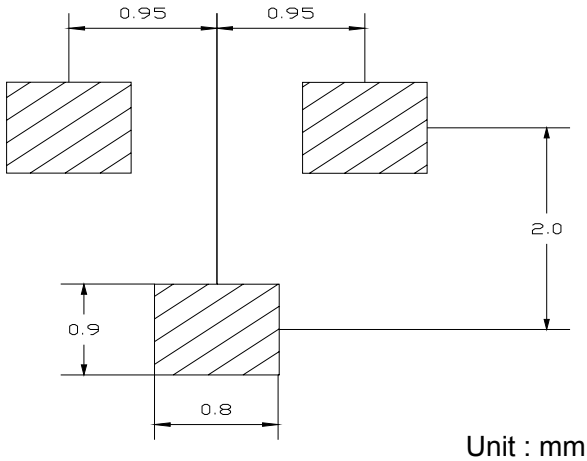
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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