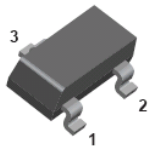
Leading Circuit Protection
Products and Solutions

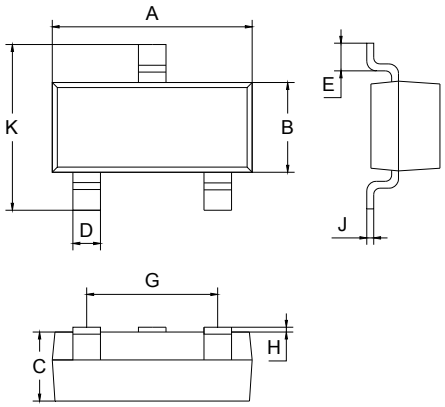
BC807-16/-25/-40
PNP General Purpose Amplifier

Features

- For general AF applications
- Complementary NPN type available BC817
- High collector current
- High current gain
- Low collector-emitter saturation voltage



1. BASE
2. EMITTER
3. COLLECTOR



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

Ordering Information

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

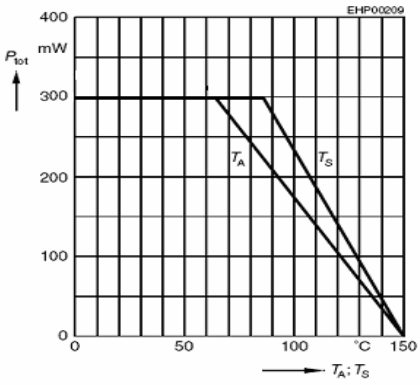
MAXIMUM RATING @ Ta=25℃ unless otherwise specified

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	℃

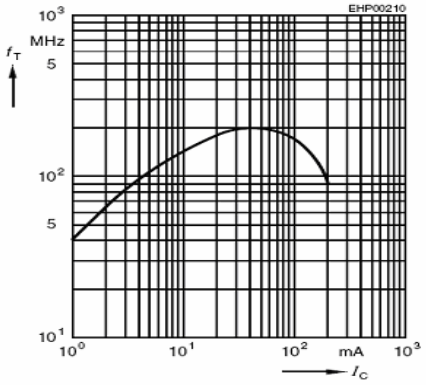
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter		Symbol	Test conditions	MIN	TYP	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=- 10μA I_C=0	-5			μV
Collector cut- off current		I_{CBO}	V_{CB}=-25V I_E=0			-0.1	μA
Emitter cut- off current		I_{EBO}	V_{CE}=-4V I_C=0			-0.1	μA
DC current gain	807- 16	h_{FE}	V_{CE}=- 1V I_C=- 100mA	100	160	250	
	807-25			160	250	400	
	807-40			250	350	600	
DC current gain	807- 16	h_{FE}	V_{CE}=- 1V I_C=-300mA	60			
	807-25			100			
	807-40			170			
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		200		MHz

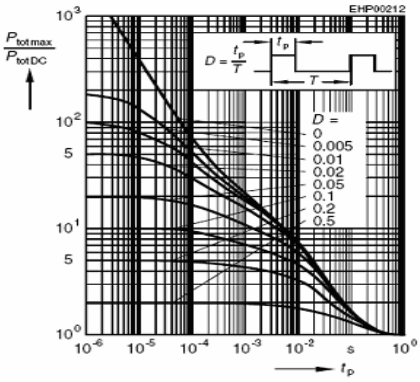
Total power dissipation $P_{tot} = f(T_A^*; T_S)$
* Package mounted on epoxy



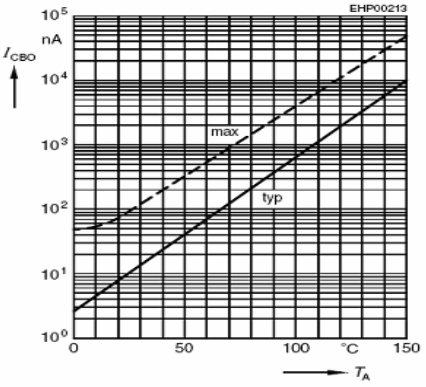
Transition frequency $f_T = f(I_C)$
V_{CE} = 5V



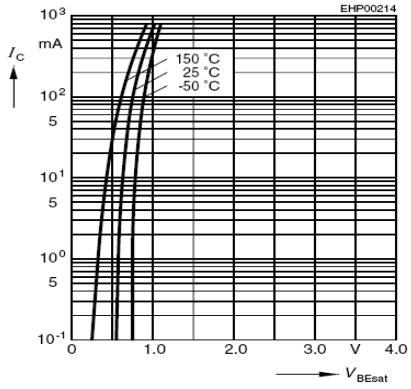
Permissible pulse load
$P_{totmax} / P_{totDC} = f(t_p)$



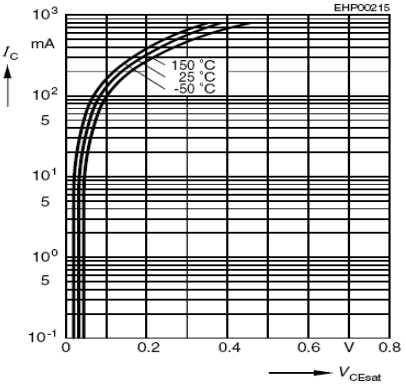
Collector cutoff current $I_{CBO} = f(T_A)$
V_{CBO} = 25V



Base-emitter saturation voltage
$I_C = f(V_{BEsat})$, h_{FE} = 10



Collector-emitter saturation voltage
$I_C = f(V_{CEsat})$, h_{FE} = 10



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