

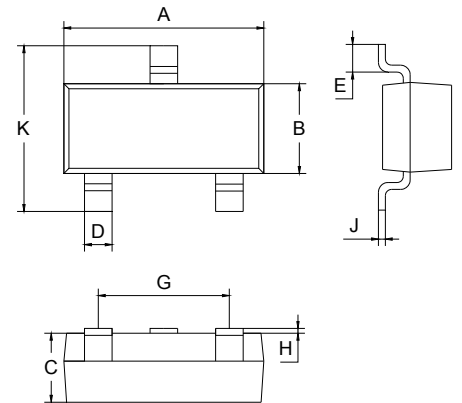
1. BASE
2. EMITTER
3. COLLECTOR

FEATURES

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

ORDERING INFORMATION

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



MAXIMUM RATING @ Ta=25°C unless otherwise specified

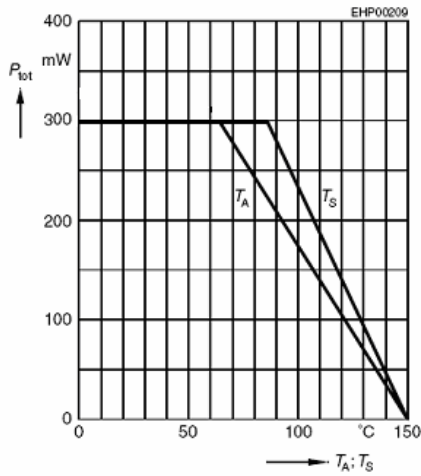
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-50	V
V _{CEO}	Collector-Emitter Voltage	-45	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-500	mA
P _D	Total Device Dissipation	300	mW
R _{θJA}	Thermal Resistance Junction to Ambient	417	°C/W
T _j , T _{stg}	Junction and Storage Temperature	-55 to +150	°C

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		

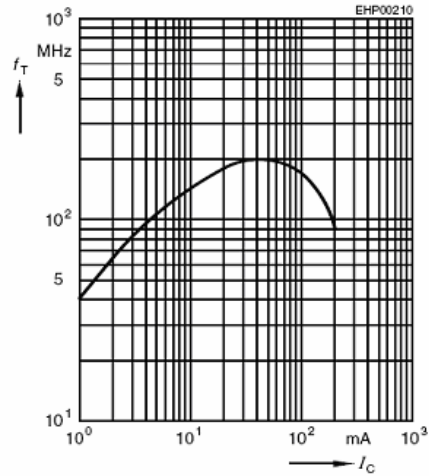
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

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 _{CB0}	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	h _{FE}	V _{CE} =-1V I _C =-100mA	100	160	250	
			160	250	400	
			250	350	600	
DC current gain	h _{FE}	V _{CE} =-1V I _C =-300mA	60			
			100			
			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

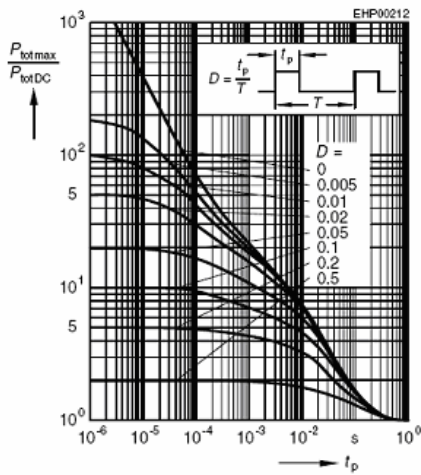


Transition frequency $f_T = f(I_C)$
 $V_{CE} = 5V$



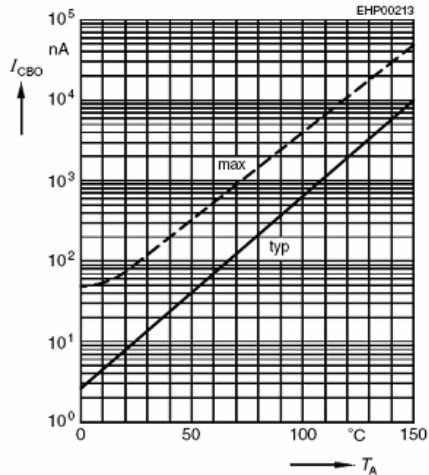
Permissible pulse load

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



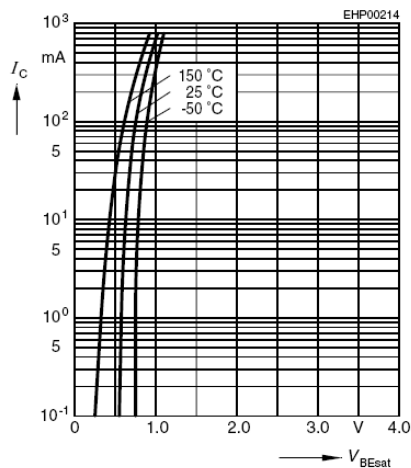
Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CBO} = 25V$



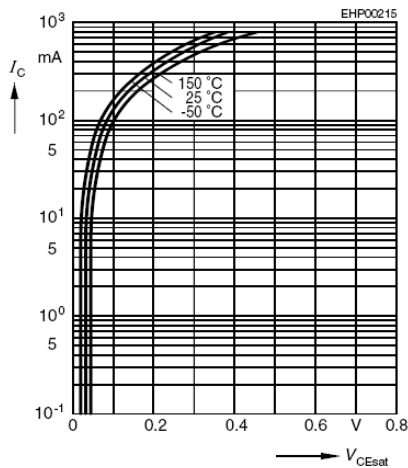
Base-emitter saturation voltage

$I_C = f(V_{BEsat}), h_{FE} = 10$



Collector-emitter saturation voltage

$I_C = f(V_{CEsat}), h_{FE} = 10$



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

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