

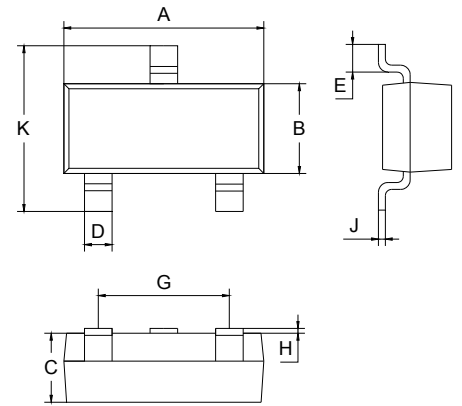
1. BASE
2. EMITTER
3. COLLECTOR

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

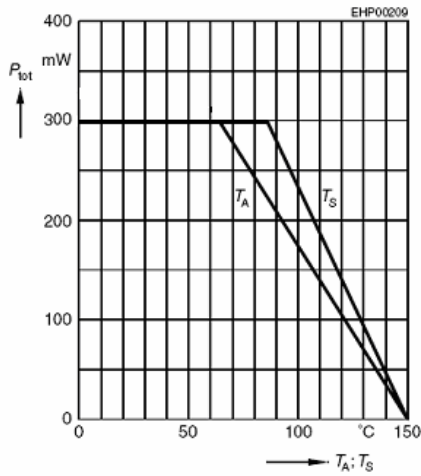
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-500	mA
P_D	Total Device Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	417	°C/W
T_j, T_{stg}	Junction 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		

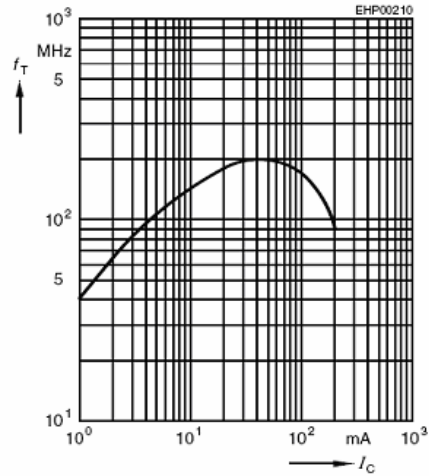
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-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	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

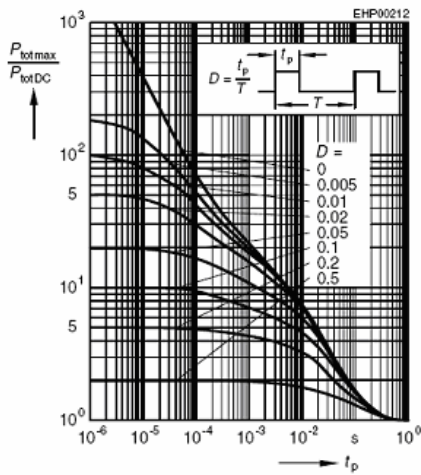


Transition frequency $f_T = f(I_C)$
 $V_{CE} = 5V$



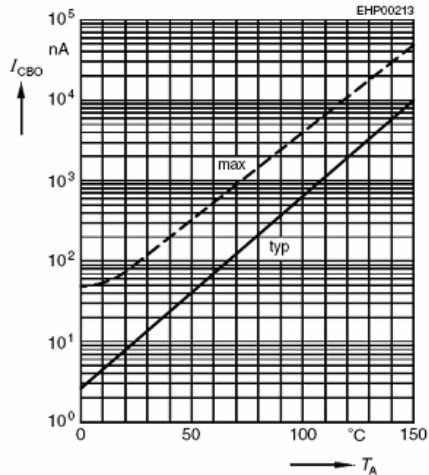
Permissible pulse load

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



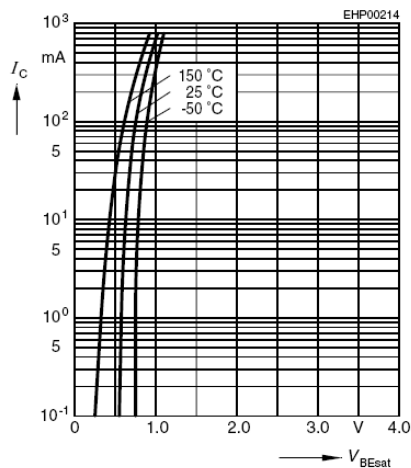
Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CBO} = 25V$



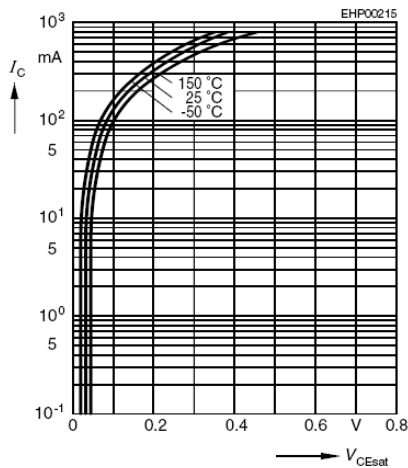
Base-emitter saturation voltage

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



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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