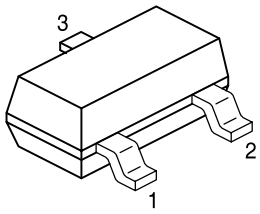
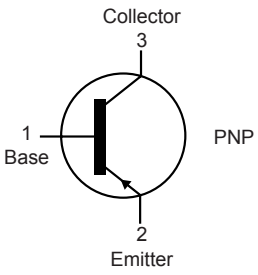
PNP General Purpose Amplifier





Features:

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

Maximum Ratings

Parameter	Symbol	Value	Unit
Collector - Base Voltage	V_{CBO}	-50	V
Collector - Emitter Voltage	V_{CEO}	-45	
Emitter - Base Voltage	V_{ebo}	-5	
Collector Current Continuous	I_C	-500	mA
Total Device Dissipation	P_{TOT}	300	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	T_j, T_{stg}	-65 to +150	°C

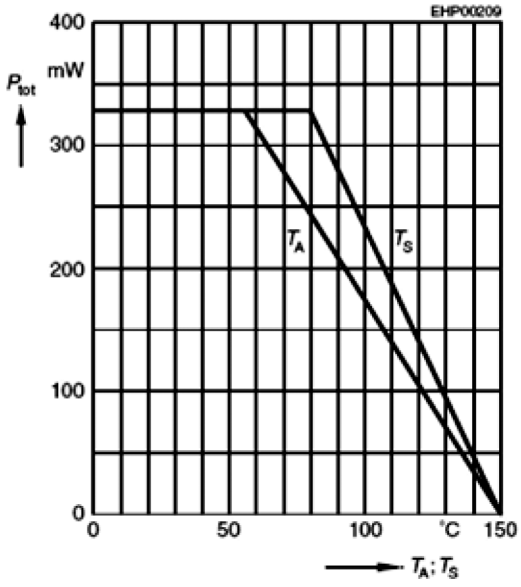
Electrical Characteristics (T_a = 25°C unless otherwise noted)

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			
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-1µA, I_C=0	-5			
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_E=0			-0.1	
DC Current Gain BC807 BC807-16 BC807-25 BC807-40	h_{FE}	V_{CE}=-1V, I_C=-100mA	100 100 160 250	160 250 350	600 250 400 600	
DC Current Gain BC807 BC807-16 BC807-25 BC807-40	h_{FE}	V_{CE}=-1V, I_C=-300mA	40 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	
Output Capacitance	C_{obo}	V_{CB}=-10V, f=1MHz			10	pF
Transition Frequency	f_T	V_{CE}=-5V, I_C=-10mA f=100MHz		200		MHz

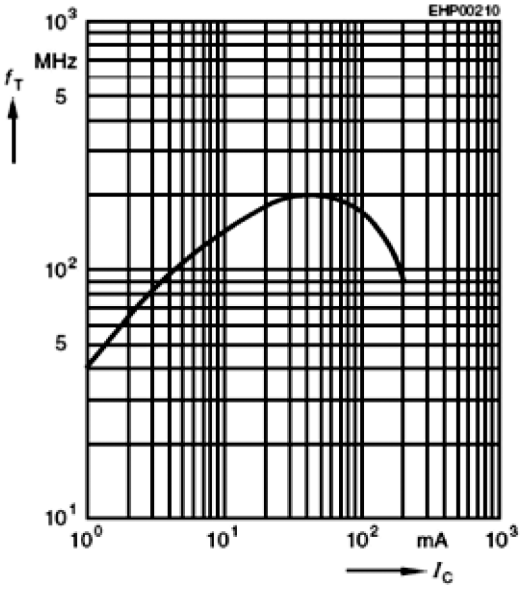
Typical Characteristics: T_a=25°C unless otherwise specified

Ratings & Characteristic Curves

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



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

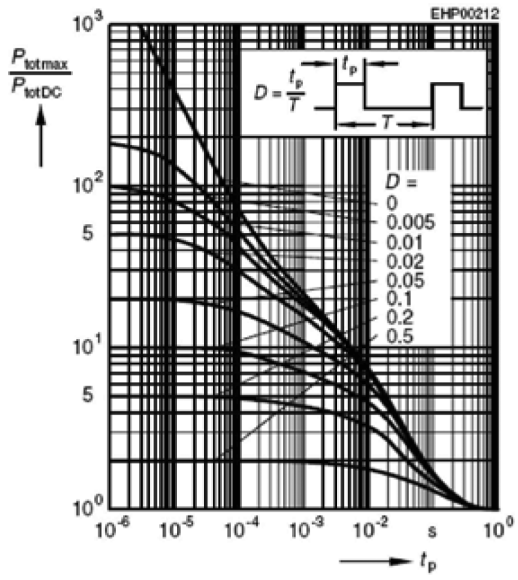


Typical Characteristics: T_a=25°C unless otherwise specified

Ratings & Characteristic Curves

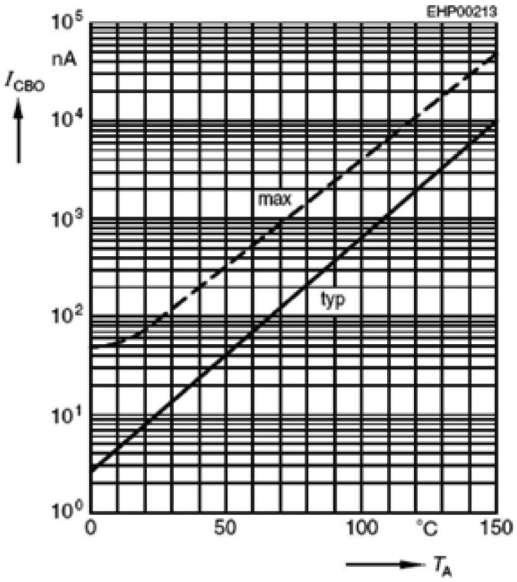
Permissible pulse load

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



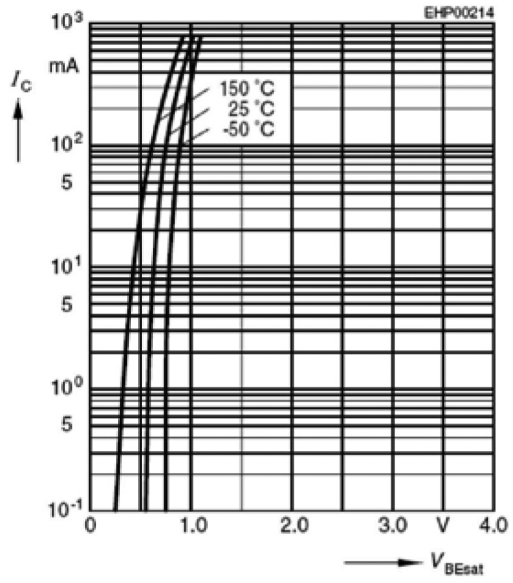
Collector cutoff current I_{CBO} = $f(T_A)$

V_{CBO} = 25V



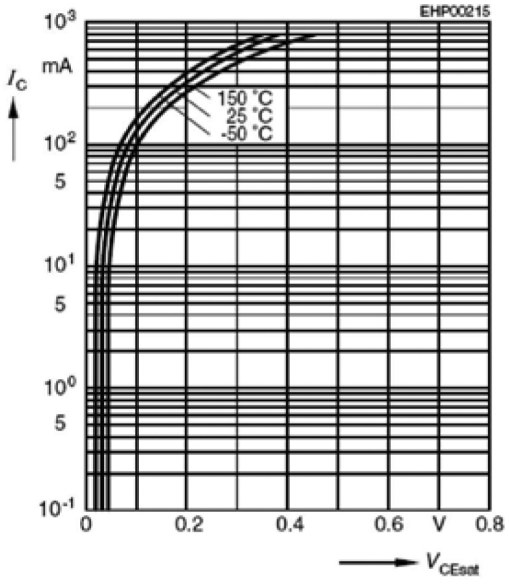
Base-emitter saturation voltage

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



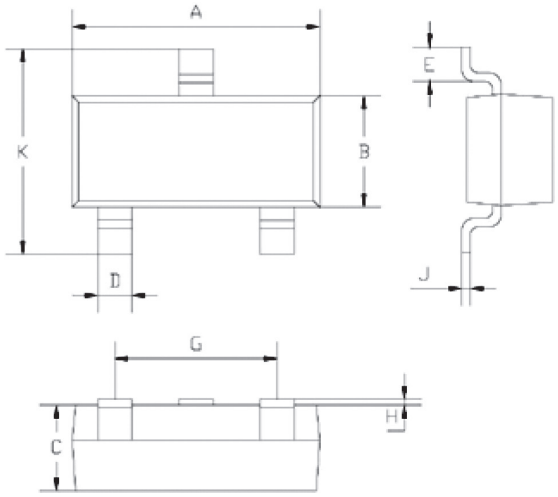
Collector-emitter saturation voltage

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



Package Outline

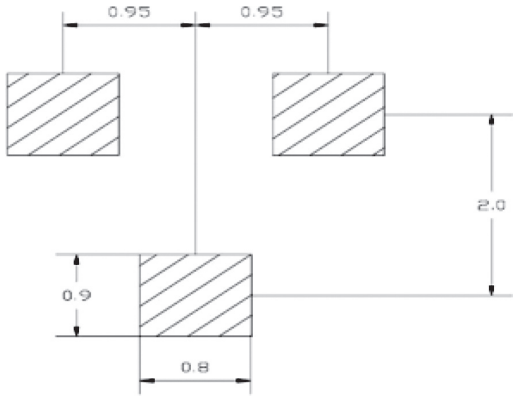
Plastic surface mounted package



Dimensions	Min.	Max.
A	2.5	2.95
B	1.25	1.35
C	1 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1 Typical	
K	2.35	2.45

Dimensions : Millimetres

Soldering Footprint



Dimensions : Millimetres

Part Number Table

Description	Marking	Part Number
Transistor, PNP, 45V, 0.5A, SOT23	5A	BC807-16
	5B	BC807-25
	5C	BC807-40

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