

## 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 ( $T_a = 25^\circ\text{C}$ unless otherwise noted)

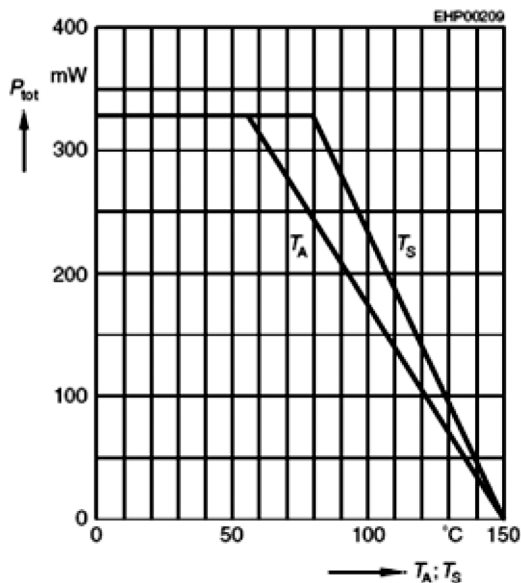
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-50			V	
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-45				
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -1\mu\text{A}, I_C = 0$	-5				
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -25\text{V}, I_E = 0$			-0.1	$\mu\text{A}$	
Emitter Cut-off Current	$I_{EBO}$	$V_{CE} = -4\text{V}, I_E = 0$			-0.1		
DC Current Gain	BC807 BC807-16 BC807-25 BC807-40	$h_{FE}$	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	100	160	600	
				100	250	250	
				160	350	400	
				250		600	
DC Current Gain	BC807 BC807-16 BC807-25 BC807-40	$h_{FE}$	$V_{CE} = -1\text{V}, I_C = -300\text{mA}$	40			
				60			
				100			
				170			
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$			-0.7	V	
Base - Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$			-1.2		
Output Capacitance	$C_{obo}$	$V_{CB} = -10\text{V}, f = 1\text{MHz}$			10	pF	
Transition Frequency	$f_T$	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $f = 100\text{MHz}$		200		MHz	

## Typical Characteristics: $T_a = 25^\circ\text{C}$ unless otherwise specified

### Ratings & Characteristic Curves

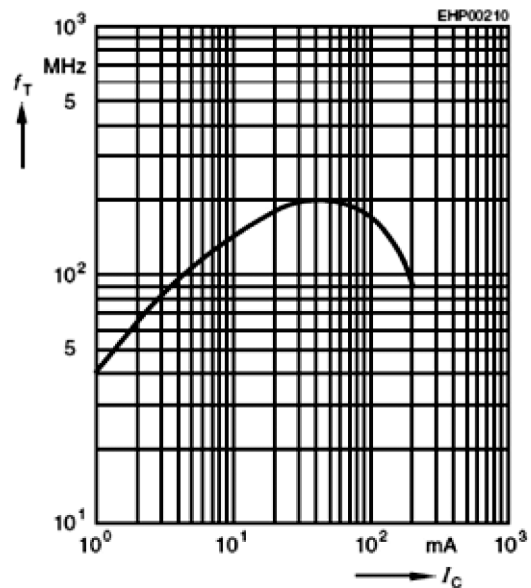
Total power dissipation  $P_{tot} = f(T_A, T_S)$

\*Package mounted on epoxy



Transition frequency  $f_T = f(I_C)$

$V_{CE} = 5\text{V}$

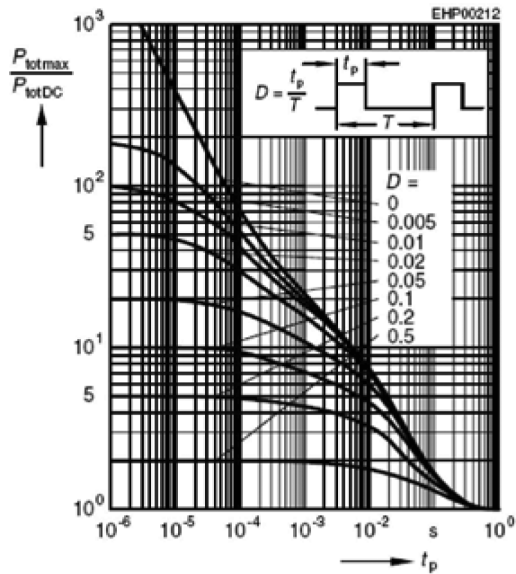


## Typical Characteristics: $T_a=25^\circ\text{C}$ unless otherwise specified

### Ratings & Characteristic Curves

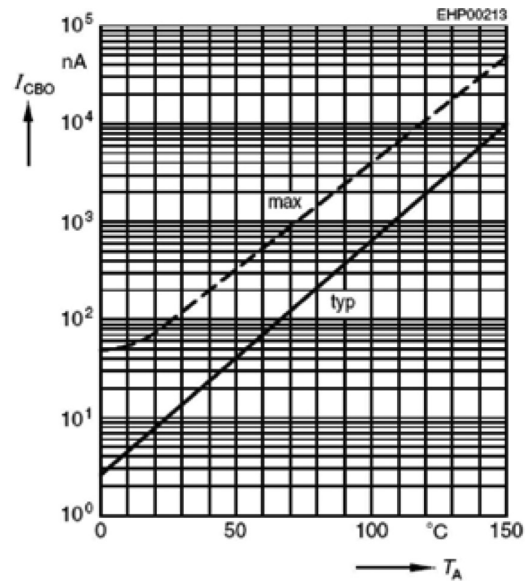
#### Permissible pulse load

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



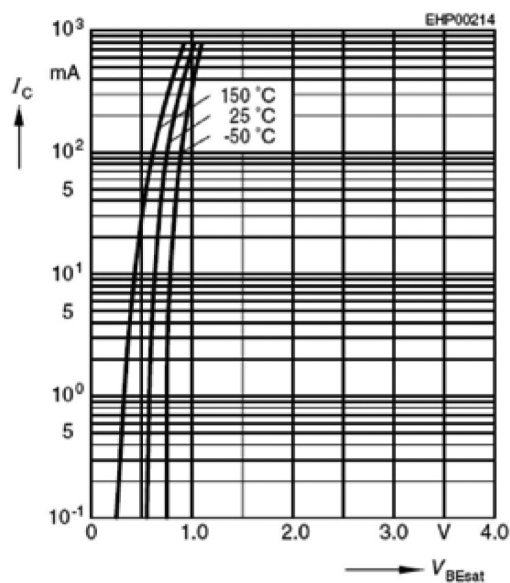
#### Collector cutoff current $I_{\text{CBO}} = f(T_a)$

$$V_{\text{CBO}} = 25\text{V}$$



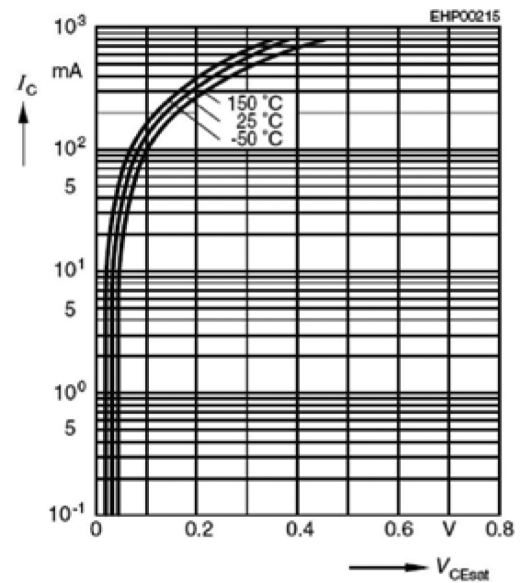
#### Base-emitter saturation voltage

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



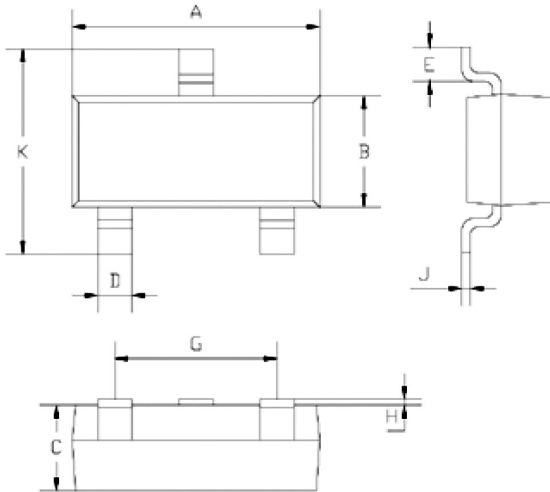
#### Collector-emitter saturation voltage

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



## Package Outline

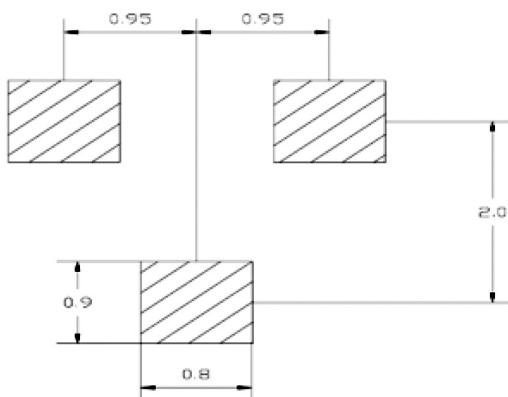
Plastic surface mounted package



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	Part Number
Transistor, PNP, 45V, 0.5A, SOT23	BC807
	BC807-16
	BC807-25
	BC807-40

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