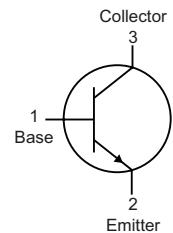
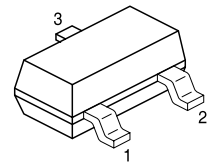




Features

- For general AF applications
- Complementary PNP type available BC807
- High collector current
- High current gain
- Low collector-emitter saturation voltage



Applications

- General purpose medium power amplifier
- Switching requiring collector currents up to 1.2mA

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
Collector Dissipation	P_C	300	mW
Junction and Storage Temperature	T_j, T_{stg}	-65 to +150	°C

Pin Configuration:

1. Base
2. Emitter
3. Collector

Electrical Characteristics ($T_{amb} = 25^\circ\text{C}$ unless otherwise noted)

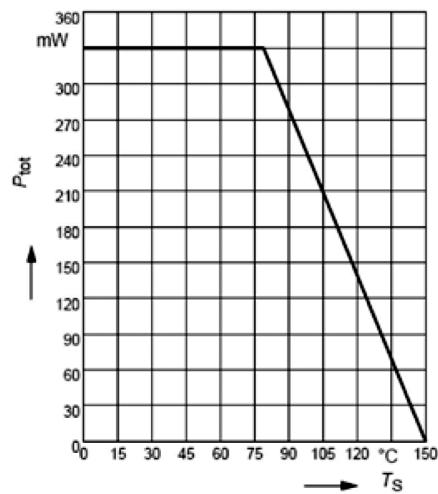
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	50			V
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	45			
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			
Collector Cut-off Current	I_{CBO}	$V_{CB}=25\text{V}, I_E=0$			-0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{CE}=4\text{V}, I_E=0$			-0.1	
DC Current Gain	h_{FE}	$V_{CE}=1\text{V}, I_C=-100\text{mA}$	100		600	
	BC817		100		250	
	BC817-16		160		400	
	BC817-40		250		600	
DC Current Gain	h_{FE}	$V_{CE}=1\text{V}, I_C=-300\text{mA}$	40			
	BC817		60			
	BC817-16		100			
	BC817-40		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	

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Output Capacitance	C_{obo}	$V_{CB}=10V, f=1MHz$		6		pF
Transition Frequency	f_T	$V_{CE}=5V, I_C=50mA$ $f=100MHz$		170		MHz

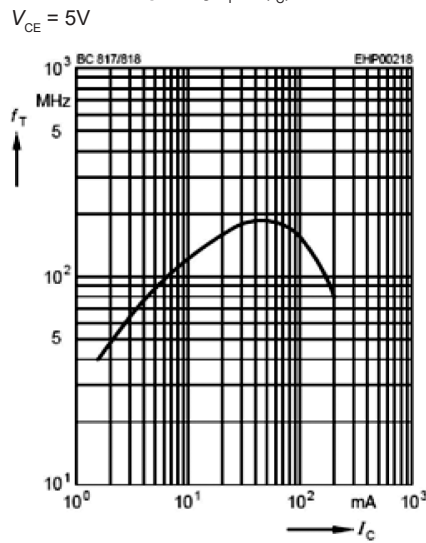
Typical Characteristics: $T_{amb}=25^\circ C$ unless otherwise specified

Ratings & Characteristic Curves

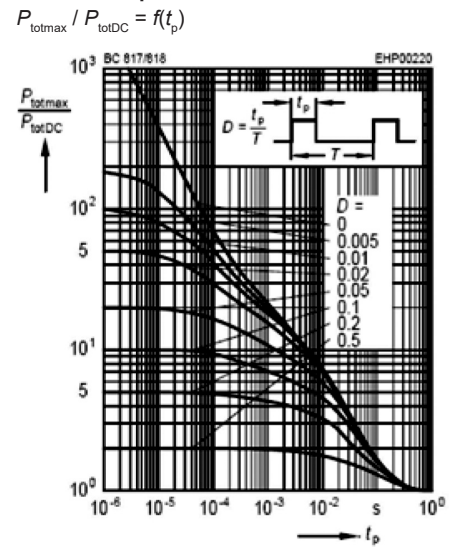
Total power dissipation $P_{tot} = f(T_S)$



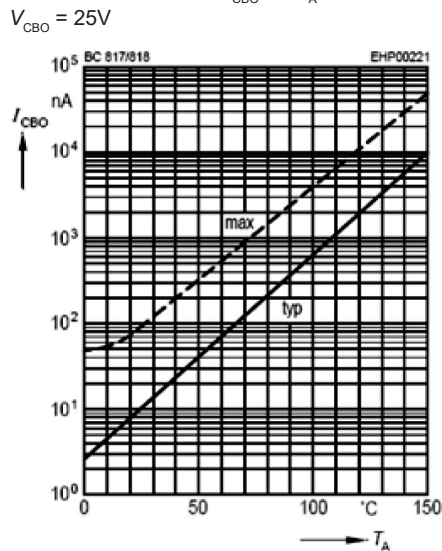
Transition frequency $f_T = f(I_C)$



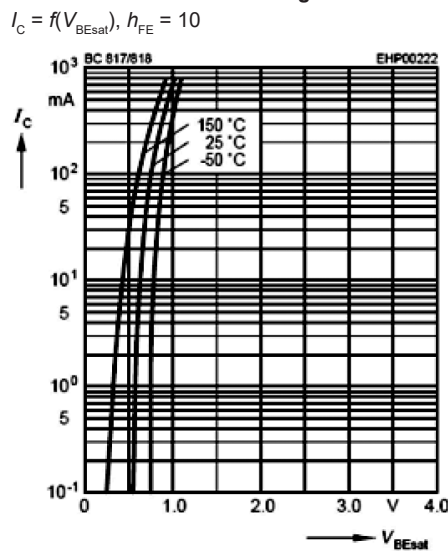
Permissible pulse load



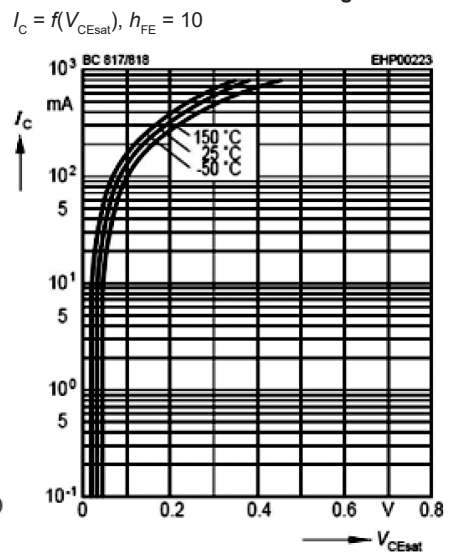
Collector cutoff current $I_{CBO} = f(T_A)$



Base-emitter saturation voltage

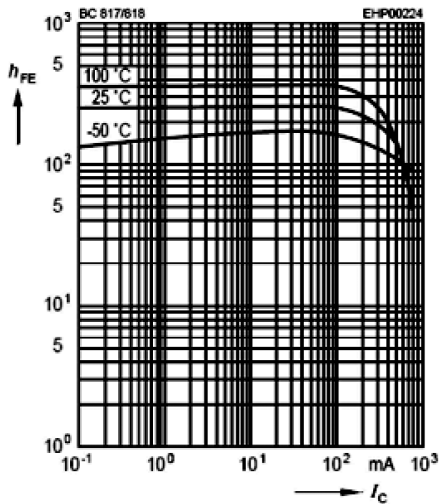


Collector-emitter saturation voltage



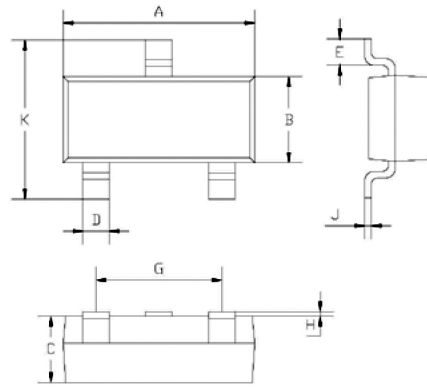
DC current gain $h_{FE} = f(I_C)$

$V_{CE} = 1V$



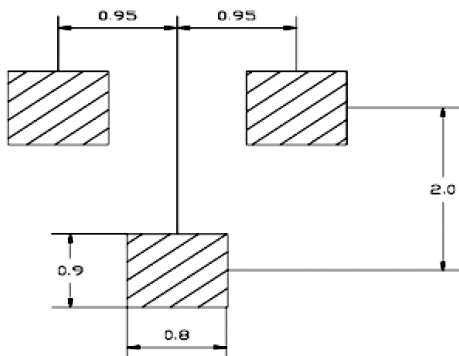
Package Outline

Plastic surface mounted package



Dimensions	Min.	Max.
A	1.8	2.2
B	1.15	1.35
C	1 Typical	
D	0.15	0.35
E	0.25	0.4
G	1.2	1.4
H	0.02	0.1
J	0.1 Typical	
K	2.1	2.3

Soldering Footprint



Marking

Part Number	*Marking Code
BC817	6D%
BC817-16	6A%
BC817-25	6B%
BC817-40	6C%

* %=placeholder for manufacturing site code.

Part Number Table

Description	Part Number
Transistor, NPN, 0.5A, 45V, SOT23	BC817
	BC817-16
	BC817-25
	BC817-40

Dimensions : Millimetres

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