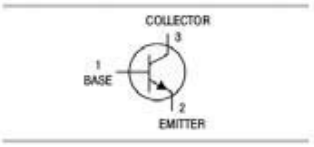
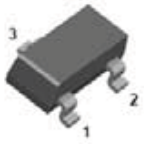
NPN General Purpose Amplifier: BC817-16/-25/-40

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





SOT-23

Ordering Information

Type No.	Marking:	Package Code:
BC817	6D	SOT-23
BC817-16	6A	SOT-23
BC817-25	6B*	SOT-23
BC817-40	6C	SOT-23

Maximum Ratings & Characteristics: Tamb=25°C unless otherwise specified

Parameter:	Symbol:	Value:	Unit:
Collector - Base Voltage	V_{CBO}	50	V
Collector - Emitter Voltage	V_{CEO}	45	V
Emitter - Base Voltage	V_{ebo}	5	V
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

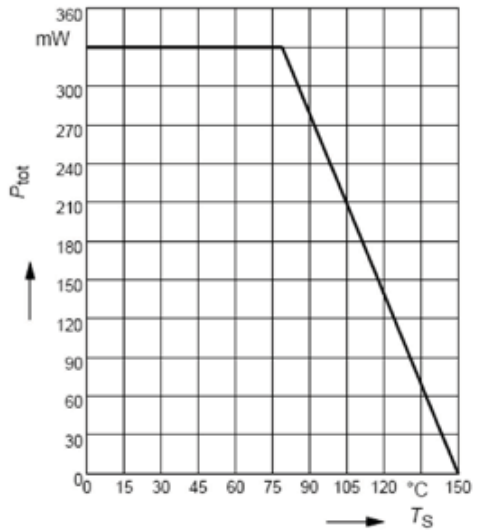
Maximum Ratings & Characteristics: Tamb=25°C unless otherwise specified

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
Emmiter - Base Breakdown Voltage		$V_{(BR)EBO}$	I_E=10µA, I_C=0	5			V
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	µA
DC Current Gain	BC817 BC817-16 BC817-25 BC817-40	h_{FE}	V_{CE}=1V, I_C=-100mA	100 100 160 250		600 250 400 600	
DC Current Gain	BC817 BC817-16 BC817-25 BC817-40	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	V
Output Capacitance		C_{obo}	V_{CB}=10V,f=1.0MHz		6		pF
Transition Frequency		f_T	V_{CE}=5V,I_C=50mA f=100MHz		170		MHz

Typical Characteristics: Tamb=25°C unless otherwise specified

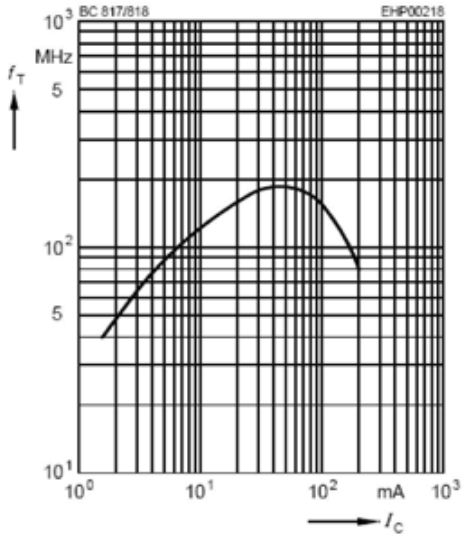
Ratings & Characteristic Curves

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



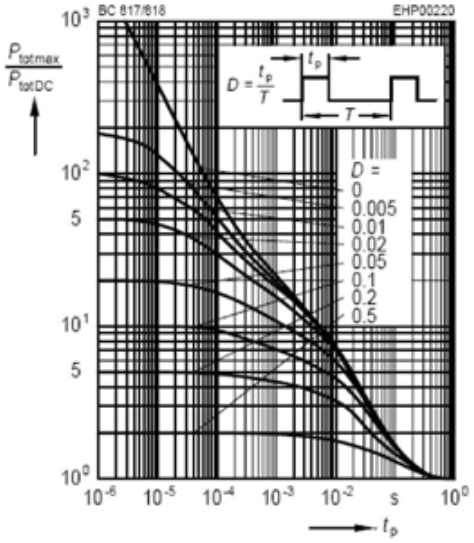
Transition frequency $f_T = f(I_C)$

V_{CE} = 5V



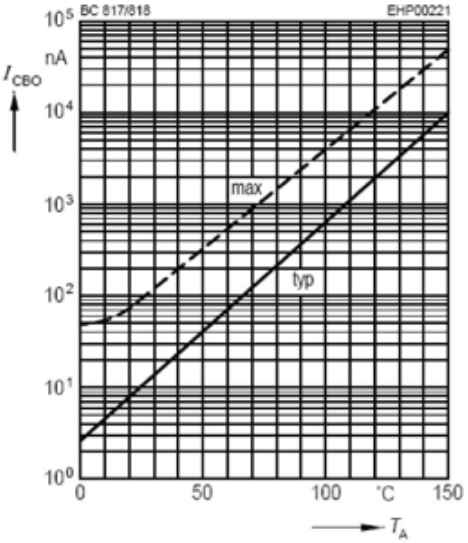
Permissible pulse load

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



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

V_{CBO} = 25V

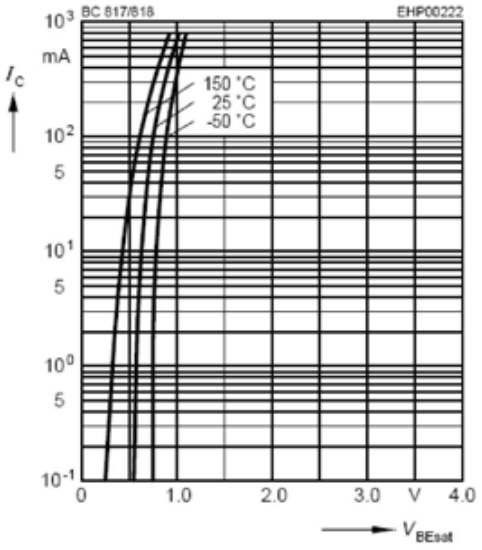


Typical Characteristics: Tamb=25°C unless otherwise specified

Ratings & Characteristic Curves

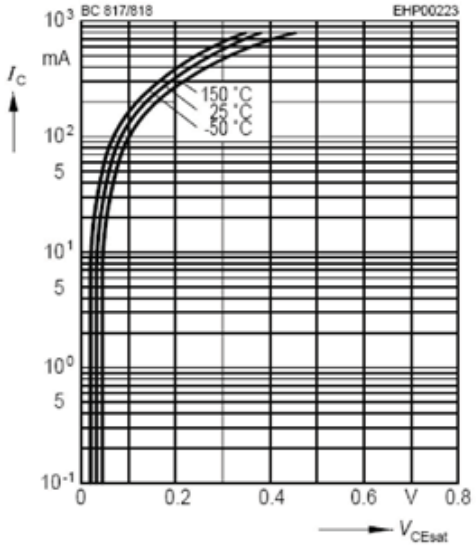
Base-emitter saturation voltage

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



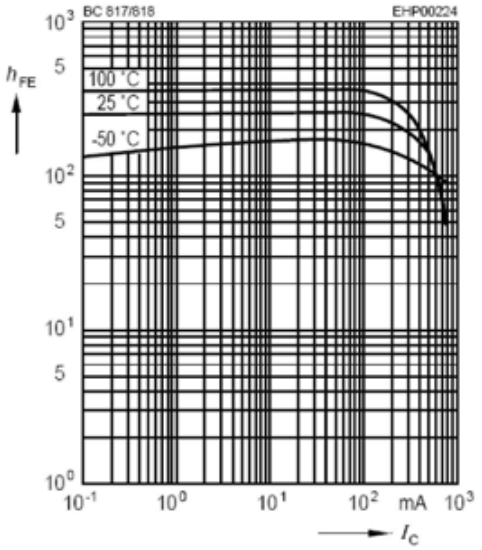
Collector-emitter saturation voltage

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



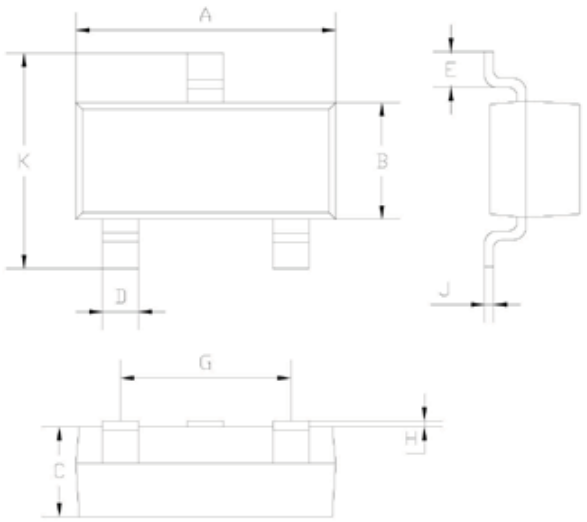
DC current gain h_{FE} = f(IC)

V_{CE} = 1V



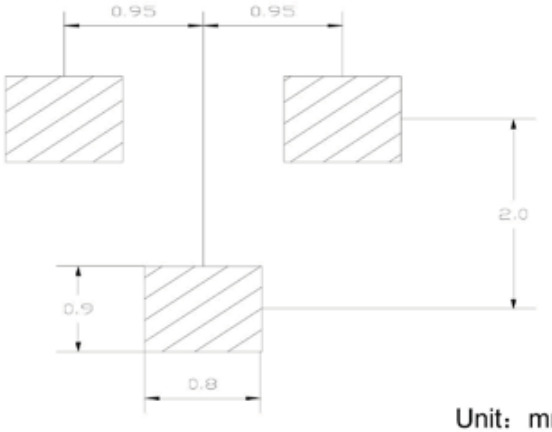
Package Outline

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0 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
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit：mm

PACKAGE INFORMATION

Device	Package	Shipping
BC817-16/-25/-40	SOT-23	3000/Tape&Reel