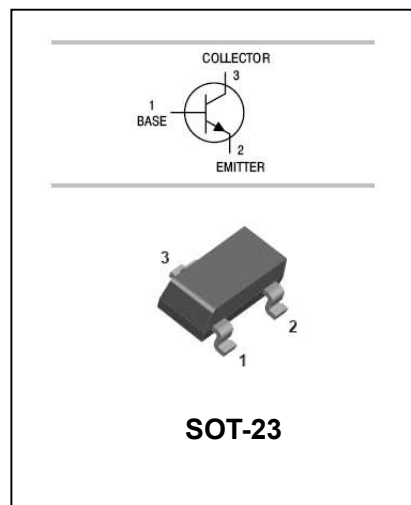


FEATURES

- For general AF application.
- Complementary PNP type available BC807.
- High collector current, high current gain.
- Low collector-emitter saturation voltage.



ORDERING INFORMATION

Type No.	Marking	Package Code
BC817-16□	6A	SOT-23
BC817-25□	6B▪	SOT-23
BC817-40□	6C	SOT-23

□: none is for Lead Free package;

“G” is for Halogen Free package.

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_C	Collector Dissipation	300	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	°C

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

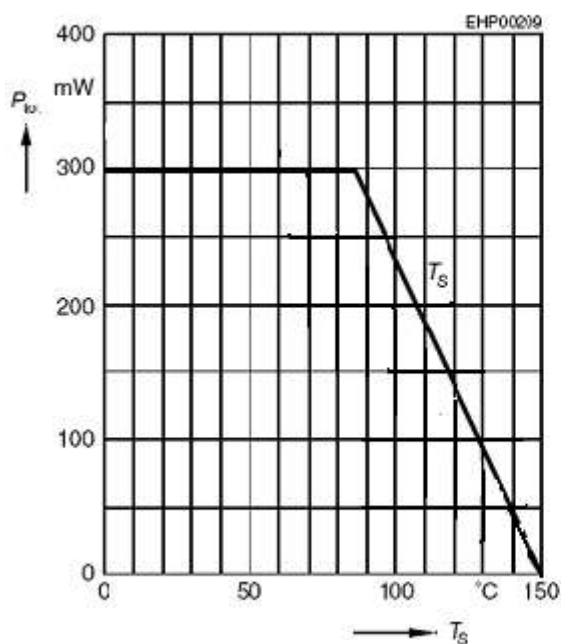
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A$ $I_E=0$	50	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA$ $I_B=0$	45	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A$ $I_C=0$	5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=25V$ $I_E=0$	-	-	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V$ $I_C=0$	-	-	0.1	μA
DC current gain	BC817-16 BC817-25 BC817-40	h_{FE}	$V_{CE}=1V$ $I_C=100mA$ 100 160 250	-	250 400 600	-
DC current gain	BC817-16 BC817-25 BC817-40					
DC current gain	BC817-40					
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
Collector capacitance	C_{ob}	$V_{CB}=10V, f=1MHz$	-	6	-	pF
Transition frequency	f_T	$V_{CE}=5V$ $I_C=50mA$ $f=100MHz$	-	170	-	MHz

CLASSIFICATION OF $H_{FE(1)}$

Rank	BC817-16	BC817-25	BC817-40
Range	100-250	160-400	250-600
Marking	6A	6B•	6C

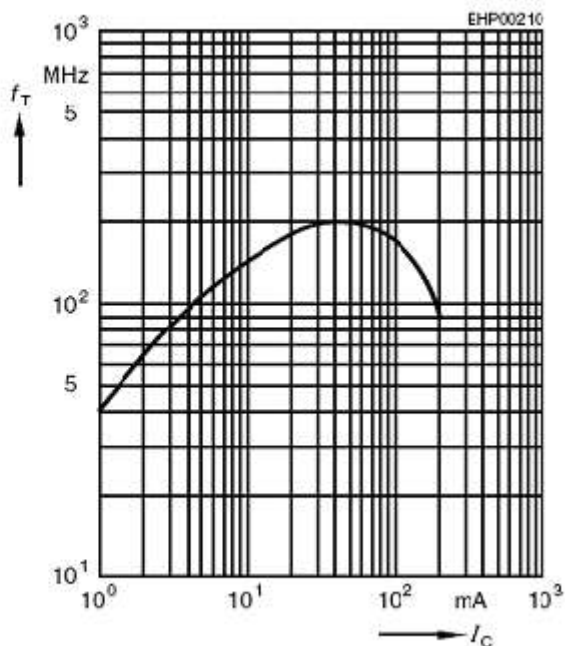
TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

Total power dissipation $P_{\text{tot}} = f(T_s)$



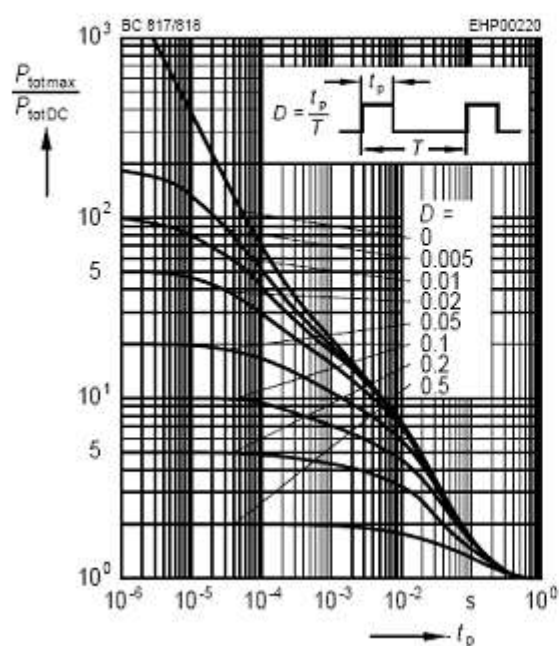
Transition frequency $f_T = f(I_C)$

$V_{CE} = 5V$



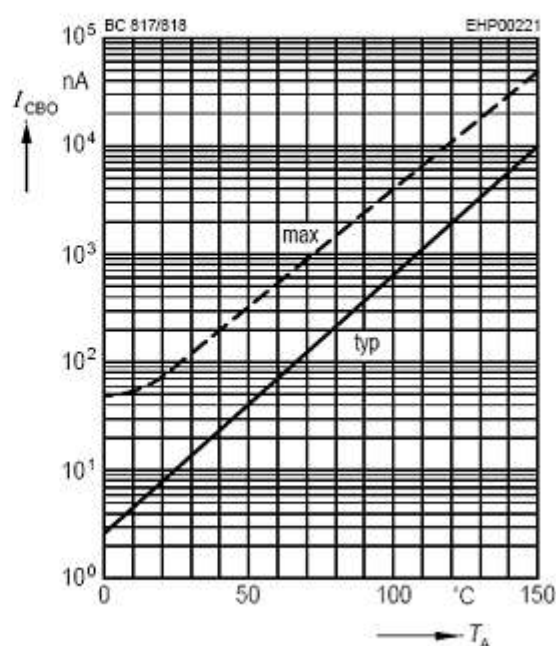
Permissible pulse load

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



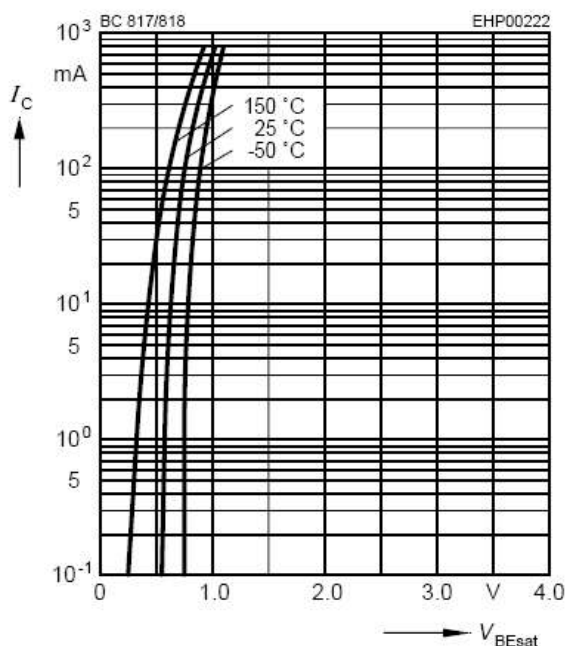
Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CBO} = 25V$



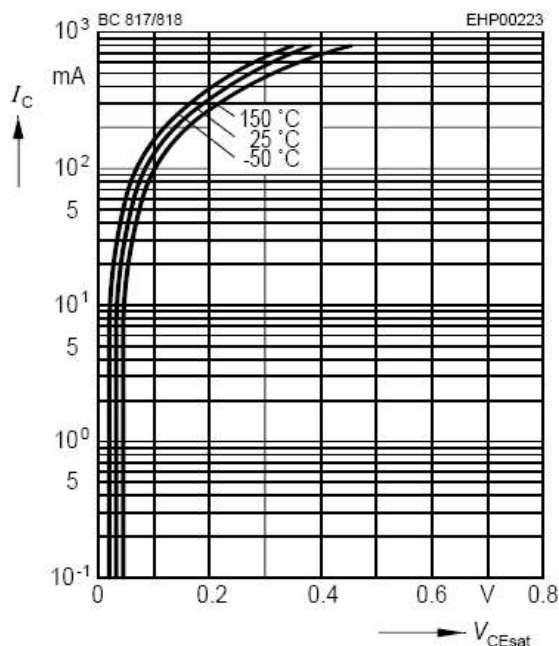
Base-emitter saturation voltage

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



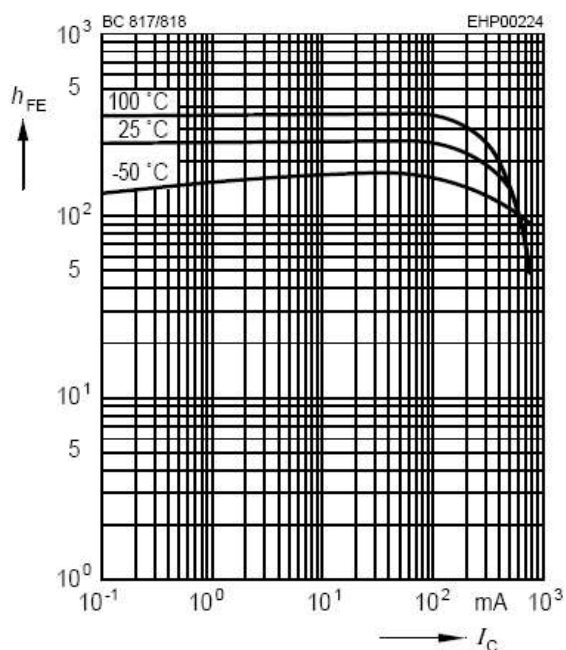
Collector-emitter saturation voltage

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



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

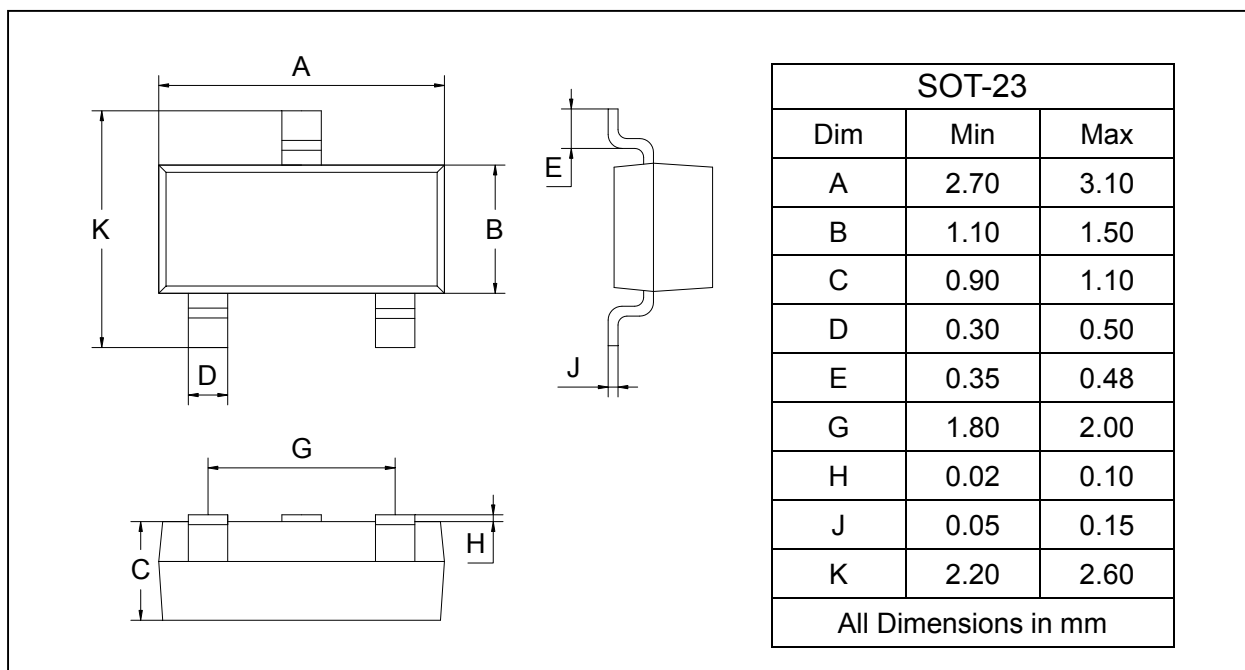
$$V_{CE} = 1V$$



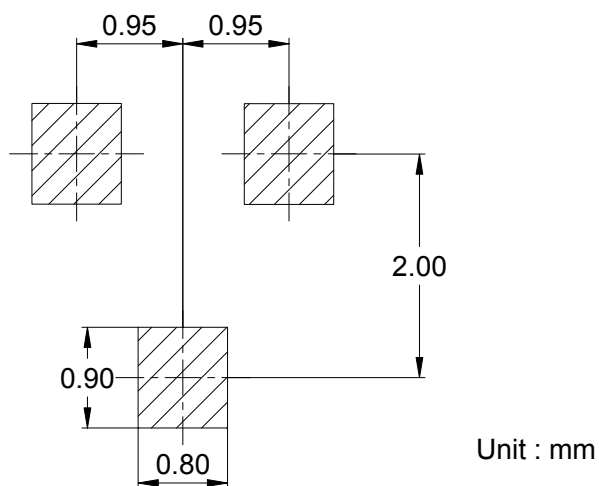
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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