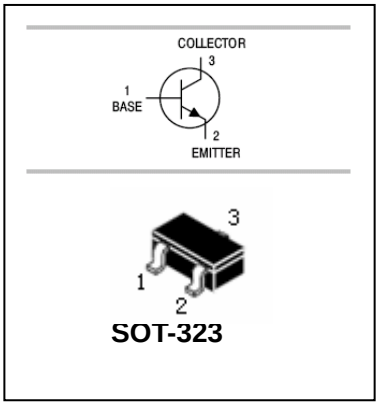
NPN general purpose transistor **BC817W/BC818W**

FEATURES

Lead-free

- High collector current.
- High current gain.
- Low collector-emitter saturation voltage.
- Complementary types:BC807W,BC808W.



APPLICATIONS

- General purpose switching and amplification application.

ORDERING INFORMATION

Type No.	Marking	Package Code
BC817-16W	6A	SOT-323
BC817-25W	6B	SOT-323
BC817-40W	6C	SOT-323
BC818-16W	6E	SOT-323
BC818-25W	6F	SOT-323
BC818-40W	6G	SOT-323

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter		Value	Units
V_{CBO}	Collector-Base Voltage	BC817W BC818W	50 30	V
V_{CEO}	Collector-Emitter Voltage	BC817W BC818W	45 25	V
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current -Continuous		500	mA
I_{CM}	Peak Collecter Current		1	A
I_B	Base Current		100	mA
I_{BM}	Peak Base Current		200	mA
P_{tot}	Total Power Dissipation		200	mW
T_j,T_{stg}	Junction and Storage Temperature		-65 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage BC817W BC818W	$V_{(BR)CBO}$	I_C=10uA,I_B=0	50 30			V
Collector-emitter breakdown voltage BC817W BC818W	$V_{(BR)CEO}$	I_C=10mA,I_B=0	45 25			V
Emitter-base breakdown voltage BC817W BC818W	$V_{(BR)EBO}$	I_E=10uA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=25V,I_E=0 V_{CB}=25V,I_E=0,T_j=150℃			100 50	nA μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			100	nA
DC current gain	h_{FE}	V_{CE}=1V,I_C=100mA 16W 25W 40W	 100 160 250		 250 400 600	
		V_{CE}=1V,I_C=300mA 16W 25W 40W	 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
Transition frequency	f_T	V_{CE}=5V,I_C=50mA, f=100MHz		170		MHz
Collector-base capacitance	C_{Cb}	V_{CB}=10V,I_E=0,f=1MHz		6		pF

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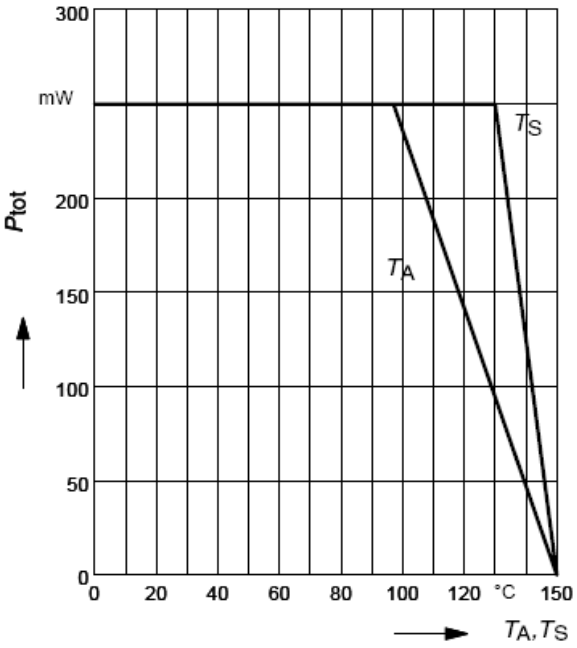
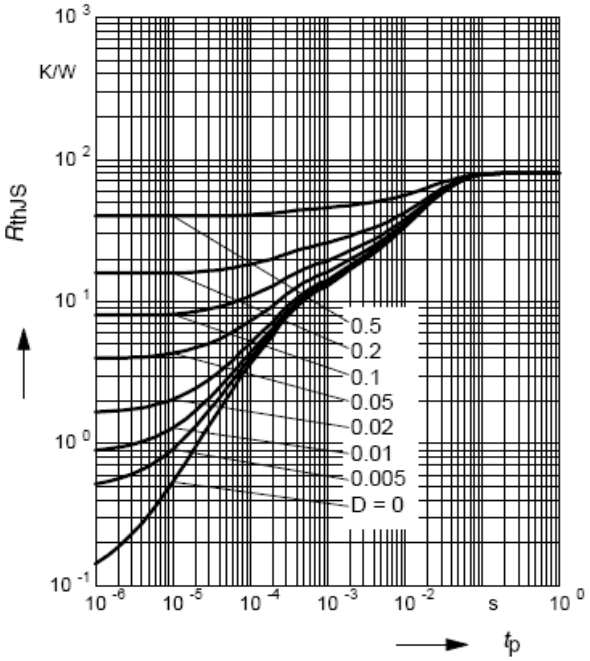
YPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

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

* Package mounted on epoxy

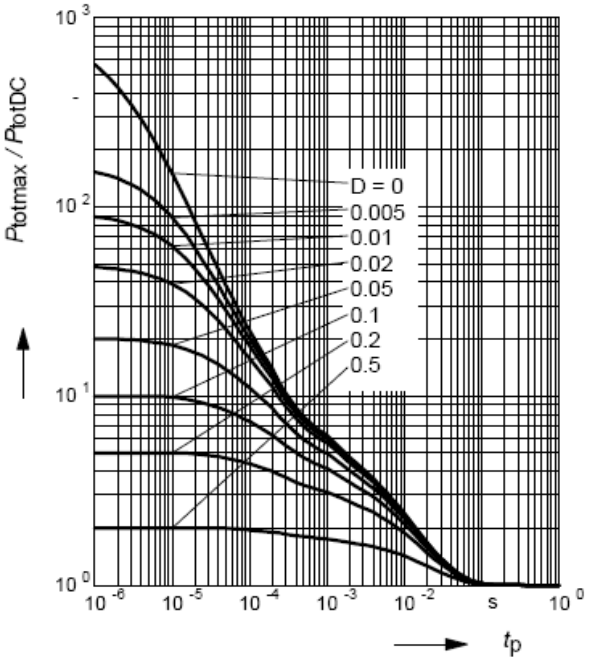


Permissible Pulse Load $R_{thJS} = f(t_p)$



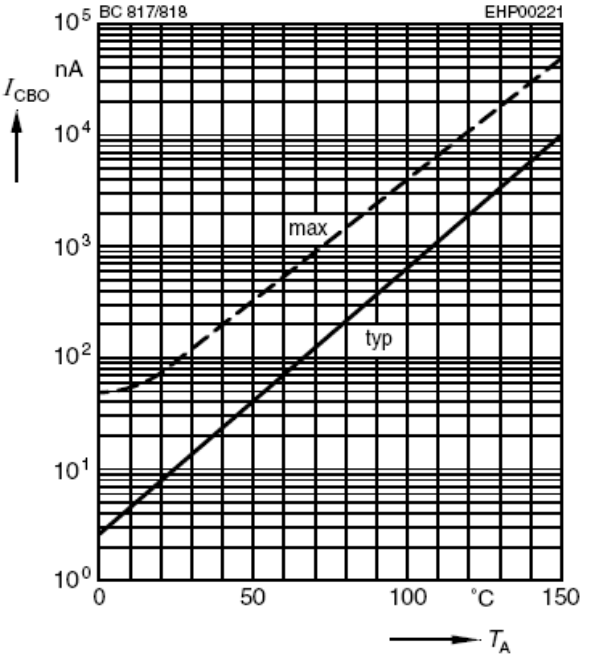
Permissible Pulse Load

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



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

V_{CBO} = 25V



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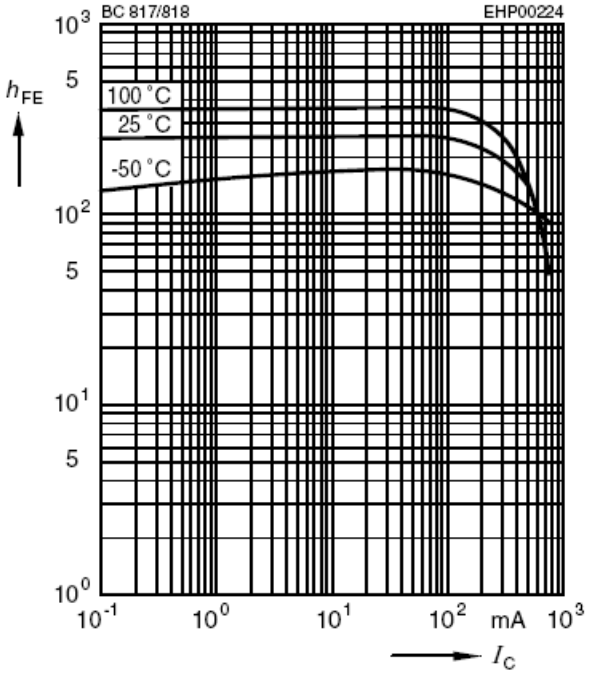
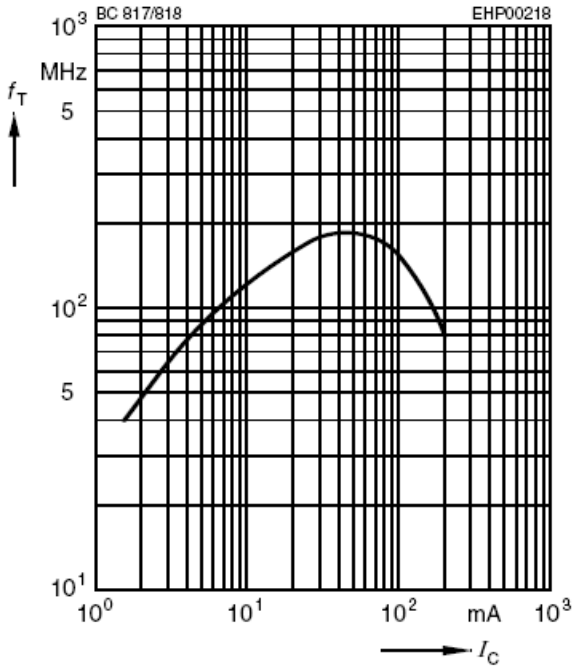
DC current gain $h_{FE} = f(I_C)$

V_{CE} = 1V



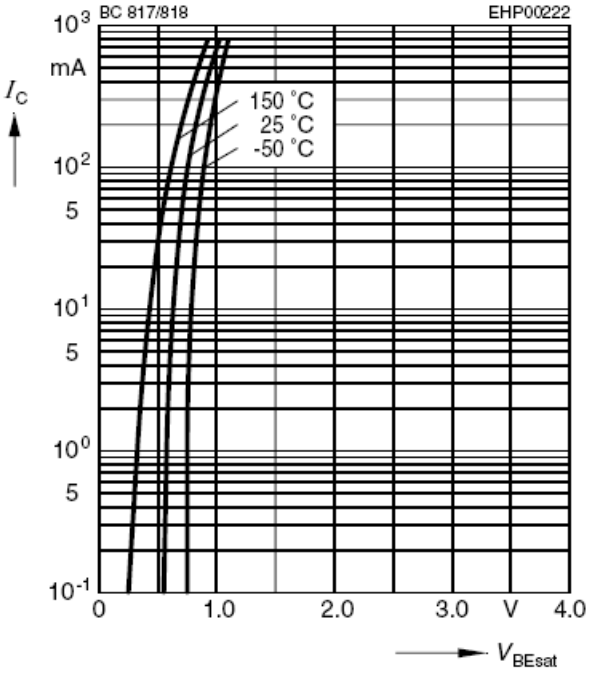
Transition frequency $f_T = f(I_C)$

V_{CE} = 5V



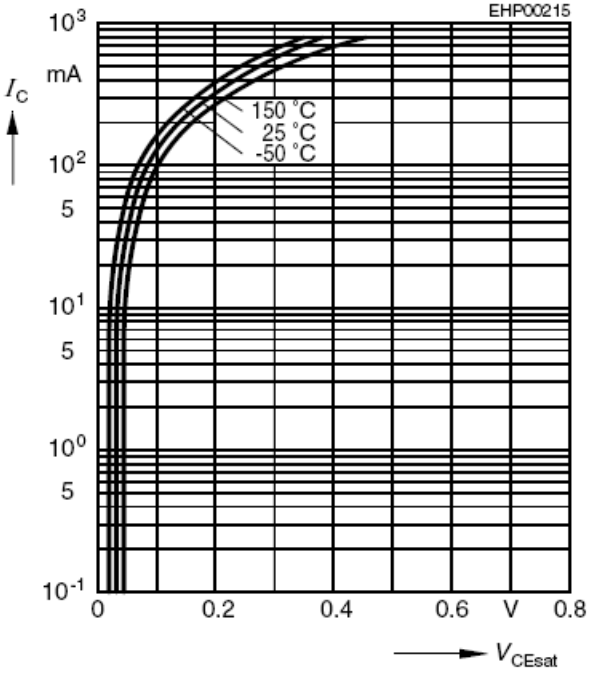
Base-emitter saturation voltage

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



Collector-emitter saturation voltage

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



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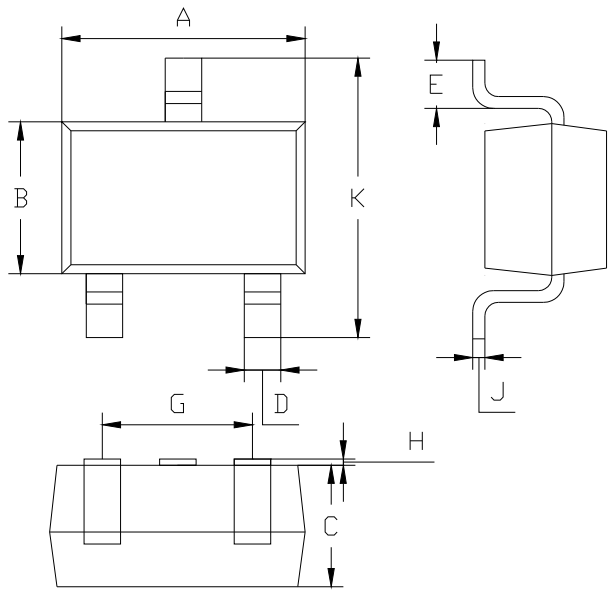
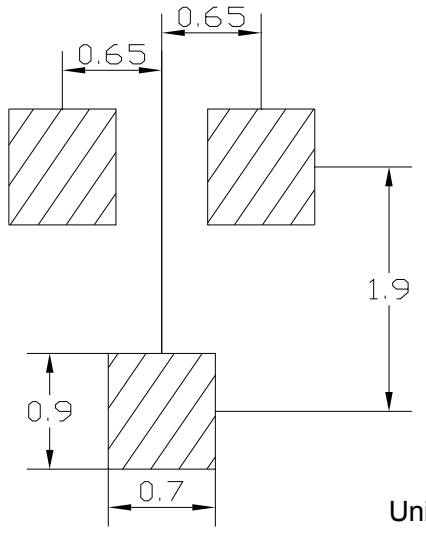
PACKAGE OUTLINE

Plastic surface mounted package SOT-323



SOT-323		
Dim	Min	Max
A	1.8	2.2
B	1.15	1.35
C	1.0Typical	
D	0.15	0.35
E	0.25	0.40
G	1.2	1.4
H	0.02	0.1
J	0.1Typical	
K	2.2	2.4
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
BC817W/BC818W	SOT-323	3000/Tape&Reel