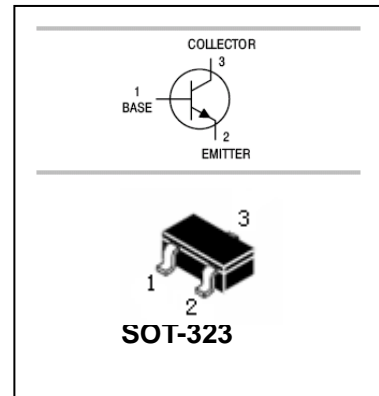


NPN general purpose transistor

BC817W/BC818W

FEATURES

- 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°C unless otherwise specified

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	BC817W	50
		BC818W	30
V _{CEO}	Collector-Emitter Voltage	BC817W	45
		BC818W	25
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	500	mA
I _{CM}	Peak Collector Current	1	A
I _B	Base Current	100	mA
I _{BM}	Peak Base Current	200	mA
P _{tot}	Total Power Dissipation	250	mW
T _J , T _{stg}	Junction and Storage Temperature	-65 to +150	°C



NPN general purpose transistor

BC817W/BC818W

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Collector-base breakdown voltage BC817W BC818W	$V_{(BR)CBO}$	$I_C=10\mu A, I_B=0$	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	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	5			V	
Collector cut-off current	I_{CBO}	$V_{CB}=25V, I_E=0$ $V_{CB}=25V, I_E=0, T_j=150^\circ C$			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	100		250		
		25W	160		400		
		40W	250		600		
		$V_{CE}=1V, I_C=300mA$					
		16W	60				
25W	100						
40W	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	



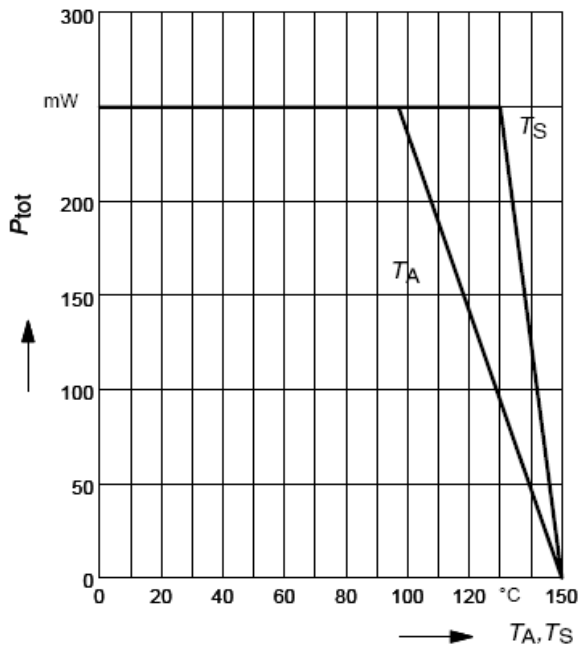
NPN general purpose transistor

BC817W/BC818W

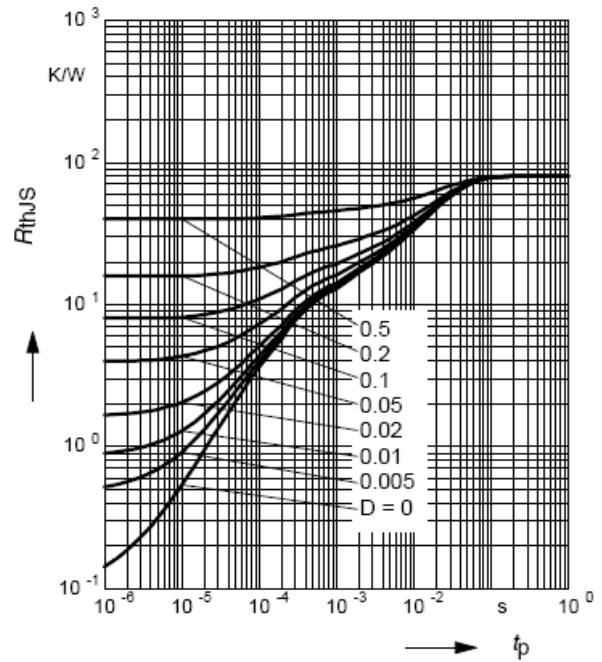
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

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

* Package mounted on epoxy

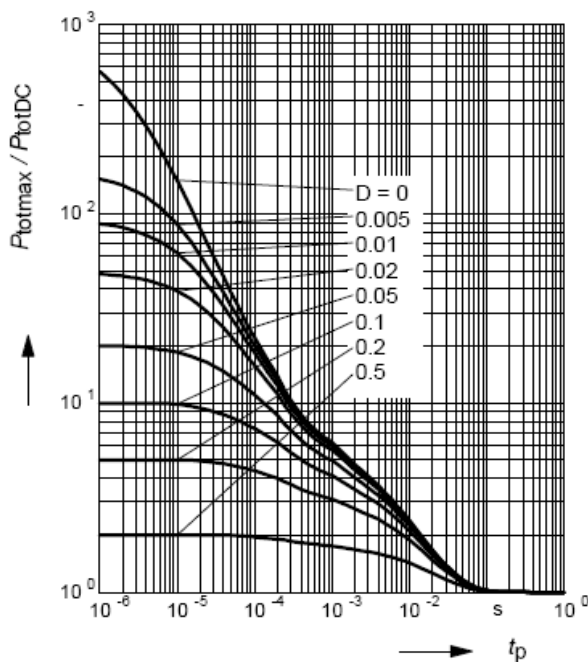


Permissible Pulse Load $R_{thJS} = f(t_p)$



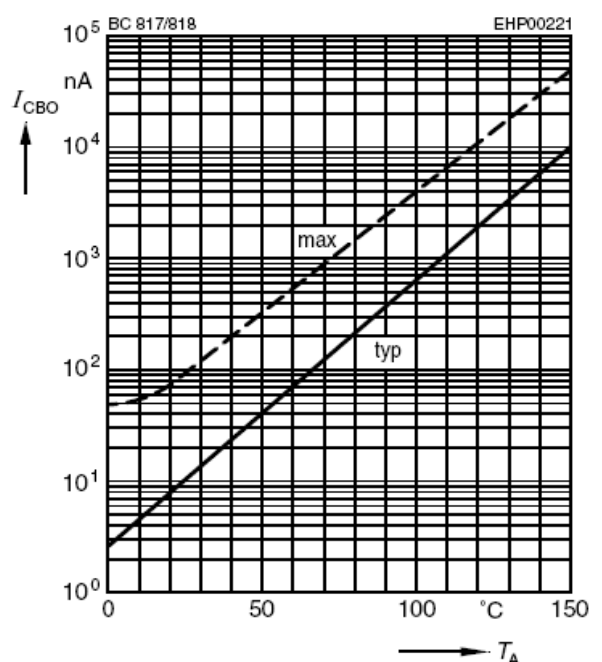
Permissible Pulse Load

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



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

$V_{CBO} = 25V$

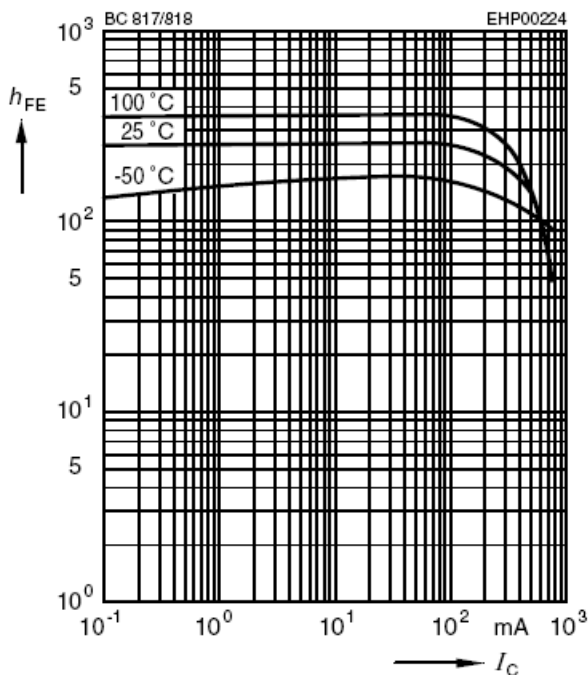


NPN general purpose transistor

BC817W/BC818W

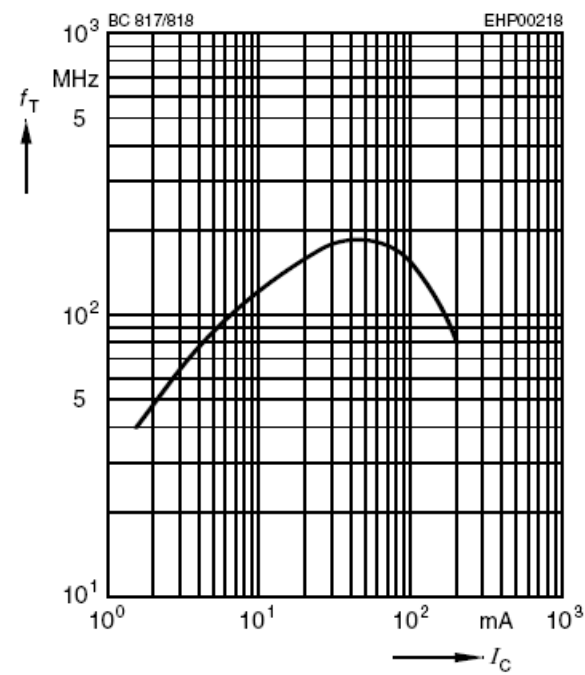
DC current gain $h_{FE} = f(I_C)$

$V_{CE} = 1V$



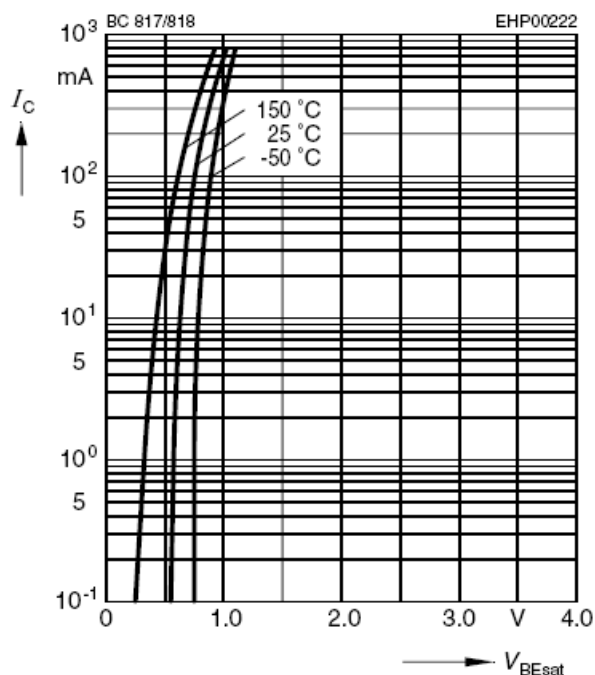
Transition frequency $f_T = f(I_C)$

$V_{CE} = 5V$



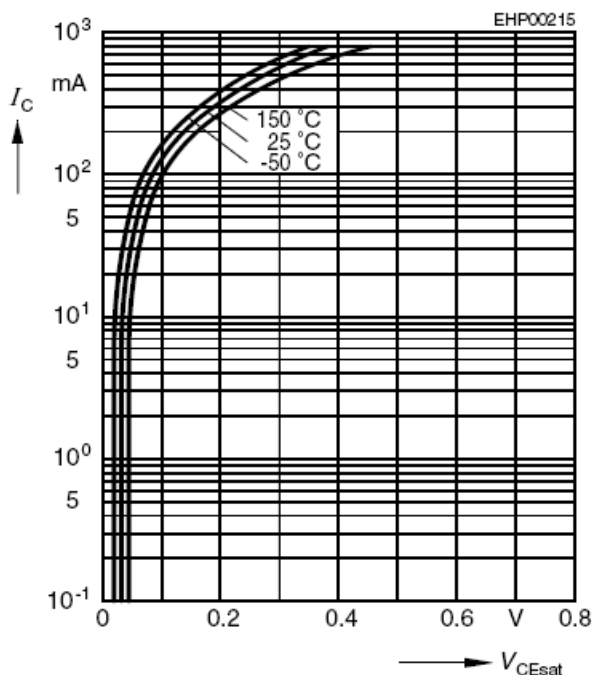
Base-emitter saturation voltage

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



Collector-emitter saturation voltage

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





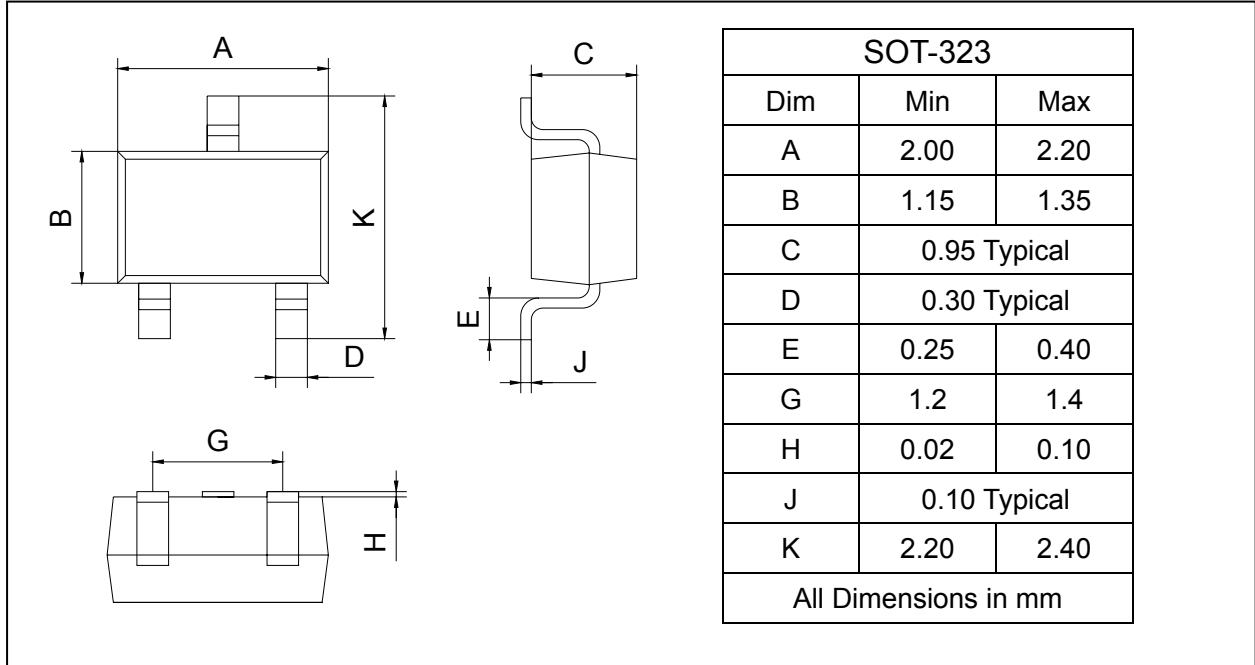
NPN general purpose transistor

BC817W/BC818W

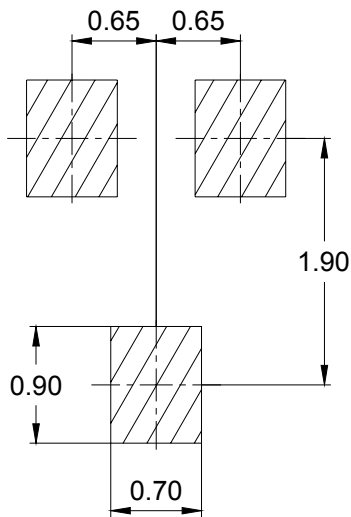
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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