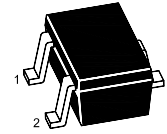


BC807W / BC808W

PNP Silicon Epitaxial Planar Transistors

for general purpose and switching applications

These transistors are subdivided into three groups
-16, -25, -40 according to their current gain.

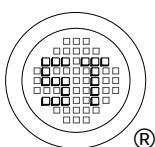


1.Base 2.Emitter 3.Collector
SOT-323 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50 30	V
Collector Emitter Voltage	$-V_{CEO}$	45 25	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	500	mA
Peak Collector Current	$-I_{CM}$	1	A
Peak Base Current	$-I_{BM}$	200	mA
Power Dissipation	P_{tot}	200	mW
Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	625 ¹⁾	K/W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$

¹⁾ Transistor mounted on an FR4 printed-circuit board.



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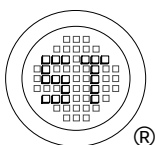


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BC807W / BC808W

Characteristics at $T_{amb} = 25^{\circ}\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 1\text{ V}$, $-I_C = 100\text{ mA}$				
-16W	h_{FE}	100	250	-
-25W	h_{FE}	160	400	-
-40W	h_{FE}	250	600	-
at $-V_{CE} = 1\text{ V}$, $-I_C = 500\text{ mA}$	h_{FE}	40	-	-
Collector Base Breakdown Voltage at $-I_C = 10\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	50 30	- -	V
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	45 25	- -	V
Emitter Base Breakdown Voltage at $-I_E = 10\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$	$-V_{CEsat}$	-	0.7	V
Base Emitter Voltage at $-I_C = 500\text{ mA}$, $-V_{CE} = 1\text{ V}$	$-V_{BE}$	-	1.2	V
Collector Cutoff Current at $-V_{CB} = 20\text{ V}$ at $-V_{CB} = 20\text{ V}$, $T_J = 150^{\circ}\text{C}$	$-I_{CBO}$	- -	100 5	nA μA
Emitter Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	100	nA
Transition Frequency at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	80	-	MHz
Collector Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_c	-	10	pF

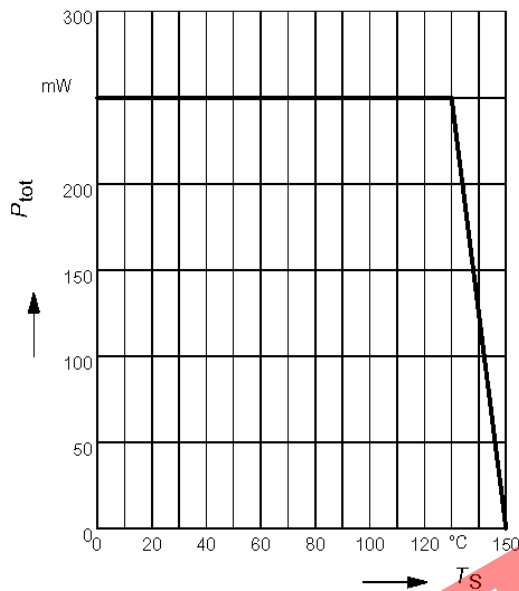


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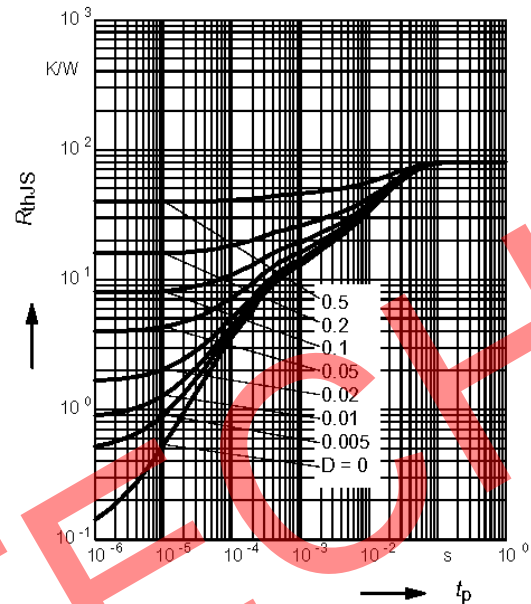


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Total power dissipation $P_{\text{tot}} = f(T_S)$

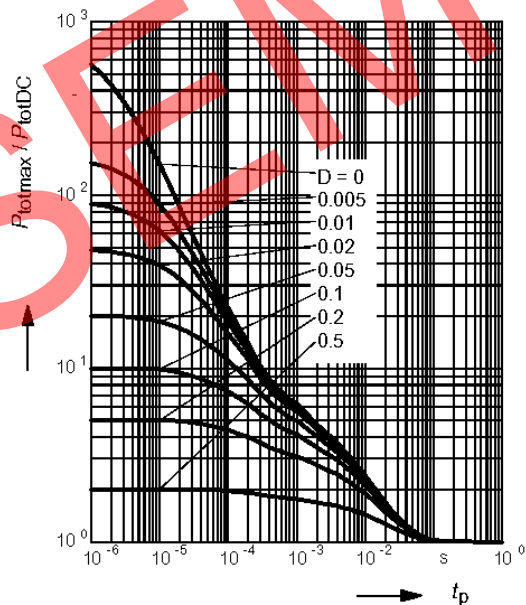


Permissible Pulse Load $R_{\text{thJS}} = f(t_p)$



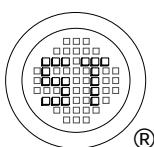
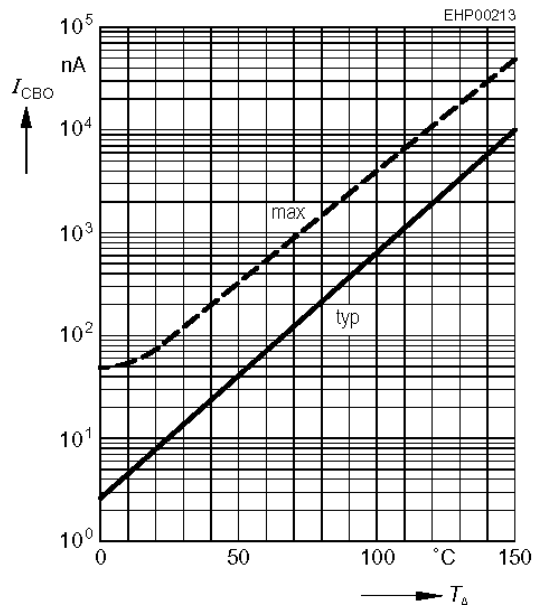
Permissible Pulse Load

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



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

$$V_{\text{CB}} = 25\text{V}$$

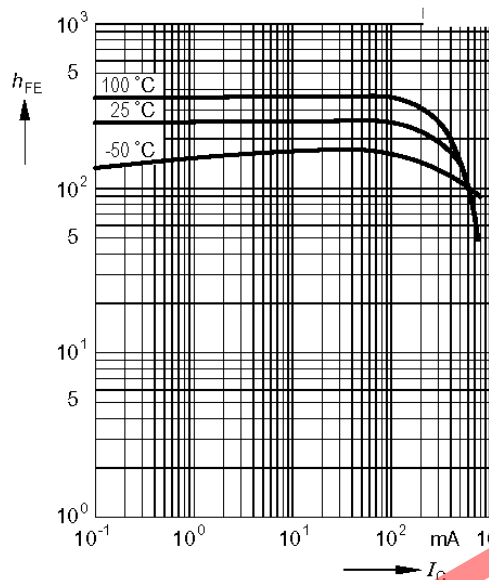


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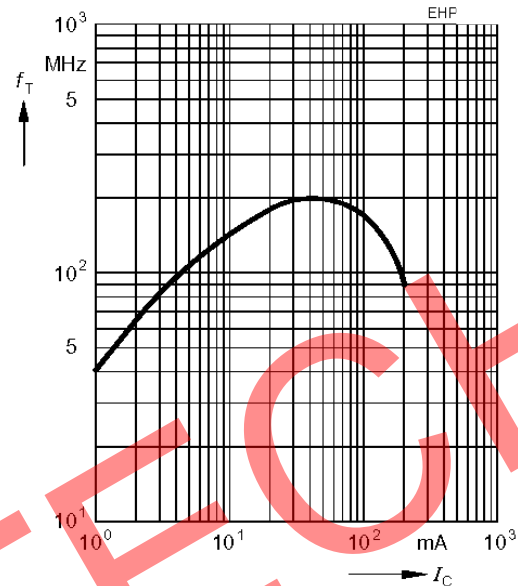
DC current gain $h_{FE} = f(I_C)$

$V_{CE} = 1V$



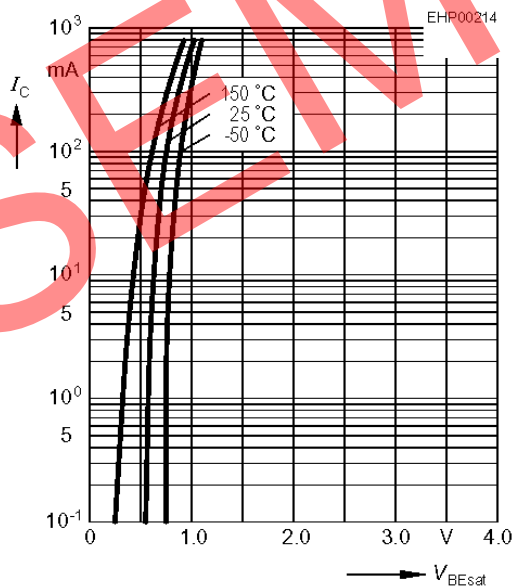
Transition frequency $f_T = f(I_C)$

$V_{CE} = 5V$



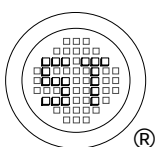
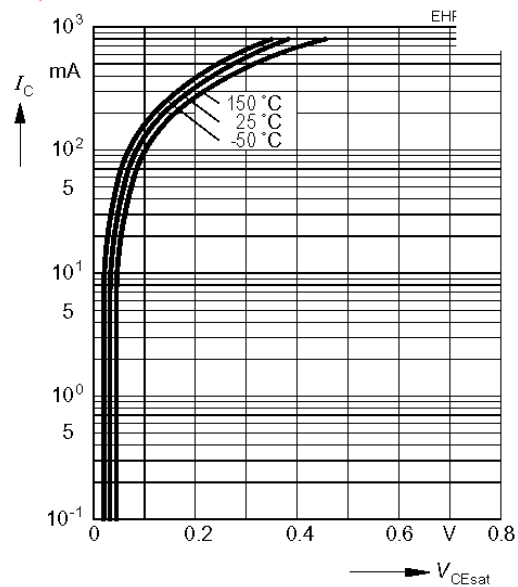
Base-emitter saturation voltage

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



Collector-emitter saturation voltage

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



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