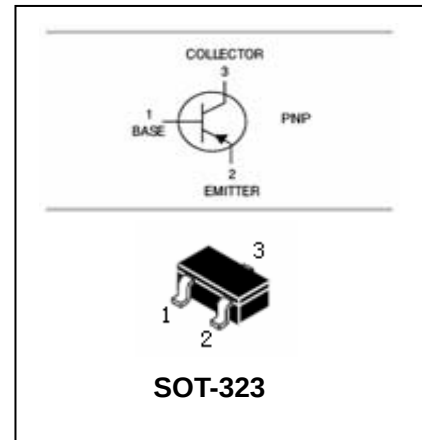


PNP Silicon Epitaxial Planar Transistor

BC807W

FEATURES

- For general AF applications.
- High collector current.
- High current gain.
- Low collector-emitter saturation voltage.
- Complements the BC817W.



APPLICATIONS

- For general purpose amplification and switching.

ORDERING INFORMATION

Type No.	Marking	Package Code
BC807-16W/25W/40W	5A/5B/5C	SOT-323

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
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
I_{CM}	Peak Collector Current	-1	A
I_B	Base Current	-0.1	A
I_{BM}	Peak Base Ccurrent	-0.2	A
P_C	Collector Dissipation	250	mW
T_j, T_{stg}	Junction and Storage Temperature	-65 to +150	°C



PNP Silicon Epitaxial Planar Transistor

BC807W

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}	$V_{CB} = -20V, I_E = 0$			-0.1	μA
		$V_{CB} = -20V, I_E = 0, T_A = 150^\circ C$			-50	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V, I_B = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -1V, I_C = -100mA$				
		BC807-16W	100	160	250	
		BC807-25W	160	250	400	
		BC807-40W	250	350	600	
		$V_{CE} = -1V, I_C = -300mA$				
		BC807-16W	60			
		BC807-25W	100			
		BC807-40W	170			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$			-0.7	V
Base-emitter voltage	$V_{BE(sat)}$	$I_C = -500mA, I_B = -50mA$			-1.2	V
Transition frequency	f_T	$V_{CE} = -5V, I_C = -50mA$ $f = 100MHz$		200		MHz
Collector-base capacitance	C_{cb}	$V_{CB} = -10V, f = 1MHz$		10		pF
Emitter-base capacitance	C_{eb}	$V_{EB} = -0.5V, f = 1MHz$		60		pF

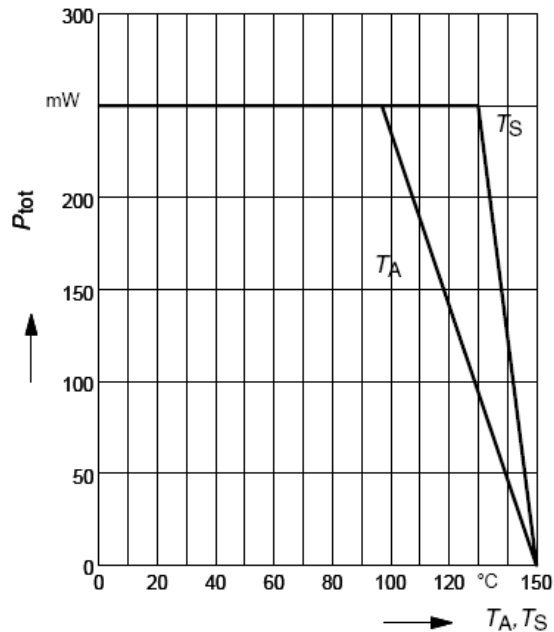
PNP Silicon Epitaxial Planar Transistor

BC807W

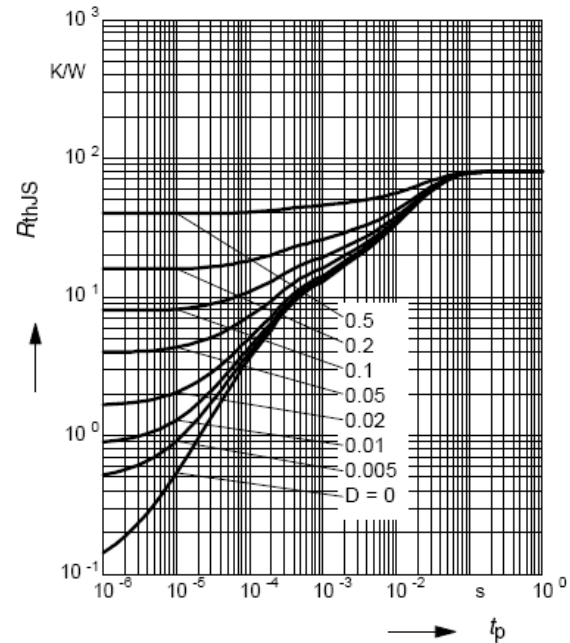
TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

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

* Package mounted on epoxy

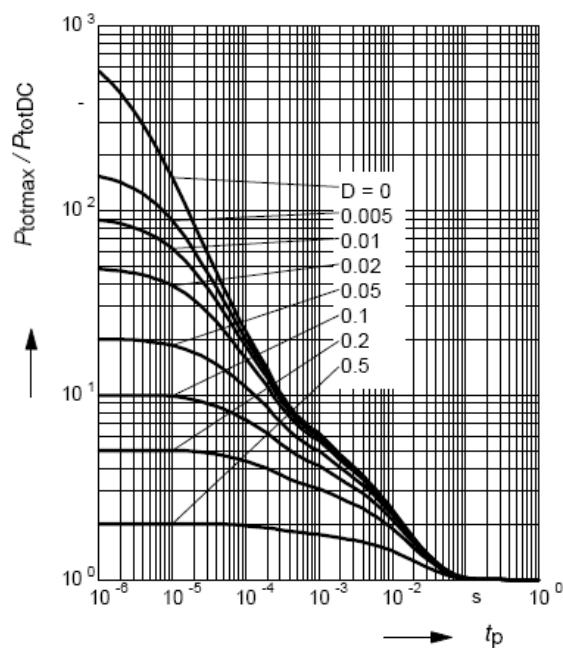


Permissible Pulse Load $R_{\text{thJS}} = f(t_p)$



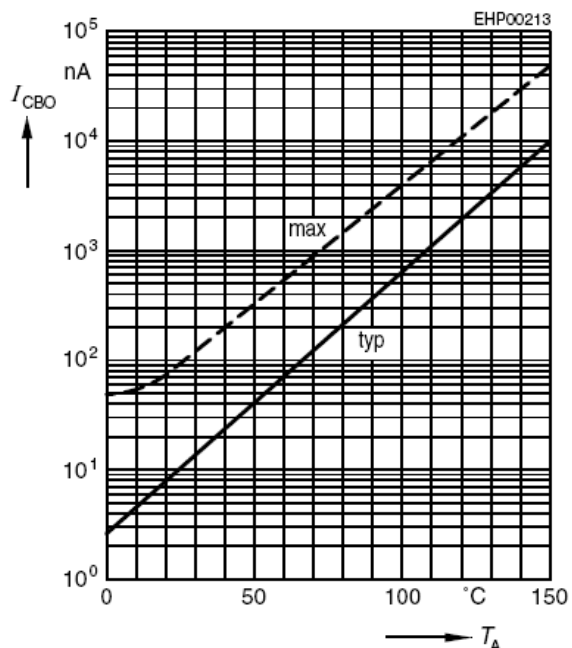
Permissible Pulse Load

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



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

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

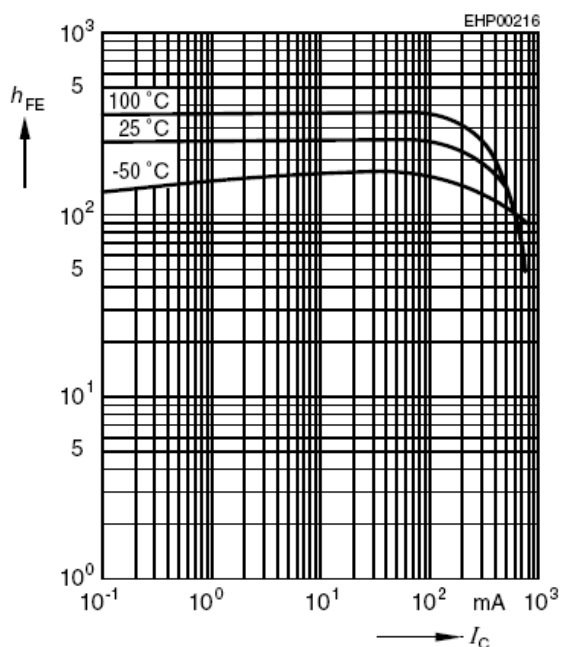


PNP Silicon Epitaxial Planar Transistor

BC807W

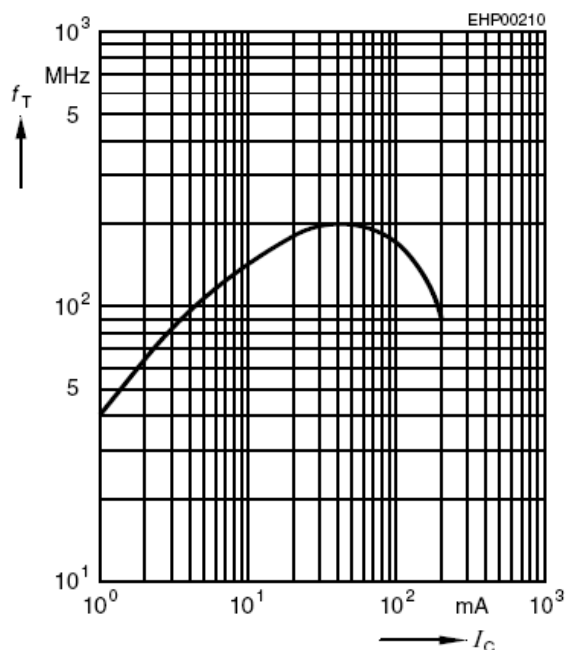
DC current gain $h_{FE} = f(I_C)$

$V_{CE} = 1V$



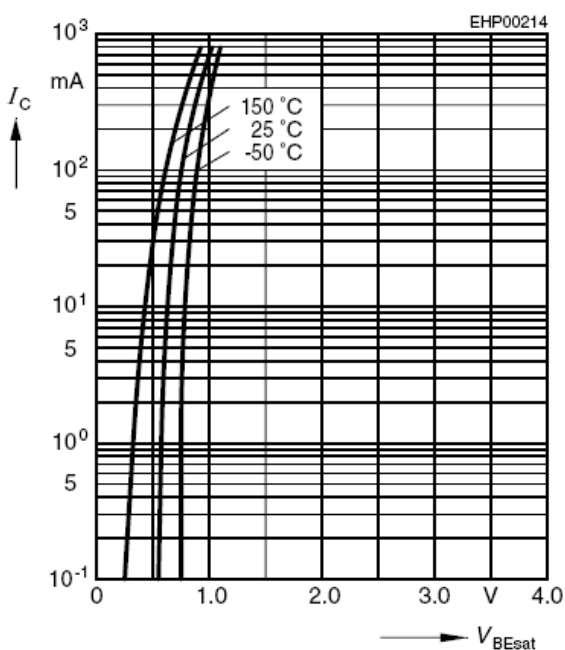
Transition frequency $f_T = f(I_C)$

$V_{CE} = 5V$



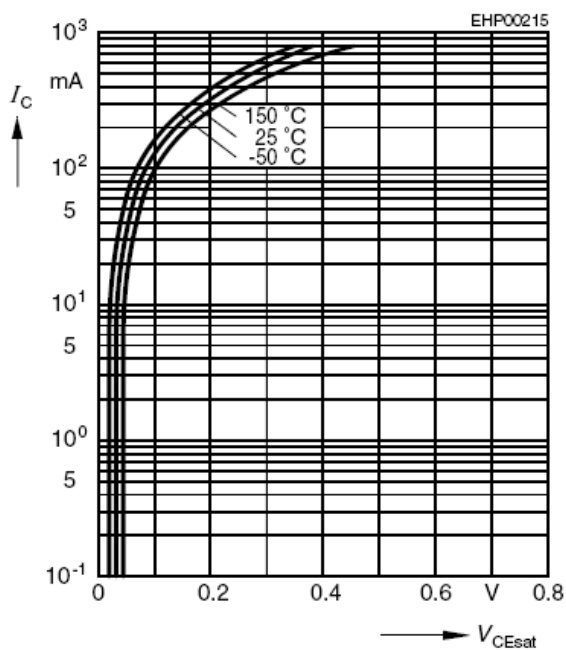
Base-emitter saturation voltage

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



Collector-emitter saturation voltage

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



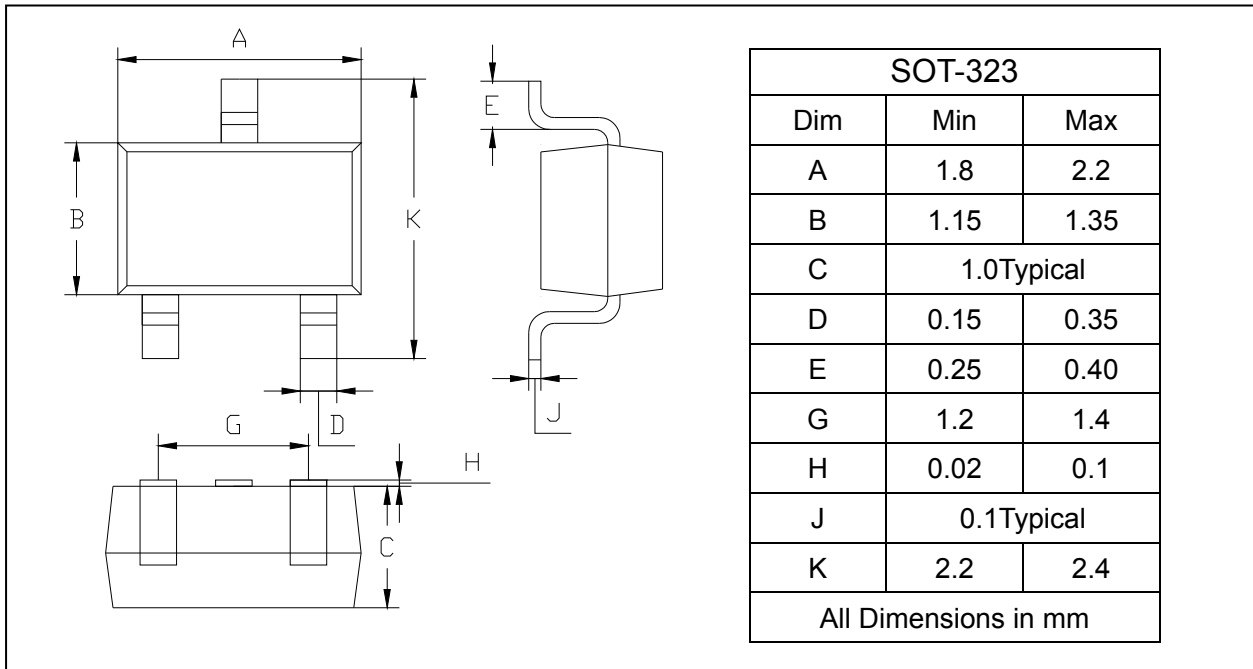
PNP Silicon Epitaxial Planar Transistor

BC807W

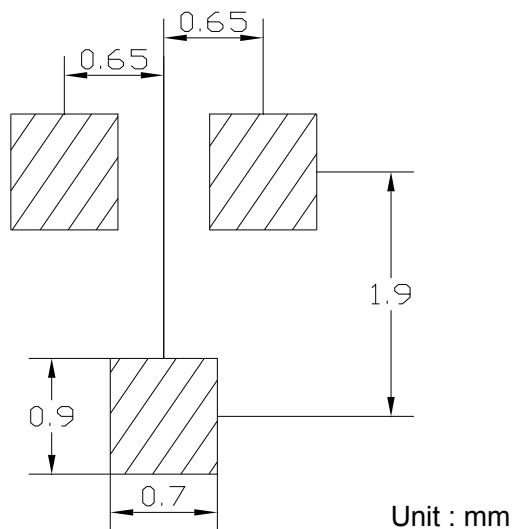
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BC807W	SOT-323	3000/Tape&Reel