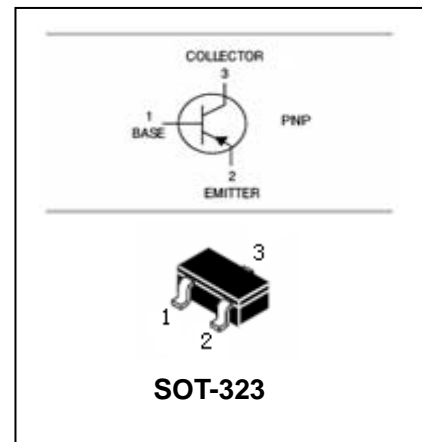


## PNP Silicon Epitaxial Planar Transistor

## 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 <sub>CBO</sub>	Collector-Base Voltage	-50	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-45	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-500	mA
I <sub>CM</sub>	Peak Collector Current	-1	A
I <sub>B</sub>	Base Current	-0.1	A
I <sub>BM</sub>	Peak Base Current	-0.2	A
P <sub>C</sub>	Collector Dissipation	250	mW
T <sub>J</sub> , T <sub>stg</sub>	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	$\mu A$
		$V_{CB}=-20V, I_E=0, T_A=150^\circ C$			-50	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-4V, I_B=0$			-0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=-1V, I_C=-100mA$ BC807-16W	100	160	250	
		BC807-25W BC807-40W	160 250	250 350	400 600	
		$V_{CE}=-1V, I_C=-300mA$ BC807-16W	60			
		BC807-25W BC807-40W	100 170			
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



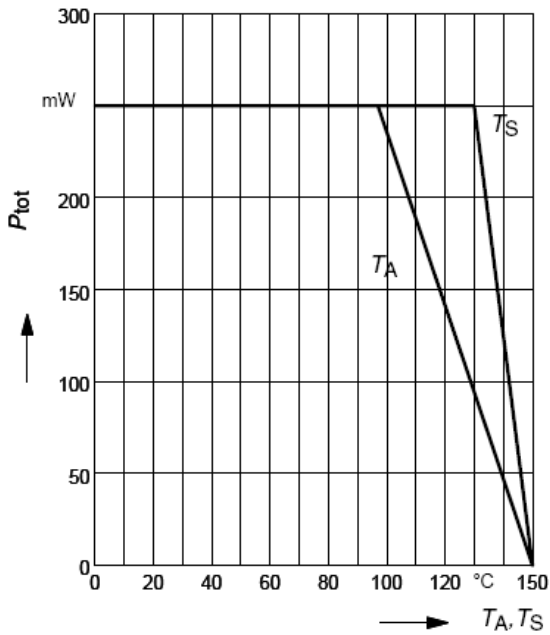
**PNP Silicon Epitaxial Planar Transistor**

**BC807W**

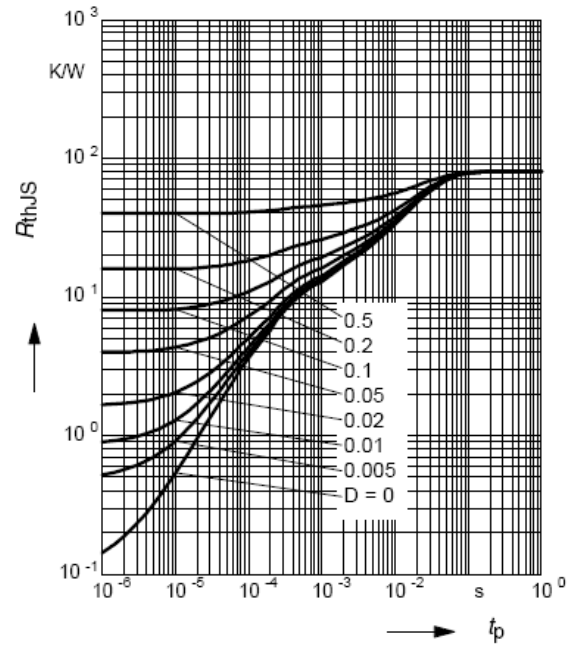
TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified

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

\* Package mounted on epoxy

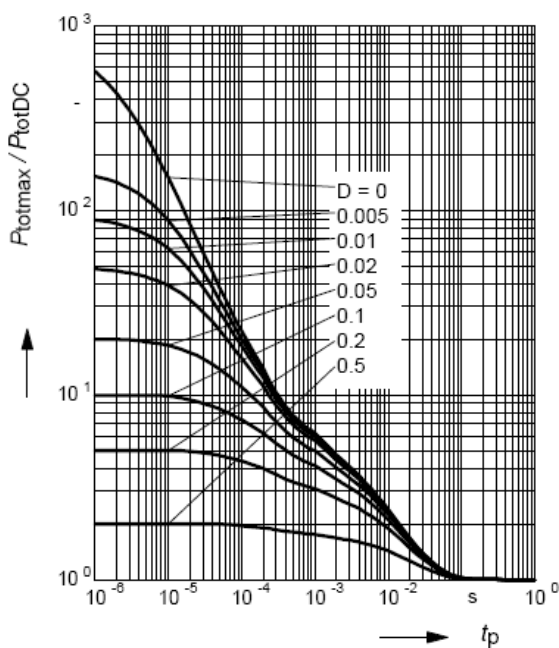


**Permissible Pulse Load  $R_{\text{thJS}} = f(t_p)$**



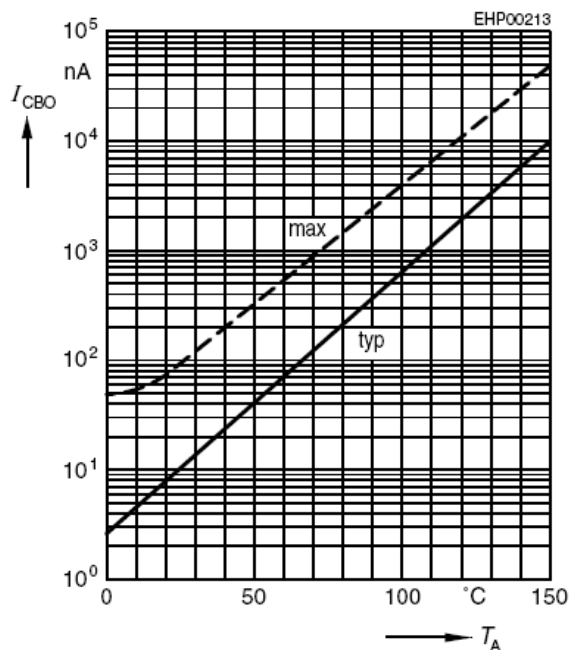
**Permissible Pulse Load**

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



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

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

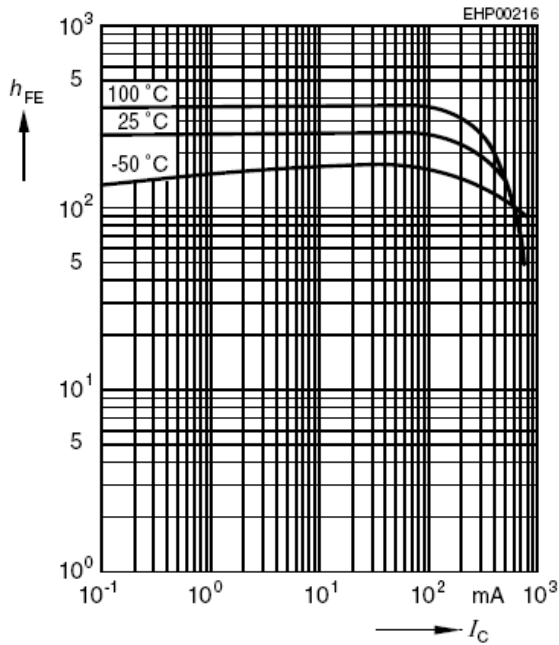


**PNP Silicon Epitaxial Planar Transistor**

**BC807W**

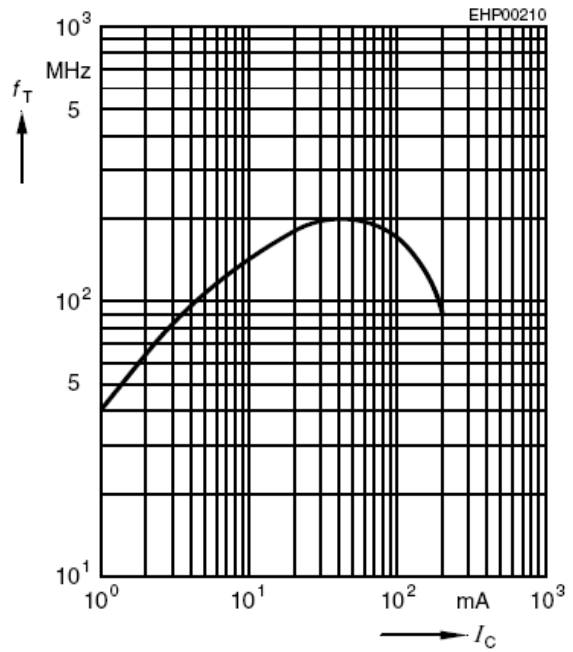
**DC current gain  $h_{FE} = f(I_C)$**

$V_{CE} = 1V$



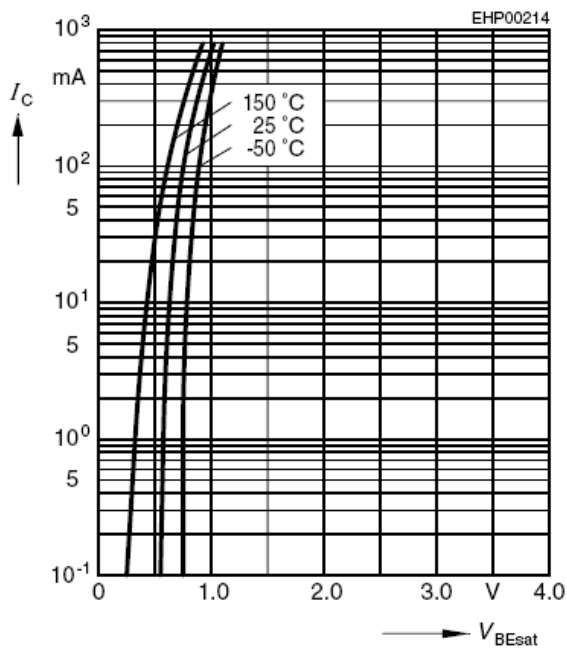
**Transition frequency  $f_T = f(I_C)$**

$V_{CE} = 5V$



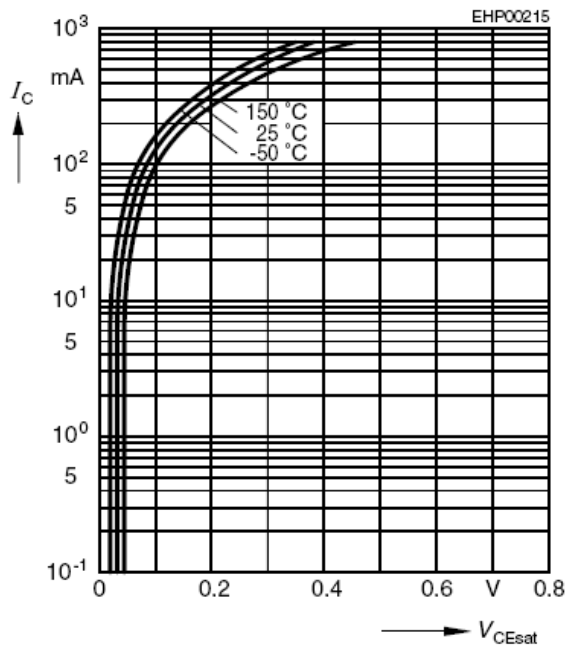
**Base-emitter saturation voltage**

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



**Collector-emitter saturation voltage**

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



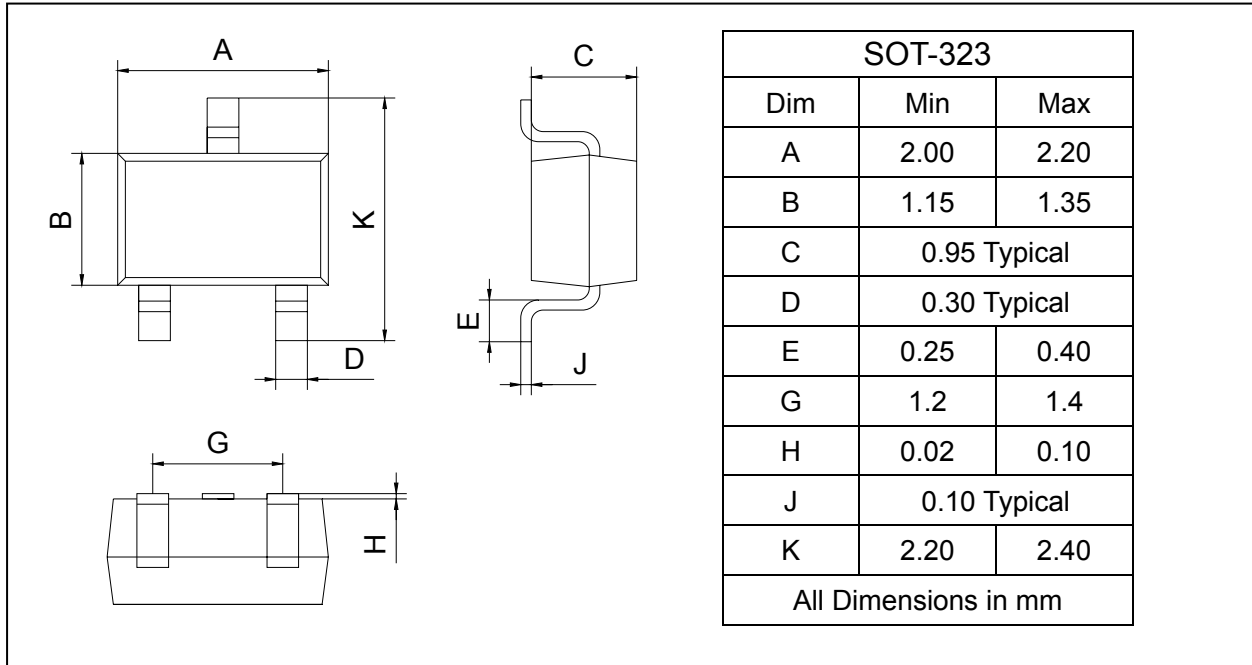
**PNP Silicon Epitaxial Planar Transistor**

**BC807W**

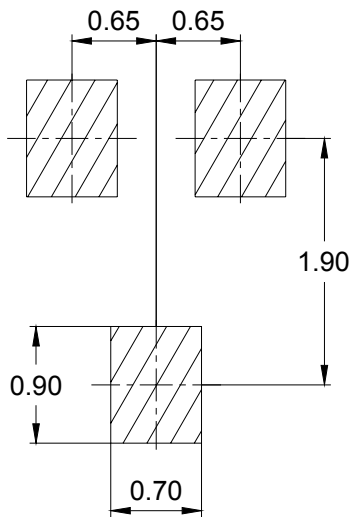
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-323



**SOLDERING FOOTPRINT**



Unit : mm

**PACKAGE INFORMATION**

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