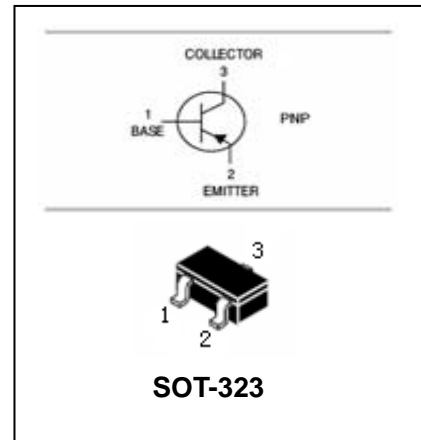


### FEATURES

- 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.	Package Code
BC807-16W/25W/40W	SOT-323

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

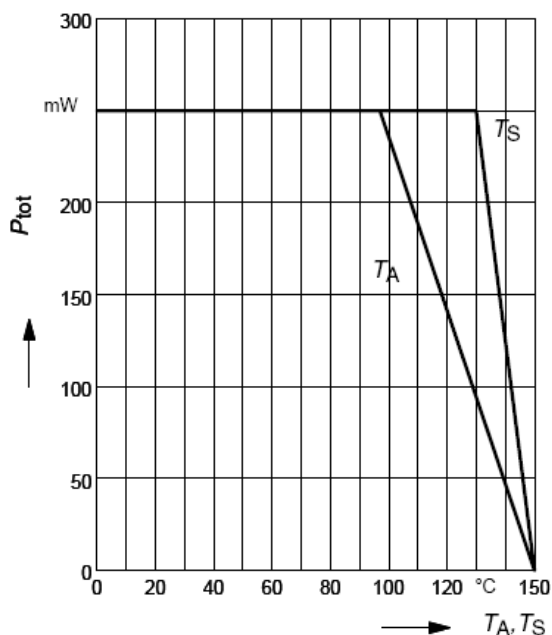
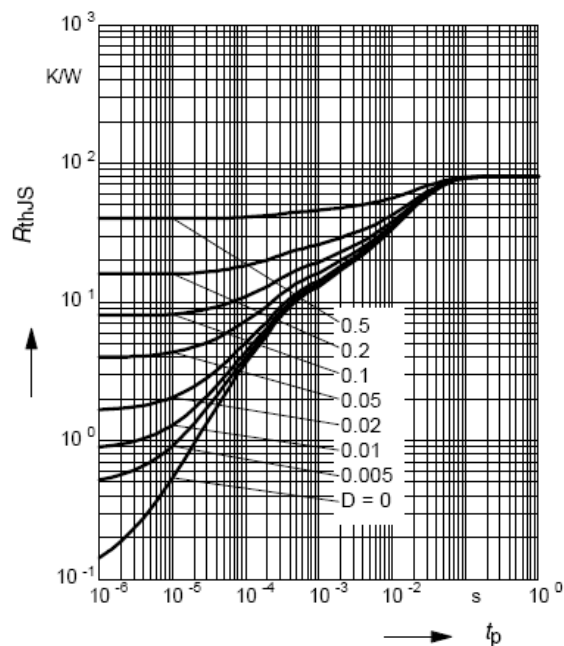
Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	-50	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-45	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-500	mA
I <sub>CM</sub>	Peak Collector Current	-1	A
I <sub>B</sub>	Base Current	-0.1	A
I <sub>BM</sub>	Peak Base Ccurrent	-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

**ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

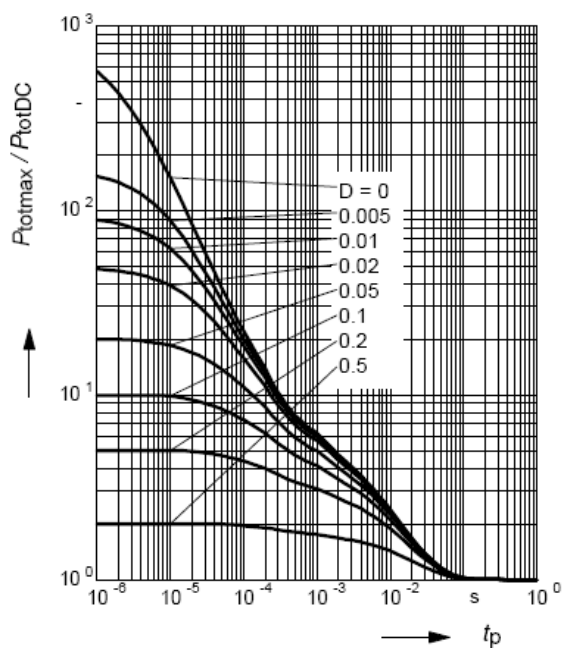
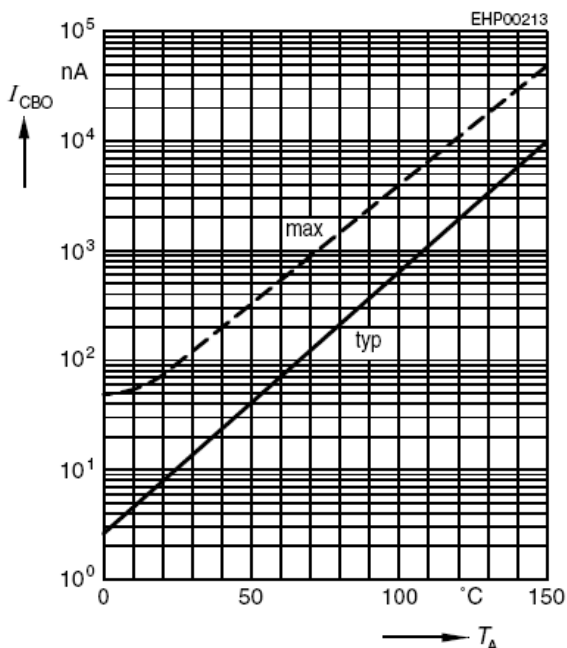
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA, I_B=0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-20V, I_E=0$			-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 BC807-25W BC807-40W	60 100 170			
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

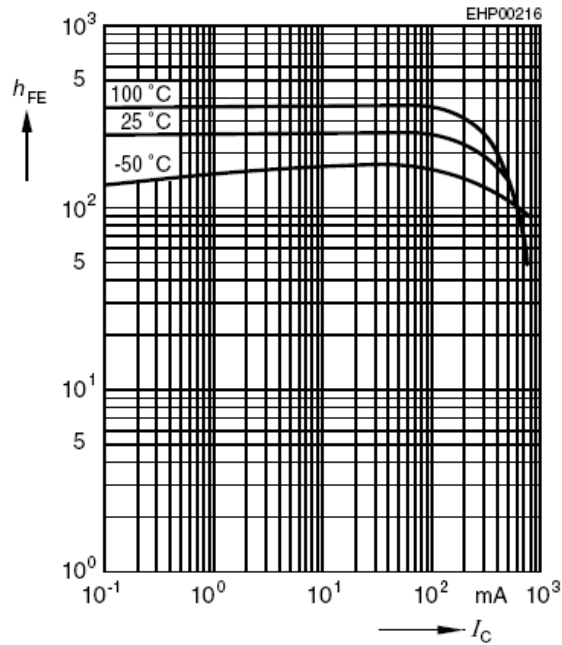
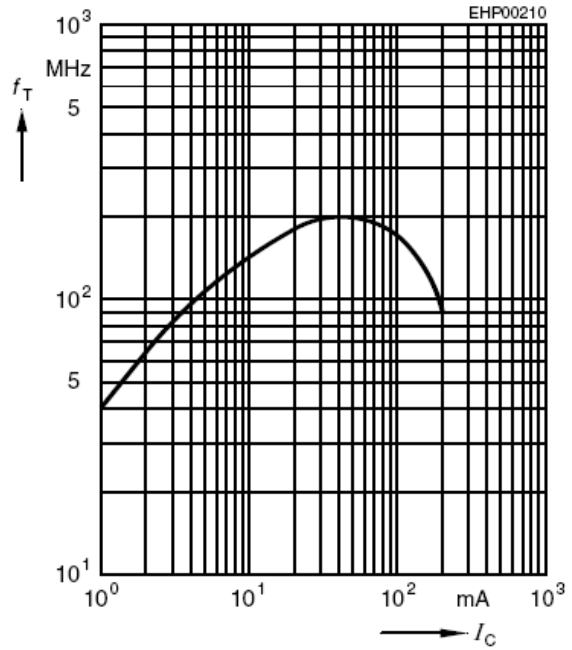
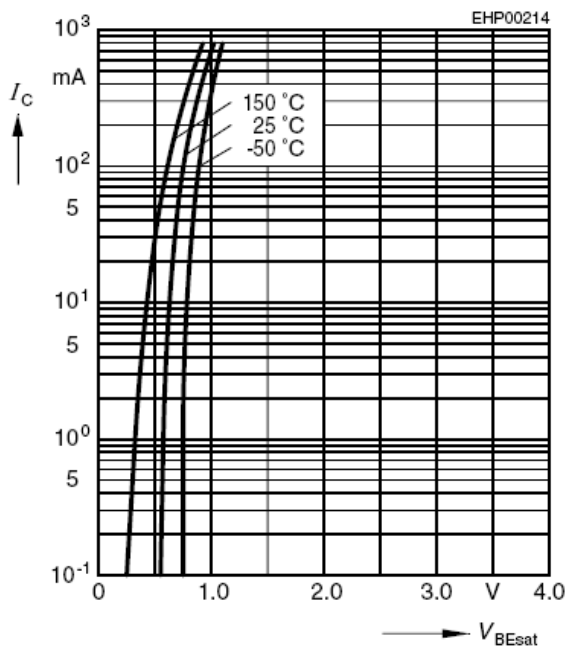
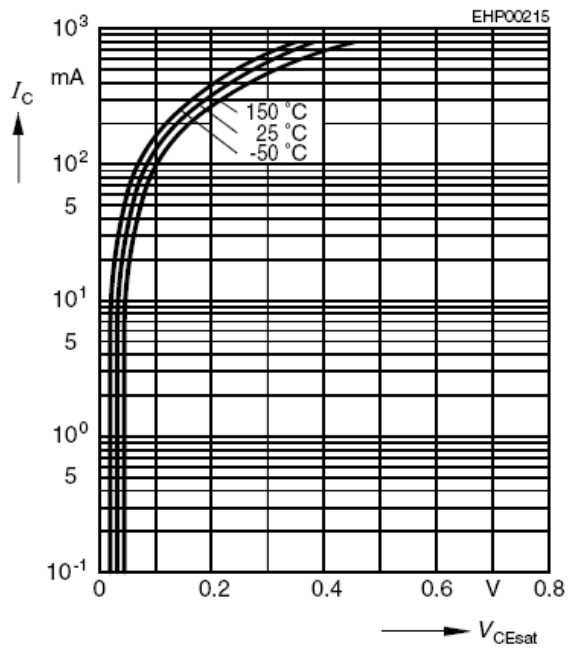
**TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified**
**Total power dissipation  $P_{\text{tot}} = f(T_A^*; T_S)$** 

\* Package mounted on epoxy


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

**Permissible Pulse Load**

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

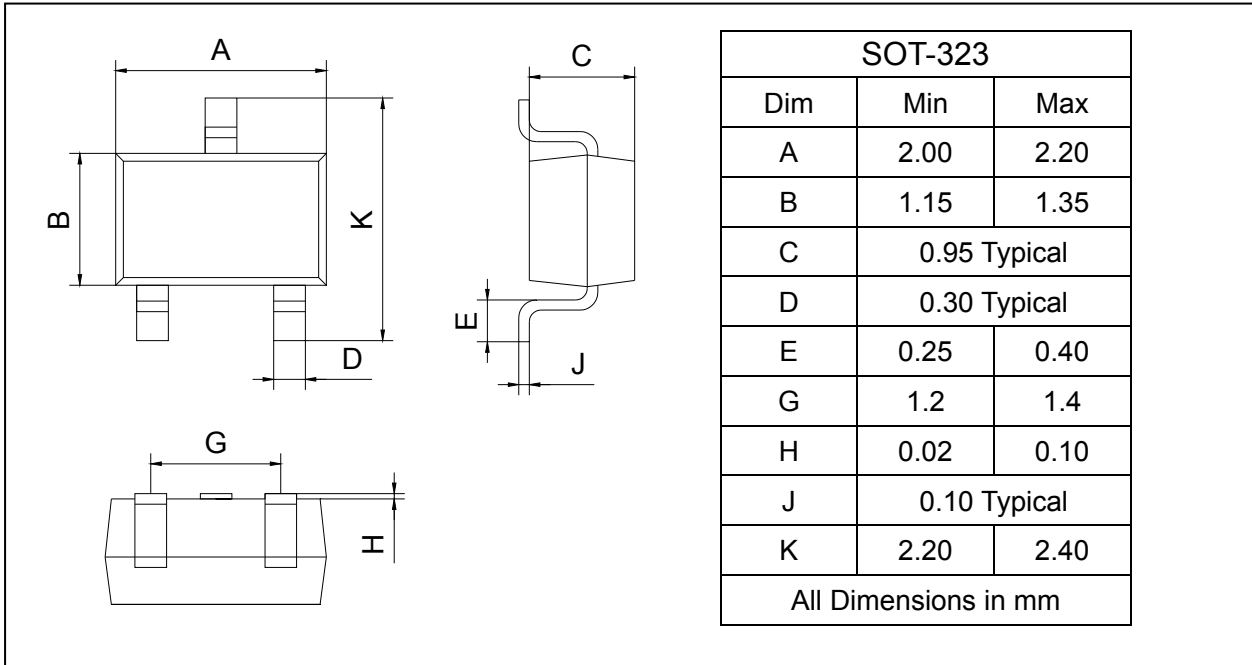
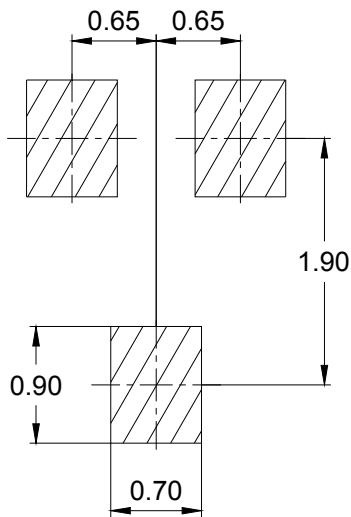

**Collector cutoff current  $I_{\text{CBO}} = f(T_A)$** 
 $V_{\text{CB}} = 25\text{V}$ 


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


**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-323


**SOLDERING FOOTPRINT**

**PACKAGE INFORMATION**

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

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