



BC807-16W SERIES

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE 45 Volts **POWER** 300 mWatts

SOT-323 Unit : inch(mm)

FEATURES

- General purpose amplifier applications
- PNP epitaxial silicon, planar design
- Collector current $I_C = 500\text{mA}$
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: SOT-323, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Apporx. Weight: 0.0001 ounce, 0.005 gram
- Device Marking : BC807-16W : 7S
BC807-25W : 7V
BC807-40W : 7W

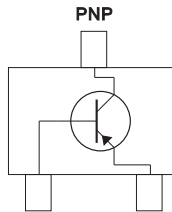
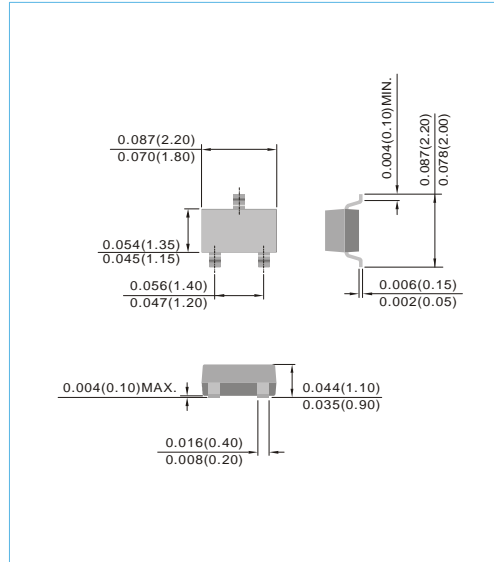


Fig.35



MECHANICAL DATA

PARAMETER	SYMBOL	Value	UNIT
Collector-Emitter Voltage	V_{CEO}	-45	V
Collector-Base Voltage	V_{CBO}	-50	V
Emitter-Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-500	mA
Total Power Dissipation (Note 1)	P_{TOT}	300	mW
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	°C

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	Value	UNIT
Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	420	°C/W

Note 1 : Transistor mounted on FR-5 board minimum pad mounting conditions.



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ELECTRICAL CHARACTERISTICS(T_J=25°C,unless otherwise notes)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	
Collector-Emitter Breakdown Voltage (I _C =-10mA, I _B =0)	V _{(BR)CEO}	-45	-	-	V	
Collector-Base Breakdown Voltage (V _{EB} =0V, I _C =-10μA)	V _{(BR)CBO}	-50	-	-	V	
Emitter-Base Breakdown Voltage (I _E =-1μA, I _C =0)	V _{(BR)EBO}	-5.0	-	-	V	
Emitter-Base Cutoff Current (V _{EB} =-5V)	I _{EBO}	-	-	-100	nA	
Collector-Base Cutoff Current (V _{CB} =-20V, I _E =0)	I _{CBO}	T _J =25°C	-	-	-100	nA
		T _J =150°C	-	-	-5.0	μA
DC Current Gain (I _C =-100mA, V _{CE} =-1V)	h _{FE}	BC807-16W	100	-	250	-
		BC807-25W	160	-	400	
		BC807-40W	250	-	600	
(I _C =-500mA, V _{CE} =-1V)			40	-	-	
Collector-Emitter Saturation Voltage (I _C =-500mA, I _B =-50mA)	V _{CE(SAT)}	-	-	-0.7	V	
Base-Emitter Voltage (I _C =-500mA, V _{CE} =-1.0V)	V _{BE(ON)}	-	-	-1.2	V	
Collector-Base Capacitance (V _{CB} =-10V, I _E =0, f=1MHz)	C _{CB0}	-	7.0	-	pF	
Current Gain-Bandwidth Product (I _C =-10mA, V _{CE} =-5V, f=100MHz)	f _T	100	-	-	MHz	



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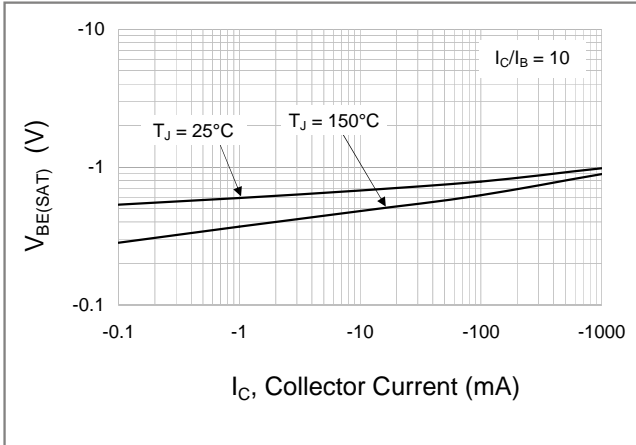


Fig.1 Base-Emitter Saturation Voltage

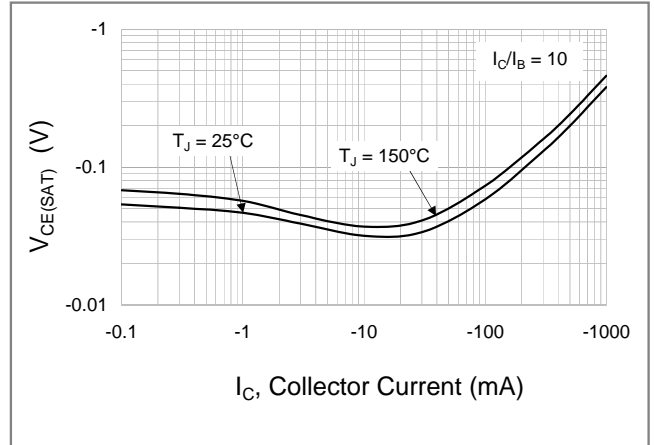


Fig.2 Collector-Emitter Saturation Voltage

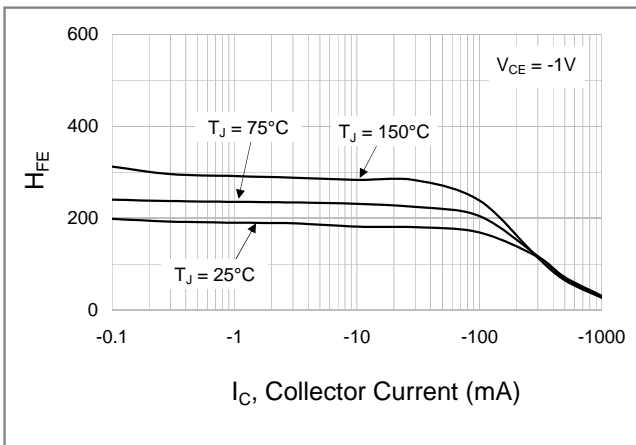


Fig.3 BC807-16W: Typical DC Current Gain

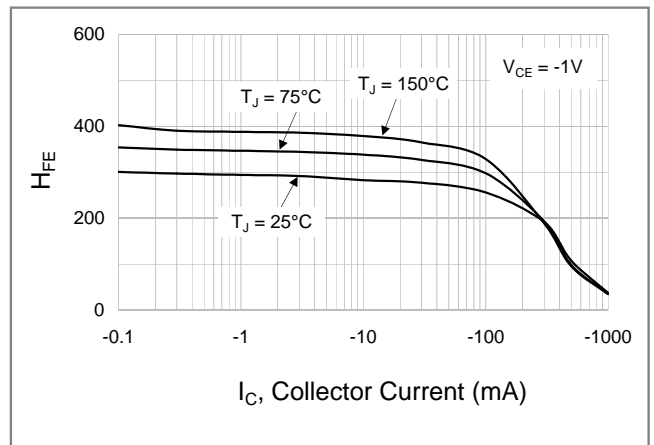


Fig.4 BC807-25W: Typical DC Current Gain

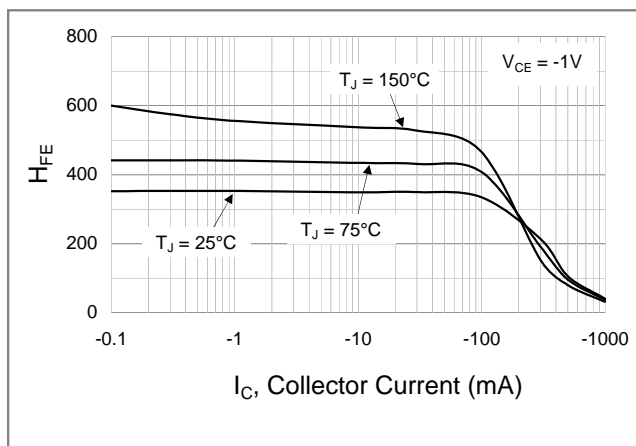


Fig.5 BC807-40W: DC Current Gain

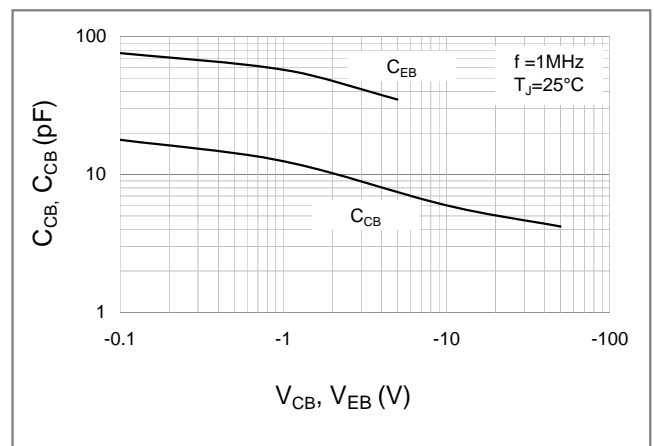


Fig.6 Typical Capacitance

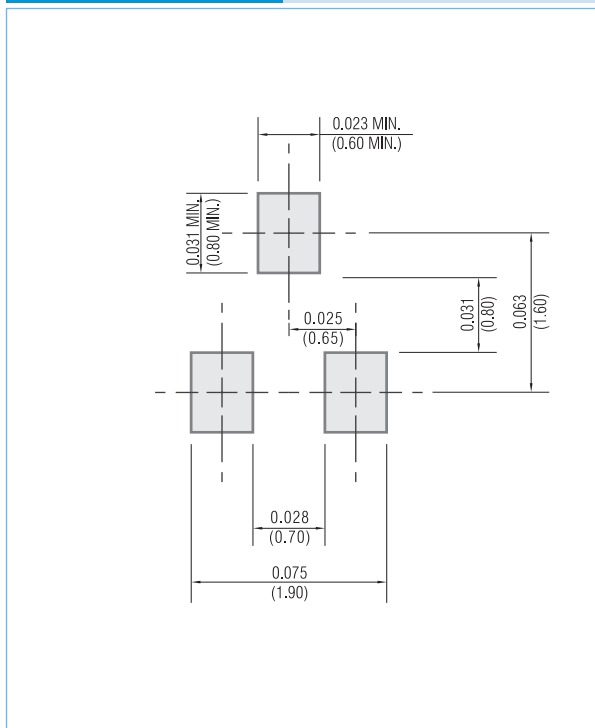


BC807-16W SERIES

MOUNTING PAD LAYOUT

SOT-323

Unit: inch (mm)



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

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