BC807-16W SERIES

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE 45 Volts **POWER** 300 mWatts

FEATURES

- General purpose amplifier applications
- PNP epitaxial silicon, planar design
- Collector current I_C = 500mA
- 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

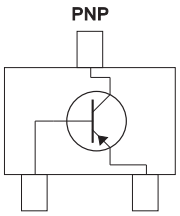
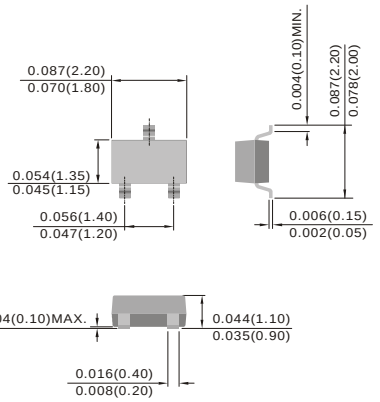


Fig.35

SOT-323 Unit : inch(mm)



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,Ic=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)	T_J =25°C	I_{CBO}	-	-	-100	nA
	T_J=150°C		-		-5.0	μA
DC Current Gain (I_C=-100mA,V_{CE}=-1V)	BC807-16W	h_{FE}	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-Emitte 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_{CBO}	-	7.0	-	pF
Current Gain-Bandwidth Product (I_C=-10mA,V_{CE}=-5V,f=100MHz)		f_T	100	-	-	MHz

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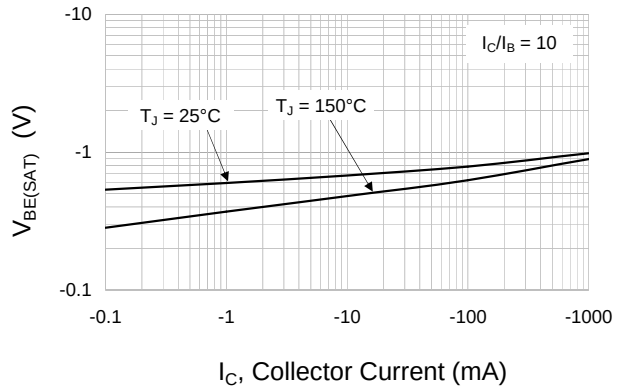

Fig.1 Base-Emitter Saturation Voltage

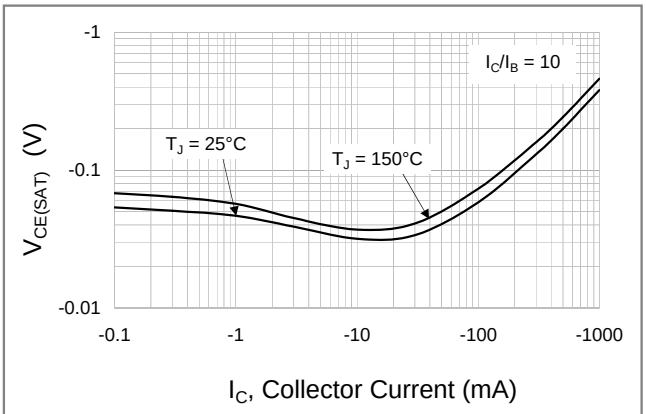

Fig.2 Collector-Emitter Saturation Voltage

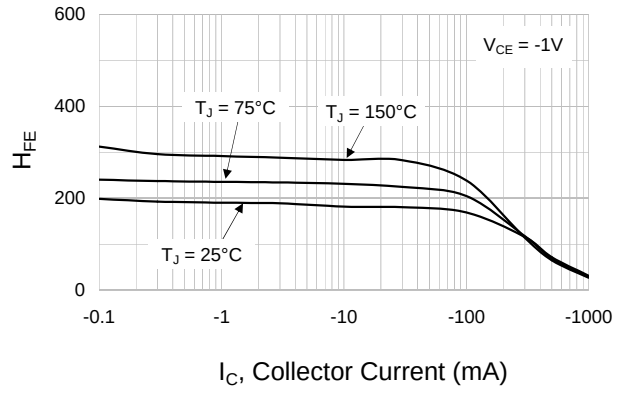

Fig.3 BC807-16W: Typical DC Current Gain

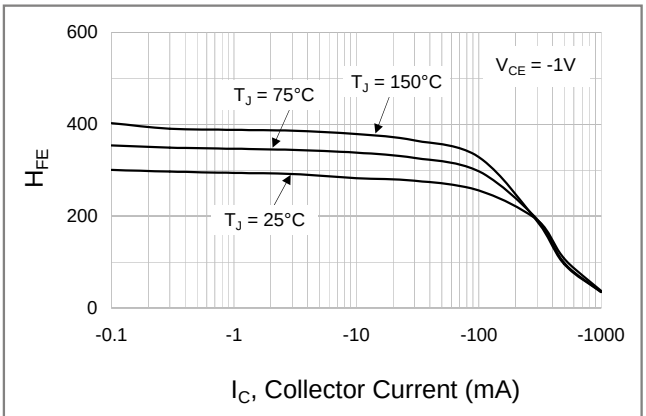

Fig.4 BC807-25W: Typical DC Current Gain

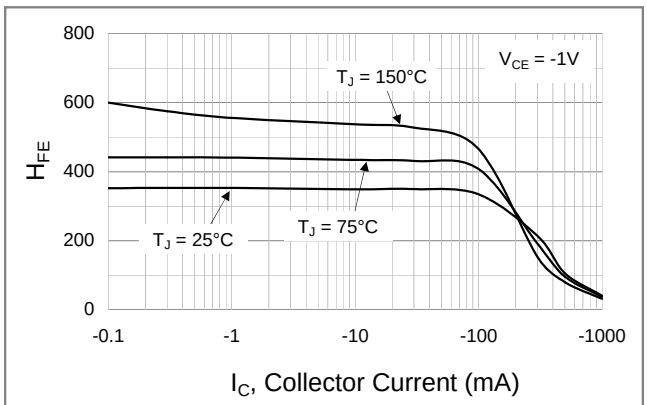

Fig.5 BC807-40W: DC Current Gain

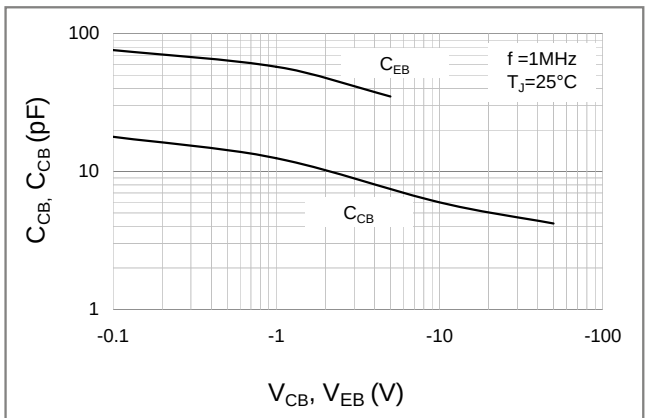

Fig.6 Typical Capacitance

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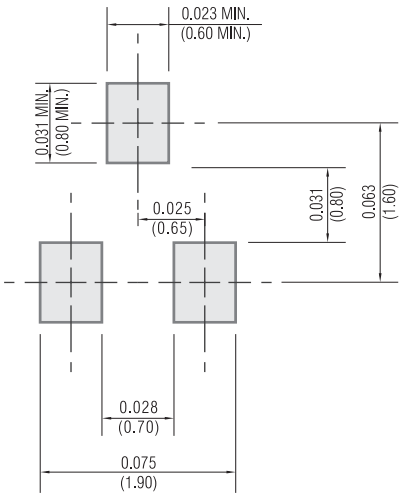
MOUNTING PAD LAYOUT

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