



BC807 SERIES

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE 45 Volts **POWER** 225 mWatts

SOT-23

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-23, Plastic

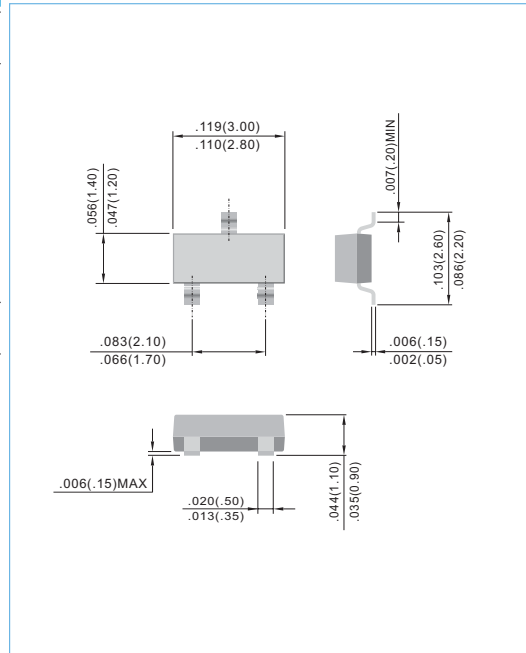
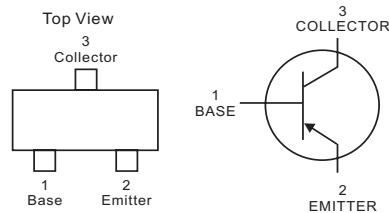
Terminals: Solderable per MIL-STD-750, Method 2026

Approx. Weight: 0.008 gram

Device Marking : BC807-16 : 7A

BC807-25 : 7B

BC807-40 : 7C



MAXIMUM RATINGS

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
Max Power Dissipation (Note 1)	P_{TOT}	225	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	$R_{\theta JA}$	556	°C/W

Note 1 : Transistor mounted on FR-4 board 70x60x1mm.



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-Emitter Breakdown Voltage (V _{EB} =0V, I _C =-100uA)	V _{(BR)CES}	-50	-	-	V
Emitter-Base Breakdown Voltage (I _E =-10uA, I _C =0)	V _{(BR)EBO}	-5.0	-	-	V
Emitter-Base Cutoff Current (V _{EB} =-4V)	I _{EBO}	-	-	-100	nA
Collector-Base Cutoff Current (V _{CB} =-20V, I _E =0)	I _{CBO}	T _J =25°C	-	-0.1	nA
		T _J =150°C	-	-5.0	uA
DC Current Gain (I _C =-100mA, V _{CE} =-1V)	h _{FE}	BC807-16	-	250	-
		BC807-25	100	400	-
(I _C =-500mA, V _{CE} =-1V)		250	600	-	-
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

ELECTRICAL CHARACTERISTICS CURVES

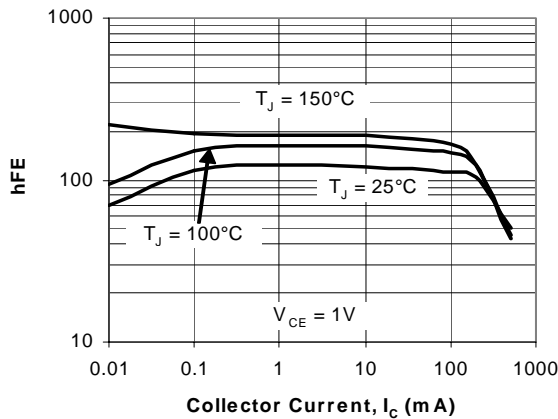


Fig. 1. BC807-16 Typical h_{FE} vs. I_C

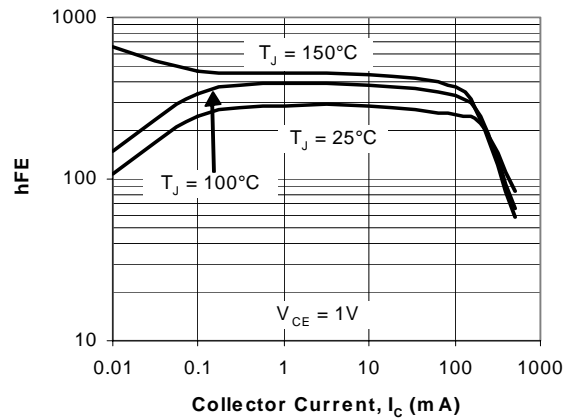


Fig. 2. BC807-25 Typical h_{FE} vs. I_C

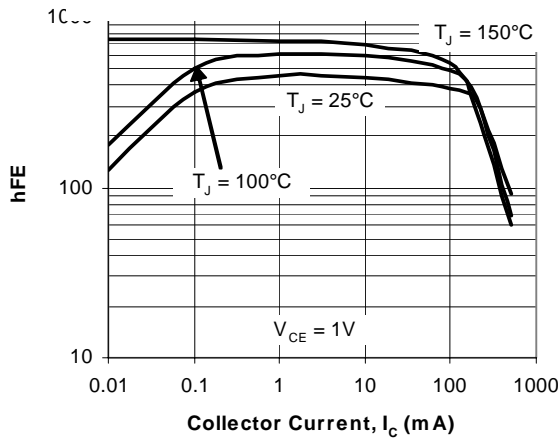


Fig. 3. BC807-40 Typical h_{FE} vs. I_C

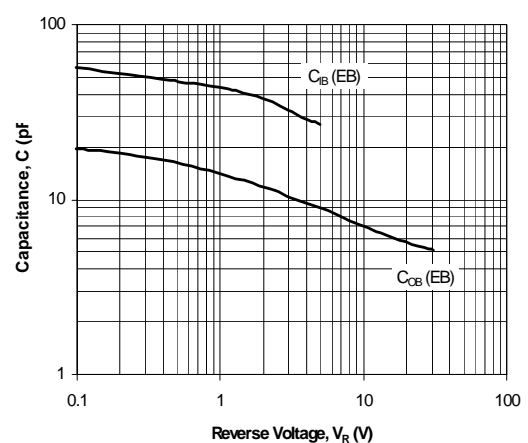
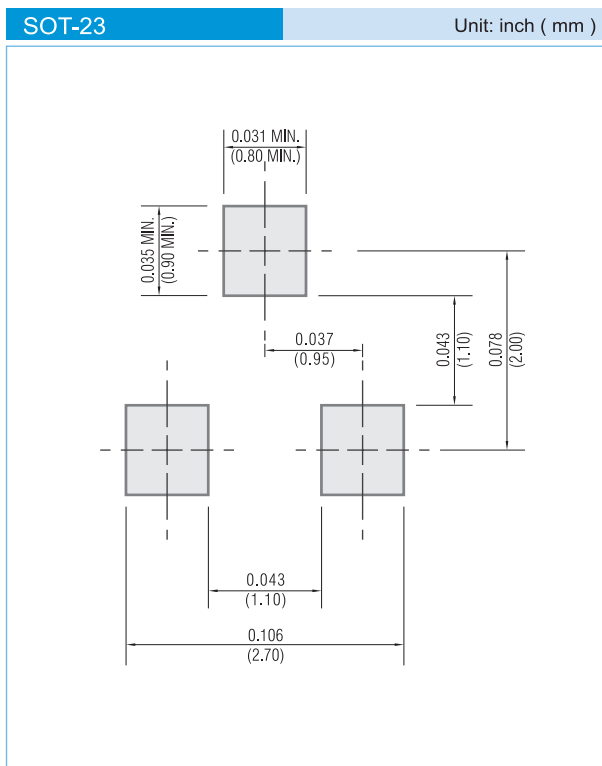


Fig. 4. Typical Capacitances



MOUNTING PAD LAYOUT



ORDER INFORMATION

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

LEGAL STATEMENT

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