

BC807-16~BC807-40

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE	45 Volt	POWER	330 mWatt
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SOT-23 Unit : inch(mm)

FEATURES

- General purpose amplifier applications
- PNP epitaxial silicon, planar design
- Collector current $I_C = 500\text{mA}$
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Apporx. Weight: 0.0003 ounce, 0.0084 gram
- Device Marking : BC807-16 : 7A
BC807-25 : 7B
BC807-40 : 7C

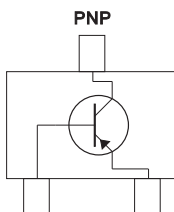
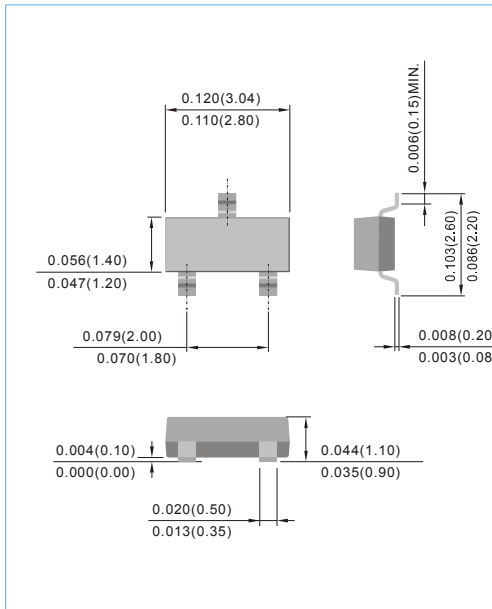


Fig.35



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	V
Collector Current - Continuous	I_C	-500	mA
Peak Collector Current	I_{CM}	-1000	mA
Total Power Dissipation (Note 1)	P_{TOT}	330	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)	$R_{\theta JA}$	375	°C/W
Thermal Resistance Junction to Lead	$R_{\theta JL}$	220	°C/W

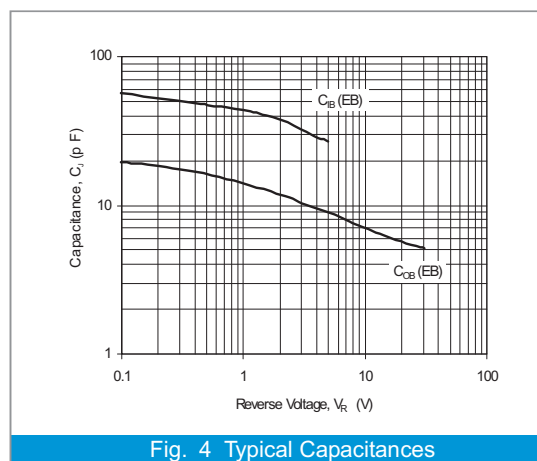
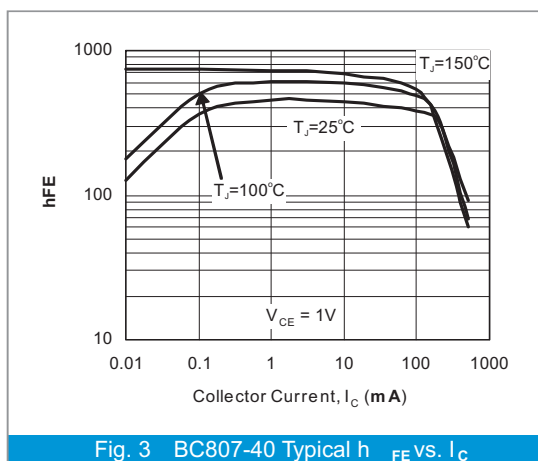
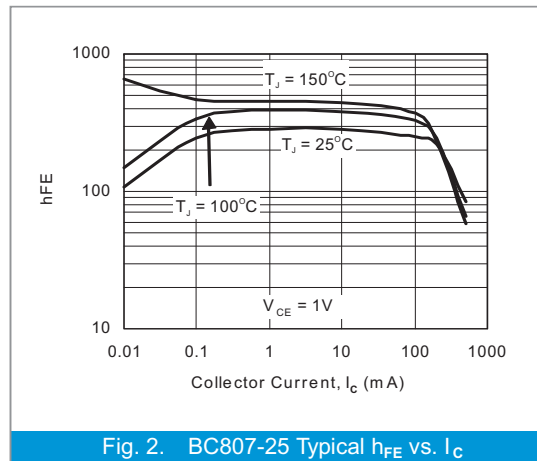
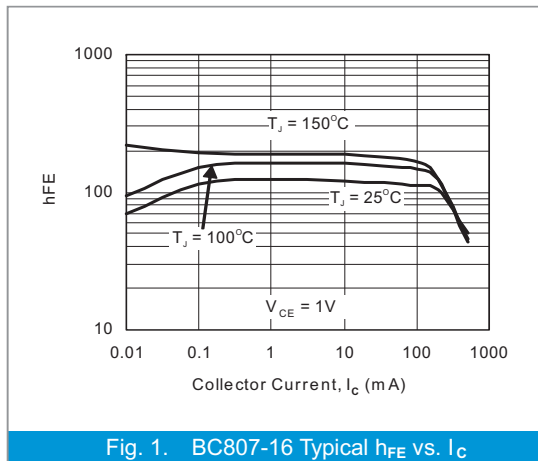
NOTES : 1. Transistor mounted on FR-5 board minimum pad mounting conditions.

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ELECTRICAL CHARACTERISTICS($T_J=25^\circ\text{C}$, unless otherwise notes)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Breakdown Voltage ($I_C=-10\text{mA}$, $I_E=0$)	$V_{(BR)CEO}$	-45	-	-	V
Collector-Base Breakdown Voltage ($V_{EB}=0\text{V}$, $I_C=-10\mu\text{A}$)	$V_{(BR)CBO}$	-50	-	-	V
Emitter-Base Breakdown Voltage ($I_E=-1\mu\text{A}$, $I_C=0$)	$V_{(BR)EBO}$	-5.0	-	-	V
Emitter-Base Cutoff Current ($V_{EB}=-5\text{V}$)	I_{EBO}	-	-	-100	nA
Collector-Base Cutoff Current ($V_{CB}=-20\text{V}$, $I_E=0$)	I_{CBO}	-	-	-100	nA
				-5.0	μA
DC Current Gain ($I_C=-100\text{mA}$, $V_{CE}=-1\text{V}$)	h_{FE}	100	-	250	-
		160	-	400	
($I_C=-500\text{mA}$, $V_{CE}=-1\text{V}$)	h_{FE}	250	-	600	
		40	-	-	
Collector-Emitter Saturation Voltage ($I_C=-500\text{mA}$, $I_E=-50\text{mA}$)	$V_{CE(SAT)}$	-	-	-0.7	V
Base-Emitter Voltage ($I_C=-500\text{mA}$, $V_{CE}=-1.0\text{V}$)	$V_{BE(ON)}$	-	-	-1.2	V
Collector-Base Capacitance ($V_{CB}=-10\text{V}$, $I_E=0$, $f=1\text{MHz}$)	C_{CBO}	-	7.0	-	pF
Current Gain-Bandwidth Product ($I_C=-10\text{mA}$, $V_{CE}=-5\text{V}$, $f=100\text{MHz}$)	f_T	100	-	-	MHz

ELECTRICAL CHARACTERISTICS

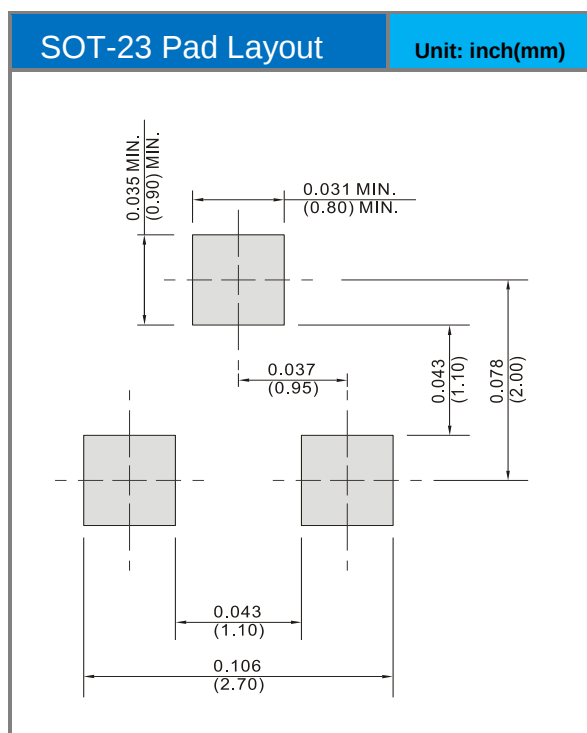


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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
BC807-16	SOT-23	3K pcs / 7" reel	7A
BC807-16	SOT-23	12K pcs / 13" reel	7A
BC807-25	SOT-23	3K pcs / 7" reel	7B
BC807-25	SOT-23	12K pcs / 13" reel	7B
BC807-40	SOT-23	3K pcs / 7" reel	7C
BC807-40	SOT-23	12K pcs / 13" reel	7C

Mounting Pad Layout



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