



# BC807-16~BC807-40

## PNP GENERAL PURPOSE TRANSISTORS

**VOLTAGE** 45 Volt **POWER** 330 mWatt

**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

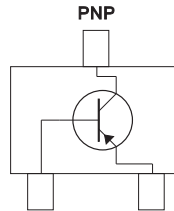
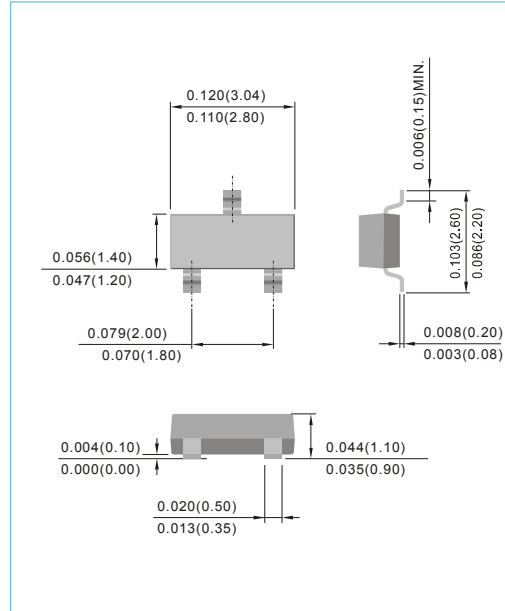


Fig.35



### 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.

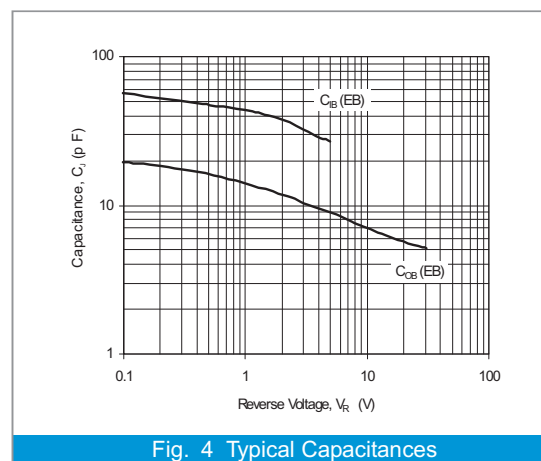
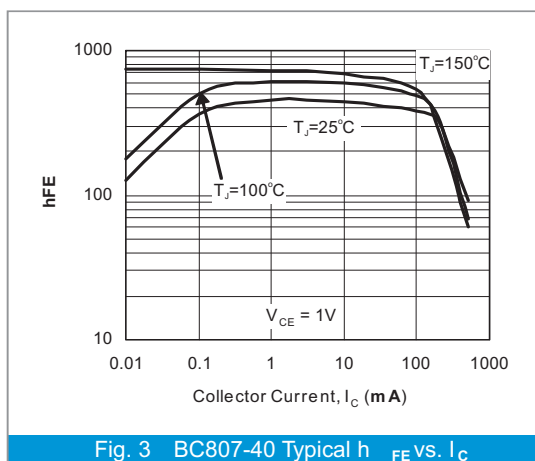
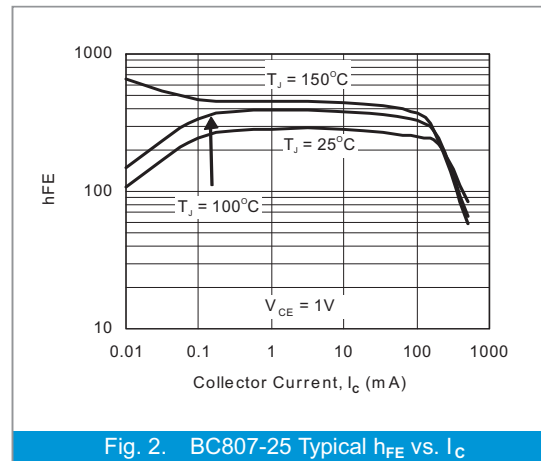
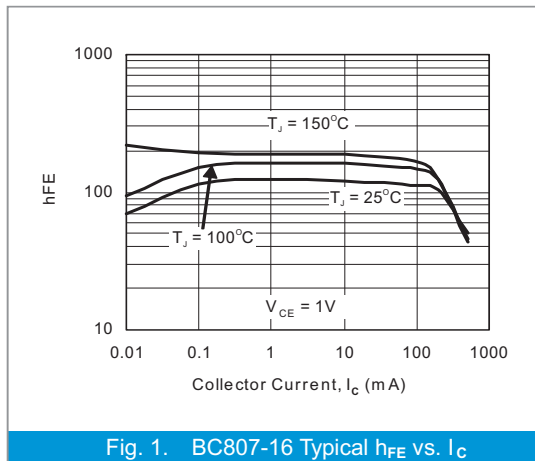


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### ELECTRICAL CHARACTERISTICS(T<sub>J</sub>=25°C,unless otherwise notes)

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

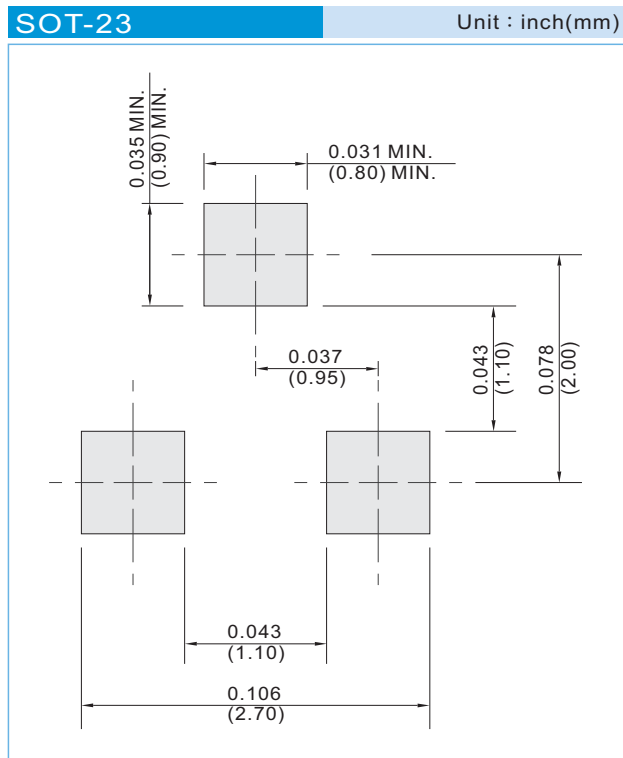
### ELECTRICAL CHARACTERISTICS





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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

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



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### Part No\_packing code\_Version

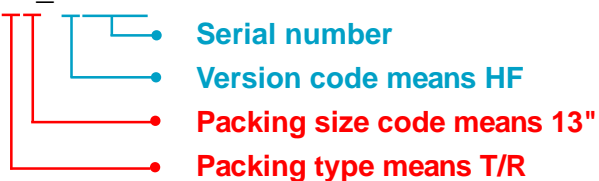
BC807-16\_R1\_00001

BC807-16\_R2\_00001

For example :

**RB500V-40\_R2\_00001**

Part No.



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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