



BC807-16W SERIES

PNP GENERAL PURPOSE TRANSISTORS

VOLTAGE 45 Volt **POWER** 300 mWatt

FEATURES

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

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

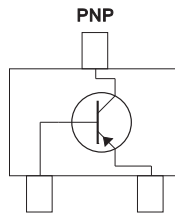
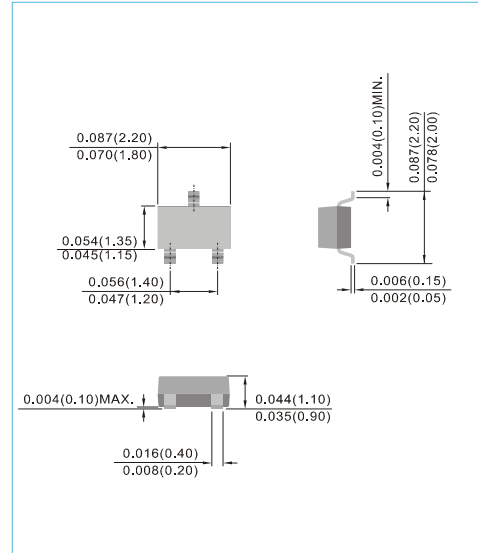


Fig.35

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	V
Collector Current - Continuous	I_C	-500	mA
Peak Collector Current	I_{CM}	-1000	mA
Base Current - Peak	I_{BM}	-200	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 ($T_J=25^\circ\text{C}$, unless otherwise notes)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	
Collector-Emitter Breakdown Voltage ($I_C=-10\text{mA}$, $I_B=0$)	$V_{(BR)CEO}$	-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}	$T_J=25^\circ\text{C}$	-	-	-100	nA
		$T_J=150^\circ\text{C}$	-	-	-5.0	μA
DC Current Gain ($I_C=-100\text{mA}$, $V_{CE}=-1\text{V}$)	h_{FE}	BC807-16W	100	-	250	-
		BC807-25W	160	-	400	
		BC807-40W	250	-	600	
($I_C=-500\text{mA}$, $V_{CE}=-1\text{V}$)			40	-	-	
Collector-Emitter Saturation Voltage ($I_C=-500\text{mA}$, $I_B=50\text{mA}$)	$V_{CE(SAT)}$	-	-	-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	



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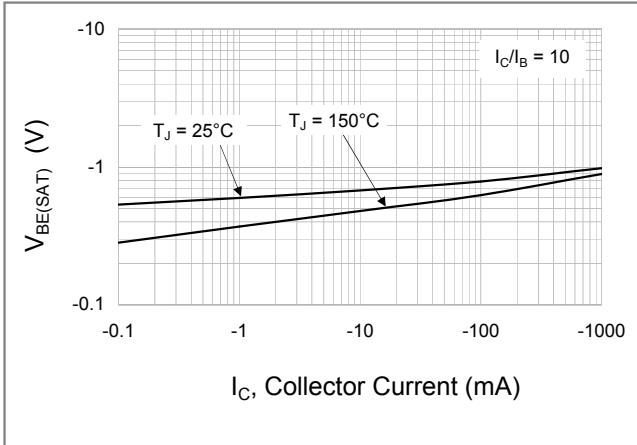


Fig.1 Base-Emitter Saturation Voltage

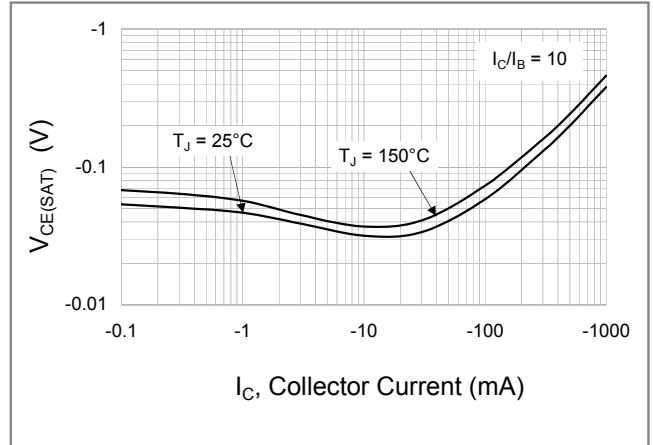


Fig.2 Collector-Emitter Saturation Voltage

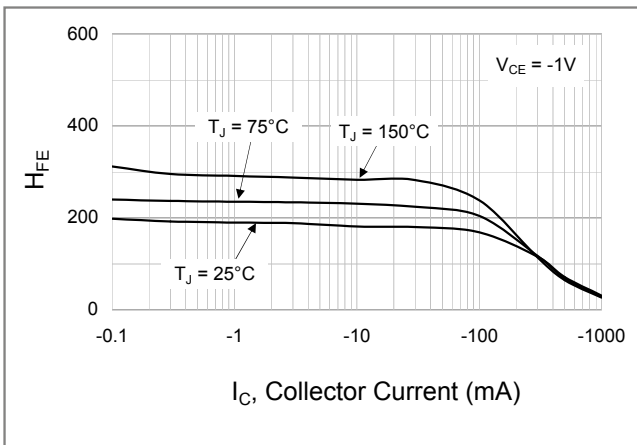


Fig.3 BC807-16W: Typical DC Current Gain

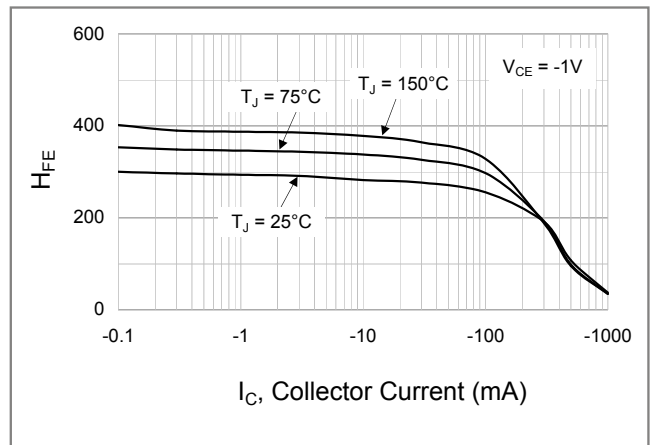


Fig.4 BC807-25W: Typical DC Current Gain

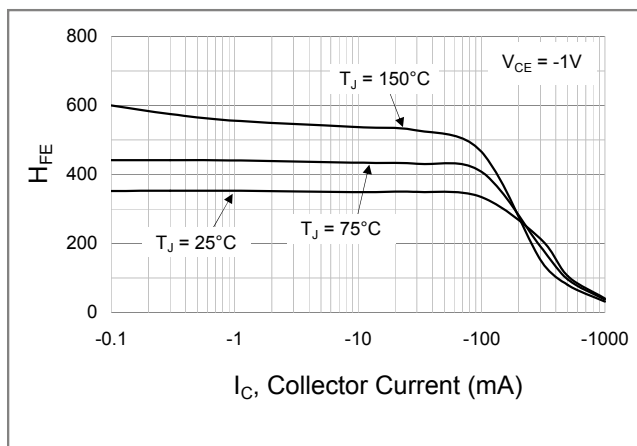


Fig.5 BC807-40W: DC Current Gain

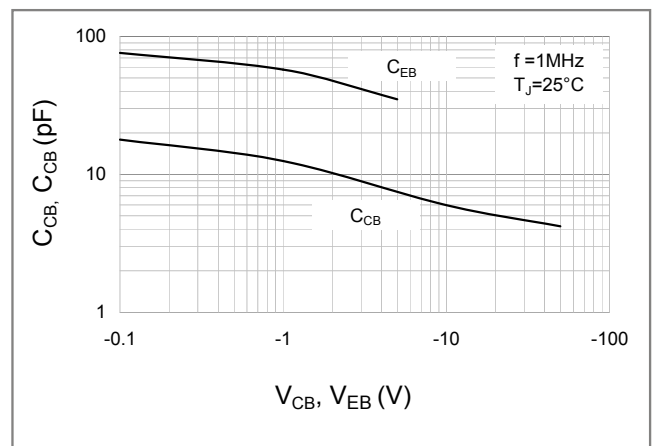
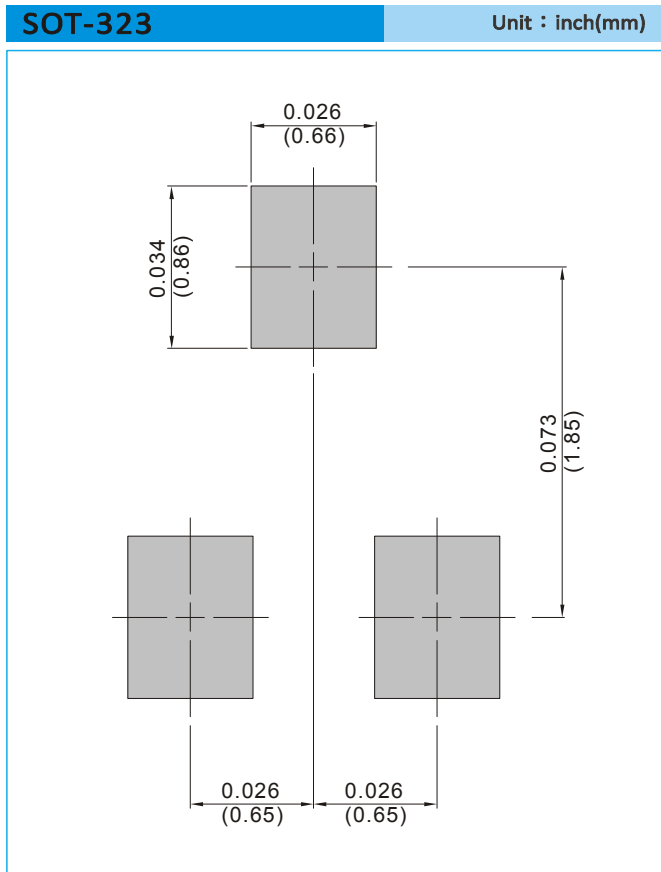


Fig.6 Typical Capacitance



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MOUNTING PAD LAYOUT



ORDER INFORMATION

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



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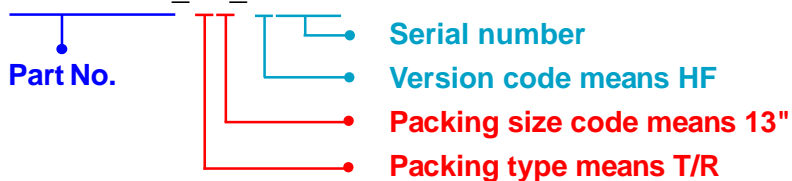
Part No_packing code_Version

BC807-16W_R1_00001

BC807-16W_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th 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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