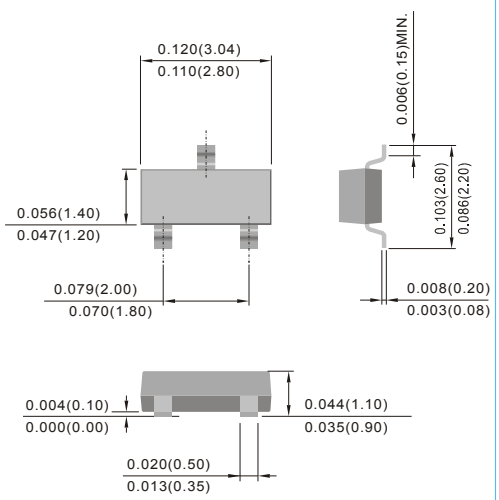
BC817 SERIES

NPN GENERAL PURPOSE TRANSISTORS

VOLTAGE 45 Volt **POWER** 330 mW

SOT-23 Unit : inch(mm)

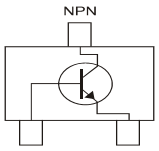


FEATURES

- General purpose amplifier applications
- NPN epitaxial silicon, planar design
- Collector current I_C = 500mA
- Lead free in compliance with EU RoHS 2011/65/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
- Approx. Weight: 0.0003 ounce, 0.0084 gram
- Device Marking: BC817-16 : 8A
  BC817-25 : 8B
  BC817-40 : 8C



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	V
Collector Current - Continuous	I_C	500	mA
Total Power Dissipation (NOTE)	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)	$R_{\theta JA}$	375	°C / W
Thermal Resistance Junction to Lead	$R_{\theta JL}$	220	°C / W

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

BC817 SERIES

ELECTRICAL CHARACTERISTICS (T_J=25°C,unless otherwise notes)

PARAMETER		SYMBOL	MIN.	TYP.	MAX.	UNIT
Collector-Emitter Breakdown Voltage (Ic=10mA, IB=0)		$V_{(BR)}CEO$	45	-	-	V
Collector-Base Breakdown Voltage (V_{EB}=0V, Ic=10μA)		$V_{(BR)}CBO$	50	-	-	V
Emitter-Base Breakdown Voltage (I_E=1μA, Ic=0)		$V_{(BR)}EBO$	5	-	-	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 T_J =150°C	I_{CBO}	- -	- -	100 5	nA μA
DC Current Gain (Ic=100mA, V_{CE}=1V) DC Current Gain (Ic=500mA, V_{CE}=1V)	BC817-16 BC817-25 BC817-40	h_{FE}	100 160 250 40	- - - -	250 400 600 -	-
Collector-Emitter Saturation Voltage (Ic=500mA, I_B=50mA)		$V_{CE(SAT)}$	-	-	0.7	V
Base-Emitte Voltage (Ic=500mA, V_{CE}=1V)		$V_{BE(ON)}$	-	-	1.2	V
Collector-Base Capacitance (V_{CB}=10V, I_E=0, f=1MHz)		C_{CBO}	-	7	-	pF
Current Gain-Bandwidth Product (Ic=10mA, V_{CE}=5V, f=100MHz)		f_T	100	-	-	MHz

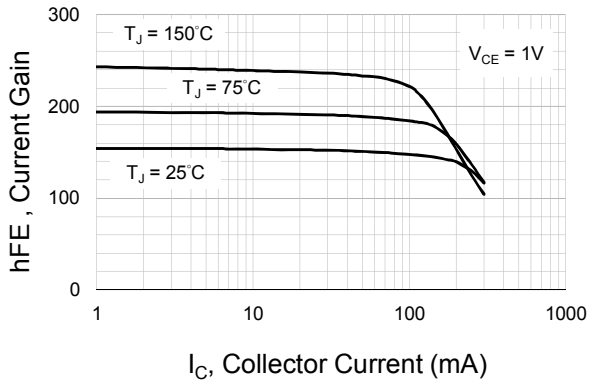


Fig.1 BC817-16 Typical hfe vs. Ic

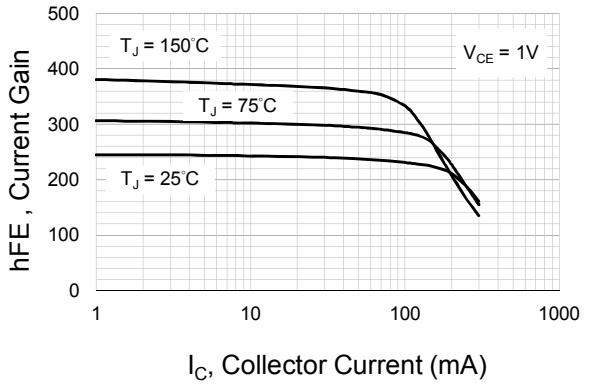


Fig.2 BC817-25 Typical hfe vs. Ic

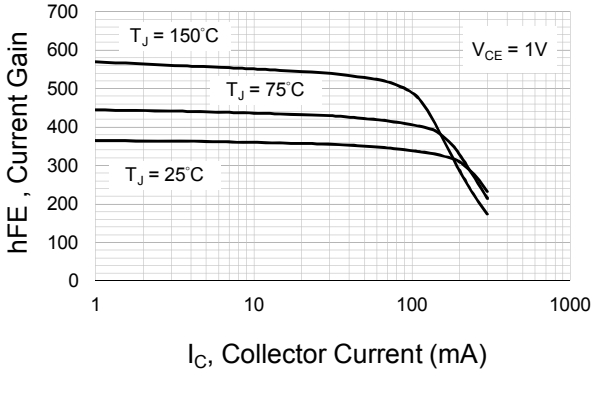


Fig.3 BC817-40 Typical hfe vs. Ic

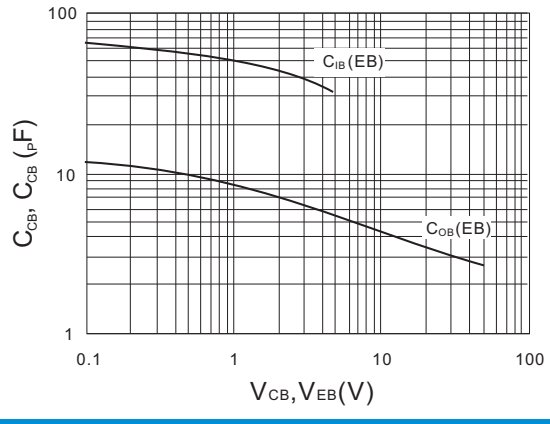
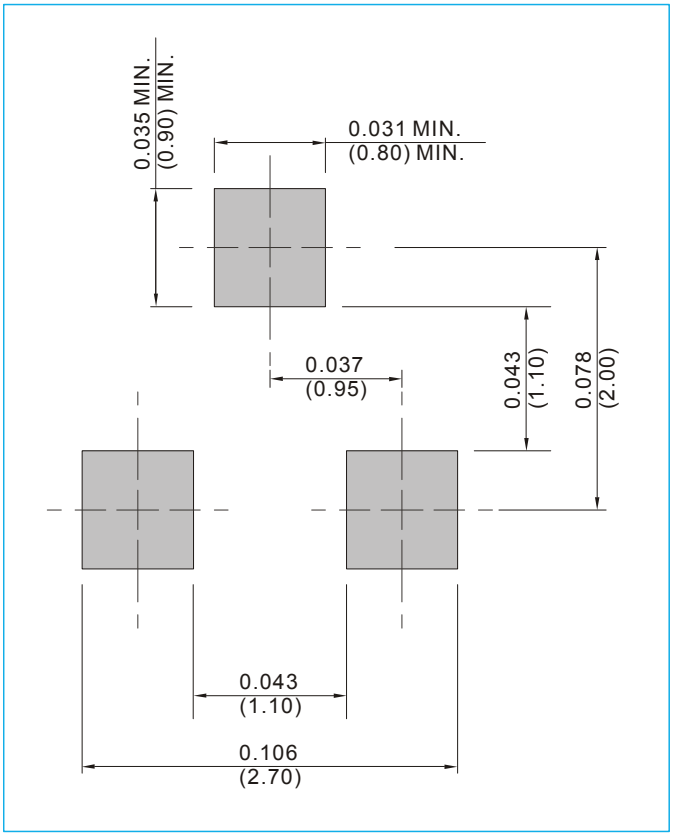


Fig.4 Typical Capacitances

BC817 SERIES

MOUNTING PAD LAYOUT

SOT-23 Unit：inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 3K per 7" plastic Reel

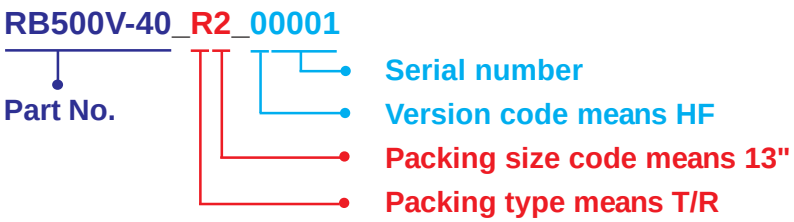
BC817 SERIES

Part No_packing code_Version

BC817-16_R1_00001

BC817-16_R2_00001

For example :



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

BC817 SERIES

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