



BC817-16W-AU SERIES

NPN GENERAL PURPOSE TRANSISTORS

VOLTAGE 45 Volts **POWER** 300 mW

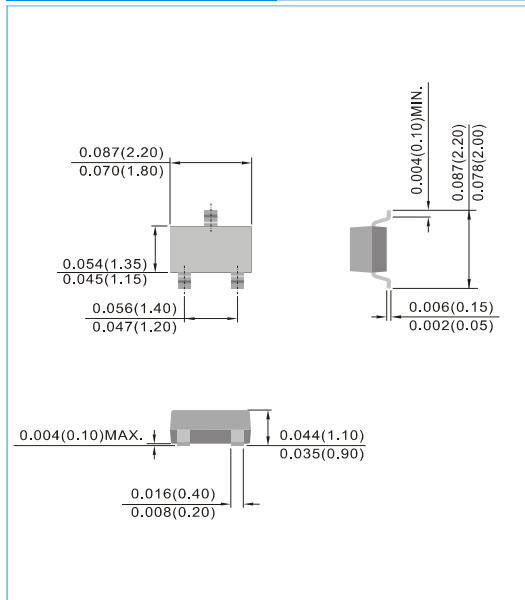
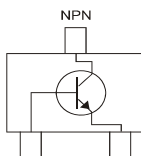
SOT-323 Unit : inch(mm)

FEATURES

- General purpose amplifier applications
- NPN epitaxial silicon, planar design
- Collector current $I_C = 500\text{mA}$
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in comply with EU RoHS 2011/65/EU directives
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case : SOT-323, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.001 ounce, 0.005 gram
- Device Marking : BC817-16W-AU : 8S
BC817-25W-AU : 8V
BC817-40W-AU : 8W



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
Total Power Dissipation (NOTE)	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)	$R_{\theta JA}$	420	°C / W

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



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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-Base Breakdown Voltage (V _{EB} =0V, I _C =10μA)	V _{(BR)CBO}	50	-	-	V
Emitter-Base Breakdown Voltage (I _E =1μA, I _C =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)	I _{CBO}	-	-	100 5	nA μA
DC Current Gain (I _C =100mA, V _{CE} =1V)	h _{FE}			100	-
BC817-16W-AU				160	-
BC817-25W-AU				250	-
DC Current Gain (I _C =500mA, V _{CE} =1V)		40	-	-	-
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	-	pF
Current Gain-Bandwidth Product (I _C =10mA, V _{CE} =5V, f=100MHz)	f _T	100	-	-	MHz



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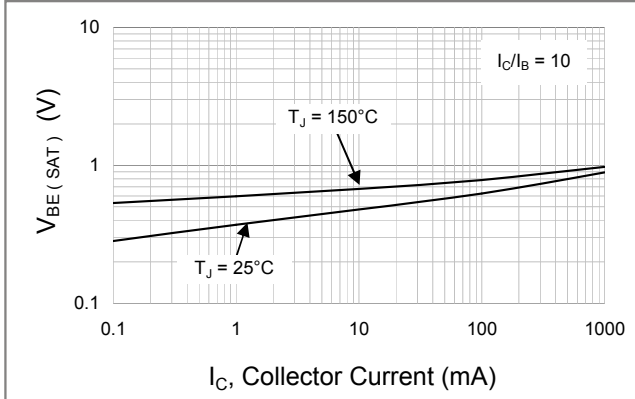


Fig.1 Base-Emitter Saturation Voltage

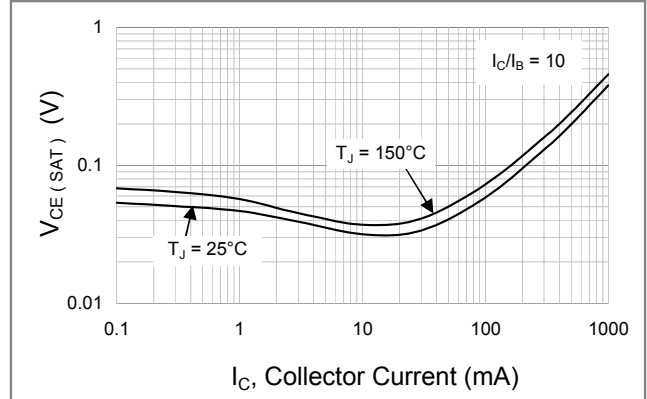


Fig.2 Collector-Emitter Saturation Voltage

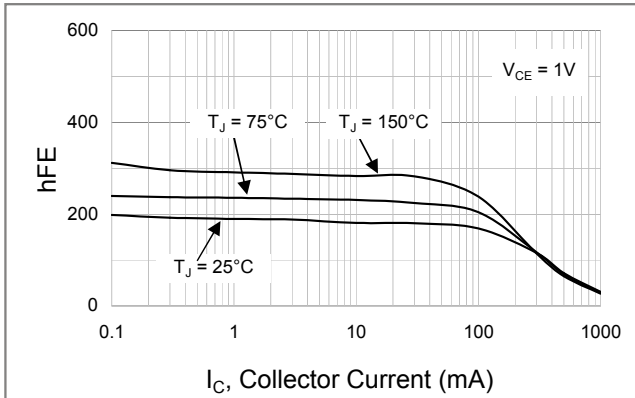


Fig.3 BC817-16W-AU : Typical DC Current Gain

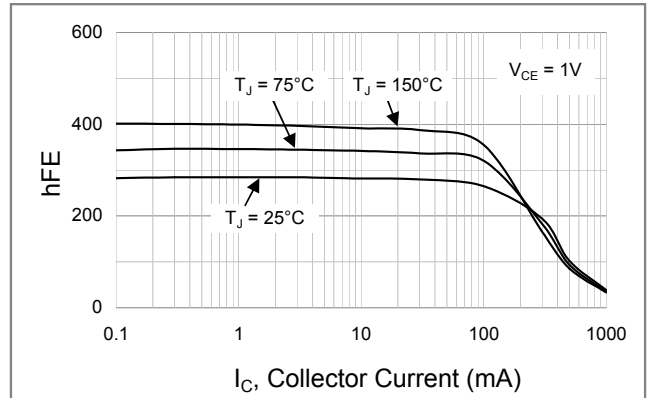


Fig.4 BC817-25W-AU : Typical DC Current Gain

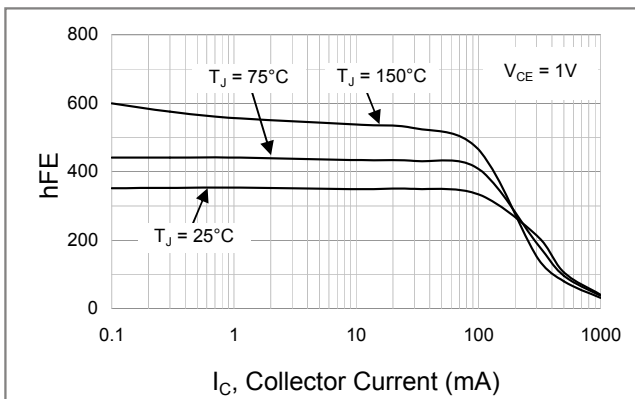


Fig.5 BC817-40W-AU : DC Current Gain

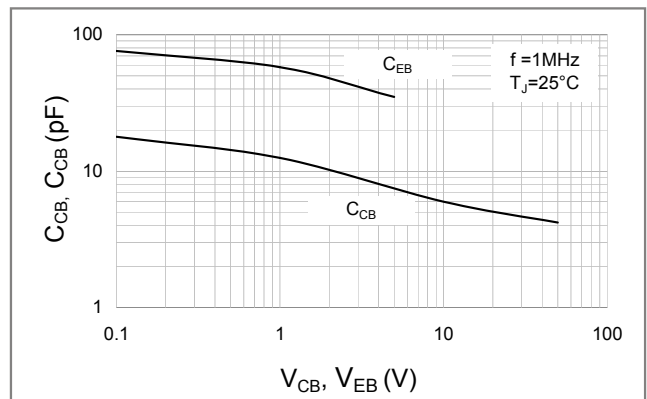


Fig.6 Typical Capacitance

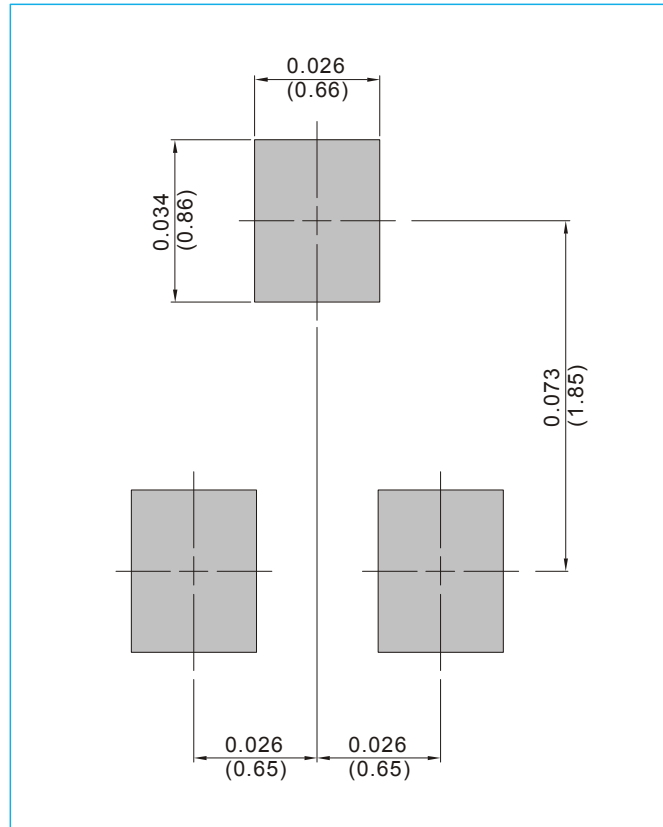


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MOUNTING PAD LAYOUT

SOT-323

Unit : inch(mm)



ORDER INFORMATION

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



BC817-16W-AU SERIES

Part No_packing code_Version

BC817-16W-AU_R1_000A1

BC817-16W-AU_R2_000A1

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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