

BC817-16LT1, BC817-25LT1, BC817-40LT1

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector – Emitter Breakdown Voltage (I _C = 10 mA)	V _{(BR)CEO}	45	–	–	V
Collector – Emitter Breakdown Voltage (V _{EB} = 0, I _C = 10 μA)	V _{(BR)CES}	50	–	–	V
Emitter – Base Breakdown Voltage (I _E = 1.0 μA)	V _{(BR)EBO}	5.0	–	–	V
Collector Cutoff Current (V _{CB} = 20 V) (V _{CB} = 20 V, T _A = 150°C)	I _{CBO}	– –	– –	100 5.0	nA μA

ON CHARACTERISTICS

DC Current Gain (I _C = 100 mA, V _{CE} = 1.0 V) (I _C = 500 mA, V _{CE} = 1.0 V)	BC817-16 BC817-25 BC817-40 h _{FE}	100 160 250 40	– – – –	250 400 600 –	–
Collector – Emitter Saturation Voltage (I _C = 500 mA, I _B = 50 mA)	V _{CE(sat)}	–	–	0.7	V
Base – Emitter On Voltage (I _C = 500 mA, V _{CE} = 1.0 V)	V _{BE(on)}	–	–	1.2	V

SMALL-SIGNAL CHARACTERISTICS

Current – Gain – Bandwidth Product (I _C = 10 mA, V _{CE} = 5.0 Vdc, f = 100 MHz)	f _T	100	–	–	MHz
Output Capacitance (V _{CB} = 10 V, f = 1.0 MHz)	C _{obo}	–	10	–	pF

ORDERING INFORMATION

Device	Specific Marking	Package	Shipping [†]
BC817-16LT1G	6A	SOT-23 (Pb-Free)	3000/Tape & Reel
BC817-16LT3G		SOT-23 (Pb-Free)	10,000/Tape & Reel
BC817-25LT1	6B	SOT-23	3000/Tape & Reel
BC817-25LT1G		SOT-23 (Pb-Free)	3000/Tape & Reel
BC817-25LT3G		SOT-23 (Pb-Free)	10,000/Tape & Reel
BC817-40LT1	6C	SOT-23	3000/Tape & Reel
BC817-40LT1G		SOT-23 (Pb-Free)	3000/Tape & Reel
BC817-40LT3G		SOT-23 (Pb-Free)	10,000/Tape & Reel

[†]For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

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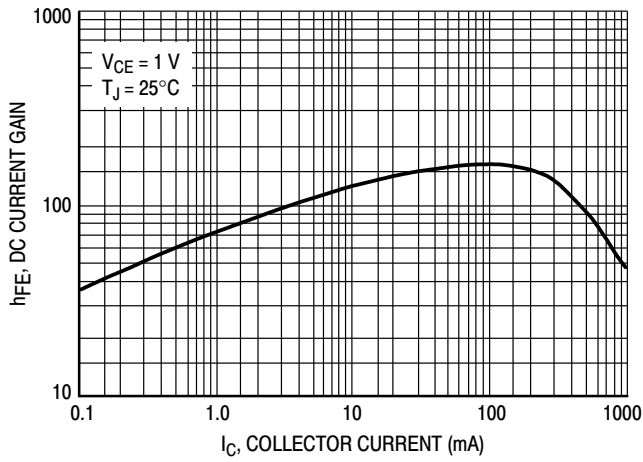


Figure 1. DC Current Gain

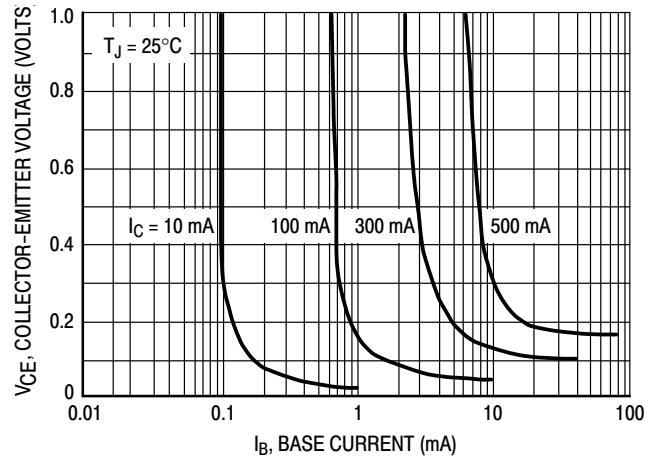


Figure 2. Saturation Region

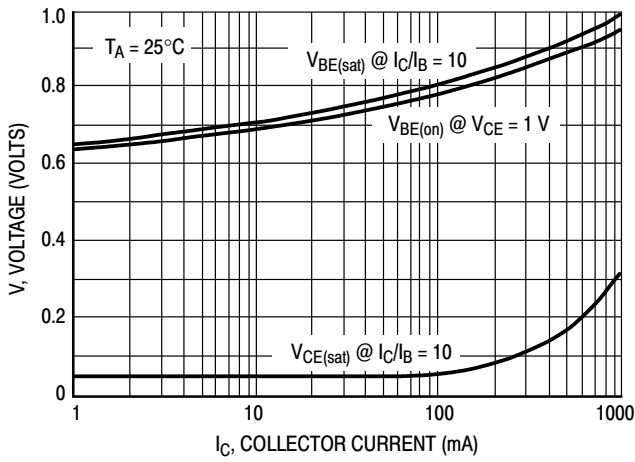


Figure 3. "On" Voltages

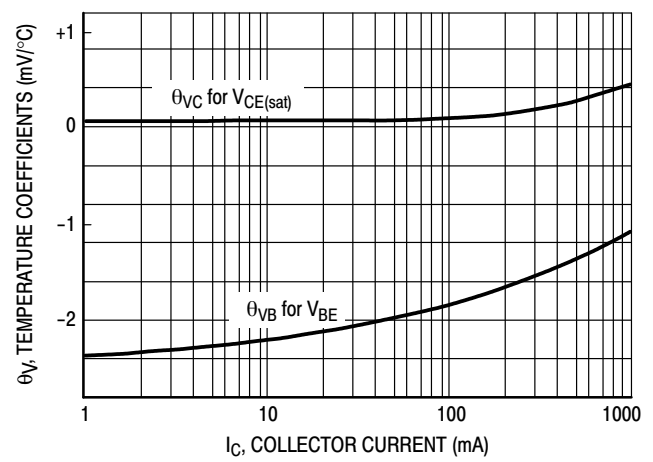


Figure 4. Temperature Coefficients

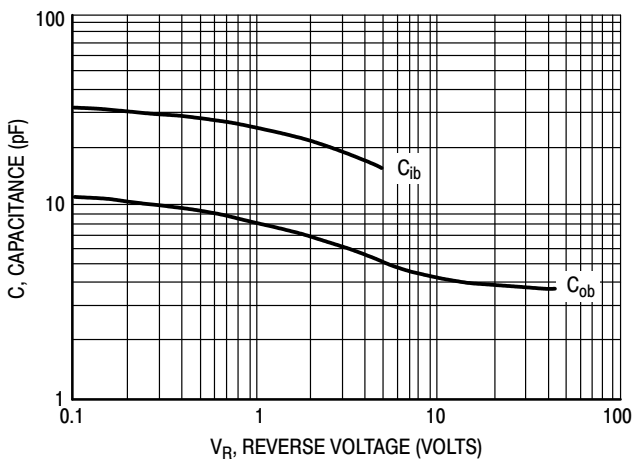


Figure 5. Capacitances

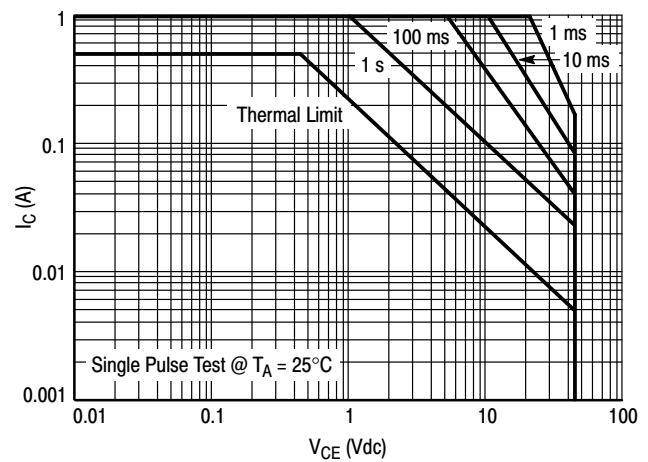
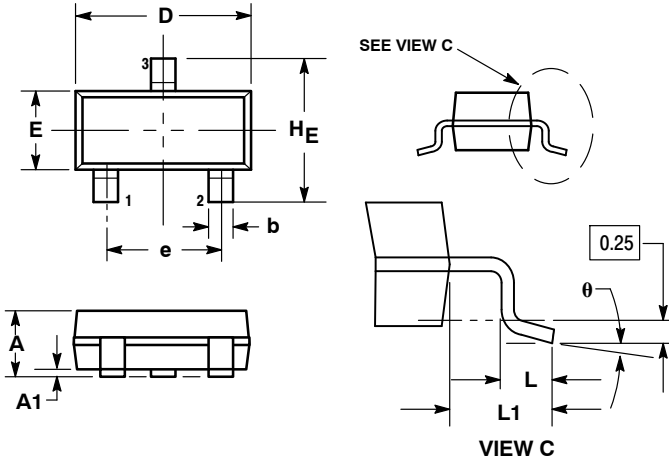


Figure 6. BC817-40L Safe Operating Area

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PACKAGE DIMENSIONS

SOT-23 (TO-236)
CASE 318-08
ISSUE AN



NOTES:

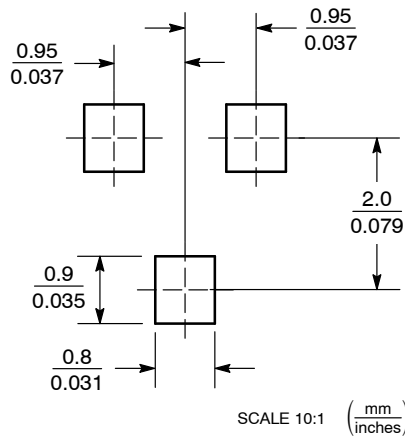
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318-01 THRU -07 AND -09 OBSOLETE, NEW STANDARD 318-08.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.10	0.20	0.30	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104

STYLE 6:

- PIN 1. BASE
- EMITTER
- COLLECTOR

SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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