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

Characteristic		Symbol	Min	Typ	Max	Unit
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		I_{CBO}				
(V_{CB} = 20 V)			−	−	100	nA
(V_{CB} = 20 V, T_A = 150°C)			−	−	5.0	μA
ON CHARACTERISTICS						
DC Current Gain		h_{FE}				−
(I_C = 100 mA, V_{CE} = 1.0 V)	BC817−16		100	−	250	
	BC817−25		160	−	400	
	BC817−40		250	−	600	
(I_C = 500 mA, V_{CE} = 1.0 V)			40	−	−	
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.

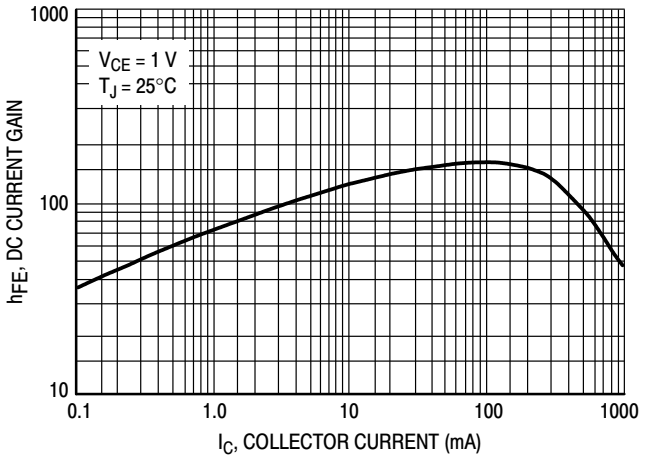


Figure 1. DC Current Gain

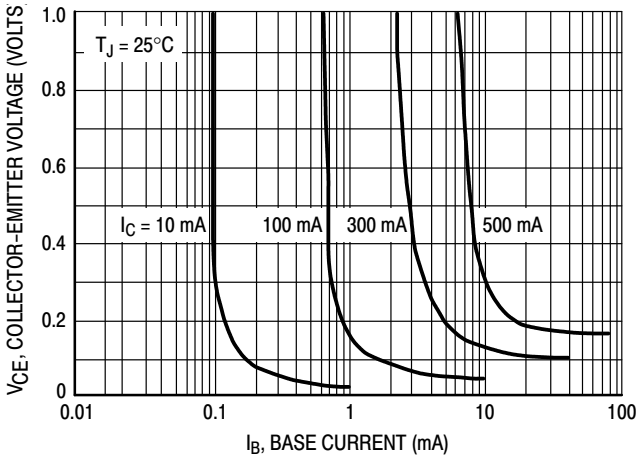


Figure 2. Saturation Region

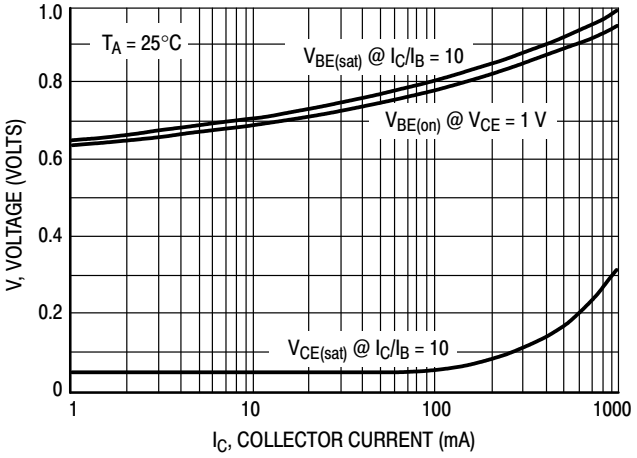


Figure 3. “On” Voltages

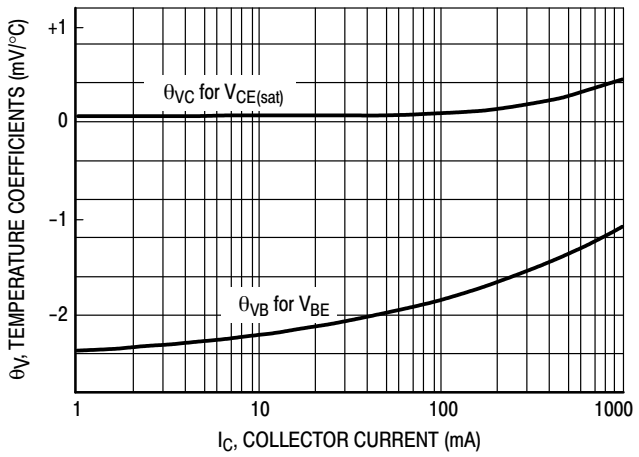


Figure 4. Temperature Coefficients

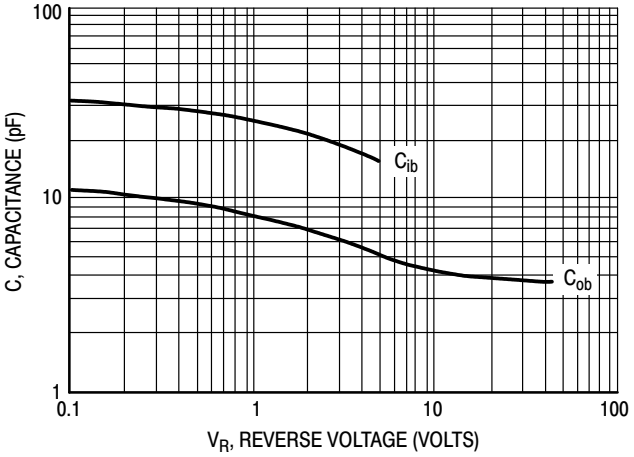


Figure 5. Capacitances

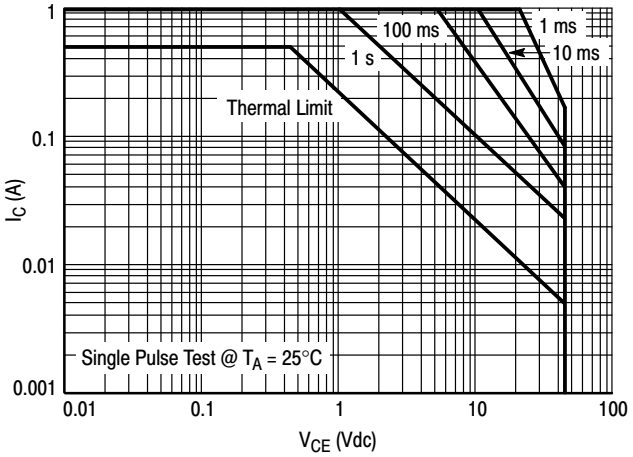
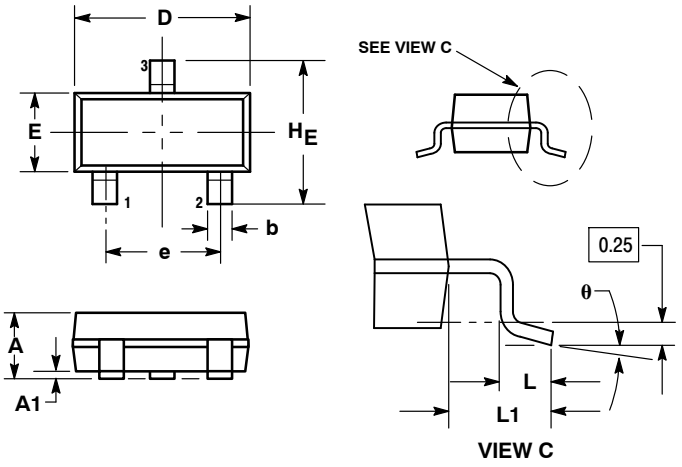


Figure 6. BC817−40L Safe Operating Area

PACKAGE DIMENSIONS

SOT−23 (TO−236)
CASE 318−08
ISSUE AN



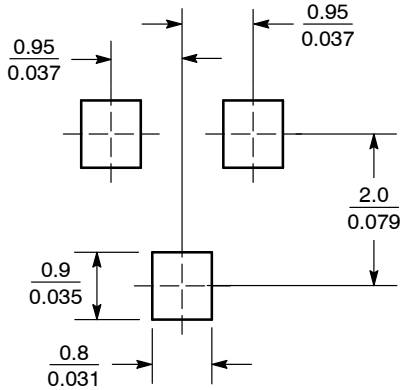
VIEW C

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.

	MILLIMETERS			INCHES		
DIM	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
H_E	2.10	2.40	2.64	0.083	0.094	0.104

STYLE 6:
PIN 1. BASE
2. EMITTER
3. 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.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
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For additional information, please contact your local Sales Representative

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