ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I_C = 2.0 mAdc, I_B = 0)	$V_{(BR)CEO}$	50	–	Vdc
Collector-Base Breakdown Voltage (I_C = 10 μAdc, I_E = 0)	$V_{(BR)CBO}$	60	–	Vdc
Emitter-Base Breakdown Voltage (I_E = 10 μAdc, I_E = 0)	$V_{(BR)EBO}$	7.0	–	Vdc
Collector-Base Cutoff Current (V_{CB} = 20 Vdc, I_E = 0)	I_{CBO}	–	0.1	μA
Collector-Emitter Cutoff Current (V_{CE} = 10 Vdc, I_B = 0)	I_{CEO}	–	0.1	μA
DC Current Gain (Note 2) (V_{CE} = 10 Vdc, I_C = 2.0 mAdc) (V_{CE} = 2.0 Vdc, I_C = 100 mAdc)	 h_{FE1} h_{FE2}	 210 90	 340 –	–
Collector-Emitter Saturation Voltage (Note 2) (I_C = 100 mAdc, I_B = 10 mAdc)	$V_{CE(sat)}$	–	0.5	Vdc

2. Pulse Test: Pulse Width ≤ 300 μs, D.C. ≤ 2%.

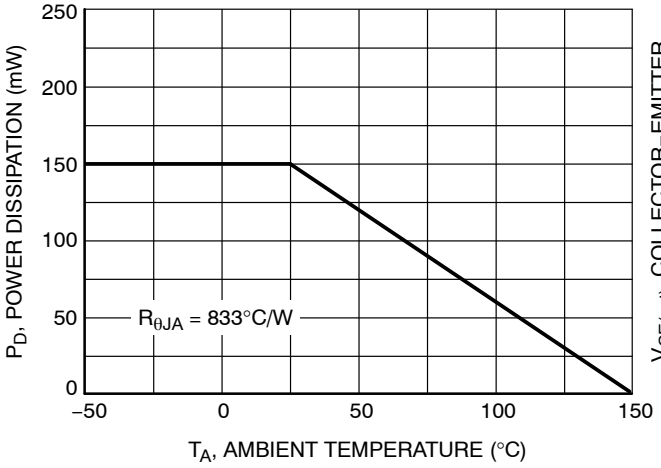


Figure 1. Derating Curve

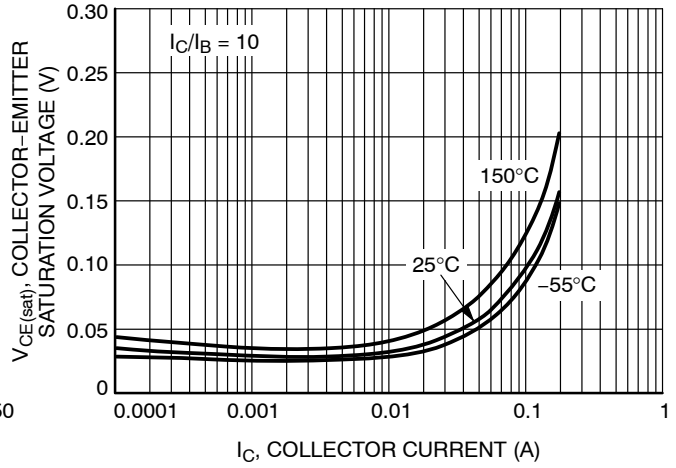


Figure 2. Collector Emitter Saturation Voltage vs. Collector Current

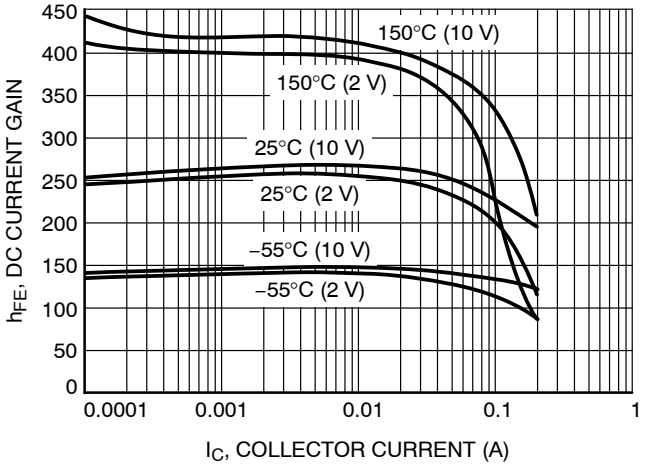


Figure 3. DC Current Gain vs. Collector Current

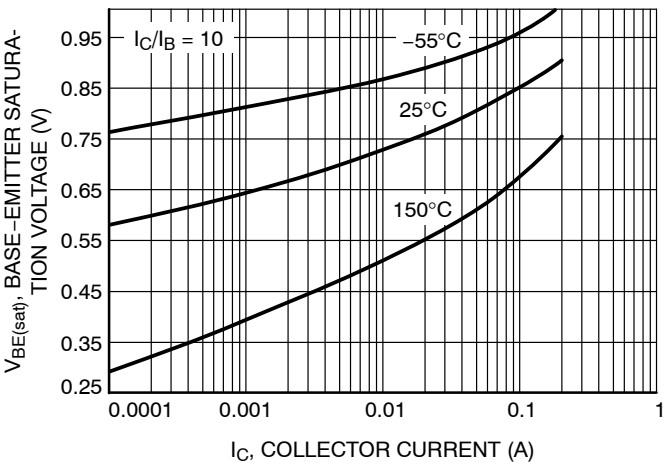


Figure 4. Base Emitter Saturation Voltage vs. Collector Current

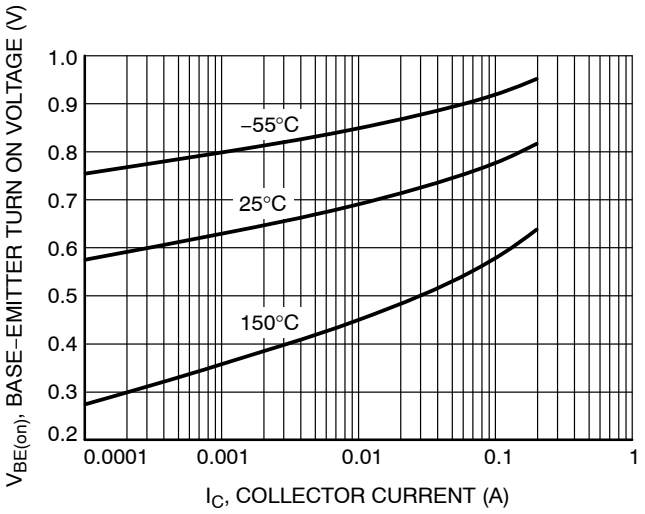


Figure 5. Base Emitter Turn−On Voltage vs. Collector Current

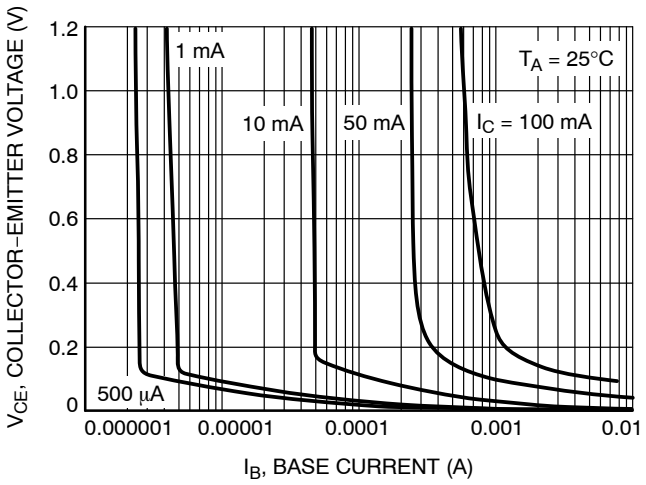


Figure 6. Collector Saturation Region

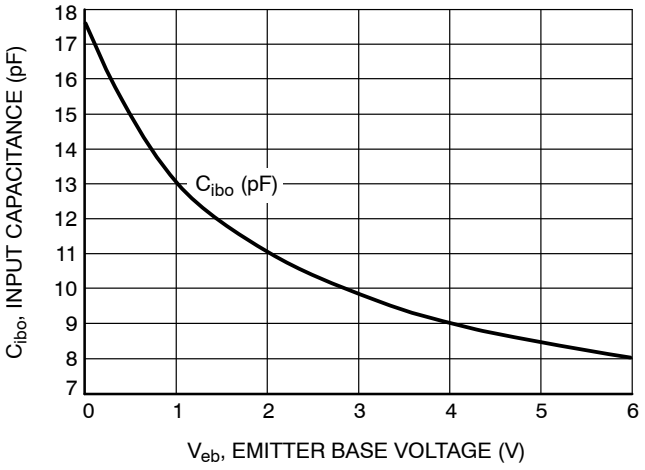


Figure 7. Input Capacitance

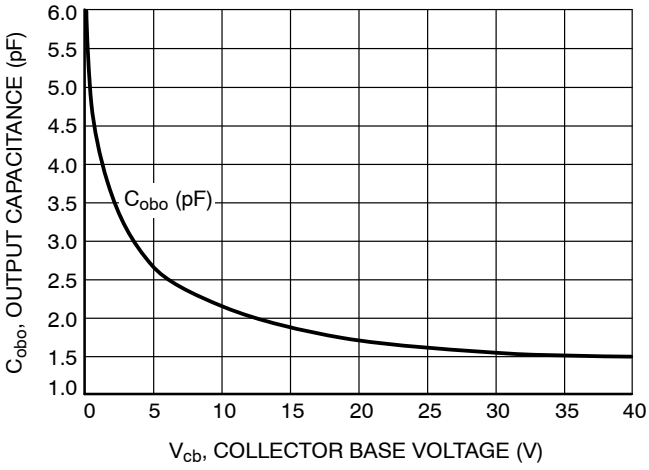


Figure 8. Output Capacitance

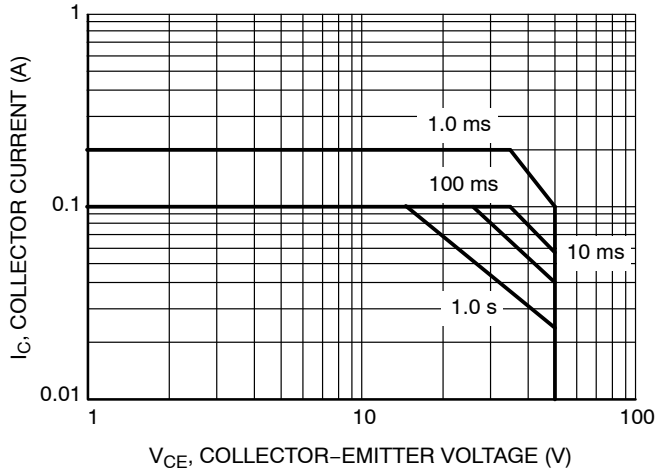
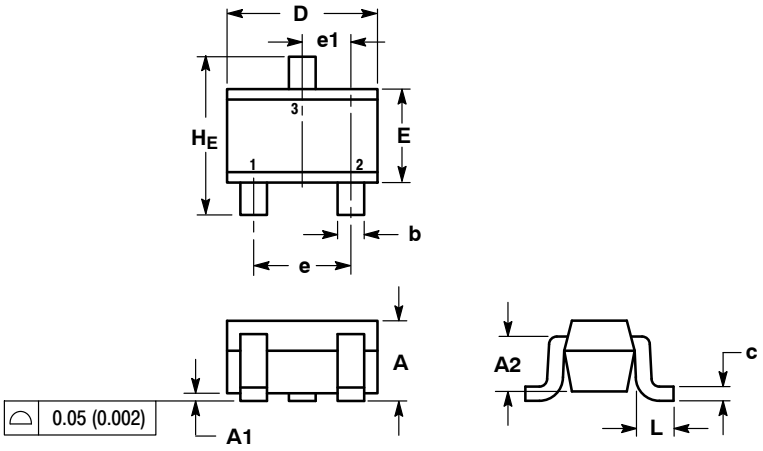


Figure 9. Safe Operating Area

PACKAGE DIMENSIONS

SC−70 (SOT−323)
CASE 419−04
ISSUE N

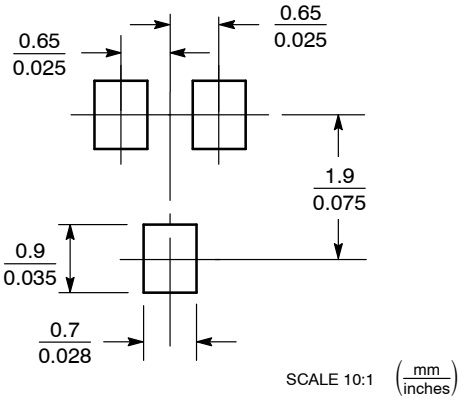


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.032	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A2		0.70 REF			0.028 REF	
b	0.30	0.35	0.40	0.012	0.014	0.016
c	0.10	0.18	0.25	0.004	0.007	0.010
D	1.80	2.10	2.20	0.071	0.083	0.087
E	1.15	1.24	1.35	0.045	0.049	0.053
e	1.20	1.30	1.40	0.047	0.051	0.055
e1		0.65 BSC			0.026 BSC	
L	0.20	0.38	0.56	0.008	0.015	0.022
H_E	2.00	2.10	2.40	0.079	0.083	0.095

STYLE 3:
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.

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