ELECTRICAL CHARACTERISTICS (T_A = 25°C)

Characteristic	Symbol	Min	Typ	Max	Unit
Collector−Base Breakdown Voltage (I_C = −50 μAdc, I_E = 0)	$V_{(BR)CBO}$	−60	–	–	V
Collector−Emitter Breakdown Voltage (I_C = −1.0 mAdc, I_B = 0)	$V_{(BR)CEO}$	−50	–	–	V
Emitter−Base Breakdown Voltage (I_E = −50 μAdc, I_E = 0)	$V_{(BR)EBO}$	−6.0	–	–	V
Collector−Base Cutoff Current (V_{CB} = −30 Vdc, I_E = 0)	I_{CBO}	–	–	−0.5	μA
Emitter−Base Cutoff Current (V_{EB} = −5.0 Vdc, I_B = 0)	I_{EBO}	–	–	−0.5	μA
Collector−Emitter Saturation Voltage (Note 2) (I_C = −50 mAdc, I_B = −5.0 mAdc)	$V_{CE(sat)}$	–	–	−0.5	V
DC Current Gain (Note 2) (V_{CE} = −6.0 Vdc, I_C = −1.0 mAdc)	h_{FE}	120	–	560	–
Transition Frequency (V_{CE} = −12 Vdc, I_C = −2.0 mAdc, f = 30 MHz)	f_T	–	140	–	MHz
Output Capacitance (V_{CB} = −12 Vdc, I_E = 0 Adc, f = 1 MHz)	C_{OB}	–	3.5	–	pF

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

TYPICAL ELECTRICAL CHARACTERISTICS

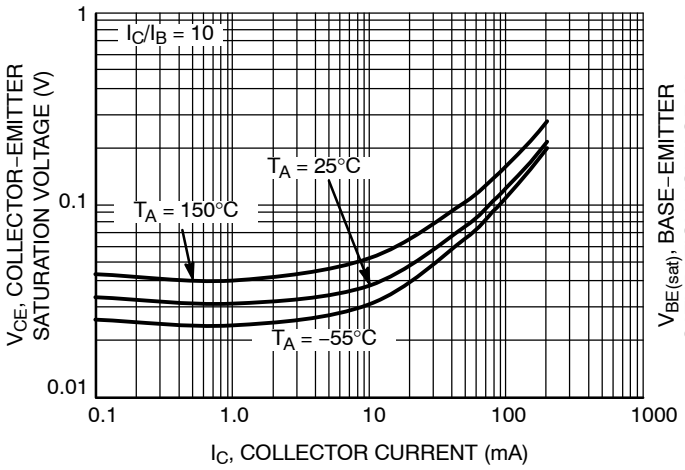


Figure 1. Collector−Emitter Saturation Voltage vs. Collector Current

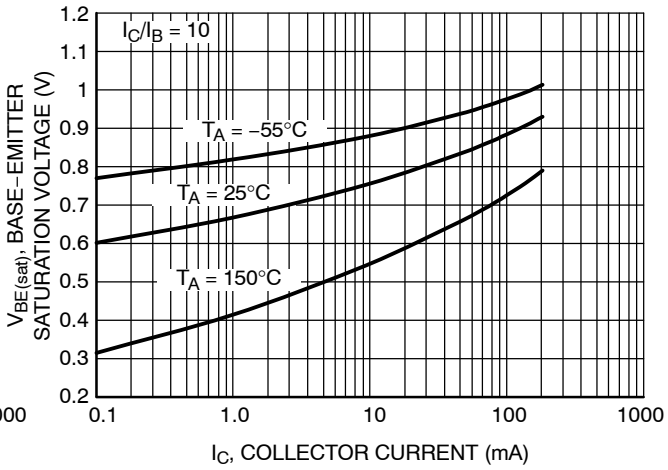


Figure 2. Base−Emitter Saturation Voltage vs. Collector Current

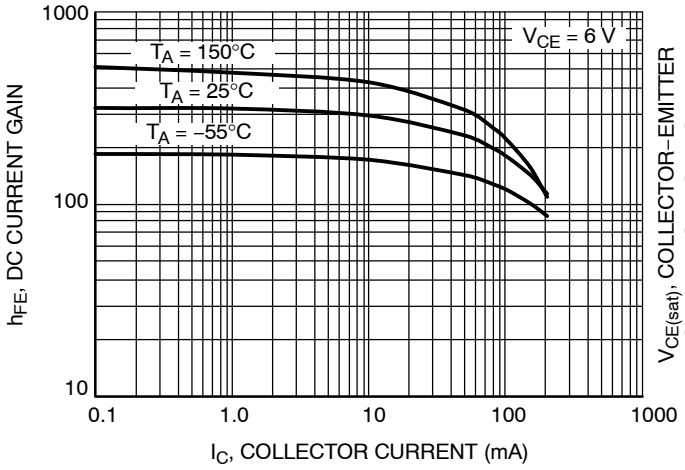


Figure 3. DC Current Gain vs. Collector Current

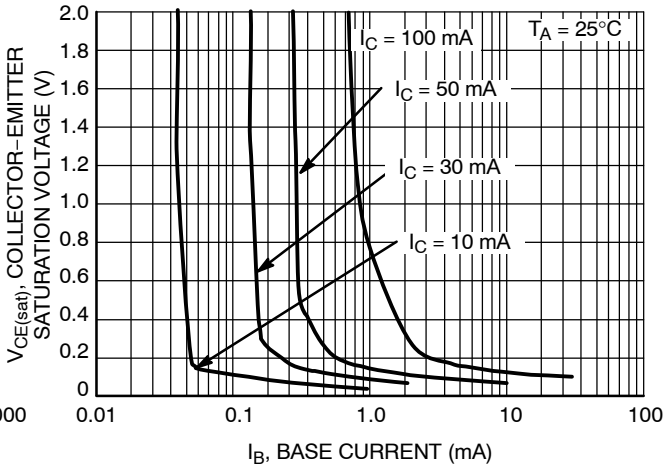


Figure 4. Saturation Region

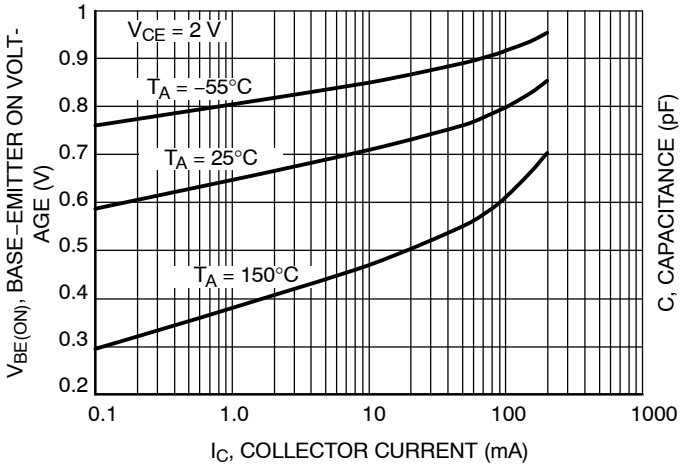


Figure 5. Base−Emitter Turn−ON Voltage vs. Collector Current

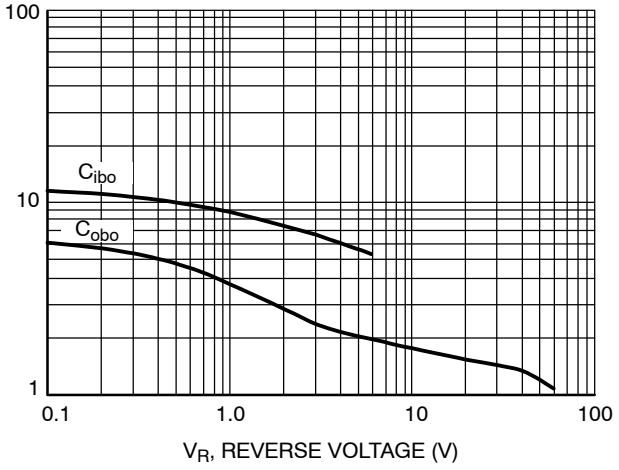


Figure 6. Capacitance

TYPICAL ELECTRICAL CHARACTERISTICS

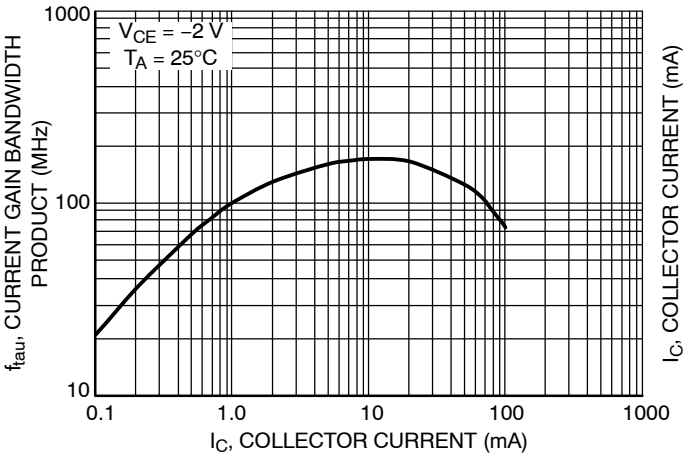


Figure 7. Current Gain Bandwidth Product vs. Collector Current

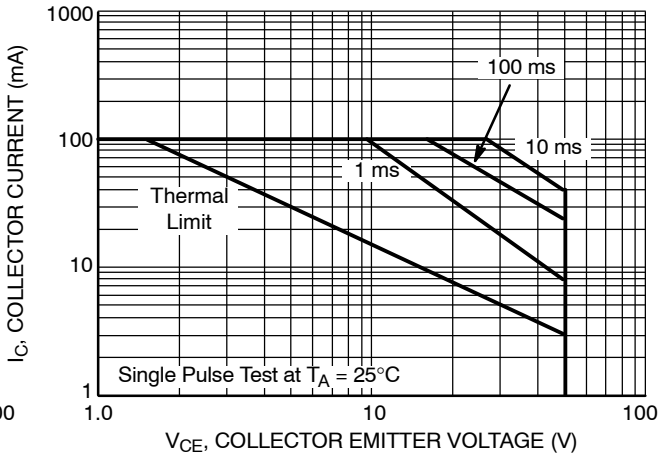


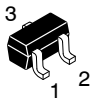
Figure 8. Safe Operating Area

MECHANICAL CASE OUTLINE
PACKAGE DIMENSIONS

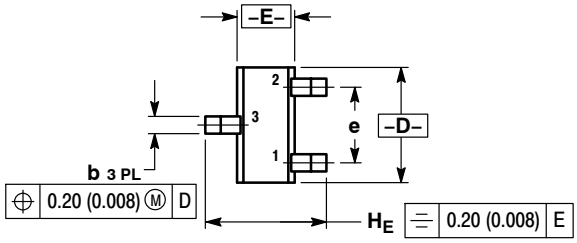
ON Semiconductor®

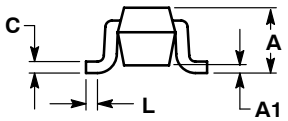
SC−75/SOT−416
CASE 463−01
ISSUE G

DATE 07 AUG 2015



SCALE 4:1





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

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.70	0.80	0.90	0.027	0.031	0.035
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.15	0.20	0.30	0.006	0.008	0.012
C	0.10	0.15	0.25	0.004	0.006	0.010
D	1.55	1.60	1.65	0.061	0.063	0.065
E	0.70	0.80	0.90	0.027	0.031	0.035
e	1.00 BSC			0.04 BSC		
L	0.10	0.15	0.20	0.004	0.006	0.008
H_E	1.50	1.60	1.70	0.060	0.063	0.067

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

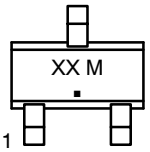
STYLE 2:
PIN 1. ANODE
2. N/C
3. CATHODE

STYLE 3:
PIN 1. ANODE
2. ANODE
3. CATHODE

STYLE 4:
PIN 1. CATHODE
2. CATHODE
3. ANODE

STYLE 5:
PIN 1. GATE
2. SOURCE
3. DRAIN

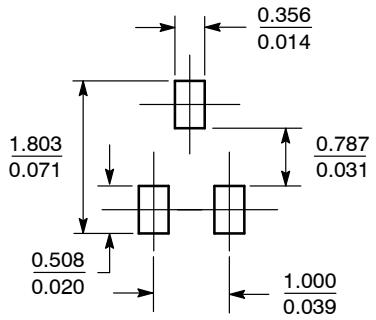
GENERIC MARKING DIAGRAM*



XX = Specific Device Code
M = Date Code
▪ = Pb−Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “ ▪”, may or may not be present.

SOLDERING FOOTPRINT*



SCALE 10:1 $\left(\frac{mm}{inches}\right)$

*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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