THE DATASHEET OF

BAS116TT1G

BAS116TT1G

Switching Diode

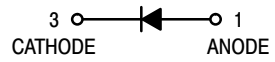


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Features

- Low Leakage Current Applications
- Medium Speed Switching Times
- Available in 8 mm Tape and Reel
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant



MAXIMUM RATINGS (T_A = 25°C)

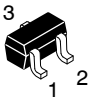
Rating	Symbol	Max	Unit
Continuous Reverse Voltage	V_R	75	V
Peak Forward Current	I_F	200	mA
Peak Forward Surge Current	$I_{FM(surge)}$	500	mA

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation, FR−4 Board (Note 1) T_A = 25°C Derated above 25°C	P_D	225 1.8	mW mW/°C
Thermal Resistance, Junction−to−Ambient (Note 1)	$R_{\theta JA}$	555	°C/W
Total Device Dissipation, FR−4 Board (Note 2) T_A = 25°C Derated above 25°C	P_D	360 2.9	mW mW/°C
Thermal Resistance, Junction−to−Ambient (Note 2)	$R_{\theta JA}$	345	°C/W
Junction and Storage Temperature Range	T_J, T_{stg}	−55 to +150	°C

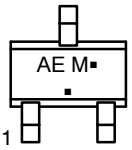
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR−4 @ Minimum Pad
2. FR−4 @ 1.0 × 1.0 Inch Pad



CASE 463
SOT−416
STYLE 2

MARKING DIAGRAM



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

ORDERING INFORMATION

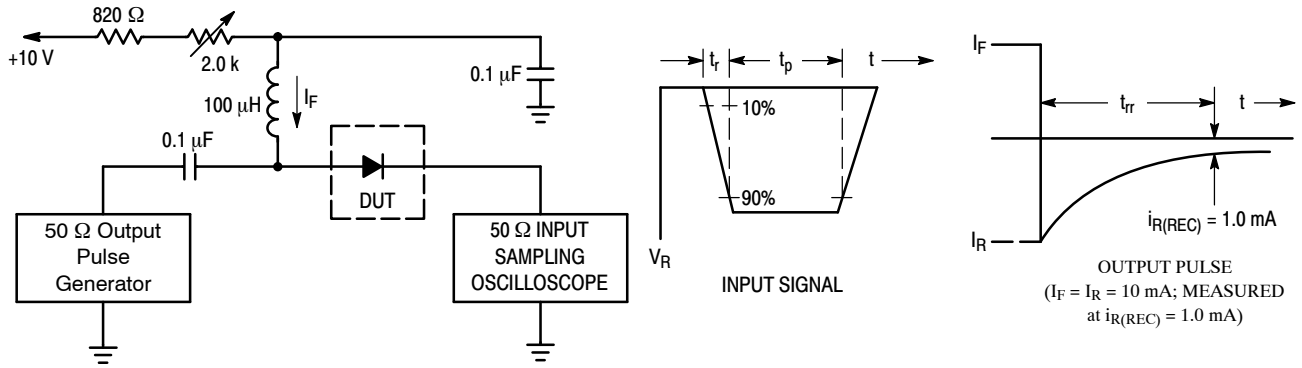
Device	Package	Shipping†
BAS116TT1G	SOT−416 (Pb−Free)	3000 / Tape & Reel

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage (I_{BR} = 100 μAdc)	$V_{(BR)}$	75	–	Vdc
Reverse Voltage Leakage Current (V_R = 75 Vdc) (V_R = 75 Vdc, T_J = 150°C)	I_R	– –	5.0 80	nAdc
Forward Voltage (I_F = 1.0 mAdc) (I_F = 10 mAdc) (I_F = 50 mAdc) (I_F = 150 mAdc)	V_F	– – – –	900 1000 1100 1250	mV
Diode Capacitance (V_R = 0 V, f = 1.0 MHz)	C_D	–	2.0	pF
Reverse Recovery Time (I_F = I_R = 10 mAdc) (Figure 1)	t_{rr}	–	3.0	μs



1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

TYPICAL CHARACTERISTICS

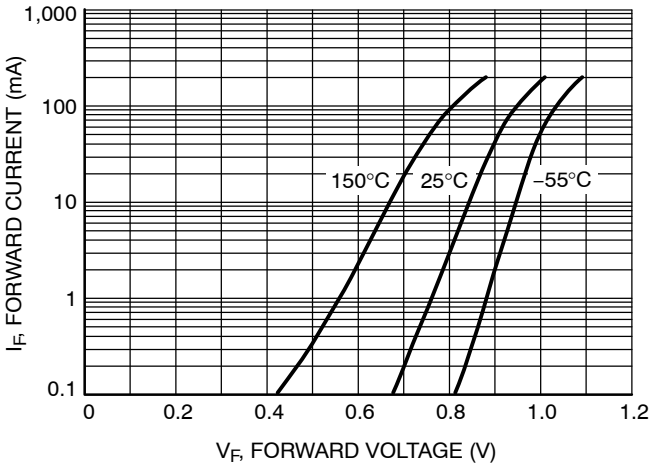


Figure 2. Forward Voltage

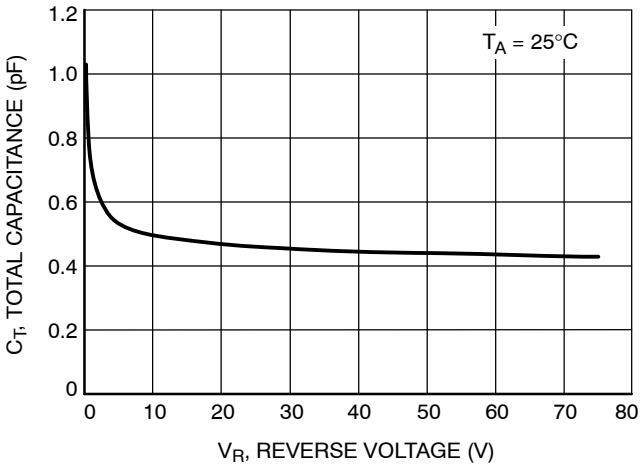
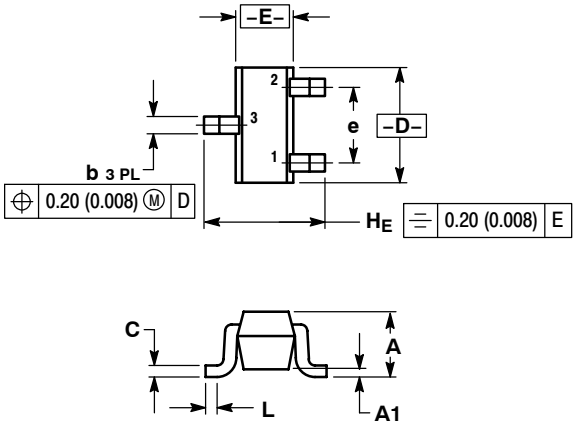


Figure 3. Capacitance

PACKAGE DIMENSIONS

SC−75/SOT−416
CASE 463−01
ISSUE F

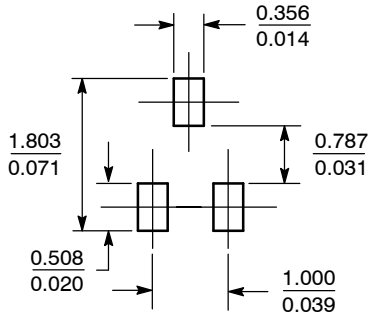


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.

	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	0.059	0.063	0.067
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	0.061	0.063	0.065

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

SOLDERING FOOTPRINT*



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

*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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