

BAS16TT1

Preferred Device

Silicon Switching Diode

Features

- Pb-Free Package is Available*

MAXIMUM RATINGS (T_A = 25°C)

Rating	Symbol	Max	Unit
Continuous Reverse Voltage	V _R	75	V
Recurrent Peak Forward Current	I _F	200	mA
Peak Forward Surge Current Pulse Width = 10 μs	I _{FM(surge)}	500	mA

THERMAL CHARACTERISTICS

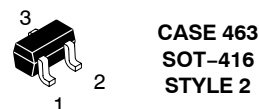
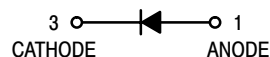
Characteristic	Symbol	Max	Unit
Total Device Dissipation, FR-4 Board (Note 6) T _A = 25°C Derated above 25°C	P _D	225	mW
Thermal Resistance, Junction-to-Ambient (Note 6)	R _{θJA}	555	°C/W
Total Device Dissipation, FR-4 Board (Note 7) T _A = 25°C Derated above 25°C	P _D	360	mW
Thermal Resistance, Junction-to-Ambient (Note 7)	R _{θJA}	345	°C/W
Junction and Storage Temperature Range	T _J , T _{stg}	-55 to +150	°C

6. FR-4 @ Minimum Pad
7. FR-4 @ 1.0 × 1.0 Inch Pad



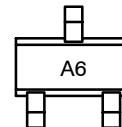
ON Semiconductor®

<http://onsemi.com>



CASE 463
SOT-416
STYLE 2

MARKING DIAGRAM



ORDERING INFORMATION

Device	Package	Shipping†
BAS16TT1	SOT-416	3000 / Tape & Reel
BAS16TT1G	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.

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

Preferred devices are recommended choices for future use and best overall value.

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ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Forward Voltage ($I_F = 1.0\text{ mA}$) ($I_F = 10\text{ mA}$) ($I_F = 50\text{ mA}$) ($I_F = 150\text{ mA}$)	V_F	– – – –	715 866 1000 1250	mV
Reverse Current ($V_R = 75\text{ V}$) ($V_R = 75\text{ V}, T_J = 150^\circ\text{C}$) ($V_R = 25\text{ V}, T_J = 150^\circ\text{C}$)	I_R	– – –	1.0 50 30	μA
Capacitance ($V_R = 0, f = 1.0\text{ MHz}$)	C_D	–	2.0	pF
Reverse Recovery Time ($I_F = I_R = 10\text{ mA}, R_L = 50\ \Omega$) (Figure 1)	t_{rr}	–	6.0	ns
Stored Charge ($I_F = 10\text{ mA}$ to $V_R = 6.0\text{ V}, R_L = 500\ \Omega$) (Figure 2)	QS	–	45	PC
Forward Recovery Voltage ($I_F = 10\text{ mA}, t_r = 20\text{ ns}$) (Figure 3)	V_{FR}	–	1.75	V

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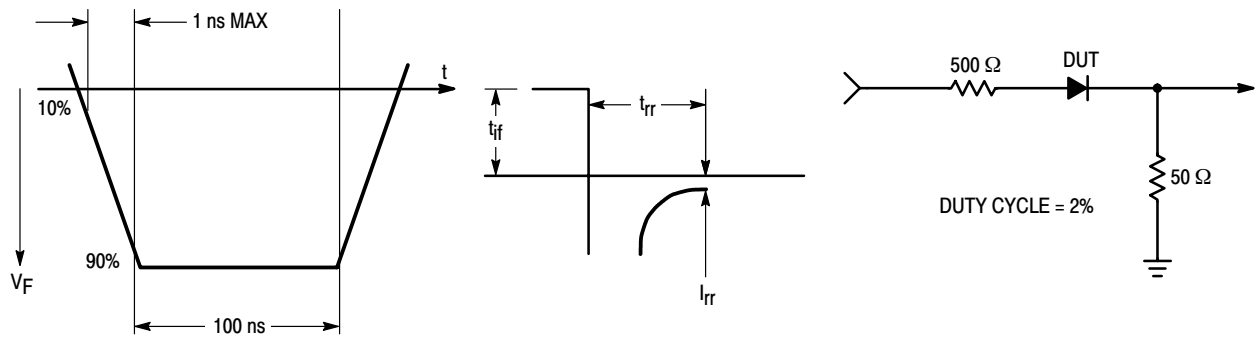


Figure 1. Reverse Recovery Time Equivalent Test Circuit

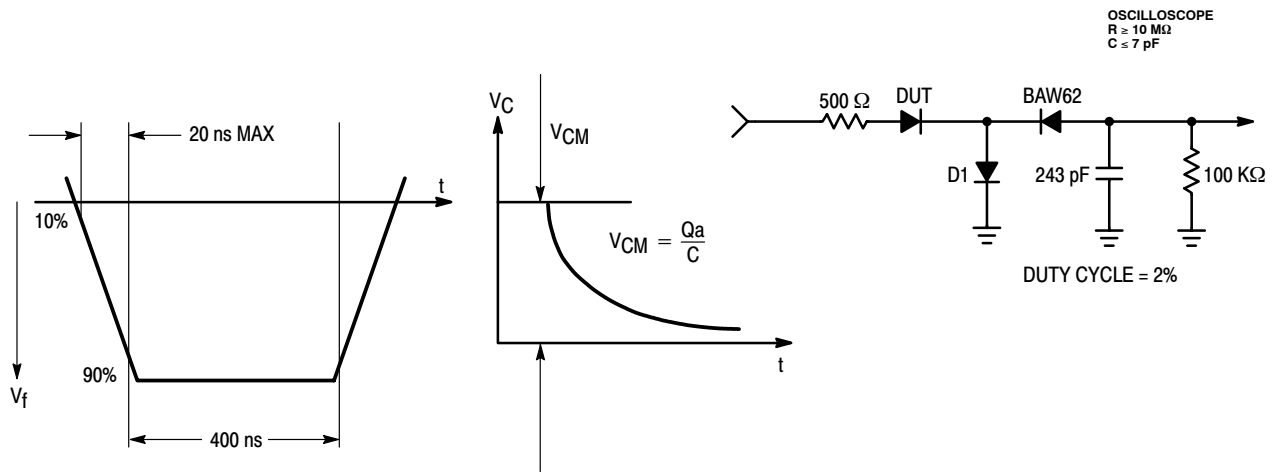


Figure 2. Stored Charge Equivalent Test Circuit

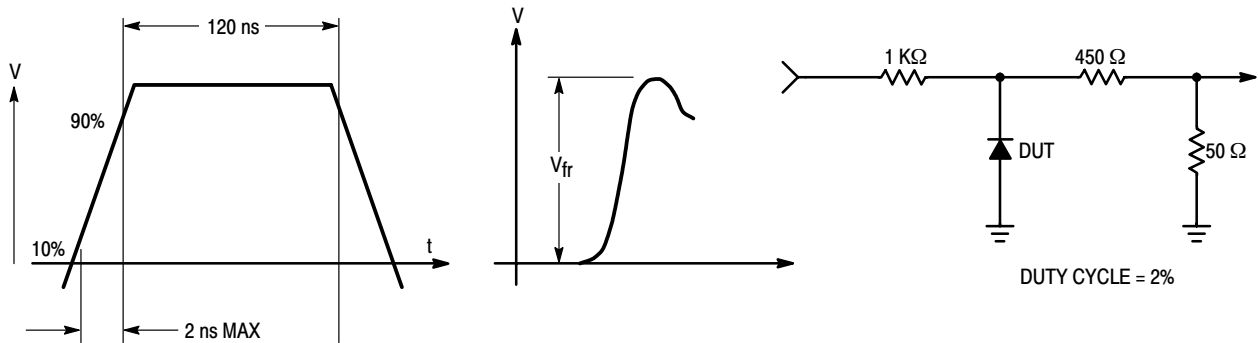


Figure 3. Forward Recovery Voltage Equivalent Test Circuit

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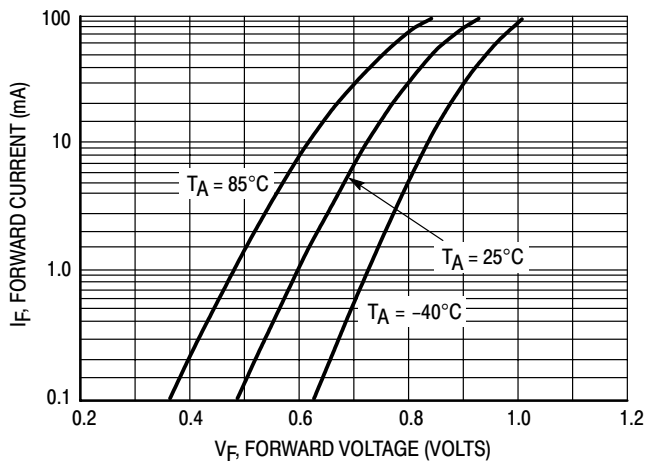


Figure 4. Forward Voltage

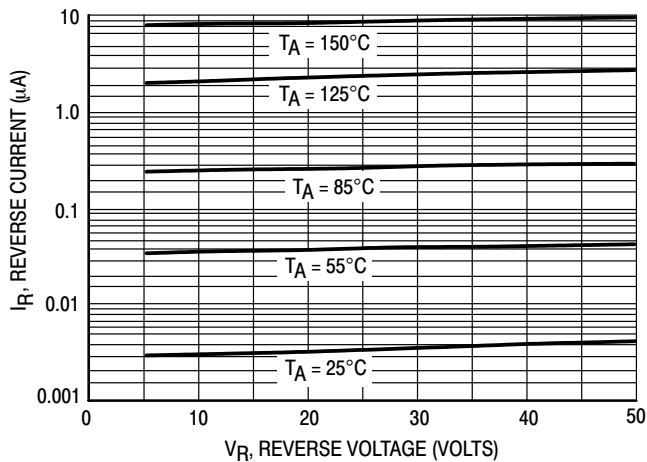


Figure 5. Leakage Current

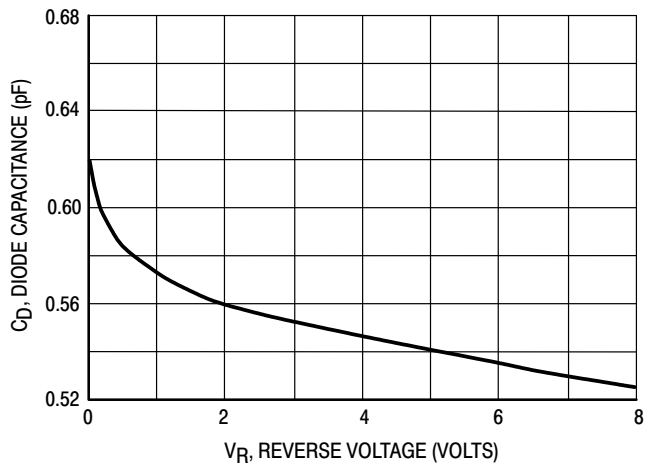


Figure 6. Capacitance

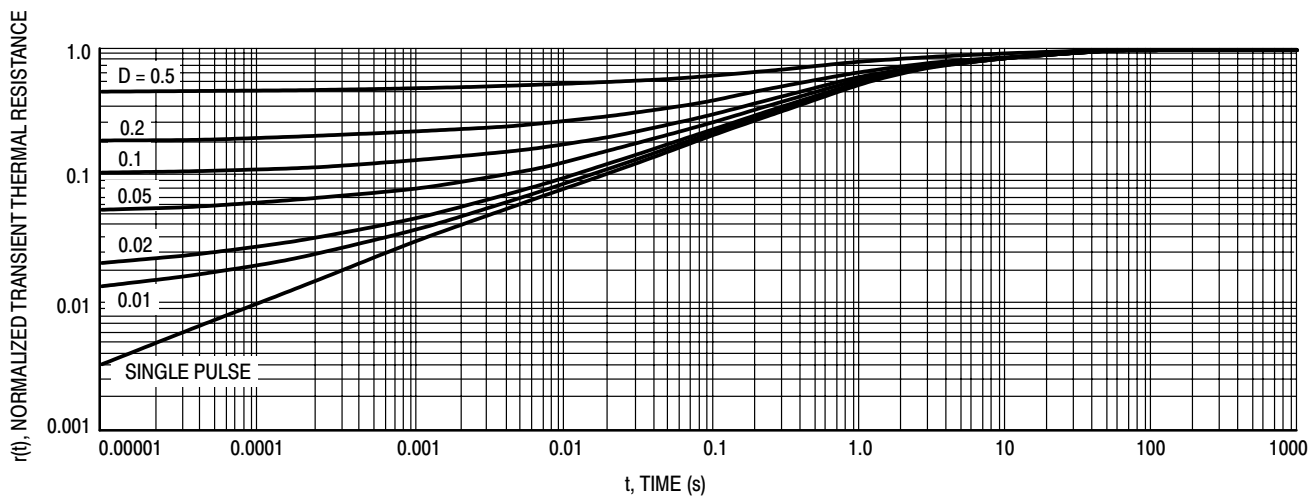


Figure 7. Normalized Thermal Response