

BAS16HT1

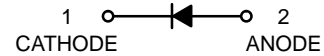
Preferred Device

Switching Diode



ON Semiconductor®

<http://onsemi.com>



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	75	Vdc
Peak Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (Note 1) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	200	mW
		1.57	mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	T_J, T_{stg}	-55 to 150	$^\circ\text{C}$

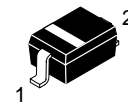
1. FR-4 Minimum Pad.

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

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Reverse Voltage Leakage Current ($V_R = 75\text{ Vdc}$) ($V_R = 75\text{ Vdc}, T_J = 150^\circ\text{C}$) ($V_R = 25\text{ Vdc}, T_J = 150^\circ\text{C}$)	I_R	-	1.0 50 30	μAdc
Reverse Breakdown Voltage ($I_{BR} = 100\ \mu\text{Adc}$)	$V_{(BR)}$	75	-	Vdc
Forward Voltage ($I_F = 1.0\ \text{mAdc}$) ($I_F = 10\ \text{mAdc}$) ($I_F = 50\ \text{mAdc}$) ($I_F = 150\ \text{mAdc}$)	V_F	-	715 855 1000 1250	mV
Diode Capacitance ($V_R = 0, f = 1.0\ \text{MHz}$)	C_D	-	2.0	pF
Forward Recovery Voltage ($I_F = 10\ \text{mAdc}, t_r = 20\ \text{ns}$)	V_{FR}	-	1.75	Vdc
Reverse Recovery Time ($I_F = I_R = 10\ \text{mAdc}, R_L = 50\ \Omega$)	t_{rr}	-	6.0	ns
Stored Charge ($I_F = 10\ \text{mAdc}$ to $V_R = 5.0\ \text{Vdc}$, $R_L = 500\ \Omega$)	Q_S	-	45	pC



SOD-323
CASE 477
STYLE 1

MARKING DIAGRAM



A6 = Specific Device Code
M = Date Code

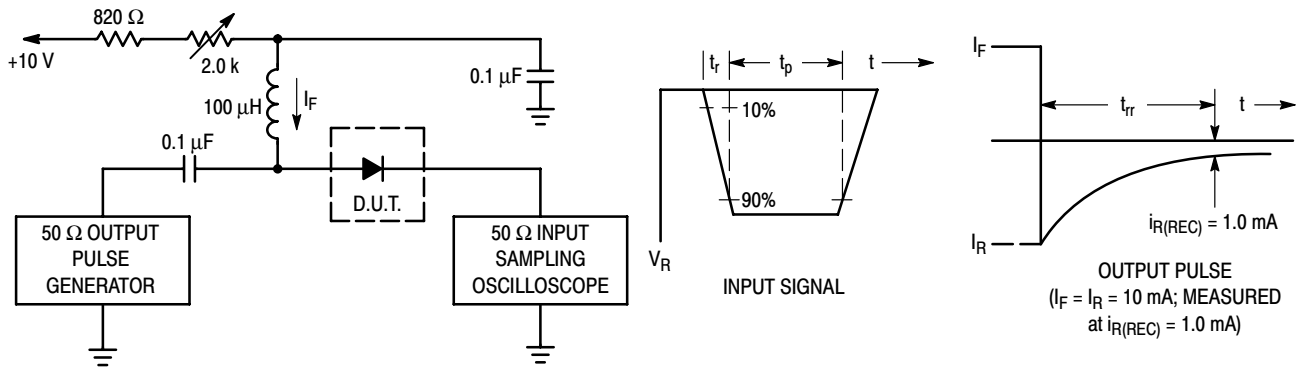
ORDERING INFORMATION

Device	Package	Shipping†
BAS16HT1	SOD-323	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.

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

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

Figure 1. Recovery Time Equivalent Test Circuit

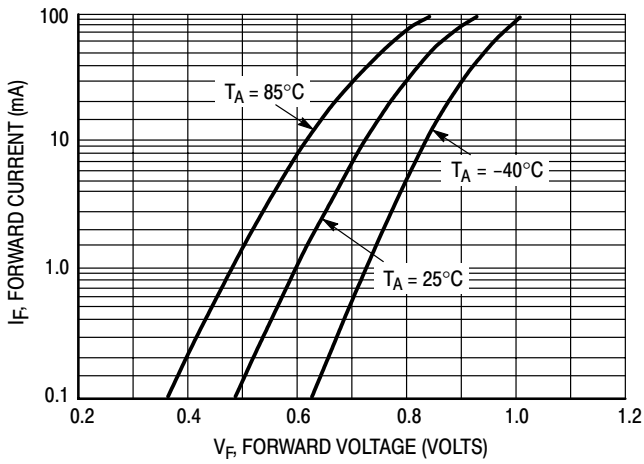


Figure 2. Forward Voltage

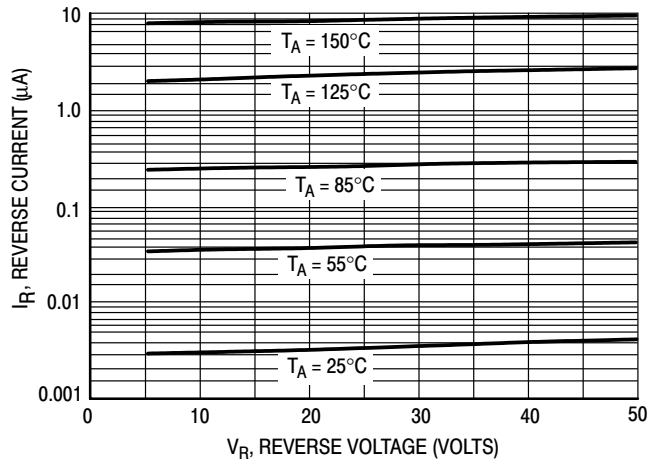


Figure 3. Leakage Current

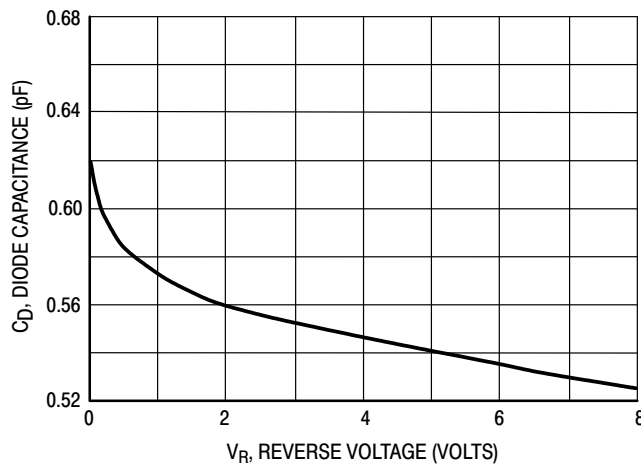
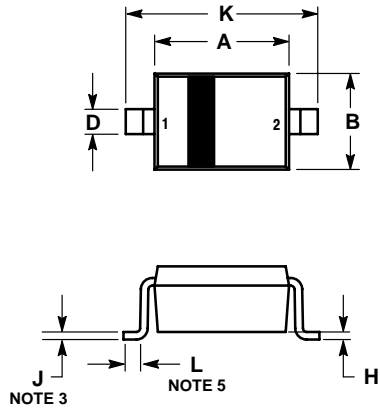


Figure 4. Capacitance

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PACKAGE DIMENSIONS

SOD-323
CASE 477-02
ISSUE D



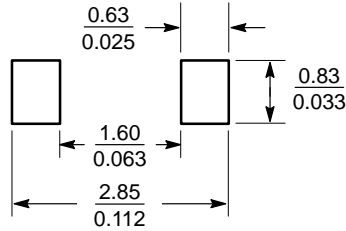
NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
B	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106
L	0.075	---	0.003	---

STYLE 1:
PIN 1. CATHODE
2. ANODE

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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