

# Switching Diode

## BAS16HT1

ON Semiconductor Preferred Device

### 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,* $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	200	mW
		1.57	mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C/W}$
Junction and Storage Temperature	$T_J, T_{stg}$	150	$^\circ\text{C}$

\*FR-4 Minimum Pad

### DEVICE MARKING

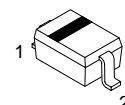
BAS16HT1 = A6

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

Characteristic	Symbol	Min	Max	Unit
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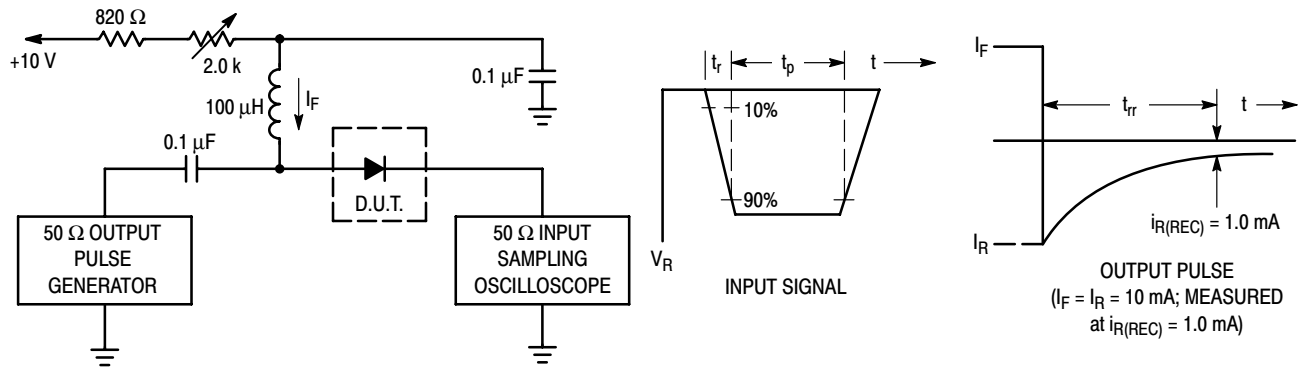
### OFF CHARACTERISTICS

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	$\mu\text{Adc}$
Reverse Breakdown Voltage ( $I_{BR} = 100\text{ }\mu\text{Adc}$ )	$V_{(BR)}$	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 ( $I_F = I_R = 10\text{ mAdc}, R_L = 50\text{ }\Omega$ )	$t_{rr}$	—	6.0	ns
Stored Charge ( $I_F = 10\text{ mAdc}$ to $V_R = 5.0\text{ Vdc}, R_L = 500\text{ }\Omega$ )	$Q_S$	—	45	pC

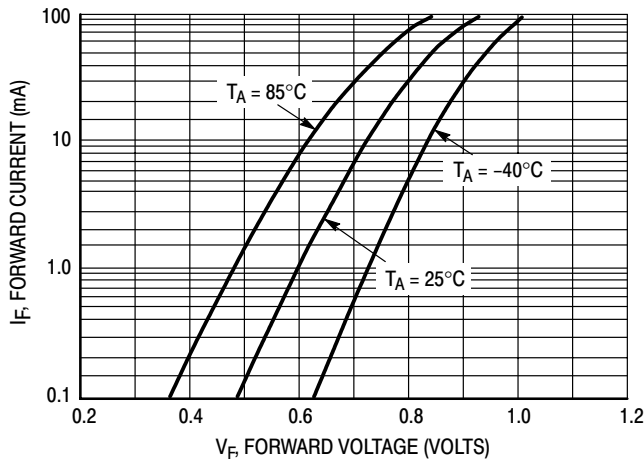
CASE 477-02, STYLE 1  
SOD323

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

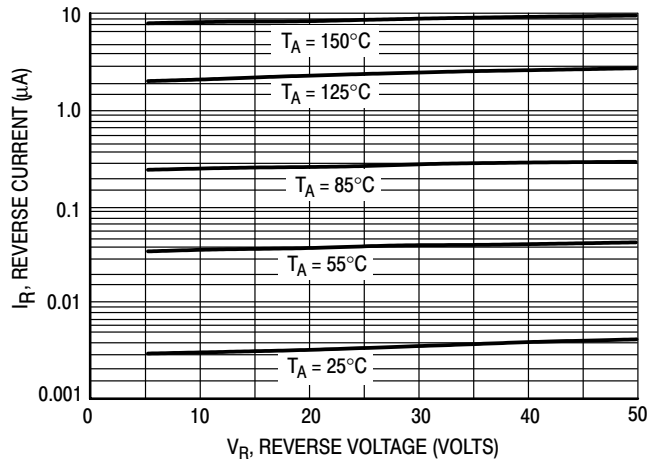
# BAS16HT1



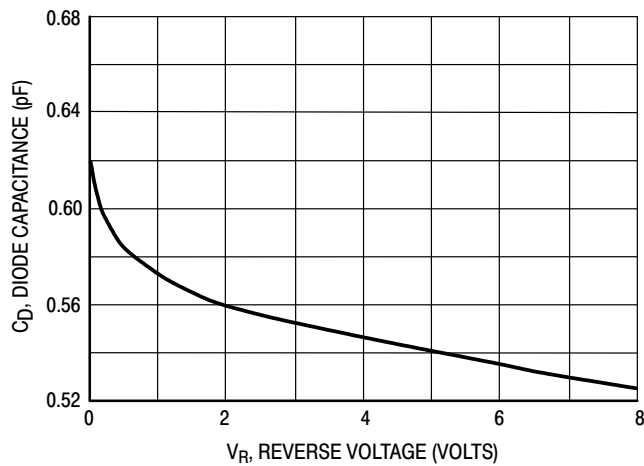
**Figure 1. Recovery Time Equivalent Test Circuit**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**

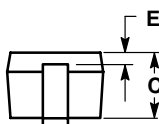
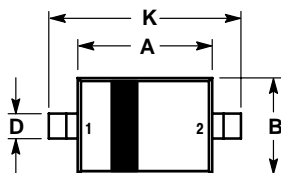


**Figure 4. Capacitance**

# BAS16HT1

## PACKAGE DIMENSIONS

### SOD-323 CASE 477-02 ISSUE B



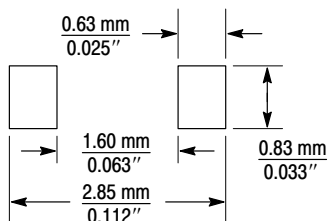
#### NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.

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

#### STYLE 1:

- PIN 1. CATHODE  
2. ANODE



( mm )  
( inches )

### SOD-323 Soldering Footprint

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