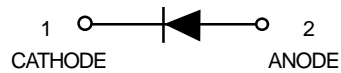


# Switching Diode



## BAS16HT1



CASE 477-02, STYLE 1  
SOD-323

### MAXIMUM RATINGS

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

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board,* $T_A = 25^\circ\text{C}$	$P_D$	200	mW
Derate above $25^\circ\text{C}$		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

### DEVICEMARKING

BAS16HT1 = A6

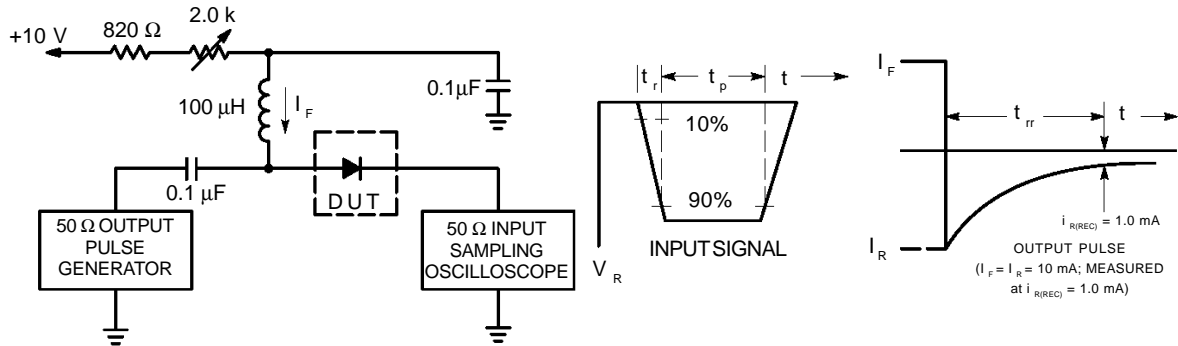
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
----------------	--------	-----	-----	------

### 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 ( $I_{BR} = 100 \mu\text{Adc}$ )	$V_{(BR)}$	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

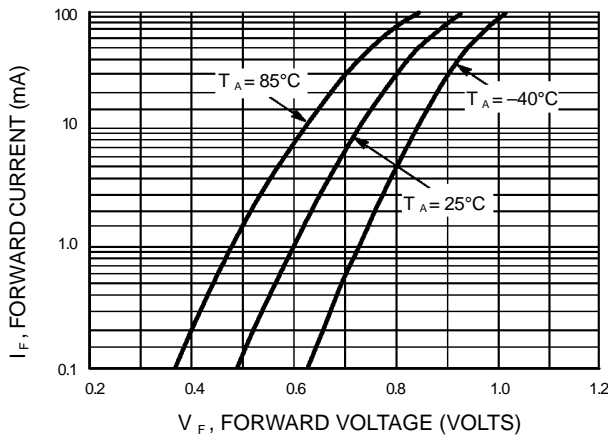
**BAS16HT1**



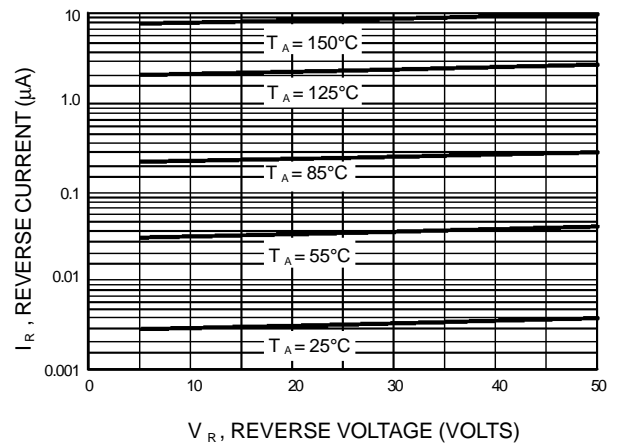
- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10mA.  
 3.  $t_p \gg t_{rr}$

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

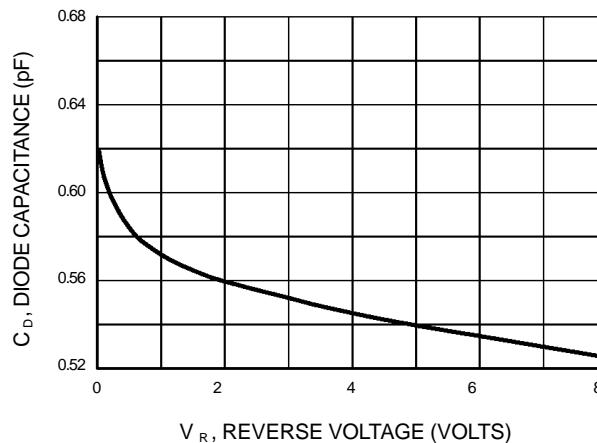
**TYPICAL CHARACTERISTICS**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**



**Figure 4. Capacitance**