



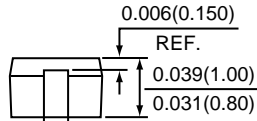
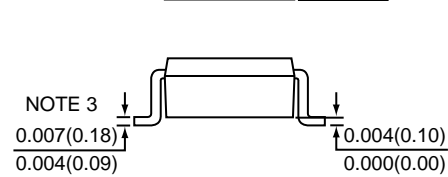
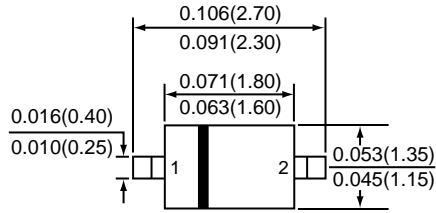
# BAS16HT1

## SURFACE MOUNT SWITCHING DIODE

Reverse Breakdown Voltage - 75 Volts

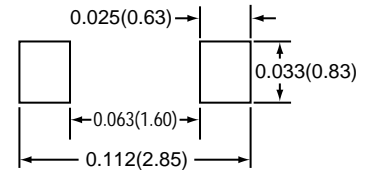
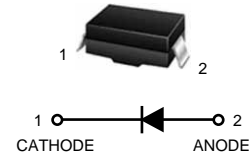
Peak Forward Current - 200mA

**SOD-323**



- 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.

\*Dimensions in inches and (millimeters)



Device Marking : BAS16HT1 = A6

### MAXIMUM RATINGS

<i>Ratings at 25°C ambient temperature unless otherwise specified.</i>	SYMBOLS	VALUE	UNITS
Continuous Reverse Voltage	$V_R$	75	Vdc
Peak Forward Current	$I_F$	200	mAdc
Peak Forward Surge Current	$I_{FSM}$	500	mAdc

### THERMAL CHARACTERISTICS

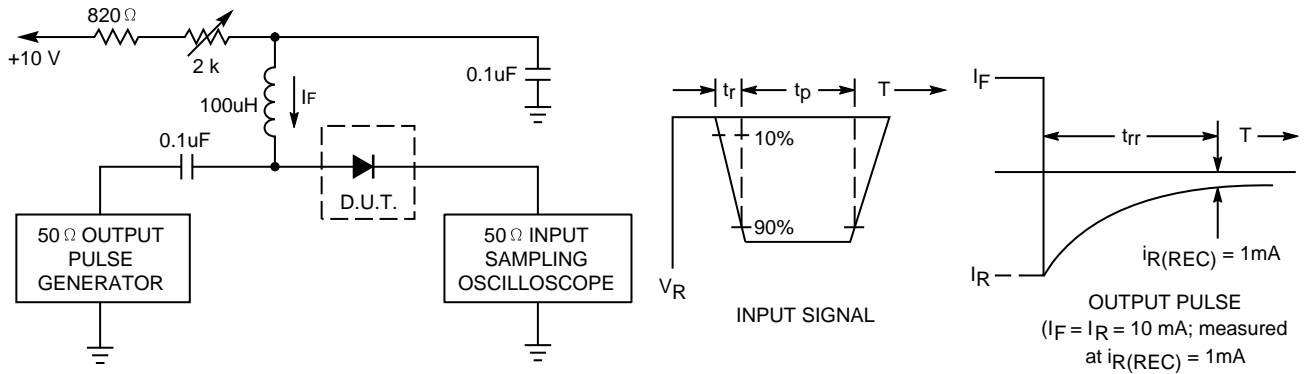
CHARACTERISTIC	SYMBOLS	MAX.	UNITS
Total Device Dissipation FR-5 Board, $T_A=25^\circ\text{C}$ Derate above 25°C	$P_D$	200 1.57	mW mW / °C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	°C / W
Junction and Storage Temperature	$T_J, T_{STG}$	150	°C

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

CHARACTERISTIC	SYMBOLS	MIN.	MAX.	UNITS
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	uAdc
Reverse Breakdown Voltage ( $I_{BR}=100\text{uAdc}$ )	$V_{(BR)}$	75	-	Vdc
Forward Voltage ( $I_F=1.0\text{mAdc}$ ) ( $I_F=10\text{mAdc}$ ) ( $I_F=50\text{mAdc}$ ) ( $I_F=150\text{mAdc}$ )	$V_F$	-	0.72 0.86 1.00 1.25	Vdc
Junction Capacitance ( $V_R=0, f=1.0\text{MHz}$ )	$C_J$	-	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 ( $I_F=10\text{mAdc}, \text{to } V_R=5.0\text{Vdc}, R_L=500\ \Omega$ )	$Q_S$	-	45	pC

# RATINGS AND CHARACTERISTIC CURVES OF BAS16HT1

FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT



- Notes: 1. A 2.0kΩ 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 2. FORWARD VOLTAGE

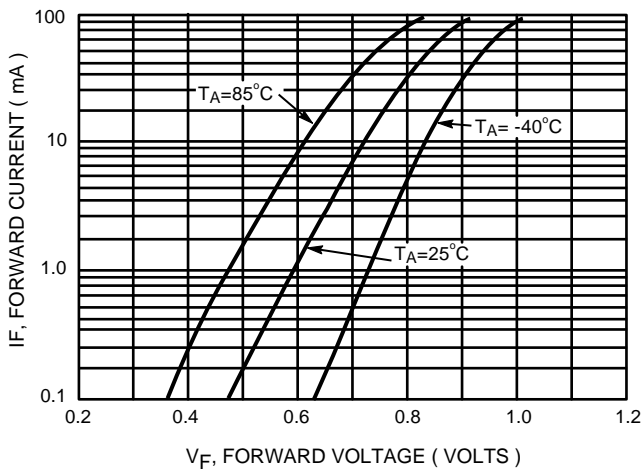


FIGURE 3. LEAKAGE CURRENT

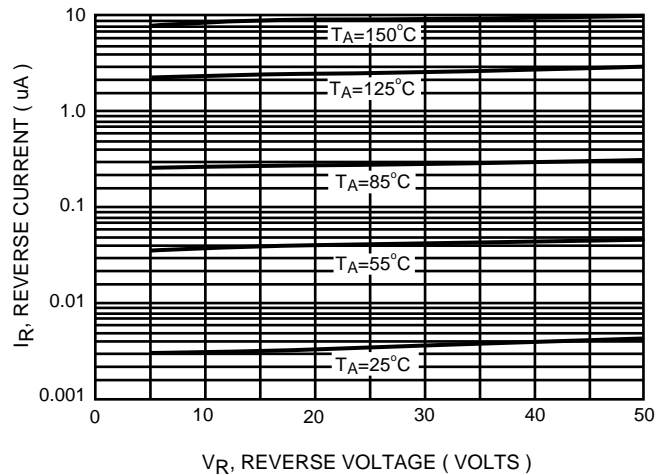


FIGURE 4. CAPACITANCE

