

# Switching Diode

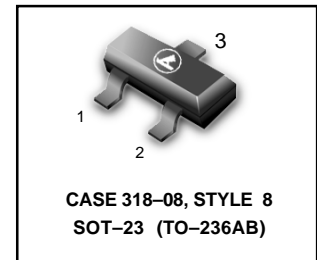
This switching diode has the following features:

- Low Leakage Current Applications
- Medium Speed Switching Times
- Available in 8 mm Tape and Reel

Use BAS116LT1 to order the 7 inch/3,000 unit reel

Use BAS116LT3 to order the 13 inch/10,000 unit reel

**BAS116LT1**



## 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

## DEVICE MARKING

BAS116LT1 = JV

## THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1) $T_A = 25^\circ\text{C}$	$P_D$	225	mW
Derate above $25^\circ\text{C}$		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$	$P_D$	300	mW
Derate above $25^\circ\text{C}$		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$

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

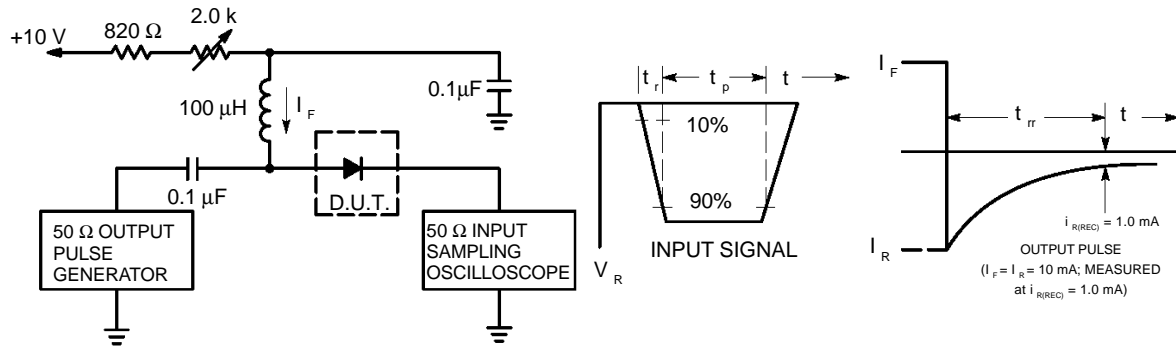
Characteristic	Symbol	Min	Max	Unit
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## OFF CHARACTERISTICS

Reverse Voltage Leakage Current ( $V_R = 75 \text{ Vdc}$ ) ( $V_R = 75 \text{ Vdc}, T_J = 150^\circ\text{C}$ )	$I_R$	—	5.0 80	nAdc
Reverse Breakdown Voltage ( $I_{BR} = 100 \mu\text{Adc}$ )	$V_{(BR)}$	75	—	Vdc
Forward Voltage ( $I_F = 1.0 \text{ mAdc}$ )	$V_F$	—	900	mV
( $I_F = 10 \text{ mAdc}$ )		—	1000	
( $I_F = 50 \text{ mAdc}$ )		—	1100	
( $I_F = 150 \text{ mAdc}$ )		—	1250	
Diode Capacitance ( $V_R = 0, f = 1.0 \text{ MHz}$ )	$C_D$	—	2.0	pF
Reverse Recovery Time ( $I_F = I_R = 10 \text{ mAdc}$ , ) (Figure 1)	$t_{rr}$	—	3.0	$\mu\text{s}$

1. FR-5 = 1.0 x 0.75 x 0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

**BAS116LT1**


- Notes: 1. A 2.0 k $\Omega$  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**