

# BAS21HT1

Preferred Device

## High Voltage Switching Diode

- Device Marking: JS

### MAXIMUM RATINGS

Symbol	Rating	Value	Unit
$V_R$	Continuous Reverse Voltage	250	Vdc
$I_F$	Peak Forward Current	200	mAdc
$I_{FM(surge)}$	Peak Forward Surge Current	625	mAdc

### THERMAL CHARACTERISTICS

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

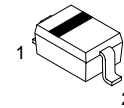
\*FR-5 Minimum Pad



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## HIGH VOLTAGE SWITCHING DIODE



SOD-323  
CASE 477  
PLASTIC

### MARKING DIAGRAM



JS = Device Code



### ORDERING INFORMATION

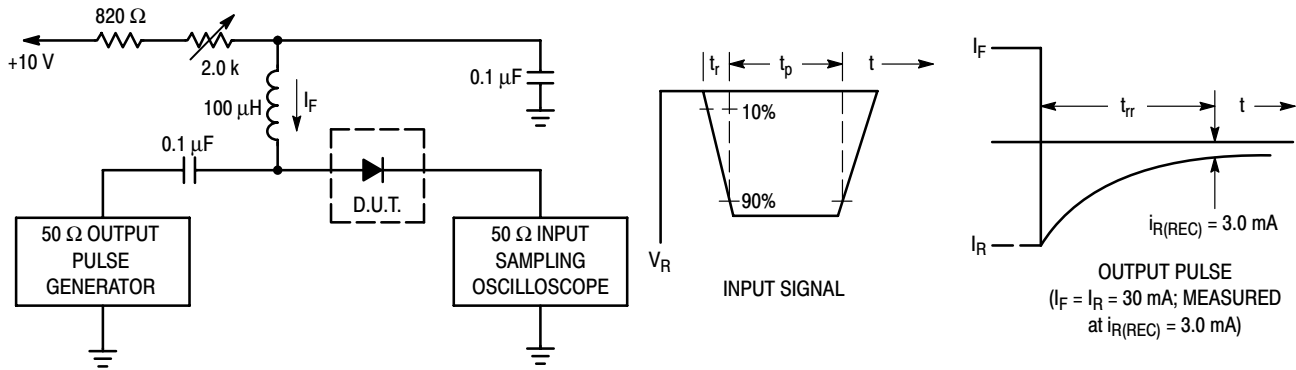
Device	Package	Shipping
BAS21HT1	SOD-323	3000/Tape & Reel

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

# BAS21HT1

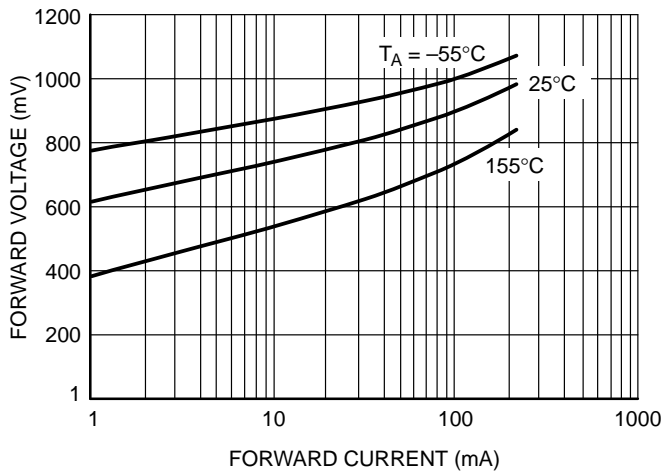
## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Reverse Voltage Leakage Current ( $V_R = 200\text{ Vdc}$ ) ( $V_R = 200\text{ Vdc}$ , $T_J = 150^\circ\text{C}$ )	$I_R$	–	0.1 100	$\mu\text{Adc}$
Reverse Breakdown Voltage ( $I_{BR} = 100\ \mu\text{Adc}$ )	$V_{(BR)}$	250	–	Vdc
Forward Voltage ( $I_F = 100\ \text{mA}$ ) ( $I_F = 200\ \text{mA}$ )	$V_F$	– –	1000 1250	mV
Diode Capacitance ( $V_R = 0$ , $f = 1.0\ \text{MHz}$ )	$C_D$	–	5.0	pF
Reverse Recovery Time ( $I_F = I_R = 30\ \text{mA}$ , $R_L = 100\ \Omega$ )	$t_{rr}$	–	50	ns

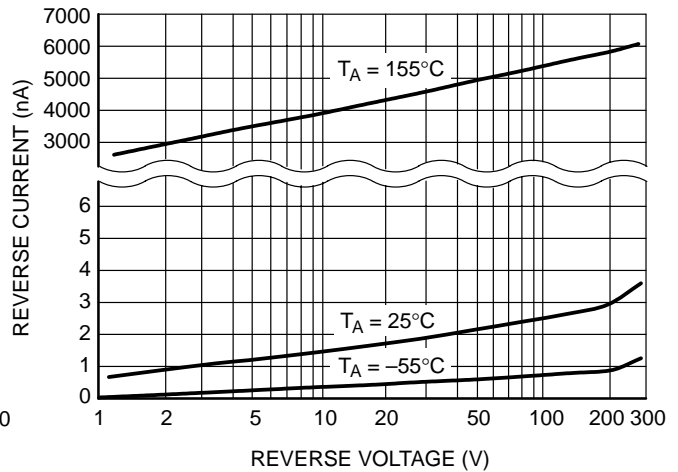


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 30 mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 30 mA.  
 3.  $t_p \gg t_{rr}$

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



**Figure 2. Forward Voltage**

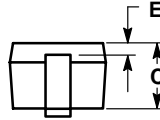
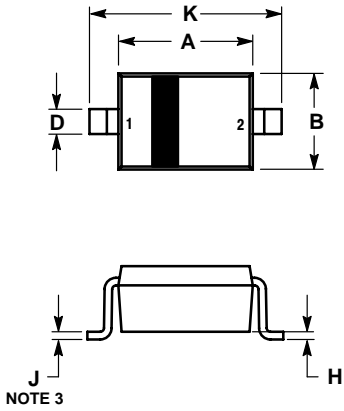


**Figure 3. Reverse Leakage**

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## PACKAGE DIMENSIONS

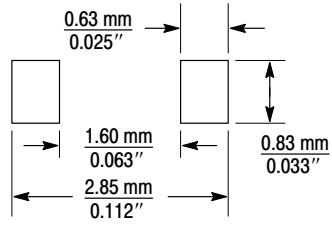
**SOD-323**  
 PLASTIC PACKAGE  
 CASE 477-02  
 ISSUE A



- 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



(  $\frac{\text{mm}}{\text{inches}}$  )

**SOD-323**  
 Soldering Footprint

# BAS21HT1

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