

# BAS20HT1

Preferred Device

## High Voltage Switching Diode

- Device Marking: JR

### MAXIMUM RATINGS

Symbol	Rating	Value	Unit
$V_R$	Continuous Reverse Voltage	200	Vdc
$V_{RRM}$	Repetitive Peak Reverse Voltage	200	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,*	200	mW
	$T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	1.57	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	$^\circ\text{C}$

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

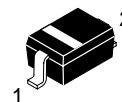
\*FR-5 Minimum Pad



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### HIGH VOLTAGE SWITCHING DIODE



SOD-323  
CASE 477  
STYLE 1

### MARKING DIAGRAM



JR = Specific Device Code  
M = Date Code

### ORDERING INFORMATION

Device	Package	Shipping†
BAS20HT1	SOD-323	3000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

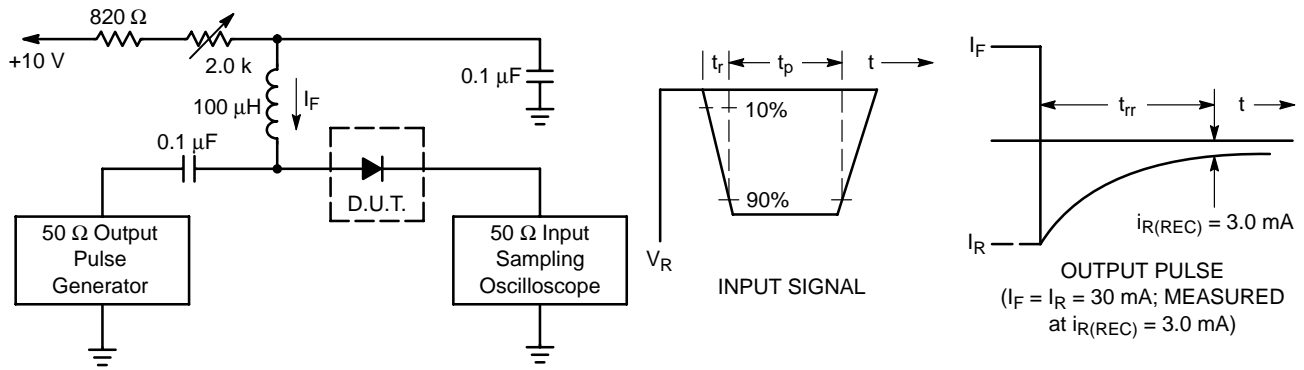
Preferred devices are recommended choices for future use and best overall value.

# BAS20HT1

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

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

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- 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

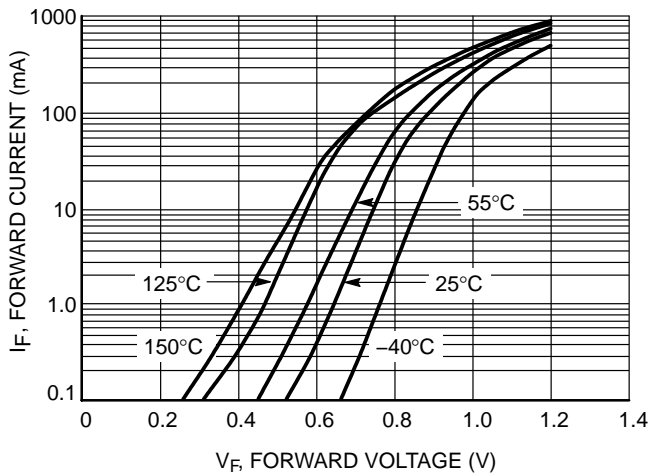


Figure 2. Forward Current

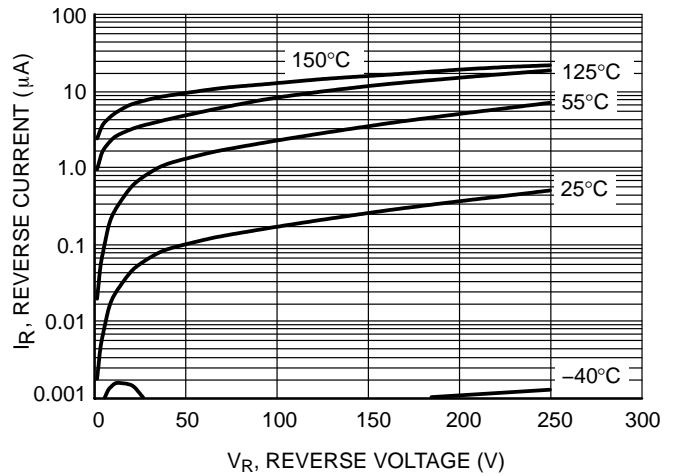


Figure 3. Leakage Current

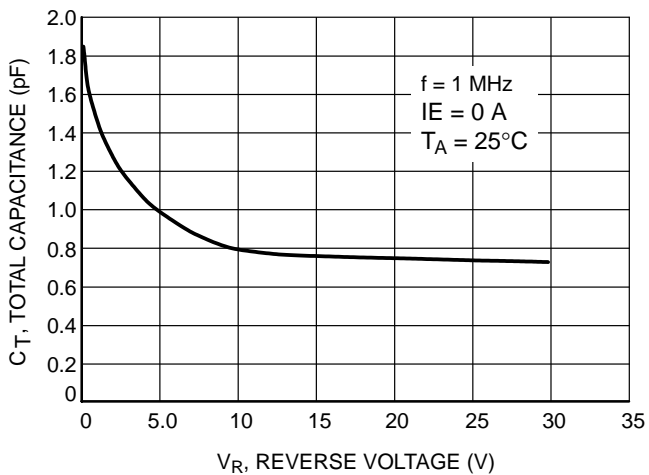


Figure 4. Total Capacitance

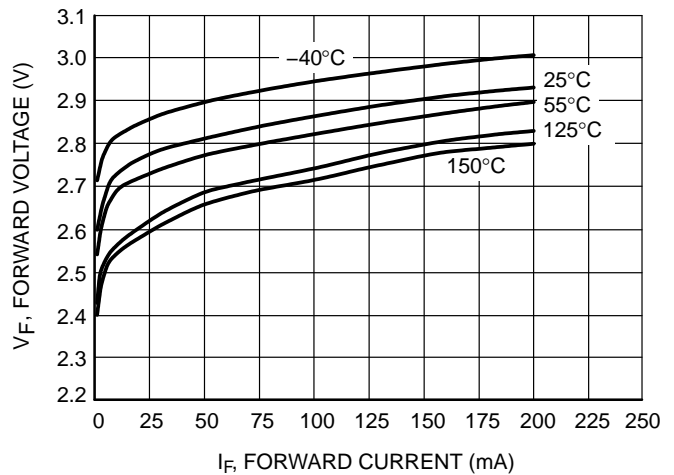
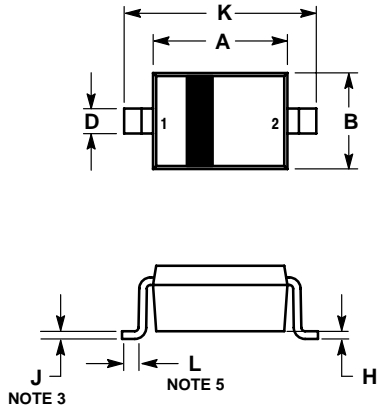


Figure 5. Forward Voltage

# BAS20HT1

## PACKAGE DIMENSIONS

**SOD-323**  
CASE 477-02  
ISSUE D



**NOTES:**

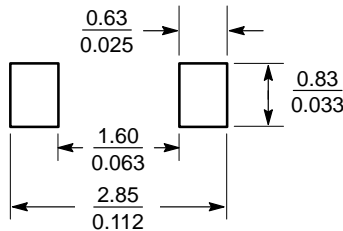
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.


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
L	0.075	---	0.003	---

**STYLE 1:**

- PIN 1. CATHODE
- ANODE

## RECOMMENDED FOOTPRINT



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