

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°C	200 1.57	mW mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	635	$^\circ\text{C/W}$
T_J, T_{stg}	Junction and Storage Temperature Range	-55 to +150	$^\circ\text{C}$

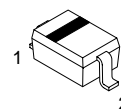
*FR-5 Minimum Pad



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HIGH VOLTAGE SWITCHING DIODE

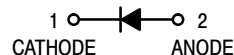


SOD-323
CASE 477
PLASTIC

MARKING DIAGRAM



JS = Device Code



ORDERING INFORMATION

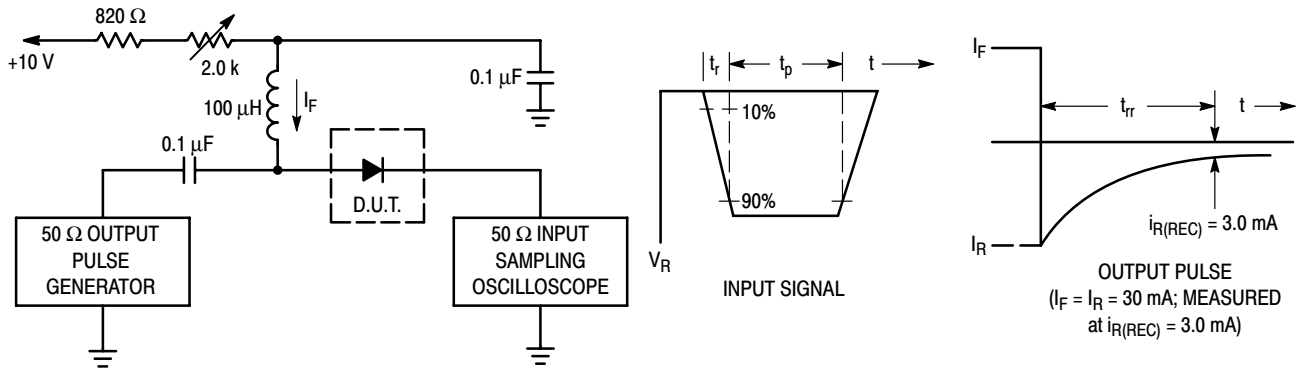
Device	Package	Shipping
BAS21HT1	SOD-323	3000/Tape & Reel

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
OFF CHARACTERISTICS				
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	μAdc
Reverse Breakdown Voltage ($I_{BR} = 100\text{ }\mu\text{Adc}$)	$V_{(BR)}$	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 ($I_F = I_R = 30\text{ mAdc}$, $R_L = 100\text{ }\Omega$)	t_{rr}	—	50	ns



- Notes: 1. A 2.0 k Ω 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

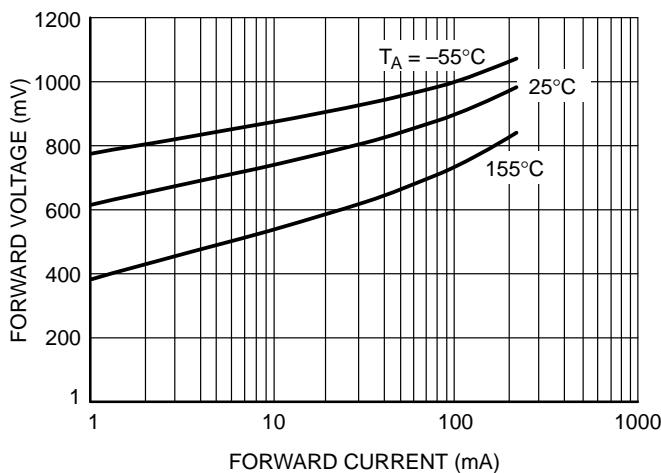


Figure 2. Forward Voltage

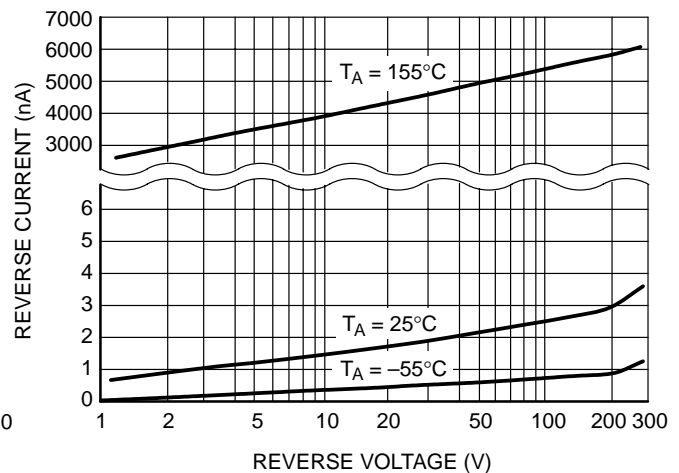
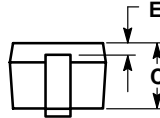
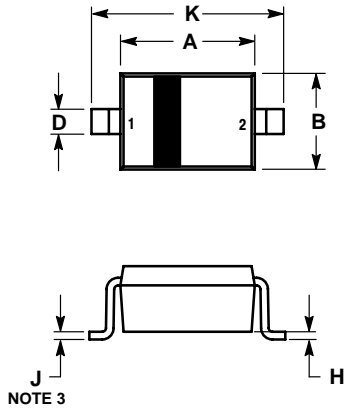


Figure 3. Reverse Leakage

BAS21HT1

PACKAGE DIMENSIONS

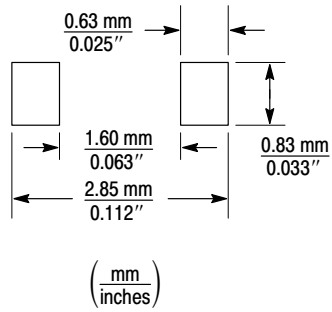
SOD-323 PLASTIC PACKAGE CASE 477-02 ISSUE A




- 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



SOD-323 Soldering Footprint

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