BAS20HT1

Preferred Device

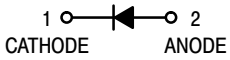
High Voltage Switching Diode

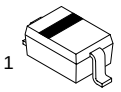
- Device Marking: JS

ON Semiconductor™

http://onsemi.com

HIGH VOLTAGE SWITCHING DIODE





SOD–323
CASE 477
STYLE 1

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°C Derate above 25°C	200 1.57	mW mW/°C
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	635	°C/W
T_J, T_{stg}	Junction and Storage Temperature Range	–55 to +150	°C

*FR–5 Minimum Pad

MARKING DIAGRAM

JS = Specific Device Code
M = Date Code

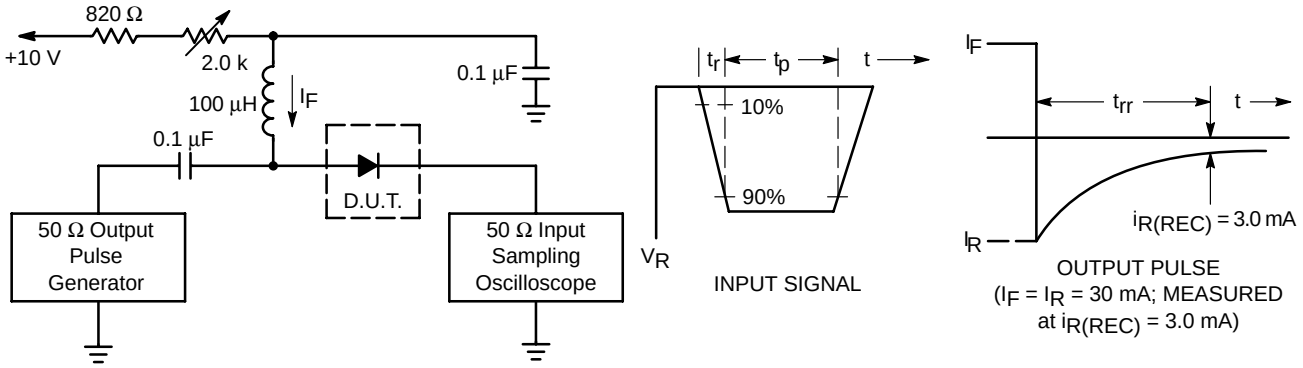
ORDERING INFORMATION

Device	Package	Shipping
BAS20HT1	SOD–323	3000/Tape & Reel

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

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Voltage Leakage Current (V_R = 200 Vdc) (V_R = 200 Vdc, T_J = 150°C)	I_R	 – –	 1.0 100	μAdc
Reverse Breakdown Voltage (I_{BR} = 100 μAdc)	$V_{(BR)}$	250	–	Vdc
Forward Voltage (I_F = 100 mAdc) (I_F = 200 mAdc)	V_F	 – –	 1000 1250	mV
Diode Capacitance (V_R = 0, f = 1.0 MHz)	C_D	–	5.0	pF
Reverse Recovery Time (I_F = I_R = 30 mAdc, R_L = 100 Ω)	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 $I_{R(peak)}$ is equal to 30 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

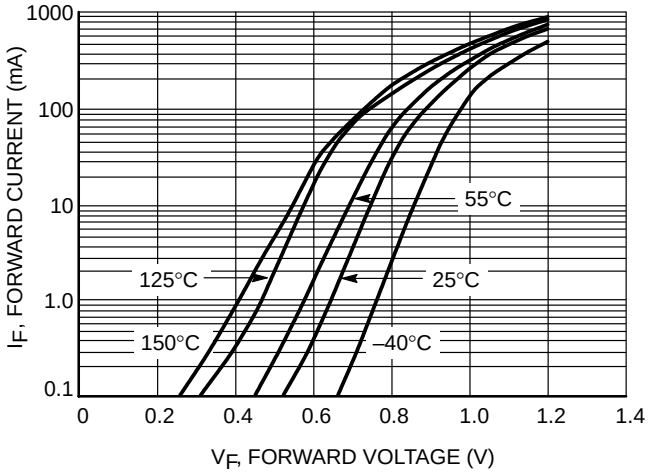


Figure 2. Forward Current

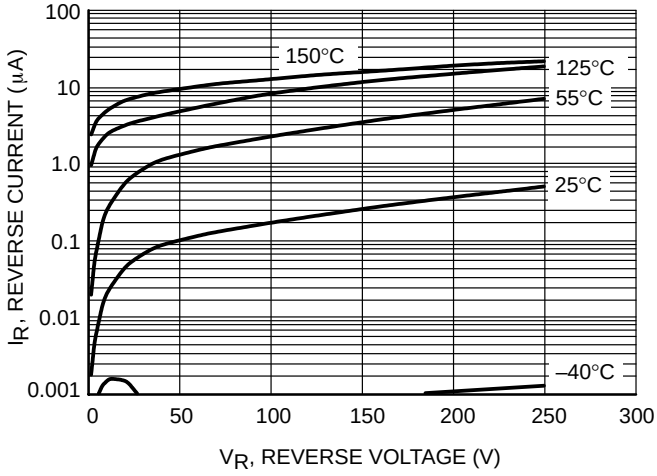


Figure 3. Leakage Current

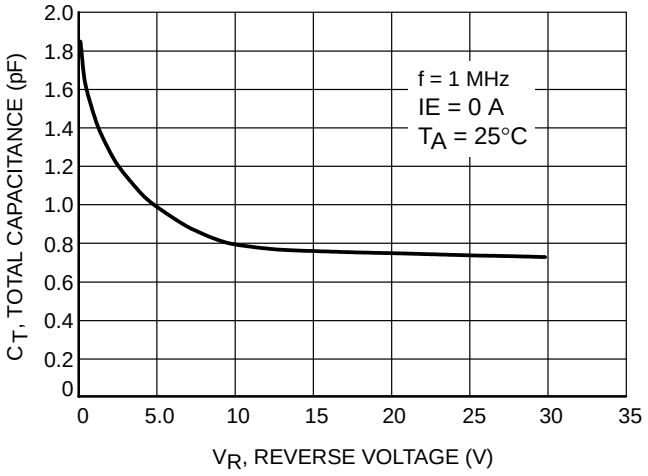


Figure 4. Total Capacitance

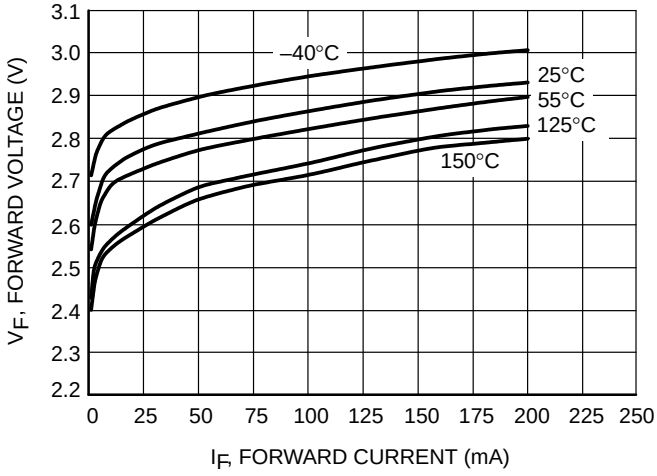
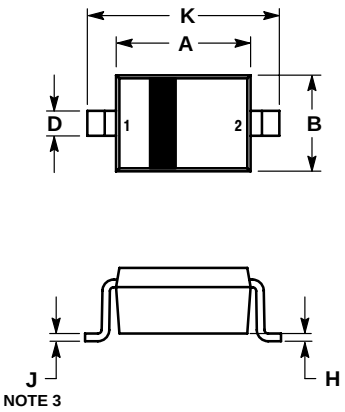


Figure 5. Forward Voltage

PACKAGE DIMENSIONS

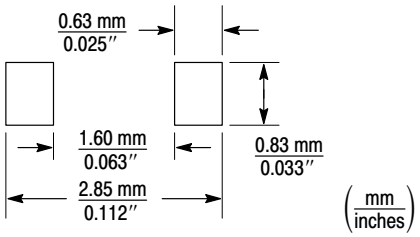
SOD–323
CASE 477–02
ISSUE B



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.

	MILLIMETERS		INCHES	
DIM	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

Thermal Clad is a trademark of the Bergquist Company.

PUBLICATION ORDERING INFORMATION

Literature Fulfillment:
Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
Phone: 303–675–2175 or 800–344–3860 Toll Free USA/Canada
Fax: 303–675–2176 or 800–344–3867 Toll Free USA/Canada
Email: ONlit@hibbertco.com

N. American Technical Support: 800–282–9855 Toll Free USA/Canada

JAPAN: ON Semiconductor, Japan Customer Focus Center
4–32–1 Nishi–Gotanda, Shinagawa–ku, Tokyo, Japan 141–0031
Phone: 81–3–5740–2700
Email: r14525@onsemi.com

ON Semiconductor Website: http://onsemi.com

For additional information, please contact your local Sales Representative.