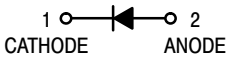
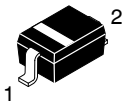
Low Leakage Switching Diode

BAS21AHT1G

LOW LEAKAGE SWITCHING DIODE





SOD−323
CASE 477
STYLE 1

Features

- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC−Q101 Qualified and PPAP Capable
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS

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

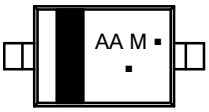
THERMAL CHARACTERISTICS

Symbol	Characteristic	Max	Unit
P_D	Total Device Dissipation FR−5 Board, (Note 1) 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

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. FR−5 Minimum Pad

MARKING DIAGRAM



AA = Device Code
M = Date Code*
▪ = Pb−Free Package

(Note: Microdot may be in either location)

*Date Code orientation may vary depending up-on manufacturing location.

ORDERING INFORMATION

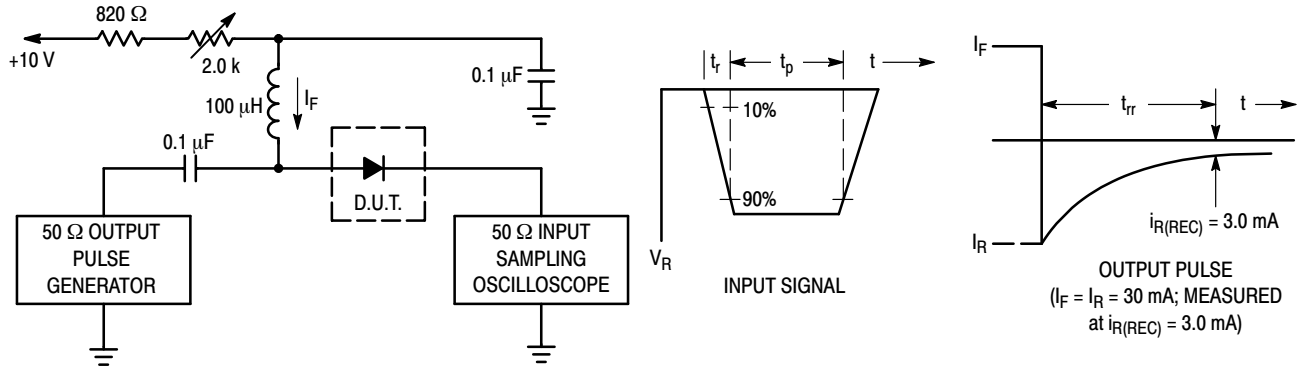
Device	Package	Shipping†
BAS21AHT1G	SOD−323 (Pb−Free)	3000/Tape & Reel
NSVBAS21AHT1G	SOD−323 (Pb−Free)	3000/Tape & Reel

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

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

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Reverse Voltage Leakage Current (V_R = 200 Vdc) (V_R = 200 Vdc, T_J = 150°C)	I_R	 – –	 – –	 40 100	 nAdc 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

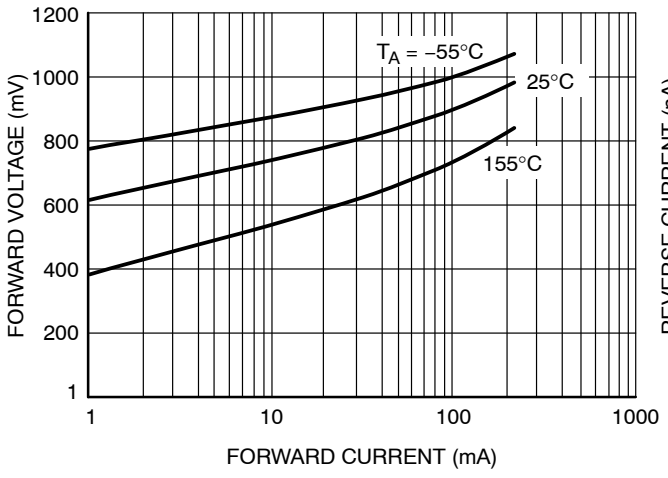


Figure 2. Forward Voltage

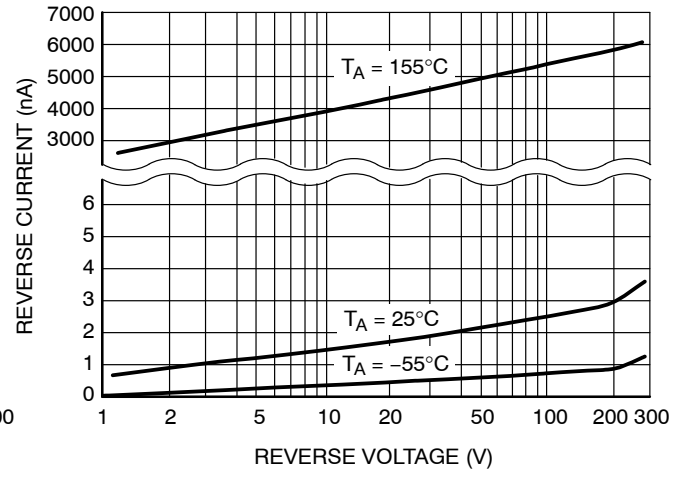
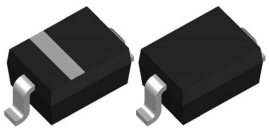
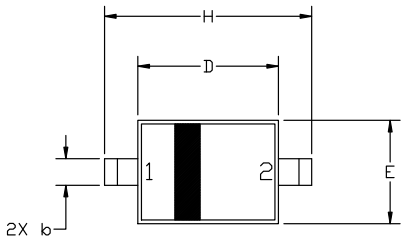


Figure 3. Reverse Leakage

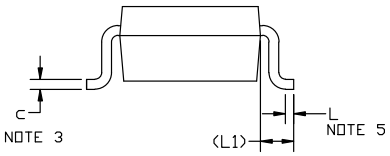


SOD−323 1.70x1.25x0.85
CASE 477
ISSUE K

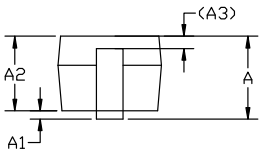
DATE 11 MAR 2024



TOP VIEW



SIDE VIEW

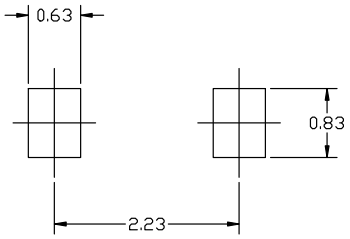


END VIEW

NOTES:

1. DIMENSIONING AND TOLERANCING AS PER ASME Y14.5M, 2018.
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 MEASURE FROM END OF RADIUS.

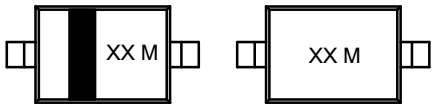
DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.80	0.90	1.00
A1	0.00	0.05	0.10
A2	0.75	0.85	0.95
A3	0.15 (REF)		
b	0.25	0.32	0.4
c	0.09	0.12	0.18
D	1.60	1.70	1.80
E	1.15	1.25	1.35
H	2.30	2.50	2.70
L	0.08	---	---
L1	0.40 (REF)		



RECOMMENDED MOUNTING FOOTPRINT

*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference manual, SOLDERRM/D.

GENERIC MARKING DIAGRAM*



STYLE 1 STYLE 2

XX = Specific Device Code
M = Date Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb−Free indicator, “G” or microdot “▪”, may or may not be present. Some products may not follow the Generic Marking.

STYLE 1:
PIN 1. CATHODE (POLARITY BAND)
2. ANODE

STYLE 2:
NO POLARITY

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DESCRIPTION:	**SOD−323 1.70x1.25x0.85**		**PAGE 1 OF 1**

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