Schottky Barrier Diodes

NSR02100HT1G

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

Features

- Fast Switching Speed
- Low Leakage Current
- Low Forward Voltage − 0.45 V @ I_F = 1 mAdc
- Surface Mount Device
- Low Capacitance Diode
- NSVR 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

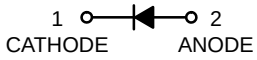
MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Total Device Dissipation FR-5 Board, (Note 1) T_A = 25 °C Derate above 25 °C	P_D	200 1.57	mW mW/°C
Forward Current (DC)	I_F	200	mA
Non-Repetitive Peak Forward Current, t_p < 10 msec	I_{FSM}	2	A
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	635	°C/W
Junction and Storage Temperature Range	T_J, T_{stg}	−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-4 Minimum Pad

100 VOLT SCHOTTKY BARRIER DIODE

SOD-323
CASE 477
STYLE 1



MARKING DIAGRAM

JC = Device Code
M = Date Code
▪ = Pb-Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
NSR02100HT1G	SOD-323 (Pb-Free)	3,000 / Tape & Reel
NSVR02100HT1G	SOD-323 (Pb-Free)	3,000 / 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.

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I_R = 10 μA)	V_R	–	100	–	V
Reverse Leakage (V_R = 50 V)	I_R	–	–	0.05	μAdc
Reverse Leakage (V_R = 100 V)	I_R	–	–	0.15	μAdc
Forward Voltage (I_F = 1 mAdc)	V_F	–	–	0.45	Vdc
Forward Voltage (I_F = 10 mAdc)	V_F	–	–	0.57	Vdc
Forward Voltage (I_F = 100 mAdc)	V_F	–	–	0.80	Vdc
Forward Voltage (I_F = 200 mAdc)	V_F	–	–	0.95	Vdc
Total Capacitance (V_R = 1.0 V, f = 1.0 MHz)	C_T	–	4	10	pF

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Share Feedback
Your Opinion Matters

TYPICAL CHARACTERISTICS

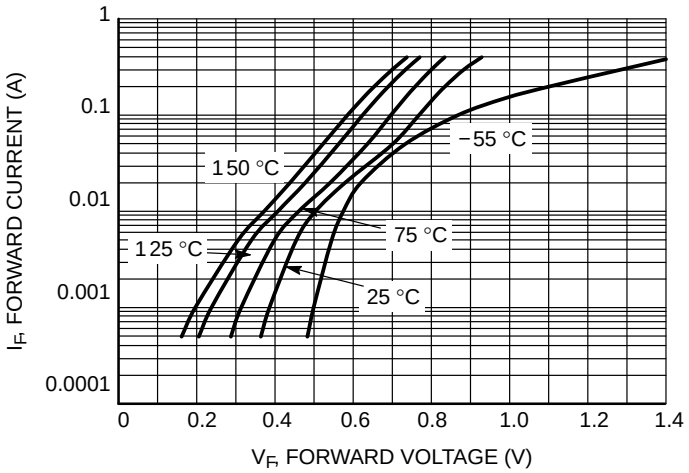

Figure 1. Forward Voltage

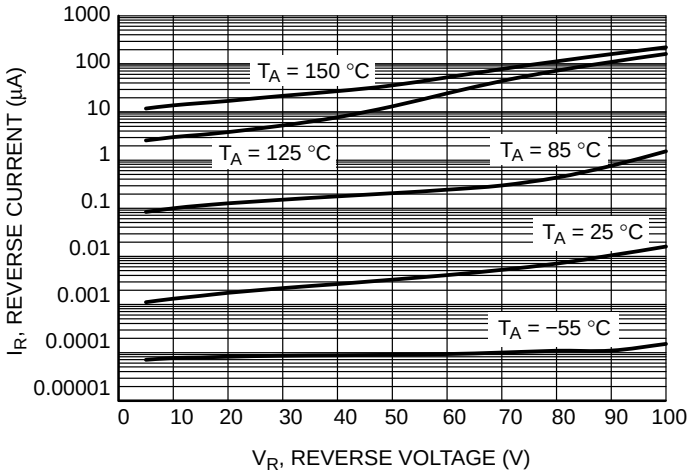

Figure 2. Leakage Current

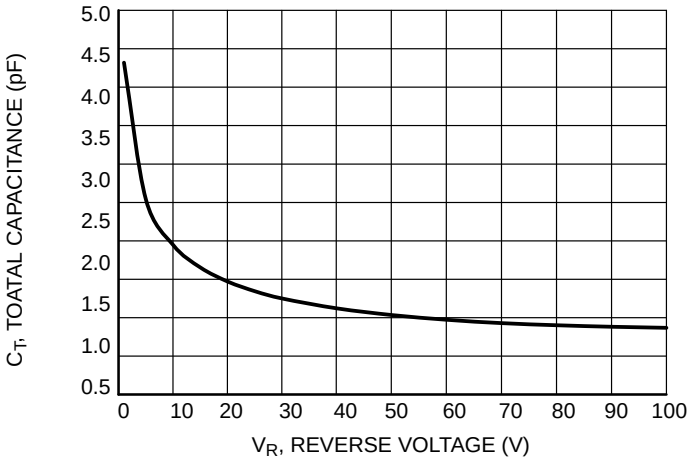

Figure 3. Total Capacitance

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REVISION HISTORY

Revision	Description of Changes	Date
2	Rebranded the Data Sheet to **onsemi** format.	6/5/2025

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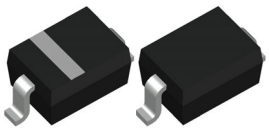
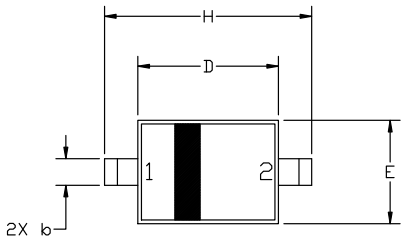
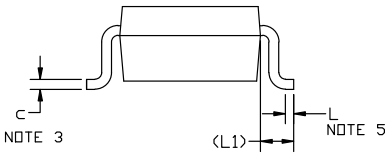


SOD−323 1.70x1.25x0.85
CASE 477
ISSUE K

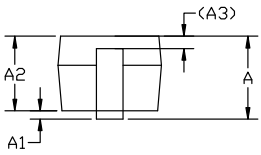
DATE 11 MAR 2024



TOP VIEW



SIDE VIEW

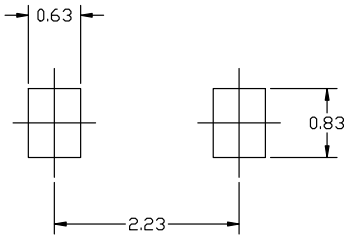


END VIEW

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.

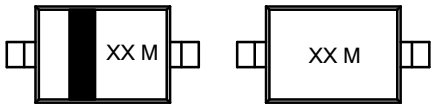
DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.80	0.90	1.00
A1	0.00	0.05	0.10
A2	0.75	0.85	0.95
A3	0.15 (REF)		
b	0.25	0.32	0.4
c	0.09	0.12	0.18
D	1.60	1.70	1.80
E	1.15	1.25	1.35
H	2.30	2.50	2.70
L	0.08	---	---
L1	0.40 (REF)		



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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