

NSR02100HT1G

Schottky Barrier Diodes

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 @ $I_F = 1$ mA
- 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) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	200 1.57	mW mW/ $^\circ\text{C}$
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	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to 150	$^\circ\text{C}$

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



ON Semiconductor®

www.onsemi.com

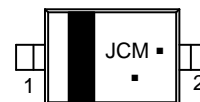
100 VOLT SCHOTTKY BARRIER DIODE



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 Specifications Brochure, BRD8011/D.

NSR02100HT1G

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

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ($I_R = 10 \mu\text{A}$)	V_R	–	100	–	V
Reverse Leakage ($V_R = 50 \text{V}$)	I_R	–	–	0.05	μA_{dc}
Reverse Leakage ($V_R = 100 \text{V}$)	I_R	–	–	0.15	μA_{dc}
Forward Voltage ($I_F = 1 \text{mA}_{dc}$)	V_F	–	–	0.45	V _{dc}
Forward Voltage ($I_F = 10 \text{mA}_{dc}$)	V_F	–	–	0.57	V _{dc}
Forward Voltage ($I_F = 100 \text{mA}_{dc}$)	V_F	–	–	0.80	V _{dc}
Forward Voltage ($I_F = 200 \text{mA}_{dc}$)	V_F	–	–	0.95	V _{dc}
Total Capacitance ($V_R = 1.0 \text{V}$, $f = 1.0 \text{MHz}$)	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.

NSR02100HT1G

TYPICAL CHARACTERISTICS

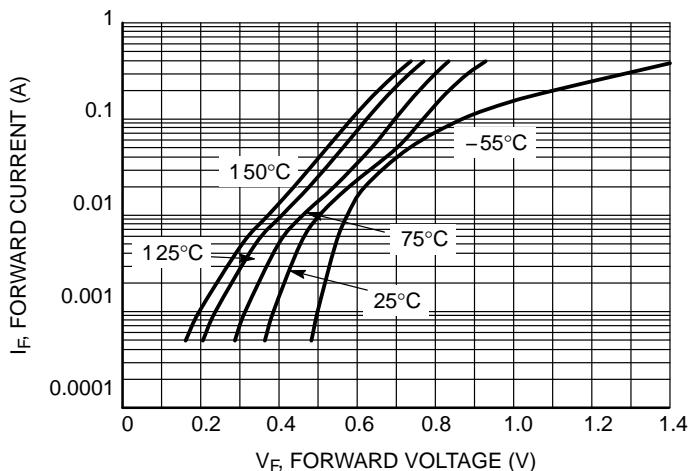


Figure 1. Forward Voltage

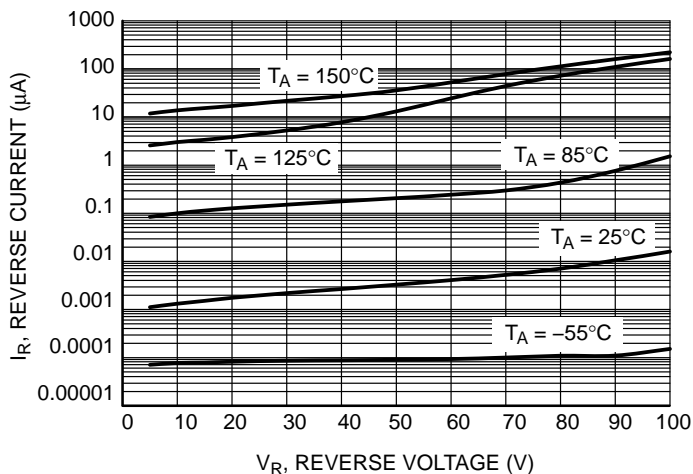


Figure 2. Leakage Current

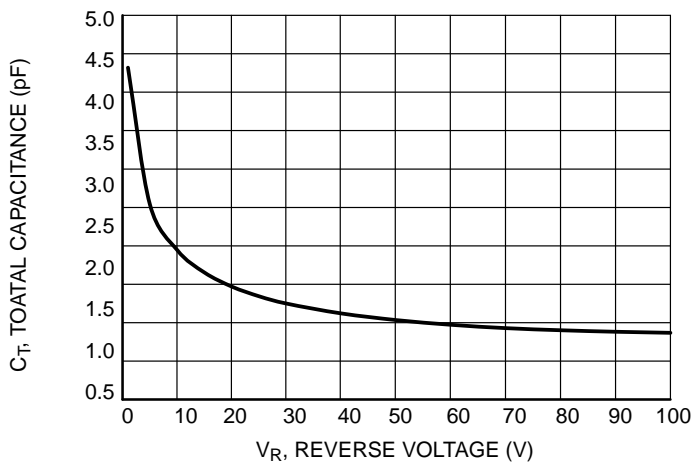
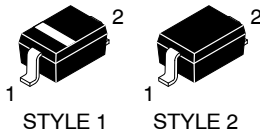


Figure 3. Total Capacitance

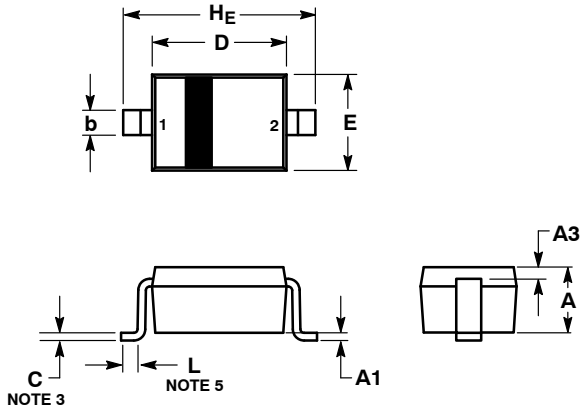
MECHANICAL CASE OUTLINE

PACKAGE DIMENSIONS

ON Semiconductor®



SCALE 4:1



SOD-323
CASE 477-02
ISSUE H

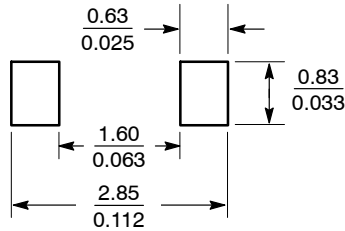
DATE 13 MAR 2007

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.

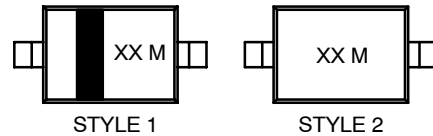
DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.80	0.90	1.00	0.031	0.035	0.040
A1	0.00	0.05	0.10	0.000	0.002	0.004
A3	0.15 REF			0.006 REF		
b	0.25	0.32	0.4	0.010	0.012	0.016
C	0.089	0.12	0.177	0.003	0.005	0.007
D	1.60	1.70	1.80	0.062	0.066	0.070
E	1.15	1.25	1.35	0.045	0.049	0.053
L	0.08			0.003		
HE	2.30	2.50	2.70	0.090	0.098	0.105

SOLDERING 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*



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.

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

STYLE 2: NO POLARITY

DOCUMENT NUMBER:	98ASB17533C	Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.
DESCRIPTION:	SOD-323	PAGE 1 OF 1

ON Semiconductor and are trademarks of Semiconductor Components Industries, LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries. ON Semiconductor reserves the right to make changes without further notice to any products herein. ON Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ON Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. ON Semiconductor does not convey any license under its patent rights nor the rights of others.

onsemi, **Onsemi**, and other names, marks, and brands are registered and/or common law trademarks of Semiconductor Components Industries, LLC dba "**onsemi**" or its affiliates and/or subsidiaries in the United States and/or other countries. **onsemi** owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of **onsemi**'s product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. **onsemi** reserves the right to make changes at any time to any products or information herein, without notice. The information herein is provided "as-is" and **onsemi** makes no warranty, representation or guarantee regarding the accuracy of the information, product features, availability, functionality, or suitability of its products for any particular purpose, nor does **onsemi** assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using **onsemi** products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by **onsemi**. "Typical" parameters which may be provided in **onsemi** data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. **onsemi** does not convey any license under any of its intellectual property rights nor the rights of others. **onsemi** products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use **onsemi** products for any such unintended or unauthorized application, Buyer shall indemnify and hold **onsemi** and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that **onsemi** was negligent regarding the design or manufacture of the part. **onsemi** is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:

Email Requests to: orderlit@onsemi.com

onsemi Website: www.onsemi.com

TECHNICAL SUPPORT

North American Technical Support:
Voice Mail: 1 800-282-9855 Toll Free USA/Canada
Phone: 011 421 33 790 2910

Europe, Middle East and Africa Technical Support:

Phone: 00421 33 790 2910

For additional information, please contact your local Sales Representative

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Schottky Diodes & Rectifiers](#) category:

Click to view products by [ON Semiconductor](#) manufacturer:

Other Similar products are found below :

[MA4E2039](#) [D1FH3-5063](#) [MBR0530L-TP](#) [MBR10100CT-BP](#) [MBR1545CT](#) [MMBD301M3T5G](#) [RB160M-50TR](#) [RB551V-30](#)
[BAS16E6433HTMA1](#) [BAT 54-02LRH E6327](#) [NSR05F40QNXT5G](#) [NTE555](#) [JANS1N6640](#) [SB07-03C-TB-H](#) [SB1003M3-TL-W](#) [SK310-T](#)
[SK32A-LTP](#) [SK34B-TP](#) [SS3003CH-TL-E](#) [GA01SHT18](#) [CRS10I30A\(TE85L,QM](#) [MA4E2501L-1290](#) [MBRB30H30CT-1G](#) [SB007-03C-TB-](#)
[E](#) [SK32A-TP](#) [SK33B-TP](#) [SK38B-TP](#) [NRVBM120LT1G](#) [NTE505](#) [NTSB30U100CT-1G](#) [SS15E-TP](#) [VS-6CWQ10FNHM3](#) [ACDBA1100LR-](#)
[HF](#) [ACDBA1200-HF](#) [ACDBA140-HF](#) [ACDBA2100-HF](#) [ACDBA3100-HF](#) [CDBQC0530L-HF](#) [ACDBA340-HF](#) [ACDBA260LR-HF](#)
[ACDBA1100-HF](#) [SK310B-TP](#) [MA4E2502L-1246](#) [MA4E2502H-1246](#) [NRVBM120ET1G](#) [NSR01L30MXT5G](#) [NTE573](#) [NTE6081](#) [SB560](#)
[PMAD1108-LF](#)