NSR0320MW2T1

Schottky Barrier Diode

These Schottky barrier diodes are designed for high current, handling capability, and low forward voltage performance.

- Low Forward Voltage − 0.24 Volts (Typ) @ I_F = 10 mAdc
- High Current Capability
- ESD Rating − Human Body Model: CLASS 3B
  − Machine Model: C
- Pb−Free Package May be Available. The G−Suffix Denotes a Pb−Free Lead Finish

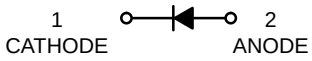
MAXIMUM RATINGS (T_J = 125°C unless otherwise noted)

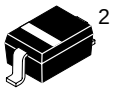
Rating	Symbol	Value	Unit
Reverse Voltage	V_R	20	Vdc
Peak Revese Voltage	V_{RM}	23	V
Forward Power Dissipation @ T_A = 25°C Derate above 25°C	P_F	 200 2.0	 mW mW/°C
Forward Current (DC) Continuous	I_F	 1	A
Forward Current t = 8.3 ms Half Sinewave	I_F	 5	A
Junction Temperature	T_J	125 Max	°C
Storage Temperature Range	T_{stg}	−55 to +150	°C

ON Semiconductor®

http://onsemi.com

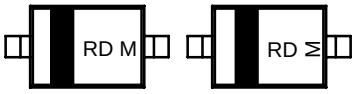
HIGH CURRENT SCHOTTKY BARRIER DIODE





SOD−323
CASE 477
STYLE 1

MARKING DIAGRAM



RD = Specific Device Code
M = Date Code

ORDERING INFORMATION

Device	Package	Shipping†
NSR0320MW2T1	SOD−323	3000/Tape & Reel
NSR0320MW2T3	SOD−323	10,000/Tape & Reel
NSR0320MW2T1G	SOD−323	3000/Tape & Reel
NSR0320MW2T3G	SOD−323	10,000/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.

January, 2004 − Rev. 0

Publication Order Number:
NSR0320MW2T1/D

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

Characteristic	Symbol	Min	Typ	Max	Unit
Total Capacitance (V_R = 5.0 V, f = 1.0 MHz)	C_T	−	30	35	pF
Reverse Leakage (V_R = 15 V)	I_R	−	10	50	μAdc
Reverse Leakage (V_R = 2.0 V @ 85° C)	I_R	−	200	300	μA
Reverse Leakage (V_R = 15.0 V @ 85° C)	I_R	−	450	1000	μA
Forward Voltage (I_F = 10 mAdc)	V_F	−	0.24	0.27	Vdc
Forward Voltage (I_F = 100 mAdc)	V_F	−	0.30	0.35	Vdc
Forward Voltage (I_F = 900 mAdc)	V_F	−	0.45	0.50	Vdc

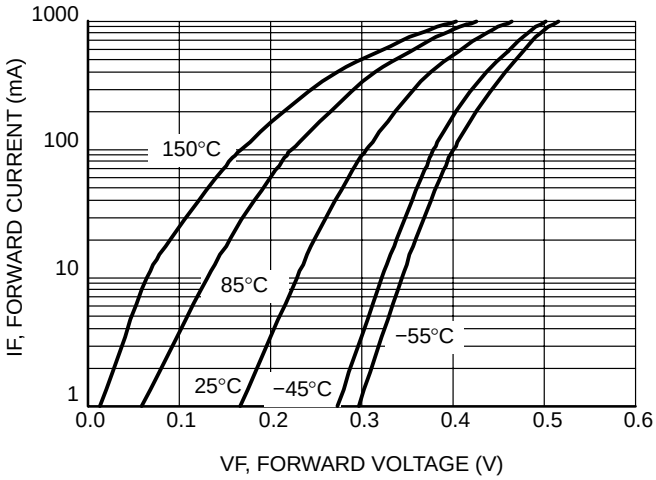


Figure 1. Forward Voltage

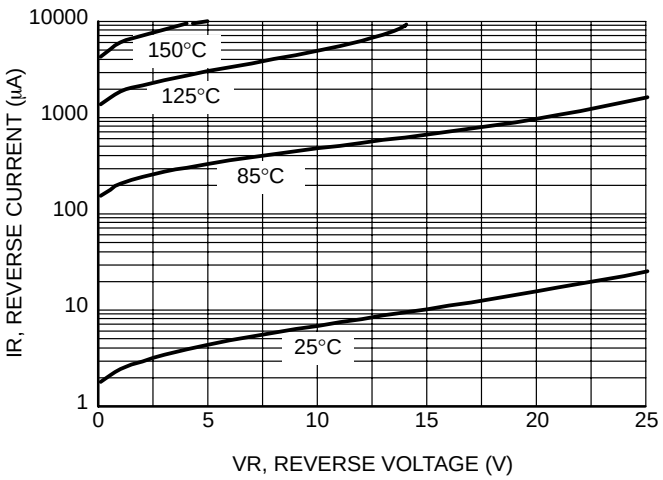


Figure 2. Leakage Current

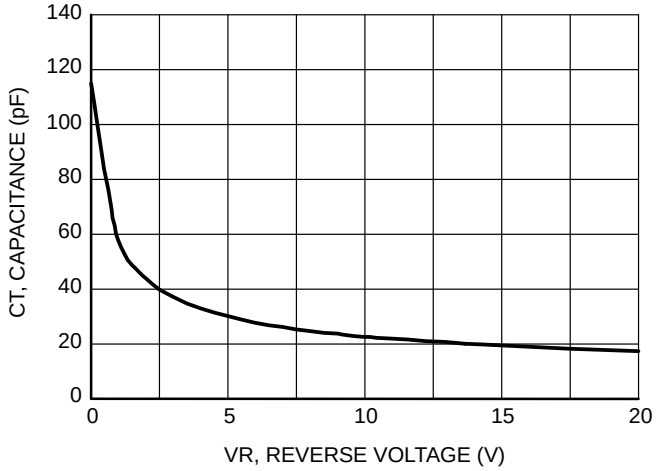
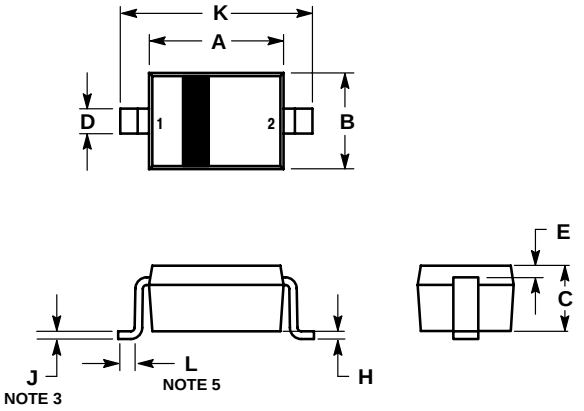


Figure 3. Total Capacitance

PACKAGE DIMENSIONS

SOD−323
CASE 477−02
ISSUE D

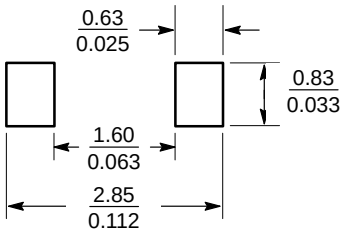


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

	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
L	0.075	−−−	0.003	−−−

STYLE 1:
PIN 1. CATHODE
2. ANODE

SOLDERING FOOTPRINT*



SCALE 10:1 $\left(\frac{\text{mm}}{\text{inches}}\right)$

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

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
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Phone: 81−3−5773−3850

ON Semiconductor Website: http://onsemi.com

Order Literature: http://www.onsemi.com/litorder

For additional information, please contact your local Sales Representative.