OM SENI

Schottky Barrier Diodes

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

Features

- Low Forward Voltage – 0.24 Volts (Typ) @ I_F = 10 mAdc
- High Current Capability
- ESD Rating:
  - ♦ Human Body Model: CLASS 3B
  - ♦ Machine Model: C
- AEC Qualified and PPAP Capable
- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant*

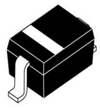
MAXIMUM RATINGS (T_J = 125°C unless otherwise noted)

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 Range	T_J	−55 to +125	°C
Storage Temperature Range	T_{stg}	−55 to +150	°C

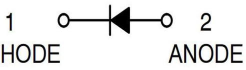
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

NSR0320MW2T1G

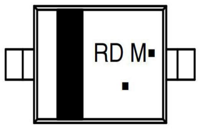
HIGH CURRENT SCHOTTKY BARRIER DIODE



SOD−323
CASE 477
STYLE 1



MARKING DIAGRAM



RD = Specific Device Code
M = Date Code
▪ = Pb−Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

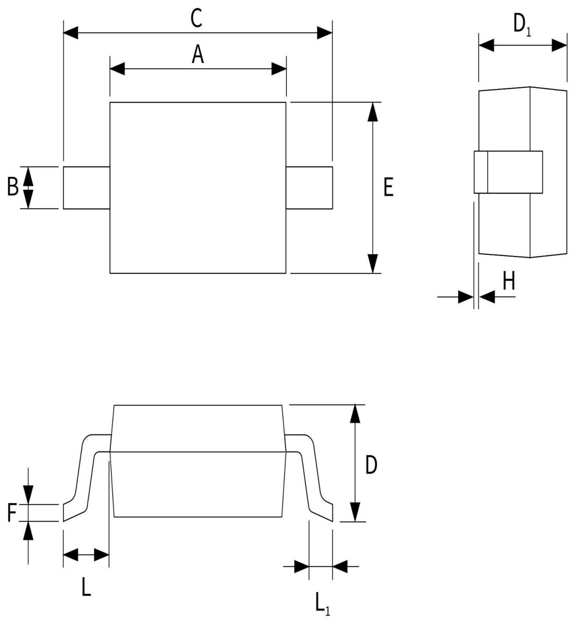
Device	Package	Shipping†
NSR0320MW2T1G	SOD−323 (Pb−Free)	3,000 / Tape & Reel

†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.

Ordering Information

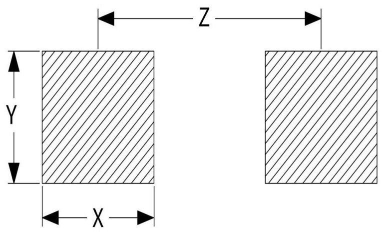
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-323	R1	0.0048	3000	30000	240000	7''

Package Outline Dimensions (SOD-323)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.80	0.063	0.071
B	0.25	0.40	0.010	0.016
C	2.30	2.80	0.091	0.110
D	0.80	1.10	0.031	0.043
D_1	0.80	0.90	0.031	0.035
E	1.20	1.40	0.047	0.055
F	0.08	0.18	0.003	0.007
L	0.475REF		0.019REF	
L_1	0.25	0.40	0.010	0.016
H	-	0.14	-	0.006

Suggested Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
X	0.65	0.75	0.026	0.030
Y	0.65	0.75	0.026	0.030
Z	2.10	2.20	0.084	0.088

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	–	25	29	pF
Reverse Leakage (V_R = 15 V)	I_R	–	10	50	µA
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 mA)	V_F	–	0.24	0.27	V
Forward Voltage (I_F = 100 mA)	V_F	–	0.30	0.35	V
Forward Voltage (I_F = 900 mA)	V_F	–	0.45	0.50	V

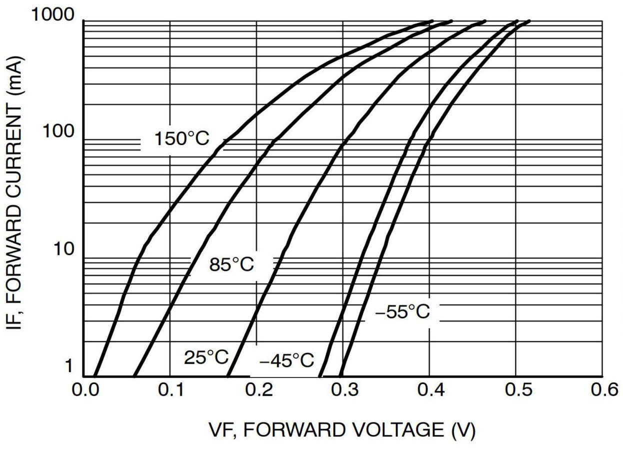


Figure 1. Forward Voltage

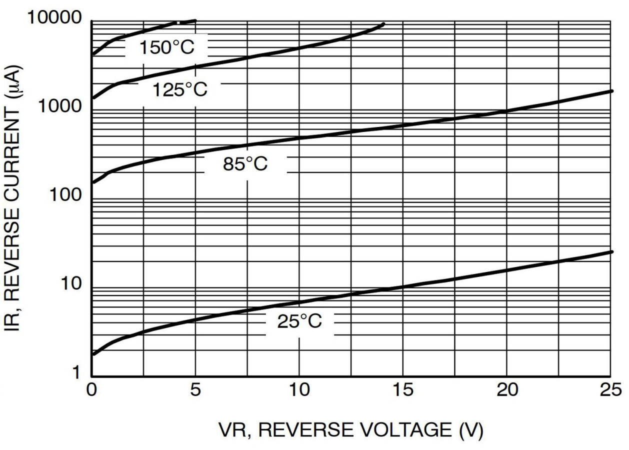


Figure 2. Leakage Current

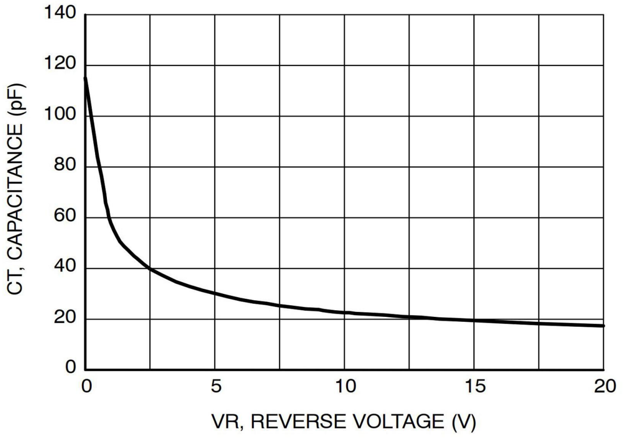


Figure 3. Total Capacitance