

# OM SENI

## 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 @  $I_F = 1 \text{ mAdc}$
- Surface Mount Device
- Low Capacitance Diode
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

### MAXIMUM RATINGS

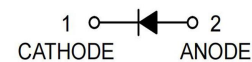
Characteristic	Symbol	Value	Unit
Total Device Dissipation FR-5 Board, (Note 1) $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	200 1.57	mW mW/°C
Forward Current (DC)	$I_F$	200	mA
Non-Repetitive Peak Forward Current, $t_p < 10 \text{ msec}$	$I_{FSM}$	2	A
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	635	°C/W
Junction and Storage Temperature Range	$T_J, T_{stg}$	-55 to 150	°C

## NSR02100HT1G

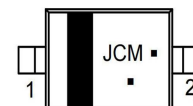
### 100 VOLT SCHOTTKY BARRIER DIODE



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

†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 ( $T_A = 25^\circ\text{C}$ 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	$\mu\text{A}$
Reverse Leakage ( $V_R = 100 \text{V}$ )	$I_R$	-	-	0.15	$\mu\text{A}$
Forward Voltage ( $I_F = 1 \text{mA}$ )	$V_F$	-	-	0.45	Vdc
Forward Voltage ( $I_F = 10 \text{mA}$ )	$V_F$	-	-	0.57	Vdc
Forward Voltage ( $I_F = 100 \text{mA}$ )	$V_F$	-	-	0.80	Vdc
Forward Voltage ( $I_F = 200 \text{mA}$ )	$V_F$	-	-	0.95	Vdc
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.

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## TYPICAL CHARACTERISTICS

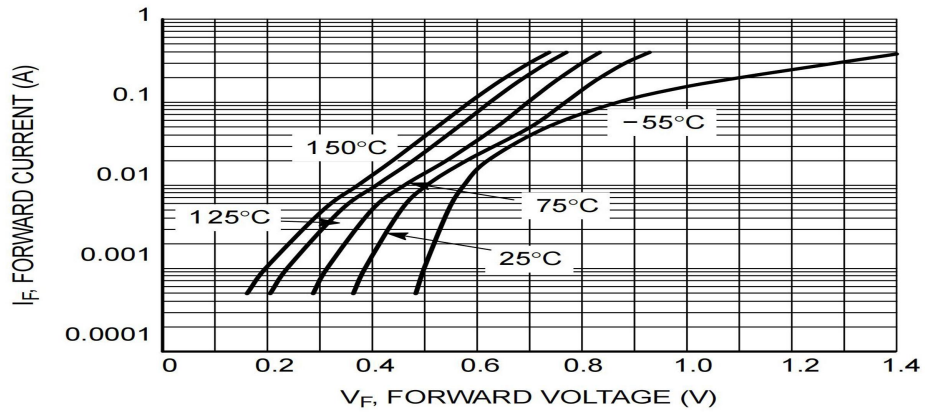


Figure 1. Forward Voltage

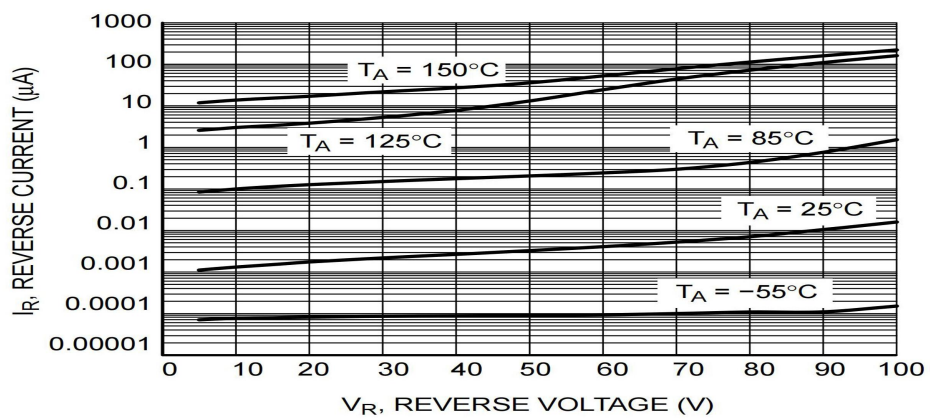


Figure 2. Leakage Current

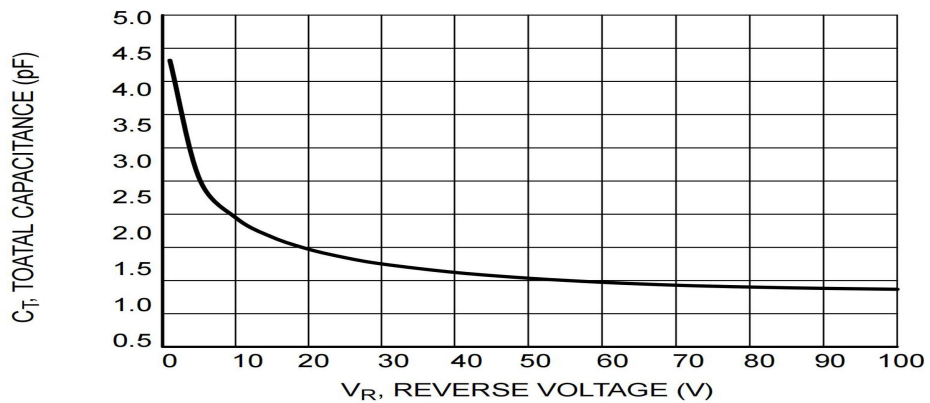


Figure 3. Total Capacitance

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## 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 <sub>1</sub>	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 <sub>1</sub>	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