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 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°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 to150	°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®

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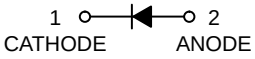
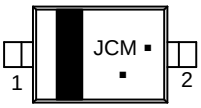
100 VOLT SCHOTTKY BARRIER DIODE

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.

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.

TYPICAL CHARACTERISTICS

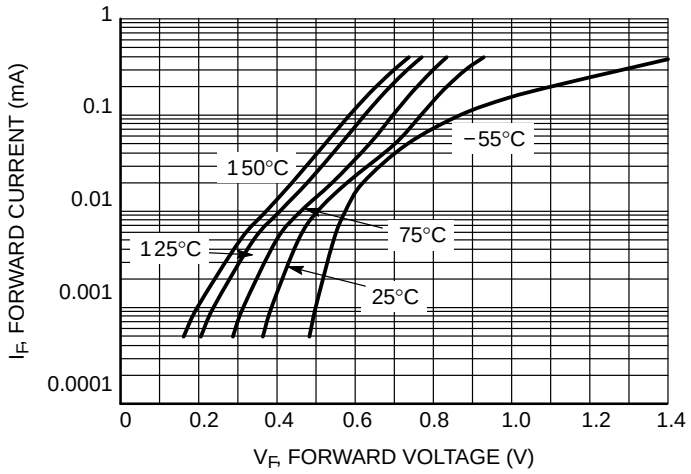


Figure 1. Forward Voltage

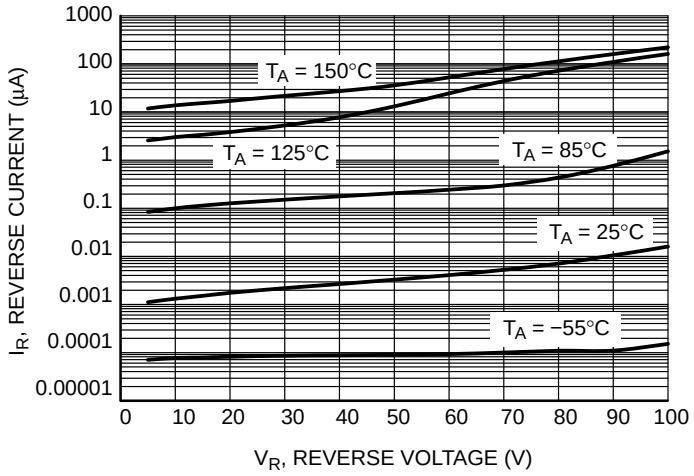


Figure 2. Leakage Current

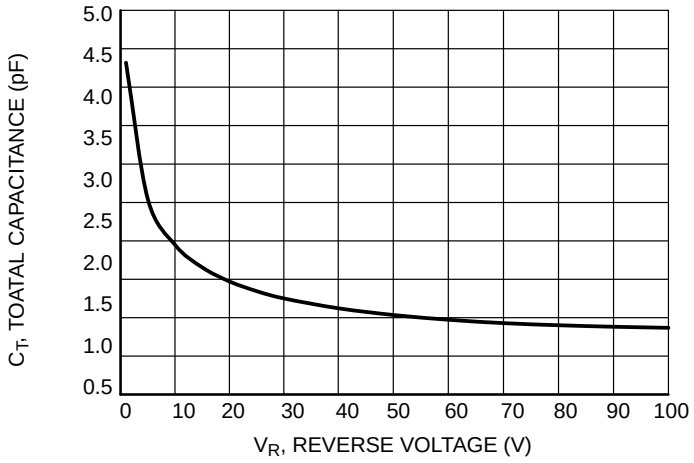
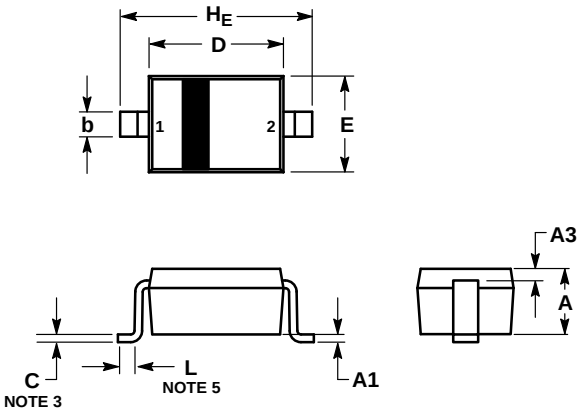


Figure 3. Total Capacitance

NSR02100HT1G

PACKAGE DIMENSIONS

SOD−323
CASE 477−02
ISSUE H

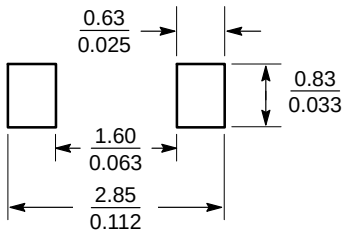


NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
5. DIMENSION L IS MEASURED FROM END OF RADIUS.

	MILLIMETERS			INCHES		
DIM	MIN	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		
H_E	2.30	2.50	2.70	0.090	0.098	0.105

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

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.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA
Phone: 303−675−2175 or 800−344−3860 Toll Free USA/Canada
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For additional information, please contact your local Sales Representative