NSR0230M2T5G, NSVR0230M2T5G

Schottky Barrier Diode

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

- Extremely Fast Switching Speed
- Extremely Low Forward Voltage 0.325 V (max) @ I_F = 10 mA
- Low Reverse Current
- AEC Qualified and PPAP Capable
- NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements
- This is a Pb−Free Device*

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	30	Vdc
Forward Current DC	I_F	200	mA
Forward Current Surge Peak (60 Hz, 1 cycle)	I_{FSM}	1.0	A
ESD Rating: Class 3B per Human Body Model Class C per Machine Model			

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.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR−5 Board, (Note 1) T_A = 25°C Derate above 25°C	P_D	167 2.0	mW mW/°C
Thermal Resistance, Junction−to−Ambient	$R_{\theta JA}$	600	°C/W
Junction and Storage Temperature Range	T_J, T_{stg}	−55 to +125	°C

1. FR−5 Minimum Pad.

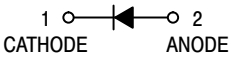
*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

ON Semiconductor®

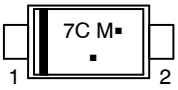
http://onsemi.com

30 V SCHOTTKY BARRIER DIODE

SOD−723
CASE 509AA
PLASTIC



MARKING DIAGRAM



7C = Specific Device Code
M = Month Code
▪ = Pb−Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
NSR0230M2T5G	SOD−723 (Pb−Free)	2 mm Pitch 8,000/Tape & Reel
NSVR0230M2T5G	SOD−723 (Pb−Free)	2 mm Pitch 8,000/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 Leakage (V_R = 10 V) (V_R = 30 V)	I_R	 – –	 – –	 10 100	μA
Forward Voltage (I_F = 10 mA) (I_F = 200 mA)	V_F	 – –	 – –	 0.325 0.500	Vdc

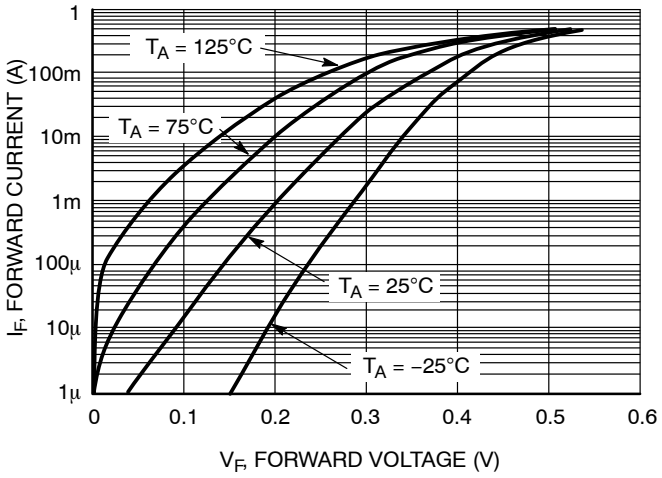


Figure 1. Forward Characteristics

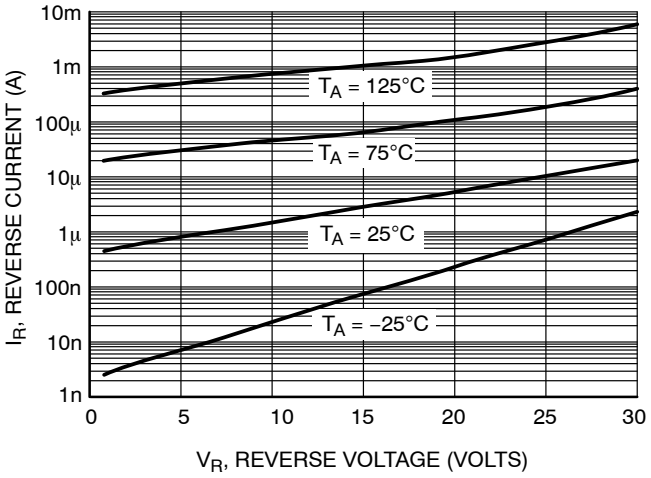


Figure 2. Reverse Characteristics

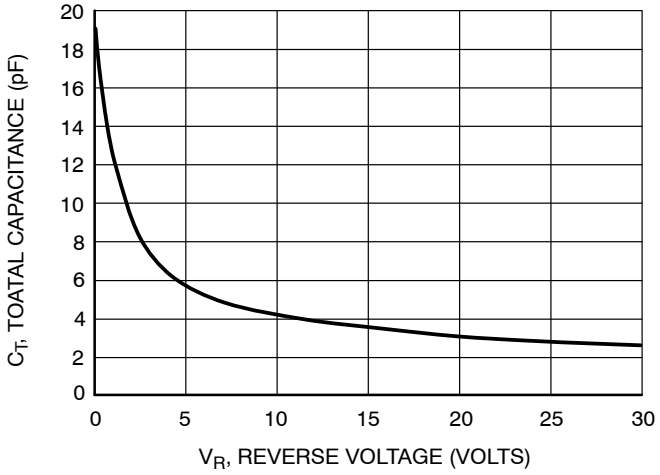
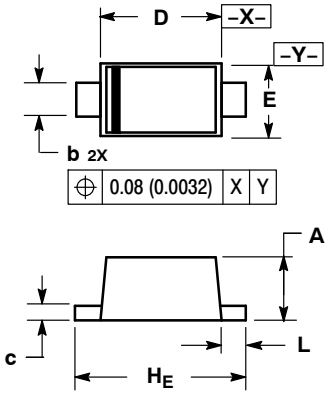


Figure 3. Total Capacitance

PACKAGE DIMENSIONS

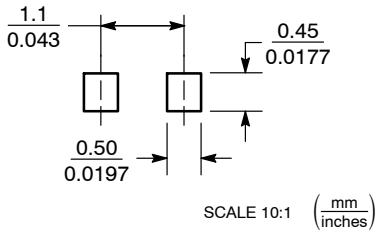
SOD−723
CASE 509AA−01
ISSUE O



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETER.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

	MILLIMETERS			INCHES		
DIM	MIN	NOM	MAX	MIN	NOM	MAX
A	0.49	0.52	0.55	0.019	0.020	0.022
b	0.25	0.28	0.32	0.0098	0.011	0.013
c	0.08	0.12	0.15	0.0032	0.0047	0.0059
D	0.95	1.00	1.05	0.037	0.039	0.041
E	0.55	0.60	0.65	0.022	0.024	0.026
H_E	1.35	1.40	1.45	0.053	0.055	0.057
L	0.15	0.20	0.25	0.006	0.0079	0.010

SOLDERING FOOTPRINT*



SOD−723

*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

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