

Schottky Barrier Diode

NSR0230M2T5G, NSVR0230M2T5G

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 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.

THERMAL CHARACTERISTICS

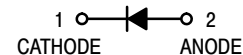
Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (Note 1) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	167 2.0	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	600	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +125	$^\circ\text{C}$

1. FR-5 Minimum Pad.

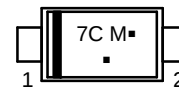
30 V SCHOTTKY BARRIER DIODE



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 Specification Brochure, [BRD8011/D](#).

* For additional information on our Pb-Free strategy and soldering details, please download the **onsemi** Soldering and Mounting Techniques Reference Manual, [SOLDERM/D](#).

NSR0230M2T5G, NSVR0230M2T5G

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Leakage ($V_R = 10\text{ V}$) ($V_R = 30\text{ V}$)	I_R	- -	- -	10 100	μA
Forward Voltage ($I_F = 10\text{ mA}$) ($I_F = 200\text{ mA}$)	V_F	- -	- -	0.325 0.500	Vdc

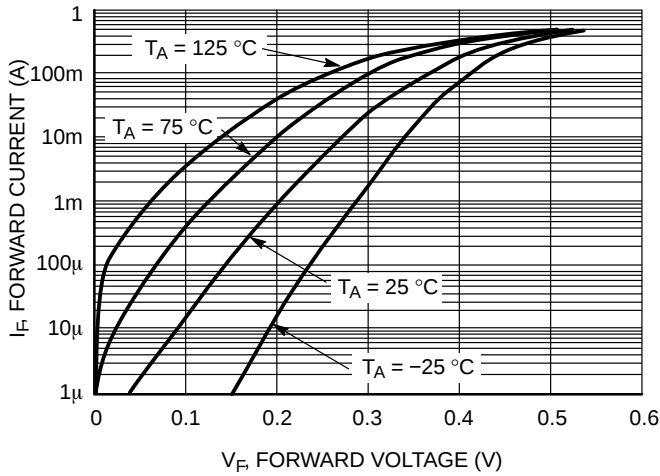


Figure 1. Forward Characteristics

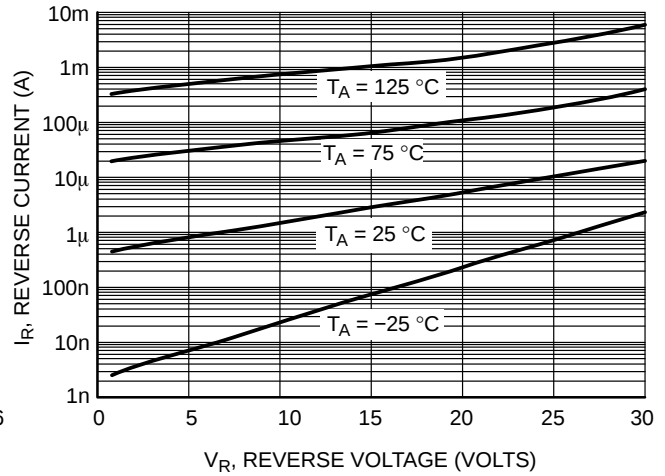


Figure 2. Reverse Characteristics

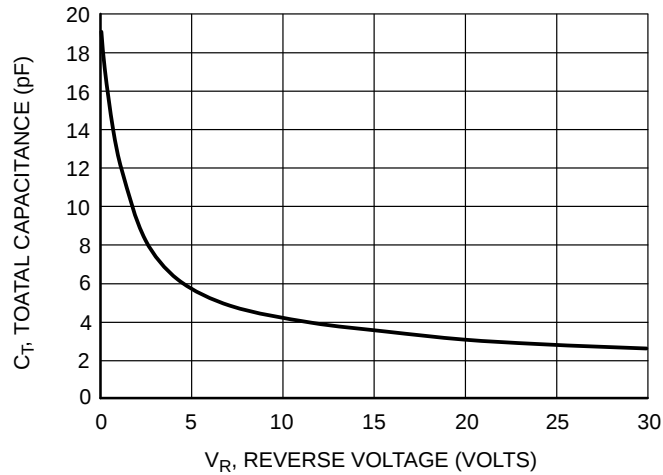
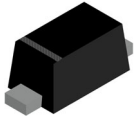


Figure 3. Total Capacitance

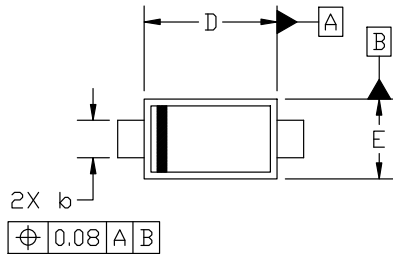
NSR0230M2T5G, NSVR0230M2T5G

REVISION HISTORY

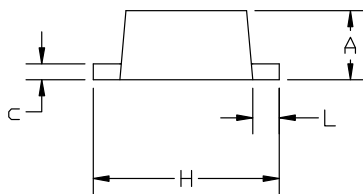
Revision	Description of Changes	Date
4	Rebranded the Data Sheet to onsemi format.	6/4/2025


SOD-723, 2-LEAD, 1.00x0.60x0.52
CASE 509AA
ISSUE A

DATE 01 FEB 2024



TOP VIEW



SIDE VIEW

GENERIC
MARKING DIAGRAM*

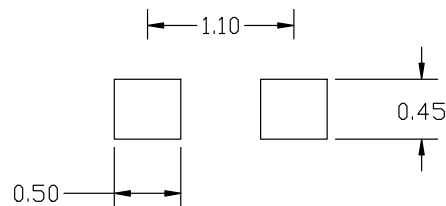
XX = Specific Device Code
M = Date Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.

NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2018.
2. CONTROLLING DIMENSIONS: MILLIMETER.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.49	0.52	0.55
b	0.25	0.28	0.32
c	0.08	0.12	0.15
D	0.95	1.00	1.05
E	0.55	0.60	0.65
H	1.35	1.40	1.45
L	0.15	0.20	0.25


RECOMMENDED MOUNTING
FOOTPRINT

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

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DESCRIPTION:	SOD-723, 2-LEAD, 1.00x0.60x0.52	PAGE 1 OF 1

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