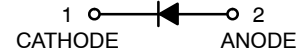


High-Speed Switching Diode

NSD914XV2



Features

- High-Speed Switching Applications
- Lead Finish: 100% Matte Sn (Tin)
- Qualified Maximum Reflow Temperature: 260 °C
- Extremely Small SOD-523 Package
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS (T_A = 25 °C)

Symbol	Rating	Max	Unit
V _R	Reverse Voltage	100	V
I _F	Forward Current	200	mAdc
I _{FM(surge)}	Peak Forward Surge Current	500	mAdc

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

Symbol	Characteristic	Max	Unit
P _D	Total Device Dissipation FR-5 Board (Note 1) T _A = 25 °C Derate above 25 °C	200 1.57	mW mW/°C
R _{θJA}	Thermal Resistance Junction-to-Ambient	635	°C/W
T _J , T _{stg}	Junction and Storage Temperature Range	-55 to 150	°C

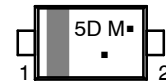
1. FR-4 @ Minimum Pad.

Symbol	Characteristic	Min	Max	Unit
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OFF CHARACTERISTICS

V _(BR)	Reverse Breakdown Voltage (I _{BR} = 100 μAdc)	100	-	Vdc
I _R	Reverse Voltage Leakage Current (V _R = 20 Vdc) (V _R = 75 Vdc)	-	25 5.0	nAdc μA dc
C _D	Diode Capacitance (V _R = 0 V, f = 1.0 MHz)	-	4.0	pF
V _F	Forward Voltage (I _F = 10 mAdc)	-	1.0	Vdc
t _{rr}	Reverse Recovery Time (I _F = I _R = 10 mAdc)	-	4.0	ns

MARKING DIAGRAM



5D = Specific Device Code
M = Date Code
▪ = Pb-Free Package

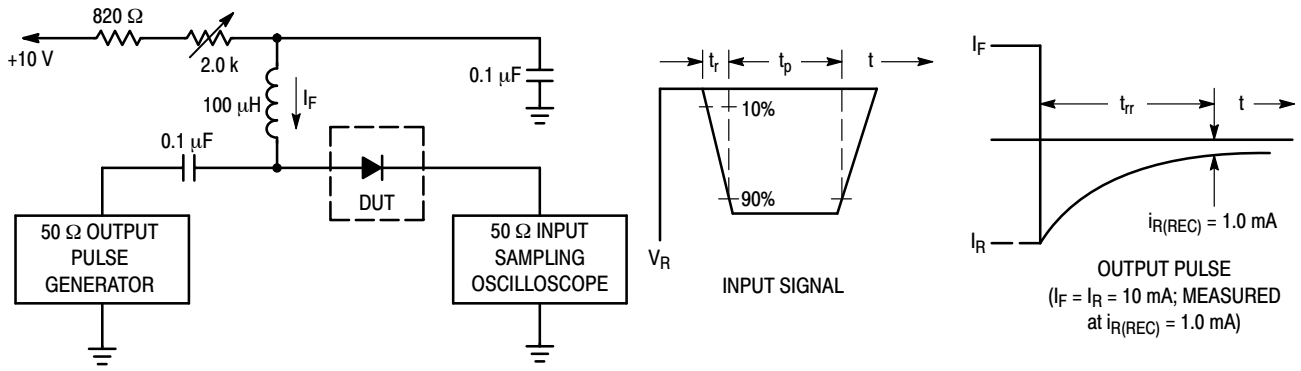
(Note: Microdot may be in either location)

ORDERING INFORMATION

Device	Package	Shipping†
NSD914XV2T1G	SOD-523 (Pb-Free)	3,000 / Tape & Reel
NSD914XV2T5G	SOD-523 (Pb-Free)	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](#).

NSD914XV2



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10 mA.
 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

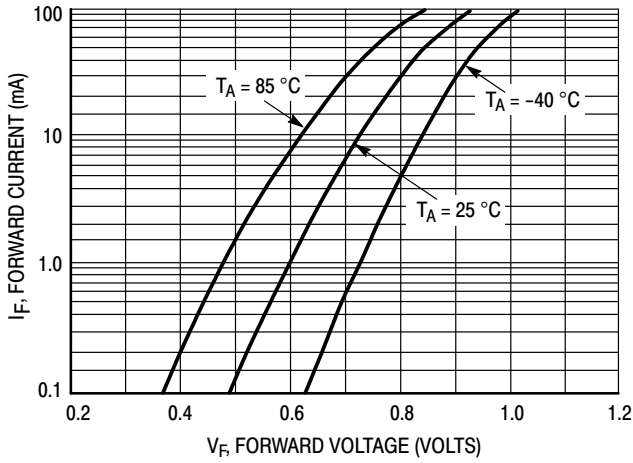


Figure 2. Forward Voltage

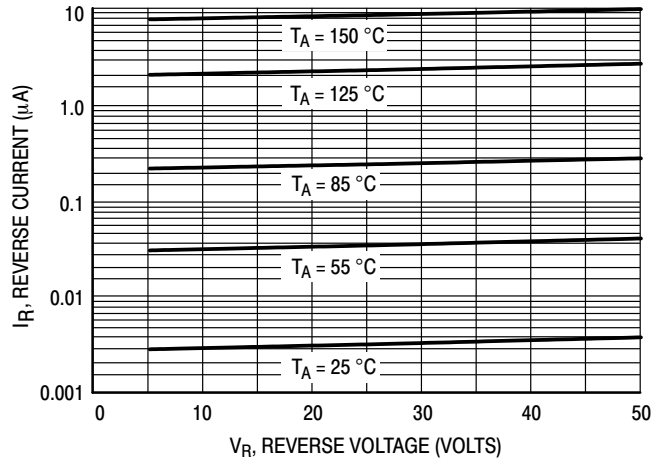


Figure 3. Leakage Current

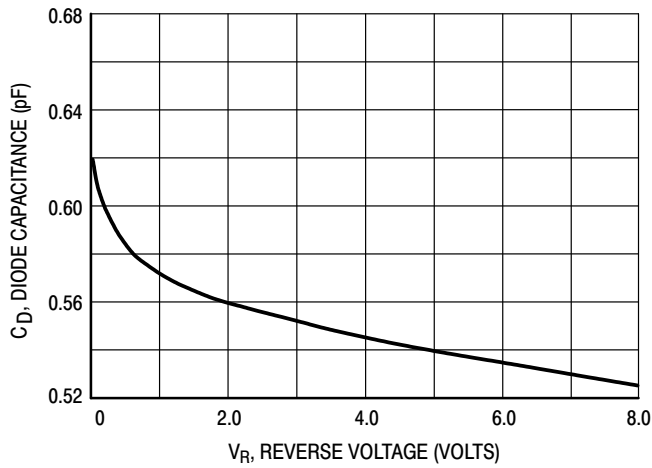


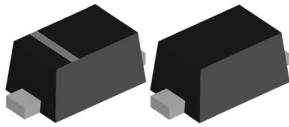
Figure 4. Capacitance

NSD914XV2

REVISION HISTORY

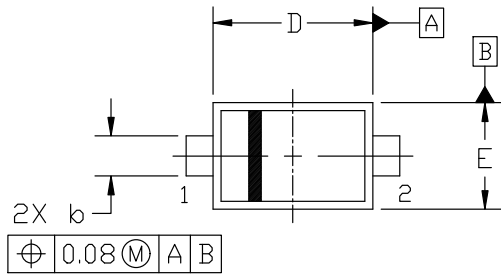
Revision	Description of Changes	Date
6	Rebranded the Data Sheet to onsemi format.	7/10/2025

This document has undergone updates prior to the inclusion of this revision history table. The changes tracked here only reflect updates made on the noted approval dates.

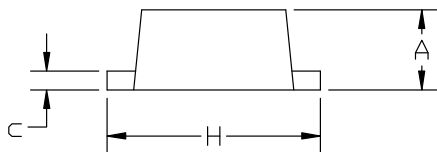


SOD-523 1.20x0.80x0.60
CASE 502
ISSUE F

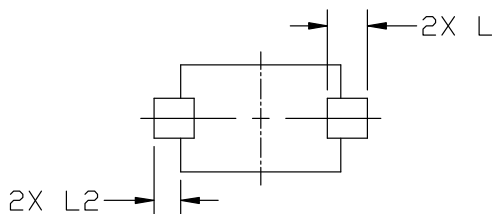
DATE 08 FEB 2024



TOP VIEW

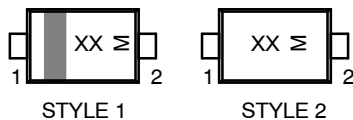


SIDE VIEW



BOTTOM VIEW

GENERIC MARKING DIAGRAM*



XX = Specific Device Code
M = Date Code

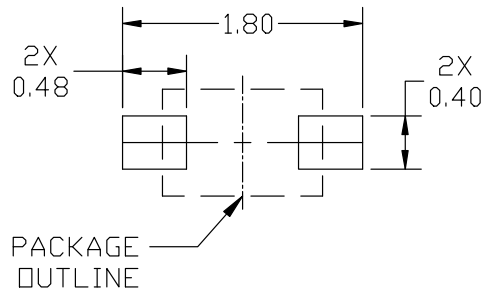
*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.

STYLE 1: PIN 1. CATHODE (POLARITY BAND)
2. ANODE
STYLE 2: NO POLARITY

NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2018.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH, MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

DIM	MILLIMETERS		
	MIN.	NOM.	MAX.
A	0.50	0.60	0.70
b	0.25	0.30	0.35
c	0.07	0.14	0.20
D	1.10	1.20	1.30
E	0.70	0.80	0.90
H	1.50	1.60	1.70
L	0.30 REF		
L2	0.15	0.20	0.25



RECOMMENDED MOUNTING 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.

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DESCRIPTION:	SOD-523 1.20x0.80x0.60	PAGE 1 OF 1

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