

# Schottky Barrier Diode for Mixer and Detector

## NSVR351SDSA3



SC-59 / CP3  
CASE 318BJ

### Description

This schottky barrier diode is designed to realize compact and efficient designs. Two schottky barrier diodes are incorporated in one SC-59 package. The use of dual schottky barrier diodes can reduce both system cost and board space. This schottky barrier diode is AEC-Q101 qualified and PPAP capable for automotive applications.

### Features

- Series Connection of 2 Elements in a Small-Sized Package
- Small Interterminal Capacitance ( $C = 0.69$  pF typ)
- Small Forward Voltage ( $V_F = 0.23$  V max)
- These Devices are Pb-Free, Halogen Free and are RoHS Compliant
- AEC-Q101 Qualified and PPAP Capable

### Typical Applications

- Level Detector for Radio

### SPECIFICATIONS ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ )

Symbol	Parameter	Value	Unit
$V_{RM}$	Reverse Voltage	5	V
$I_F$	Forward Current	30	mA
$T_J, T_{Stg}$	Operating Junction and Storage Temperature	-55 to +125	$^\circ\text{C}$

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.

### ELECTRICAL CHARACTERISTICS $T_A = 25^\circ\text{C}$ (Note 1)

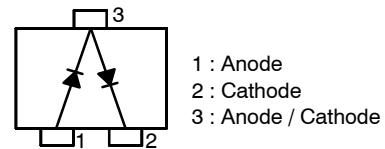
Symbol	Parameter	Conditions	Value			Unit
			Min	Typ	Max	
$V_F$	Forward Voltage	$I_F = 1$ mA	-	-	0.23	V
$I_F$	Forward Current	$V_F = 0.5$ V	30	-	-	mA
$I_R$	Reverse Current	$V_R = 0.5$ V	-	-	25	$\mu\text{A}$
C	Interterminal Capacitance	$V_R = 0.2$ V, $f = 1$ MHz	-	0.69	0.9	pF

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.

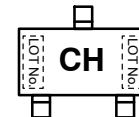
1. The specifications shown above are for each individual diode.

5 V, 30 mA  
C = 0.69 pF typ  
Schottky Barrier Diode

### ELECTRICAL CONNECTION



### MARKING DIAGRAM



### ORDERING INFORMATION

See detailed ordering and shipping information on page 3 of this data sheet.

# NSVR351SDSA3

## CHARACTERISTICS

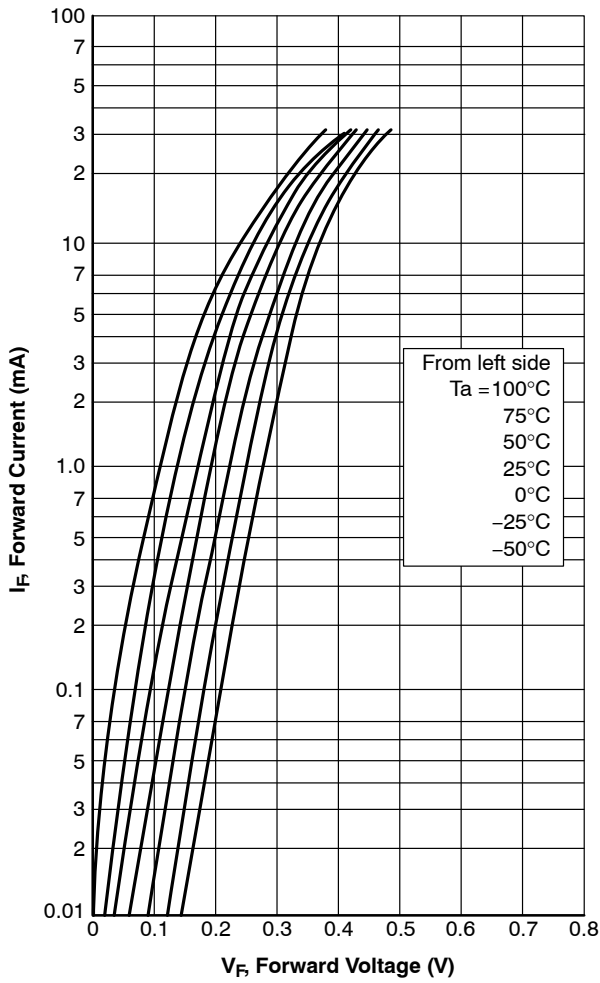


Figure 1.  $I_F - V_F$

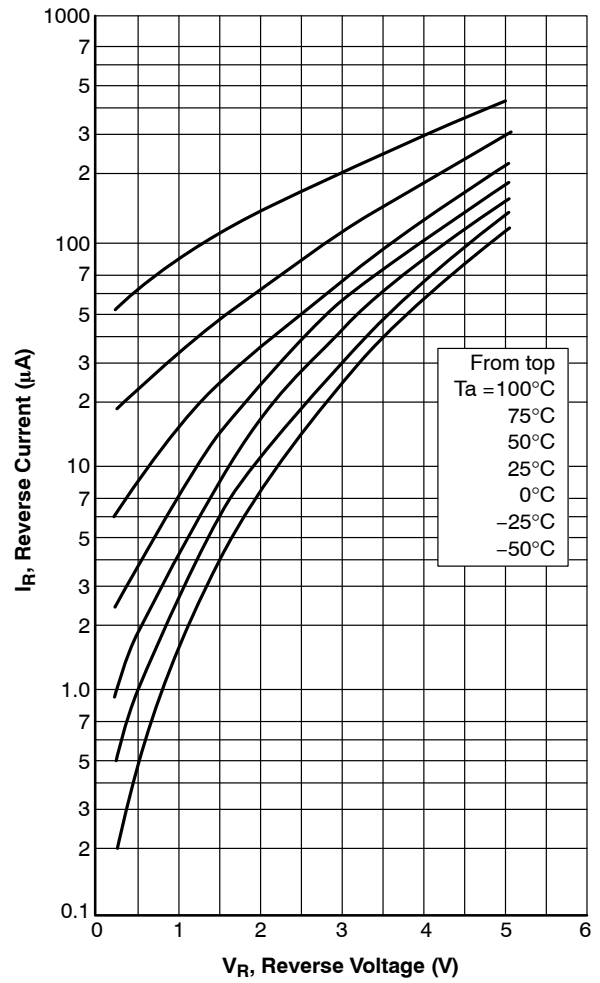


Figure 2.  $I_R - V_R$

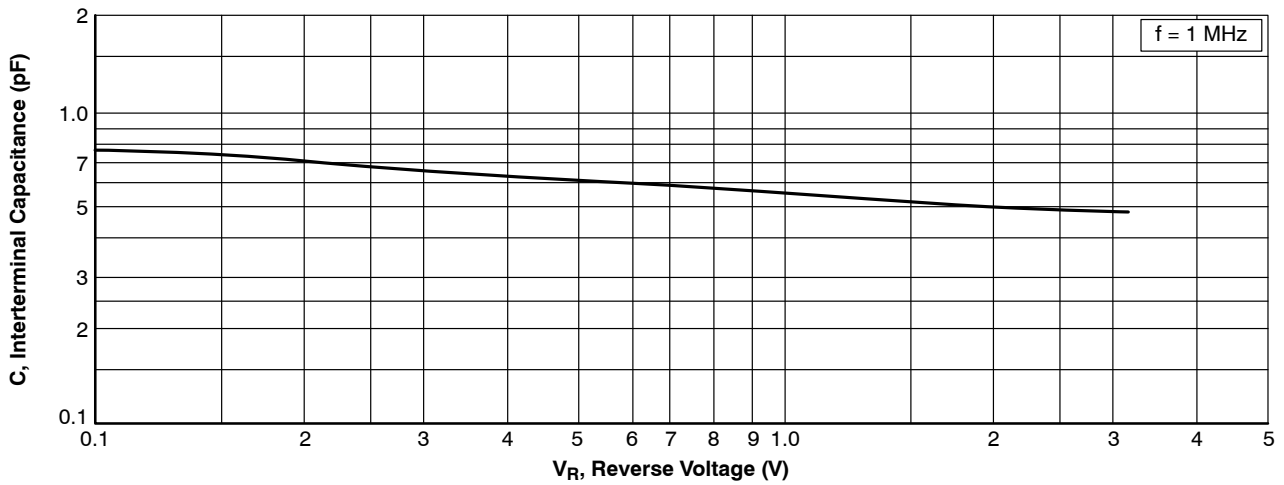


Figure 3.  $C - V_R$

# NSVR351SDSA3

## ORDERING INFORMATION

Device Order Number	Marking	Package Type	Shipping <sup>†</sup>
NSVR351SDSA3T1G	CH	SC-59 / CP3 (Pb-Free / Halogen Free)	3,000 / Tape & Reel

<sup>†</sup>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](#).

# MECHANICAL CASE OUTLINE

## PACKAGE DIMENSIONS

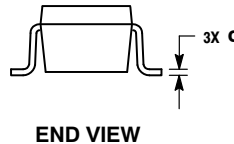
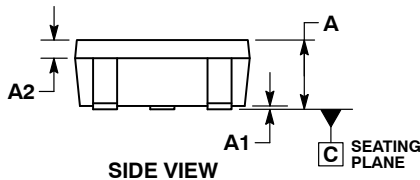
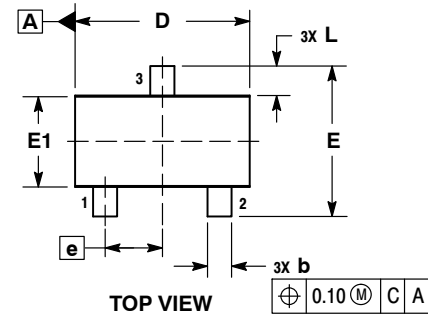
ON Semiconductor®



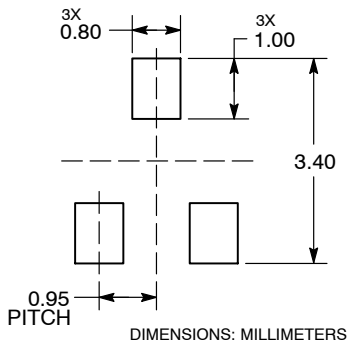
SCALE 2:1

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ISSUE O

DATE 09 JAN 2015



### RECOMMENDED SOLDERING FOOTPRINT\*

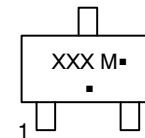


### NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. DIMENSIONS D AND E1 DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.20 PER SIDE.
4. DIMENSIONS D AND E1 ARE MEASURED AT THE OUTERMOST EXTREME OF THE PLASTIC BODY.
5. DIMENSIONS b AND c APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.10 AND 0.20 FROM THE TIP.

MILLIMETERS		
DIM	MIN	MAX
A	0.95	1.35
A1	0.00	0.10
A2	0.20	0.40
b	0.35	0.50
c	0.10	0.20
D	2.75	3.05
E	2.30	2.70
E1	1.35	1.65
e	0.95 BSC	
L	0.35	0.75

### GENERIC MARKING DIAGRAM



- XXX = Specific Device Code
- M = Date Code
- = Pb-Free Package

(Note: Microdot may be in either location)

\*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.

\*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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