

# PIN Diode

## Dual series PIN Diode for VHF, UHF and AGC

### NSVP249SDSF3

This PIN diode is designed to realize compact and efficient designs. Two PIN diodes are incorporated in one SC-70 package. The use of dual PIN diodes can reduce both system cost and board space. This PIN diode is AEC-Q101 qualified and PPAP capable for automotive applications.

#### Features

- Series connection of 2 elements in a small-size package
- Small Interterminal Capacitance ( $C = 0.23 \text{ pF typ}$ )
- Small Forward Series Resistance ( $r_s = 4.5 \Omega \text{ max}$ )
- AEC-Q101 qualified and PPAP capable
- Pb-Free, Halogen Free and RoHS Compliance

#### Typical Applications

- Auto Gain Control for Radio

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

Symbol	Parameter	Value	Unit
$V_R$	Reverse Voltage	50	V
$I_F$	Forward Current	50	mA
P	Allowable Power Dissipation	100	mW
$T_J, T_{stg}$	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 at $T_A = 25^\circ\text{C}$ (Note 1)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$V_R$	Reverse Voltage	$I_R = 10 \mu\text{A}$	50	–	–	V
$I_R$	Reverse Current	$V_R = 50 \text{ V}$	–	–	0.1	$\mu\text{A}$
$V_F$	Forward Voltage	$I_F = 50 \text{ mA}$	–	0.92	–	V
C	Interterminal Capacitance	$V_R = 50 \text{ V}, f = 1 \text{ MHz}$	–	0.23	–	pF
$r_s$	Series Resistance	$I_F = 10 \text{ mA}, f = 100 \text{ MHz}$	–	–	4.5	$\Omega$

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.

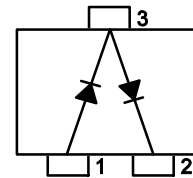
1. The specifications shown above are for each individual diode.



MCP3  
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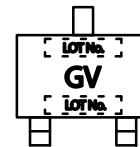
50 V, 50 mA  
 $r_s = 4.5 \Omega \text{ max}$   
 PIN Diode

#### ELECTRICAL CONNECTION



1 : Anode  
 2 : Cathode  
 3 : Cathode / Anode

#### MARKING DIAGRAM



#### ORDERING INFORMATION

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

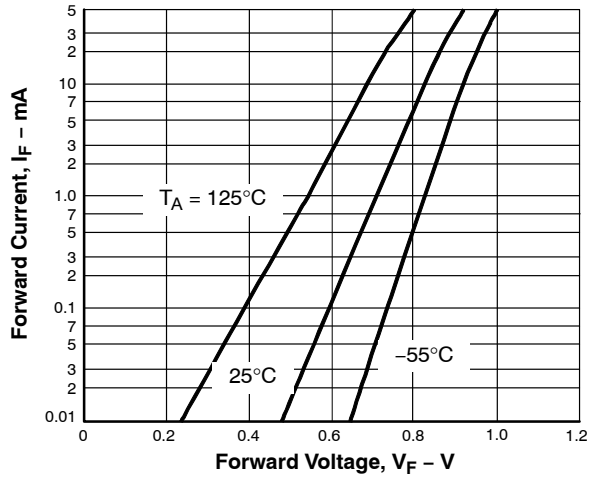


Figure 1.  $I_F - V_F$

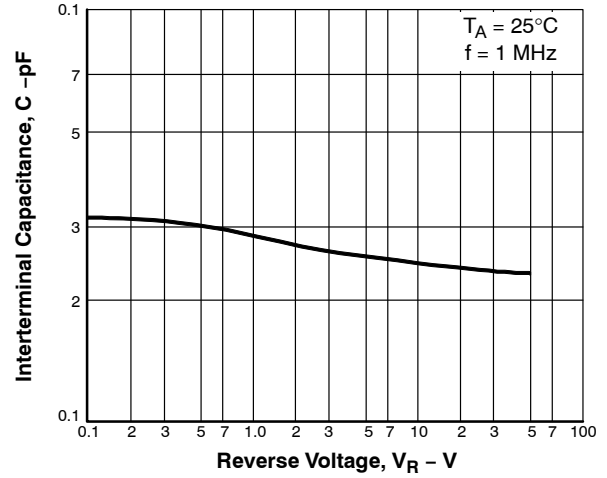


Figure 2.  $C - V_R$

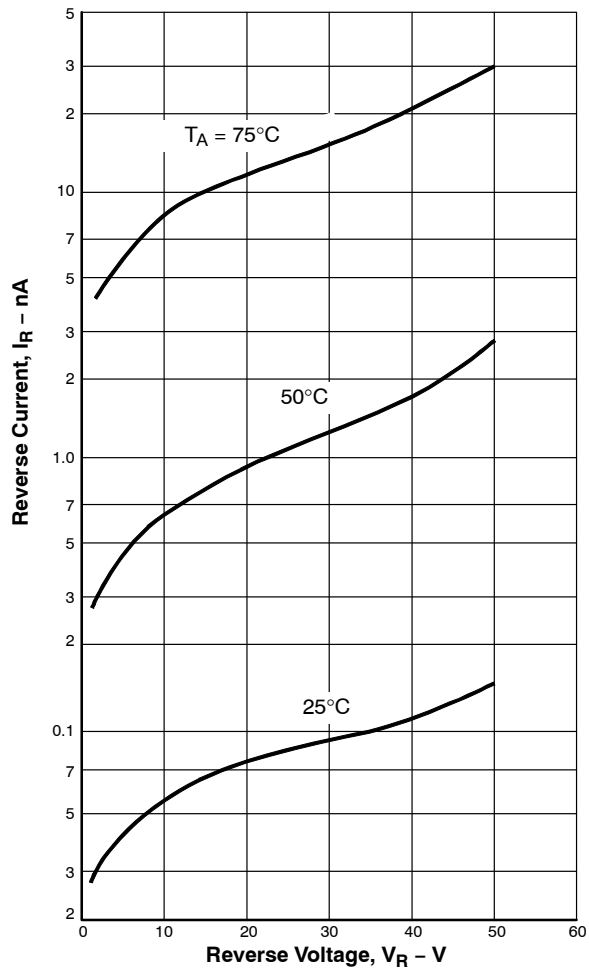


Figure 3.  $I_R - V_R$

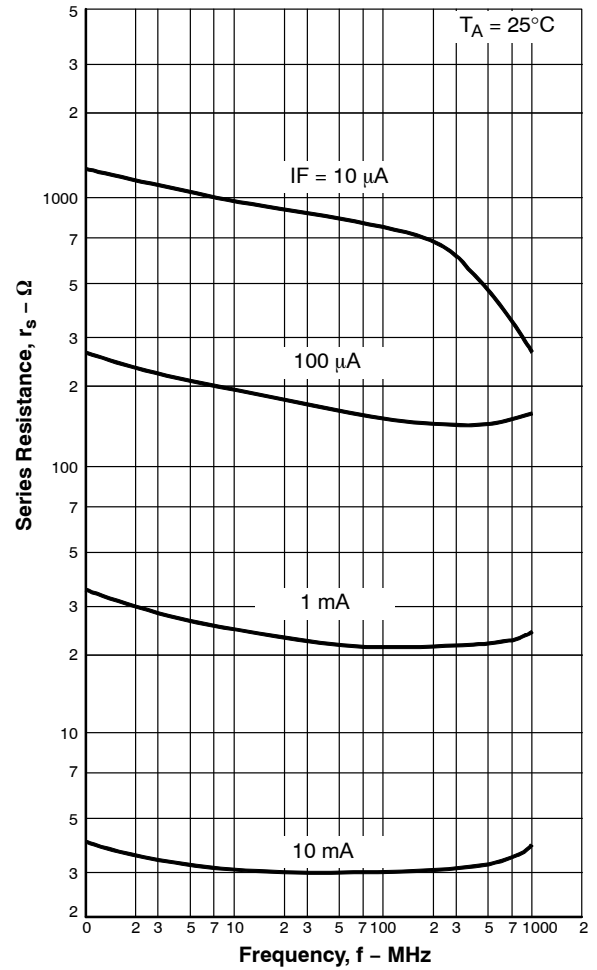


Figure 4.  $r_s - f$

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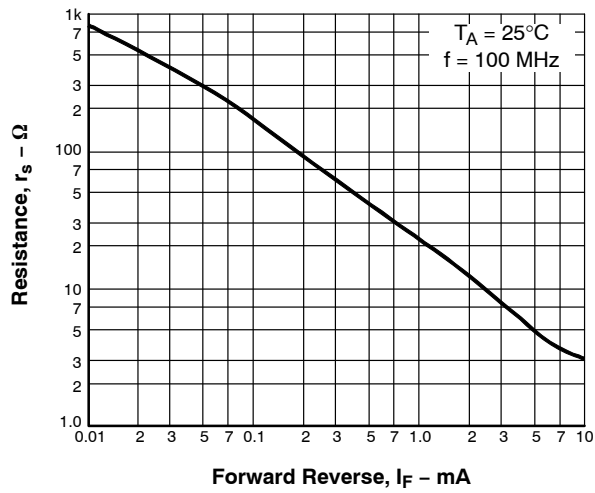


Figure 5.  $r_s$  -  $I_F$

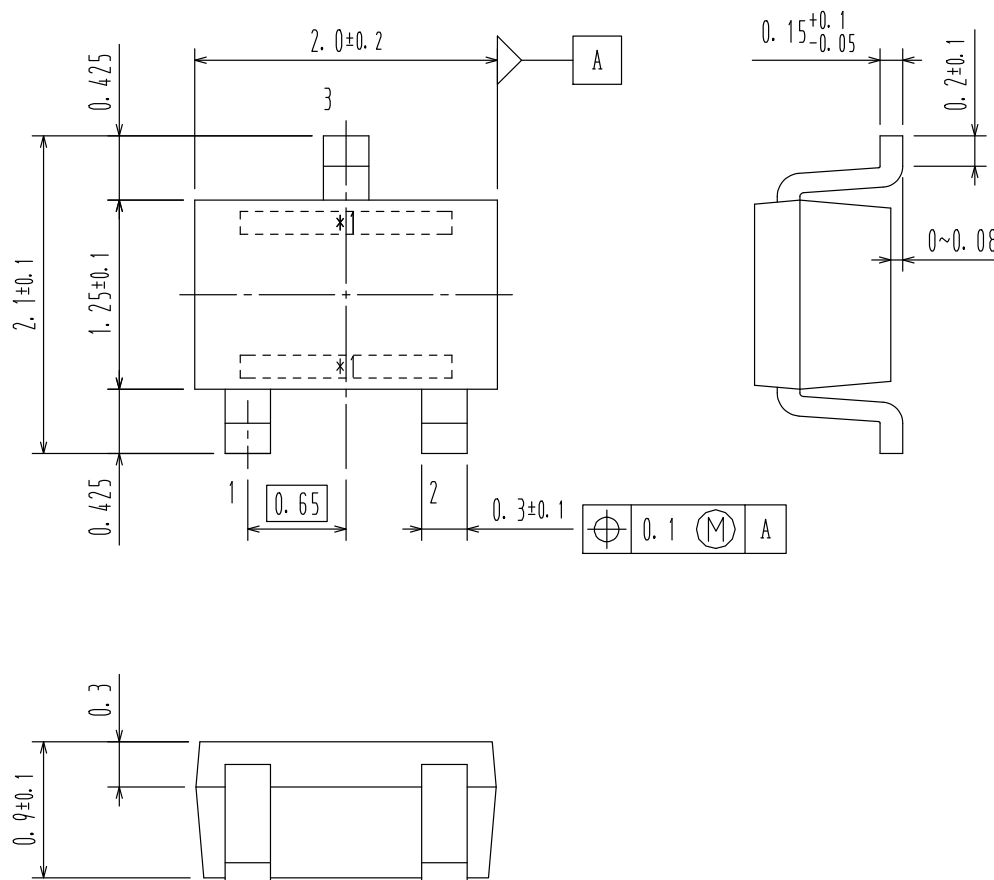
## ORDERING INFORMATION

Device	Marking	Package	Shipping <sup>†</sup>
NSVP249SDSF3T1G	GV	SC-70 / MCP3 (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](#).

**SC-70 / MCP3**  
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<b>DESCRIPTION:</b>	<b>SC-70 / MCP3</b>	<b>PAGE 1 OF 1</b>

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