

# NSD914XV2T1

Preferred Device

## High-Speed Switching Diode

- High-Speed Switching Applications
- Lead Finish: 100% Matte Sn (Tin)
- Qualified Maximum Reflow Temperature: 260°C
- Extremely Small SOD-523 Package

### MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

Rating	Symbol	Max	Unit
Reverse Voltage	V <sub>R</sub>	100	V
Forward Current	I <sub>F</sub>	200	mAdc
Peak Forward Surge Current	I <sub>FM(surge)</sub>	500	mAdc

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (Note 1) T <sub>A</sub> = 25°C Derate above 25°C	P <sub>D</sub>	120 1.57	mW mW/°C
Thermal Resistance Junction-to-Ambient	R <sub>θJA</sub>	TBD	°C/W
Junction and Storage Temperature	T <sub>J</sub> , T <sub>stg</sub>	150	°C

1. FR-4 @ Minimum Pad

Characteristic	Symbol	Min	Max	Unit
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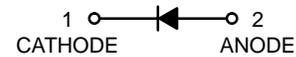
### OFF CHARACTERISTICS

Reverse Breakdown Voltage (I <sub>BR</sub> = 100 μAdc)	V <sub>(BR)</sub>	100	-	Vdc
Reverse Voltage Leakage Current (V <sub>R</sub> = 20 Vdc) (V <sub>R</sub> = 75 Vdc)	V <sub>F</sub>	-	25 5.0	nAdc μAdc
Diode Capacitance (V <sub>R</sub> = 0, f = 1.0 MHz)	C <sub>T</sub>	-	4.0	pF
Forward Recovery Voltage (I <sub>F</sub> = 10 mAdc)	V <sub>FR</sub>	-	1.0	Vdc
Reverse Recovery Time (I <sub>F</sub> = I <sub>R</sub> = 10 mAdc)	t <sub>rr</sub>	-	4.0	ns



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SOD-523  
CASE 502  
PLASTIC

### MARKING DIAGRAM



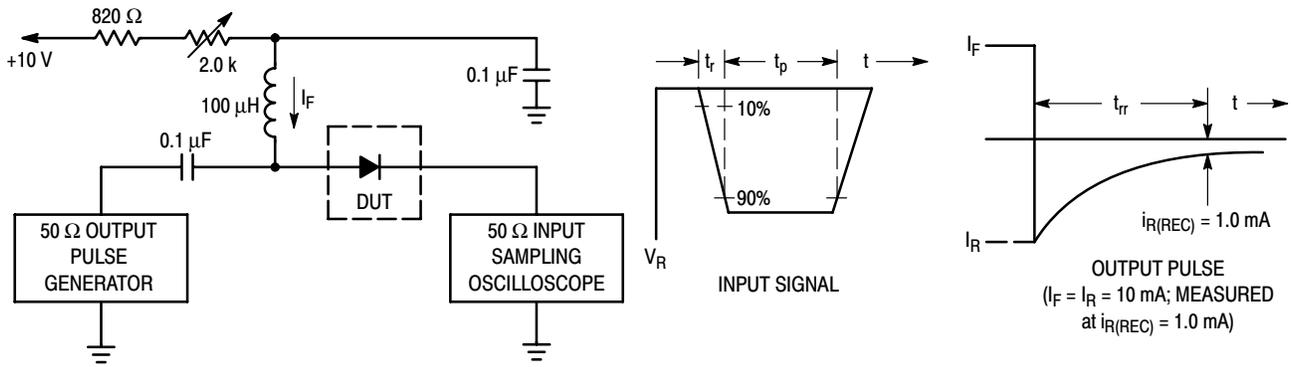
5D = Specific Device Code  
d = Date Code

### ORDERING INFORMATION

Device	Package	Shipping
NSD914XV2T1	SOD-523	4 mm pitch 3000/Tape & Reel

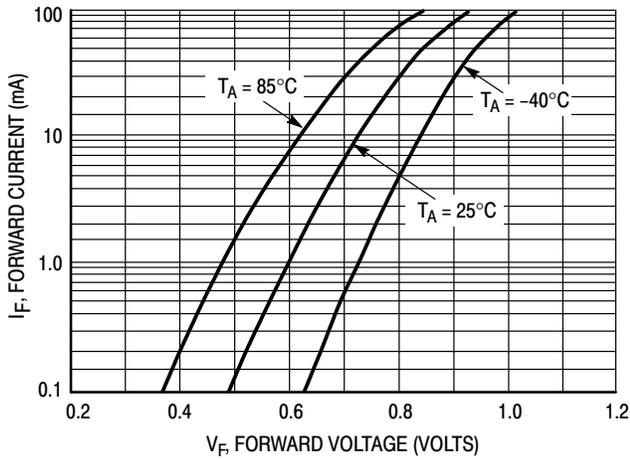
Preferred devices are recommended choices for future use and best overall value.

# NSD914XV2T1

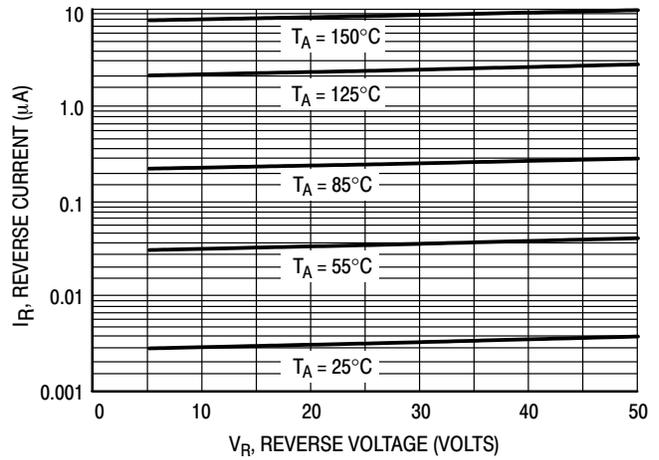


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10 mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10 mA.  
 3.  $t_p \gg t_{rr}$

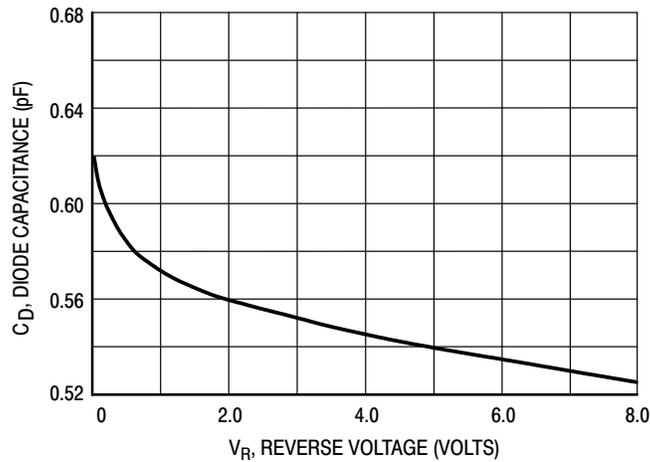
**Figure 1. Recovery Time Equivalent Test Circuit**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**

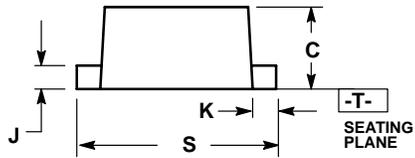
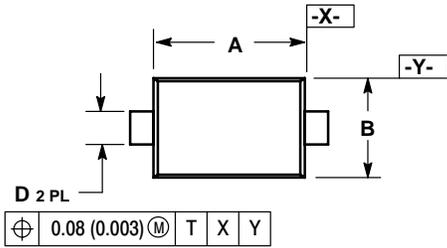


**Figure 4. Capacitance**

# NSD914XV2T1

## PACKAGE DIMENSIONS

SOD-523  
CASE 502-01  
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.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
S	1.50	1.60	1.70	0.059	0.063	0.067

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