

# NSR0320XV6T1

## Schottky Barrier Diode

These Schottky barrier diodes are designed for high current, handling capability, and low forward voltage performance.

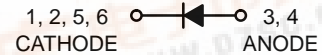
- Low Forward Voltage – 0.35 Volts (Typ) @  $I_F = 10 \text{ mA}$ dc
- High Current Capability



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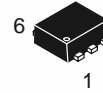
### HIGH CURRENT SCHOTTKY BARRIER DIODE



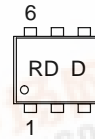
#### MAXIMUM RATINGS ( $T_J = 125^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Reverse Voltage	$V_R$	23	V
Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_F$	200 2.0	mW mW/ $^\circ\text{C}$
Forward Current (DC) Continuous	$I_F$	1	A
Forward Current $t = 8.3 \text{ ms}$ Half Sinewave; JEDEC Method	$I_F$	7.5	A
Junction Temperature	$T_J$	125 Max	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	-55 to +150	$^\circ\text{C}$

#### MARKING DIAGRAM



**SOT-563  
CASE 463A**



RD = Specific Device Code  
D = Date Code

#### ORDERING INFORMATION

Device	Package	Shipping
NSR0320XV6T1	SOT-563	3000/Tape & Reel

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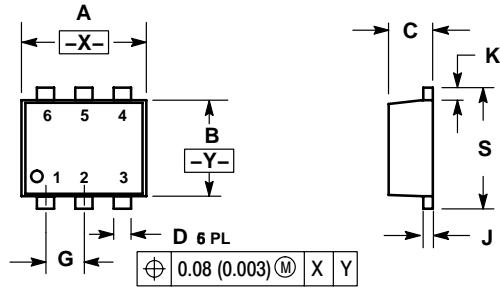
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Total Capacitance ( $V_R = 5.0\text{ V}$ , $f = 1.0\text{ MHz}$ )	$C_T$	–	30	35	pF
Reverse Leakage ( $V_R = 15\text{ V}$ )	$I_R$	–	10	50	$\mu\text{A}_{dc}$
Forward Voltage ( $I_F = 10\text{ mA}_{dc}$ )	$V_F$	–	0.24	0.27	Vdc
Forward Voltage ( $I_F = 100\text{ mA}_{dc}$ )	$V_F$	–	0.30	0.35	Vdc
Forward Voltage ( $I_F = 900\text{ mA}_{dc}$ )	$V_F$	–	0.45	0.50	Vdc

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## PACKAGE DIMENSIONS

SOT-563, 6 LEAD  
 PLASTIC PACKAGE  
 CASE 463A-01  
 ISSUE O



**NOTES:**

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.50	1.70	0.059	0.067
B	1.10	1.30	0.043	0.051
C	0.50	0.60	0.020	0.024
D	0.17	0.27	0.007	0.011
G	0.50 BSC		0.020 BSC	
J	0.08	0.18	0.003	0.007
K	0.10	0.30	0.004	0.012
S	1.50	1.70	0.059	0.067

**STYLE 1:**

- PIN 1. EMITTER 1
- 2. BASE 1
- 3. COLLECTOR 2
- 4. EMITTER 2
- 5. BASE 2
- 6. COLLECTOR 1

**STYLE 2:**

- PIN 1. EMITTER 1
- 2. EMITTER 2
- 3. BASE 2
- 4. COLLECTOR 2
- 5. BASE 1
- 6. COLLECTOR 1


**STYLE 3:**

- PIN 1. CATHODE 1
- 2. CATHODE 1
- 3. ANODE/ANODE 2
- 4. CATHODE 2
- 5. CATHODE 2
- 6. ANODE/ANODE 1

**STYLE 4:**

- PIN 1. COLLECTOR
- 2. COLLECTOR
- 3. BASE
- 4. EMITTER
- 5. COLLECTOR
- 6. COLLECTOR

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