

NSR0320XV6T1

Schottky Barrier Diode

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

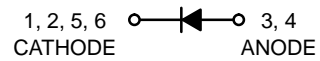
- Low Forward Voltage – 0.35 Volts (Typ) @ $I_F = 10 \text{ mAdc}$
- High Current Capability



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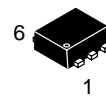
HIGH CURRENT SCHOTTKY BARRIER DIODE



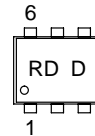
MAXIMUM RATINGS ($T_J = 125^\circ\text{C}$ unless otherwise noted)

| Rating | Symbol | Value | Unit |
|--|------------------|-------------|----------------------------|
| Reverse Voltage | V_R | 23 | V |
| Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°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_{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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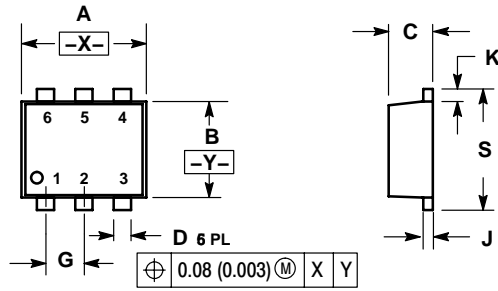
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| 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 | μA_{dc} |
| Forward Voltage ($I_F = 10\text{ mA}_{dc}$) | V_F | – | 0.24 | 0.27 | V _{dc} |
| Forward Voltage ($I_F = 100\text{ mA}_{dc}$) | V_F | – | 0.30 | 0.35 | V _{dc} |
| Forward Voltage ($I_F = 900\text{ mA}_{dc}$) | V_F | – | 0.45 | 0.50 | V _{dc} |

NSR0320XV6T1

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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