

NUR30Q

Quad Schottky Barrier Diodes Array

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

Features:

- Very Low Forward Voltage
- Guard Ring Protected
- Ultra Small SMD Package

Typical Applications:

- Ultra High-Speed Switching
- Low Current Rectification
- Low Power Consumption Applications (e.g. Hand-Held Devices)

MAXIMUM RATINGS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

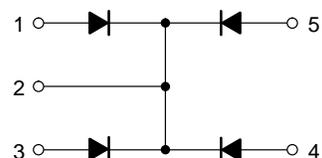
| Rating | Symbol | Value | Unit |
|--|--------|------------|----------------------------|
| Reverse Voltage | V_R | 30 | Volts |
| Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C | P_F | 385 3.1 | mW mW/ $^\circ\text{C}$ |
| Forward Current (DC) | I_F | 200 | mA |
| Junction Temperature | T_J | 125 | $^\circ\text{C}$ |



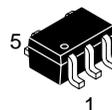
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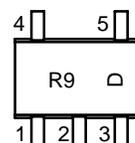
30 VOLT QUAD SCHOTTKY DIODES ARRAY



MARKING DIAGRAM



SC-88A/SOT-353
CASE 419A
STYLE 9



R9 = Device Marking
D = One Digit Date Code

ORDERING INFORMATION

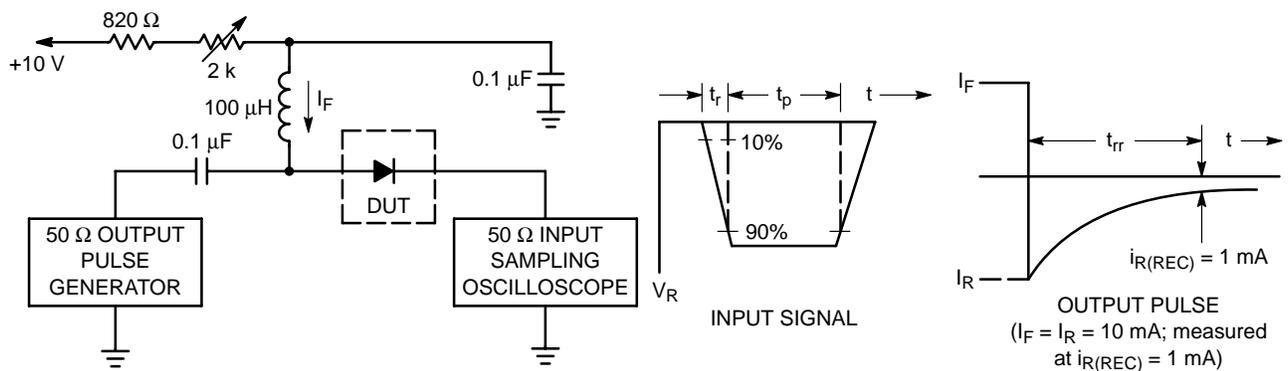
| Device | Package | Shipping† |
|------------|---------|------------------|
| NUR30QW5T1 | SC-88A | 3000/Tape & Reel |

†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.

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

| Characteristic | Symbol | Min | Typ | Max | Unit |
|--|----------|-----|------|------|------------------|
| Total Capacitance ($V_R = 1.0\text{ V}$, $f = 1.0\text{ MHz}$) | C_T | - | 10 | 20 | pF |
| Reverse Leakage ($V_R = 10\text{ V}$) | I_R | - | 1.5 | 30 | μA dc |
| Forward Voltage ($I_F = 0.1\text{ mA}$ dc) | V_F | - | 0.15 | 0.19 | Vdc |
| Forward Voltage ($I_F = 1.0\text{ mA}$ dc) | V_F | - | 0.21 | 0.25 | Vdc |
| Forward Voltage ($I_F = 10\text{ mA}$ dc) | V_F | - | 0.28 | 0.30 | Vdc |
| Forward Voltage ($I_F = 100\text{ mA}$ dc) | V_F | - | 0.36 | 0.41 | Vdc |
| Forward Voltage ($I_F = 200\text{ mA}$ dc) | V_F | - | 0.41 | 0.50 | Vdc |
| Reverse Recovery Time ($I_F = I_R = 10\text{ mA}$ dc, $I_{R(\text{REC})} = 1.0\text{ mA}$) Figure 1 | t_{rr} | - | 5.0 | - | ns |



- 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

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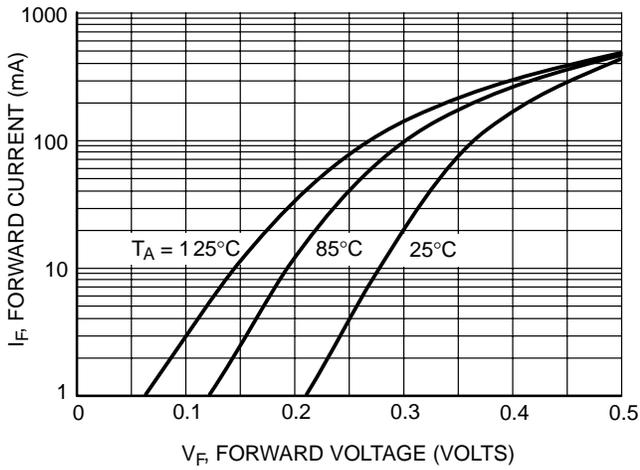


Figure 2. Forward Current as a Function of Forward Voltage; Typical Values

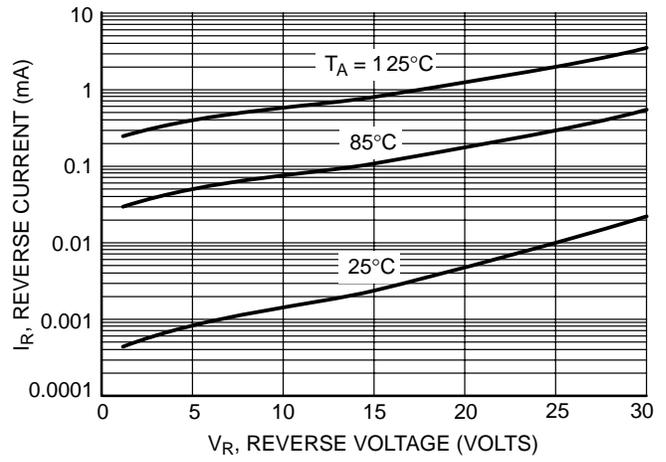


Figure 3. Reverse Current as a Function of Reverse Voltage; Typical Values

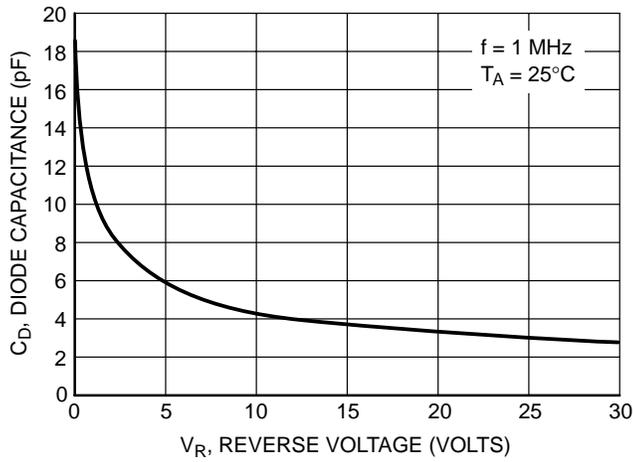
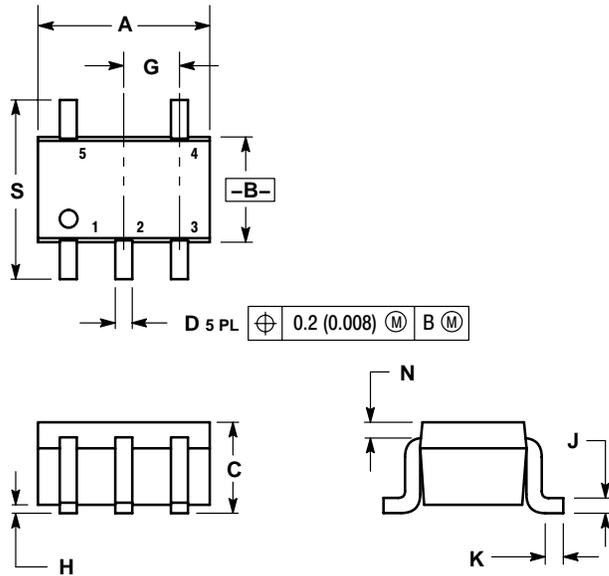


Figure 4. Diode Capacitance as a Function of Reverse Voltage; Typical Values

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PACKAGE DIMENSIONS

SC-88A (SOT-353)
CASE 419A-02
ISSUE G



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. 419A-01 OBSOLETE. NEW STANDARD 419A-02.
4. DIMENSIONS A AND B DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

| DIM | INCHES | | MILLIMETERS | |
|-----|-----------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.071 | 0.087 | 1.80 | 2.20 |
| B | 0.045 | 0.053 | 1.15 | 1.35 |
| C | 0.031 | 0.043 | 0.80 | 1.10 |
| D | 0.004 | 0.012 | 0.10 | 0.30 |
| G | 0.026 BSC | | 0.65 BSC | |
| H | --- | 0.004 | --- | 0.10 |
| J | 0.004 | 0.010 | 0.10 | 0.25 |
| K | 0.004 | 0.012 | 0.10 | 0.30 |
| N | 0.008 REF | | 0.20 REF | |
| S | 0.079 | 0.087 | 2.00 | 2.20 |

STYLE 9:

- PIN 1. ANODE
- CATHODE
- ANODE
- ANODE
- ANODE

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