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°C unless otherwise noted)

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

ON Semiconductor®

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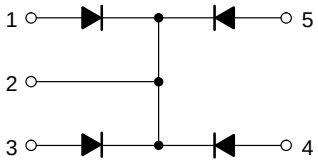
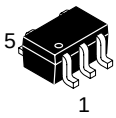
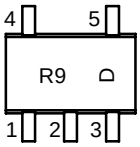
30 VOLT
QUAD
SCHOTTKY DIODES ARRAY



MARKING DIAGRAM



SC−88A/SOT−353
CASE 419A
STYLE 9



R9 = Device Marking
D = One Digit Date Code

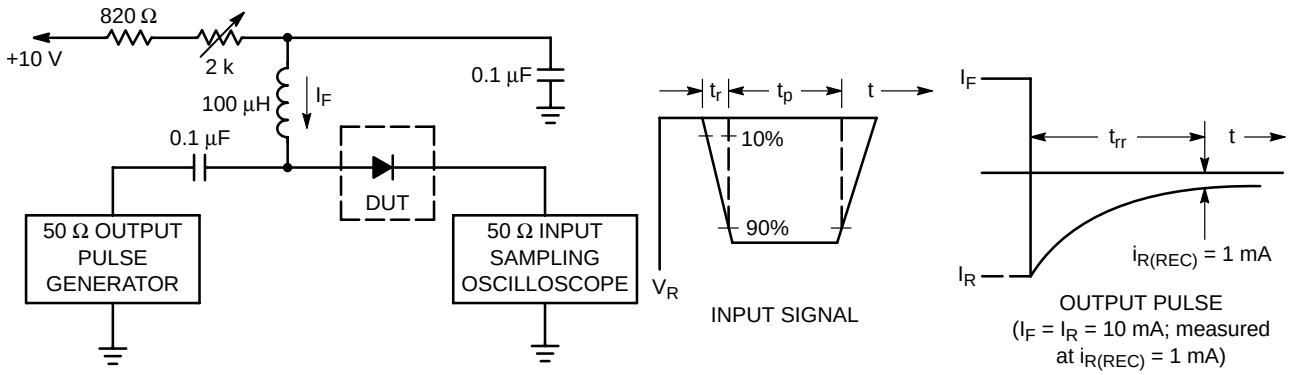
ORDERING INFORMATION

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.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min	Typ	Max	Unit
Total Capacitance (V_R = 1.0 V, f = 1.0 MHz)	C_T	–	10	20	pF
Reverse Leakage (V_R = 10 V)	I_R	–	1.5	30	μAdc
Forward Voltage (I_F = 0.1 mAdc)	V_F	–	0.15	0.19	Vdc
Forward Voltage (I_F = 1.0 mAdc)	V_F	–	0.21	0.25	Vdc
Forward Voltage (I_F = 10 mAdc)	V_F	–	0.28	0.30	Vdc
Forward Voltage (I_F = 100 mAdc)	V_F	–	0.36	0.41	Vdc
Forward Voltage (I_F = 200 mAdc)	V_F	–	0.41	0.50	Vdc
Reverse Recovery Time (I_F = I_R = 10 mAdc, $I_{R(REC)}$ = 1.0 mAdc) 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 $I_{R(peak)}$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

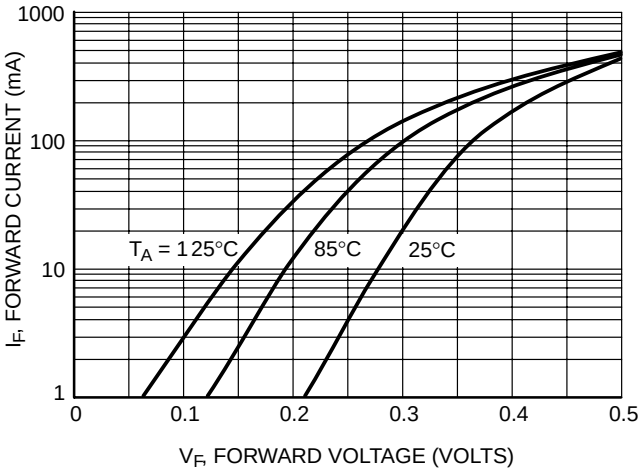


Figure 2. Forward Current as a Function of Forward Voltage; Typical Values

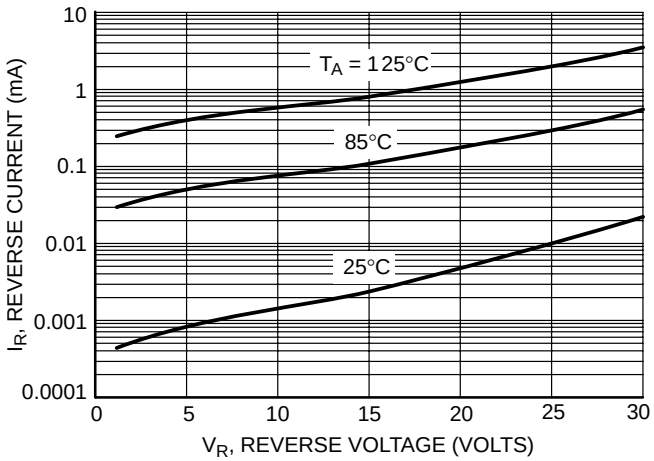


Figure 3. Reverse Current as a Function of Reverse Voltage; Typical Values

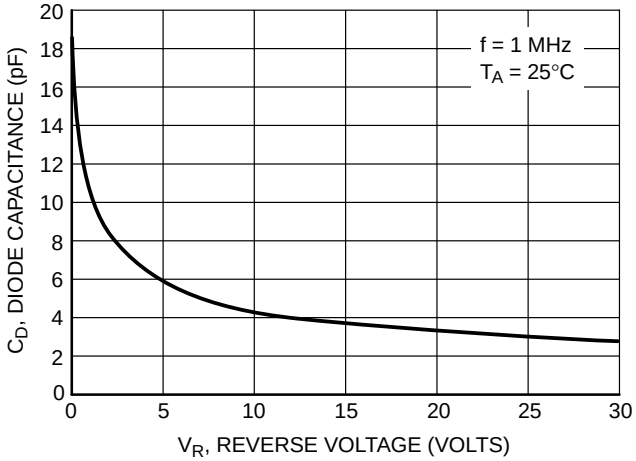
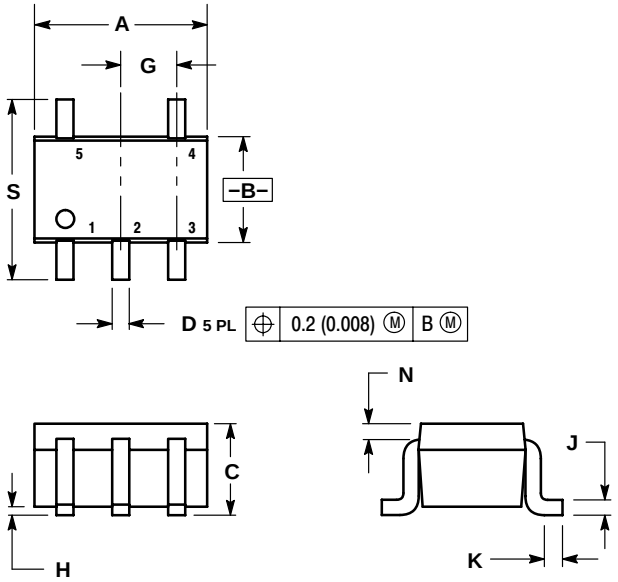


Figure 4. Diode Capacitance as a Function of Reverse Voltage; Typical Values

NUR30Q

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.

	INCHES		MILLIMETERS	
DIM	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
2. CATHODE
3. ANODE
4. ANODE
5. ANODE

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
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Order Literature: http://www.onsemi.com/litorder

For additional information, please contact your local Sales Representative.

NUR30Q/D