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HN2D02FUTW1T1

Ultra High Speed Switching Diodes

These Silicon Epitaxial Planar Diodes are designed for use in ultra high speed switching applications. These devices are housed in the SC-88 package which is designed for low power surface mount applications.

- Fast t_{rr} , < 3.0 ns
- Low C_D , < 2.0 pF
- Available in 8 mm Tape and Reel

Use HN2D02FUTW1T1 to order the 7 inch/3000 unit reel.

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	80	
Peak Reverse Voltage	V_{RM}	85	
Forward Current	I_F	100	mAdc
Peak Forward Current	I_{FM}	240	mAdc
Peak Forward Surge Current (10 ms)	I_{FSM} (Note 1)	1.0	mAdc

THERMAL CHARACTERISTICS

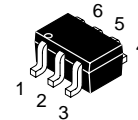
Rating	Symbol	Max	Unit
Power Dissipation	P_D	300	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

1. $t = 10$ ms
2. This is maximum rating for a single diode. Derate by 75 percent when using 2 or 3 diodes.

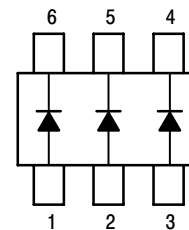


ON Semiconductor®

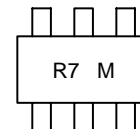
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SC-88
CASE 419B



MARKING DIAGRAM



R7 = for Specified
Device Code
M = Date Code

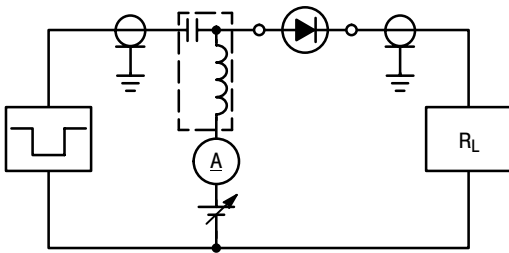
HN2D02FUTW1T1

ELECTRICAL CHARACTERISTICS (T_A = 25°C)

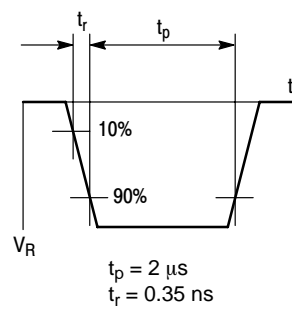
Characteristic	Symbol	Condition	Min	Max	Unit
Reverse Voltage Leakage Current	I _R	V _R = 35 V	—	0.1	μAdc
		V _R = 75 V	—	0.1	
Forward Voltage	V _F	I _F = 100 mA	—	1.2	Vdc
Reverse Breakdown Voltage	V _R	I _R = 100 μA	80	—	Vdc
Diode Capacitance	C _D	V _R = 0, f = 1.0 MHz	—	2.0	pF
Reverse Recovery Time (Figure 1)	t _{rr} (Note 3)	I _F = 10 mA, V _R = 6.0 V, R _L = 100 Ω, I _{rr} = 0.1 I _R	—	3.0	ns

3. t_{rr} Test Circuit

RECOVERY TIME EQUIVALENT TEST CIRCUIT



INPUT PULSE



OUTPUT PULSE

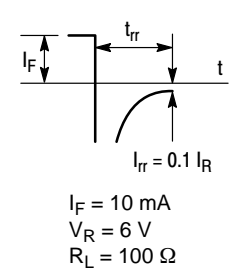


Figure 1. Reverse Recovery Time Equivalent Test Circuit

HN2D02FUTW1T1

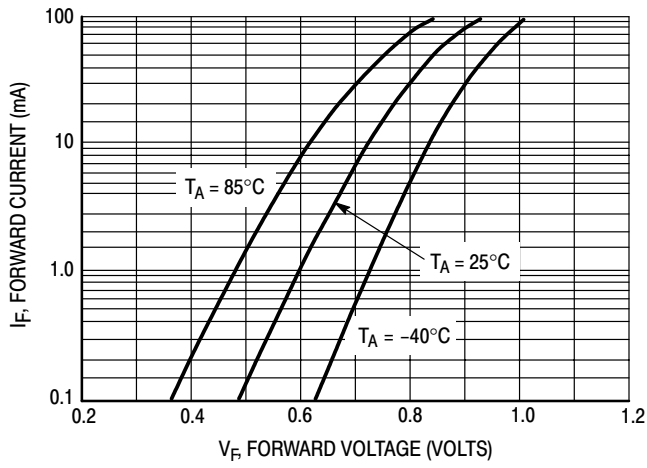


Figure 2. Forward Voltage

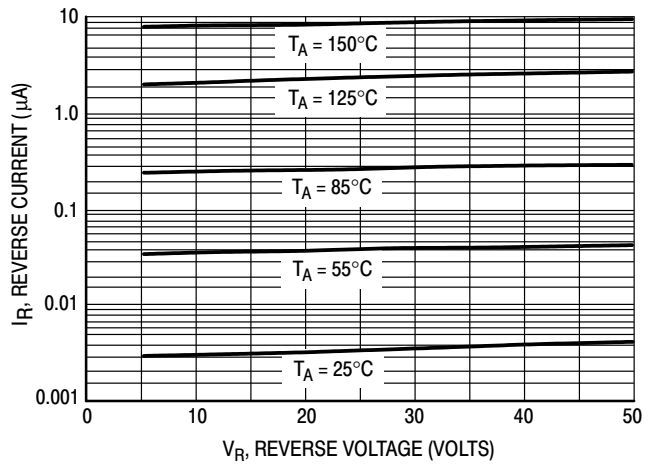


Figure 3. Leakage Current

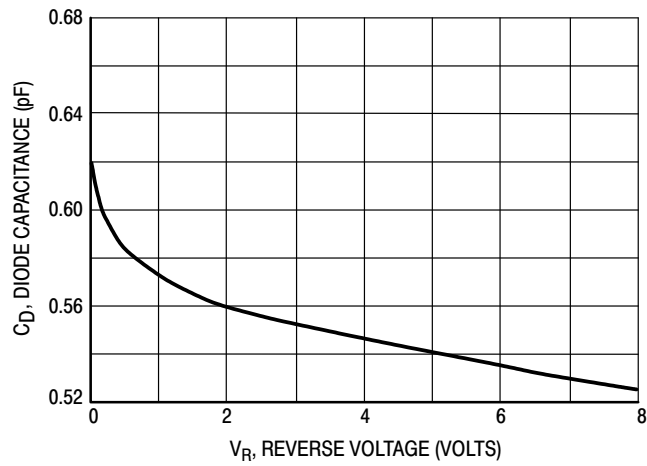
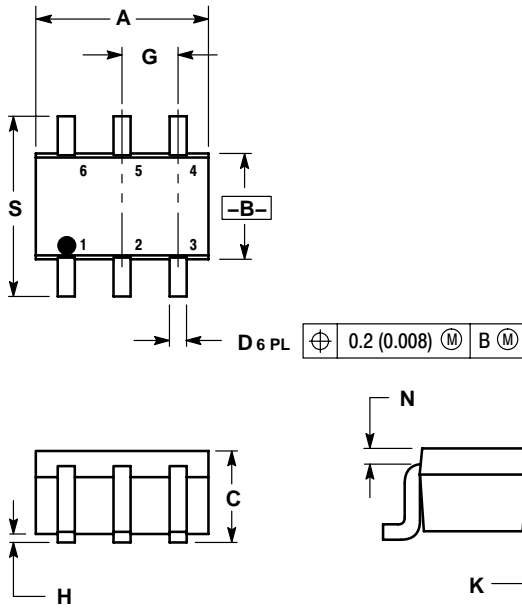


Figure 4. Capacitance

HN2D02FUTW1T1

PACKAGE DIMENSIONS

SC-88 (SOT-363)
CASE 419B-02
ISSUE N



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. 419B-01 OBSOLETE, NEW STANDARD 419B-02.

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

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