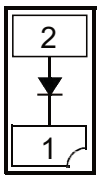
RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

1N4448DF

SURFACE MOUNT FAST SWITCHING DIODE

DFN1006-2

Bottom View



Device Schematic

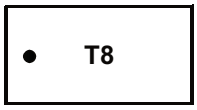
Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- Low Reverse Leakage Current
- Ideal for Battery Powered Portable Applications
- **Halogen Free**

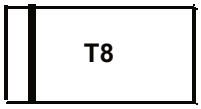
Mechanical Data

- Case: DFN1006-2
- Case Material: Molded Plastic, "Green" Molding Compound; UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: See Marking Information
- Terminals: Finish—NiPdAu over Copper Leadframe; Solderable per MIL-STD-202, Method 208 e4
- Weight: 0.001 grams (Approximate)

Marking Information

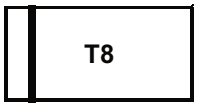


Top View
Dot Denotes
Cathode Side



Top View
Bar Denotes
Cathode Side

T8 = Product Type Marking Code



Top View
Bar Denotes
Cathode Side

Note: From date code 1527 (YYWW), dot marking was changed to bar marking for 1N4448DF

Maximum Ratings (@T_A = +25°C unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	80	V
RMS Reverse Voltage	$V_{R(RMS)}$	57	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectified Output Current	I_O	95	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	I_{FSM}	2.0 1.0	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_D	250	mW
Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature Range	T_J , T_{STG}	-65 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 7)	$V_{(BR)R}$	80	—	V	I_R = 100μA
Forward Voltage	V_F	0.62 — — —	0.72 0.855 1.0 1.25	V	I_F = 5.0mA I_F = 10mA I_F = 100mA I_F = 150mA
Peak Reverse Current (Note 2)	I_R	—	100 50 30 25	nA μA μA nA	V_R = 80V V_R = 75V, T_J = +150°C V_R = 25V, T_J = +150°C V_R = 20V
Total Capacitance	C_T	—	3.0	pF	V_R = 0.5V, f = 1.0MHz
Reverse Recovery Time	t_{rr}	—	4.0	ns	I_F = I_R = 10mA, I_{rr} = 0.1 × I_R, R_L = 100Ω

Notes: 1. Part mounted on FR-4 PC board with recommended pad layout
2. Short duration pulse test used to minimize self-heating effect.

RATING AND CHARACTERISTICS CURVES (1N4448DF)

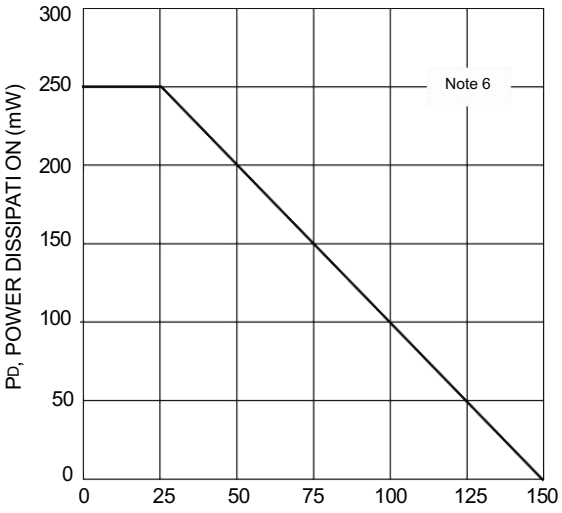


Fig. 1 Power Derating Curve

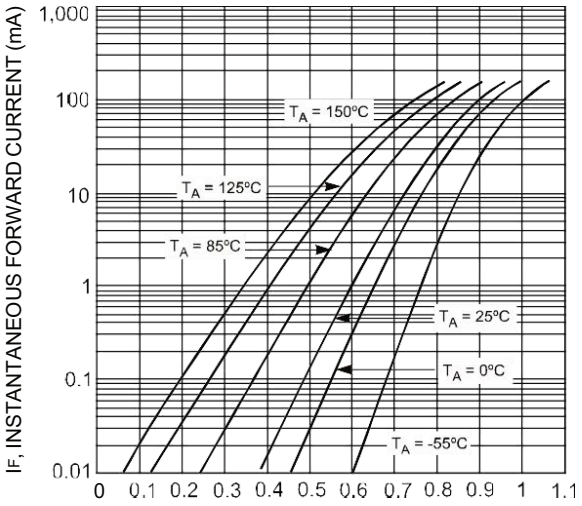


Fig. 2 Typical Forward Characteristics

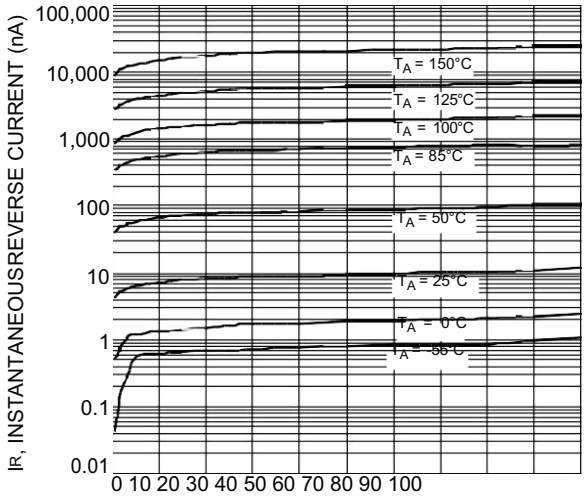


Fig. 3 Typical Reverse Characteristics

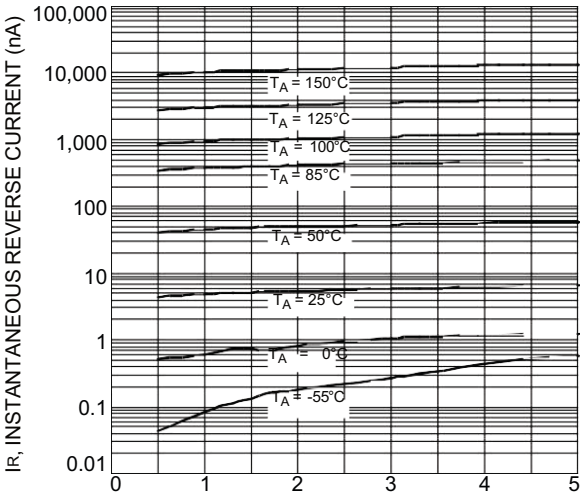


Fig. 4 Typical Reverse Characteristics - Low Bias

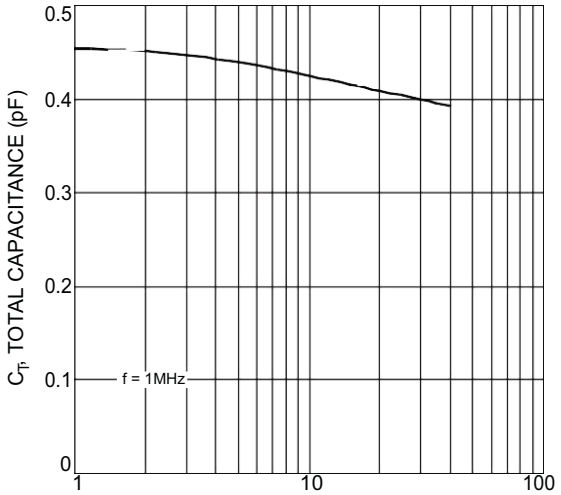


Fig. 5 Typical Total Capacitance vs. Reverse Voltage

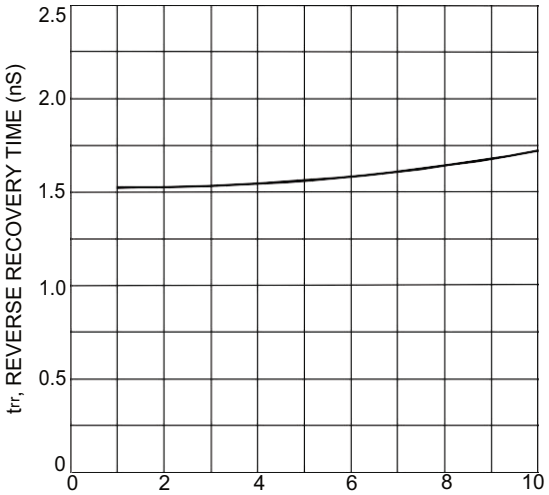
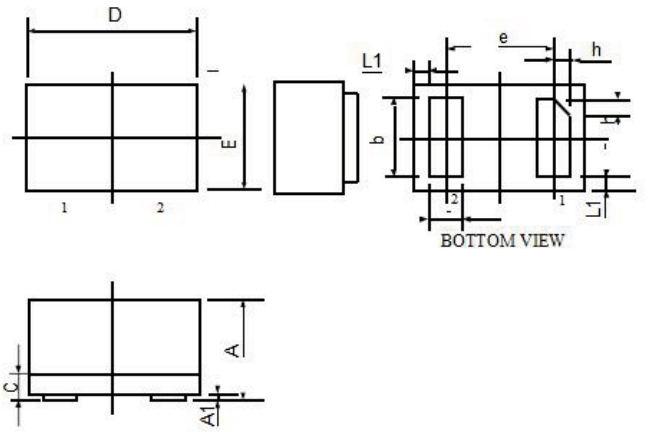


Fig. 6 Typical Reverse Recovery Time vs. Forward Current

Package Outline Dimensions

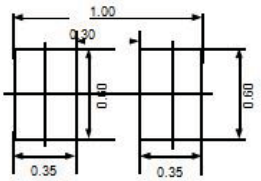
PACKAGE OUTLINE



DFN1006-2L

SYMBOL	MILIMETER		
	MIN	NOM	MAX
A	0.45	0.50	0.55
A1	0	0.02	0.05
b	0.45	0.50	0.55
C	0.12	0.15	0.18
D	0.95	1.00	1.05
e		0.65BSC	
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1		0.05REF	
h	0.07	0.12	0.17

Land Pattern



Ordering Information

Packaging Code	Case	Packaging
-W	DFN1006-2	3,000/Tape & Reel
-T	DFN1006-2	10,000/Tape & Reel

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