1N4448W

FAST SWITCHING SURFACE MOUNT DIODE

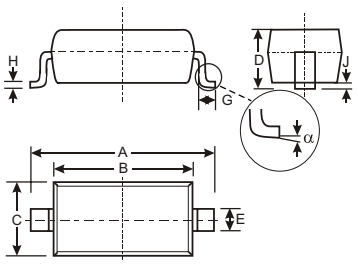
SPICE MODEL: 1N4448W

Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

Mechanical Data

- Case: SOD-123, Molded Plastic
- Plastic Material: UL Flammability Rating Classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Date Code and Type Code: See Page 3
- Type Code: T5
- Weight: 0.01 grams (approx.)
- Ordering Information See Page 3



SOD-123		
Dim	**Min**	**Max**
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	1N4448W	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	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	I_{FM}	500	mA
Average Rectified Output Current	I_O	250	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs @ t = 1.0s	I_{FSM}	4.0 2.0	A
Power Dissipation (Note 2)	P_d	400	mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{\theta JA}$	315	°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 Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	75	—	V	I_R = 10μA
Forward Voltage (Note 1)	V_{FM}	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 1)	I_{RM}	—	2.5 50 30 25	μA μA μA nA	V_R = 75V V_R = 75V, T_j = 150°C V_R = 25V, T_j = 150°C V_R = 20V
Total Capacitance	C_T	—	4.0	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time	t_{rr}	—	4.0	ns	I_F = I_R = 10mA, I_{rr} = 0.1 x I_R, R_L = 100Ω

Notes: 1. Short duration pulse test used to minimize self-heating effect.
2. Part mounted on FR-4 PC board with minimum recommended pad layout, which can be found on our website at http://www/diodes.com/datasheets/ap02001.pdf.

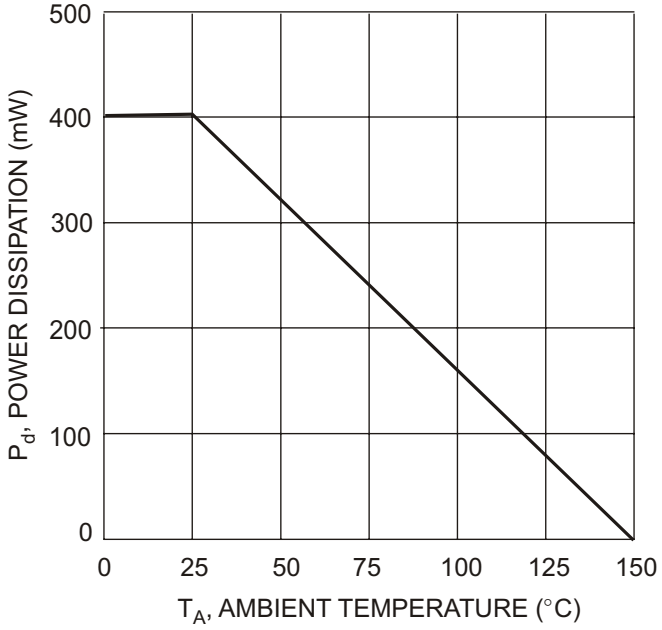


Fig. 1 Power Derating Curve

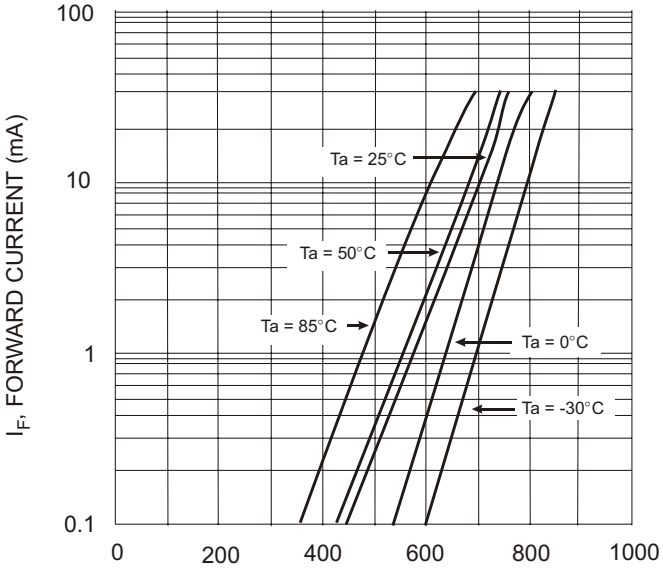


Fig. 2 Typical Forward Characteristics

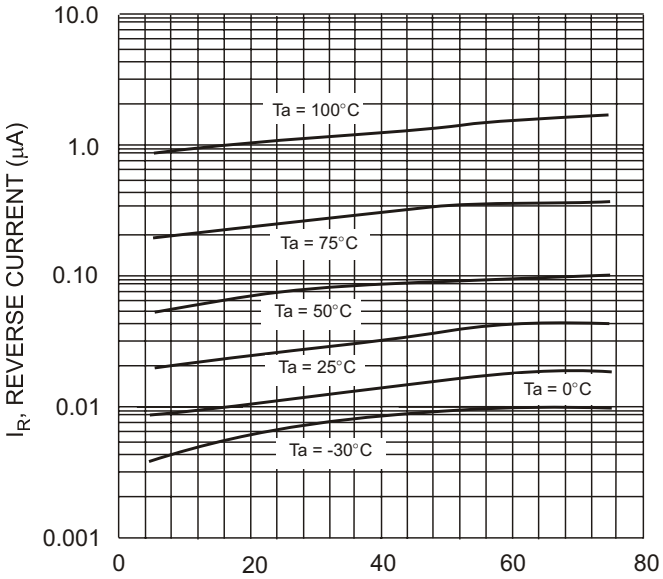


Fig. 3 Typical Reverse Characteristics

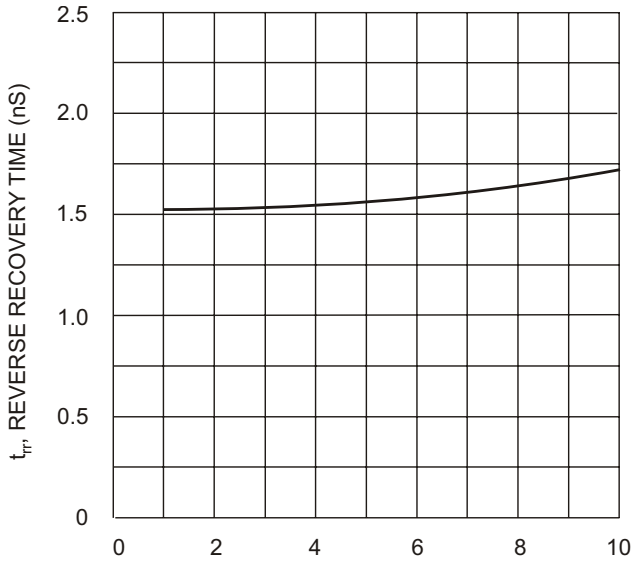


Fig. 4 Reverse Recovery Time vs. Forward Current

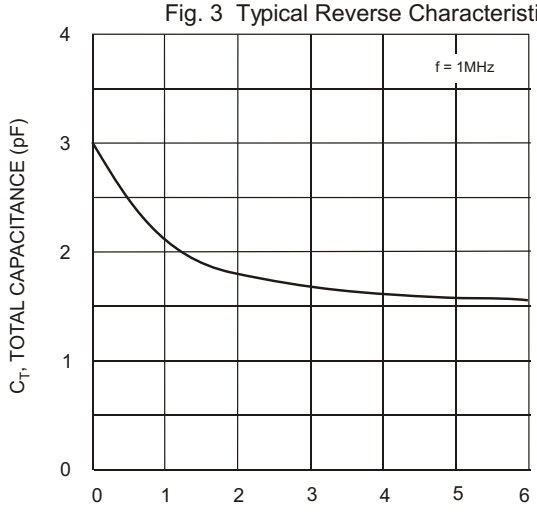


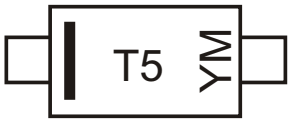
Fig. 5 Total Capacitance vs. Reverse Voltage

Ordering Information (Note 1)

Device	Packaging	Shipping
1N4448W-7	SOD-123	3000/Tape & Reel

Notes: 1. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



T5 = Product Type Marking Code (See Sheet 1)
YM = Date Code Marking
Y = Year (ex: N = 2002)
M = Month (ex: 9 = September)

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005
Code	J	K	L	M	N	P	R	S

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D