



# 1N4448HWS

## SURFACE MOUNT FAST SWITCHING DIODE

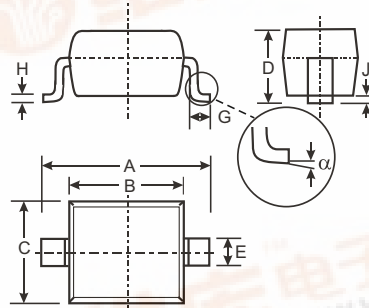
### Features

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance

Lead Free/RoHS Compliant (Note 3)

### Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: Cathode Band
- Marking: T5
- Weight: 0.004 grams (approximate)



SOD-323		
Dim	Min	Max
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
	0	8
All Dimensions in mm		

### Maximum Ratings @ $T_A = 25^\circ\text{C}$ 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	$I_{FM}$	500	mA
Average Rectified Output Current	$I_O$	250	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\text{ s}$ @ $t = 1.0\text{ s}$	$I_{FSM}$	4.0 2.0	A
Power Dissipation (Note 2)	$P_d$	200	mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

### Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{BR(R)}$	80		V	$I_R = 100\text{ A}$
Forward Voltage	$V_{FM}$	0.62	0.72 0.855 1.0 1.25	V	$I_F = 5.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 100\text{mA}$ $I_F = 150\text{mA}$
Peak Reverse Current (Note 1)	$I_{RM}$		100 50 30 25	nA A A nA	$V_R = 80\text{V}$ $V_R = 75\text{V}, T_J = 150^\circ\text{C}$ $V_R = 25\text{V}, T_J = 150^\circ\text{C}$ $V_R = 20\text{V}$
Total Capacitance	$C_T$		3.5	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$		4.0	ns	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100$

- Notes:
- Short duration test pulse used to minimize self-heating.
  - Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  - No purposefully added lead.



## Ordering Information (Note 4)

Device	Packaging	Shipping
1N4448HWS-7-F	SOD-323	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

## Marking Information

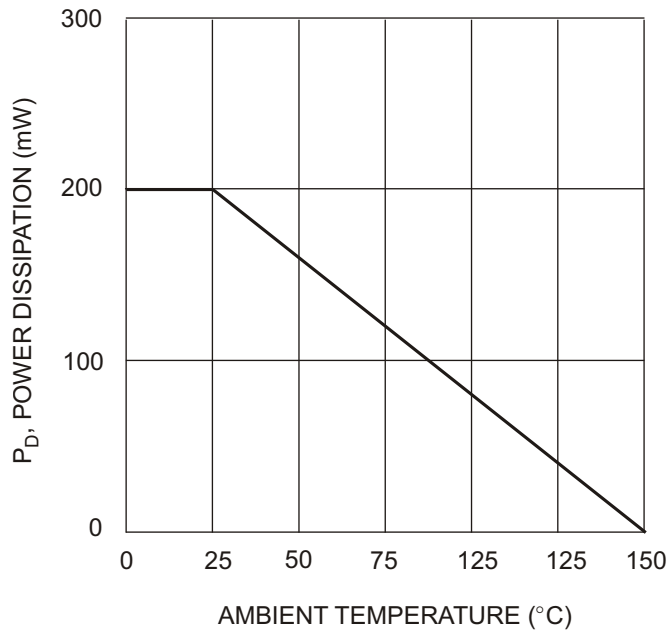
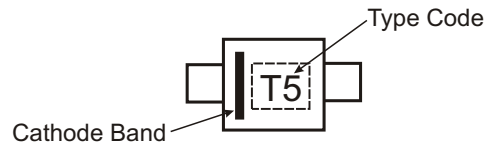


Fig. 1 Forward Current Derating Curve

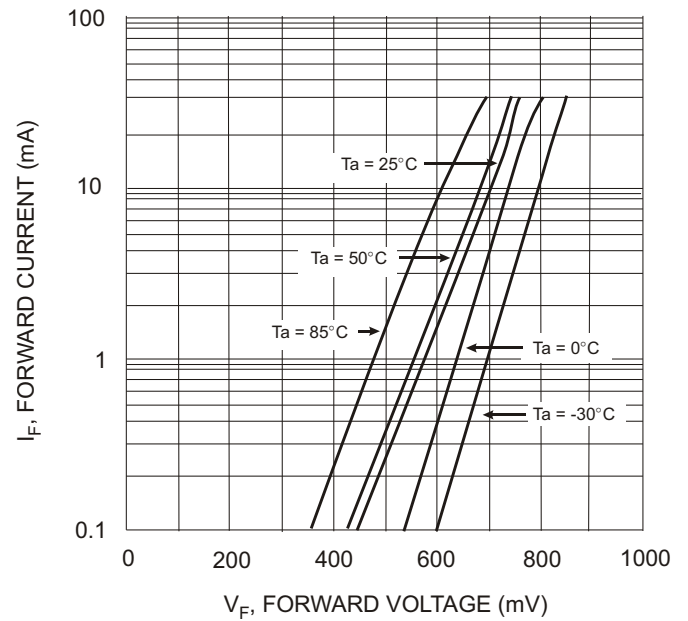


Fig. 2 Typical Forward Characteristics

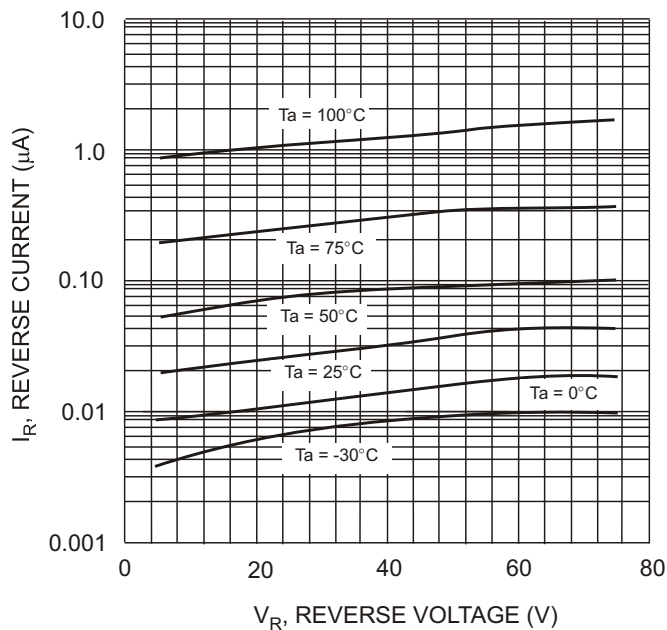


Fig. 3 Typical Reverse Characteristics

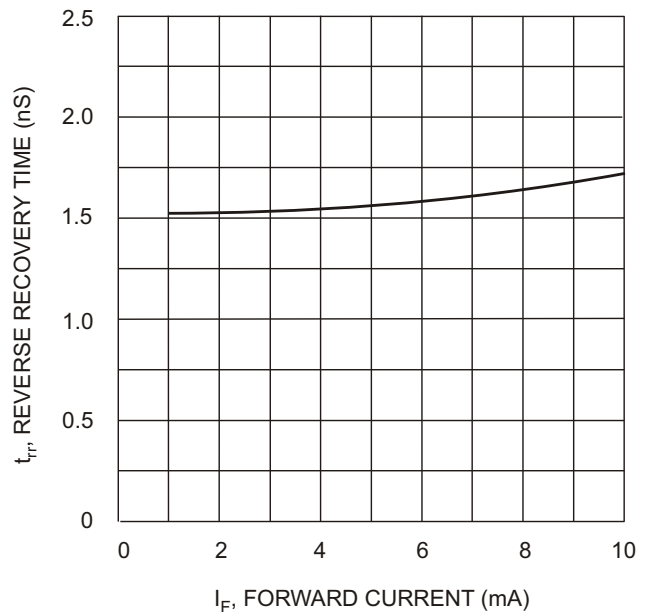


Fig. 4 Reverse Recovery Time vs. Forward Current

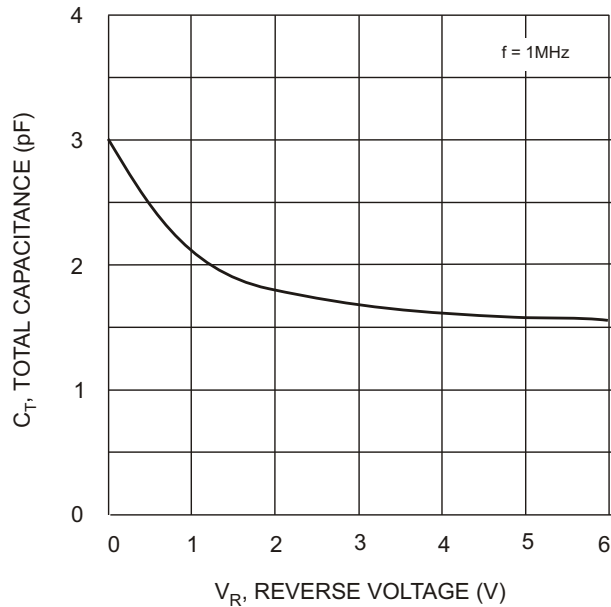


Fig. 5 Total Capacitance vs.  
Reverse Voltage

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