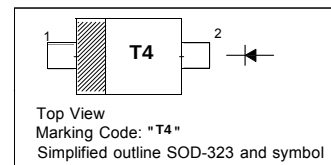


# 1N4448WS Silicon Epitaxial Planar Switching Diode

Fast Switching Diode

## PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



## Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                                                           | Symbol      | Value         | Unit             |
|---------------------------------------------------------------------|-------------|---------------|------------------|
| Peak Reverse Voltage                                                | $V_{RM}$    | 100           | V                |
| Reverse Voltage                                                     | $V_R$       | 80            | V                |
| Average Rectified Forward Current                                   | $I_{F(AV)}$ | 150           | mA               |
| Forward Continuous Current                                          | $I_{FM}$    | 300           | mA               |
| Non-Repetitive Peak Forward Surge Current (at $t = 1 \mu\text{s}$ ) | $I_{FSM}$   | 0.5           | A                |
| Power Dissipation                                                   | $P_d$       | 200           | mW               |
| Junction Temperature                                                | $T_j$       | 150           | $^\circ\text{C}$ |
| Storage Temperature Range                                           | $T_{stg}$   | - 65 to + 150 | $^\circ\text{C}$ |

## Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                                                                                                                                                                                   | Symbol      | Min.                | Max.                       | Unit                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------|----------------------------|--------------------------------------------|
| Forward Voltage<br>at $I_F = 5 \text{ mA}$<br>at $I_F = 10 \text{ mA}$<br>at $I_F = 100 \text{ mA}$<br>at $I_F = 150 \text{ mA}$                                                            | $V_F$       | 0.62<br>-<br>-<br>- | 0.72<br>0.855<br>1<br>1.25 | V                                          |
| Reverse Leakage Current<br>at $V_R = 80 \text{ V}$<br>at $V_R = 20 \text{ V}$<br>at $V_R = 75 \text{ V}$ , $T_J = 150^\circ\text{C}$<br>at $V_R = 25 \text{ V}$ , $T_J = 150^\circ\text{C}$ | $I_R$       | -<br>-<br>-<br>-    | 100<br>25<br>50<br>30      | nA<br>nA<br>$\mu\text{A}$<br>$\mu\text{A}$ |
| Reverse Breakdown Voltage<br>at $I_R = 100 \mu\text{A}$                                                                                                                                     | $V_{(BR)R}$ | 80                  | -                          | V                                          |
| Total Capacitance<br>at $V_R = 0.5 \text{ V}$ , $f = 1 \text{ MHz}$                                                                                                                         | $C_{tot}$   | -                   | 4                          | pF                                         |
| Reverse Recovery Time<br>at $I_F = I_R = 10 \text{ mA}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100 \Omega$                                                                                    | $t_{rr}$    | -                   | 4                          | ns                                         |

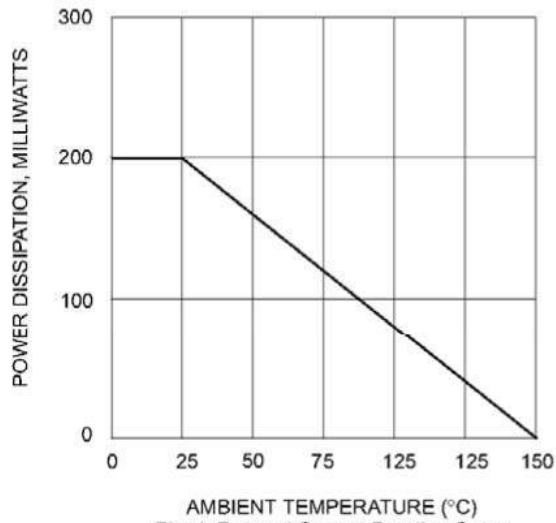


Fig. 1 Forward Current Derating Curve

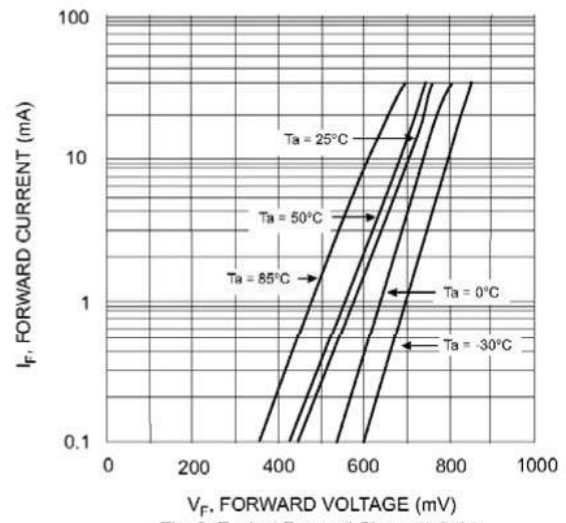


Fig. 2 Typical Forward Characteristics

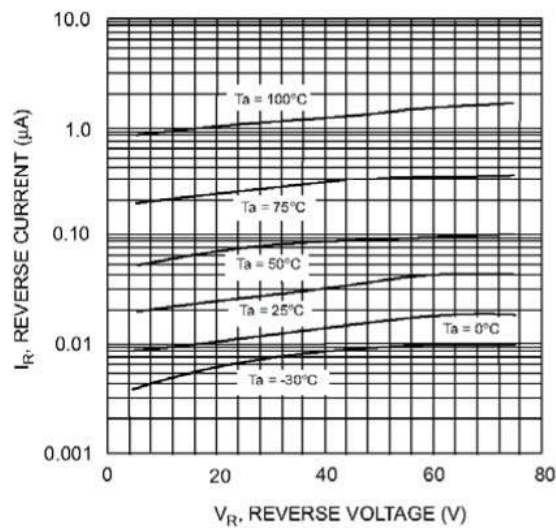


Fig. 3 Typical Reverse Characteristics

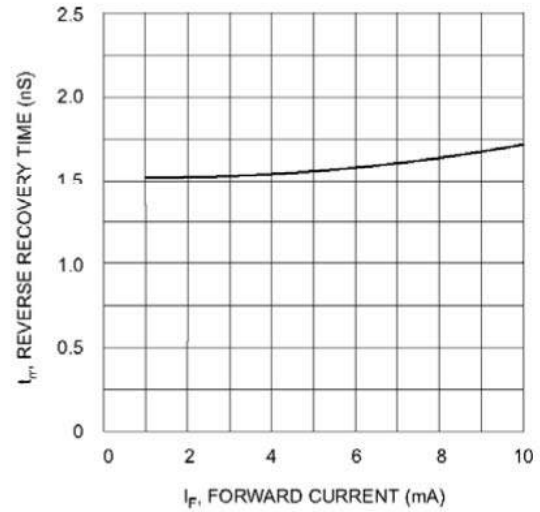


Fig. 4 Reverse Recovery Time vs. Forward Current

## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323

