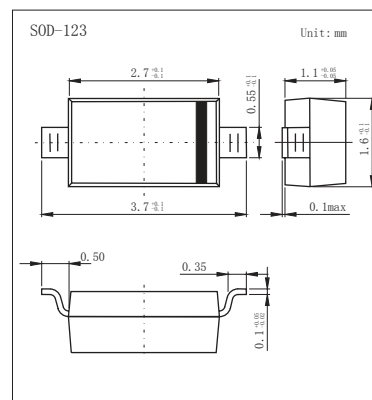


## Switching Diodes

## 1N4148W

## ■ Features

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

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                              | Symbol          | Rating     | Unit |
|----------------------------------------|-----------------|------------|------|
| Reverse Voltage                        | $V_{RM}$        | 100        | V    |
| Peak Repetitive Peak Reverse Voltage   | $V_{RRM}$       | 100        |      |
| Working Peak Reverse Voltage           | $V_{RWM}$       |            |      |
| DC Blocking Voltage                    | $V_R$           |            |      |
| RMS Reverse Voltage                    | $V_{R(RMS)}$    | 71         | mA   |
| Average Rectified Output Current       | $I_o$           | 150        |      |
| Forward Continuous Current             | $I_{FM}$        | 300        |      |
| Peak Forward Surge Current @ t=1us     | $I_{FSM}$       | 2          | A    |
| @ t = 1s                               |                 | 1          |      |
| Power Dissipation                      | $P_d$           | 500        | mW   |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 250        | °C/W |
| Junction Temperature                   | $T_J$           | 150        | °C   |
| Storage Temperature range              | $T_{stg}$       | -55 to 150 |      |

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Parameter                       | Symbol   | Test Conditions                                                           | Min | Typ | Max   | Unit          |
|---------------------------------|----------|---------------------------------------------------------------------------|-----|-----|-------|---------------|
| Reverse breakdown voltage       | $V_R$    | $I_R = 100\mu\text{A}$                                                    | 100 |     |       | V             |
| Forward voltage                 | $V_{F1}$ | $I_F = 1\text{mA}$                                                        |     |     | 0.715 |               |
|                                 | $V_{F2}$ | $I_F = 10\text{mA}$                                                       |     |     | 0.855 |               |
|                                 | $V_{F3}$ | $I_F = 50\text{mA}$                                                       |     |     | 1     |               |
|                                 | $V_{F4}$ | $I_F = 150\text{mA}$                                                      |     |     | 1.25  |               |
| Reverse voltage leakage current | $I_{R1}$ | $V_R = 75\text{V}$                                                        |     |     | 1     | $\mu\text{A}$ |
|                                 | $I_{R2}$ | $V_R = 20\text{V}$                                                        |     |     | 25    | nA            |
| Junction capacitance            | $C_j$    | $V_R = 0\text{V}$ , $f = 1\text{MHz}$                                     |     |     | 2     | pF            |
| Reverse recovery time           | $t_{rr}$ | $I_F = I_R = 10\text{mA}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100\Omega$ |     |     | 4     | ns            |

## ■ Marking

|         |    |
|---------|----|
| Marking | T4 |
|---------|----|

## Switching Diodes

## 1N4148W

## ■ Typical Characteristics

