## 1N4148WS Silicon Epitaxial Planar Switching Diode

## Features

- SOD-323 package
- Fast switching
- These diodes are also available in other case style including the DO-35 case with the type designation 1N4148, the MiniMELF case with the type designation LL4148 and the MicroMELF case with the type designation MCL4148.

PINNING

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



Absolute Maximum Ratings ( $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$ )

| Parameter | Symbol | Value | Unit |
| :--- | :---: | :---: | :---: |
| Peak Reverse Voltage | $\mathrm{V}_{\mathrm{RM}}$ | 100 | V |
| Reverse Voltage | $\mathrm{V}_{\mathrm{R}}$ | 75 | V |
| Average Rectified Forward Current | $\mathrm{I}_{\mathrm{F}(\mathrm{AV})}$ | 150 | mA |
| Surge Forward Current $\left(\mathrm{t}<1 \mathrm{~s}, \mathrm{~T}_{\mathrm{j}}=25^{\circ} \mathrm{C}\right)$ | $\mathrm{I}_{\mathrm{FSM}}$ | 350 | mA |
| Power Dissipation | $\mathrm{P}_{\text {tot }}$ | 200 | mW |
| Thermal Resistance from Junction to Ambient Air | $\mathrm{R}_{\text {өJA }}$ | 625 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Junction Temperature | $\mathrm{T}_{\mathrm{j}}$ | 150 | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature Range | $\mathrm{T}_{\text {stg }}$ | -65 to +150 | ${ }^{\circ} \mathrm{C}$ |

Characteristics at $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$

| Parameter | Symbol | Min. | Max. | Unit |
| :---: | :---: | :---: | :---: | :---: |
| Reverse Breakdown Voltage at $I_{R}=1 \mu \mathrm{~A}$ | $\mathrm{V}_{(\mathrm{BR}) \mathrm{R}}$ | 75 | - | V |
| $\begin{aligned} & \text { Forward Voltage } \\ & \text { at } I_{F}=1 \mathrm{~mA} \\ & \text { at } I_{F}=10 \mathrm{~mA} \\ & \text { at } I_{F}=50 \mathrm{~mA} \\ & \text { at } I_{F}=150 \mathrm{~mA} \end{aligned}$ | $V_{F}$ |  | $\begin{gathered} 0.715 \\ 0.855 \\ 1 \\ 1.25 \end{gathered}$ | V |
| $\begin{aligned} & \text { Peak Reverse Current } \\ & \text { at } \mathrm{V}_{\mathrm{R}}=75 \mathrm{~V} \\ & \text { at } \mathrm{V}_{\mathrm{R}}=20 \mathrm{~V} \\ & \text { at } \mathrm{V}_{\mathrm{R}}=75 \mathrm{~V}, \mathrm{~T}_{J}=150^{\circ} \mathrm{C} \\ & \text { at } \mathrm{V}_{\mathrm{R}}=25 \mathrm{~V}, \mathrm{~T}_{J}=150^{\circ} \mathrm{C} \end{aligned}$ | $I_{\text {R }}$ |  | $\begin{gathered} 1 \\ 25 \\ 50 \\ 30 \end{gathered}$ | $\mu \mathrm{A}$ <br> nA <br> $\mu \mathrm{A}$ <br> $\mu \mathrm{A}$ |
| $\begin{aligned} & \text { Total Capacitance } \\ & \text { at } \mathrm{V}_{\mathrm{R}}=0 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz} \end{aligned}$ | $\mathrm{C}_{\text {T }}$ | - | 2 | pF |
| Reverse Recovery Time at $\mathrm{I}_{\mathrm{r}}=0.1 \mathrm{XI} \mathrm{I}_{\mathrm{R}}, \mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{R}}=10 \mathrm{~mA}, \mathrm{R}_{\mathrm{L}}=100 \Omega$ | $\mathrm{t}_{\mathrm{rr}}$ | - | 4 | ns |



Reverse capacitance vs. reverse voltage


Dynamic forward resistance vs. forward current


Amissible repetitive peak forward current vs. pulse duration


## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads


