## 1N4148WS

## 200 mW Surface Mount Switching Diode－100V

## Features

－Fast switching speed．
－Electrically identical to standard JEDEC．
－Surface mount package ideally suited for automatic insertion．
－Tiny plastic SMD package．
－RoHS Compliant
－Compliant to Halogen－free
－High Conductance．
－Silicon epitaxial planar chip．
－Lead－free parts for green partner，exceeds environmental standards of MIL－STD－19500／228

## Mechanical data

－Epoxy ：UL94－V0 rated flame retardant
－Case ：Molded plastic，SOD－323
－Terminals ：Plated terminals，solderable per MIL－STD－750， Method 2026
－Polarity ：Indicated by cathode band
－Mounting Position ：Any

## Package Outline



Maximum ratings and Electrical Characteristics（ $A T T_{A}=25^{\circ} \mathrm{C}$ unless otherwise noted）

| PARAMETER | Symbol | 1N4148WS | UNIT |
| :---: | :---: | :---: | :---: |
| Maximum reverse voltage | $V_{\text {R }}$ | 75 | V |
| Maximum peak reverse voltage | $\mathrm{V}_{\text {RM }}$ | 100 | V |
| Maximum RMS voltage | $\mathrm{V}_{\text {RMS }}$ | 50 | V |
| Maximum DC blocking voltage | $\mathrm{V}_{\text {D }}$ | 75 | V |
| Maximum average forward current at $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ | 1 。 | 200 | mA |
| Maximum peak forward surge current，1．0us | $\mathrm{I}_{\text {FSM }}$ | 2.0 | A |
| Maximum power dissipation derate above $25^{\circ} \mathrm{C}$ | $\mathrm{P}_{\text {D }}$ | 200 | mW |
| Maximum forward voltage | $V_{F}$ | $\begin{gathered} 0.715 @ I F=0.001 \mathrm{~A} \\ 0.855 @ I F=0.01 \mathrm{~A} \\ 1.0 @ I F=0.05 \mathrm{~A} \\ 1.25 @ I F=0.15 \mathrm{~A} \\ \hline \end{gathered}$ | V |
| Maximum DC reverse current at rated DC blocking voltage $\mathrm{T}_{J}=25^{\circ} \mathrm{C}$ | $I_{R}$ | $\begin{gathered} 0.025 @ V R=20 \mathrm{~V} \\ 1.0 @ \mathrm{VR}=75 \mathrm{~V} \end{gathered}$ | uA |
| Typical junction capacitance（Notes 1） | C | 2.0 | pF |
| Maximum reverse recovery time（Notes 2） | $\mathrm{t}_{\text {r }}$ | 8.0 | ns |
| Typical thermal resistance junction to ambient | $\mathrm{R}_{\text {өJA }}$ | 500 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Operating junction and Storage Temperature Range | $\mathrm{T}_{\mathrm{j}}, \mathrm{T}_{\text {ste }}$ | -55 to＋150 | ${ }^{\circ} \mathrm{C}$ |

## Notes：

1．$C_{\jmath}$ at $V_{R}=0 V, f=1 \mathrm{MHZ}$
2．From $I_{F}=10 \mathrm{~mA}$ to $\mathrm{I}_{\mathrm{R}}=1 \mathrm{~mA}, \mathrm{~V}_{\mathrm{R}}=6 \mathrm{~V}, \mathrm{R}_{\mathrm{L}}=100 \mathrm{ohm}$

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## Rating and characteristic curves

Fig. 1 TYPICAL FORWARD CHARACTERISTICS


Fig. 2 TYPICAL REVERSE CHARACTERISTICS


Fig. 3 POWER DERATING CURVE


## Marking

| Type number | Marking code |
| :---: | :---: |
| 1N4148WS | T4 |

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