## 1N4148W

## 400 mW Surface Mount Switching Diode－100V

## Features

－Fast Switching Device（trr＜4．0 ns）
－General Purpose Diodes
－Flat Lead SOD－123 Small Outline Plastic Package
－Surface Device Type Mounting
－RoHS Compliant
－Compliant to Halogen－free
－Matte Tin（Sn）Lead Finish
－Band Indicates Cathode
－Lead－free parts for green partner，exceeds environmental standards of MIL－STD－19500／228

## Mechanical data

－Epoxy：UL94－VO rated flame retardant
－Case ：Molded plastic，SOD－123
－Terminals ：Solder plated，solderable per MIL－STD－750，Method 2026
－Polarity ：Indicated by cathode band
－Mounting Position ：Any

## Package Outline



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

| PARAMETER | Symbol | 1N4148W | UNIT |
| :---: | :---: | :---: | :---: |
| Maximum reverse voltage | $V_{\text {R }}$ | 75 | V |
| Maximum peak reverse voltage | $V_{\text {RM }}$ | 100 | V |
| Maximum RMS voltage | $\mathrm{V}_{\text {RMs }}$ | 50 | V |
| Maximum DC blocking voltage | $\mathrm{V}_{\text {DC }}$ | 75 | V |
| Maximum average forward current at $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ | I。 | 150 | mA |
| Maximum peak forward surge current，1．0us | $\mathrm{I}_{\text {FSM }}$ | 2 | A |
| Maximum power dissipation derate above $25^{\circ} \mathrm{C}$ | $\mathrm{P}_{\mathrm{D}}$ | 400 | mW |
| Maximum forward voltage | $V_{F}$ | $\begin{array}{r} 0.855 @ 0.01 \mathrm{~A} \\ 1.0 @ 0.05 \mathrm{~A} \\ 1.25 @ 0.15 \mathrm{~A} \end{array}$ | V |
| Maximum DC reverse current at rated DC blocking voltage $\mathrm{T}_{J}=25^{\circ} \mathrm{C}$ | $I_{R}$ | $\begin{gathered} \hline 0.025 @ 20 \mathrm{~V} \\ 2.5 @ 75 \mathrm{~V} \\ \hline \end{gathered}$ | uA |
| Typical junction capacitance（Notes 1） | C | 1.5 | pF |
| Maximum reverse recovery time（Notes 2） | $\mathrm{t}_{\text {r }}$ | 8.0 | ns |
| Maximum thermal resistance | $\mathrm{R}_{\text {өJA }}$ | 450 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Operating junction temperature range | $\mathrm{T}_{\mathrm{J}}$ | -55 to＋150 | ${ }^{\circ} \mathrm{C}$ |
| Storage temperature range | $\mathrm{T}_{\text {STG }}$ | -55 to＋150 | ${ }^{\circ} \mathrm{C}$ |

## Notes

1． $\mathrm{C}_{\mathrm{J}}$ at $\mathrm{V}_{\mathrm{R}}=0 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHZ}$
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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## 400 mW Surface Mount Switching

 Diode-100V
## Rating and characteristic curves

Fig. 1 TYPICAL FORWARD CHARACTERISTICS



Fig. 2 TYPICAL REVERSE CHARACTERISTICS


Fig. 4 POWER DERATING CURVE


## Marking

| Type number | Marking code |
| :---: | :---: |
| 1N4148W | T4 |

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