1N4148W


## Features

$\star$ Fast Switching Speed
\& Surface Mount Package Ideally Suited for Automatic Insertion
$\diamond$ For General Purpose Switching Applications
\& High Conductance

## Mechanical Data

$\triangleleft$ Case: SOD-123, Molded Plastic
\& Polarity: Cathode Band
$\triangleleft$ Marking: Date Code only or Date Code and Type Code
Type Code: T4
\& Weight: 0.01 grams (approx.)

SOD-123


Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at $25^{\circ} \mathrm{C}$ ambient temperature unless otherwise specified.

## Maximum Ratings

| Type Number | Symbol | 1N4148W | Unit |
| :---: | :---: | :---: | :---: |
| Non-Repetitive Peak Reverse Voltage | $V_{\text {RM }}$ | 100 | V |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | $\begin{aligned} & \mathrm{V}_{\mathrm{RRM}} \\ & \mathrm{~V}_{\mathrm{RWMM}} \\ & \mathrm{~V}_{\mathrm{R}} \end{aligned}$ | 75 | V |
| RMS Reverse Voltage | $\mathrm{V}_{\mathrm{R} \text { (RMS) }}$ | 53 | V |
| Forward Continuous Current (Note 1) | IFM | 300 | mA |
| Average Rectified Output Current (Note 1) | 10 | 150 | mA |
| Non-Repetitive Peak Forward Surge Current <br> $\begin{array}{l}@ \\ \mathrm{t}=1.0 \mu \mathrm{~s} \\ \mathrm{t}=1.0 \mathrm{~s}\end{array}$ | IFSM | $\begin{aligned} & 2.0 \\ & 1.0 \\ & \hline \end{aligned}$ | A |
| Power Dissipation (Note 1) | $\mathrm{P}_{\mathrm{d}}$ | 350 | mW |
| Thermal Resistance Junction to Ambient Air (Note 1) | $\mathrm{R}_{\text {өJA }}$ | 357 | K/W |
| Operating and Storage Temperature Range | $\mathrm{T}_{\mathrm{j}}$, $\mathrm{T}_{\text {STG }}$ | -65 to +150 | ${ }^{\circ} \mathrm{C}$ |

## Electrical Characteristics

| Type Number | Symbol | Min | Max | Unit | Test Condition |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Maximum Forward Voltage | $V_{\text {FM }}$ | - | $\begin{gathered} 0.715 \\ 0.855 \\ 1.0 \\ 1.25 \end{gathered}$ | V | $\begin{aligned} & \mathrm{I}_{\mathrm{F}}=1.0 \mathrm{~mA} \\ & \mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA} \\ & \mathrm{I}_{\mathrm{F}}=50 \mathrm{~mA} \\ & \mathrm{I}_{\mathrm{F}}=150 \mathrm{~mA} \end{aligned}$ |
| Maximum Peak Reverse Current | IRM | - | $\begin{aligned} & 2.5 \\ & 50 \\ & 30 \\ & 25 \end{aligned}$ | $\begin{aligned} & \mu \mathrm{A} \\ & \mu \mathrm{~A} \\ & \mu \mathrm{~A} \\ & \mathrm{AA} \end{aligned}$ | $\begin{aligned} & V_{R}=75 \mathrm{~V} \\ & V_{R}=75 \mathrm{~V}, T_{j}=150^{\circ} \mathrm{C} \\ & V_{R}=25 \mathrm{~V}, T_{j}=150^{\circ} \mathrm{C} \\ & V_{R}=20 \mathrm{~V} \end{aligned}$ |
| Junction Capacitance | $\mathrm{C}_{\mathrm{j}}$ | - | 2.0 | pF | $\mathrm{V}_{\mathrm{R}}=0, \mathrm{f}=1.0 \mathrm{MHz}$ |
| Reverse Recovery Time | $t_{\text {rr }}$ | - | 4.0 | ns | $\begin{aligned} & I_{F}=I_{R}=10 \mathrm{~mA}, \\ & I_{r r}=0.1 \times I_{R}, R_{L}=100 \Omega \end{aligned}$ |

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$\mathrm{V}_{\mathrm{F}}$, INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 1 Forward Characteristics


Fig. 2 Leakage Current vs Junction Temperature

| PACKAGE | SPQ/PCS | CARTON <br> SPQ/PCS | CARTON <br> SIZE/CM | CARTON <br> GW/KG | CARTON <br> NW/KG |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SOD-123 | $3000 /$ REEL | 90000 | $40 \times 20 \times 22$ | 5.00 | 4.00 |

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[^0]:    Notes: 1. Valid provided that terminals are kept at ambient temperature.

