## 200mW SOD-523 SURFACE MOUNT

 Very Small Outline Flat Lead Plastic Package General Purpose Application Fast Switching DiodeAbsolute Maximum Ratings $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
| :---: | :--- | :---: | :---: |
| $\mathbf{P}_{\mathbf{D}}$ | Power Dissipation | 200 | mW |
| $\mathbf{T}_{\mathbf{S T G}}$ | Storage Temperature Range | -55 to +150 | ${ }^{\circ} \mathrm{C}$ |
| $\mathbf{T}_{\mathbf{J}}$ | Operating Junction Temperature | +150 | ${ }^{\circ} \mathrm{C}$ |
| $\mathbf{V}_{\text {RSM }}$ | Non-Repetitive Peak Reverse Voltage | 100 | V |
| $\mathbf{V}_{\text {RRM }}$ | Repetitive Peak Reverse Voltage | 75 | V |
| $\mathbf{I}_{\text {FRM }}$ | Repetitive Peak Forward Current | 300 | mA |
| $\mathbf{I}_{\mathbf{0}}$ | Continuous Forward Current | 150 | mA |
| $\mathbf{I}_{\text {FSM }}$ | Non-repetitive Peak Forward Surge Current <br> (Pulse Width=1us) | 2 | A |

These ratings are limiting values above which the serviceability of the diode may be impaired.

## Specification Features:

- Fast Switching Device ( $\mathrm{T}_{\mathrm{RR}}<4.0 \mathrm{nS}$ )
- General Purpose Diodes
- Extremely Small SOD-523 Package
- Flat Lead SOD-523 Small Outline Plastic Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode

Green Product


SOD-523 Flat Lead


ELECTRICAL SYMBOL

- P/N suffix $V$ means AEC-Q101qualified, eg:1N4148WTV
- P/N suffix $V$ means Halogen-free

Electrical Characteristics $\quad \mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Limits |  | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Min | Max |  |
| $B_{v}$ | Breakdown Voltage | $\begin{aligned} & \mathrm{I}_{\mathrm{R}}=100 \mu \mathrm{~A} \\ & \mathrm{I}_{\mathrm{R}}=5 \mu \mathrm{~A} \end{aligned}$ | $\begin{gathered} 100 \\ 75 \end{gathered}$ |  | Volts |
| $\mathrm{I}_{\mathrm{R}}$ | Reverse Leakage Current | $\begin{aligned} & V_{R}=20 \mathrm{~V} \\ & V_{R}=75 \mathrm{~V} \end{aligned}$ |  | $\begin{gathered} 25 \\ 5 \end{gathered}$ | nA $\mu \mathrm{A}$ |
| $\mathrm{V}_{\mathrm{F}}$ | Forward Voltage $\quad$ 1N4448WT, 1N914BWT 1N4148WT 1N4448WT, 1N914BWT | $\begin{aligned} & \mathrm{I}_{\mathrm{F}}=5 \mathrm{~mA} \\ & \mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA} \\ & \mathrm{I}_{\mathrm{F}}=100 \mathrm{~mA} \end{aligned}$ | 0.62 | $\begin{gathered} 0.72 \\ 1.0 \\ 1.0 \end{gathered}$ | Volts |
| $\mathrm{T}_{\mathrm{RR}}$ | Reverse Recovery Time | $\begin{aligned} & \mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA} \\ & \mathrm{I}_{\mathrm{R}}=60 \mathrm{~mA} \\ & \mathrm{R}_{\mathrm{L}}=100 \Omega \\ & \mathrm{I}_{\mathrm{RR}}=1 \mathrm{~mA} \end{aligned}$ |  | 4 | nS |
| C | Capacitance | $\mathrm{V}_{\mathrm{R}}=0 \mathrm{~V}, \mathrm{f}=1 \mathrm{M}_{\mathrm{Hz}}$ |  | 4 | pF |
|  |  |  |  |  | $\begin{aligned} & 2020-1 \\ & \text { REV:C } \end{aligned}$ |

## RATING AND CHARACTERISTICS CURVES (1N4148WTV ,1N4448WTV,1N914BWTV)

Total Capacitance


Forward Voltage vs Ambient Temperature


RATING AND CHARACTERISTICS CURVES (1N4148WTV ,1N4448WTV,1N914BWTV )


Reverse Current vs Reverse VoltageReverse


## Flat Lead SOD-523 Package Outline



Note: Dimensions are exclusive of Burrs, Mold Flash \& Tie Bar extrusions.

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

| PACKAGE | PACKING <br> CODE | EA PER <br> REEL | EA PER <br> INNER <br> BOX | COMPONENT <br> SPACE <br> $(\mathrm{mm})$ | TAPE SPACE <br> $(\mathrm{mm})$ | REEL DIA <br> $(\mathrm{mm})$ | CARTON SIZE <br> $(\mathrm{mm})$ | EA PER <br> CARTON | GROSS <br> WEIGHT(Kg) $)$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SOD-523 | -T | 8,000 | -- | -- | -- | 178 | $390^{*} 205^{*} 31$ | 320,000 | 6.16 |

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