BAV199

## FEATURES

- This Switching Diode has The Following Features:
- Low Leakage Current Applications

Marking: JY


## Maximum Ratings @Ta=25 ${ }^{\circ} \mathrm{C}$

| Parameter |  | Symbol | Value | Unit |
| :---: | :---: | :---: | :---: | :---: |
| Peak Repetitive Reverse Voltage |  | $V_{\text {RRM }}$ | 85 | V |
| Continuous Reverse Voltage |  | $V_{R}$ | 85 | V |
| Continuous Forward Current | Single Diode Double Diode | $\mathrm{I}_{\mathrm{F}}$ | $\begin{aligned} & 160 \\ & 140 \end{aligned}$ | mA |
| Repetitive Peak Forward Current |  | $\mathrm{I}_{\text {FRM }}$ | 500 | mA |
| Non-Repetitive Peak Forward Surge Current | $\begin{aligned} & \text { at } \mathrm{t}=1 \mu \mathrm{~s} \\ & \text { at } \mathrm{t}=1 \mathrm{~ms} \\ & \text { at } \mathrm{t}=1 \mathrm{~s} \end{aligned}$ | $\mathrm{I}_{\text {FSM }}$ | $\begin{gathered} \hline 4 \\ 1 \\ 0.5 \end{gathered}$ | A |
| Power Dissipation |  | $\mathrm{P}_{\mathrm{D}}$ | 250 | mW |
| Thermal Resistance Junction to Ambient Air |  | $\mathrm{R}_{\text {өJA }}$ | 500 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Operating and Storage Temperature Range |  | $\mathrm{T}_{\mathrm{j}}, \mathrm{T}_{\text {stg }}$ | -65 to +150 | ${ }^{\circ} \mathrm{C}$ |

## ELECTRICAL CHARACTERISTICS ( $\mathbf{T a}=25^{\circ} \mathrm{C}$ unless otherwise specified)

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Reverse Breakdown Voltage at $I_{R}=100 \mu \mathrm{~A}$ | $\mathrm{V}_{(\mathrm{BR}) \mathrm{R}}$ | 85 | - | - | V |
| $\begin{aligned} & \text { Forward Voltage } \\ & \text { at } I_{F}=1 \mathrm{~mA} \\ & \text { at } I_{F}=10 \mathrm{~mA} \\ & \text { at } I_{I_{1}}=50 \mathrm{~mA} \\ & \text { at } I_{F}=150 \mathrm{~mA} \end{aligned}$ | $V_{F}$ |  | - | $\begin{gathered} 0.9 \\ 1 \\ 1.1 \\ 1.25 \end{gathered}$ | V |
| $\begin{aligned} & \text { Reverse Current } \\ & \text { at } \mathrm{V}_{\mathrm{R}}=75 \mathrm{~V} \\ & \text { at } \mathrm{V}_{\mathrm{R}}=75 \mathrm{~V}, \mathrm{~T}_{\mathrm{j}}=150^{\circ} \mathrm{C} \end{aligned}$ | $\begin{aligned} & I_{R} \\ & I_{R} \end{aligned}$ | - | - | $\begin{gathered} 5 \\ 80 \end{gathered}$ | nA |
| Total Capacitance at $V_{R}=0, f=1 \mathrm{MHz}$ | $\mathrm{C}_{\text {T }}$ | - | 2 | - | pF |
| Reverse Recovery Time at $I_{F}=I_{R}=10 \mathrm{~mA}, I_{r f}=0.1 X I_{R}, R_{L}=100 \Omega$ | $\mathrm{t}_{\mathrm{rr}}$ | - | - | 3 | $\mu \mathrm{S}$ |

BAV199

## Typical Characteristics




Fig. 3 Typical Forward Characteristics


Fig. 2 Current Derating Curve


Fig. 4 Typical Reverse Characteristics

## SOT-23 Package Information



| Symbol | Dimensions In Millimeters |  | Dimensions In Inches |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Min. | Max. | Min. | Max. |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP. |  | 0.037 TYP. |  |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF. |  | 0.022 REF. |  |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |

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