## BAV99BRW

## QUAD SURFACE MOUNT SWITCHING DIODE ARRAY

## FEATURES

- Fast Switching Speed
- Ultra-Small Surface Mount Package
- For General Purpose Switching Applications
- High Conductance
- Easily Connected As Full-Wave Bridge




## MECHANICALDATA

## Case : SOT-363, Plastic

Terminals : Solderable per MIL-STD-750, Method 2026
Approx. Weight : 0.0002 ounces, 0.006 grams
Marking : PW



MAXIMUM RATINGS ( $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ unless otherwise specified)

| PARAMETER | SYMBOL | VALUE | UNIT |
| :---: | :---: | :---: | :---: |
| Non-Repetitive Peak Reverse Voltage | VRM | 100 | V |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | VRRM <br> Vrwm VR | 75 | V |
| RMS Reverse Voltage | $V_{R}$ (RMS) | 53 | V |
| Forward Continuous Current (Note 1) | I FM | 300 | mA |
| Average Rectified Output Current (Note 1) | 10 | 215 | mA |
| Non-Repetitive Peak Forward Surge Current $\quad \begin{aligned} & \text { @ } \mathrm{t}=1.0 \mu \mathrm{~s} \\ & \\ & \text { @ } \mathrm{t}=1.0 \mathrm{~s}\end{aligned}$ | I FSM | $\begin{aligned} & 4.0 \\ & 0.7 \end{aligned}$ | A |
| Power Dissipation (Note 1) | Pd | 200 | mW |
| Thermal Resistance Junction to Ambient Air (Note 1) | ReJA | 625 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Operating and Storage Temperature Range | TJ,Tstg | -55 to +150 | ${ }^{\circ} \mathrm{C}$ |

Notes: 1.Device mounted on FR-4 PC board with recommended pad layout
2. Short duration test pulse used to minimize self-heating effect
3.No Purposefully added lead

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ELECTRICAL CHARACTERISTICS ( $\mathrm{TA}_{\mathrm{A}}=25^{\circ} \mathrm{C}$ unless otherwise specified)

| PARAMETER | TEST CONDITION | SYMBOL | MIN. | MAX | UNIT |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Reverse Breakdown Voltage (Note 2) | $\mathrm{IR}=2.5 \mu \mathrm{~A}$ | $V(B R) R$ | 75 | - | V |
| Forward Voltage | $\begin{aligned} & I F=1.0 \mathrm{~mA} \\ & I F=10 \mathrm{~mA} \\ & I F=50 \mathrm{~mA} \\ & I F=150 \mathrm{~mA} \end{aligned}$ | VF | - | $\begin{gathered} \hline 0.715 \\ 0.855 \\ 1.0 \\ 1.25 \end{gathered}$ | V |
| Reverse Current (Note 2) | $\begin{aligned} & V_{R}=75 \mathrm{~V} \\ & V_{R}=75 \mathrm{~V}, T_{J}=150^{\circ} \mathrm{C} \\ & V_{R}=25 \mathrm{~V}, T_{J}=150^{\circ} \mathrm{C} \\ & V_{R}=25 \mathrm{~V} \end{aligned}$ | 1 R | - | $\begin{gathered} 2.5 \\ 50 \\ 30 \\ 0.03 \end{gathered}$ | $\mu \mathrm{A}$ <br> $\mu \mathrm{A}$ <br> $\mu \mathrm{A}$ <br> $\mu \mathrm{A}$ |
| Total Capacitance | $\mathrm{V}_{\mathrm{R}}=0, \mathrm{f}=1.0 \mathrm{MHz}$ | $\mathrm{C}_{\text {T }}$ | - | 2.0 | pF |
| Reverse Recovery Time | $\begin{aligned} & I F=I R=10 \mathrm{~mA}, \\ & I R R=0.1 \mathrm{xIR}, R L=100 \Omega \end{aligned}$ | TRR | - | 4.0 | ns |



Fig. 1 Forward Characteristics

$\mathrm{V}_{\mathrm{R}}$, REVERSE VOLTAGE (V)
Fig. 3 Typical Capacitance vs. Reverse Voltage


Fig. 2 Typical Reverse Characteristics


Fig. 4 Power Derating Curve

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MOUNTING PAD LAYOUT


## ORDER INFORMATION

- Packing information

T/R - 10K per 13" plastic Reel
T/R - 3K per 7" plastic Reel

## LEGAL STATEMENT

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