## BAV99-HAF

## Silicon Epitaxial Planar Switching Diode

Fast switching in thick and thin-film circuits diode

## Features

- Halogen and Antimony Free(HAF), RoHS compliant


Absolute Maximum Ratings ( $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$ )

| Parameter | Symbol | Value | Unit |
| :---: | :---: | :---: | :---: |
| Repetitive Peak Reverse Voltage | $\mathrm{V}_{\text {RRM }}$ | 85 | V |
| Continuous Reverse Voltage | $V_{\text {R }}$ | 75 | V |
| Continuous Forward Current (Double Diode Loaded) | $\mathrm{I}_{\text {F }}$ | 125 | mA |
| Continuous Forward Current (Single Diode Loaded) | $\mathrm{I}_{\mathrm{F}}$ | 215 | mA |
| Repetitive Peak Forward Current | IFRM | 450 | mA |
| Non-repetitive Peak Forward Surge Current at $t=1 \mathrm{~s}$ <br> at $t=1 \mathrm{~ms}$ <br> at $t=1 \mu \mathrm{~s}$ | $\mathrm{I}_{\text {FSM }}$ | $\begin{gathered} 0.5 \\ 1 \\ 4.5 \end{gathered}$ | A |
| Power Dissipation | $\mathrm{P}_{\text {tot }}$ | 350 | mW |
| Junction Temperature | $\mathrm{T}_{\mathrm{j}}$ | 150 | ${ }^{\circ} \mathrm{C}$ |
| Storage Temperature Range | $\mathrm{T}_{\text {stg }}$ | - 65 to +150 | ${ }^{\circ} \mathrm{C}$ |

Characteristics at $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$

| Parameter | Symbol | Max. | Unit |
| :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Forward Voltage } \\ & \text { at } I_{I}=1 \mathrm{~mA} \\ & \text { at } I_{F}=10 \mathrm{~mA} \\ & \text { at } I_{F}=50 \mathrm{~mA} \\ & \text { at } I_{F}=150 \mathrm{~mA} \end{aligned}$ | $V_{F}$ | $\begin{gathered} 0.715 \\ 0.855 \\ 1 \\ 1.25 \end{gathered}$ | V |
| $\begin{aligned} & \text { Reverse Current } \\ & \text { at } V_{R}=25 \mathrm{~V} \\ & \text { at } V_{R}=75 \mathrm{~V} \\ & \text { at } V_{R}=25 \mathrm{~V}, \mathrm{~T}_{j}=150^{\circ} \mathrm{C} \\ & \text { at } V_{R}=75 \mathrm{~V}, \mathrm{~T}_{j}=150^{\circ} \mathrm{C} \end{aligned}$ | $I_{R}$ | $\begin{gathered} 30 \\ 1 \\ 30 \\ 50 \\ \hline \end{gathered}$ | nA $\mu \mathrm{A}$ $\mu \mathrm{A}$ $\mu \mathrm{A}$ |
| Diode Capacitance at $V_{R}=0, f=1 \mathrm{MHz}$ | $\mathrm{C}_{\text {d }}$ | 1.5 | pF |
| Reverse Recovery Time at $\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA}, \mathrm{~V}_{\mathrm{R}}=6 \mathrm{~V}, \mathrm{I}_{\mathrm{RR}}=1 \mathrm{~mA}, \mathrm{R}_{\mathrm{L}}=100 \Omega$ | $\mathrm{t}_{\text {T }}$ | 4 | ns |




Fig. 2 Typical Leakage Current vs Reverse Voltage

