BAW56/BAV70/BAV99

## FEATURES

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance


BAW56 Marking: A1


BAV70 Marking: A4


BAV99 Marking: A7

SOT-23


Maximum Ratings $@ T_{A}=25^{\circ} \mathrm{C}$

| Parameter | Symbol | Limits | Unit |
| :--- | :---: | :---: | :---: |
| Reverse voltage | $\mathrm{V}_{\mathrm{R}}$ | 70 | V |
| Forward Current | $\mathrm{I}_{\mathrm{F}}$ | 200 | mA |
| Peak Forward Surge Current | $\mathrm{I}_{\text {FM(surge) }}$ | 500 | mA |
| Power Dissipation | $\mathrm{P}_{\mathrm{D}}$ | 225 | mW |
| Thermal Resistance Junction to Ambient Air | $\mathrm{R}_{\text {ӨJA }}$ | 556 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |
| Junction temperature | $\mathrm{T}_{J}$ | 150 | ${ }^{\circ} \mathrm{C}$ |
| Storage temperature range | $\mathrm{T}_{\text {STG }}$ | $-55-150$ | ${ }^{\circ} \mathrm{C}$ |

Electrical Characteristics @ $T_{A}=25^{\circ} \mathrm{C}$

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
| :--- | :---: | :---: | :---: | :---: | :---: | :--- |
| Reverse Breakdown Voltage | $\mathrm{V}_{\mathrm{R}}$ | 70 |  |  | V | $\mathrm{I}_{\mathrm{R}}=100 \mu \mathrm{~A}$ |
| Forward voltage | $\mathrm{V}_{\mathrm{F} 1}$ |  |  | 0.715 | V | $\mathrm{I}_{\mathrm{F}}=1 \mathrm{~mA}$ |
|  | $\mathrm{~V}_{\mathrm{F} 2}$ |  |  | 0.855 | V | $\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA}$ |
|  | $\mathrm{~V}_{\mathrm{F} 3}$ |  |  | 1 | V | $\mathrm{I}_{\mathrm{F}}=50 \mathrm{~mA}$ |
|  | $\mathrm{~V}_{\mathrm{F} 4}$ |  |  | 1.25 | V | $\mathrm{I}_{\mathrm{F}}=150 \mathrm{~mA}$ |
| Reverse current | $\mathrm{I}_{\mathrm{R}}$ |  |  | 2.5 | $\mu \mathrm{~A}$ | $\mathrm{~V}_{\mathrm{R}}=70 \mathrm{~V}$ |
| Capacitance between terminals | $\mathrm{C}_{\mathrm{T}}$ |  |  | 1.5 | pF | $\mathrm{V}_{\mathrm{R}}=0, \mathrm{f}=1 \mathrm{MHz}$ |
| Reverse recovery time |  |  |  |  | 6 | ns |



Figure 1. Forward Voltage


Figure 2 Leakage Current


Figure 3 Capacitance

