BAV199

## Small-Signal Fast Switching Diodes



## Features

- VR 100V
- I $I_{\text {FAV }}$ single diode loaded 215 mA double diode loaded 125 mA


## Typical Applications

-Low-Leakage

## Mechanical Data

- Package: SOT23
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking: JY
-Maximum Ratings ( $\mathrm{Ta}=25^{\circ} \mathrm{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | Conditions | VALUE |
| :---: | :---: | :---: | :---: | :---: |
| Repetitive peak reverse voltage | $V_{\text {RRM }}$ | V |  | 85 |
| Reverse voltage | $V_{R}$ | V | $\mathrm{IR}=100 \mathrm{uA}$ | 100 |
| Peak forward surge current | IFSM | A | Non-Repetitive t= $1 \mu \mathrm{~s}$ | 4 |
| Average forward current | $I_{\text {faV }}$ | mA | single diode loaded | 215 |
|  |  |  | double diode loaded | 125 |
| Power dissipation | $\mathrm{P}_{\text {tot }}$ | mW |  | 250 |
| Maximum junction temperature | $\mathrm{T}_{\mathrm{j}}$ | ${ }^{\circ} \mathrm{C}$ |  | 150 |
| Storage temperature range | $\mathrm{T}_{\text {stg }}$ | ${ }^{\circ} \mathrm{C}$ |  | -55 to +150 |



| PARAMETER | Symbol | UNIT | Conditions | Min | Max |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Breakdown Voltage | $V_{R}$ | V | $\mathrm{IR}=100 \mathrm{uA}$ | 100 |  |
| Forward Voltage | $V_{F}$ | V | $\mathrm{IF}=1 \mathrm{~mA}$ |  | 0.9 |
|  |  |  | $\mathrm{IF}=10 \mathrm{~mA}$ |  | 1.0 |
|  |  |  | $\mathrm{IF}=50 \mathrm{~mA}$ |  | 1.1 |
|  |  |  | $\mathrm{IF}=150 \mathrm{~mA}$ |  | 1.25 |
| Reverse Leakage Current | $\mathrm{I}_{\mathrm{R}}$ | nA | $V R=75 \mathrm{~V}$ |  | 5 |
| Capacitance | C | pF | $\mathrm{VR}=0 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ |  | 4 |
| Reverse Recovery Time | Trr | us | $\begin{aligned} & \text { IF=IR=10mA, Irr=0.1*IR, } \\ & R L=100 \Omega \end{aligned}$ |  | 3 |

-Ordering Information (Example)

| PREFERED P/N | PACKING <br> CODE | UNIT WEIGHT(g) | MINIMUM <br> PACKAGE(pcs) | INNER BOX <br> QUANTITY(pcs) | OUTER CARTON <br> QUANTITY(pcs) | DELIVERY <br> MODE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BAV199 | F2 | Approximate 0.008 | 3000 | 30000 | 120000 | $7^{\text {n reel }}$ |

## ■ Characteristics (Typical)





## BAV199

## ■SOT-23 Package Outline Dimensions



| Syabol | Dimensions In Xillimeters |  | 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. 100 | 0.200 | 0.004 | 0.008 |
| D | 2. 800 | 3.000 | 0.110 | 0.118 |
| E | 1. 200 | 1. 400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.059 | 0.100 |
| e | 0.950T1P |  | 0.037 TYP |  |
| el | 1. 800 | 2. 000 | 0.071 | 0.079 |
| L | 0.550REF |  | 0.022REF |  |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| $\theta$ | $0{ }^{\circ}$ | $8{ }^{*}$ | $0{ }^{*}$ | $8{ }^{*}$ |

■SOT-23Suggested Pad Layout


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1N4001-T 1N4001W

