# BAV99

# DATASHEET

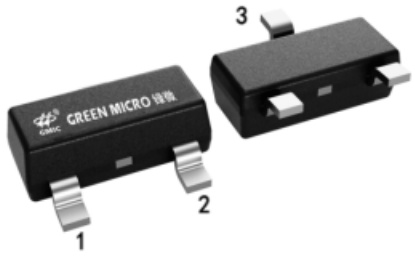
## Specification Revision History:

| Version | Date | Description |
|---|---|---|
| V1.0 | 2021/11 | New |
| V1.1 | 2022/03 | Modify Ordering Information |
| V1.2 | 2023/02 | Modify Ordering Information |
| V1.3 | 2025/05 | Add application precautions and overall typesetting. |

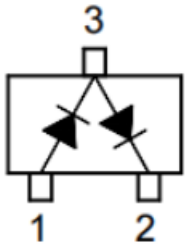
## Features

※Switching Diodes
※Fast Switching Speed
※For General Purpose Switching Applications.
※High Conductance

## The appearance of the product




SOT-23




Simplified outline

## Ordering Information

| Product Model | Package Type | Marking | Packing | Packing Qty |
|---|---|---|---|---|
| BAV99-GM | SOT-23 | A7 | REEL | 3000PCS/REEL |

## Absolute Maximum Ratings Ta = 25°C

| Parameter | | Symbol | Rating | Unit |
|---|---|---|---|---|
| Repetitive Peak Reverse Voltage | | $V_{RRM}$ | 100 | V |
| Continuous Reverse Voltage | | $V_R$ | 75 | |
| Forward Current (Double Diode Loaded) | | $I_F$ | 125 | mA |
| Forward Current (Single Diode Loaded) | | | 215 | |
| Repetitive Peak Forward Current | | $I_{FRM}$ | 450 | |
| Non-repetitive Peak Forward Surge Current | t=1s | $I_{FSM}$ | 0.5 | A |
| | t=1ms | | 1 | |
| | t=1us | | 1.5 | |
| Power Dissipation | | $P_d$ | 350 | mW |
| Junction Temperature | | $T_J$ | 150 | °C |
| Storage Temperature range | | $T_{stg}$ | -65 to 150 | |

## Electrical Characteristics Ta = 25°C

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Reverse breakdown voltage | $V_R$ | $I_R$= 100 uA | 100 | | | V |
| Forward voltage | $V_F$ | $I_F$=1 mA | | | 0.715 | |
| | | $I_F$=10 mA | | | 0.855 | |
| | | $I_F$=50 mA | | | 1 | |
| | | $I_F$=150 mA | | | 1.25 | |
| Reverse voltage leakage current | $I_R$ | $V_R$= 25 V | | | 30 | nA |
| | | $V_R$= 75 V | | | 1 | uA |
| | | $V_R$= 25 V , TJ=150°C | | | 30 | |
| | | $V_R$= 75 V , TJ=150°C | | | 50 | |
| Junction capacitance | $C_j$ | $V_R$= 0 V, f= 1 MHz | | | 1.5 | pF |
| Reverse recovery time | $t_{rr}$ | $I_F$=$I_R$=10mA,$I_R$=1mA, $R_L$=100Ω | | | 4 | ns |

## Typical Characterisitics

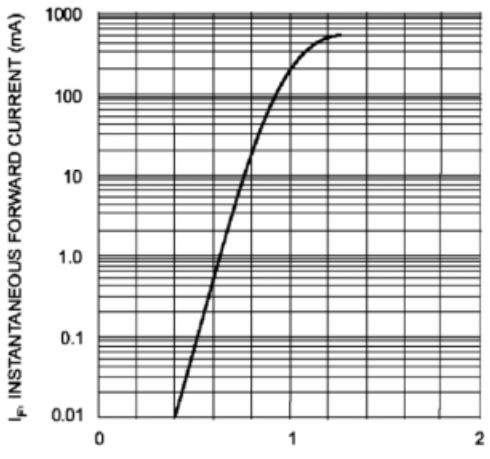


Fig. 1 Forward Characteristics

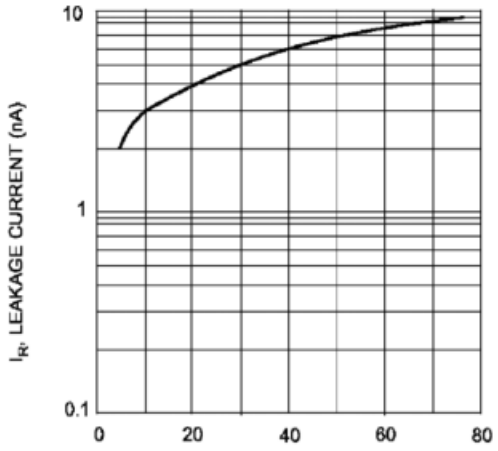


Fig. 2 Typical Leakage Current vs Reverse Voltage

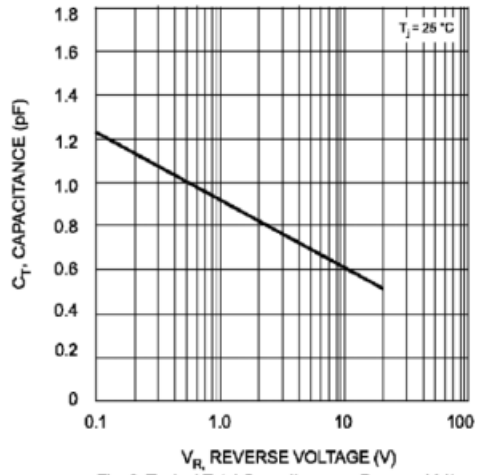
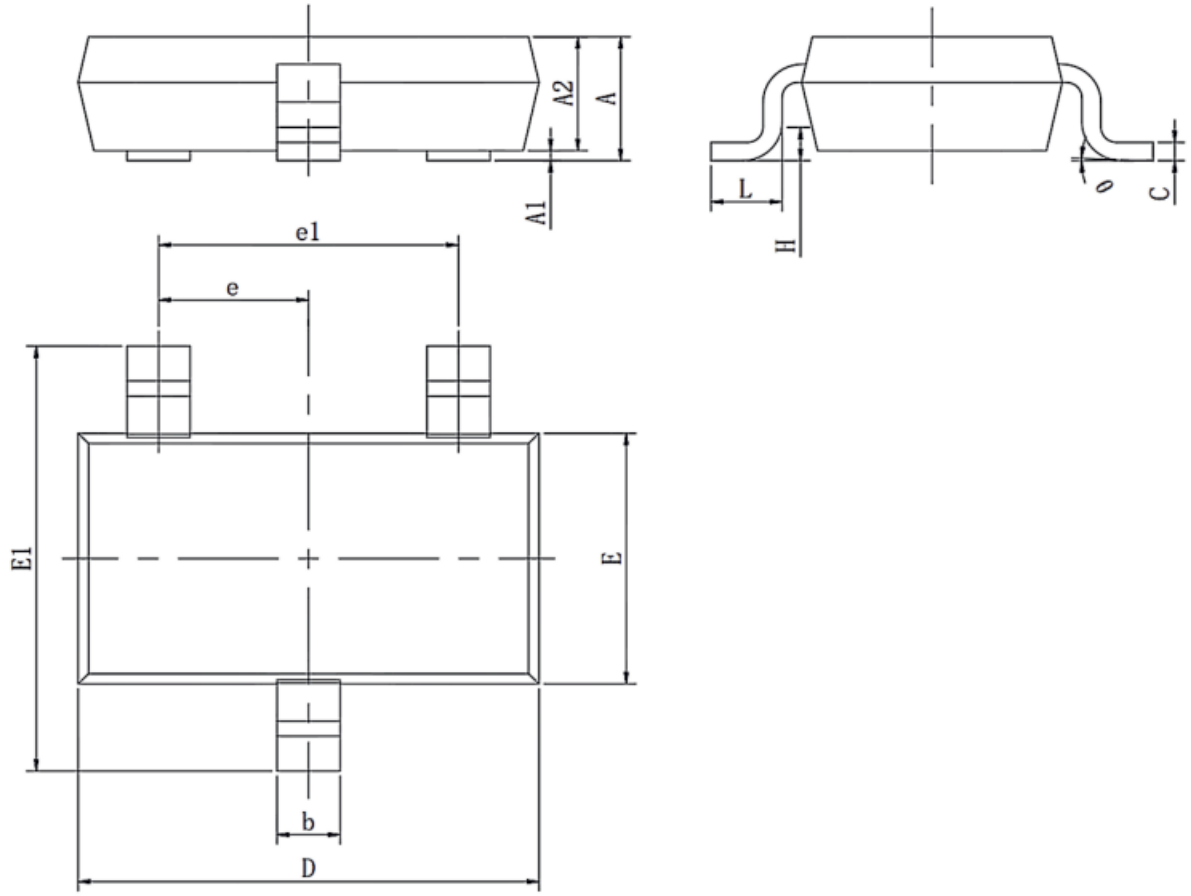


Fig. 3 Typical Total Capacitance vs Reverse Voltage

## Outline Dimensions

**SOT-23** Unit : mm




| 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 | 0.200 | 0.003 | 0.008 |
| D | 2.800 | 3.020 | 0.110 | 0.119 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.95 (BSC) | | 0.037(BSC) | |
| e1 | 1.90 (BSC) | | 0.075(BSC) | |
| L | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

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