

BAV99

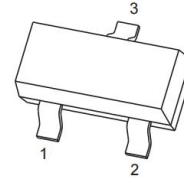
Switching Diode

FEATURE

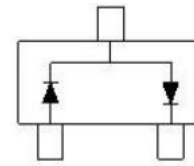
- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance
- Low Current Leakage
- Small Outline Surface Mount Package
- RoHS compliant / Green EMC

MARKING: A7

SOT-23



Schematic diagram



ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

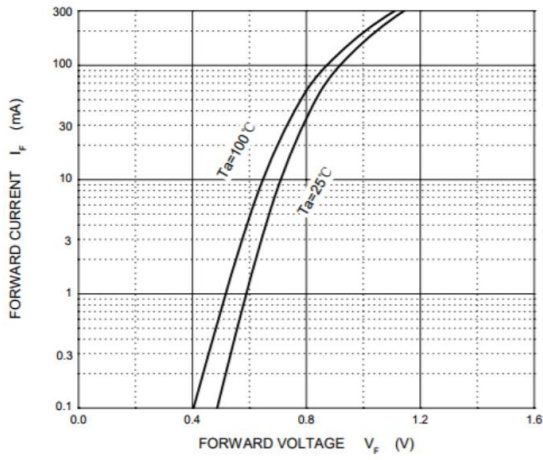
| Parameter | Symbol | Value | Unit |
|---|-----------------|-------------|---------------------------|
| Reverse Voltage | V_R | 70 | V |
| Forward Current | I_F | 200 | mA |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 556 | $^\circ\text{C}/\text{W}$ |
| Non-Repetitive Peak Forward Surge Current*1 | I_{FSM} | 2.0 | A |
| Power Dissipation | P_D | 225 | mW |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

*1 8.3 ms single half sine-wave

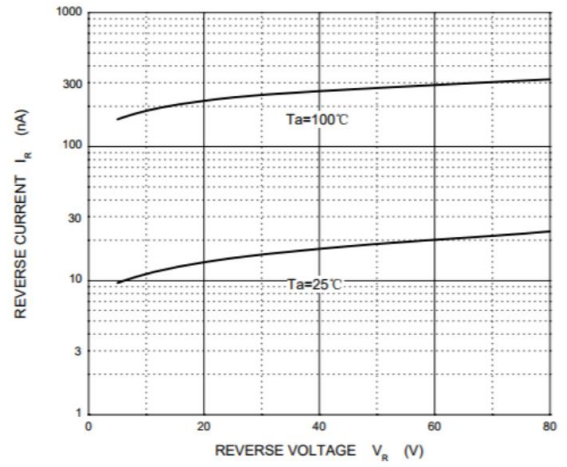
ELECTRICAL CHARACTERISTICS($T_a=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Test Condition | Min | Type | Max | Unit |
|---------------------------------|----------|---|-----|------|-------|---------------|
| Forward Voltage | V_F | $I_F=1\text{mA}$ | | | 0.715 | V |
| | | $I_F=10\text{mA}$ | | | 0.855 | V |
| | | $I_F=50\text{mA}$ | | | 1 | V |
| | | $I_F=150\text{mA}$ | | | 1.25 | V |
| Reverse breakdown voltage | V_R | $I_R=100\mu\text{A}$ | 75 | | | V |
| Reverse voltage leakage current | I_R | $V_R=70\text{V}$ | | | 2.5 | μA |
| Capacitance between terminals | C_T | $V_R=0\text{V}$, $f=1\text{MHz}$ | | | 2 | pF |
| Reverse recovery time | T_{rr} | $I_F=I_R=10\text{mA}$, $I_{rr}=0.1 \times I_R$, $R_L=100\Omega$ | | | 6 | nS |

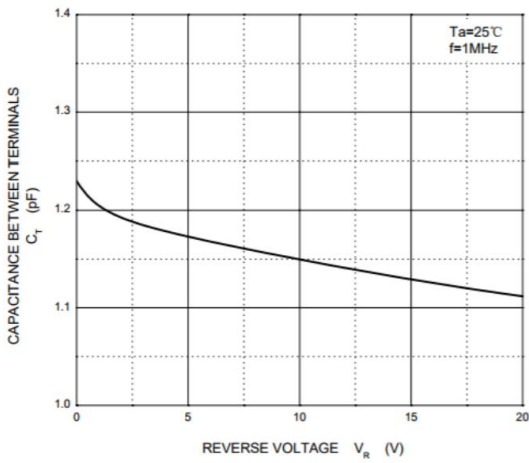
Typical Electrical



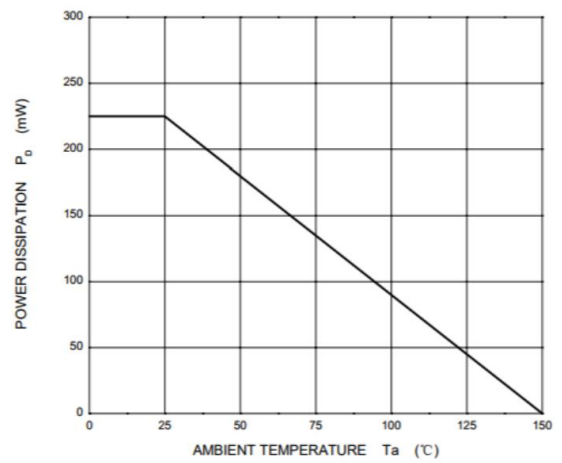
Forward Characteristics



Reverse Characteristics



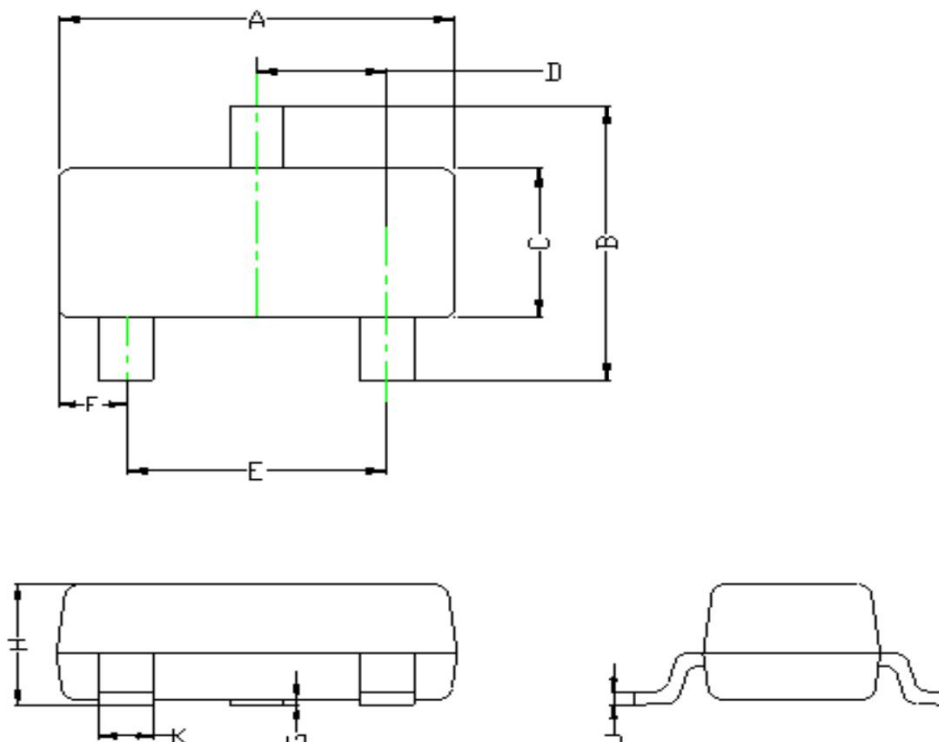
Capacitance Characteristics



Power Derating Curve

SOT-23 Package Information

| Device | Package | Shipping | Tape wide | Emboss pitch | Tape specification | Notes |
|--------|---------|-------------------------------|-----------|--------------|--------------------|-------|
| BAV99 | SOT23 | Tape & Reel 3000pcs/7"Reel | 8mm | 4mm | Conductive | |



| Symbol | Dimensions In Millimeters | | |
|--------|---------------------------|-----|-------|
| | Min | Typ | Max |
| A | 2.800 | - | 3.040 |
| B | 2.100 | - | 2.640 |
| C | 1.200 | - | 1-400 |
| D | 0.890 | - | 1.030 |
| E | 1.780 | - | 2.050 |
| F | 0.450 | - | 0.600 |
| G | 0.013 | - | 0.100 |
| H | 0.900 | - | 1.110 |
| J | 0.090 | - | 0.180 |
| K | 0.370 | - | 0.510 |

1.Unit mm