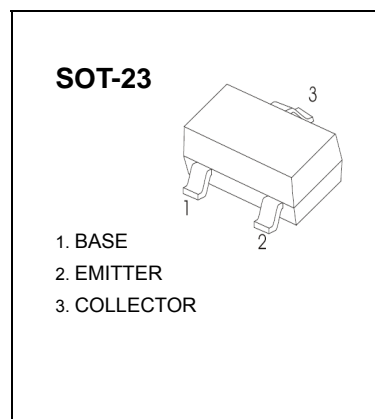


SOT-23 Plastic-Encapsulate Transistors

BAW56/BAV70/BAV99 SWITCHING DIODE

FEATURES

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



| BAW56 | BAV70 | BAV99 |
|-------------------|-------------------|-------------------|
| | | |
| MARKING:A1 | MARKING:A4 | MARKING:A7 |
| | | |
| | | |

Solid dot = Green molding compound device, if none, the normal device

Maximum Ratings @Ta=25°C

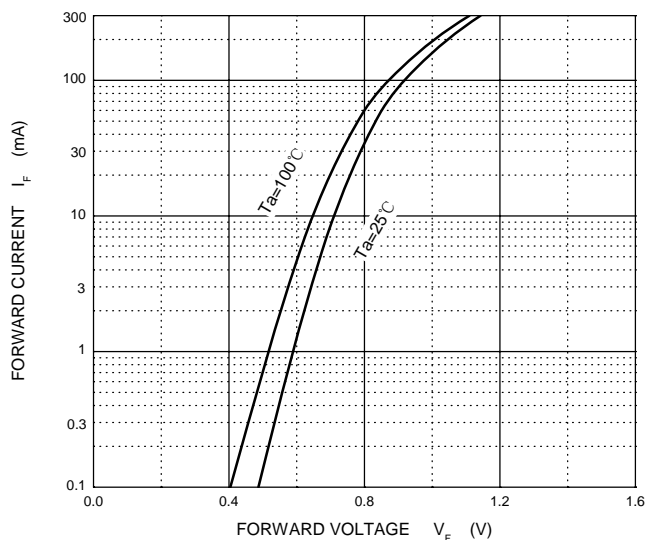
| Parameter | Symbol | Limit | Unit |
|--|-----------------|----------|------|
| Reverse Voltage | V_R | 70 | V |
| Forward Current | I_F | 200 | mA |
| Non-Repetitive Peak Forward Surge Current @t=8.3ms | I_{FSM} | 2.0 | A |
| Power Dissipation | P_D | 225 | mW |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 556 | °C/W |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature range | T_{STG} | -55~+150 | °C |

Electrical Characteristics @Ta=25°C

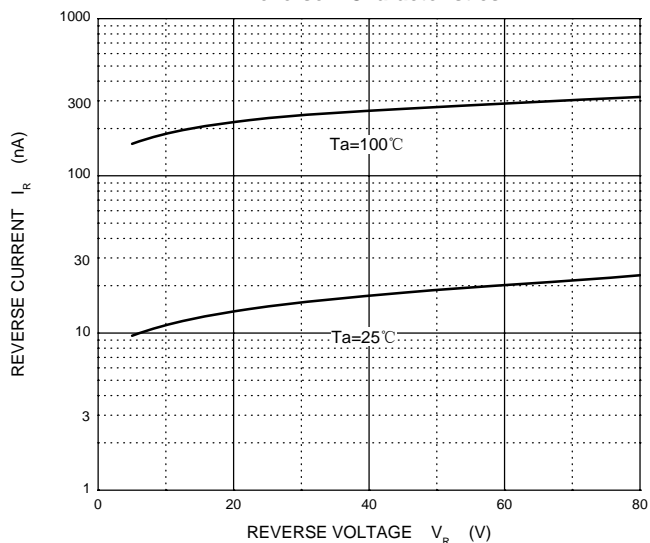
| Parameter | Symbol | Min | Typ | Max | Unit | Conditions |
|-------------------------------|----------|-----|-----|-------|---------|---|
| Reverse breakdown voltage | V_R | 70 | | | V | $I_R=100\mu A$ |
| Forward voltage | V_{F1} | | | 0.715 | V | $I_F=1mA$ |
| | V_{F2} | | | 0.855 | V | $I_F=10mA$ |
| | V_{F3} | | | 1 | V | $I_F=50mA$ |
| | V_{F4} | | | 1.25 | V | $I_F=150mA$ |
| Reverse current | I_R | | | 2.5 | μA | $V_R=70V$ |
| Capacitance between terminals | C_T | | | 1.5 | pF | $V_R=0, f=1MHz$ |
| Reverse recovery time | t_{rr} | | | 6 | ns | $I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ |

Typical Characteristics

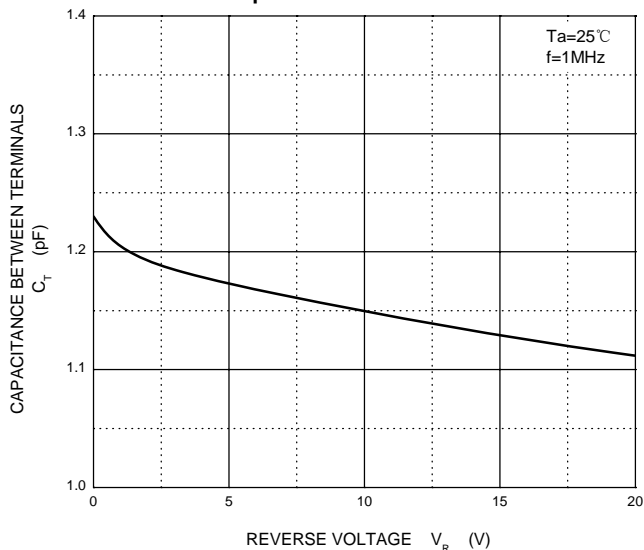
Forward Characteristics



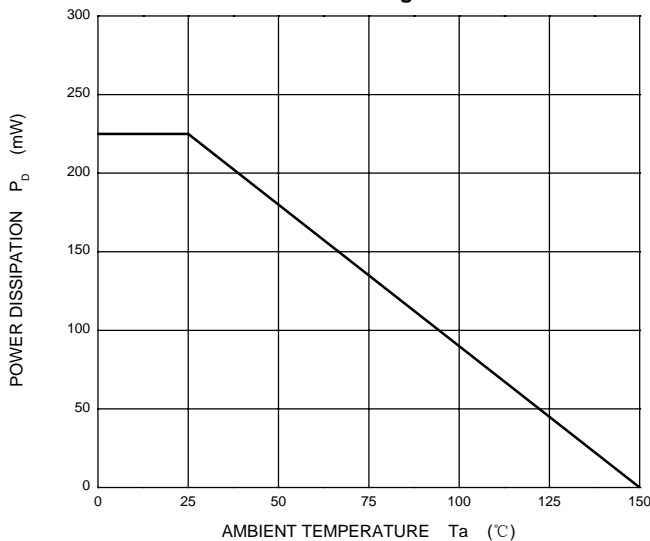
Reverse Characteristics



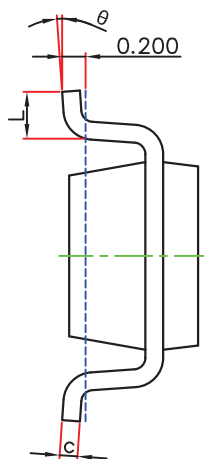
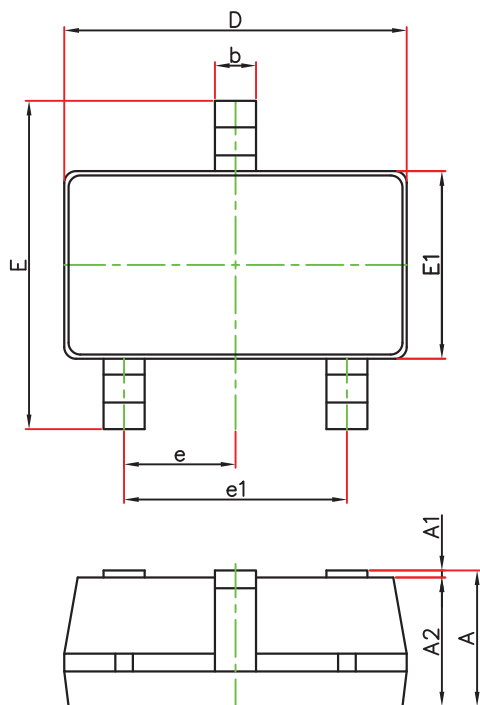
Capacitance Characteristics



Power Derating Curve



SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|----------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 1.050 | 1.250 | 0.041 | 0.049 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 1.050 | 1.150 | 0.041 | 0.045 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.100 | 0.200 | 0.004 | 0.008 |
| D | 2.820 | 3.020 | 0.111 | 0.119 |
| E1 | 1.500 | 1.700 | 0.059 | 0.067 |
| E | 2.650 | 2.950 | 0.104 | 0.116 |
| e | 0.950(BSC) | | 0.037(BSC) | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.300 | 0.600 | 0.012 | 0.024 |
| θ | 0° | 8° | 0° | 8° |