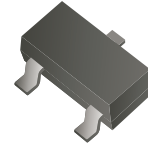


BAW56-HF, BAV70-HF/99-HF

RoHS Device
Halogen Free



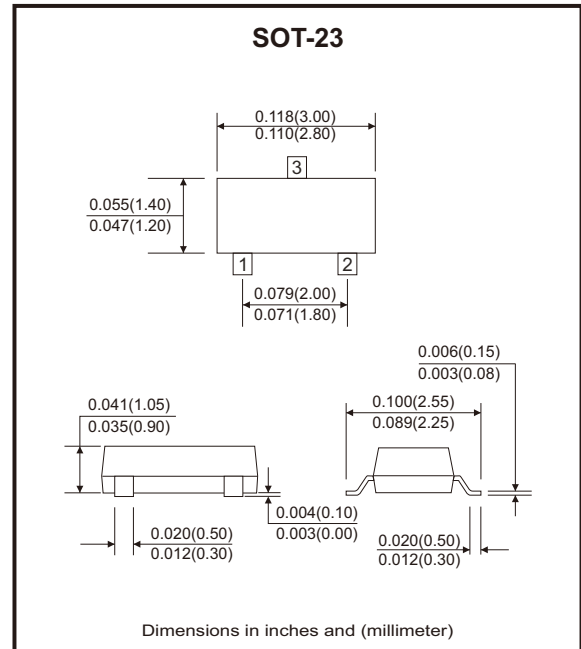
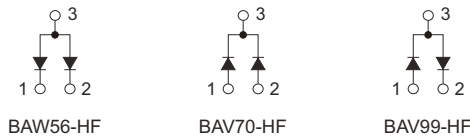
Features

- Fast switching device ($T_{rr} < 6.0\text{nS}$).
- Power dissipation of 225mW.
- High stability and high reliability.
- Low reverse leakage.

Mechanical data

- Case: SOT-23, molded plastic.
- Epoxy UL: 94V-0.
- Mounting position: Any.

Circuit Diagram



Maximum Rating (at $T_a=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------------|-------------|--------------------|
| Reverse voltage | V_R | 70 | V |
| Power dissipation | P_D | 225 | mW |
| Average rectified current | I_O | 200 | mA |
| Non-repetitive peak forward current | I_{FM} | 400 | mA |
| Peak forward surge current @ $t_p=1\text{ms}$, $T_A=25^\circ\text{C}$ | I_{FSM} | 2 | A |
| Typical thermal resistance | $R_{\theta JA}$ | 500 | $^\circ\text{C/W}$ |
| Operating junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -65 to +150 | $^\circ\text{C}$ |

Note: Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (at Ta=25°C unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-------------------------|--|----------|-----|-----|--------------------------------|---------|
| Reverse voltage | $I_B = 100\mu A$ | V_{RB} | 70 | | | V |
| Reverse leakage current | $V_R = 70V$ | I_R | | | 2.5 | μA |
| Forward voltage | $I_F = 1mA$ $I_F = 10mA$ $I_F = 50mA$ $I_F = 150mA$ | V_F | | | 0.715 0.855 1.00 1.25 | V |
| Capacitance | $V_R = 0V, f = 1 MHz$ | C_T | | | 1.5 | pF |
| Reverse recovery time | $I_F = I_R = 10mA, R_L = 100\Omega$ $t_{rr} = 0.1 \times I_R$ | T_{RR} | | | 6 | nS |

Rating and Characteristic Curves (BAW56-HF, BAV70-HF/99-HF)

Fig.1 - Forward Characteristics

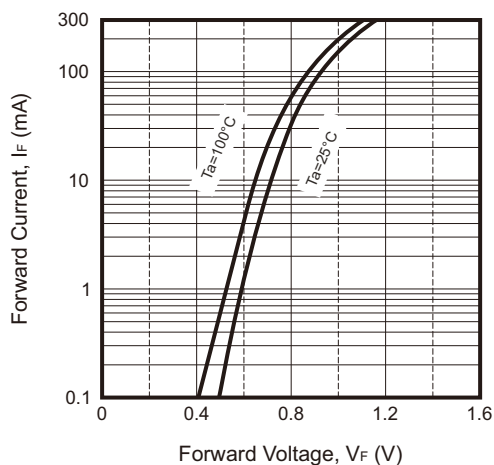


Fig.2 - Reverse Characteristics

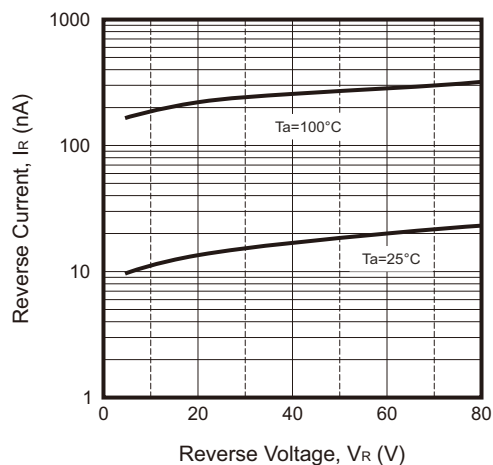


Fig.3 - Capacitance Characteristics

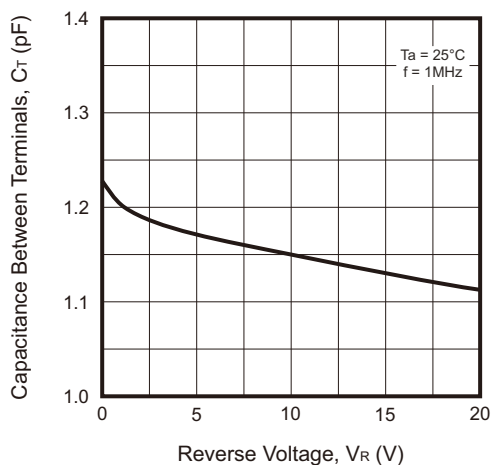
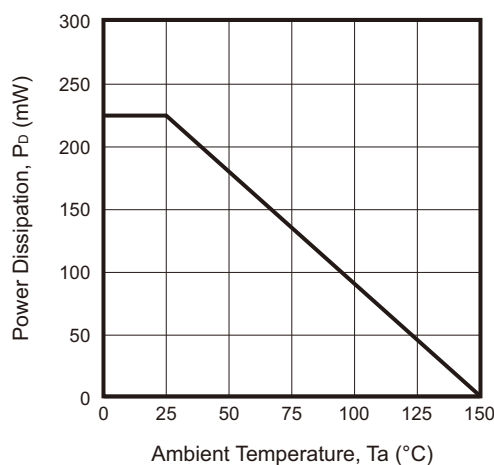
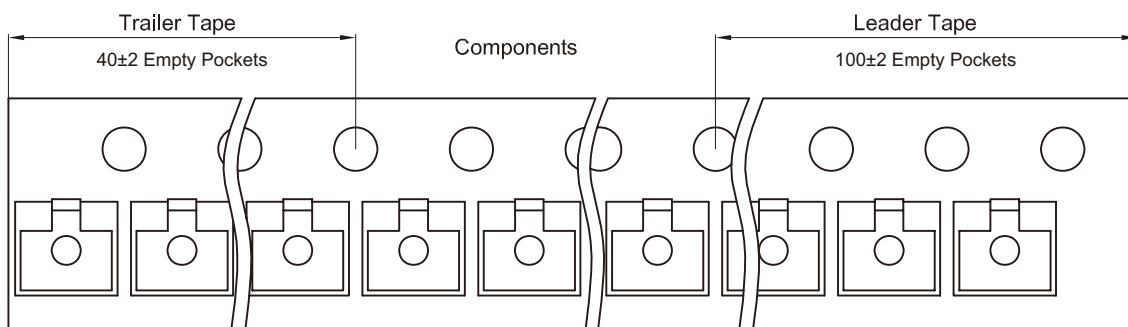
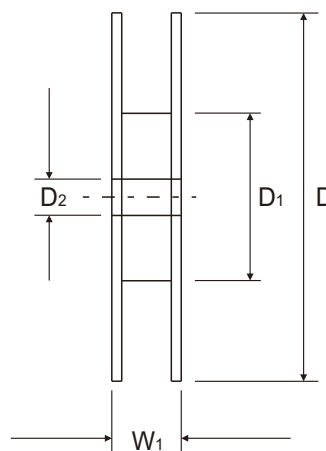
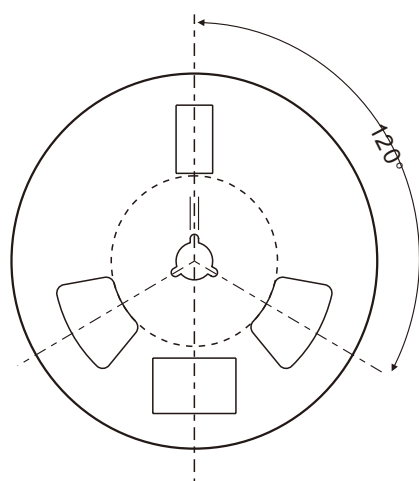
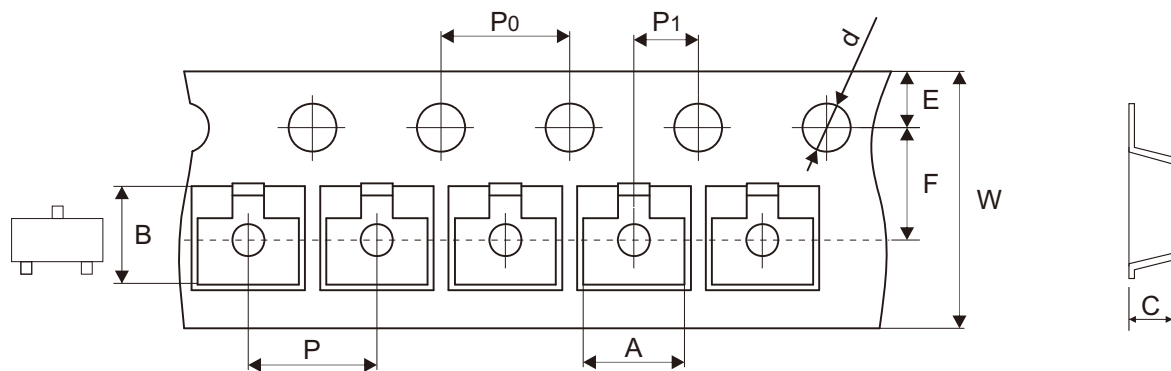


Fig.4 - Power Derating Curve



Reel Taping Specification



| SOT-23 | SYMBOL | A | B | C | d | D | D1 | D2 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 3.15 ± 0.10 | 2.77 ± 0.10 | 1.22 ± 0.10 | 1.50 ± 0.10 | 178.00 ± 2.00 | 54.40 ± 1.00 | 13.00 ± 1.00 |
| | (inch) | 0.124 ± 0.004 | 0.109 ± 0.004 | 0.048 ± 0.004 | 0.059 ± 0.004 | 7.008 ± 0.079 | 2.142 ± 0.039 | 0.512 ± 0.039 |

| SOT-23 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 8.00 ± 0.10 | 12.30 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.315 ± 0.004 | 0.472 ± 0.039 |