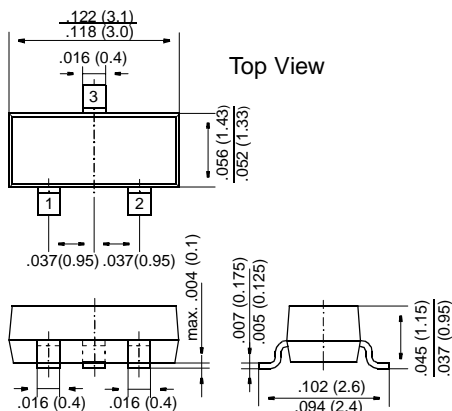


BAW56

Small Signal Diodes

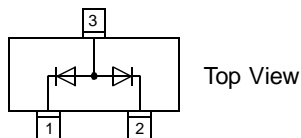
SOT-23



Dimensions in inches and (millimeters)

Marking

JD



FEATURES

- ◆ Silicon Epitaxial Planar Diodes
- ◆ Fast switching dual diode with common anode.
- ◆ This diode is also available in other configurations including: a single diode with type designation BAL99, a dual anode to cathode with type designation BAV99, and a dual common cathode with type designation BAV70.



MECHANICAL DATA

Case: SOT-23 Plastic Package

Weight: approx. 0.008 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings for a single diode at 25 °C ambient temperature unless otherwise specified.

| | Symbol | Value | Unit |
|--|-------------------------------------|-------------------|-------------|
| Reverse Voltage, Peak Reverse Voltage | V_R, V_{RM} | 70 | V |
| Forward Current (continuous) | I_F | 250 | mA |
| Non-Repetitive Peak Forward Current at $t = 1 \mu s$ at $t = 1 ms$ at $t = 1 s$ | I_{FSM} I_{FSM} I_{FSM} | 2 1 0.5 | A A A |
| Power Dissipation at $T_{amb} = 25 \text{ }^\circ\text{C}$ | P_{tot} | 350 ¹⁾ | mW |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_S | -65 to +150 | °C |
| 1) Device on fiberglass substrate, see layout | | | |

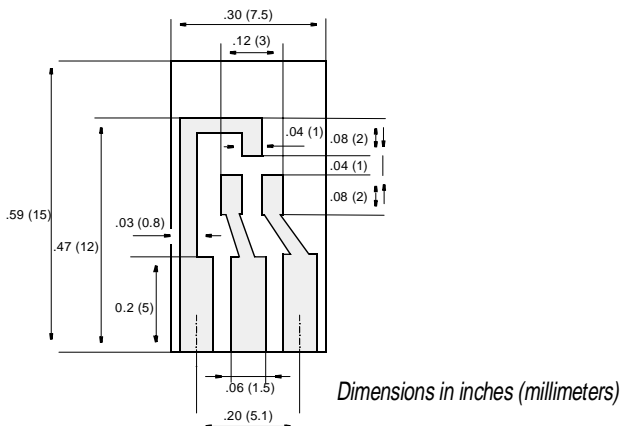
BAW56

ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

| | Symbol | Min. | Typ. | Max. | Unit |
|--|------------|------|------|-------------------|---------|
| Forward Voltage at $I_F = 1$ mA | V_F | – | – | 0.715 | V |
| at $I_F = 10$ mA | V_F | – | – | 0.855 | V |
| at $I_F = 50$ mA | V_F | – | – | 1.0 | V |
| at $I_F = 150$ mA | V_F | – | – | 1.25 | V |
| Leakage Current at $V_R = 70$ V | I_R | – | – | 2.5 | μ A |
| at $V_R = 70$ V, $T_j = 150$ °C | I_R | – | – | 100 | μ A |
| at $V_R = 25$ V, $T_j = 150$ °C | I_R | – | – | 30 | μ A |
| Capacitance at $V_F = V_R = 0$, $f = 1$ MHz | C_{tot} | – | – | 2 | pF |
| Reverse Recovery Time from $I_F = 10$ mA to $I_R = 10$ mA measured at $I_R = 1$ mA, $R_L = 100$ Ω | t_{rr} | – | – | 6 | ns |
| Thermal Resistance Junction to Ambient Air | R_{thJA} | – | – | 430 ¹⁾ | K/W |

¹⁾ Device on fiberglass substrate, see layout



Layout for R_{thJA} test

Thickness: Fiberglass 0.059 in (1.5 mm)

Copper leads 0.012 in (0.3 mm)