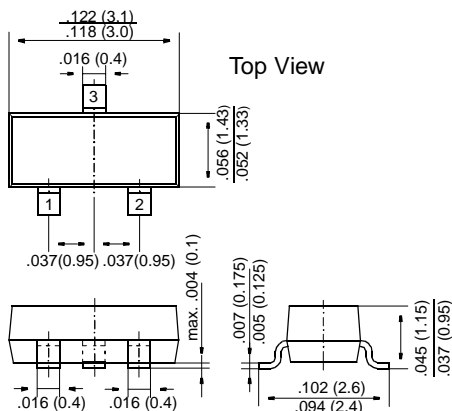


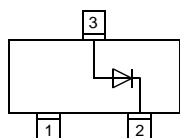
BAL99, BAV99

Small Signal Diodes

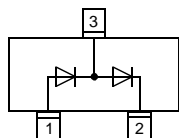
SOT-23



Dimensions in inches and (millimeters)



BAL99
Marking: JF



BAV99
Marking: JE

FEATURES

- ◆ Silicon Epitaxial Planar Diode
- ◆ Fast switching diodes, especially suited for automatic insertion.
- ◆ This diode is also available in other configurations including a dual common cathode with type designation BAV70 and a dual common anode with type designation BAW56.



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 $t = 1 \mu s$ | I_{FSM} | 2 | A |
| at $t = 1 ms$ | I_{FSM} | 1 | A |
| at $t = 1 s$ | I_{FSM} | 0.5 | A |
| Power Dissipation at $T_{amb} = 25 \text{ }^\circ\text{C}$ | P_{tot} | 350 ¹⁾ | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_S | -65 to +150 | $^\circ\text{C}$ |

¹⁾ Device on fiberglass substrate, see layout.

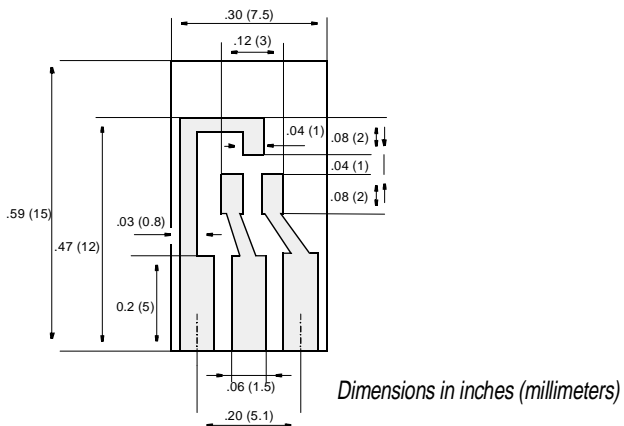
BAL99, BAV99

ELECTRICAL CHARACTERISTICS

Ratings for one diode at 25 °C ambient temperature unless otherwise specified

| | Symbol | Min. | Typ. | Max. | Unit |
|---|-------------------|------|------|-------------------|---------------|
| Forward Voltage at $I_F = 1 \text{ mA}$ | V_F | – | – | 0.715 | V |
| at $I_F = 10 \text{ mA}$ | V_F | – | – | 0.855 | V |
| at $I_F = 50 \text{ mA}$ | V_F | – | – | 1.0 | V |
| at $I_F = 150 \text{ mA}$ | V_F | – | – | 1.25 | V |
| Leakage Current at $V_R = 70 \text{ V}$ | I_R | – | – | 2.5 | μA |
| at $V_R = 70 \text{ V}, T_j = 150 \text{ }^\circ\text{C}$ | I_R | – | – | 100 | μA |
| at $V_R = 25 \text{ V}, T_j = 150 \text{ }^\circ\text{C}$ | I_R | – | – | 30 | μA |
| Capacitance at $V_F = V_R = 0; f = 1 \text{ MHz}$ | C_{tot} | – | – | 1.5 | pF |
| Reverse Recovery Time from $I_F = 10 \text{ mA}$ to $I_R = 10 \text{ mA}$ measured at $I_R = 1 \text{ mA}, R_L = 100 \text{ } \Omega$ | 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)

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.