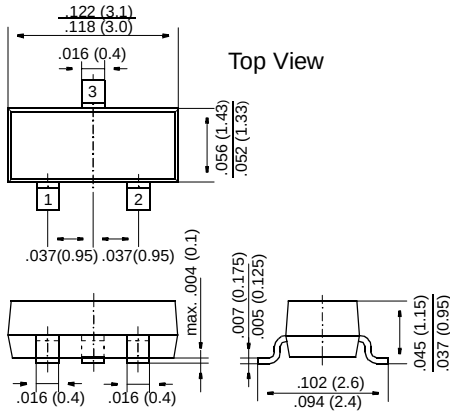


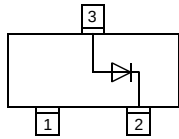
BAL99, BAV99

Small Signal Diodes

SOT-23

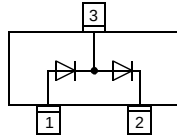


Dimensions in inches and (millimeters)



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 $t = 1 \mu s$ at $t = 1 ms$ at $t = 1 s$	I_{FSM} I_{FSM} I_{FSM}	2 1 0.5	A A A
Power Dissipation at $T_{amb} = 25^\circ C$	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.

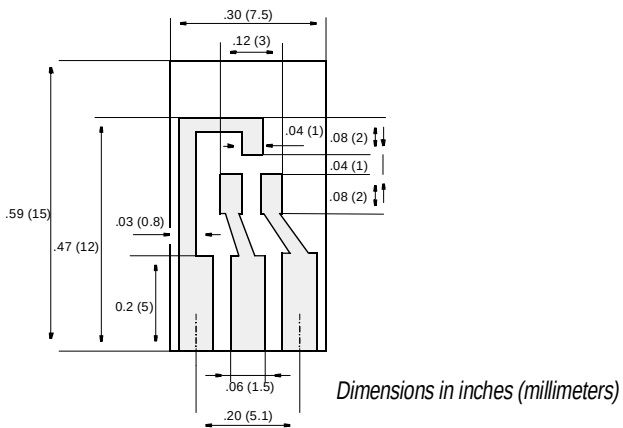
BAL99, BAV99

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)