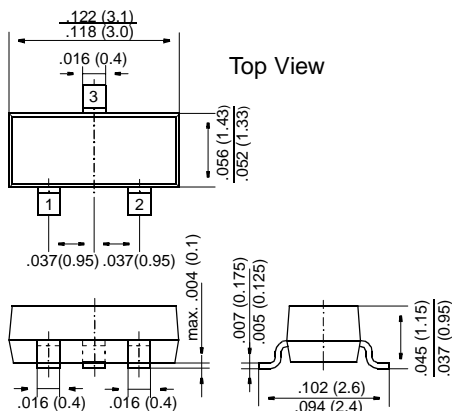


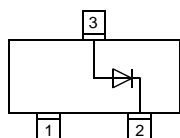
BAL99, BAV99

Small Signal Diodes

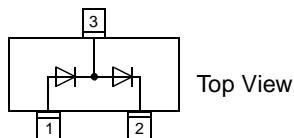
SOT-23



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.

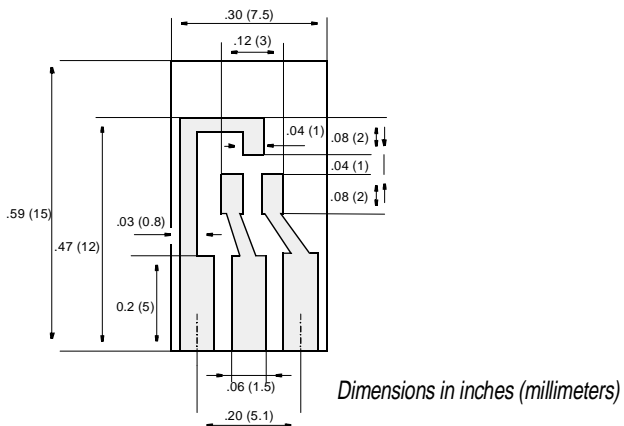
BAL99, BAV99

ELECTRICAL CHARACTERISTICS

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

	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 1$ mA at $I_F = 10$ mA at $I_F = 50$ mA at $I_F = 150$ mA	V_F	–	–	0.715	V
	V_F	–	–	0.855	V
	V_F	–	–	1.0	V
	V_F	–	–	1.25	V
Leakage Current at $V_R = 70$ V at $V_R = 70$ V, $T_j = 150$ °C at $V_R = 25$ V, $T_j = 150$ °C	I_R	–	–	2.5	μ A
	I_R	–	–	100	μ A
	I_R	–	–	30	μ A
Capacitance at $V_F = V_R = 0$; $f = 1$ MHz	C_{tot}	–	–	1.5	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)