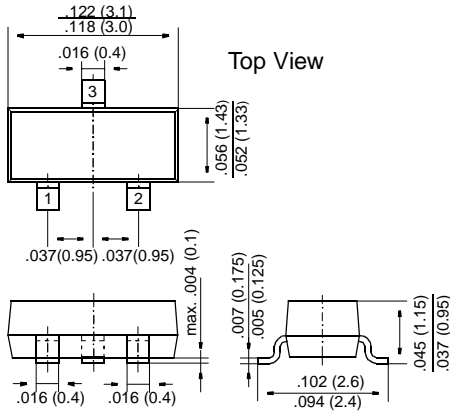


# BAW56

## Small Signal Diodes

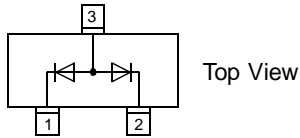
### SOT-23



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.

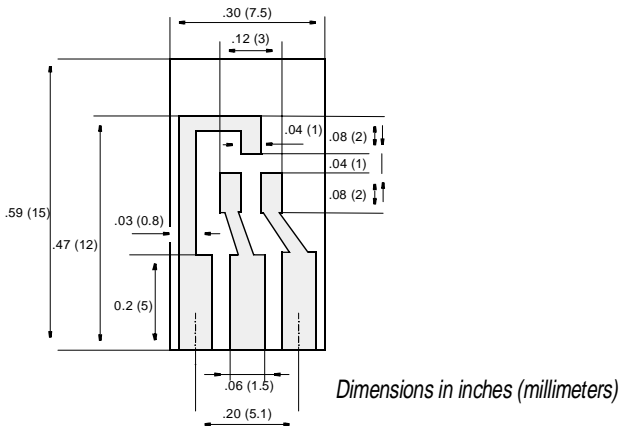
	Symbol	Value	Unit
Reverse Voltage, Peak Reverse Voltage	$V_R, V_{RM}$	70	V
Forward Current (continuous)	$I_F$	250	mA
Non-Repetitive Peak Forward Current at $t = 1 \mu s$ at $t = 1 ms$ at $t = 1 s$	$I_{FSM}$ $I_{FSM}$ $I_{FSM}$	2 1 0.5	A A A
Power Dissipation at $T_{amb} = 25 \text{ }^\circ\text{C}$	$P_{tot}$	350 <sup>1)</sup>	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_S$	-65 to +150	$^\circ\text{C}$
<sup>1)</sup> 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 $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 50 \text{ mA}$ at $I_F = 150 \text{ mA}$	$V_F$ $V_F$ $V_F$ $V_F$	– – – –	– – – –	0.715 0.855 1.0 1.25	V V V V
Leakage Current at $V_R = 70 \text{ V}$ at $V_R = 70 \text{ V}$ , $T_j = 150 \text{ }^\circ\text{C}$ at $V_R = 25 \text{ V}$ , $T_j = 150 \text{ }^\circ\text{C}$	$I_R$ $I_R$ $I_R$	– – –	– – –	2.5 100 30	$\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$
Capacitance at $V_F = V_R = 0$ , $f = 1 \text{ MHz}$	$C_{\text{tot}}$	–	–	2	pF
Reverse Recovery Time from $I_F = 10 \text{ mA}$ to $I_R = 10 \text{ mA}$ measured at $I_R = 1 \text{ mA}$ , $R_L = 100 \text{ } \Omega$	$t_{\text{rr}}$	–	–	6	ns
Thermal Resistance Junction to Ambient Air	$R_{\text{thJA}}$	–	–	430 <sup>1)</sup>	K/W
1) Device on fiberglass substrate, see layout					



### Layout for $R_{\text{thJA}}$ test

Thickness: Fiberglass 0.059 in (1.5 mm)

Copper leads 0.012 in (0.3 mm)