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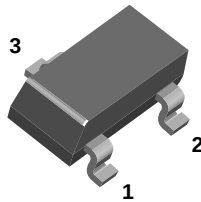


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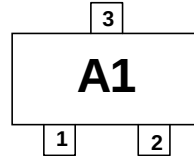
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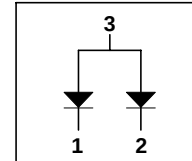
# BAW56



SOT-23



Connection Diagram



## Small Signal Diode

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

| Symbol      | Parameter                                                                                              | Value       | Units            |
|-------------|--------------------------------------------------------------------------------------------------------|-------------|------------------|
| $V_{RRM}$   | Maximum Repetitive Reverse Voltage                                                                     | 85          | V                |
| $I_{F(AV)}$ | Average Rectified Forward Current                                                                      | 200         | mA               |
| $I_{FSM}$   | Non-repetitive Peak Forward Surge Current<br>Pulse Width = 1.0 second<br>Pulse Width = 1.0 microsecond | 1.0         | A                |
|             |                                                                                                        | 2.0         | A                |
| $T_{stg}$   | Storage Temperature Range                                                                              | -55 to +150 | $^\circ\text{C}$ |
| $T_J$       | Operating Junction Temperature                                                                         | 150         | $^\circ\text{C}$ |

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

#### NOTES:

1) These ratings are based on a maximum junction temperature of 150 degrees C.

2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

## Thermal Characteristics

| Symbol          | Parameter                               | Value | Units                     |
|-----------------|-----------------------------------------|-------|---------------------------|
| $P_D$           | Power Dissipation                       | 350   | mW                        |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 357   | $^\circ\text{C}/\text{W}$ |

## Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

| Symbol   | Parameter             | Test Conditions                                                        | Min | Max  | Units         |
|----------|-----------------------|------------------------------------------------------------------------|-----|------|---------------|
| $V_R$    | Breakdown Voltage     | $I_R = 5.0 \mu\text{A}$                                                | 85  |      | V             |
| $V_F$    | Forward Voltage       | $I_F = 1.0 \text{ mA}$                                                 |     | 715  | mV            |
|          |                       | $I_F = 10 \text{ mA}$                                                  |     | 855  | mV            |
|          |                       | $I_F = 50 \text{ mA}$                                                  |     | 1.0  | V             |
|          |                       | $I_F = 150 \text{ mA}$                                                 |     | 1.25 | V             |
| $I_R$    | Reverse Current       | $V_R = 70 \text{ V}$                                                   |     | 2.5  | $\mu\text{A}$ |
|          |                       | $V_R = 25 \text{ V}, T_A = 150^\circ\text{C}$                          |     | 30   | $\mu\text{A}$ |
|          |                       | $V_R = 70 \text{ V}, T_A = 150^\circ\text{C}$                          |     | 50   | $\mu\text{A}$ |
| $C_T$    | Total Capacitance     | $V_R = 0, f = 1.0 \text{ MHz}$                                         |     | 2.0  | pF            |
| $t_{rr}$ | Reverse Recovery Time | $I_F = I_R = 10 \text{ mA}, I_{RR} = 1.0 \text{ mA}, R_L = 100 \Omega$ |     | 6.0  | ns            |

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