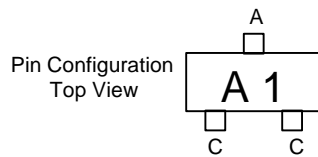


# BAW56

## 300mW 70Volt Dual Switching Diode

### Features

- Low Current Leakage
- Low Cost
- Small Outline Surface Mount Package



### Maximum Ratings

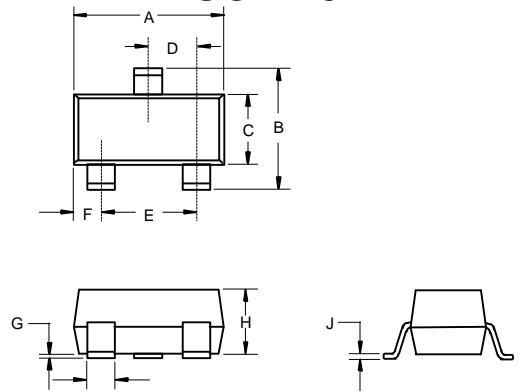
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 417 °C/W Junction To Ambient

### Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |           |                           |  |
|---|-----------|---------------------------|--|
| Reverse Voltage   | $V_R$     | 70V                       |  |
| Peak Forward Current                                    | $I_F$     | 200mA                     |  |
| Power Dissipation                                       | $P_{TOT}$ | 300mW                     |  |
| Peak Forward Surge Current                              | $I_{FSM}$ | 500mA                     | 8.3ms, half sine   |
| Maximum Instantaneous Forward Voltage                   | $V_F$     | 855mV                     | $I_{FM} = 10mA$ ;<br>$T_J = 25^\circ C^*$                    |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$     | 2.5 $\mu A$<br>50 $\mu A$ | $V_R = 70Volts$<br>$T_J = 25^\circ C$<br>$T_J = 150^\circ C$ |
| Typical Junction Capacitance                            | $C_J$     | 2pF                       | Measured at 1.0MHz, $V_R = 0V$                               |
| Reverse Recovery Time                                   | $T_{rr}$  | 6nS                       | $I_F = 10mA$<br>$V_R = 0V$<br>$R_L = 500\Omega$              |

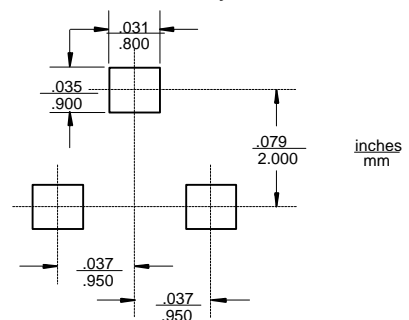
\*Pulse test: Pulse width 300  $\mu sec$ , Duty cycle 2%

### SOT-23



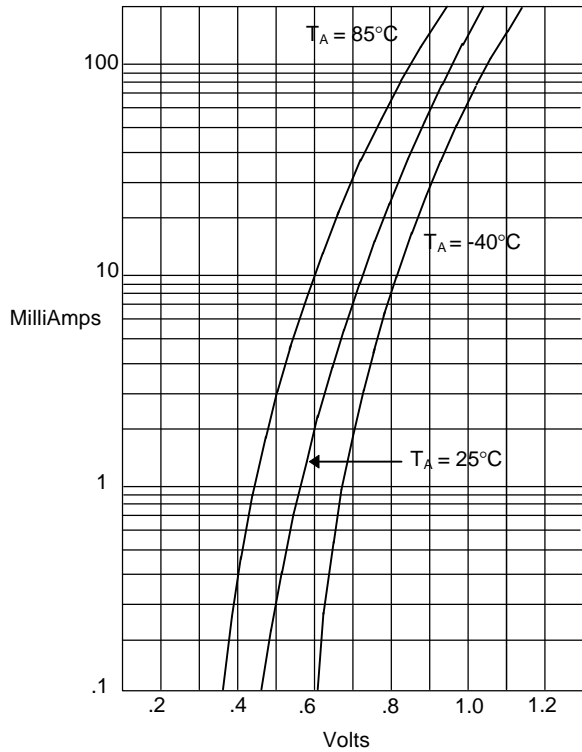
| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | .110   | .120  | 2.80 | 3.04 |      |
| B   | .083   | .098  | 2.10 | 2.64 |      |
| C   | .047   | .055  | 1.20 | 1.40 |      |
| D   | .035   | .041  | .89  | 1.03 |      |
| E   | .070   | .081  | 1.78 | 2.05 |      |
| F   | .018   | .024  | .45  | .60  |      |
| G   | .0005  | .0039 | .013 | .100 |      |
| H   | .035   | .044  | .89  | 1.12 |      |
| J   | .003   | .007  | .085 | .180 |      |
| K   | .015   | .020  | .37  | .51  |      |

### Suggested Solder Pad Layout



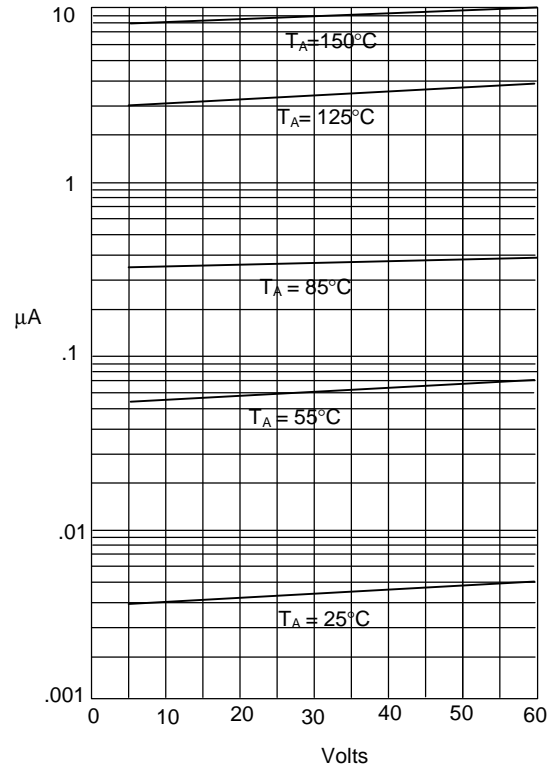
# BAW56

Figure 1  
Typical Forward Characteristics



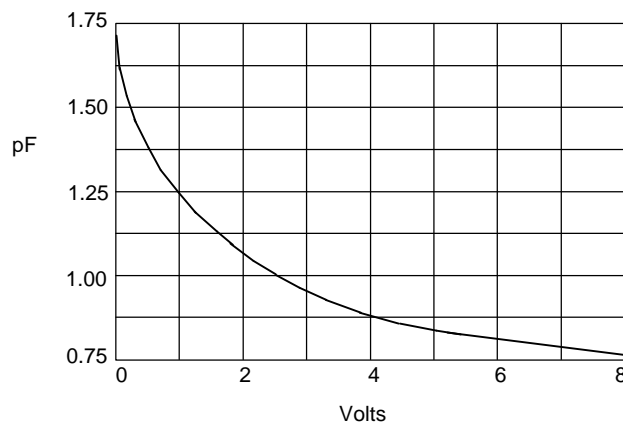
Instantaneous Forward Current - Amperes *versus*  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



Instantaneous Reverse Current - MicroAmperes *versus*  
Reverse Voltage - Volts

Figure 3  
Diode Capacitance



Diode Capacitance - pF *versus*  
Reverse Voltage - Volts