

# BAW56

## SWITCHING DIODE

**VOLTAGE** 75 Volt **POWER** 350 mWatt

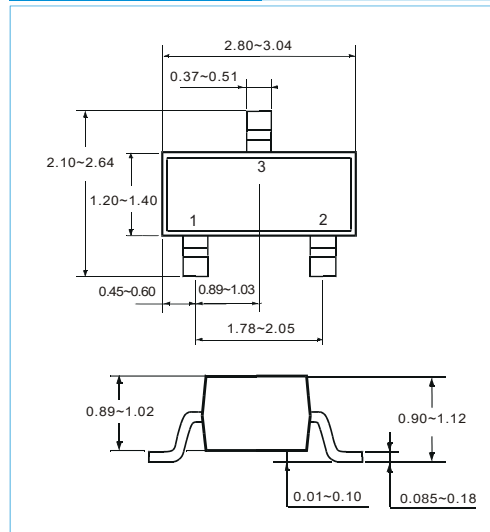
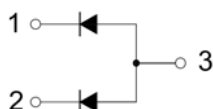
**SOT-23** Unit:mm

### FEATURES

- Fast Switching Speed
- EFor General Purpose Switching Applications
- High Conductance
- Lead free in compliance with EU RoHS
- Marking code: A1

### MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



### MAXIMUM RATINGS ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter                                                 | Symbol          | Limit    | Unit                        |
|-----------------------------------------------------------|-----------------|----------|-----------------------------|
| Reverse Voltage                                           | $V_R$           | 75       | V                           |
| Forward Current                                           | $I_F$           | 250      | mA                          |
| Non-Repetitive Peak Forward Surge Current @ $t=1\text{s}$ | $I_{FSM}$       | 1.0      | A                           |
| Power Dissipation                                         | $P_D$           | 350      | mW                          |
| Thermal Resistance Junction to Ambient                    | $R_{\theta JA}$ | 357      | $^{\circ}\text{C}/\text{W}$ |
| Junction Temperature                                      | $T_J$           | 150      | $^{\circ}\text{C}$          |
| Storage Temperature range                                 | $T_{STG}$       | -55~+150 | $^{\circ}\text{C}$          |

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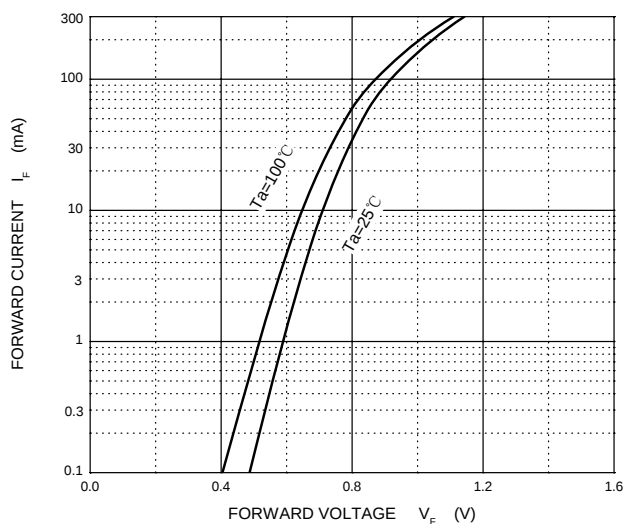
### ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter                     | Symbol   | Min | Typ | Max   | Unit          | Conditions                                                                   |
|-------------------------------|----------|-----|-----|-------|---------------|------------------------------------------------------------------------------|
| Reverse breakdown voltage     | $V_R$    | 75  |     |       | V             | $I_R=100\mu\text{A}$                                                         |
| Forward voltage               | $V_{F1}$ |     |     | 0.715 | V             | $I_F=1\text{mA}$                                                             |
|                               | $V_{F2}$ |     |     | 0.855 | V             | $I_F=10\text{mA}$                                                            |
|                               | $V_{F3}$ |     |     | 1     | V             | $I_F=50\text{mA}$                                                            |
|                               | $V_{F4}$ |     |     | 1.25  | V             | $I_F=150\text{mA}$                                                           |
| Reverse current               | $I_R$    |     |     | 2.5   | $\mu\text{A}$ | $V_R=75\text{V}$                                                             |
| Capacitance between terminals | $C_T$    |     |     | 2.0   | pF            | $V_R=0, f=1\text{MHz}$                                                       |
| Reverse recovery time         | $t_{rr}$ |     |     | 4     | ns            | $I_F = I_R = 10\text{mA}$ ,<br>$I_{rr} = 0.1 \times I_R$ , $R_L = 100\Omega$ |

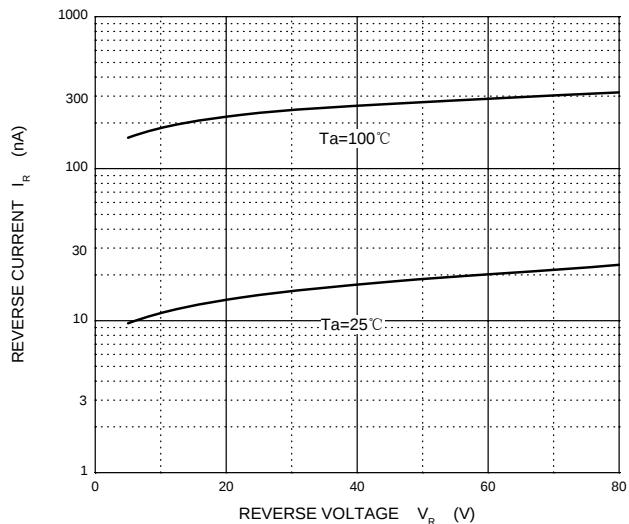
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## Typical Characteristics

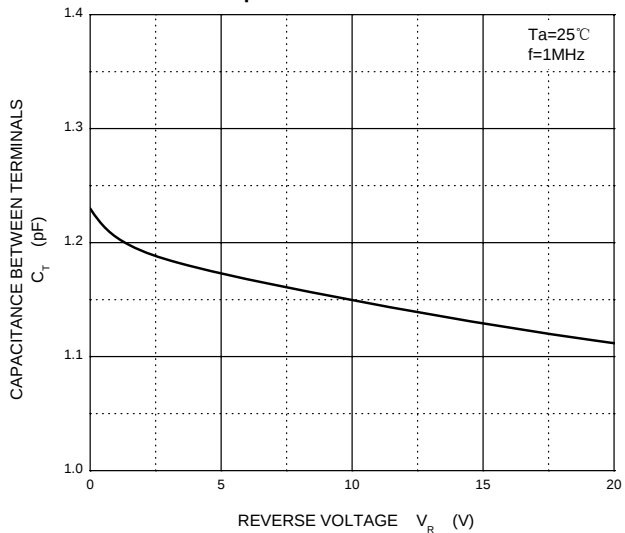
Forward Characteristics



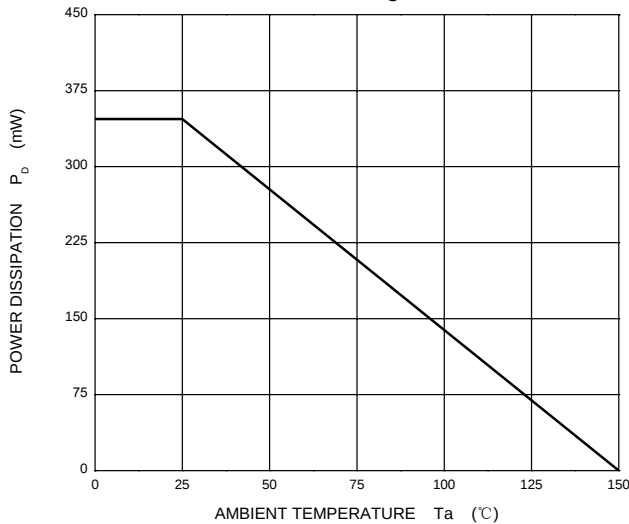
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve

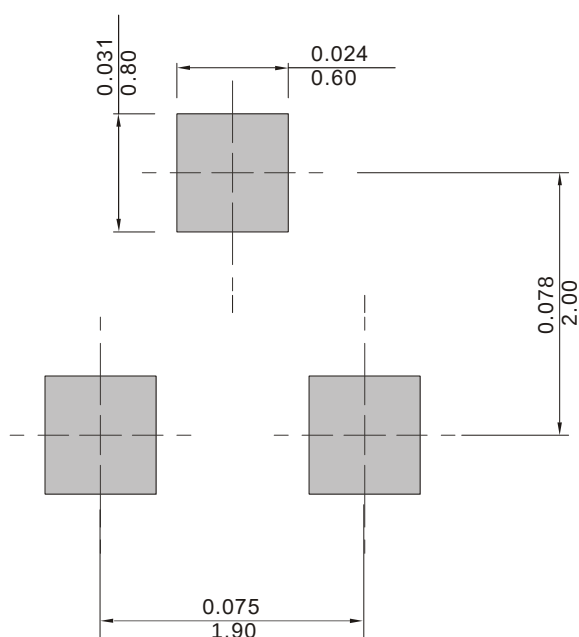


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## MOUNTING PAD LAYOUT

SOT-23

Unit:Inch(mm)



## ORDER INFORMATION

- Packing information

| Part Number | Case   | Reel Size | QUANTITY |
|-------------|--------|-----------|----------|
| BAW56       | SOT-23 | 7 Inch    | 3000     |