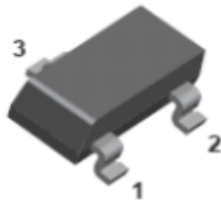
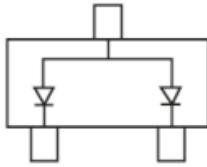


## Dual Switching Diode



**SOT-23**

### Features

- Moisture sensitivity level 1
- Reverse voltage: 100V
- Average forward current : 200mA

### Application

- Signal switching
- High frequency rectifier

### Mechanical data

- **Package:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| Parameter  | Symbol           | Unit | Value       |
|--|------------------|------|-------------|
| Device marking code  |                  |      | A1          |
| Repetitive peak reverse voltage                                    | V <sub>RRM</sub> | V    | 100         |
| Forward current, per leg   | I <sub>F</sub>   | mA   | 200         |
| Non-repetitive Surge peak forward current @ t=8.3ms half-sine wave | I <sub>FSM</sub> | A    | 2           |
| Non-repetitive Surge peak forward current @ t=1ms square wave      |                  |      | 1.5         |
| Power dissipation  | P <sub>D</sub>   | mW   | 350         |
| Junction temperature   | T <sub>J</sub>   | °C   | -55 to +150 |
| Storage temperature  | T <sub>STG</sub> | °C   | -55 to +150 |



## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| Parameter               | Symbol          | Unit | Conditions   | Min | Typ | Max   |
|-------------------------|-----------------|------|--|-----|-----|-------|
| Reverse voltage         | V <sub>R</sub>  | V    | I <sub>R</sub> =100uA  | 100 |     |       |
| Forward voltage         | V <sub>F1</sub> | V    | I <sub>F</sub> =10mA   |     |     | 0.855 |
|                         | V <sub>F2</sub> | V    | I <sub>F</sub> =150mA  |     |     | 1.25  |
| Reverse leakage current | I <sub>R</sub>  | uA   | V <sub>R</sub> =75V  |     |     | 2.5   |
| Junction capacitance    | C <sub>j</sub>  | pF   | V <sub>R</sub> =0V,f=1MHz  |     |     | 4     |
| Reverse recovery time   | T <sub>rr</sub> | ns   | I <sub>F</sub> =10mA,<br>V <sub>R</sub> =6V,I <sub>rr</sub> =0.1mA, R <sub>L</sub> =100Ω |     |     | 4     |

## ■ Thermal Characteristics

| Parameter                               | Symbol                           | Unit | Value |
|---|----------------------------------|------|-------|
| Thermal resistance, junction-to-ambient | R <sub>θJ-A</sub> <sup>(1)</sup> | °C/W | 357   |
| Thermal resistance, junction-to-case    | R <sub>θJ-C</sub> <sup>(1)</sup> | °C/W | 286   |

### Note:

(1) Device mounted on PCB, single-sided copper, with standard footprint



■ Characteristics

Fig 1:  $P_D$ - $T_a$  Curve

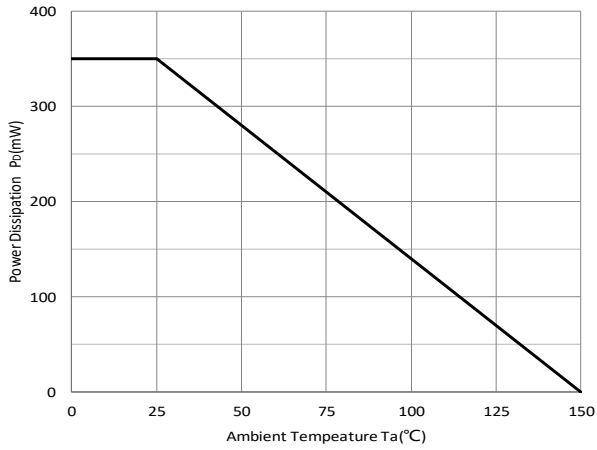


Fig 2: Capacitance Capability

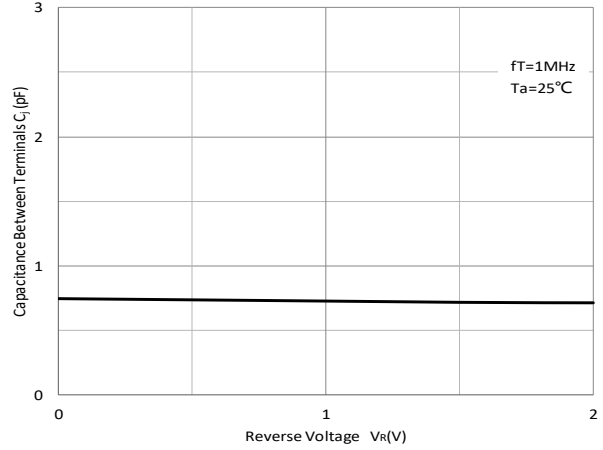


Fig 3: Typical Forward Characteristics

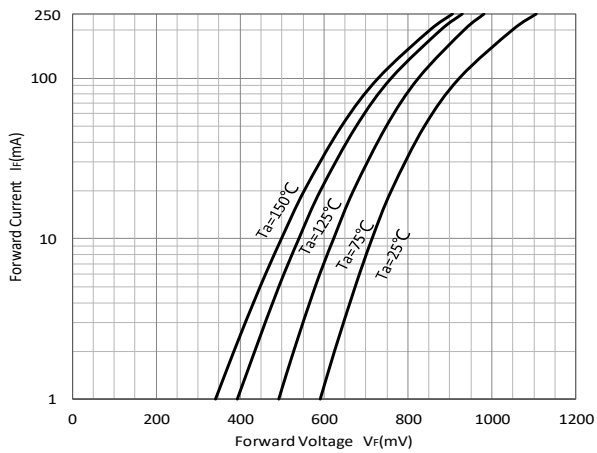
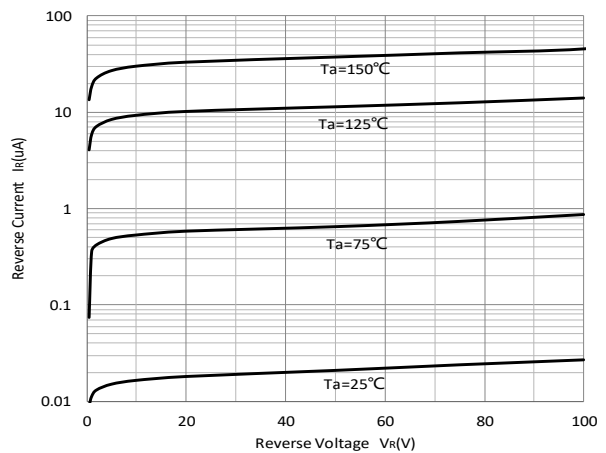


Fig 4: Typical Reverse Characteristics

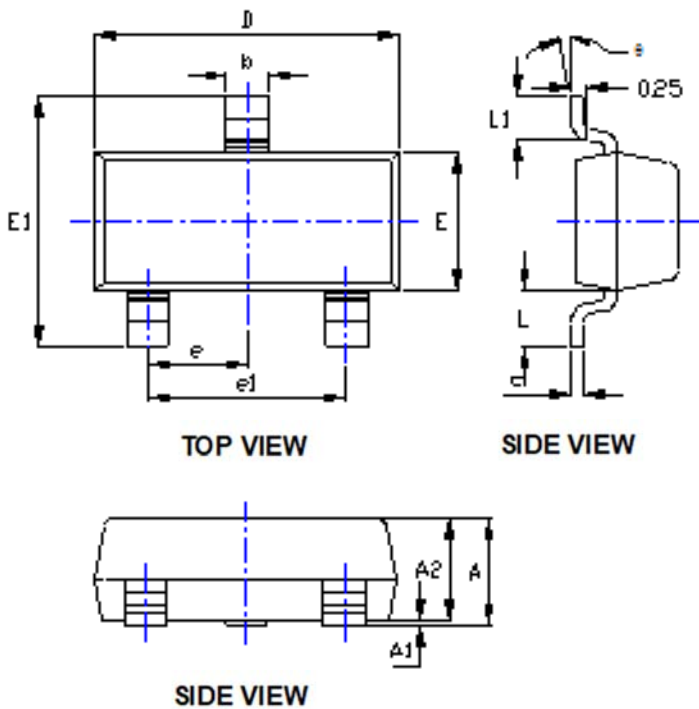




■ Ordering Information

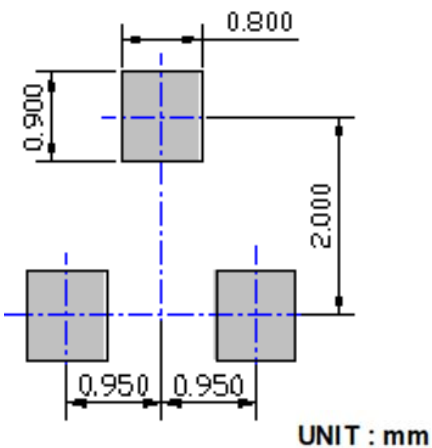
| Preferred P/N | Packing code | Unit weight(g)    | Minimum package(pcs) | Inner box quantity(pcs) | Outer carton quantity (pcs) | Delivery mode |
|---------------|--------------|-------------------|----------------------|-------------------------|-----------------------------|---------------|
| BAW56         | F2           | Approximate 0.008 | 3000                 | 30000                   | 120000                      | 7" reel       |
| BAW56         | F4           | Approximate 0.008 | 10000                | /                       | 210000                      | 13" reel      |

■ Outline Dimensions



| SYMBOL | DIMENSIONS |       |            |       |
|--------|------------|-------|------------|-------|
|        | INCHES     |       | Millimeter |       |
|        | MIN.       | MAX.  | MIN.       | MAX.  |
| A      | 0.035      | 0.045 | 0.900      | 1.150 |
| A1     | 0.000      | 0.004 | 0.000      | 0.100 |
| A2     | 0.035      | 0.041 | 0.900      | 1.050 |
| b      | 0.012      | 0.020 | 0.300      | 0.500 |
| c      | 0.004      | 0.008 | 0.100      | 0.200 |
| D      | 0.110      | 0.118 | 2.800      | 3.000 |
| E      | 0.047      | 0.055 | 1.200      | 1.400 |
| E1     | 0.089      | 0.100 | 2.250      | 2.550 |
| e      | 0.037TYP   |       | 0.950TYP   |       |
| e1     | 0.071      | 0.079 | 1.800      | 2.000 |
| L      | 0.022REF   |       | 0.550REF   |       |
| L1     | 0.012      | 0.020 | 0.300      | 0.500 |
| θ      | 0°         | 8°    | 0°         | 8°    |

■ Suggested Pad Layout





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