



### FEATURES

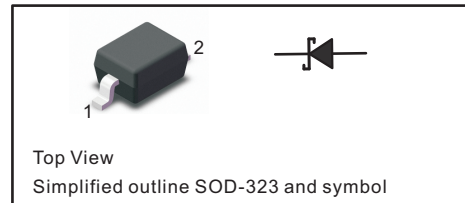
- For surface mounted applications
- Glass Passivated Chip Junction
- Fast reverse recovery time
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



### Absolute Maximum Ratings at 25 °C

| Parameter  | Symbols        | BAV19WS     | BAV20WS | BAV21WS | Units |
|--|----------------|-------------|---------|---------|-------|
| Maximum Repetitive Peak Reverse Voltage                                | $V_{RRM}$      | 120         | 200     | 250     | V     |
| Maximum RMS voltage  | $V_{RMS}$      | 100         | 150     | 200     | V     |
| Continuous Forward Current   | $I_F$          | 250         |         |         | mA    |
| Repetitive Peak Forward Current  | $I_{FRM}$      | 625         |         |         | mA    |
| Non-repetitive Peak Forward Surge Current<br>at 1s<br>at 1ms<br>at 1us | $I_{FSM}$      | 1<br>3<br>9 |         |         | A     |
| Total Power Dissipation  | $P_{tot}$      | 500         |         |         | mW    |
| Operating and Storage Temperature Range                                | $T_j, T_{stg}$ | -55 ~ +150  |         |         | °C    |

### Characteristics at $T_a = 25\text{ °C}$

| Parameter   | Symbols     | BAV19WS      | BAV20WS | BAV21WS | Units   |
|---|-------------|--------------|---------|---------|---------|
| Reverse Breakdown Voltage at $I_R = 100\mu A$   | $V_{(BR)R}$ | 120          | 200     | 250     | V       |
| Maximum Forward Voltage<br>at 100 mA<br>at 200 mA   | $V_F$       | 1.00<br>1.25 |         |         | V       |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage<br>$T_a = 25\text{ °C}$<br>$T_a = 150\text{ °C}$ | $I_R$       | 0.1<br>100   |         |         | $\mu A$ |
| Typical Junction Capacitance<br>at $V_R = 4V, f = 1MHz$   | $C_j$       | 5            |         |         | pF      |
| Maximum Reverse Recovery Time   | $t_{rr}$    | 50           |         |         | ns      |



Fig.1 Forward Current Derating Curve

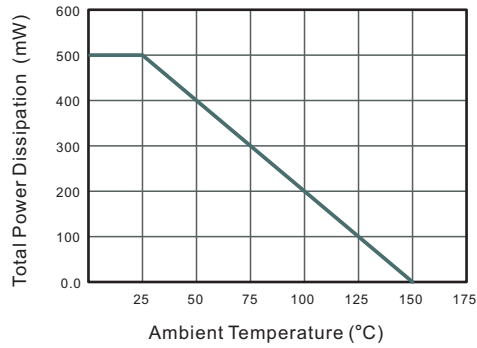


Fig.2 Typical Reverse Characteristics

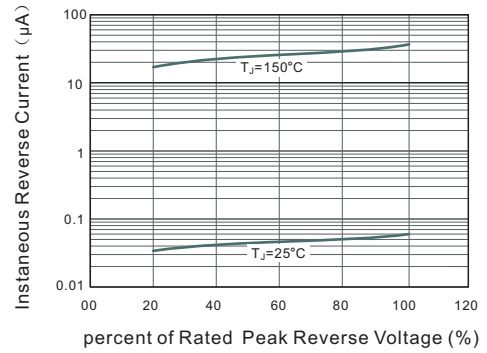


Fig.3 Typical Instantaneous Forward Characteristics

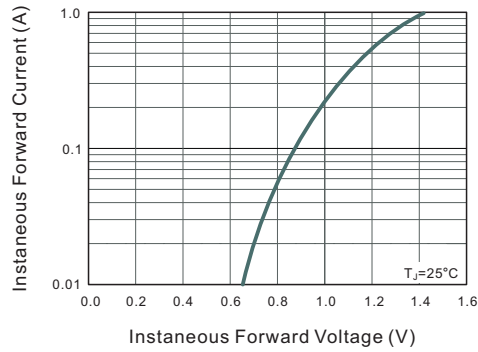
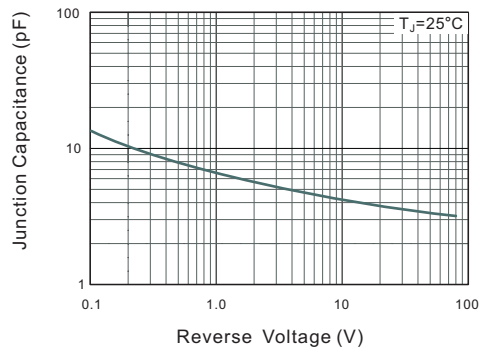


Fig.4 Typical Junction Capacitance

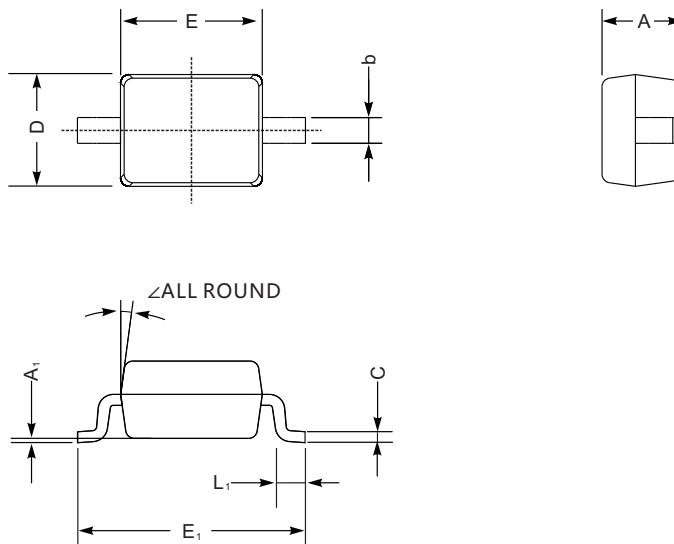




**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

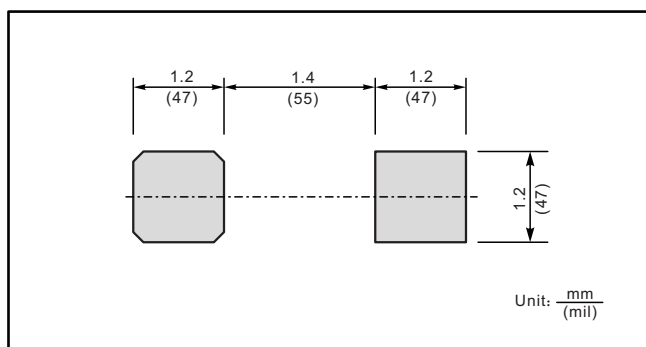
SOD-323



SOD-323 mechanical data

| UNIT |     | A   | C    | D   | E   | E <sub>1</sub> | b    | L <sub>1</sub> | A <sub>1</sub> | $\angle$ |
|------|-----|-----|------|-----|-----|----------------|------|----------------|----------------|----------|
| mm   | max | 1.1 | 0.15 | 1.4 | 1.8 | 2.75           | 0.4  | 0.45           | 0.2            | 9°       |
|      | min | 0.8 | 0.08 | 1.2 | 1.4 | 2.55           | 0.25 | 0.2            | —              |          |
| mil  | max | 43  | 5.9  | 55  | 70  | 108            | 16   | 16             | 8              |          |
|      | min | 32  | 3.1  | 47  | 63  | 100            | 9.8  | 7.9            | —              |          |

**The recommended mounting pad size**



**Marking**

| Type number | Marking code |
|-------------|--------------|
| BAV19WS     | A8           |
| BAV20WS     | T2           |
| BAV21WS     | T3           |

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