## FEATURES

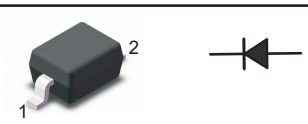
- For surface mounted applications
- Glass Passivated Chip Junction
- Fast reverse recovery time
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

## MECHANICAL DATA

- Case: SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 5.48mg / 0.00019oz

## PINNING

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




Top View
Simplified outline SOD-323 and symbol

### 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-reptitive Peak Forward Surge Current at 1s<br>at 1ms<br>at 1 us | $I_{FSM}$ | 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 °C

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

( 1 ) Measured with IF = 0.5 A, IR = 1 A, Irr = 0.25 A

**Fig.1 Power Derating Curve**

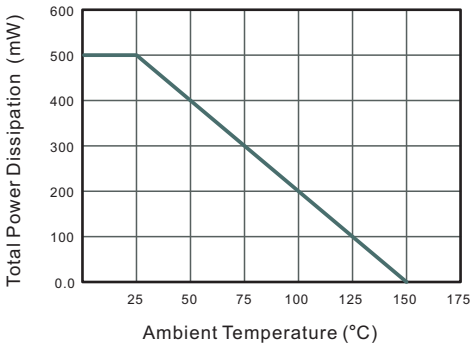



**Fig.2 Typical Reverse Characteristics**

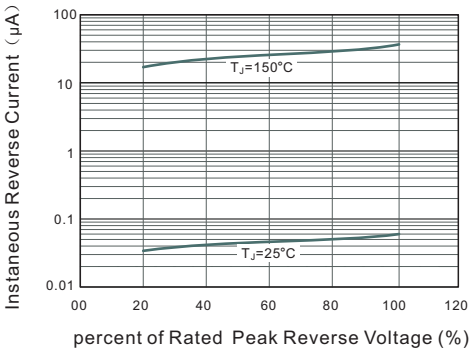



**Fig.3 Typical Instaneous Forward Characteristics**

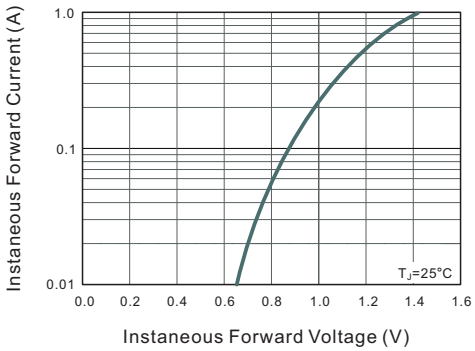
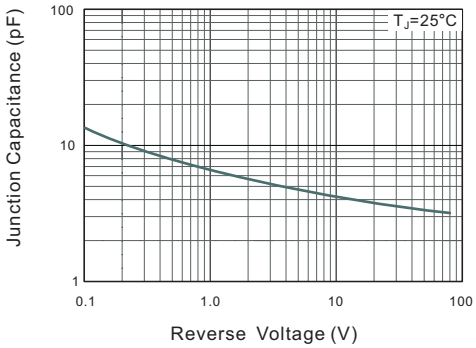


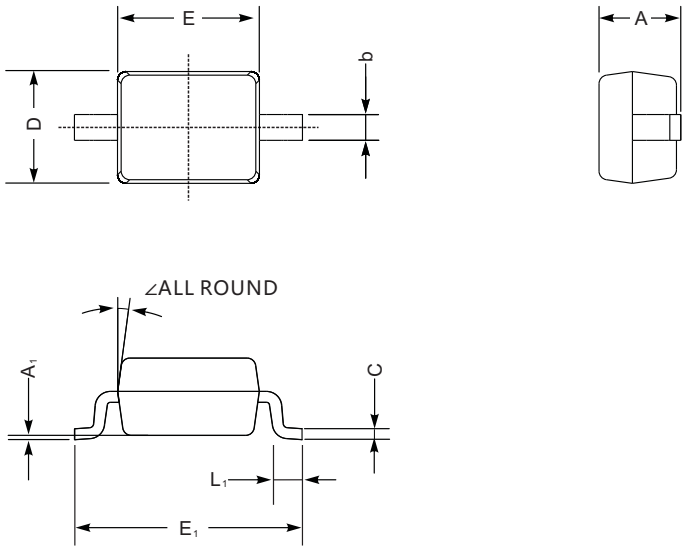

**Fig.4 Typical Junction Capacitance**



## PACKAGE OUTLINE

**Plastic surface mounted package; 2 leads**

**SOD-323**




SOD-323 mechanical data

| UNIT | | A | C | D | E | $E_1$ | b | $L_1$ | $A_1$ | ∠ |
|---|---|---|---|---|---|---|---|---|---|---|
| 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**