

### FEATURES

- Low Reverse Current
- Surface Mount Package Ideally Suited for Automatic Insertion
- Fast Switching Speed
- For General Purpose Switching Applications

SOD-323



| MARKING |         |         |
|---------|---------|---------|
| BAV19WS | BAV20WS | BAV21WS |
| A8      | T2      | T3      |

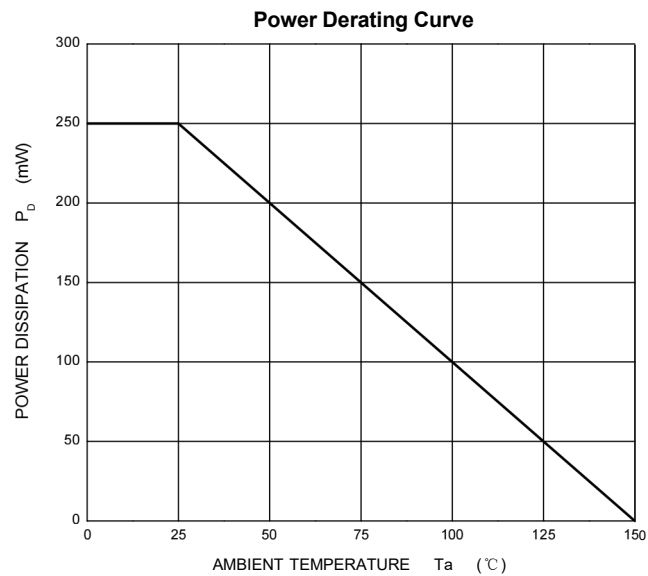
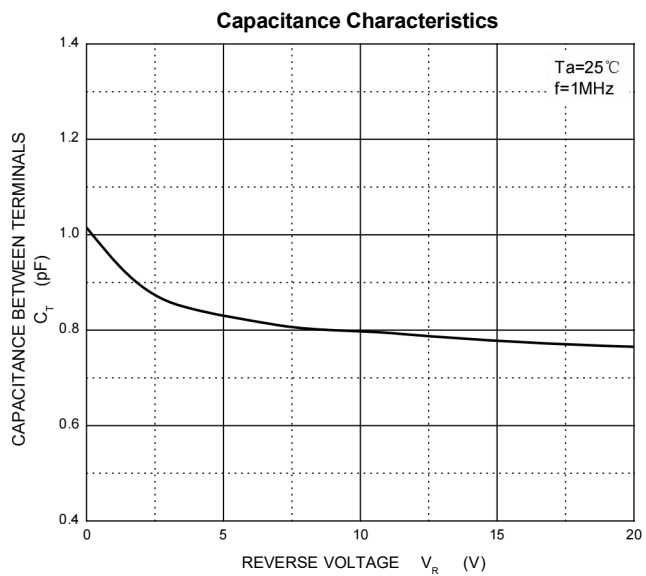
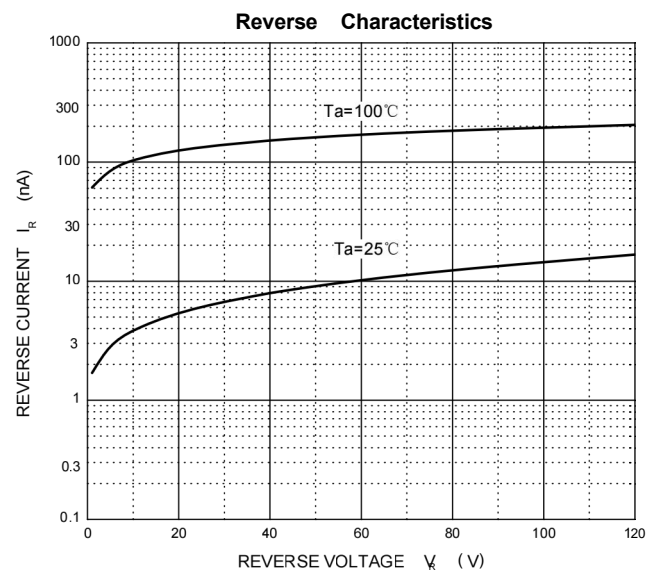
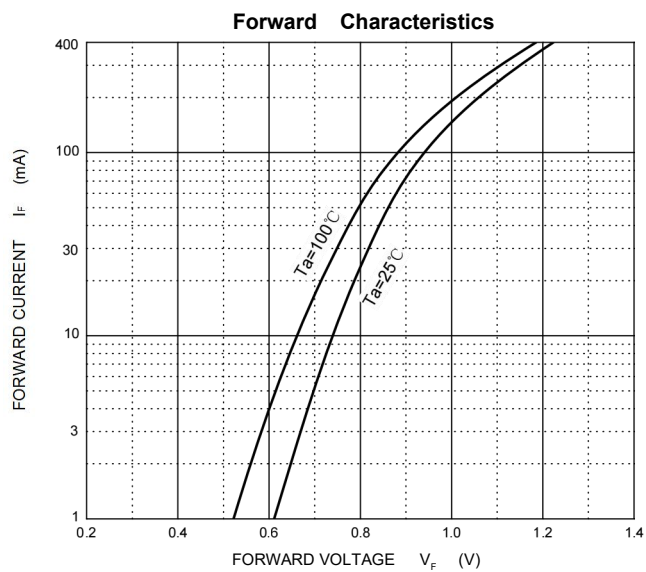
### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted )

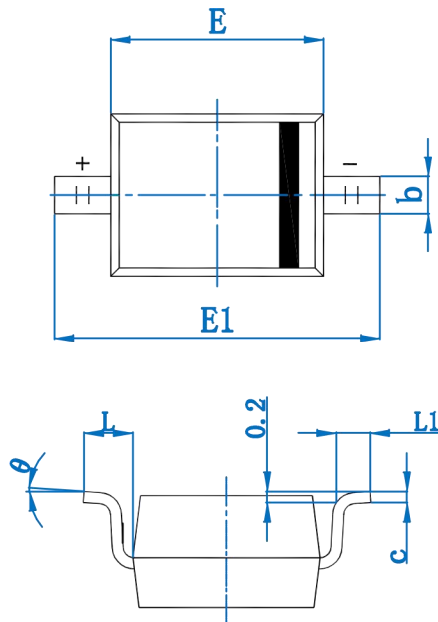
| Symbol         | Parameter                                                    | Value         |         |         | Unit                        |
|----------------|--------------------------------------------------------------|---------------|---------|---------|-----------------------------|
|                |                                                              | BAV19WS       | BAV20WS | BAV21WS |                             |
| $V_{RM}$       | Non-Repetitive Peak Reverse Voltage                          | 120           | 200     | 250     | V                           |
| $V_{RRM}$      | Peak Repetitive Reverse Voltage                              | 100           | 150     | 200     | V                           |
| $V_{RWM}$      | Working Peak Reverse Voltage                                 |               |         |         |                             |
| $V_{R(RMS)}$   | RMS Reverse Voltage                                          | 71            | 106     | 141     | V                           |
| $I_b$          | Average Rectified Output Current                             | 200           |         |         | mA                          |
| $I_{FSM}$      | Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$ | 2.0           |         |         | A                           |
| $I_{FRM}$      | Repetitive Peak Forward Surge Current                        | 625           |         |         | mA                          |
| $P_D$          | Power Dissipation                                            | 250           |         |         | mW                          |
| $R_{JA}$       | Thermal Resistance from Junction to Ambient                  | 500           |         |         | $^{\circ}\text{C}/\text{W}$ |
| $T_J, T_{stg}$ | Operation Junction and Storage Temperature Range             | $-55\sim+150$ |         |         | $^{\circ}\text{C}$          |

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

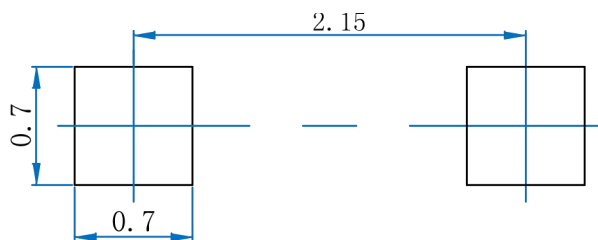
| Parameter             | Symbol    | Test conditions                                            | Min | Typ | Max  | Unit          |
|-----------------------|-----------|------------------------------------------------------------|-----|-----|------|---------------|
| Reverse current       | $I_R$     | $V_R=100\text{V}$                                          |     |     | 0.1  | $\mu\text{A}$ |
|                       |           | $V_R=150\text{V}$                                          |     |     | 0.1  |               |
|                       |           | $V_R=200\text{V}$                                          |     |     | 0.1  |               |
| Forward voltage       | $V_F$     | $I_F=100\text{mA}$                                         |     |     | 1    | V             |
|                       |           | $I_F=200\text{mA}$                                         |     |     | 1.25 |               |
| Total capacitance     | $C_{tot}$ | $V_R=0\text{V}, f=1\text{MHz}$                             |     |     | 5    | pF            |
| Reverse recovery time | $t_{rr}$  | $I_F=I_R=30\text{mA}, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$ |     |     | 50   | ns            |

## Typical Characteristics



**SOD-323 Package Outline Dimensions**


| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      |                           | 1.100 |                      | 0.043 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.800                     | 1.000 | 0.031                | 0.039 |
| b      | 0.250                     | 0.350 | 0.010                | 0.014 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E      | 1.600                     | 1.800 | 0.063                | 0.071 |
| E1     | 2.500                     | 2.750 | 0.098                | 0.108 |
| L      | 0.475 REF                 |       | 0.019 REF            |       |
| L1     | 0.250                     | 0.400 | 0.010                | 0.016 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

**SOD-323 Suggested Pad Layout**

**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.