

## Features

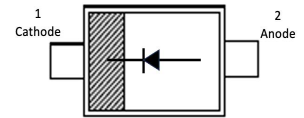
- Very low leakage current
- Medium speed switching times



SOD-323

## Applications

For low leakage current applications



Schematic Diagram

## Absolute Maximum Ratings ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter  | Symbol          | Value       | Unit               |
|--|-----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage                                | $V_{RRM}$       | 110         | V                  |
| Continuous Forward Current                                     | $I_{FM}$        | 215         | mA                 |
| Repetitive Peak Forward Current                                | $I_{FRM}$       | 500         | mA                 |
| Non-Repetitive Peak Forward Surge Current ( $t=1\mu\text{s}$ ) | $I_{FSM}$       | 4           | A                  |
| Non-Repetitive Peak Forward Surge Current ( $t=1\text{ms}$ )   |                 | 1           |                    |
| Non-Repetitive Peak Forward Surge Current ( $t=1\text{s}$ )    |                 | 0.5         |                    |
| Power Dissipation  | $P_D$           | 200         | mW                 |
| Operating and Storage Temperature Range                        | $T_J, T_{stg}$  | -65 to +150 | $^\circ\text{C}$   |
| Thermal Resistance from Max Junction to Ambient <sup>1</sup>   | $R_{\theta JA}$ | 625         | $^\circ\text{C/W}$ |

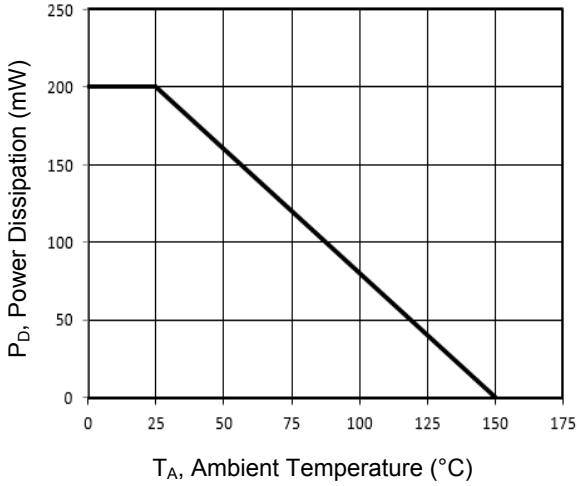
Note:

1. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

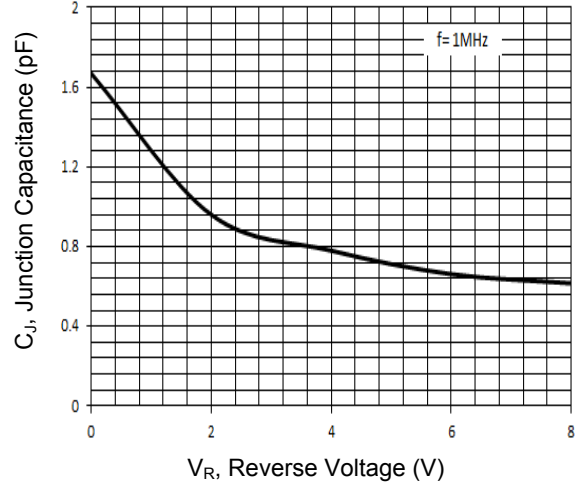
## Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                 | Symbol      | Conditions  | Min. | Max. | Unit          |
|---------------------------|-------------|---|------|------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | $I_R=100\mu\text{A}$  | 110  | -    | V             |
| Forward Voltage           | $V_F$       | $I_F=1\text{mA}$  | -    | 0.9  | V             |
|                           |             | $I_F=10\text{mA}$   | -    | 1    |               |
|                           |             | $I_F=50\text{mA}$   | -    | 1.1  |               |
|                           |             | $I_F=150\text{mA}$  | -    | 1.25 |               |
| Reverse Current           | $I_R$       | $V_R=75\text{V}$  | -    | 5    | nA            |
|                           |             | $V_R=75\text{V}, T_J=125^\circ\text{C}$                     | -    | 80   |               |
| Total Capacitance         | $C_T$       | $V_R=0, F=1\text{MHz}$                                      | -    | 5    | pF            |
| Reverse Recovery Time     | $t_{rr}$    | $I_F=I_R=10\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$ | -    | 3    | $\mu\text{s}$ |

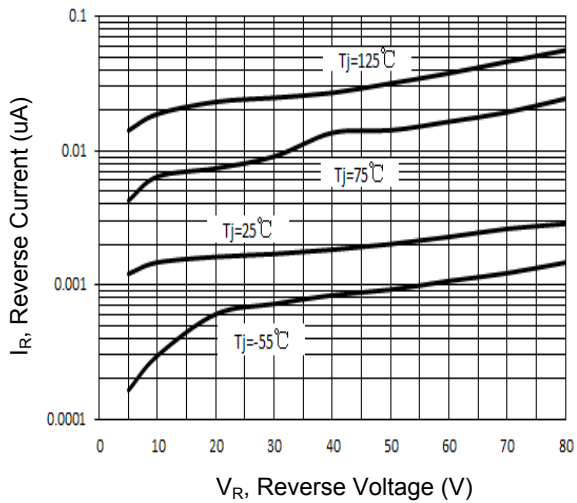
**Electrical Characteristic Curve**



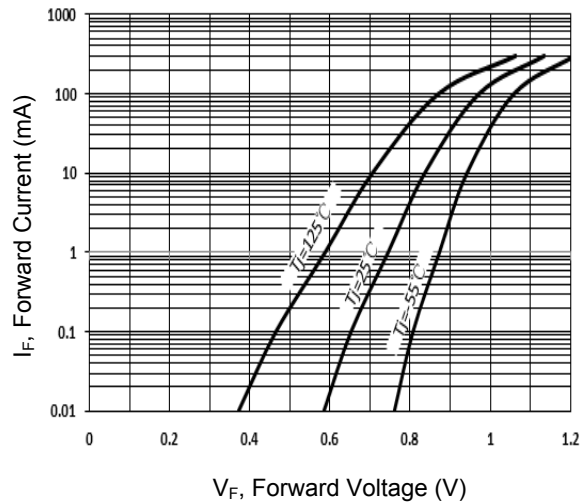
**Figure 1. Power Derating Curve**



**Figure 2. Capacitance Characteristics Curve**

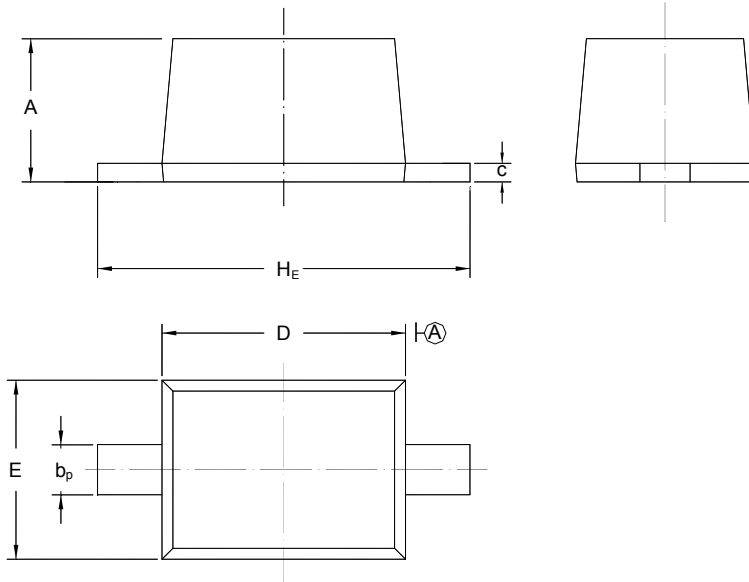


**Figure 3. Reverse Characteristics Curve**



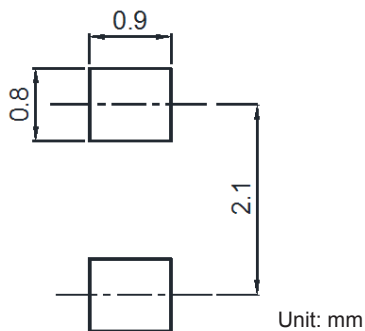
**Figure 4. Forward Characteristics Curve**

**Package Outline Dimensions (SOD-323)**



| Symbol         | Dimensions In Millimeters |      | Dimensions In Inches |       |
|----------------|---------------------------|------|----------------------|-------|
|                | Min.                      | Max. | Min.                 | Max.  |
| A              | 0.80                      | 1.10 | 0.031                | 0.043 |
| b <sub>p</sub> | 0.25                      | 0.40 | 0.010                | 0.016 |
| C              | 0.10                      | 0.15 | 0.004                | 0.006 |
| D              | 1.60                      | 1.80 | 0.063                | 0.071 |
| E              | 1.15                      | 1.35 | 0.045                | 0.053 |
| H <sub>E</sub> | 2.30                      | 2.80 | 0.091                | 0.110 |

**Recommended Pad Layout**



**Order Information**

| Device   | Package | Marking Code | Carrier     | Quantity        |
|----------|---------|--------------|-------------|-----------------|
| BAV116WS | SOD-323 | CL           | Tape & Reel | 3,000pcs / Reel |