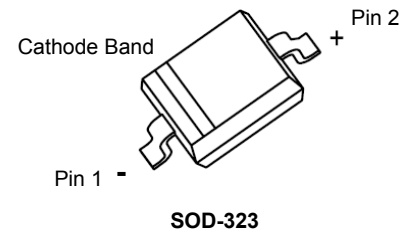


## Features

- Low Forward Voltage Drop
- Very Small SMD Package

## Applications

- Low Voltage Rectification
- High Efficiency DC/DC Conversion
- Switch Mode Power Supply
- Inverse Polarity Protection
- Low Power Consumption Applications



Schematic Diagram

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

| Parameter  | Symbol          | Value       | Unit             |
|--|-----------------|-------------|------------------|
| Peak Repetitive Reverse Voltage                              | $V_{RRM}$       | 20          | V                |
| Working Peak Reverse Voltage                                 | $V_{RWM}$       |             |                  |
| RMS Reverse Voltage  | $V_{R(RMS)}$    | 14          | V                |
| Continuous Forward Current                                   | $I_F$           | 2           | A                |
| Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$ | $I_{FSM}$       | 9           | A                |
| Power Dissipation  | $P_D$           | Note1       | 250              |
|  |                 | Note2       | 480              |
| Thermal Resistance from Junction to Ambient                  | $R_{\theta JA}$ | Note1       | 400              |
|  |                 | Note2       | 208              |
| Junction Temperature   | $T_J$           | 125         | $^\circ\text{C}$ |
| Storage Temperature  | $T_{STG}$       | -55 to +150 | $^\circ\text{C}$ |

1. Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

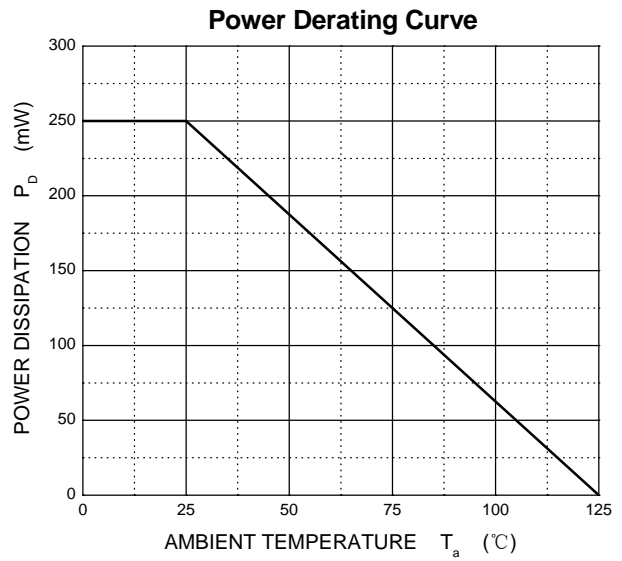
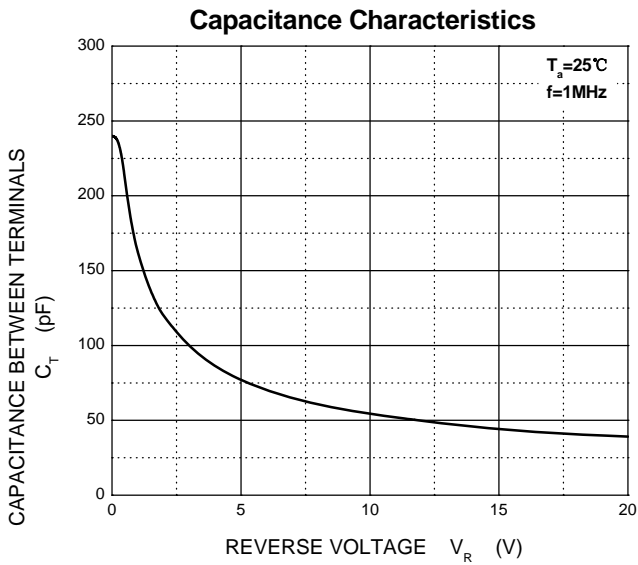
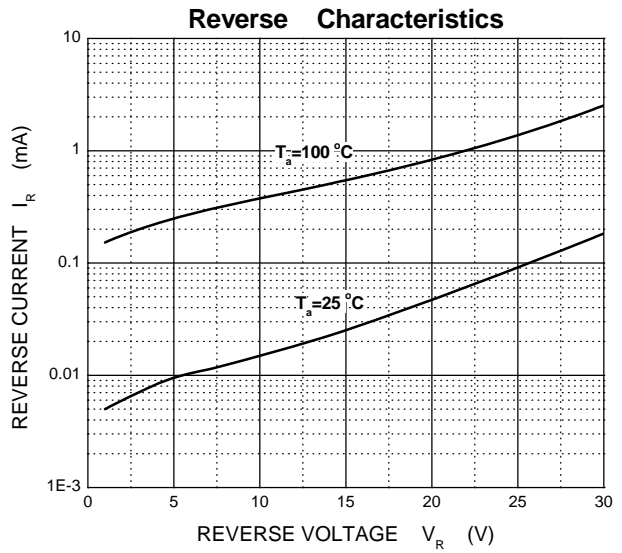
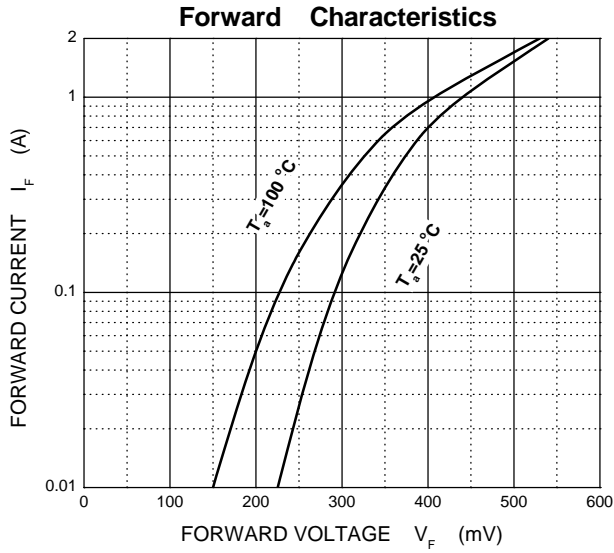
2. Device mounted on an FR4 PCB with copper pad 10 x 10 mm.

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

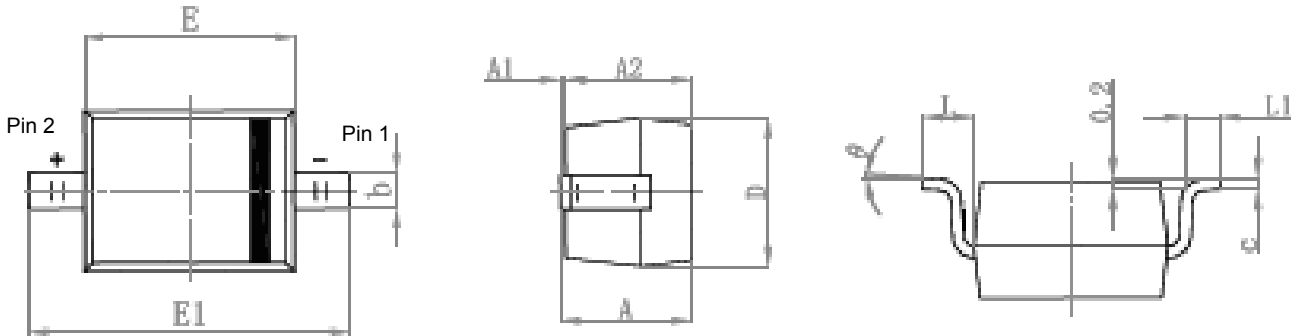
| Parameter                 | Symbol     | Test conditions                | Min | Max  | Unit          |
|---------------------------|------------|--------------------------------|-----|------|---------------|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_R=1\text{mA}$               | 20  |      | V             |
| Reverse Current           | $I_R$      | $V_R=10\text{V}$               |     | 80   | $\mu\text{A}$ |
|                           |            | $V_R=20\text{V}$               |     | 100  |               |
| Forward Voltage           | $V_F^*$    | $I_F=1\text{A}$                |     | 0.45 | V             |
|                           |            | $I_F=2\text{A}$                |     | 0.55 |               |
| Total Capacitance         | $C_{tot}$  | $V_R=4\text{V}, f=1\text{MHz}$ |     | 120  | pF            |

\*Pulse test:  $t_p \leq 300 \mu\text{s}$ ;  $\delta \leq 0.02$ .

**Typical Characteristic Curves**



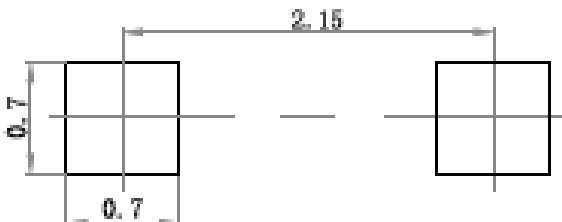
**Package Outline Dimensions SOD-323**



Pin 1= Cathode  
 Pin 2 = Anode  
 Marking bar indicates the cathode.

| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min.                      | Max.  | Min.                 | Max.  |
| A      |                           | 1.000 |                      | 0.039 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.800                     | 0.900 | 0.031                | 0.035 |
| 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     | 2.550                     | 2.750 | 0.100                | 0.108 |
| L      | 0.475 REF.                |       | 0.019 REF.           |       |
| L1     | 0.250                     | 0.400 | 0.010                | 0.016 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

**Suggested Pad Layout**



**Note:**  
 1. Controlling dimension: in millimeters.  
 2. General tolerance: ± 0.05mm.  
 3. The pad layout is for reference purposes only.