

### FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time

SOD-323



MARKING: S3

### Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

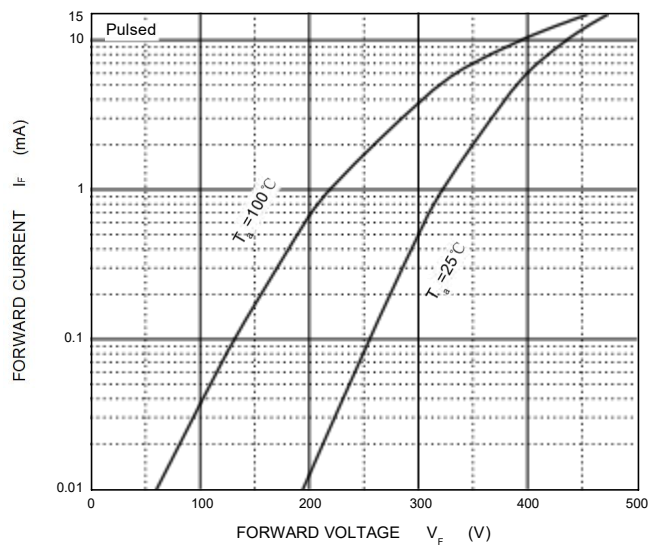
| Parameter                                          | Symbol          | Value      | Unit |
|----------------------------------------------------|-----------------|------------|------|
| Peak Repetitive Peak Reverse Voltage               | $V_{RRM}$       | 40         | V    |
| Working Peak Reverse Voltage                       | $V_{RWM}$       |            |      |
| DC Blocking Voltage                                | $V_R$           |            |      |
| RMS Reverse Voltage                                | $V_{R(RMS)}$    | 28         | V    |
| Forward Continuous Current                         | $I_{FM}$        | 15         | mA   |
| Non-Repetitive Peak Forward Surge Current@t=8..3ms | $I_{FSM}$       | 2.0        | A    |
| Power Dissipation                                  | $P_d$           | 200        | mW   |
| Thermal Resistance Junction to Ambient             | $R_{\theta JA}$ | 500        | °C/W |
| Operating Junction Temperature Range               | $T_j$           | -40 ~ +125 | °C   |
| Storage Temperature Range                          | $T_{STG}$       | -55 ~ +150 | °C   |

### Electrical Ratings @Ta=25°C

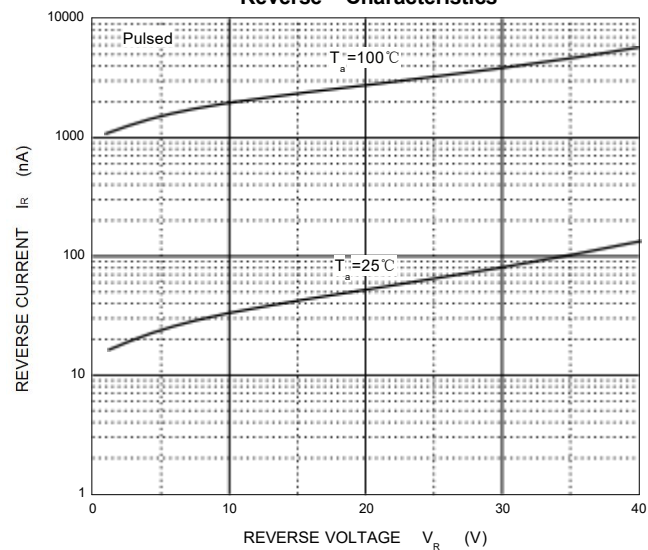
| Parameter                     | Symbol   | Min | Typ | Max  | Unit    | Conditions                                              |
|-------------------------------|----------|-----|-----|------|---------|---------------------------------------------------------|
| Reverse breakdown voltage     | $V_R$    | 40  |     |      | V       | $I_R=10\mu A$                                           |
| Forward voltage               | $V_F$    |     |     | 0.39 | V       | $I_F=1.0mA$                                             |
|                               |          |     |     | 0.90 |         | $I_F=15mA$                                              |
| Reverse current               | $I_R$    |     |     | 0.2  | $\mu A$ | $V_R=30V$                                               |
| Capacitance between terminals | $C_T$    |     | 2.2 |      | pF      | $V_R=0V, f=1.0MHz$                                      |
| Reverse recovery time         | $t_{rr}$ |     |     | 1.0  | ns      | $I_F=I_R=5mA$<br>$I_{rr}=0.1 \times I_R, R_L=100\Omega$ |

## Typical Characteristics

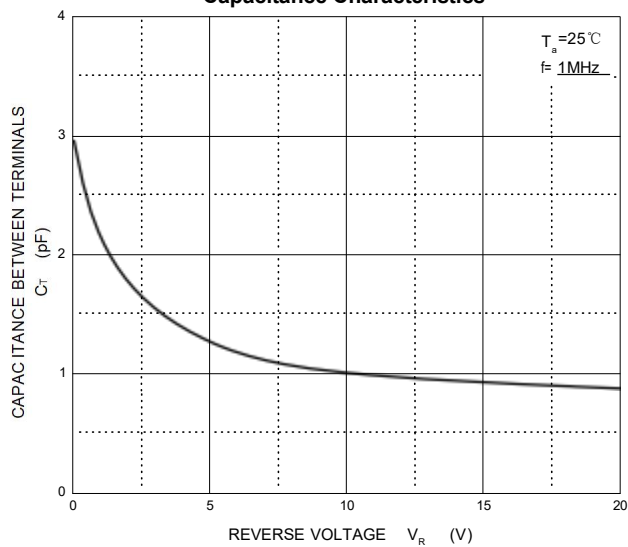
**Forward Characteristics**



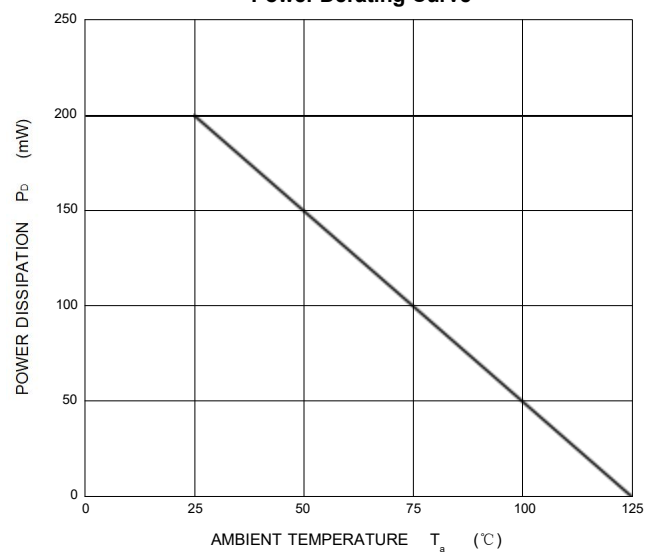
**Reverse Characteristics**

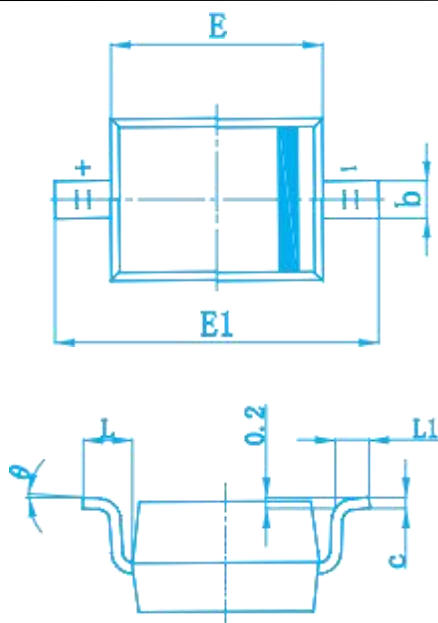


**Capacitance Characteristics**

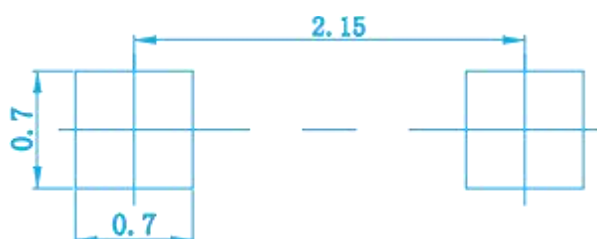


**Power Derating Curve**



**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.