

**Features**

- Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection

- Ideal for Low Logic Level

**Applications**

- Low Capacitance
- Also Available in Lead Free Version



SOD-323 top view



Schematic diagram



Marking and pin assignment



Pb-Free



Halogen-Free

**Maximum Ratings( $T_a=25^{\circ}\text{C}$  unless otherwise noted)**

| Symbol          | Parameter                                                   | Value         | Unit                 |
|-----------------|-------------------------------------------------------------|---------------|----------------------|
| $V_{RM}$        | Peak reverse voltage                                        | 30            | V                    |
| $I_{FM}$        | Peak forward current                                        | 100           | mA                   |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$ | 2             | A                    |
| $P_{tot}$       | Power dissipation $TC=25^{\circ}\text{C}$                   | 250           | mW                   |
| $T_{\theta JA}$ | Thermal resistance junction to ambient                      | 400           | $^{\circ}\text{C/W}$ |
| $T_J$           | Operating Junction Temperature Range                        | $-40\sim+125$ | $^{\circ}\text{C}$   |
| $T_{stg}$       | Operation Junction and Storage Temperature Range            | $-55\sim+150$ | $^{\circ}\text{C}$   |

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

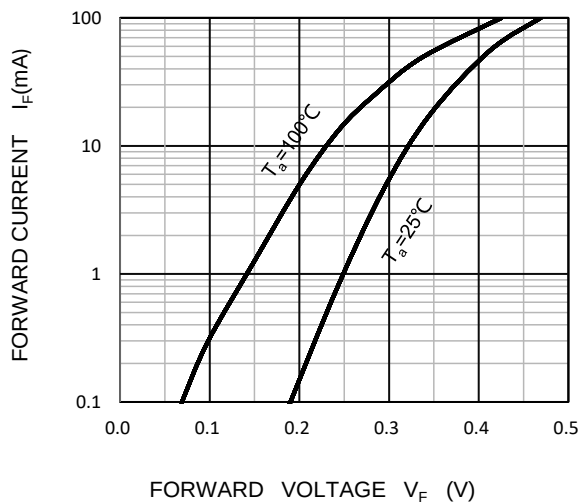
| Symbol    | Parameter                       | Condition                       | Min | Typ | Max | Unit          |
|-----------|---------------------------------|---------------------------------|-----|-----|-----|---------------|
| $V_R$     | Reverse breakdown voltage       | $I_R = 100\mu\text{A}$          | 30  | --  | --  | V             |
| $I_R$     | Reverse voltage leakage current | $V_R=25\text{V}$                | --  | --  | 1   | $\mu\text{A}$ |
| $V_F$     | Forward voltage                 | $I_F=2\text{mA}$                | --  | 300 | --  | mV            |
|           |                                 | $I_F=15\text{A}$                | --  | 360 | --  |               |
|           |                                 | $I_F=15\text{mA}$               | --  | 430 | 550 |               |
|           |                                 | $I_F=100\text{mA}$              | --  | 500 | 800 |               |
| $C_{tot}$ | Total capacitance               | $V_R=10\text{V}, f=1\text{MHz}$ | --  | 7   | --  | pF            |

**Ordering Information (Example)**

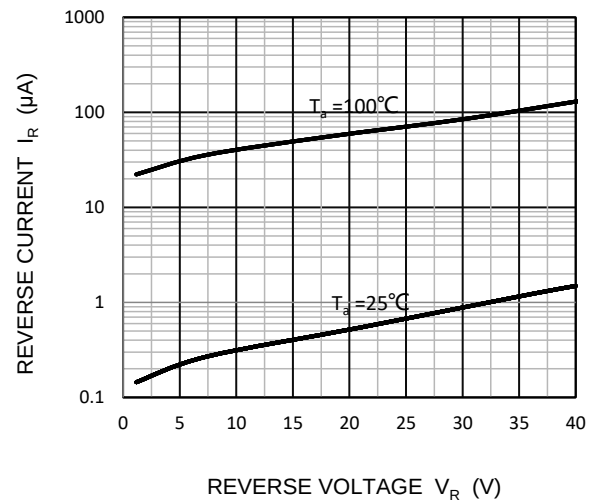
| Type    | Package | Marking | Minimum Package(pcs) | Inner Box Quantity(pcs) | Outer Carton Quantity(pcs) | Delivery Mode |
|---------|---------|---------|----------------------|-------------------------|----------------------------|---------------|
| SD107WS | SOD-323 | SG      | 3,000                | 45,000                  | 180,000                    | 7"reel        |

## Typical Operating Characteristics

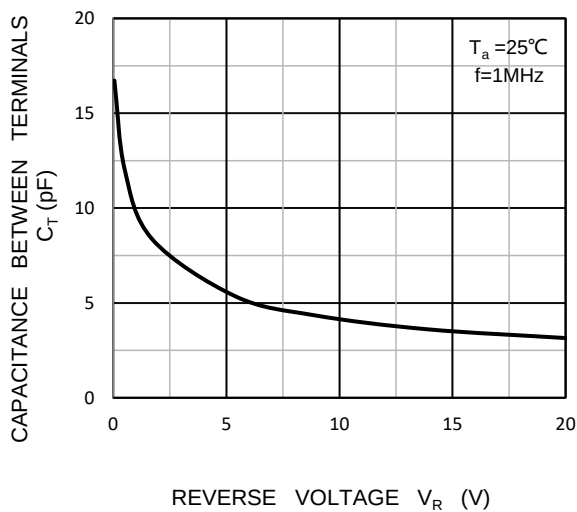
Forward Characteristics



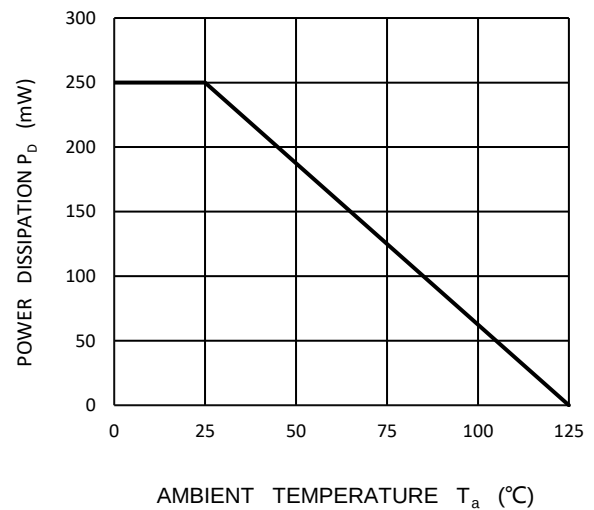
Reverse Characteristics



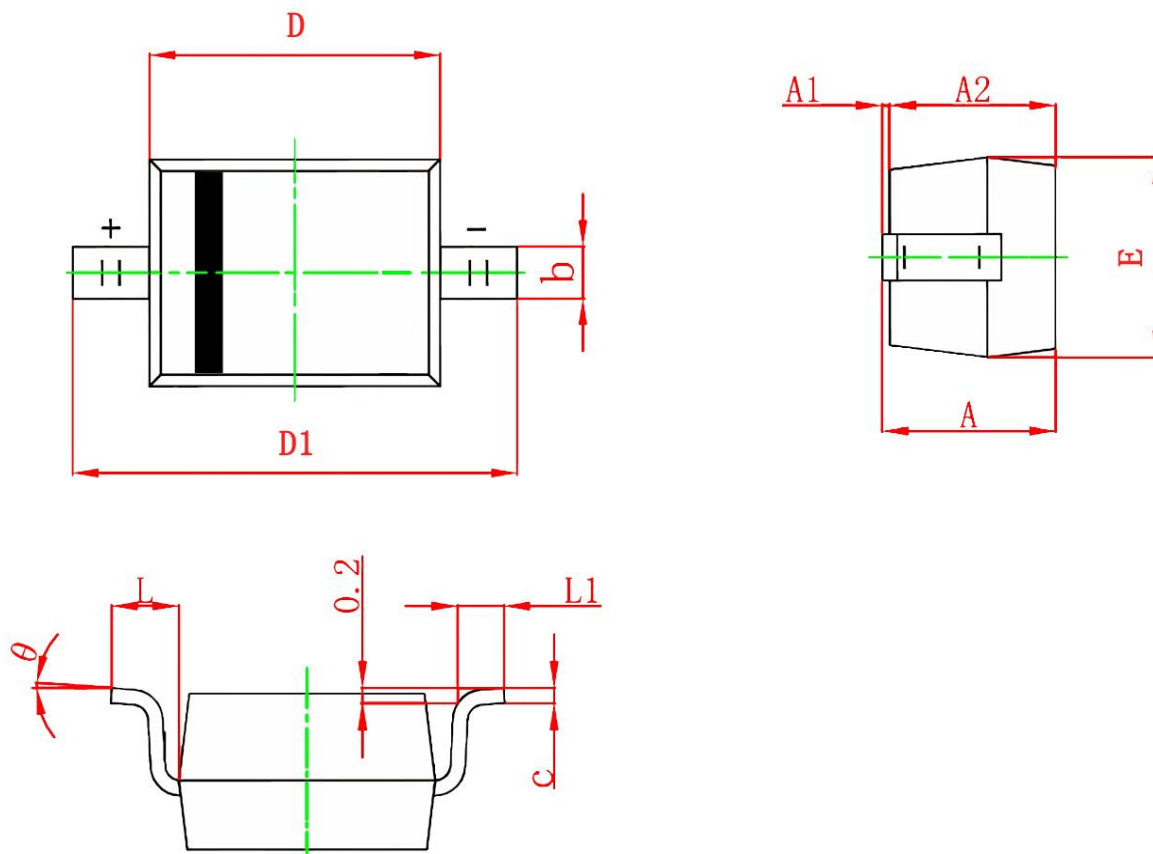
Capacitance Characteristics



Power Derating Curve



SOD-323 Package information



| Symbol | Dimensions in Millimeters(mm) |       | 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      | 1.600                         | 1.800 | 0.063                | 0.071 |
| D1     | 2.500                         | 2.750 | 0.098                | 0.108 |
| E      | 1.200                         | 1.400 | 0.047                | 0.055 |
| L      | 0.475 REF                     |       | 0.019 REF            |       |
| L1     | 0.250                         | 0.400 | 0.010                | 0.016 |
| θ      | 0°                            | 8°    | 0°                   | 8°    |