

### Features

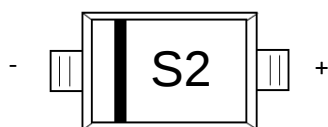
- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Capacitance
- Ultra-small Surface Mount Package



SOD-323 top view



Schematic diagram



Marking and pin assignment



Halogen-Free

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

| Symbol          | Parameter                                                   | Value         | Unit                 |
|-----------------|-------------------------------------------------------------|---------------|----------------------|
| $V_R$           | Reverse Voltage                                             | 50            | V                    |
| $V_{RRM}$       | Maximum recurrent peak reverse voltage                      |               |                      |
| $V_{RWM}$       | Working Peak Reverse Voltage                                |               |                      |
| $V_{R(RMS)}$    | RMS Reverse Voltage                                         | 35            | V                    |
| $I_{FM}$        | Peak forward current                                        | 15            | mA                   |
| $I_{FSM}$       | Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$ | 2             | A                    |
| $P_D$           | Power Dissipation                                           | 200           | mW                   |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient                 | 500           | $^{\circ}\text{C/W}$ |
| $T_J$           | Operating Junction Temperature Range                        | $-40\sim+125$ | $^{\circ}\text{C}$   |
| $T_{stg}$       | Operation Junction and Storage Temperature Range            | $-55\sim+150$ | $^{\circ}\text{C}$   |

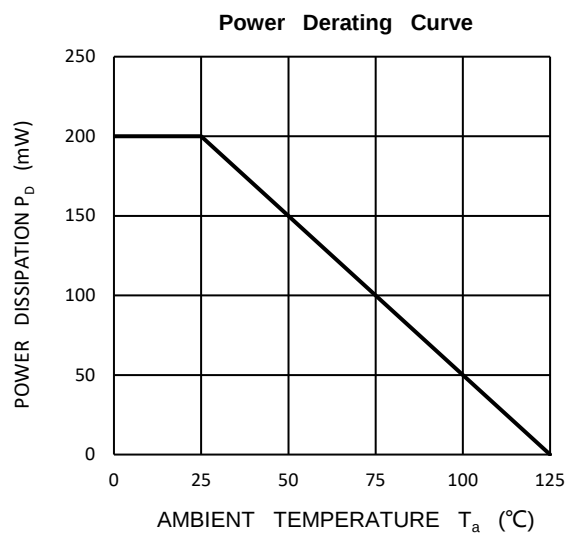
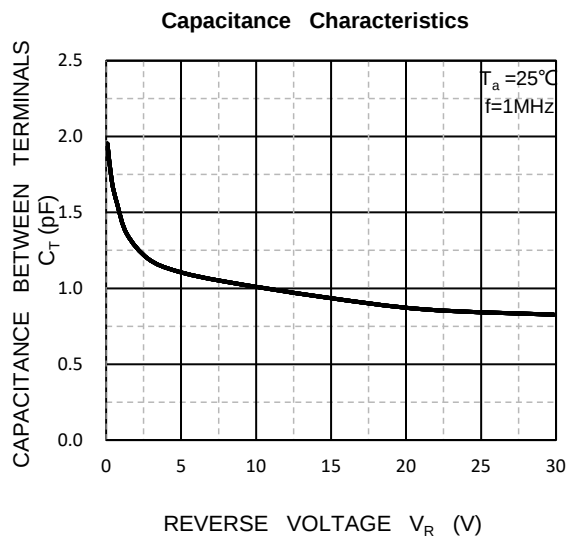
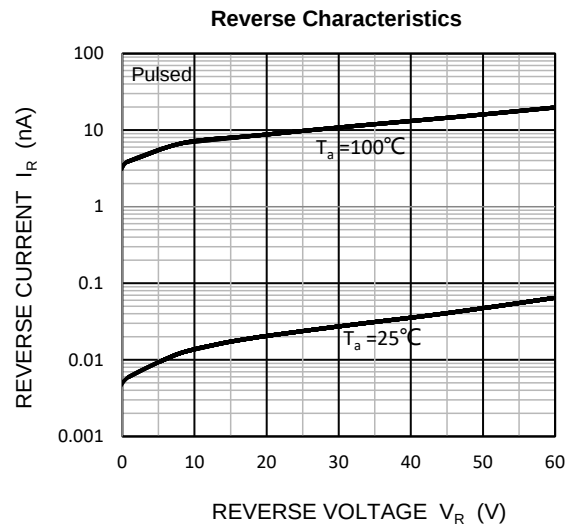
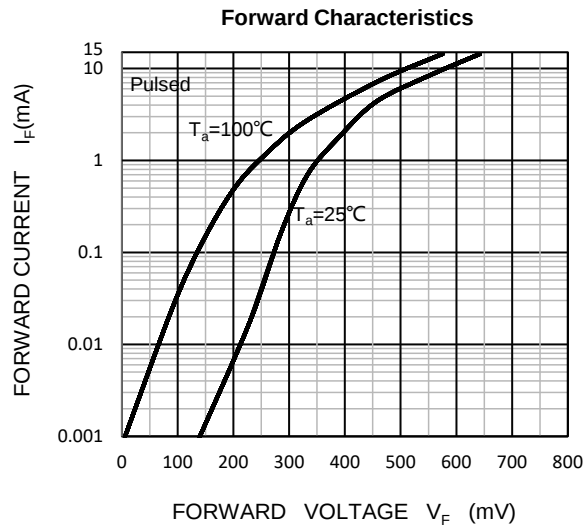
### ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

| Symbol     | Parameter                       | Condition                                          | Min | Typ | Max  | Unit          |
|------------|---------------------------------|----------------------------------------------------|-----|-----|------|---------------|
| $V_{(BR)}$ | Reverse voltage                 | $I_R=10\mu\text{A}$                                | 50  | --  | --   | V             |
| $I_R$      | Reverse voltage leakage current | $V_R=40\text{V}$                                   | --  | --  | 0.2  | $\mu\text{A}$ |
| $V_F$      | Forward voltage                 | $I_F=1\text{mA}$                                   | --  | --  | 0.4  | V             |
|            |                                 | $I_F=15\text{mA}$                                  | --  | --  | 0.95 |               |
| $C_T$      | Capacitance between terminals   | $V_R=0\text{V}, f=1.0\text{MHz}$                   |     | --  | 2.1  | pF            |
| $t_{rr}$   | Reverse recovery time           | $I_F=I_R=5\text{mA}, I_{rr}=0.1I_R, R_L=100\Omega$ | --  | --  | 1    | ns            |

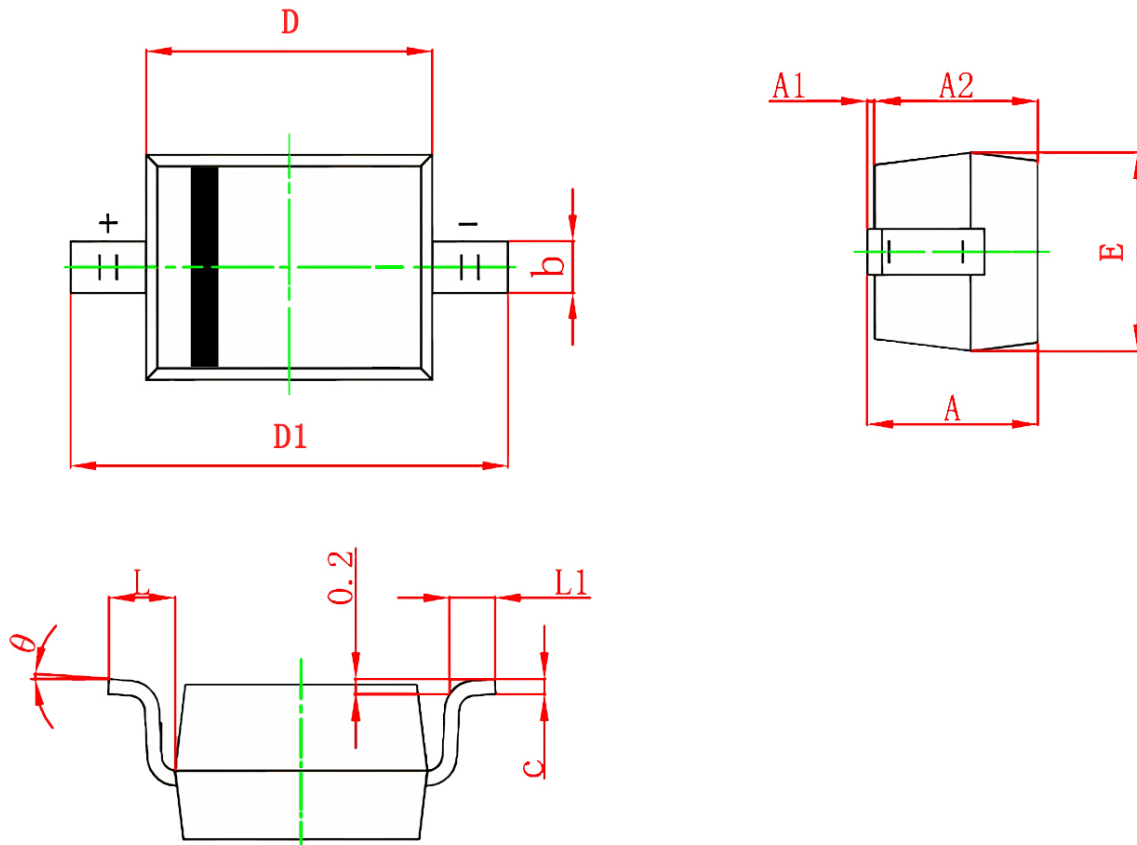
### Ordering Information (Example)

| Type     | Package | Marking | Minimum Package(pcs) | Inner Box Quantity(pcs) | Outer Carton Quantity(pcs) | Delivery Mode |
|----------|---------|---------|----------------------|-------------------------|----------------------------|---------------|
| SD101BWS | SOD-323 | S2      | 3,000                | 45,000                  | 180,000                    | 7"reel        |

## Typical Operating Characteristics



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°    |