

## SOD-323 Fast Switching Diodes

### Features

- $V_R=100V$
- $I_{F(AV)}=150mA$
- Power Dissipation of 200mW
- High Stability and High Reliability
- Fast switching speed

### Applications

Small signal switching  
Ultra high speed switching application

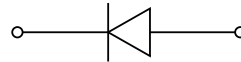
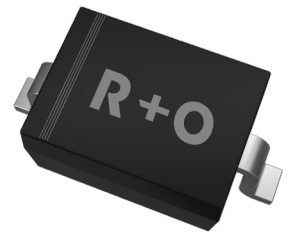
### Mechanical Data

- Case: SOD-323  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

### Function Diagram

**Reverse Voltage**  
100 V  
**Forward Current**  
0.15 Ampere

SOD-323



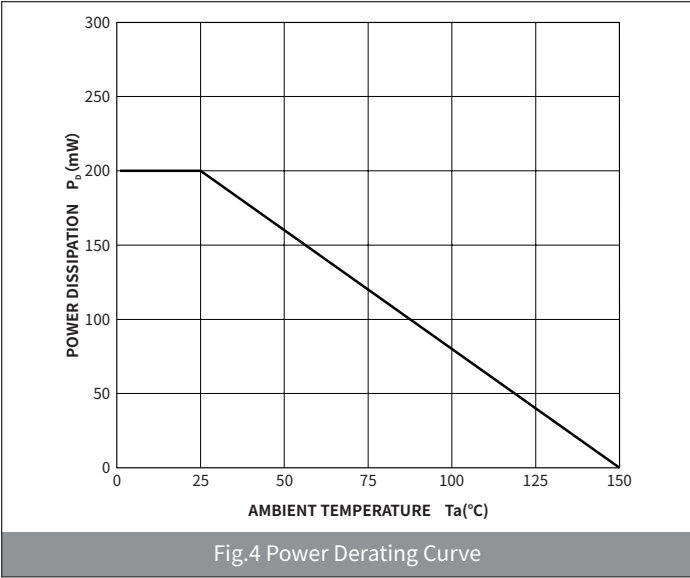
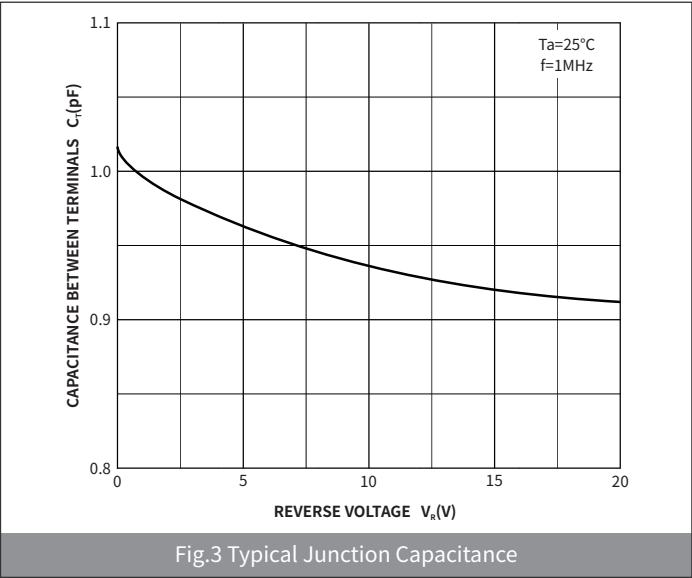
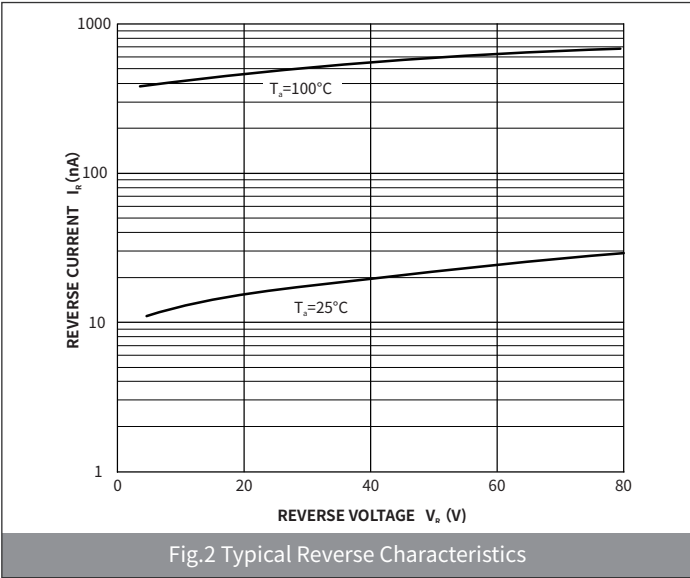
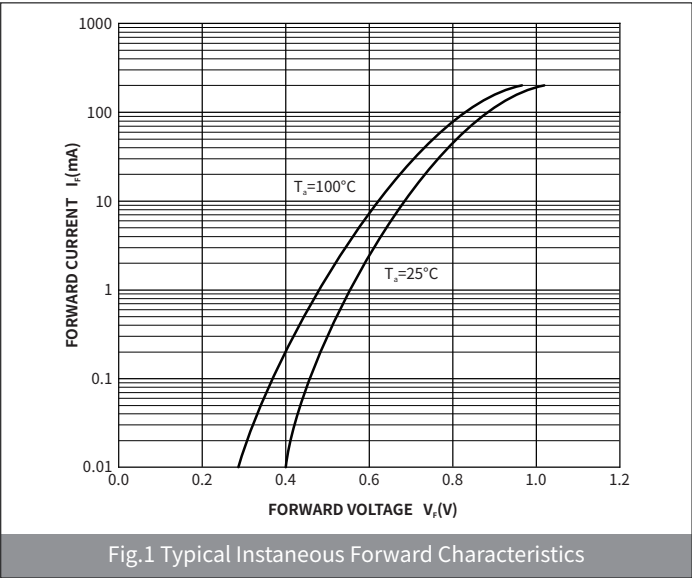
### Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                                  | SYMBOL           | UNIT  | VALUE      |
|------------------------------------------------------------|------------------|-------|------------|
| Maximum repetitive peak reverse voltage                    | $V_{RRM}$        | V     | 100        |
| Maximum RMS Voltage                                        | $V_{RMS}$        | V     | 75         |
| Reverse Breakdown voltage @ $I_R=100\mu A$                 | $V_{(BR)R}$      | V     | 100        |
| Maximum Average Forward Rectified Current                  | $I_{F(AV)}$      | mA    | 150        |
| Repetitive peak forward current                            | $I_{FRM}$        | mA    | 300        |
| Non-Repetitive Peak forward surge current @ $t_p=1.0\mu s$ | $I_{FSM}$        | A     | 2.0        |
| Non-Repetitive Peak forward surge current @ $t_p=1.0s$     |                  |       | 1.0        |
| Power Dissipation                                          | $P_d$            | mW    | 200        |
| Storage temperature                                        | $T_{stg}$        | °C    | -55 ~ +150 |
| Junction temperature                                       | $T_j$            | °C    | -55 ~ +150 |
| Typical thermal resistance                                 | $R_{\theta J-A}$ | °C /W | 625        |

● Electrical Characteristics (Ta=25°C Unless otherwise noted)

| PARAMETER                             | TEST CONDITIONS                                            | SYMBOL   | UNIT | Min | Type | Max   |
|---------------------------------------|------------------------------------------------------------|----------|------|-----|------|-------|
| Maximum instantaneous forward voltage | $I_F=1.0\text{mA}$                                         | $V_F$    | V    | —   | —    | 0.715 |
|                                       | $I_F=10\text{mA}$                                          |          |      | —   | —    | 0.855 |
|                                       | $I_F=50\text{mA}$                                          |          |      | —   | —    | 1.0   |
|                                       | $I_F=150\text{mA}$                                         |          |      | —   | —    | 1.25  |
| Reverse Leakage Current               | $V_R=20\text{V}$                                           | $I_{R1}$ | nA   | —   | —    | 25    |
|                                       | $V_R=75\text{V}$                                           | $I_{R2}$ | μA   | —   | —    | 1.0   |
| Total capacitance                     | $V_R=0\text{V}, f=1\text{MHz}$                             | $C_T$    | pF   | —   | —    | 2.0   |
| Maximum reverse recovery time         | $I_F=I_R=10\text{mA}, I_{rr}=0.1\times I_R, R_L=100\Omega$ | $T_{rr}$ | ns   | —   | —    | 4.0   |

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



## ● Ordering Information

| PACKAGE | PACKAGE CODE | UNIT WEIGHT(g) | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|---------|--------------|----------------|-----------|----------|-------------|---------------|
| SOD-323 | R1           | 0.0048         | 3000      | 45000    | 180000      | 7"            |

## ● Package Outline Dimensions (SOD-323)

| Symbol         | Dimensions  |      |          |       |
|----------------|-------------|------|----------|-------|
|                | Millimeters |      | Inches   |       |
|                | Min.        | Max. | Min.     | Max.  |
| A              | 1.60        | 1.80 | 0.063    | 0.071 |
| B              | 0.25        | 0.40 | 0.010    | 0.016 |
| C              | 2.30        | 2.80 | 0.091    | 0.110 |
| D              | 0.80        | 1.10 | 0.031    | 0.043 |
| D <sub>1</sub> | 0.80        | 0.90 | 0.031    | 0.035 |
| E              | 1.20        | 1.40 | 0.047    | 0.055 |
| F              | 0.08        | 0.18 | 0.003    | 0.007 |
| L              | 0.475REF    |      | 0.019REF |       |
| L <sub>1</sub> | 0.25        | 0.40 | 0.010    | 0.016 |
| H              | -           | 0.14 | -        | 0.006 |

## ● Suggested Pad Layout

| Symbol | Dimensions  |      |        |       |
|--------|-------------|------|--------|-------|
|        | Millimeters |      | Inches |       |
|        | Min.        | Max. | Min.   | Max.  |
| X      | 0.65        | 0.75 | 0.026  | 0.030 |
| Y      | 0.65        | 0.75 | 0.026  | 0.030 |
| Z      | 2.10        | 2.20 | 0.084  | 0.088 |