

SOD-323 Fast Switching Diodes

Features

- Fast Switching Device ( $T_{RR}<4nS$ )
- Power Dissipation of 250mW
- High Stability and High Reliability
- Low reverse leakage

Applications

Small signal switching  
Ultra high speed switching application

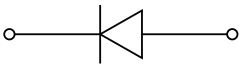
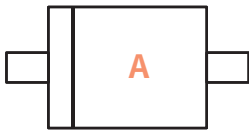
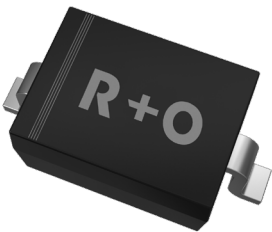
Mechanical Data

- 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  
80 V  
Forward Current  
0.1 Ampere

SOD-323



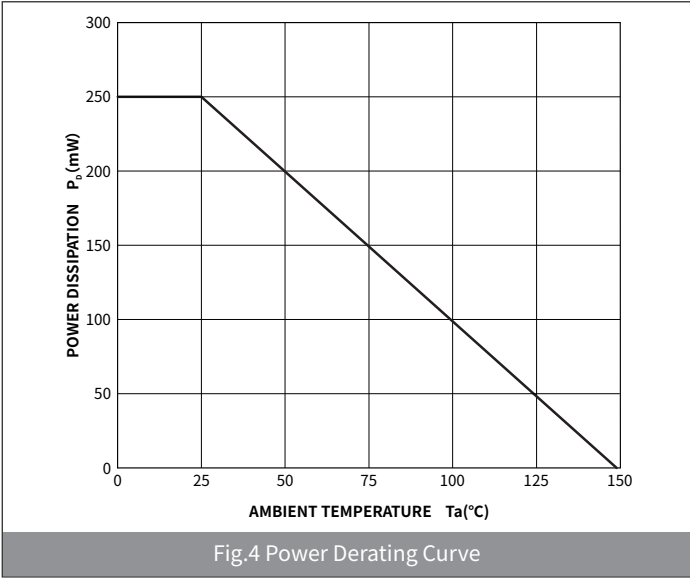
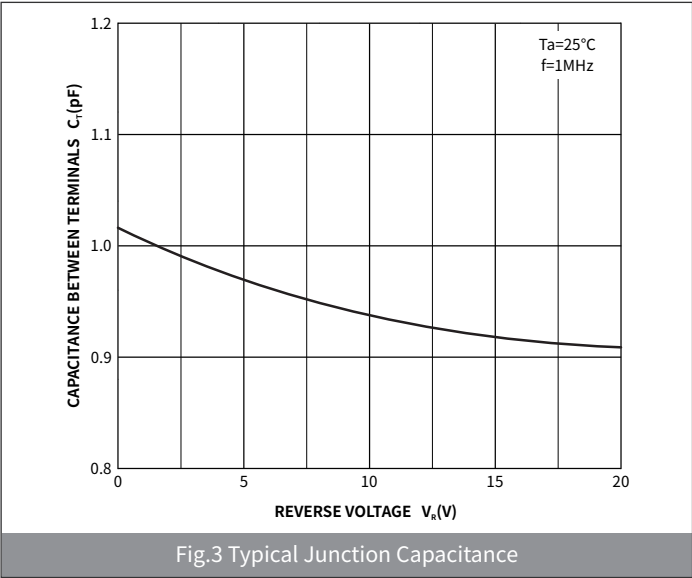
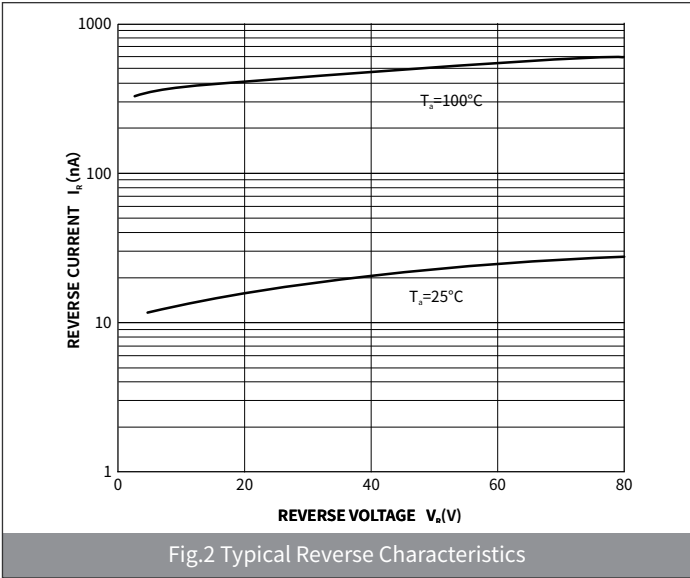
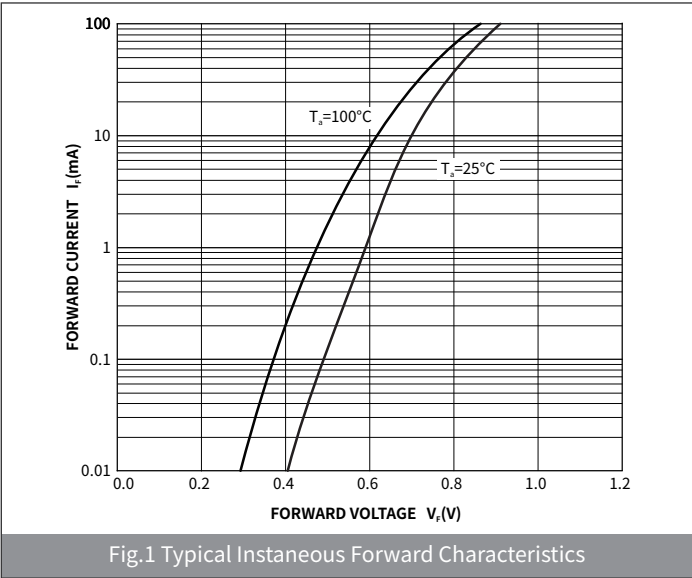
Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                               | SYMBOL           | UNIT  | VALUE     |
|---------------------------------------------------------|------------------|-------|-----------|
| Maximum repetitive peak reverse voltage                 | $V_{RRM}$        | V     | 80        |
| Maximum RMS Voltage                                     | $V_{RMS}$        | V     | 80        |
| Reverse Breakdown voltage @ $I_R=100\mu A$              | $V_{(BR)R}$      | V     | 90        |
| Maximum Average Forward Rectified Current               | $I_{F(AV)}$      | mA    | 100       |
| Non-Repetitive Peak forward surge current @ $t_p=1.0ms$ | $I_{FSM}$        | mA    | 500       |
| Power Dissipation                                       | $P_d$            | mW    | 250       |
| Storage temperature                                     | $T_{stg}$        | °C    | -55 ~+150 |
| Junction temperature                                    | $T_j$            | °C    | 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 <sub>F</sub> =100mA                                                                                   | V <sub>F</sub>  | V    | —   | 1.2  | —   |
| Reverse Leakage Current               | V <sub>R</sub> =80V                                                                                     | I <sub>R</sub>  | μA   | —   | —    | 0.1 |
| Total capacitance                     | V <sub>R</sub> =0V,f=1MHz                                                                               | C <sub>T</sub>  | pF   | —   | —    | 3.0 |
| Maximum reverse recovery time         | I <sub>F</sub> =10mA, V <sub>R</sub> =6V,<br>I <sub>rr</sub> =0.1×I <sub>R</sub> , R <sub>L</sub> =100Ω | T <sub>rr</sub> | 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 |