

SOD-323 Surface Mount Schottky Barrier Rectifier

Features

- $V_R=30V$
- $I_{F(AV)}=0.2A$
- Low Turn-on Voltage
- Fast switching speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

For use in low voltage high frequency circuit signals.

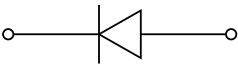
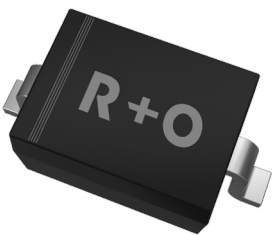
Mechanical Data

- 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  
30 V  
Forward Current  
0.2 Ampere

SOD-323



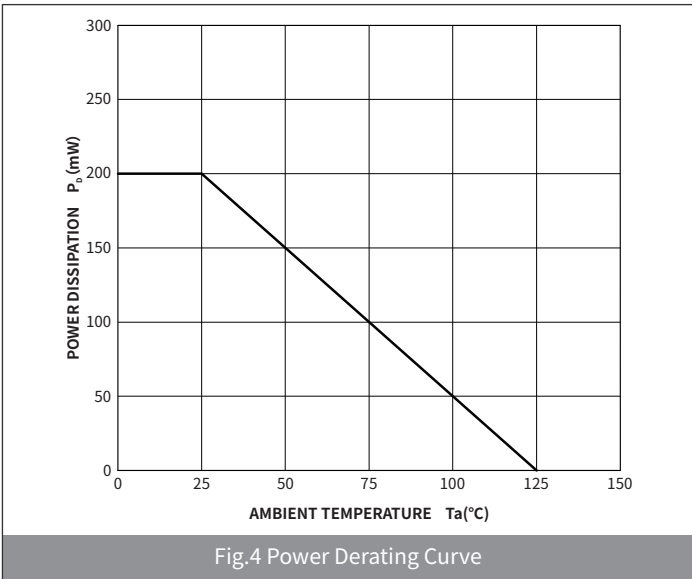
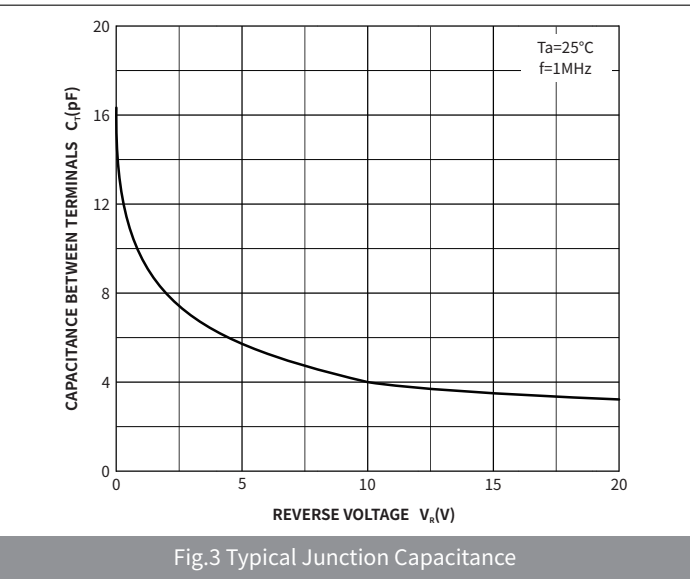
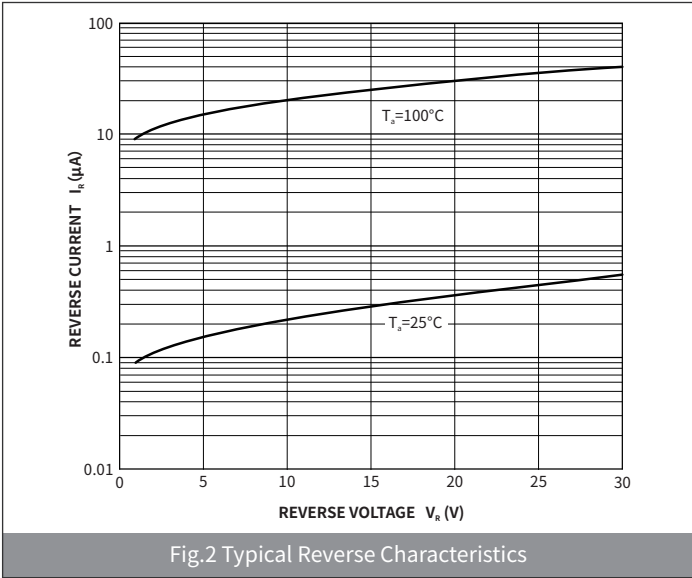
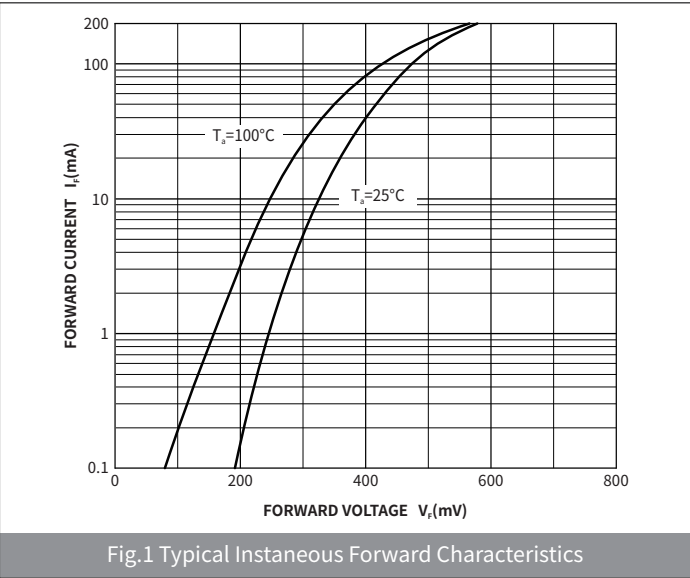
Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                                          | SYMBOL          | UNIT  | VALUE     |
|--------------------------------------------------------------------|-----------------|-------|-----------|
| Maximum repetitive peak reverse voltage                            | $V_{RRM}$       | V     | 30        |
| Maximum RMS voltage                                                | $V_{RMS}$       | V     | 21        |
| Maximum DC blocking voltage                                        | $V_{DC}$        | V     | 30        |
| Maximum average forward rectified current                          | $I_{F(AV)}$     | A     | 200       |
| Repetitive peak forward current                                    | $I_{FRM}$       | mA    | 300       |
| Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave | $I_{FSM}$       | A     | 600       |
| Power Dissipation                                                  | $P_D$           | mW    | 230       |
| Junction Temperature                                               | $T_j$           | °C    | -55 ~+125 |
| Storage temperature range                                          | $T_{STG}$       | °C    | -55 ~+150 |
| Typical thermal resistance                                         | $R_{\theta JA}$ | °C /W | 500       |

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

| PARAMETER                     | TEST CONDITIONS                                             | SYMBOL   | UNIT          | Min | Type | Max  |
|-------------------------------|-------------------------------------------------------------|----------|---------------|-----|------|------|
| Maximum forward voltage       | $I_F = 0.1\text{mA}$                                        | $V_{F1}$ | mV            | —   | —    | 240  |
|                               | $I_F = 1.0\text{mA}$                                        | $V_{F2}$ |               | —   | —    | 320  |
|                               | $I_F = 10\text{mA}$                                         | $V_{F3}$ |               | —   | —    | 400  |
|                               | $I_F = 30\text{mA}$                                         | $V_{F4}$ |               | —   | —    | 500  |
|                               | $I_F = 100\text{mA}$                                        | $V_{F5}$ |               | —   | —    | 1000 |
| Maximum reverse current       | $V_R = 25\text{V}$                                          | $I_R$    | $\mu\text{A}$ | —   | —    | 2.0  |
| Capacitance between terminals | $V_R = 1.0\text{V}, f = 1\text{MHz}$                        | $C_T$    | pF            | —   | —    | 10.0 |
| Maximum reverse recovery time | $I_F = 10\text{mA}$<br>$I_R = 10\text{mA}, V_R = 6\text{V}$ | $t_{rr}$ | ns            | —   | —    | 6.0  |

● **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 |