

SOD-123 Surface Mount Schottky Barrier Rectifier

Features

- $V_R=30V$
- $I_{F(AV)}=1A$
- Power Dissipation of 350mW
- For use in low voltage, high frequency inverters
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

For use in low voltage high frequency circuit signals.

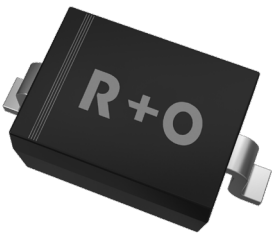
Mechanical Data

- Case: SOD-123  
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  
1.0 Ampere

SOD-123



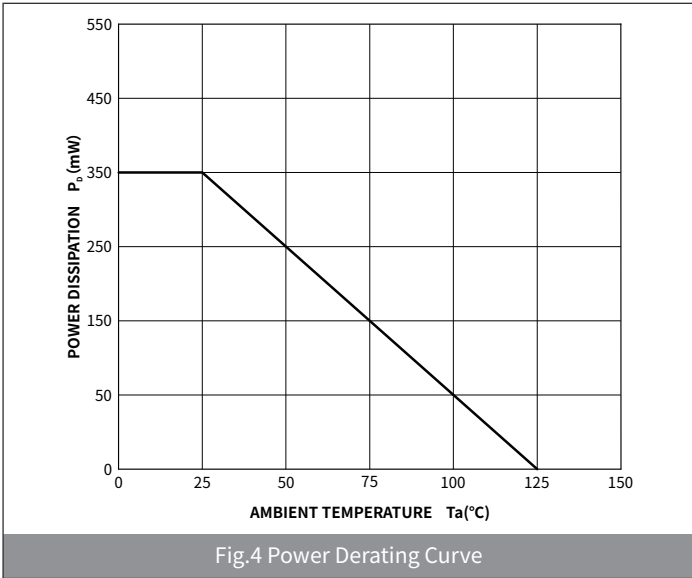
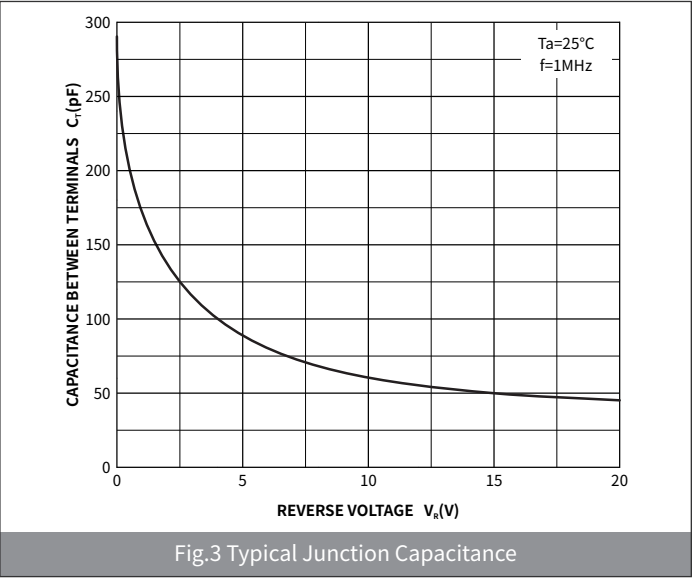
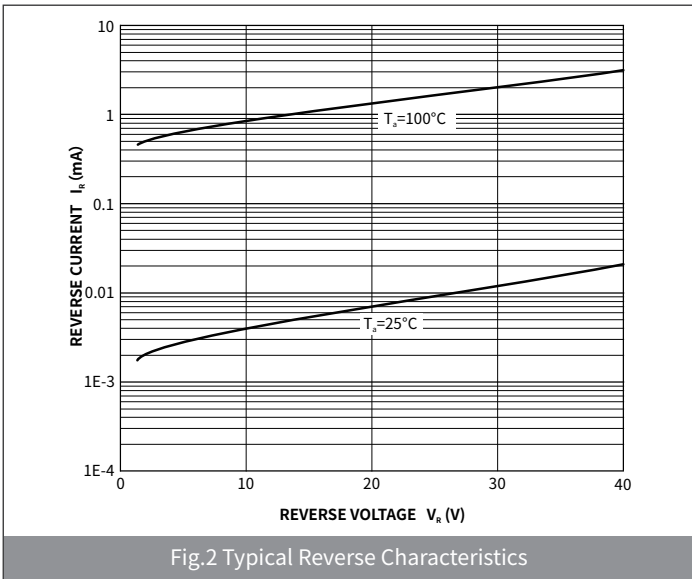
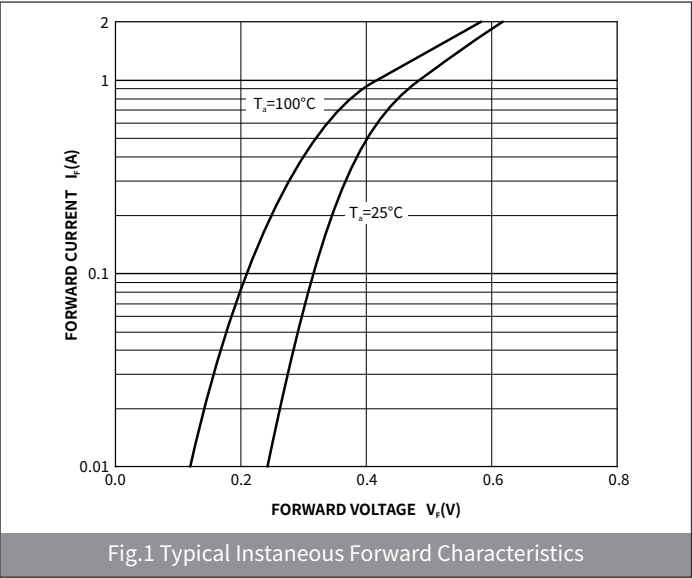
Maximum Ratings (Ta=25°C Unless otherwise specified)

| 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     | 1.0       |
| Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave | $I_{FSM}$       | A     | 30        |
| Power Dissipation                                                  | $P_D$           | mW    | 350       |
| Junction Temperature                                               | $T_j$           | °C    | 125       |
| Storage temperature range                                          | $T_{STG}$       | °C    | -55 ~+150 |
| Typical thermal resistance                                         | $R_{\theta JA}$ | °C /W | 222       |

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

| PARAMETER               | TEST CONDITIONS      | SYMBOL         | UNIT | Min | Type | Max  |
|-------------------------|----------------------|----------------|------|-----|------|------|
| Maximum forward voltage | I <sub>F</sub> =0.5A | V <sub>F</sub> | V    | —   | —    | 0.46 |
|                         | I <sub>F</sub> =1.0A |                |      | —   | —    | 0.48 |
| Maximum reverse current | V <sub>R</sub> =15V  | I <sub>R</sub> | mA   | —   | —    | 0.02 |
|                         | V <sub>R</sub> =30V  |                |      | —   | —    | 0.05 |

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



RB160M-30

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

● Ordering Information

| PACKAGE | PACKAGE CODE | UNIT WEIGHT(g) | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|---------|--------------|----------------|-----------|----------|-------------|---------------|
| SOD-123 | R1           | 0.012          | 3000      | 45000    | 180000      | 7"            |

● Package Outline Dimensions (SOD-123)

| Symbol | Dimensions  |      |        |       |
|--------|-------------|------|--------|-------|
|        | Millimeters |      | Inches |       |
|        | Min.        | Max. | Min.   | Max.  |
| A      | 3.55        | 3.85 | 0.140  | 0.152 |
| B      | 2.55        | 2.85 | 0.100  | 0.112 |
| C      | 1.40        | 1.80 | 0.055  | 0.071 |
| D      | 0.95        | 1.35 | 0.140  | 0.152 |
| E      | 0.51        | 0.71 | 0.037  | 0.053 |
| F      | -           | 0.15 | -      | 0.006 |
| G      | 0.15        | 0.45 | 0.006  | 0.008 |
| H      | 0.08        | 0.25 | 0.003  | 0.010 |
| θ      | -           | 8°   | -      | 8°    |

| Symbol | Dimensions  |      |        |       |
|--------|-------------|------|--------|-------|
|        | Millimeters |      | Inches |       |
|        | Min.        | Max. | Min.   | Max.  |
| J      | 0.91        | -    | 0.036  | -     |
| K      | -           | 2.36 | -      | 0.092 |
| M      | 1.22        | -    | 0.048  | -     |