

## SOD-123 Surface Mount Schottky Barrier Rectifier

### Features

- $V_R=60V$
- $I_{F(AV)}=1.0A$
- High Current Capability
- Low Forward Voltage Drop
- Low IR
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

### Applications

The device is a single rectifier offering low VF and excellent high temperature stability.

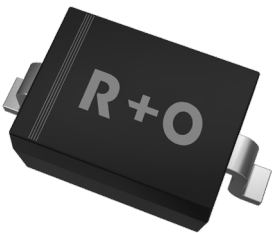
### Mechanical Data

- 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  
60 V  
Forward Current  
1.0 Ampere

SOD-123



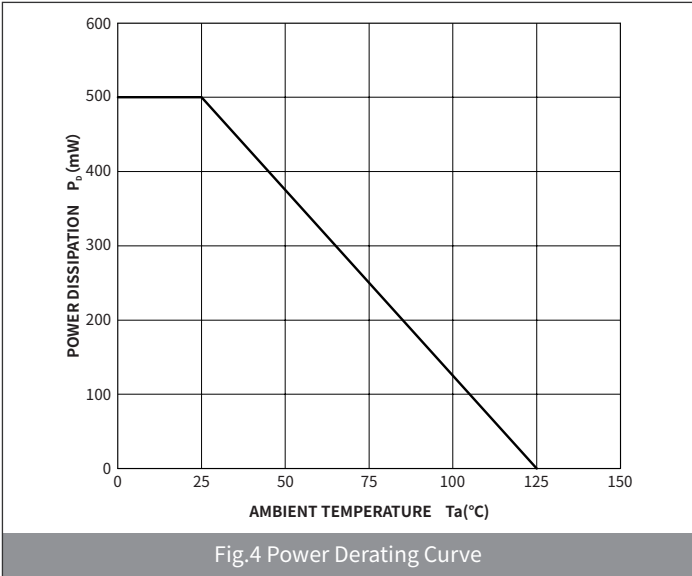
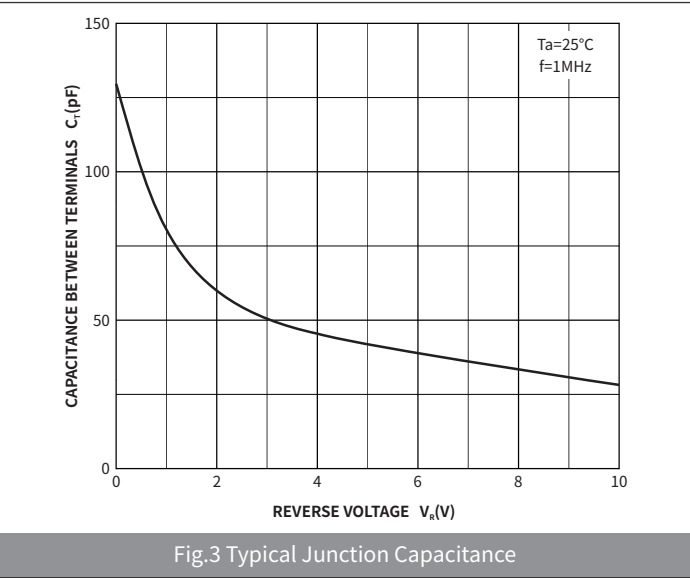
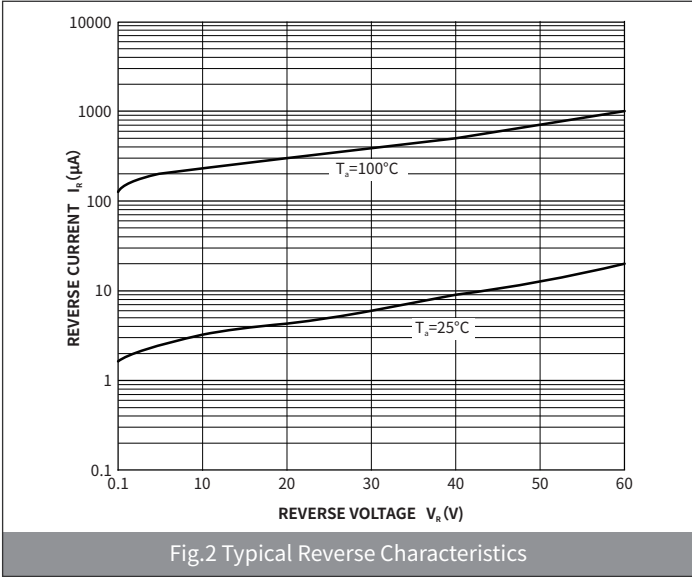
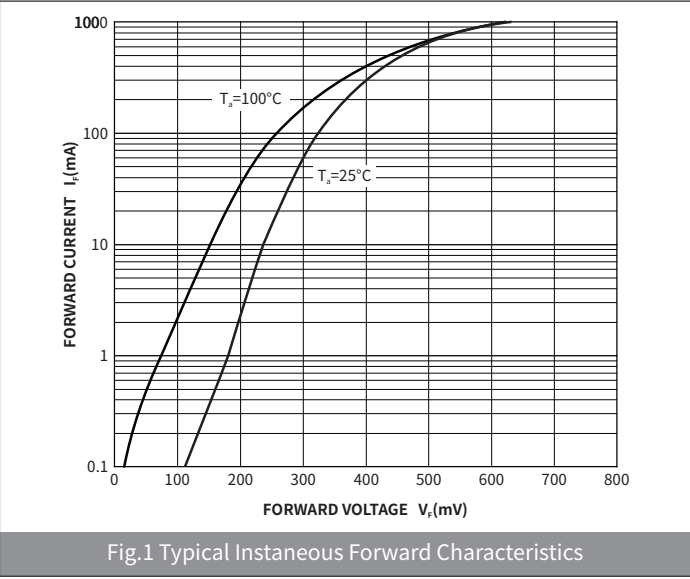
### Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                                            | SYMBOL           | UNIT  | VALUE    |
|----------------------------------------------------------------------|------------------|-------|----------|
| Maximum repetitive peak reverse voltage                              | $V_{RRM}$        | V     | 60       |
| Maximum RMS voltage                                                  | $V_{RMS}$        | V     | 42       |
| Maximum DC blocking voltage                                          | $V_{DC}$         | V     | 60       |
| Maximum Average Forward Rectified Current                            | $I_{F(AV)}$      | A     | 1.0      |
| Non-repetitive Peak Forward Surge Current<br>@t=8.3ms Half-sine wave | $I_{FSM}$        | A     | 10       |
| Power Dissipation                                                    | $P_D$            | mW    | 500      |
| Junction temperature                                                 | $T_j$            | °C    | 125      |
| Storage temperature range                                            | $T_{STG}$        | °C    | -55-+150 |
| Typical thermal resistance                                           | $R_{\theta J-A}$ | °C /W | 400      |

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

| PARAMETER                     | TEST CONDITIONS  | SYMBOL | UNIT | Min | Type | Max |
|-------------------------------|------------------|--------|------|-----|------|-----|
| Maximum forward voltage       | $I_F=1.0A$       | $V_F$  | V    | —   | —    | 0.7 |
| Maximum reverse current       | $V_R=60V$        | $I_R$  | uA   | —   | —    | 100 |
| Capacitance between terminals | $V_R=4V, f=1MHz$ | $C_T$  | pF   | —   | —    | 120 |

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



# B16W

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  | -     |