

► Features

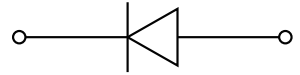
- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

► Applications

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

► Mechanical Data

- Case: SOD-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

SOD-323


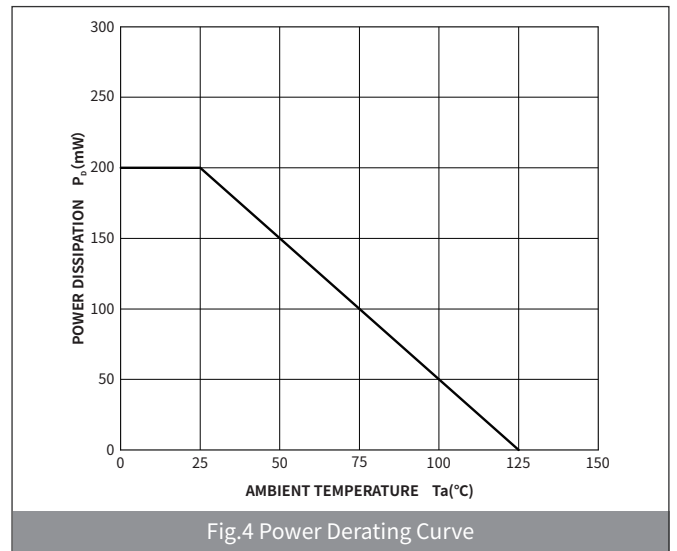
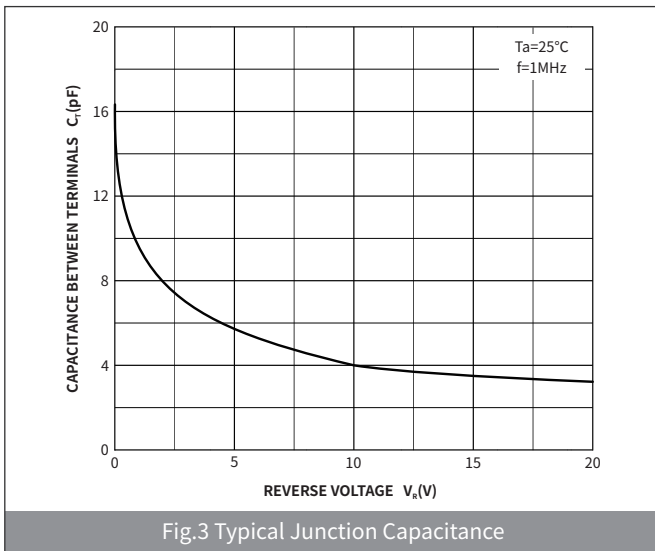
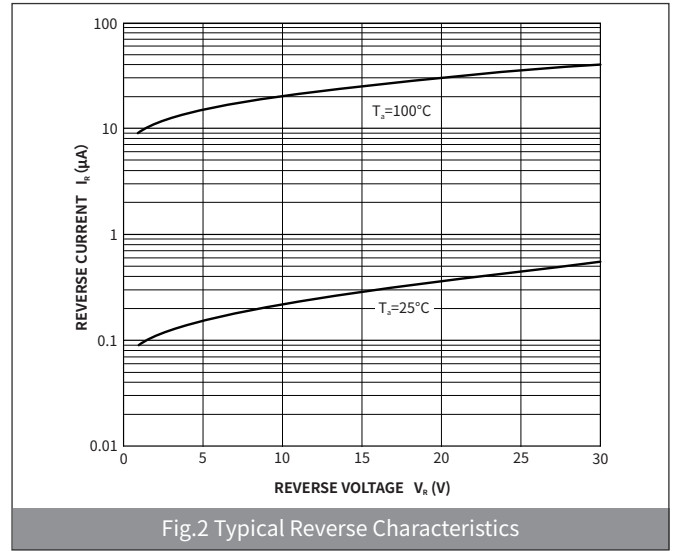
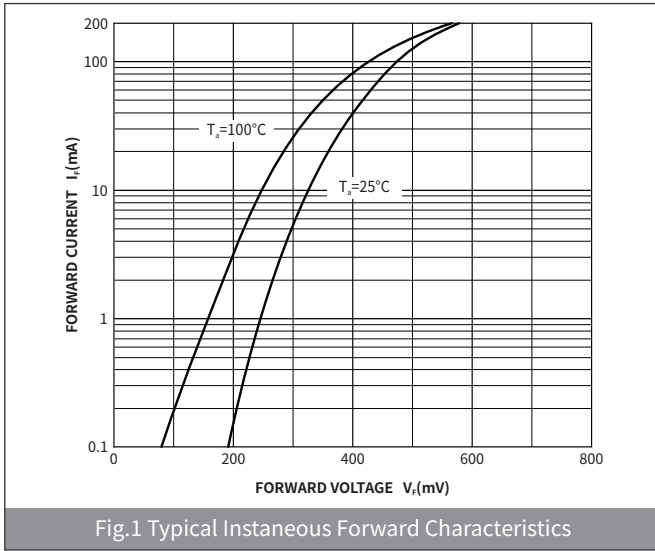
► Maximum Ratings (Ta=25°C Unless otherwise specified)

| 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 | $I_{F(AV)}$ | mA | 200 |
| Repetitive peak forward current | I_{FRM} | mA | 300 |
| Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave | I_{FSM} | mA | 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 specified)

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

► **Ratings And Characteristics Curves** ($T_a=25^\circ\text{C}$ 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 | 30000 | 120000 | 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 ₁ | 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 ₁ | 0.25 | 0.40 | 0.010 | 0.016 |
| H | - | 0.14 | - | 0.006 |

Suggested Pad Layout

| Symbol | Dimensions | | | |
|--------|-------------|------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| J | 0.80 | - | 0.031 | - |
| K | - | 1.40 | - | 0.055 |
| M | 0.80 | - | 0.031 | - |

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