

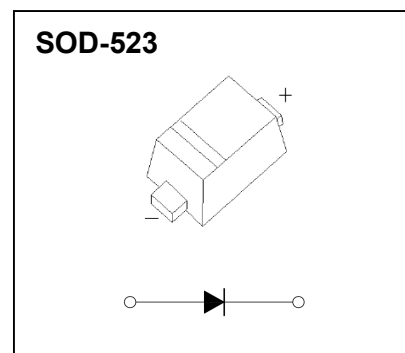
Plastic-Encapsulate Diodes

SCHOTTKY BARRIER DIODE

FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Low Reverse Recovery Time
- Low Reverse Capacitance

MARKING: S4



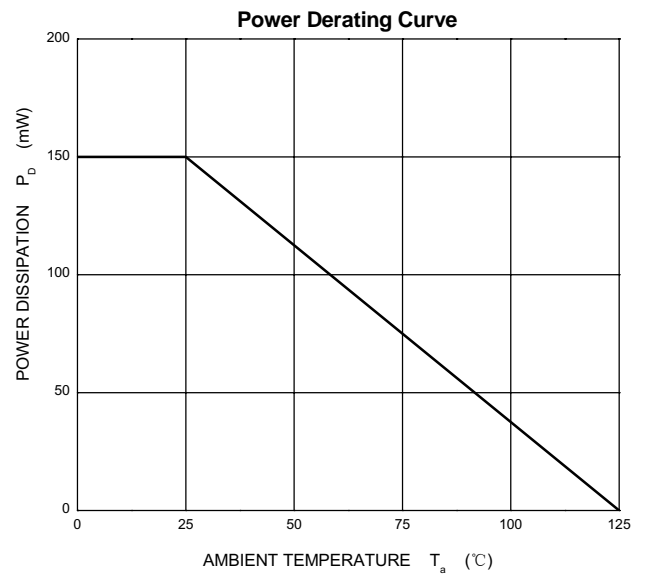
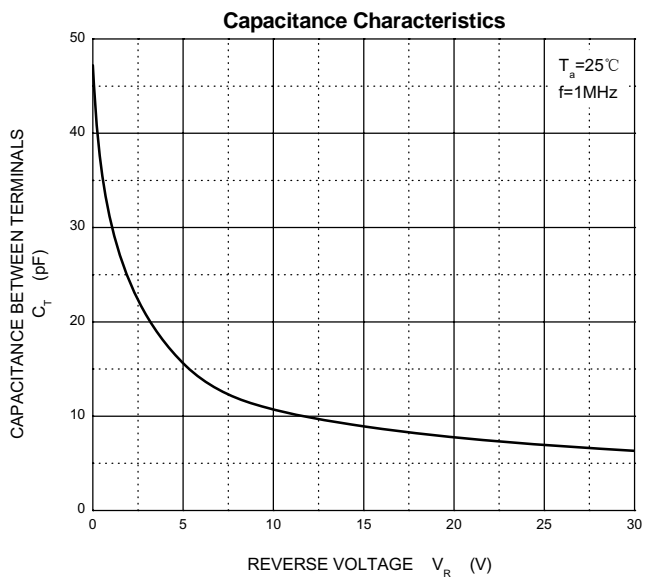
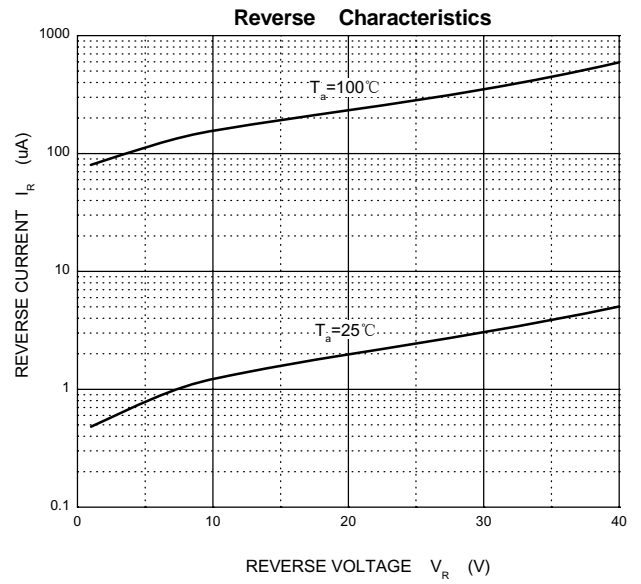
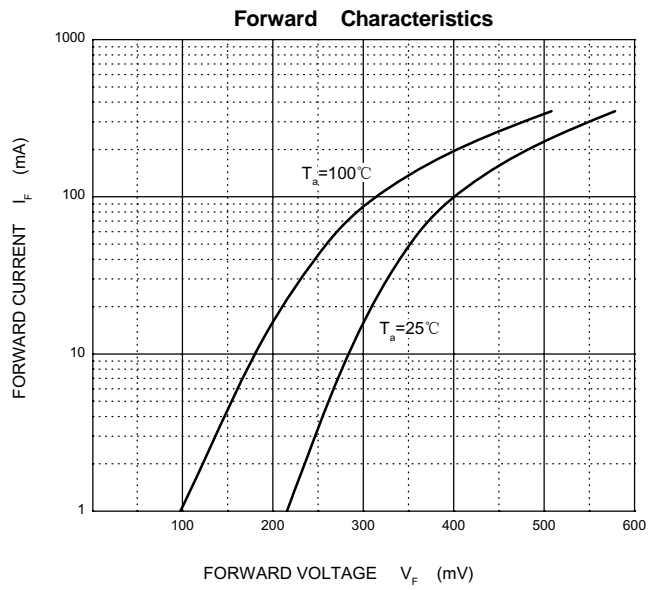
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|-----------------|---|----------|-----------------------------|
| V_{RRM} | Peak Repetitive Reverse Voltage | 40 | V |
| V_{RWM} | Working Peak Reverse Voltage | | |
| V_R | DC Blocking Voltage | | |
| $V_{R(RMS)}$ | RMS Reverse Voltage | 28 | V |
| I_{FM} | Forward Continuous Current | 350 | mA |
| I_{FSM} | Non-Repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$ | 2 | A |
| P_D | Power Dissipation | 150 | mW |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient | 667 | $^{\circ}\text{C}/\text{W}$ |
| T_j | Junction Temperature | 125 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature | -55~+150 | $^{\circ}\text{C}$ |

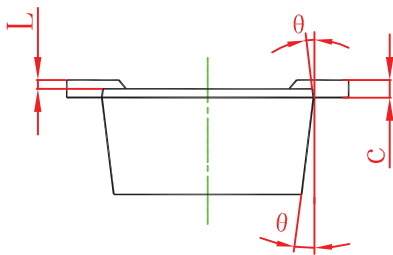
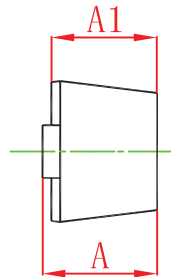
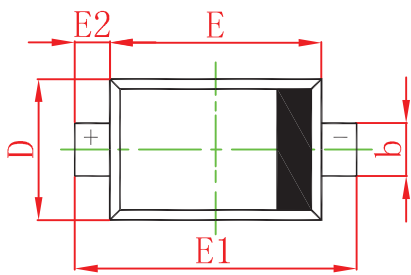
ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|-----------------------|------------|--|-----|------|------|---------------|
| Reverse voltage | $V_{(BR)}$ | $I_R=100\mu\text{A}$ | 40 | | | V |
| Reverse current | I_R | $V_R=30\text{V}$ | | | 5 | μA |
| | | $V_R=20\text{V}$ | | | 2 | |
| | | $V_R=10\text{V}$ | | | 1 | |
| Forward voltage | V_F | $I_F=1\text{mA}$ | | 0.27 | | V |
| | | $I_F=5\text{mA}$ | | 0.32 | | |
| | | $I_F=20\text{mA}$ | | | 0.37 | |
| | | $I_F=200\text{mA}$ | | | 0.6 | |
| Total capacitance | C_{tot} | $V_R=0\text{V}, f=1\text{MHz}$ | | 50 | | pF |
| Reverse recovery time | t_{rr} | $I_F=I_R=200\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$ | | 10 | | ns |

Typical Characteristics

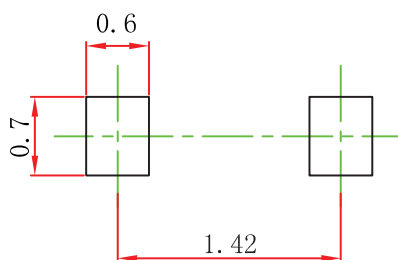


SOD-523 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|----------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.510 | 0.770 | 0.020 | 0.031 |
| A1 | 0.500 | 0.700 | 0.020 | 0.028 |
| b | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 0.750 | 0.850 | 0.030 | 0.033 |
| E | 1.100 | 1.300 | 0.043 | 0.051 |
| E1 | 1.500 | 1.700 | 0.059 | 0.067 |
| E2 | 0.200 REF | | 0.008 REF | |
| L | 0.010 | 0.070 | 0.001 | 0.003 |
| θ | 7° REF | | 7° REF | |

SOD-523 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.