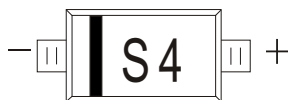


## SOD-523 Plastic-Encapsulate Diodes

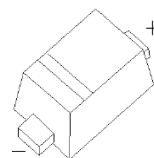
## FEATURES

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

## MARKING: S4



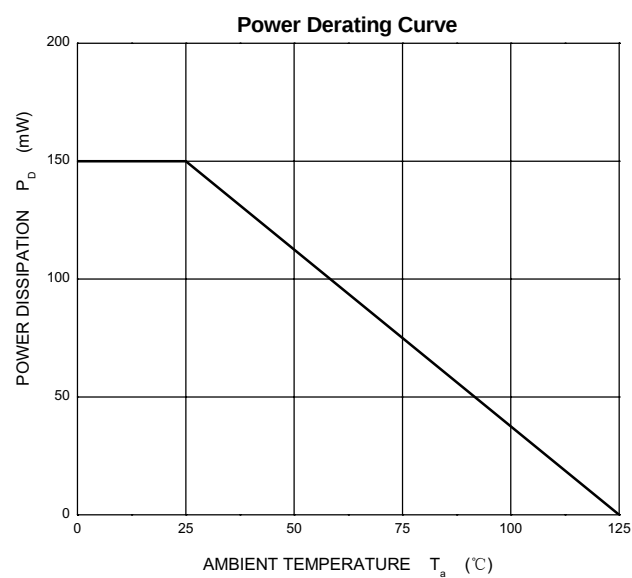
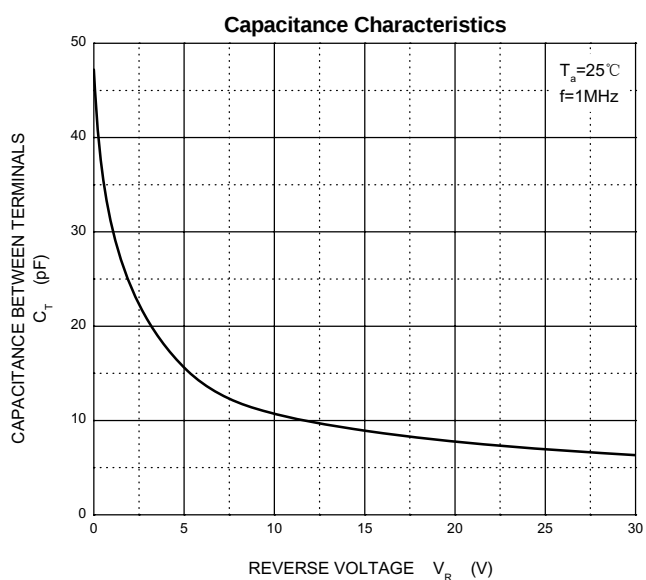
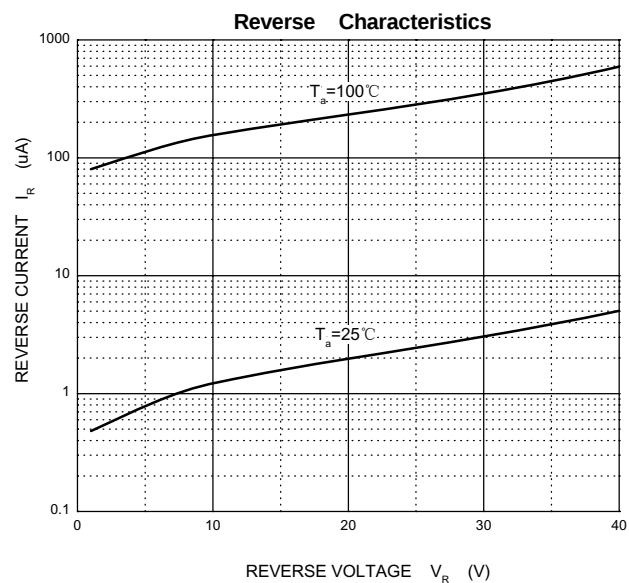
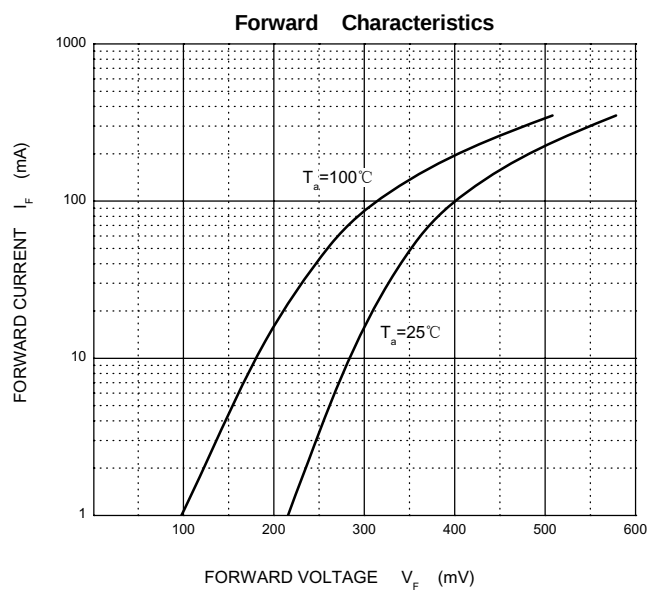
## SOD-523

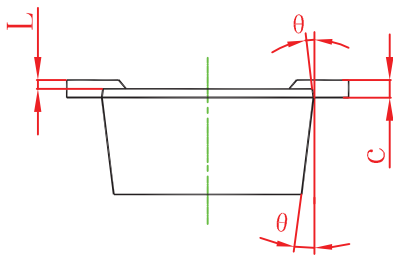
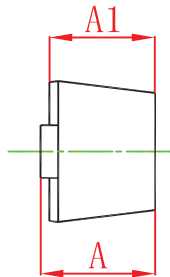
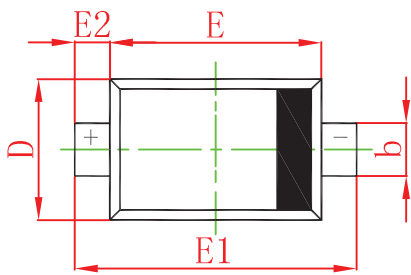
MAXIMUM RATINGS (  $T_a=25^{\circ}\text{C}$  unless otherwise noted )

| 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      | $^{\circ}\text{C/W}$ |
| $T_j$           | 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)

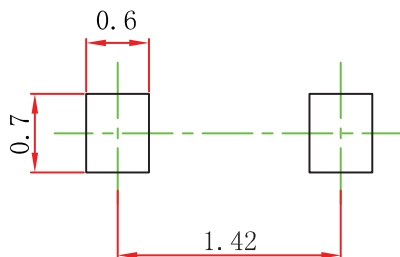
| Parameter             | Symbol     | Test conditions                                             | Min | Typ  | Max  | Unit          |
|-----------------------|------------|-------------------------------------------------------------|-----|------|------|---------------|
| Reverse voltage       | $V_{(BR)}$ | $I_R=100\mu\text{A}$                                        | 40  |      |      | V             |
| Reverse current       | $I_R$      | $V_R=30\text{V}$                                            |     |      | 5    | $\mu\text{A}$ |
|                       |            | $V_R=20\text{V}$                                            |     |      | 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            |





| 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.