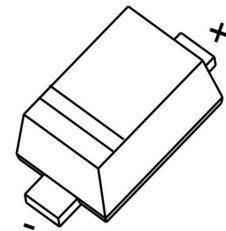


### Very Small Outline Flat Lead Plastic Package General Purpose Application Fast Switching Diode

#### Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol    | Parameter  | Value       | Units |
|-----------|--|-------------|-------|
| $P_D$     | Power Dissipation  | 200         | mW    |
| $T_{STG}$ | Storage Temperature Range                                      | -55 to +150 | °C    |
| $T_J$     | Operating Junction Temperature                                 | +150        | °C    |
| $V_{RSM}$ | Non-Repetitive Peak Reverse Voltage                            | 100         | V     |
| $V_{RRM}$ | Repetitive Peak Reverse Voltage                                | 75          | V     |
| $I_{FRM}$ | Repetitive Peak Forward Current                                | 300         | mA    |
| $I_O$     | Continuous Forward Current                                     | 150         | mA    |
| $I_{FSM}$ | Non-repetitive Peak Forward Surge Current<br>(Pulse Width=1us) | 2           | A     |

These ratings are limiting values above which the serviceability of the diode may be impaired.



SOD-523



MARKING:T4



#### Specification Features:

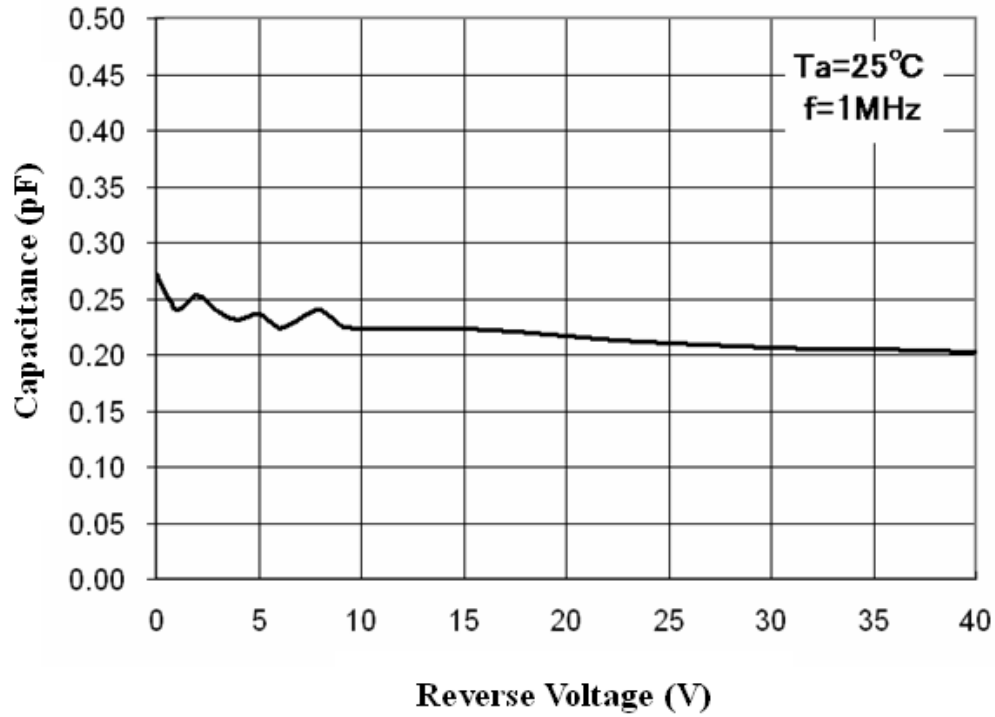
- Fast Switching Device ( $T_{RR} < 4.0$  nS)
- General Purpose Diodes
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode
- Weight: approx. 0.002g

#### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

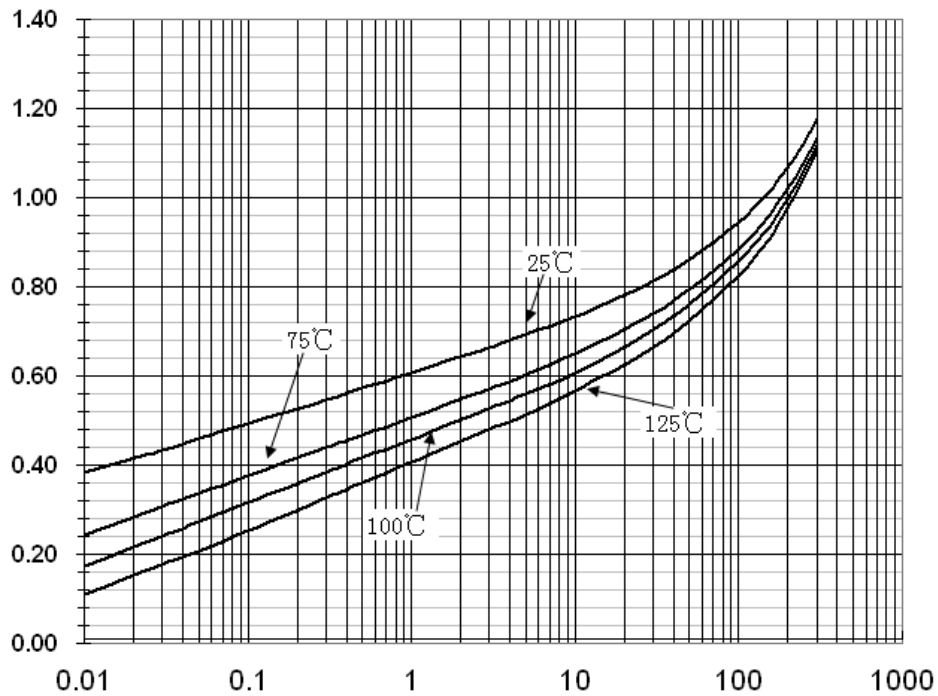
| Symbol   | Parameter               | Test Condition   | Limits    |                    | Unit                |
|----------|-------------------------|--|-----------|--------------------|---------------------|
|          |                         |  | Min       | Max                |                     |
| $B_V$    | Breakdown Voltage       | $I_R=100\mu\text{A}$<br>$I_R=5\mu\text{A}$                                       | 100<br>75 |                    | Volts               |
| $I_R$    | Reverse Leakage Current | $V_R=20\text{V}$<br>$V_R=75\text{V}$   |           | 25<br>5            | nA<br>$\mu\text{A}$ |
| $V_F$    | Forward Voltage         | $I_F=5\text{mA}$<br>$I_F=10\text{mA}$<br>$I_F=100\text{mA}$                      | 0.62      | 0.72<br>1.0<br>1.0 | Volts               |
| $T_{RR}$ | Reverse Recovery Time   | $I_F=10\text{mA}$<br>$I_R=60\text{mA}$<br>$R_L=100\Omega$<br>$I_{RR}=1\text{mA}$ |           | 4                  | nS                  |
| $C$      | Capacitance             | $V_R=0\text{V}$ , $f=1\text{MHz}$  |           | 4                  | pF                  |

**Typical Performance Characteristics**

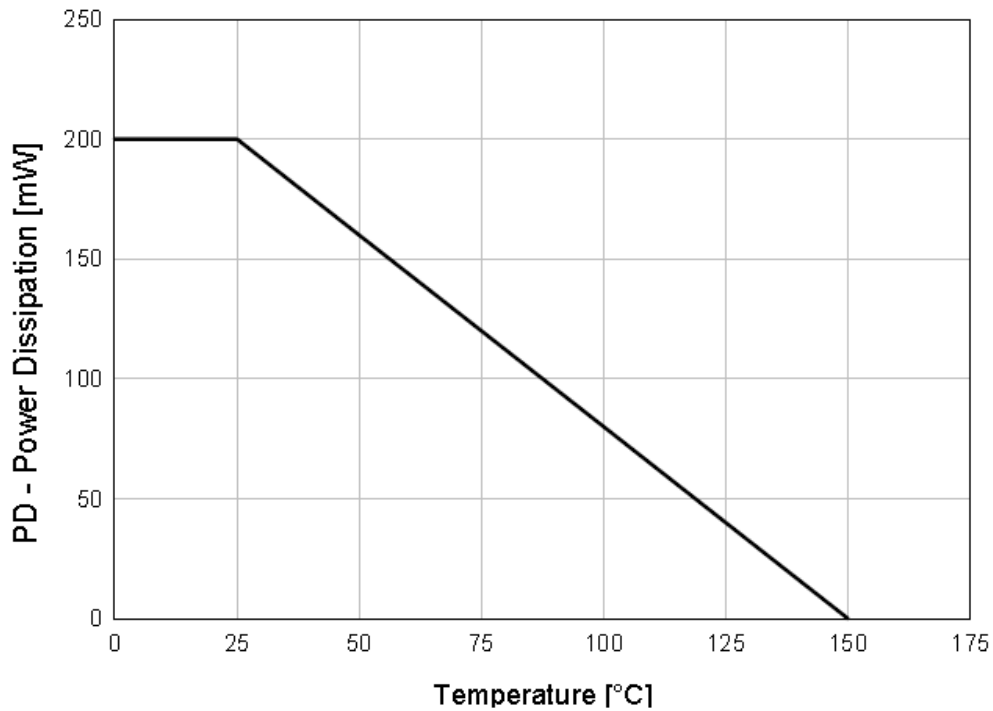
**Total Capacitance**



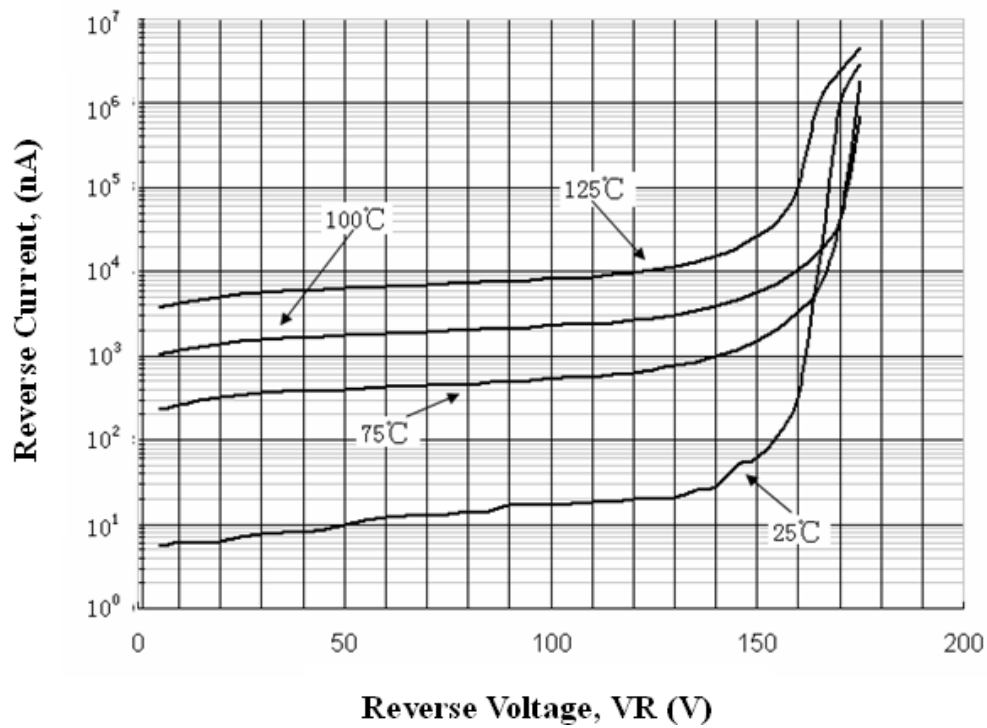
**Forward Voltage vs Ambient Temperature**



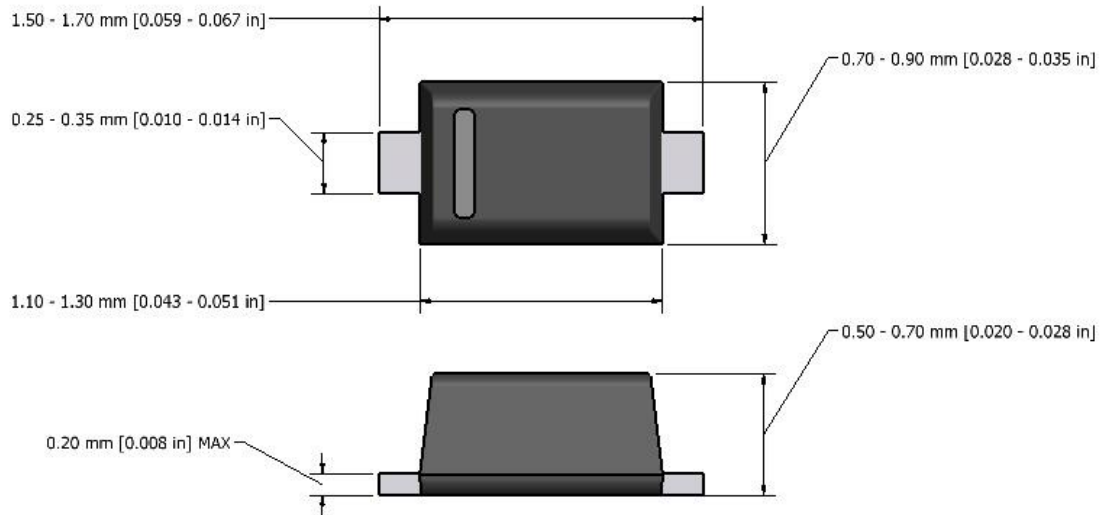
**Power Derating Curve**




**Reverse Current vs Reverse Voltage**



## Flat Lead SOD-523 Package Outline



**Note:** Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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