

**Features**

- ◆ Fast switching devices
- ◆ SOD-523F Micro SMD package
- ◆ RoHS compliant / Green EMC
- ◆ Matte Tin (Sn) Lead finish
- ◆ Cathode Band / Device marking
- ◆ Surface Mount Package Ideally Suited for Automatic Insertion
- ◆ For General Purpose Switching Applications
- ◆ High Conductance

**SOD-523F****Absolute Maximum Ratings (Ta = 25°C)**

| Parameter                                            | Symbol       | Value       | Units |
|------------------------------------------------------|--------------|-------------|-------|
| Non-Repetitive Peak Reverse Voltage                  | $V_{RM}$     | 100         | V     |
| Repetitive Peak Reverse Voltage                      | $V_{RRM}$    | 100         | V     |
| RMS Reverse Voltage                                  | $V_{R(RMS)}$ | 75          | V     |
| Forward Continuous Current                           | $I_{FM}$     | 300         | mA    |
| Average Rectified Output Current                     | $I_o$        | 150         | mA    |
| Non-Repetitive Peak Forward Surge Current (@t=8.3ms) | $I_{FSM}$    | 2.0         | A     |
| Power Dissipation                                    | $P_D$        | 150         | mW    |
| Junction Temperature                                 | $T_J$        | 150         | °C    |
| Storage Temperature                                  | $T_{STG}$    | -55 to +150 | °C    |

# Fast Switching Diode

## 1N4148WT

Electrical Characteristics (Ta = 25°C)

| Parameter             | Symbol          | Conditions                                                                              | Min. | Max.  | Units |
|-----------------------|-----------------|-----------------------------------------------------------------------------------------|------|-------|-------|
| Forward Voltage       | V <sub>F</sub>  | I <sub>F</sub> = 1mA                                                                    | --   | 0.715 | V     |
|                       |                 | I <sub>F</sub> = 10mA                                                                   | --   | 0.855 | V     |
|                       |                 | I <sub>F</sub> = 50mA                                                                   | --   | 1.0   | V     |
|                       |                 | I <sub>F</sub> = 150mA                                                                  | --   | 1.25  | V     |
| Reverse Current       | I <sub>R</sub>  | V <sub>R</sub> = 20V (25°C)                                                             | --   | 0.025 | µA    |
|                       |                 | V <sub>R</sub> = 75V (25°C)                                                             | --   | 1.0   | µA    |
|                       |                 | V <sub>R</sub> = 75V (150°C)                                                            |      | 50.0  | µA    |
| Capacitance           | C <sub>T</sub>  | V <sub>R</sub> = 0V, f = 1MHz                                                           | --   | 2     | pF    |
| Reverse Recovery Time | t <sub>rr</sub> | I <sub>F</sub> = I <sub>R</sub> = 10mA,<br>I <sub>RR</sub> = 1mA, R <sub>L</sub> = 100Ω | --   | 4     | ns    |

### SOD-523F Package Dimensions

**SOD-523F Package Outline**

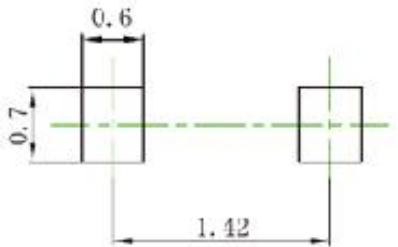
| Symbol | Dimensions in mm |      |
|--------|------------------|------|
|        | Min.             | Max. |
| A      | 0.51             | 0.77 |
| A1     | 0.50             | 0.70 |
| b      | 0.25             | 0.35 |
| c      | 0.08             | 0.15 |
| D      | 0.75             | 0.85 |
| E      | 1.10             | 1.30 |
| E1     | 1.50             | 1.70 |
| E2     | 0.20 REF.        |      |
| L      | 0.01             | 0.07 |
| θ      | 7° REF.          |      |

- Notes:**
- Halogen free. EMC.
  - Pb free solder.
  - Lead thickness includes solder plating.
  - Lead frame: Cu.
  - Other Tolerance: ±0.05.
  - Dimensions are exclusive of Burrs, Mold Flash and Tie Bar extrusions.

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**SOD-523F Package Dimensions (Continue)**



**SOD-523F Pattern Recommendation**