

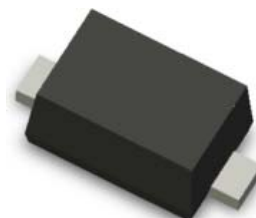
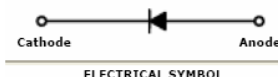
1N4148WT / 1N4448WT / 1N914BWT

High Conductance Fast Switching Diode

- Fast Switching Diode ($T_{rr} < 4.0\text{ns}$)
- Flat Lead, Surface Mount Device under 0.70mm Height
- Extremely Small Outline Plastic Package SOD523F
- Moisture Level Sensitivity 1
- Pb-free Version and RoHS Compliant
- Matte Tin (Sn) Lead Finish
- Green Mold Compound

Device Marking Code

| Device Type | Device Marking |
|-------------|----------------|
| 1N4148WT | E1 |
| 1N4448WT | E2 |
| 1N914BWT | E3 |



SOD-523F
Band Indicates Cathode*

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

| Symbol | Parameter | Value | Units |
|-----------|--------------------------------------|-------------|------------------|
| V_{RSM} | Non-Repetitive Peak Reverse Voltage | 75 | V |
| V_{RRM} | Repetitive Peak Reverse Voltage | 75 | V |
| I_{FRM} | Repetitive Peak Forward Current | 300 | mA |
| T_J | Operating Junction Temperature Range | -55 to +150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature Range | -55 to +150 | $^\circ\text{C}$ |

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

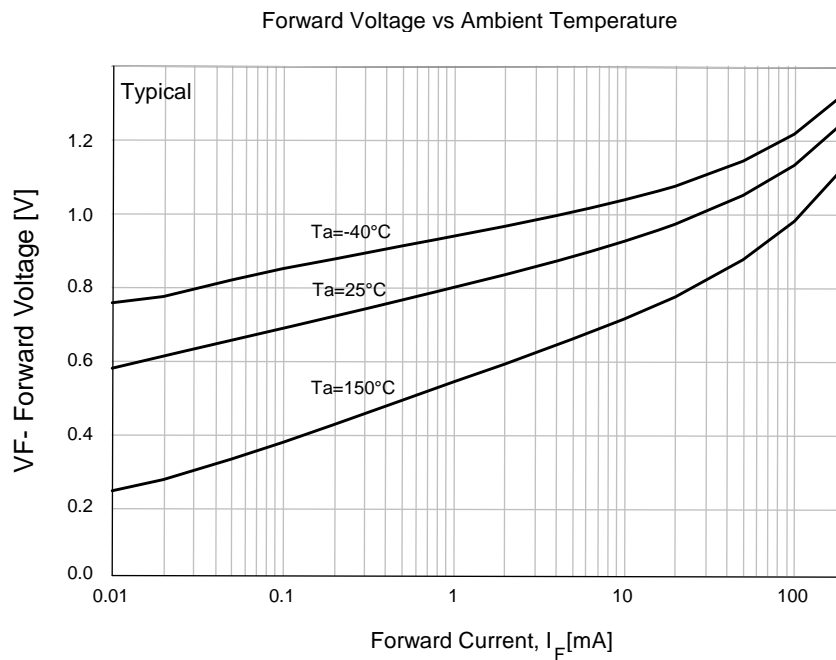
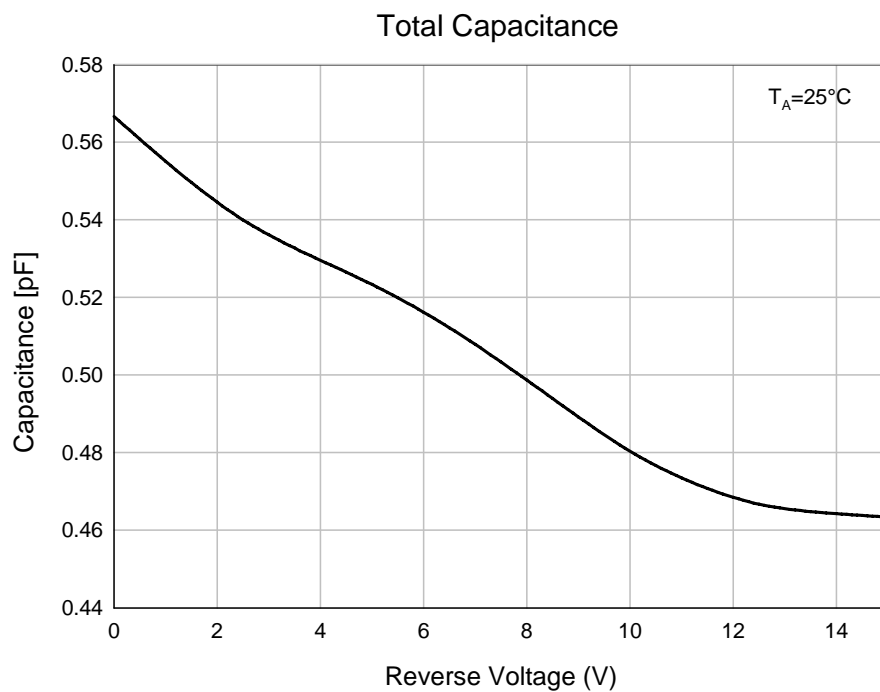
| Symbol | Parameter | Value | Unit |
|-----------------|--|-------|---------------------------|
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 500 | $^\circ\text{C}/\text{W}$ |
| P_D | Power Dissipation ($T_C = 25^\circ\text{C}$) | 200 | mW |

*Device mounted on FR-4 PCB minimum land pad.

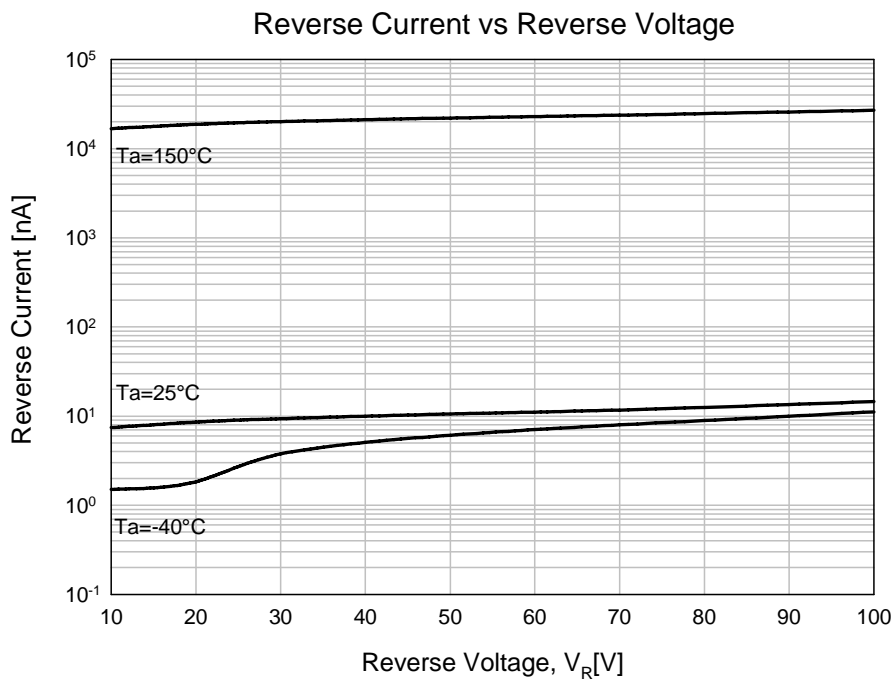
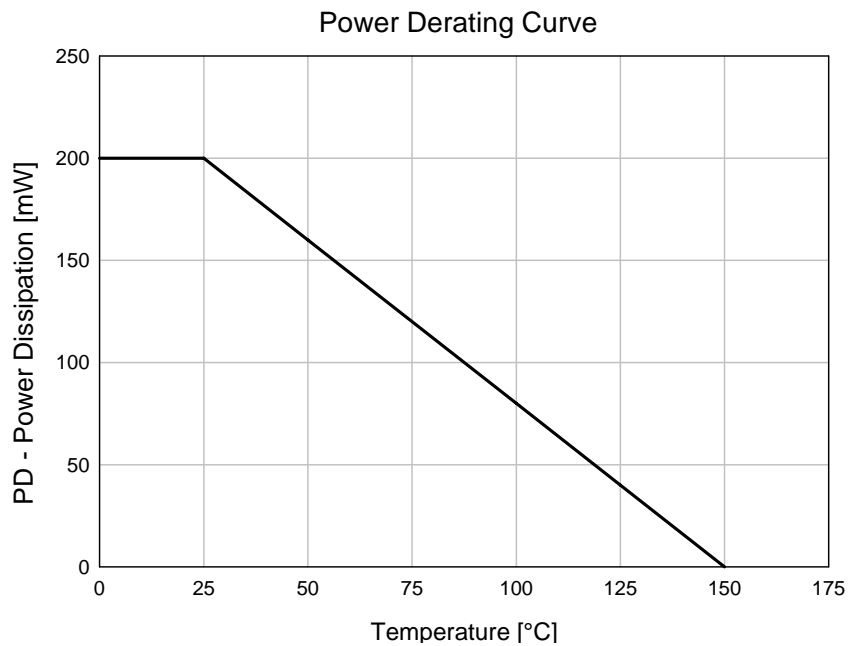
Electrical Characteristics* $T_a = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Conditions | Min | Typ | Max | Units |
|----------|-----------------------|--|-----------|-----|----------------|---------------------|
| BV_R | Breakdown Voltage | $I_R = 100\text{ }\mu\text{A}$ $I_R = 5\text{ }\mu\text{A}$ | 100 75 | | | V |
| I_R | Reverse Current | $V_R = 20\text{ V}$ $V_R = 75\text{ V}$ | | | 25 5 | nA μA |
| V_F | Forward Voltage | 1N4448WT/ 914WT 1N4448WT 1N4448WT/ 914WT $I_F = 5\text{ mA}$ $I_F = 10\text{ mA}$ $I_F = 100\text{ mA}$ | 0.62 | | 0.72 1 1 | V |
| C_O | Diode Capacitance | $V_R = 0, f = 1\text{ MHz}$ | | | 4 | pF |
| T_{RR} | Reverse Recovery Time | $I_F = 10\text{ mA}, V_R = 6.0\text{ V}$ $I_{RR} = 1\text{ mA}, R_L = 100\text{ }\Omega$ | | | 4 | nS |

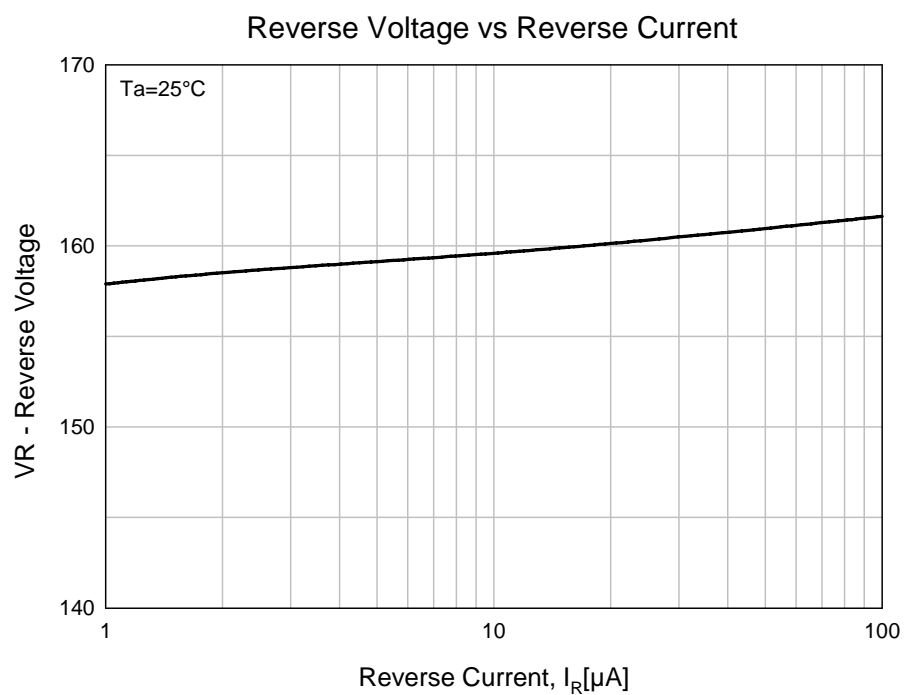
Typical Performance Characteristics



Typical Performance Characteristics

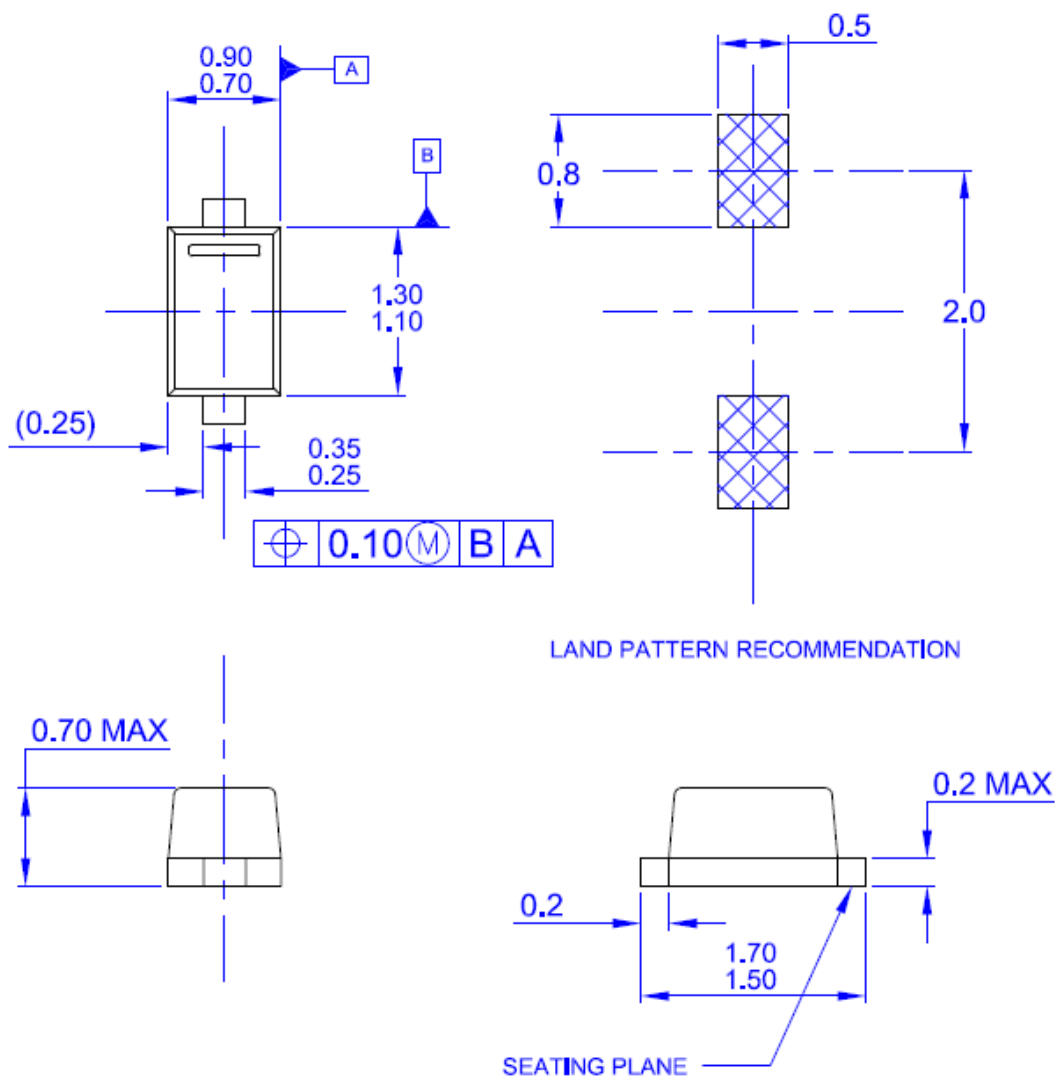


Typical Performance Characteristics



Package Dimension

SOD-523F






NOTES: UNLESS OTHERWISE SPECIFIED

- PACKAGE REFERENCE: THIS PACKAGE OUTLINE CONFORMS TO JEITA SC-79.
- ALL DIMENSIONS ARE IN MILLIMETERS.
- DRAWING CONFORMS TO ASME Y14.5M - 1994
- DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR EXTRUSIONS.
- LANDPATTERN RECOMMENDATION IS BASED ON IPC7351A STANDARD SOD1609X65M.
- DRAWING NUMBER AND REVISION: MKT-SOD523F1rev1

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|--------------------------|------------------------|--|
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