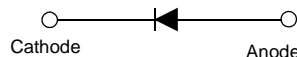


# 1N4148WT / 1N4448WT / 1N914BWT High Conductance Fast Switching Diode

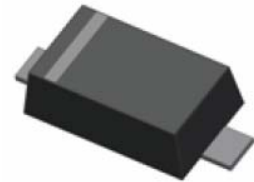
## Features

- 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



ELECTRICAL SYMBOL



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

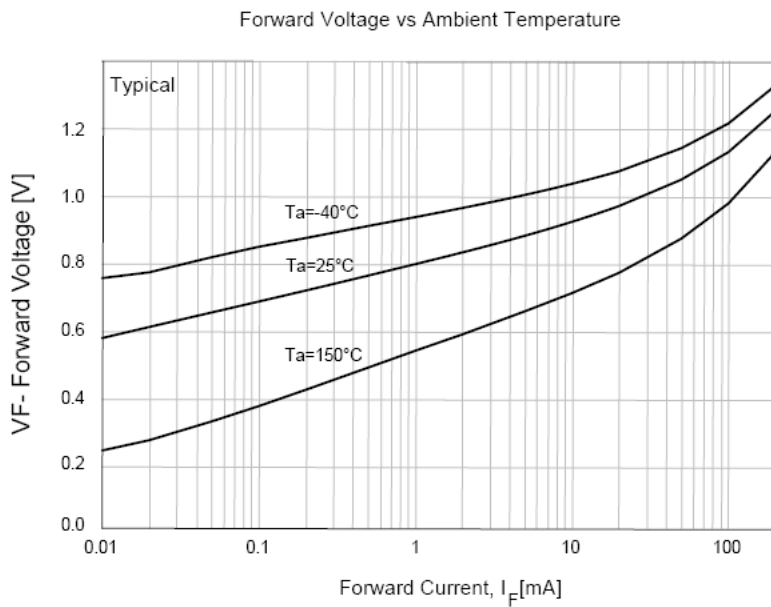
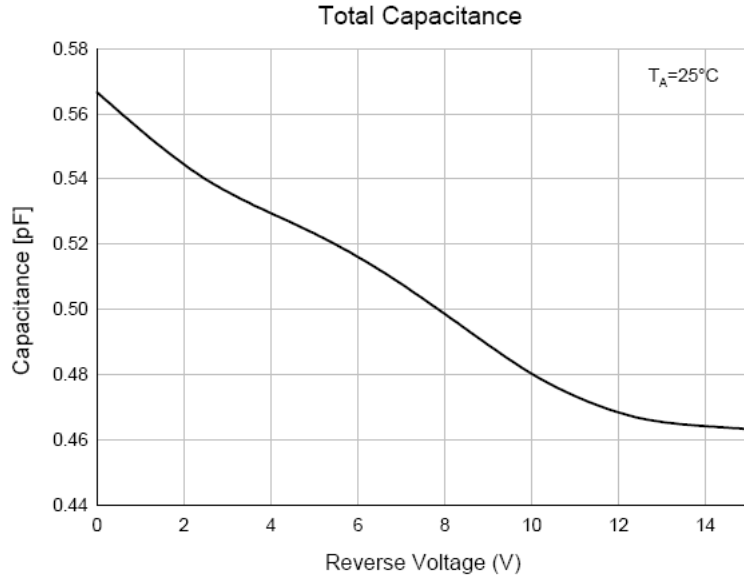
Symbol	Parameter	Value	Units
$P_D$	Power Dissipation ( $T_C=25^\circ\text{C}$ )	200	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	500	$^\circ\text{C}/\text{W}$

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

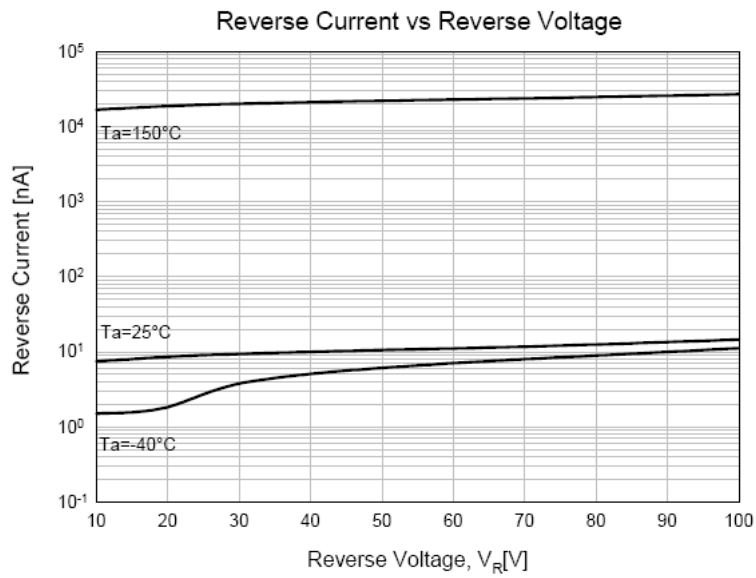
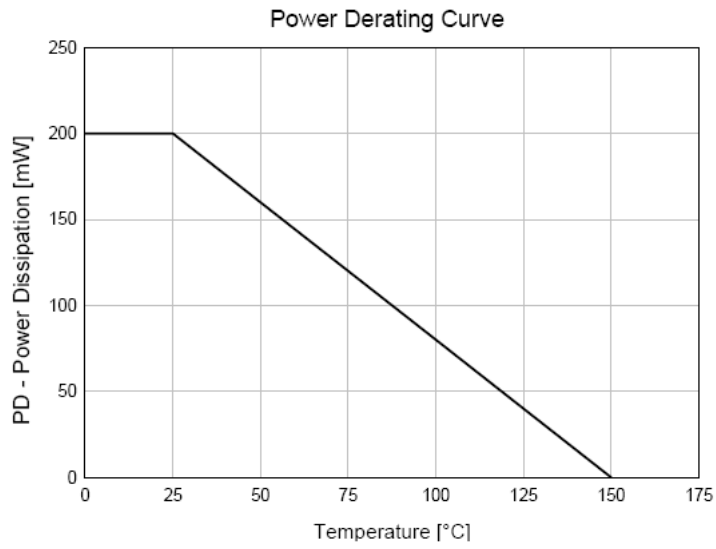
## Electrical Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
$BV_R$	Breakdown Voltage	$I_R = 100 \mu\text{A}$ $I_R = 5 \mu\text{A}$	100 75			V
$I_R$	Reverse Current	$V_R = 20 \text{V}$ $V_R = 75 \text{V}$			25 5	nA $\mu\text{A}$
$V_F$	Forward Voltage	1N4448WT/ 914BWT 1N4148WT 1N4448WT/ 914BWT	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	$I_F = 10 \text{mA}, V_R = 6.0 \text{V}$ $I_{RR} = 1 \text{mA}, R_L = 100 \Omega$			4	nS

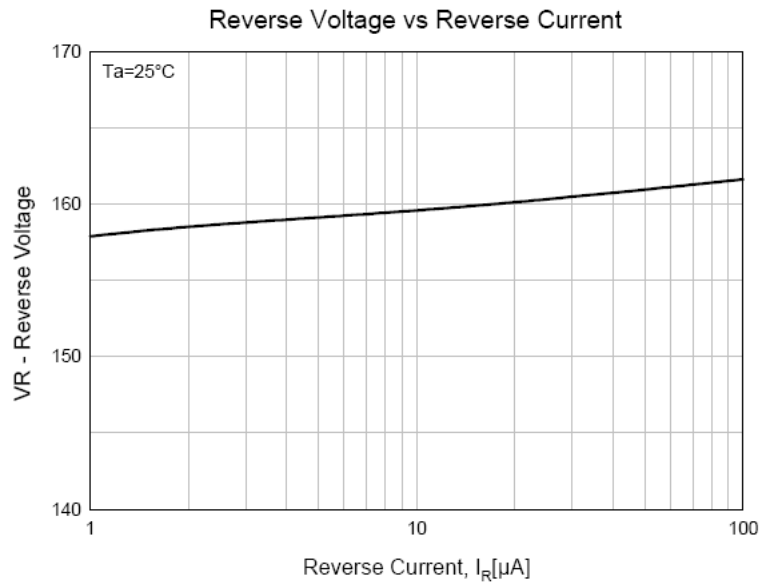
### Typical Performance Characteristics



Typical Performance Characteristics (Continue)

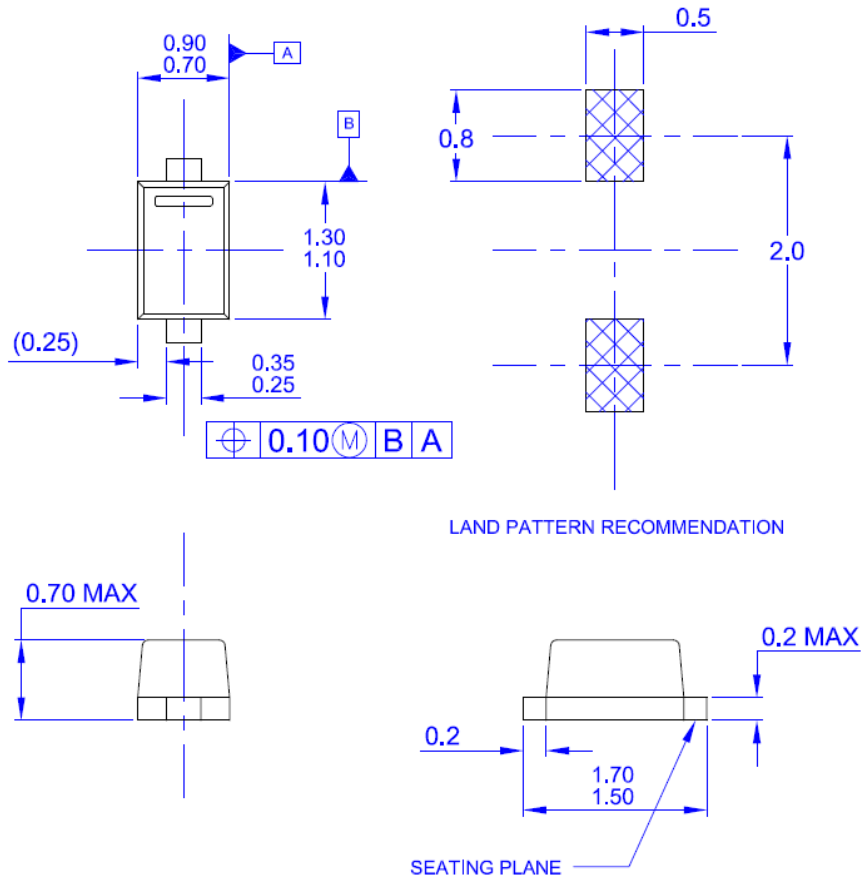


### Typical Performance Characteristics (Continue)



Physical Dimension

SOD-523F



NOTES: UNLESS OTHERWISE SPECIFIED

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



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Datasheet Identification	Product Status	Definition
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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.