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

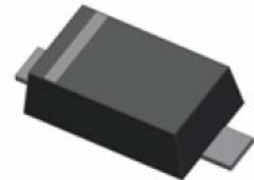
## Features

- 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

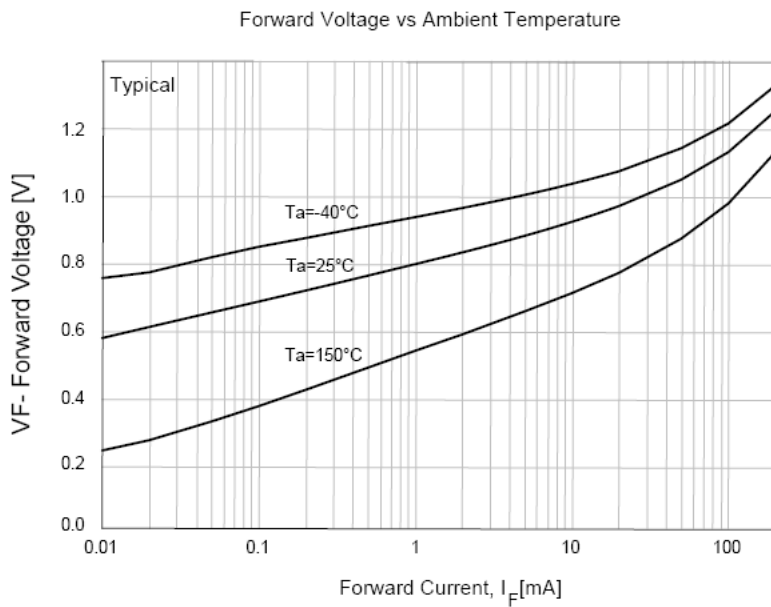
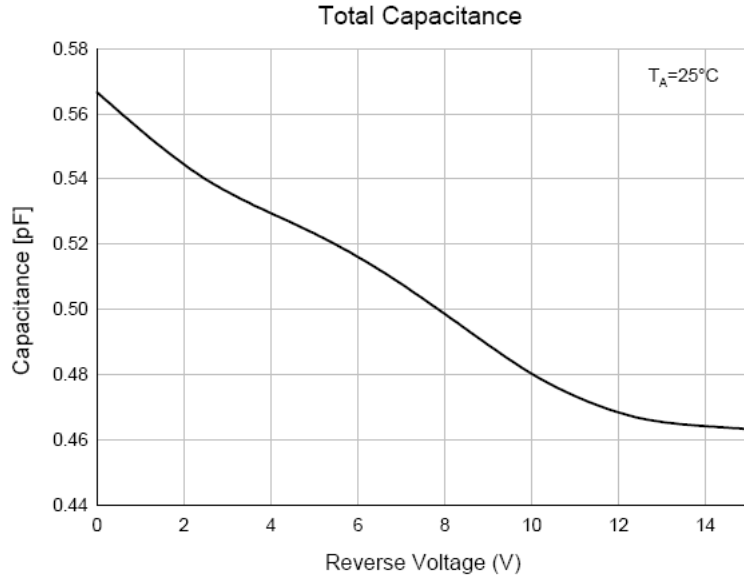
Symbol	Parameter	Value	Units
$P_D$	Power Dissipation ( $T_C=25^\circ\text{C}$ )	200	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	500	$^\circ\text{C}/\text{W}$

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

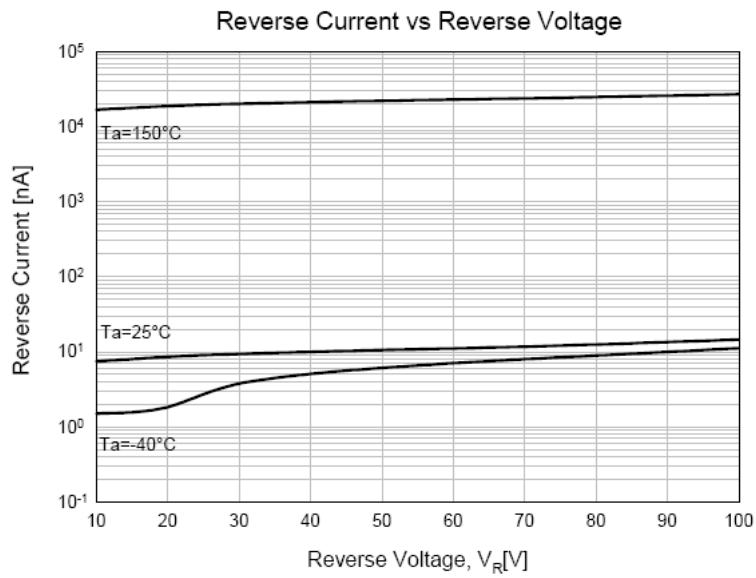
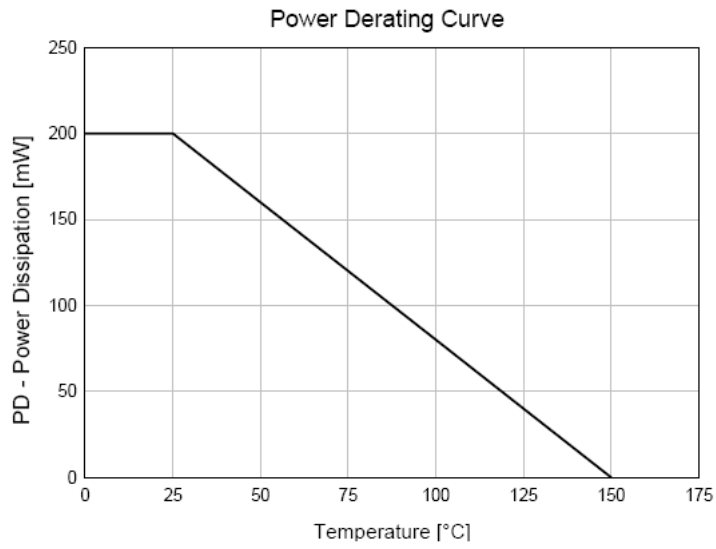
## Electrical Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

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

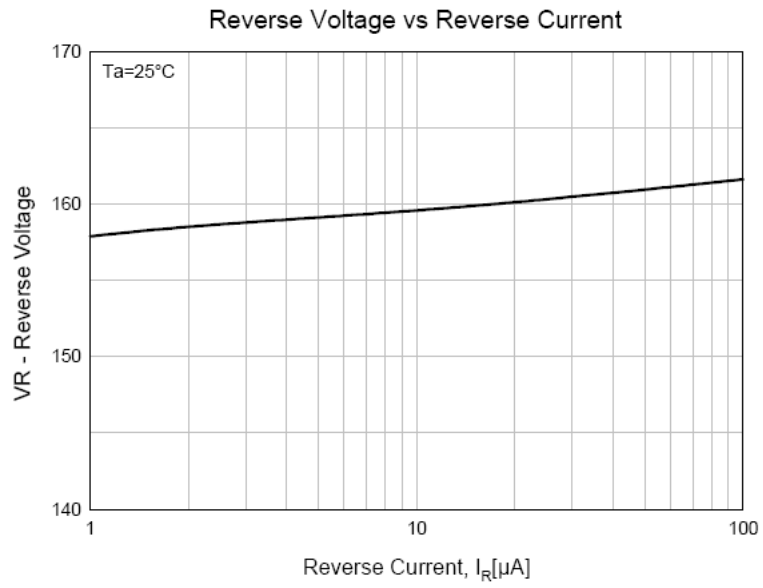
### Typical Performance Characteristics



Typical Performance Characteristics (Continue)

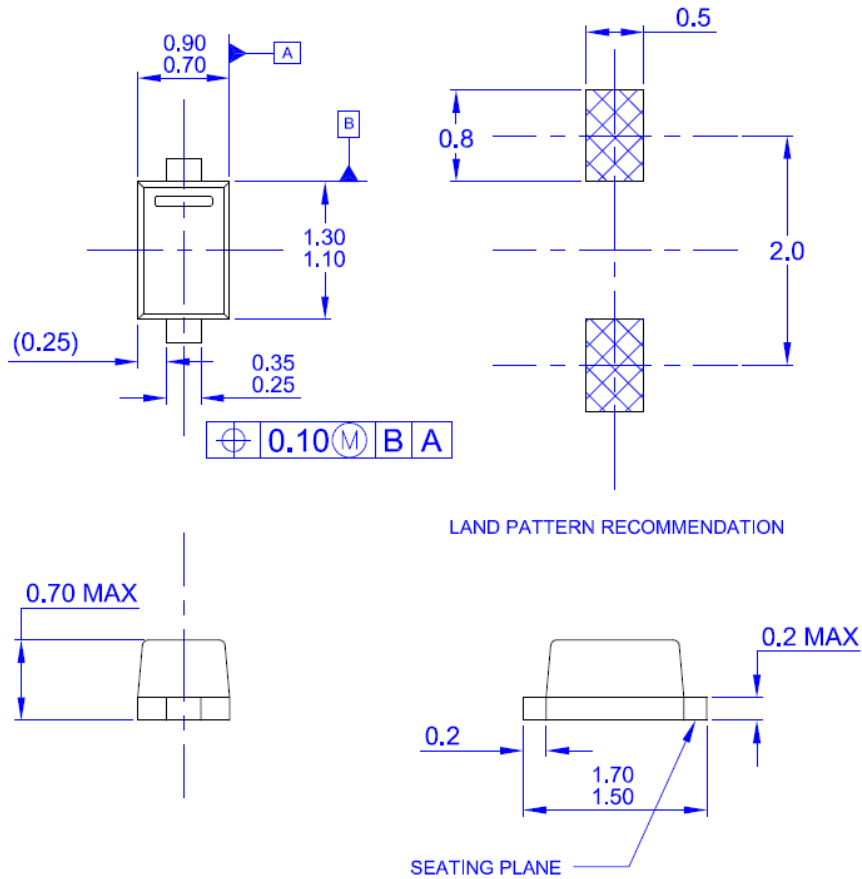


### Typical Performance Characteristics (Continue)



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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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.
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