

1N4148WT / 1N4448WT / 1N914BWT

High Conductance Fast Switching Diode

Features

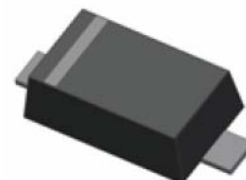
- Fast Switching Diode ($T_{rr} < 4.0\text{ nsec}$)
- Flat Lead, Surface Mount Device Under 0.70mm Height
- Extremely Small Outline Plastic Package SOD523F
- Moisture Level Sensitivity 1
- Pb-free Version and RoHS Compliant
- Matte Tin (Sn) Lead Finish
- Green Mold Compound

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

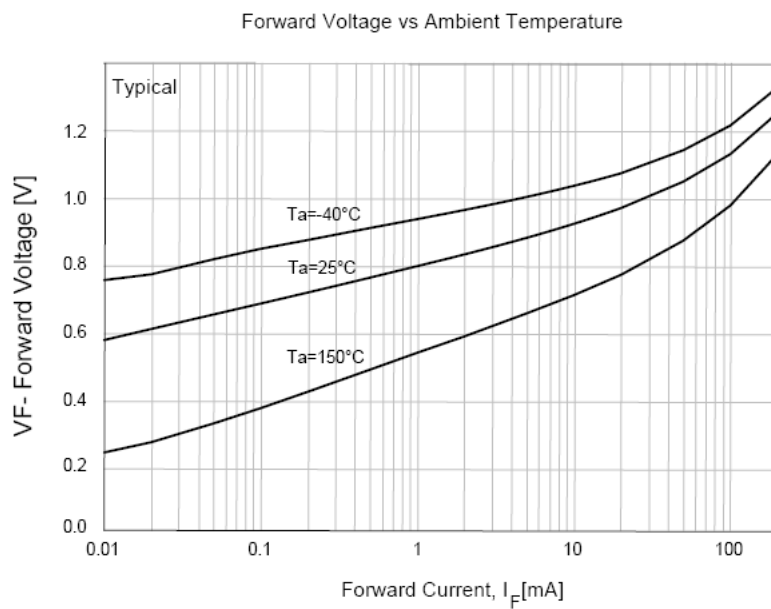
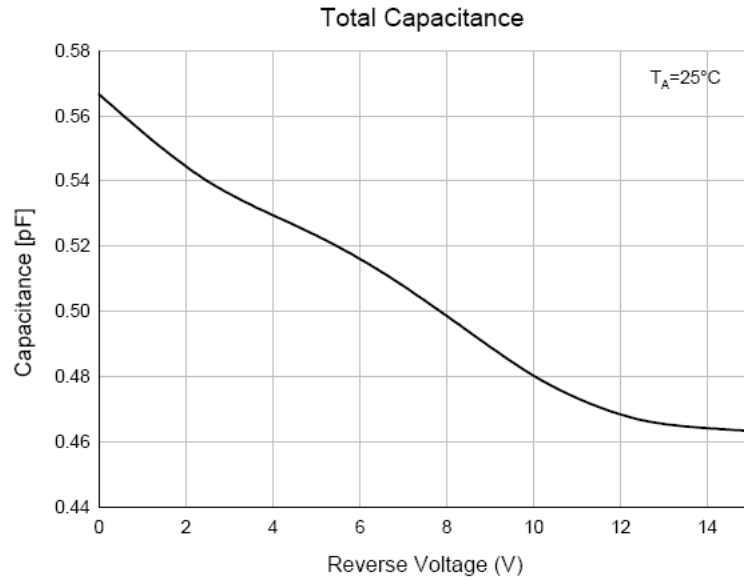
Symbol	Parameter	Value	Units
P_D	Power Dissipation ($T_C = 25^\circ\text{C}$)	200	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	500	$^\circ\text{C/W}$

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

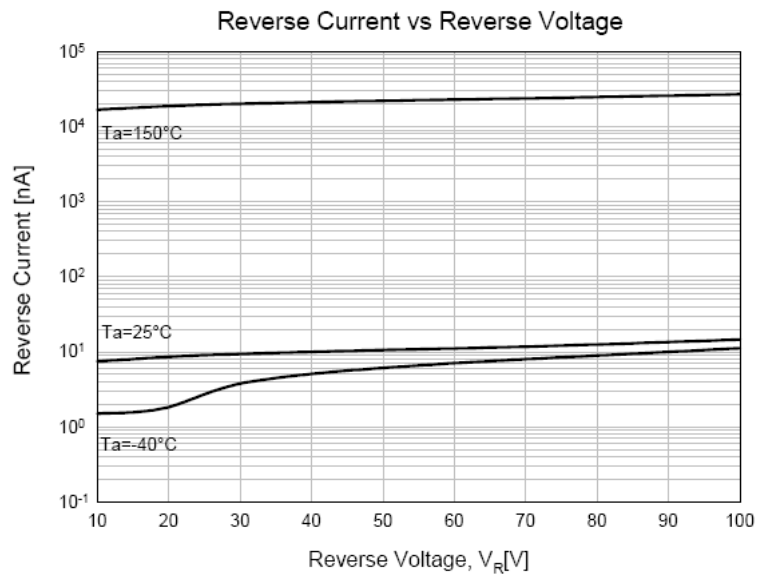
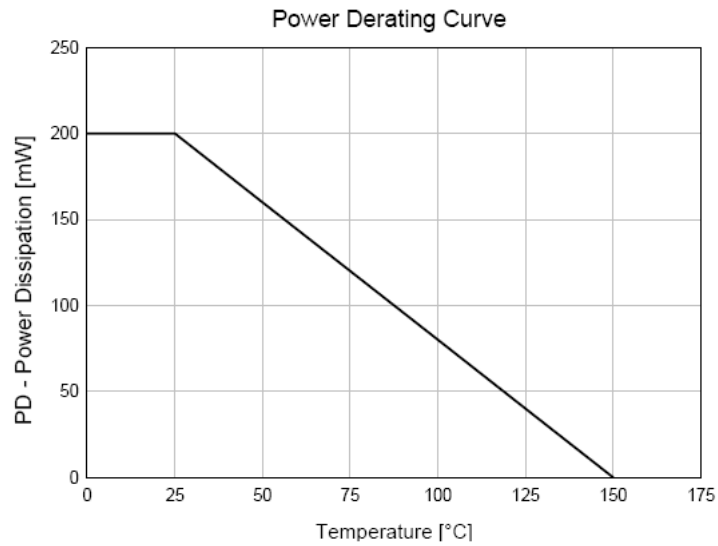
Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
BV_R	Breakdown Voltage	$I_R = 100\text{ }\mu\text{A}$ $I_R = 5\text{ }\mu\text{A}$	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/ 914BWT 1N4148WT 1N4448WT/ 914BWT $I_F = 5\text{ mA}$ $I_F = 10\text{ mA}$ $I_F = 100\text{ mA}$	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

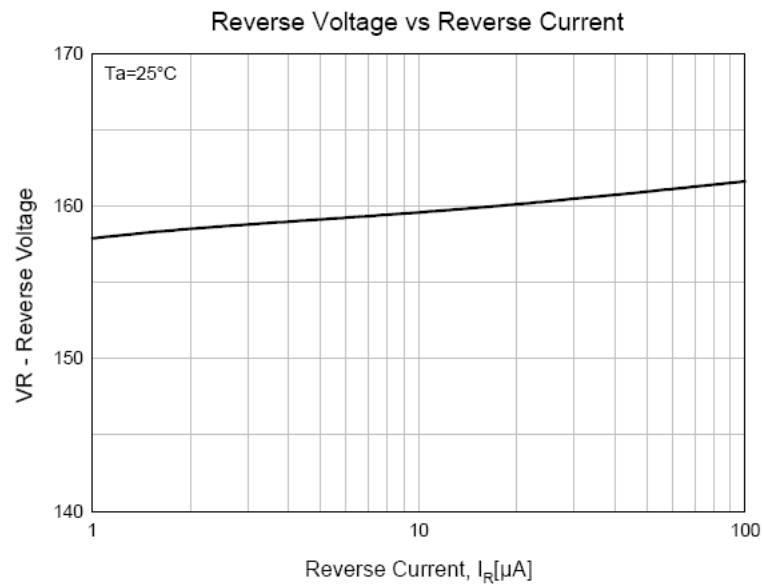
Typical Performance Characteristics



Typical Performance Characteristics (Continue)

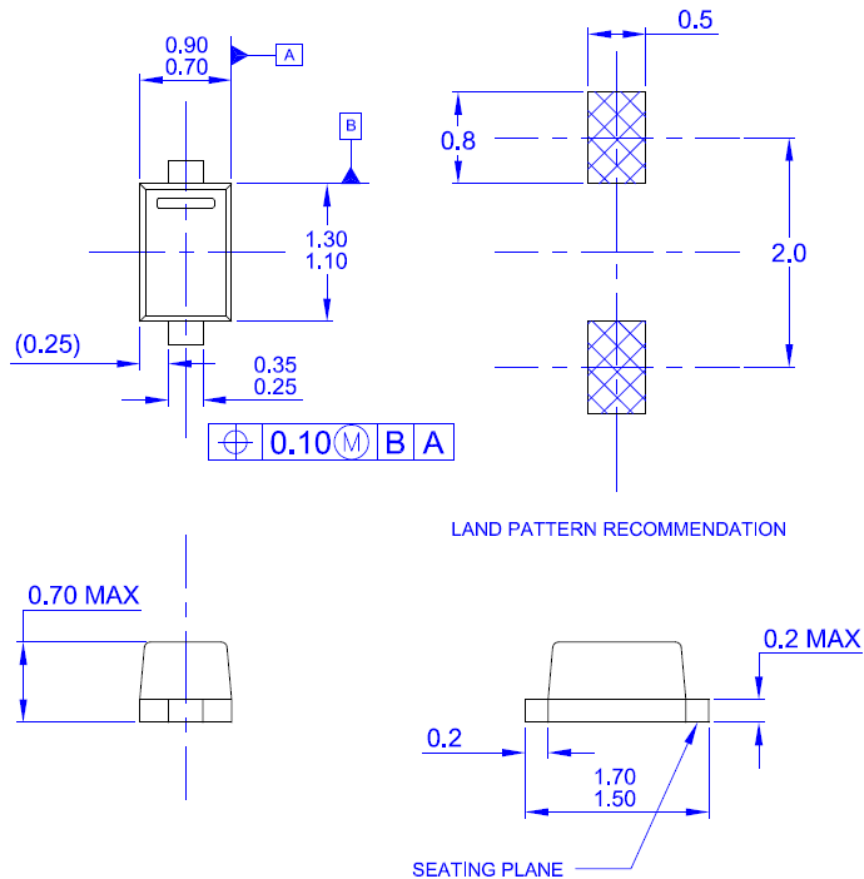


Typical Performance Characteristics (Continue)



Physical 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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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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