

1N4148WS / 1N4448WS / 1N914BWS

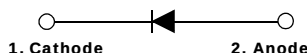
Small Signal Diodes

Features

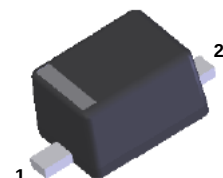
- General Purpose Diodes
- Fast Switching Device ($T_{RR} < 4.0\text{ns}$)
- Very Small and Thin SMD Package
- Moisture Level Sensitivity 1
- Pb-free Version and RoHS Compliant
- Matte Tin (Sn) Lead Finish
- Green Mold Compound

Device Marking Code

Device Type	Device Marking
1N4148WS	S1
1N4448WS	S2
1N914BWS	S3



ELECTRICAL SYMBOL



SOD-323 Flat Lead
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	100	V
V_{RRM}	Repetitive Peak Reverse Voltage	75	V
I_{FRM}	Repetitive Peak Forward Current	300	mA
I_O	Continuous Forward Current	150	mA
T_J	Operating Junction Temperature	+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. 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	$I_R = 100\ \mu\text{A}$ $I_R = 5\ \mu\text{A}$	100 75			V V
I_R	Reverse Current	$V_R = 20\ \text{V}$ $V_R = 75\ \text{V}$			25 5	nA μA
V_F	Forward Voltage	1N4448WS/914BWS 1N4148WS 1N4448WS/914BWS $I_F = 5\ \text{mA}$ $I_F = 10\ \text{mA}$ $I_F = 100\ \text{mA}$	0.62		0.72 1 1	V V V
C_O	Diode Capacitance	$V_R = 0, f = 1\ \text{MHz}$			4	pF
T_{RR}	Reverse Recovery Time	$I_F = 10\ \text{mA}, I_R = 60\ \text{mA},$ $I_{RR} = 1\ \text{mA}, R_L = 100\ \Omega$			4	ns

Typical Performance Characteristics

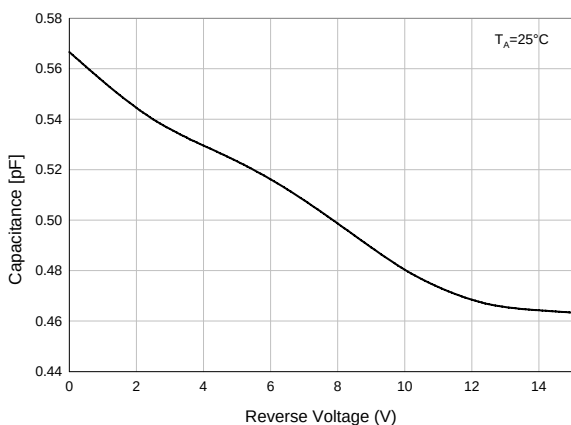


Figure 1. Total Capacitance

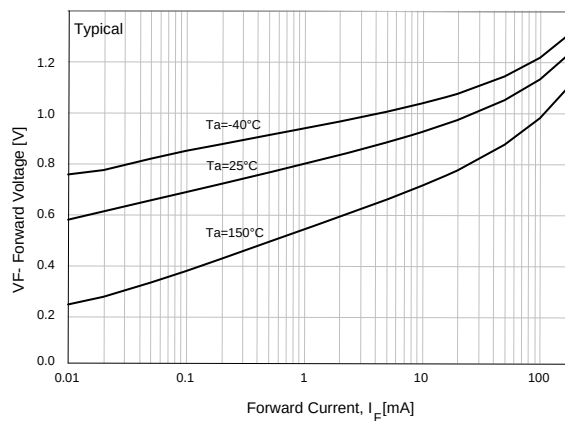


Figure 2. Forward Voltage vs. Ambient Temperature

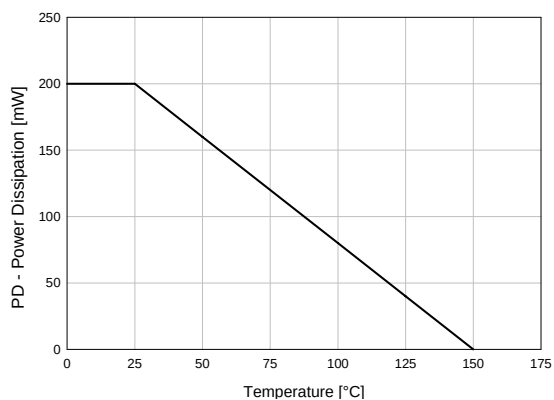


Figure 3. Power Derating Curve

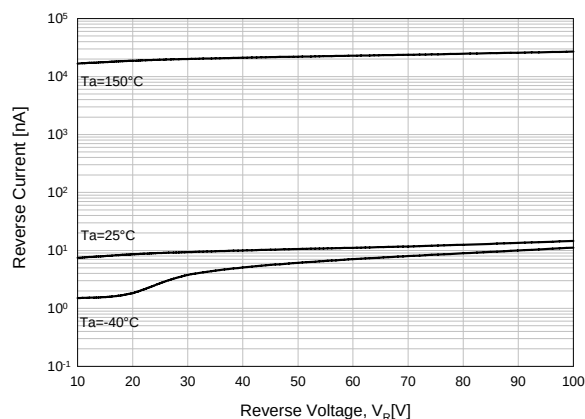


Figure 4. Reverse Current vs. Reverse Voltage

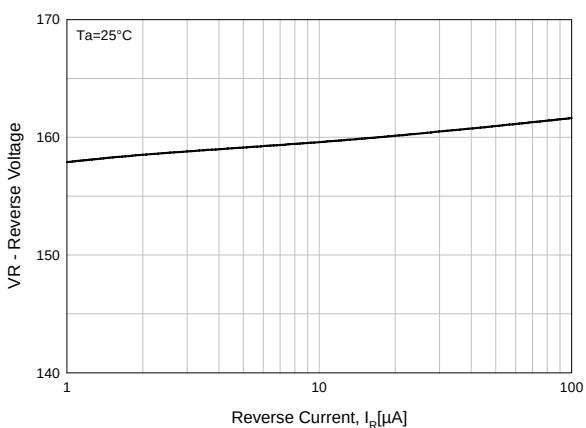


Figure 5. Reverse Voltage vs. Reverse Current



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CROSSVOLT™	GTO™	 ™	TinyPower™
CTL™	IntelliMAX™	Saving our world, 1mW/W/kW at a time™	TinyPWM™
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