



SEMICONDUCTOR

# DATA SHEET

## 1NWT



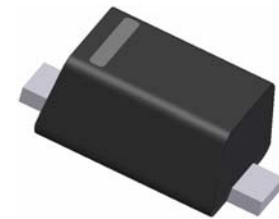
### 200mW SOD-523 SURFACE MOUNT Very Small Outline Flat Lead Plastic Package General Purpose Application Fast Switching Diode

DEVICE MARKING CODE:

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

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

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	200	mW
$T_{STG}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	+150	$^\circ\text{C}$
$V_{RSM}$	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

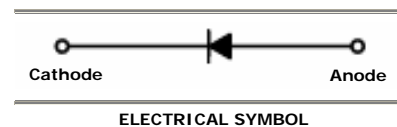


SOD-523 Flat Lead

These ratings are limiting values above which the serviceability of the diode may be impaired.

#### Specification Features:

- Fast Switching Device ( $T_{RR} < 4.0$  nS)
- General Purpose Diodes
- Extremely Small SOD-523 Package
- Flat Lead SOD-523 Small Outline Plastic Package
- Surface Device Type Mounting
- Moisture Sensitivity Level 1
- Pb Free Version and RoHS Compliant
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode



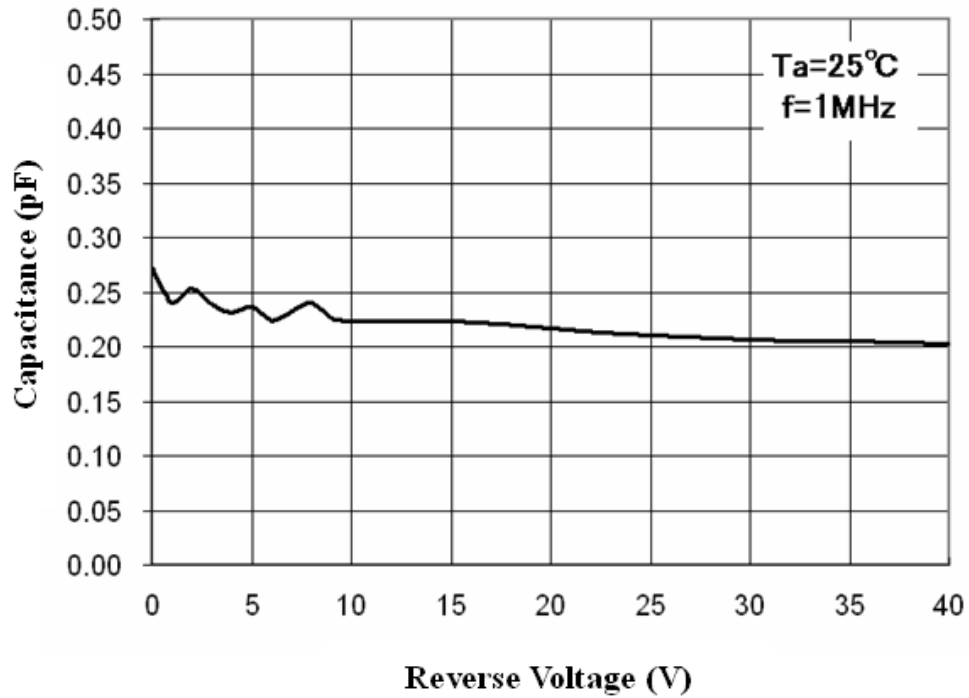
#### Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
$B_V$	Breakdown Voltage	$I_R = 100\mu\text{A}$	100		Volts
		$I_R = 5\mu\text{A}$	75		
$I_R$	Reverse Leakage Current	$V_R = 20\text{V}$		25	nA
		$V_R = 75\text{V}$		5	$\mu\text{A}$
$V_F$	Forward Voltage	1N4448WT, 1N914BWT $I_F = 5\text{mA}$	0.62	0.72	Volts
		1N4148WT $I_F = 10\text{mA}$		1.0	
		1N4448WT, 1N914BWT $I_F = 100\text{mA}$		1.0	
$T_{RR}$	Reverse Recovery Time	$I_F = 10\text{mA}$ $I_R = 60\text{mA}$ $R_L = 100\Omega$ $I_{RR} = 1\text{mA}$		4	nS
$C$	Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$		4	pF

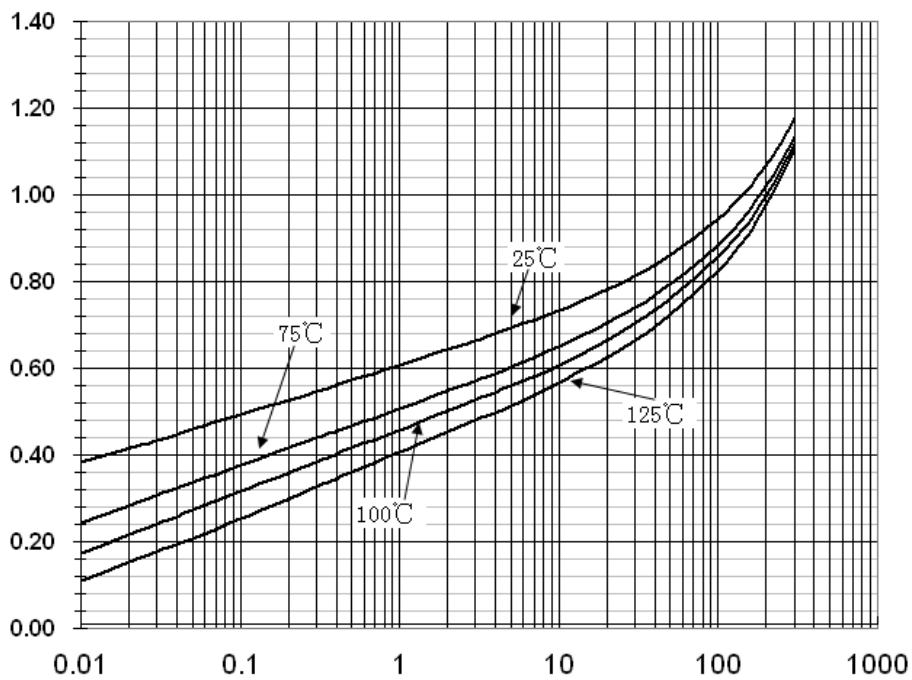
# DEVICE CHARACTERISTICS

1NxxxxWT

Total Capacitance



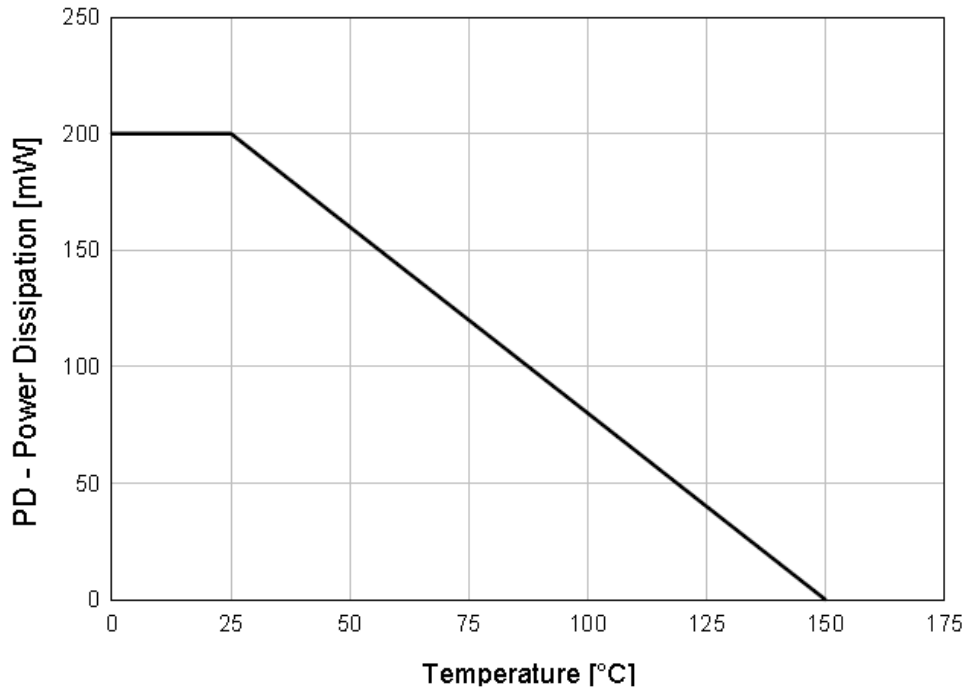
Forward Voltage vs Ambient Temperature



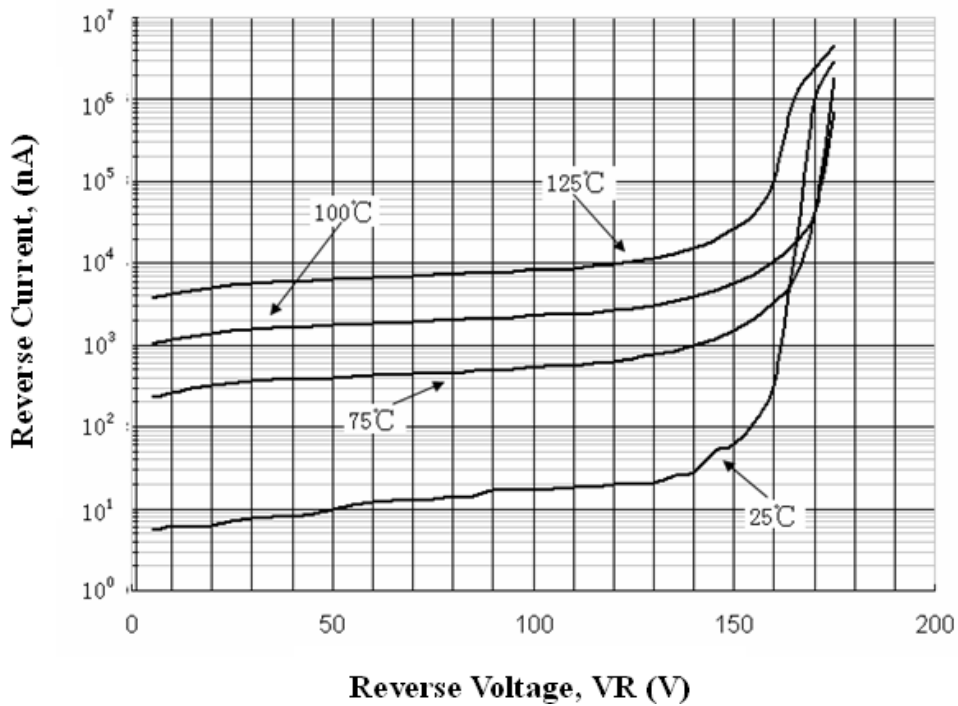
# DEVICE CHARACTERISTICS

1NxxxxWT

Power Derating Curve



Reverse Current vs Reverse Voltage



# DEVICE CHARACTERISTICS

1NxxxxWT

## Flat Lead SOD-523 Package Outline

