

**SURFACE MOUNT  
FAST SWITCHING DIODE**

**REVERSE VOLTAGE – 75 Volts  
FORWARD CURRENT – 0.15 Ampere**

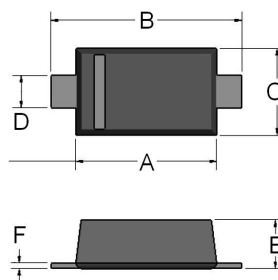
**FEATURES**

- Fast switching device ( $T_{rr} < 4.0$  ns)
- Extremely Small SOD-523F Package
- Flat Lead SOD-523F Small Outline Plastic Package
- Surface device type mounting
- General Purpose Diodes
- Green EMC
- Matte Tin(Sn) Lead Finish
- RoHS compliant
- Band Indicates Cathode

**MECHANICAL DATA**

- Polarity: Color band denotes cathode

**SOD-523F**



SOD-523F		
DIM.	MIN.	MAX.
A	1.10	1.30
B	1.50	1.70
C	0.7	0.9
D	0.25	0.35
E	0.50	0.70
F	0.05	0.20

All Dimensions in millimeter

**Maximum Ratings & Thermal Characteristics @  $T_A = 25^\circ\text{C}$  unless otherwise specified**

Characteristic	Symbol	1N4148WTF	1N4448WTF	Units
Repetitive Peak Reverse Voltage	VRRM	75		V
Repetitive Peak Forward Current	$I_{FRM}$	300		mA
Average Rectified Output Current	$I_o$	150		mA
Power Dissipation	$P_D$	200		mW
Operating Temperature Range	$T_J$	+150		$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~+150		$^\circ\text{C}$
Non-Repetitive Peak Reverse Voltage	VRSM	100		V

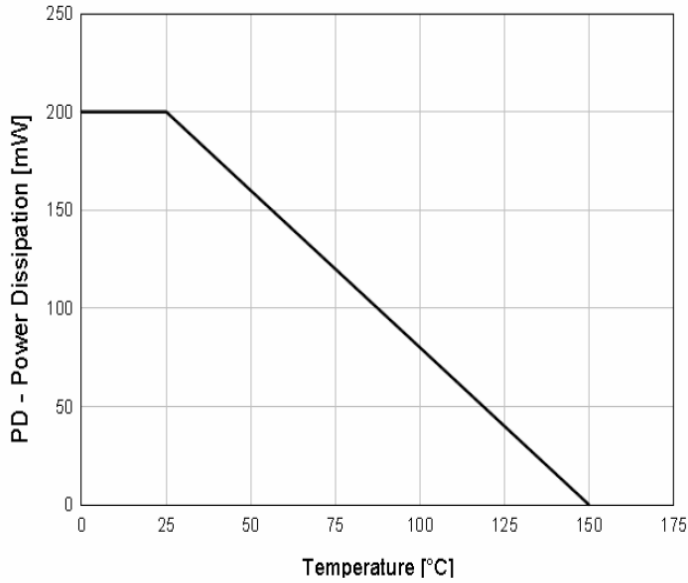
**Electrical Characteristics @  $T_A = 25^\circ\text{C}$  unless otherwise specified**

Characteristic	Test Condition	Symbol	1N4148WTF	1N4448WTF	Unit
Breakdown voltage	$I_R = 100\mu\text{A}$	BV	100		V
	$I_R = 5\mu\text{A}$		75		
Maximum Forward Voltage	$I_F = 5\text{mA}$	$V_F$	-	720	mV
	$I_F = 10\text{mA}$		1000	-	
	$I_F = 100\text{mA}$		-	1000	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$V_R = 75\text{V}$	$I_R$	5		uA
	$V_R = 20\text{V}$		25		
Typical Diode Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	$C_D$	4		pF
Reverse Recovery time	$I_F = 10\text{mA}$ , $I_R = 60\text{mA}$ , $R_L = 100\Omega$ , $I_{RR} = 1\text{mA}$ ,	trr	4		ns

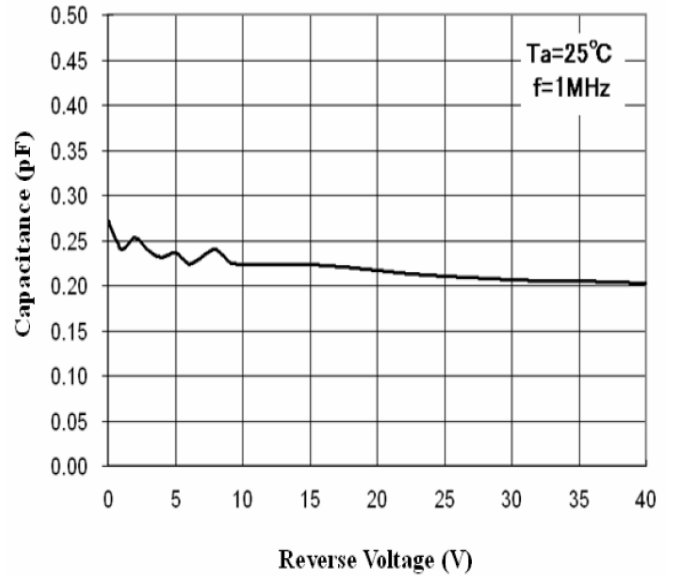
**RATING AND CHARACTERISTIC CURVES**  
**1N4148WTF / 1N448WTF**



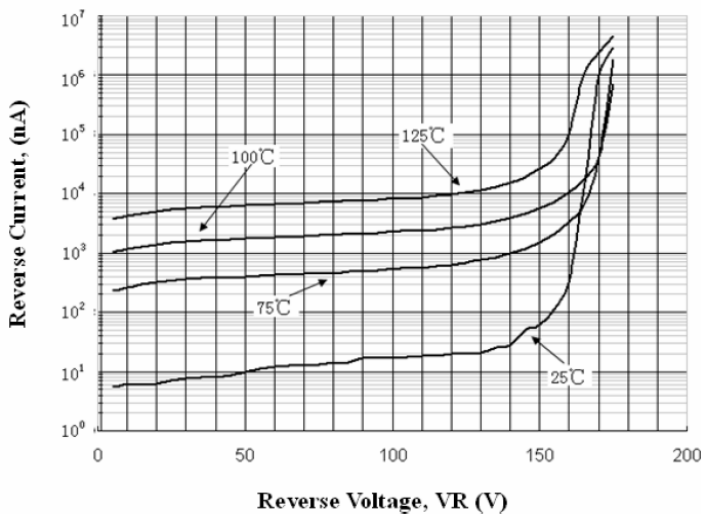
**Figure 1. Power Dissipation vs Ambient Temperature**  
 Valid provided leads at a distance of 0.8mm from case are kept at ambient temperature



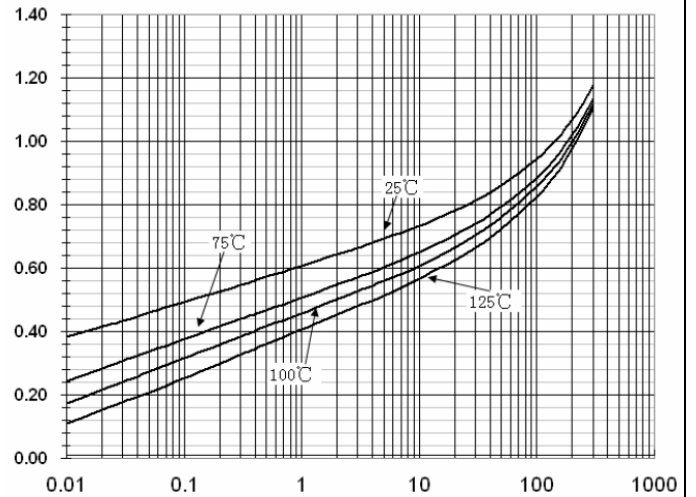
**Figure 2. Total Capacitance**



**Figure 3. Reverse Voltage vs Reverse Current**



**Figure 4. Forward Voltage vs Ambient Temperature**



**Device Marking:**

Device P/N	Marking code	Equivalent Circuit Diagram
1N4148WTF	E1	
1N4448WTF	E2	

## **Important Notice and Disclaimer**

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