

**SURFACE MOUNT
FAST SWITCHING DIODE**

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

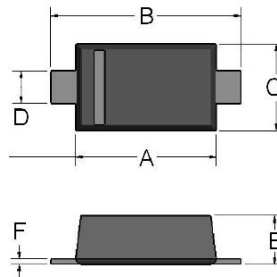
FEATURES

- 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	V_{RRM}	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	V_{RSM}	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	$I_F = 10\text{mA}, I_R = 60\text{mA}, R_L = 100\Omega, I_{RR} = 1\text{mA}$	t_{rr}	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

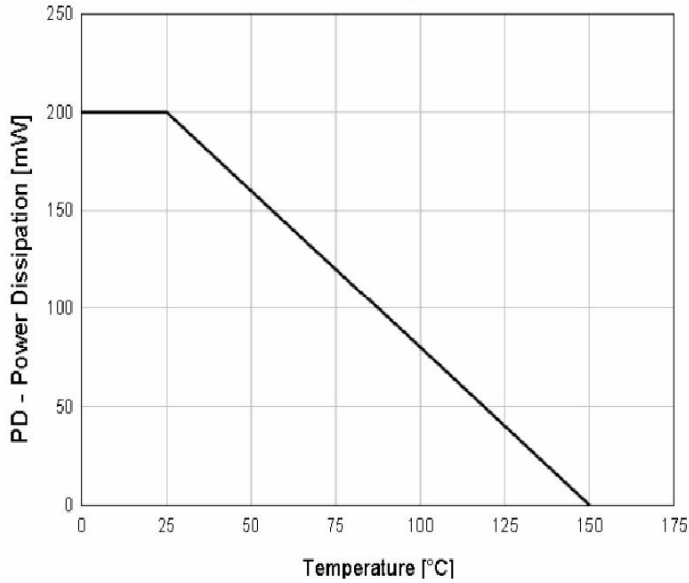


Figure 2. Total Capacitance

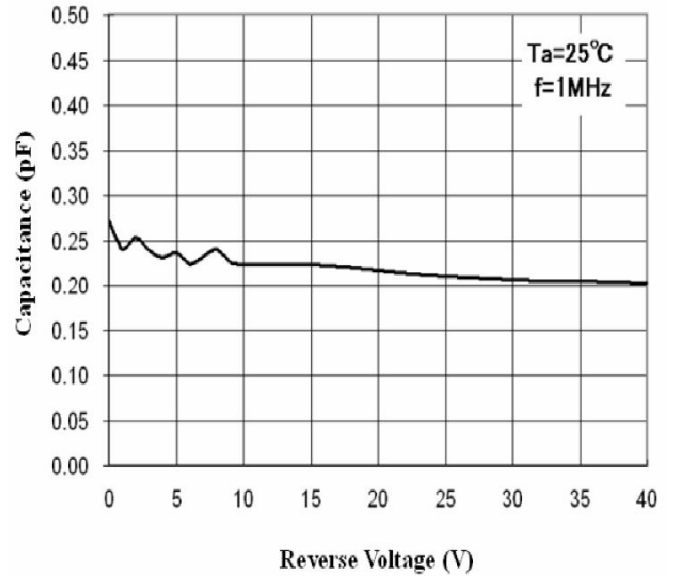


Figure 3. Reverse Voltage vs Reverse Current

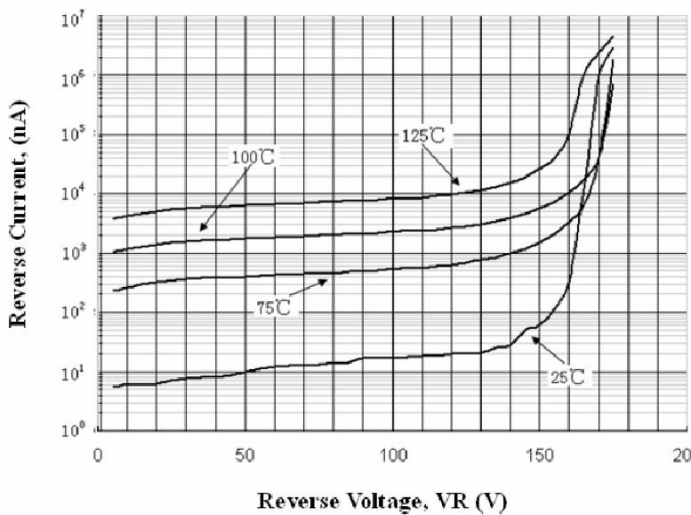
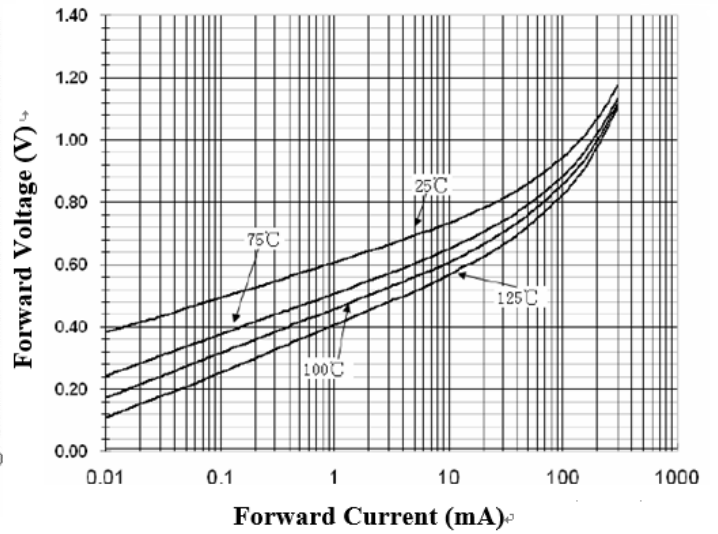


Figure 4. Forward Voltage vs Ambient Temperature



Device Marking:

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

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