LITE-ON SEMICONDUCTORS

1N4148WTF / 1N4448WTF

SURFACE MOUNT
FAST SWITCHING DIODE

REVERSE VOLTAGE – 75 Volts
FORWARD CURRENT – 0.15 Ampere

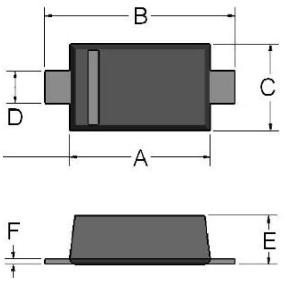
FEATURES

- Fast switching device (Trr < 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℃ 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		℃
Storage Temperature Range	I_{STG}	-55~+150		℃
Non-Repetitive Peak Reverse Voltage	V_{RSM}	100		V

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

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

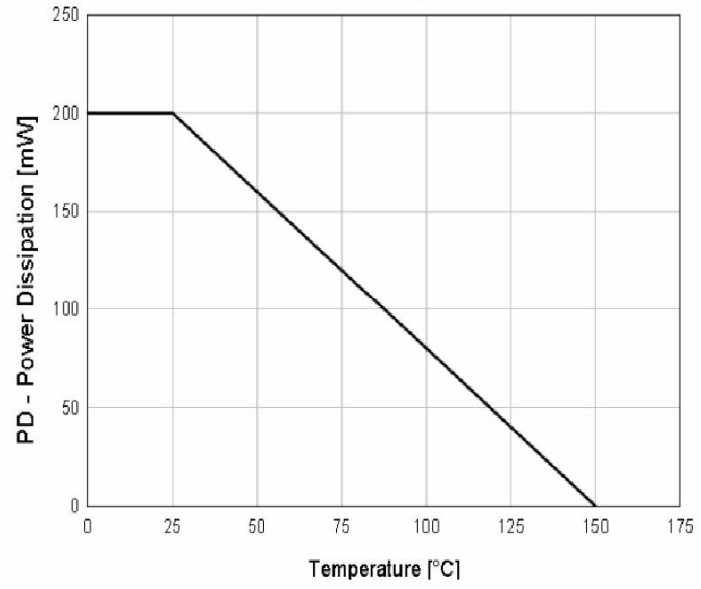


Figure 2. Total Capacitance

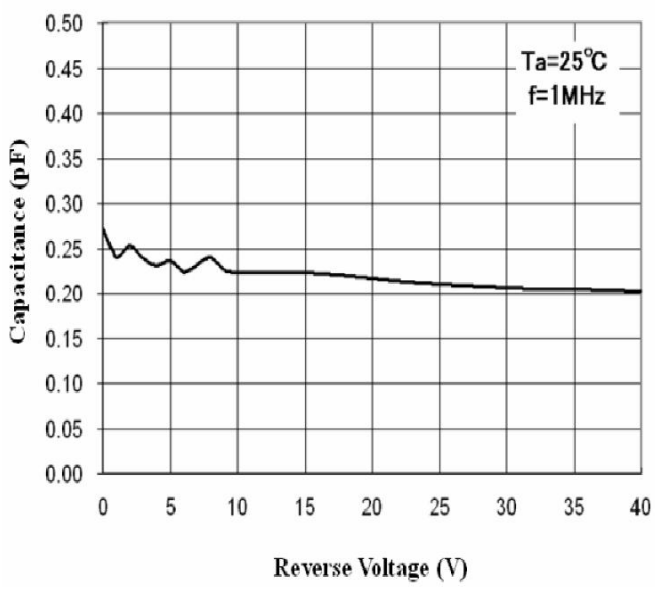


Figure 3. Reverse Voltage vs Reverse Current

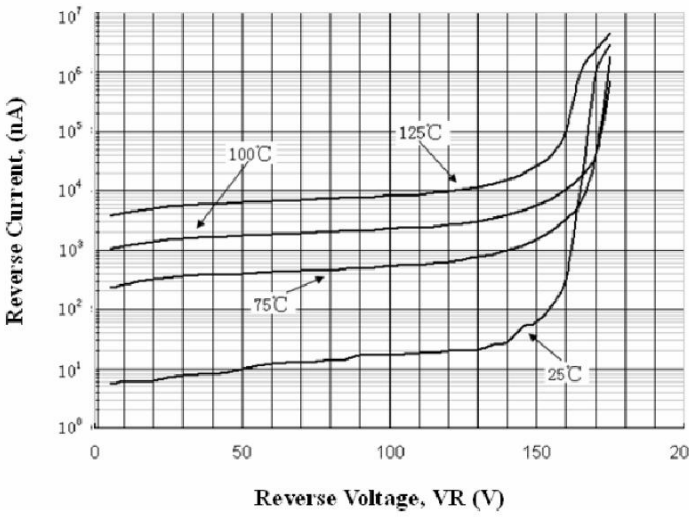
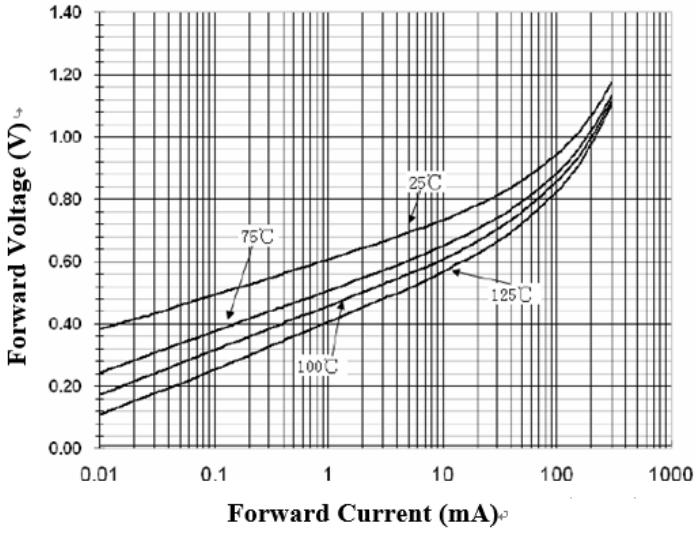


Figure 4. Forward Voltage vs Ambient Temperature



Device Marking:

Device P/N	Marking code	Equivalent Circuit Diagram
1N4148WTF 1N4448WTF	E1 E2	1 ○—▶|—○ 2

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