LITE-ON SEMICONDUCTORS

MMSZ2V4CWF THRU MMSZ75VCWF

SURFACE MOUNT
ZENER DIODE

REVERSE VOLTAGE – 2.4 to 75 Volts
POWER DISSIPATION – 0.5 Watts

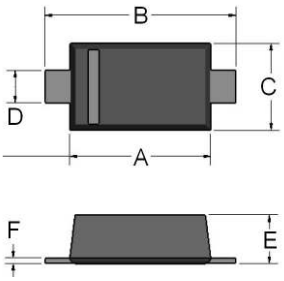
FEATURES

- Wide Zener Voltage Range Selection, 2.4V to 75V
- VZ Tolerance Selection of ±5% (C Series)
- Flat Lead SOD-123F Plastic Package
- Surface Device Type Mounting
- Green EMC
- Matte Tin(Sn) Lead Finish
- RoHS compliant
- Band Indicates Cathode

MECHANICAL DATA

- Case: SOD-123F Plastic

SOD-123F

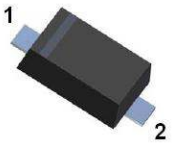


SOD-123F		
DIM.	MIN.	MAX.
A	2.50	2.70
B	3.30	3.70
C	1.50	1.70
D	0.50	0.70
E	0.80	1.00
F	0.05	0.20
All Dimensions in millimeter		

Maximum Ratings & Thermal Characteristics @ T_A = 25℃ unless otherwise specified

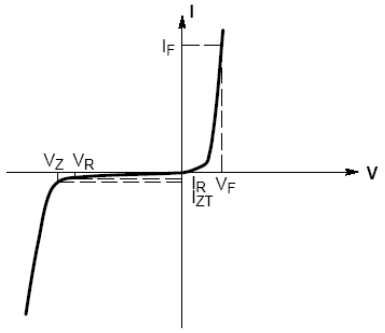
Characteristic	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
Storage Temperature Range	T_{STG}	-65 to +150	°C
Operating Temperature Range	T_{OPR}	-65 to +150	°C

Device Marking :

Device P/N	Marking	Pin Diagram	Equivalent Circuit Diagram
MMSZxxxCWF	See below table		

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Symbol	Parameter
V_Z	Reverse Zener Voltage @ IZT
I_{ZT}	Reverse Current
Z_{ZT}	Maximum Zener Impedance @ IZT
I_{ZK}	Reverse Current
Z_{ZK}	Maximum Zener Impedance @ IZK
I_R	Reverse Leakage Current @ VR
V_R	Reverse Voltage
I_F	Forward Current
V_F	Forward Voltage @ IF



Device	Device marking	Zener Voltage				Maximum Zener Impedance			Maximum Reverse Current	
		VZ@IZT			IZT	ZZT@IZT	IZK	ZZK@IZK	IR @VR	
		Min	Nom	Max	mA	Ω	mA	Ω	uA	V
MMSZ2V4CWF	2V4Z	2.28	2.4	2.52	5	100	1	564	45	1
MMSZ2V7CWF	2V7Z	2.57	2.7	2.84	5	100	1	564	18	1
MMSZ3V0CWF	3V0Z	2.85	3.0	3.15	5	100	1	564	9	1
MMSZ3V3CWF	3V3Z	3.14	3.3	3.47	5	95	1	564	4.5	1
MMSZ3V6CWF	3V6Z	3.42	3.6	3.78	5	90	1	564	4.5	1
MMSZ3V9CWF	3V9Z	3.71	3.9	4.10	5	90	1	564	2.7	1
MMSZ4V3CWF	4V3Z	4.09	4.3	4.52	5	90	1	564	2.7	1
MMSZ4V7CWF	4V7Z	4.47	4.7	4.94	5	80	1	470	2.7	2
MMSZ5V1CWF	5V1Z	4.85	5.1	5.36	5	60	1	451	1.8	2
MMSZ5V6CWF	5V6Z	5.32	5.6	5.88	5	40	1	376	0.9	2
MMSZ6V2CWF	6V2Z	5.89	6.2	6.51	5	10	1	141	2.7	4
MMSZ6V8CWF	6V8Z	6.46	6.8	7.14	5	15	1	75	1.8	4
MMSZ7V5CWF	7V5Z	7.11	7.5	7.86	5	15	1	75	0.9	5
MMSZ8V2CWF	8V2Z	7.79	8.2	8.61	5	15	1	75	0.63	5
MMSZ9V1CWF	9V1Z	8.65	9.1	9.56	5	15	1	94	0.45	6
MMSZ10VCWF	10VZ	9.50	10	10.50	5	20	1	141	0.18	7
MMSZ11VCWF	11VZ	10.45	11	11.55	5	20	1	141	0.09	8
MMSZ12VCWF	12VZ	11.40	12	12.60	5	25	1	141	0.09	8
MMSZ13VCWF	13VZ	12.35	13	13.65	5	30	1	160	0.09	8
MMSZ15VCWF	15VZ	14.25	15	15.75	5	30	1	188	0.045	10.5
MMSZ16VCWF	16VZ	15.20	16	16.80	5	40	1	188	0.045	11.2
MMSZ18VCWF	18VZ	17.10	18	18.90	5	45	1	212	0.045	12.6
MMSZ20VCWF	20VZ	19.00	20	21.00	5	55	1	212	0.045	14.0
MMSZ22VCWF	22VZ	20.90	22	23.10	5	55	1	235	0.045	15.4
MMSZ24VCWF	24VZ	22.80	24	25.20	5	70	1	235	0.045	16.8
MMSZ27VCWF	27VZ	25.65	27	28.35	2	80	0.5	282	0.045	18.9
MMSZ30VCWF	30VZ	28.50	30	31.50	2	80	0.5	282	0.045	21.0
MMSZ33VCWF	33VZ	31.35	33	34.65	2	80	0.5	306	0.045	23.0
MMSZ36VCWF	36VZ	34.20	36	37.80	2	90	0.5	329	0.045	25.2
MMSZ39VCWF	39VZ	37.05	39	40.95	2	130	0.5	329	0.045	27.3
MMSZ43VCWF	43VZ	40.85	43	45.15	2	150	0.5	353	0.045	30.1
MMSZ47VCWF	47VZ	44.65	47	49.35	2	170	0.5	353	0.045	33.0
MMSZ51VCWF	51VZ	48.45	51	53.55	2	180	0.5	376	0.045	35.7
MMSZ56VCWF	56VZ	53.20	56	58.80	2	200	0.5	400	0.045	39.2
MMSZ62VCWF	62VZ	58.90	62	65.10	2	215	0.5	423	0.045	43.4
MMSZ68VCWF	68VZ	64.60	68	71.40	2	240	0.5	447	0.045	47.6
MMSZ75VCWF	75VZ	71.25	75	78.75	2	255	0.5	470	0.045	52.5

V_F Forward Voltage=900Mv Maximum@**I_F**=10mA for all types

Notes:

1. The Zener Voltage (**V_Z**) is tested under pulse condition of 10mS.
2. The device numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
3. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Liteon Semiconductor Corp. representative.
4. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK}.

MMSZ2V4CWF THRU MMSZ75VCWF
Typical Characteristics

Fig.1 Power Derating Curve

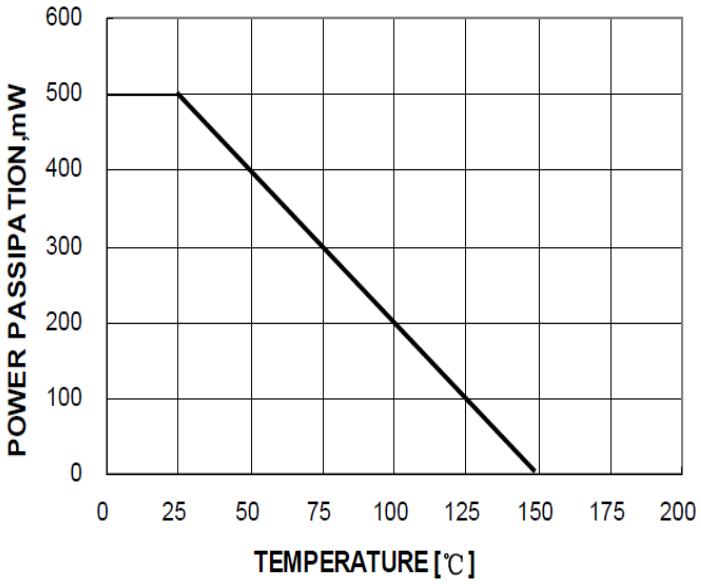


Fig.2 Typical Zener Breakdown Characteristics

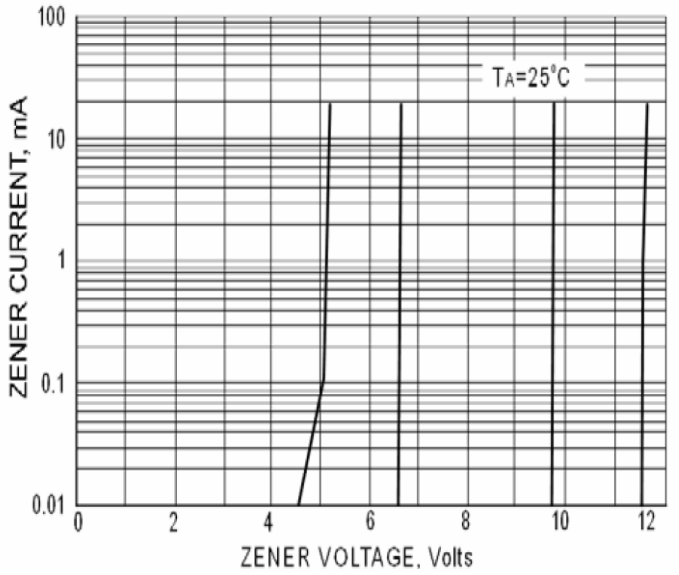


Fig.3 Typical Zener Breakdown Characteristics

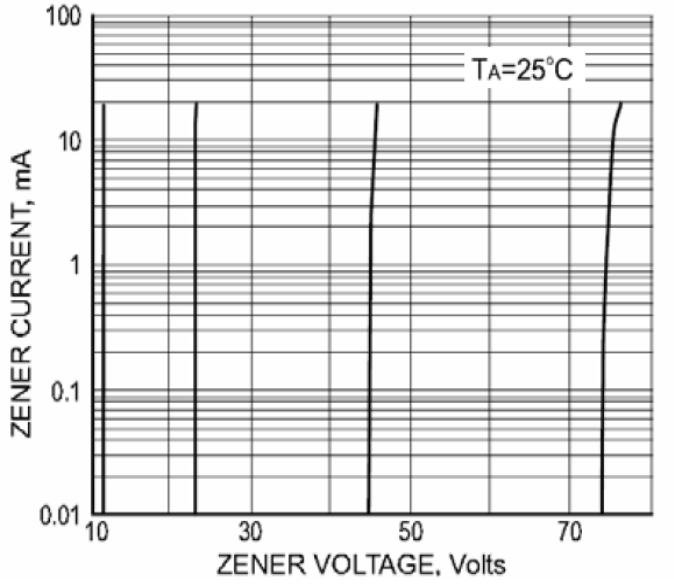


Fig.4 Typical Total Capacitance vs. Nominal Zener Voltage

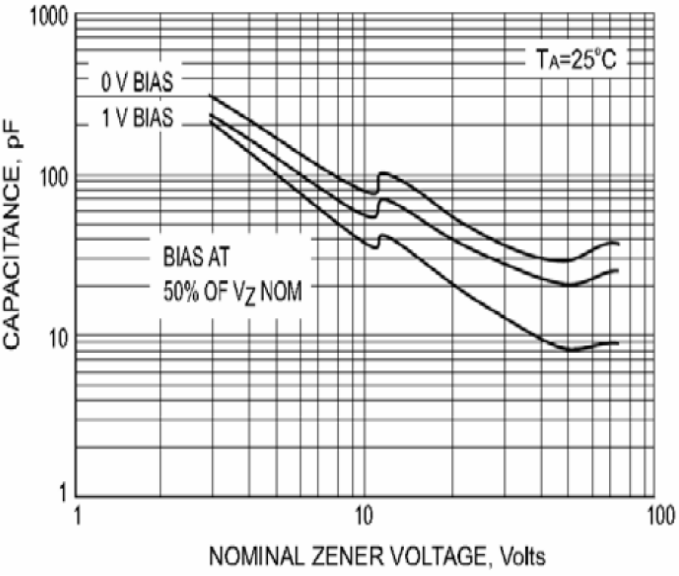


Fig.5 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

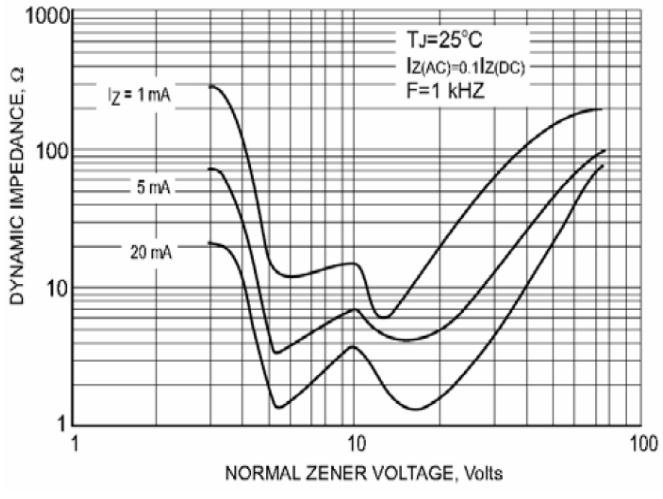
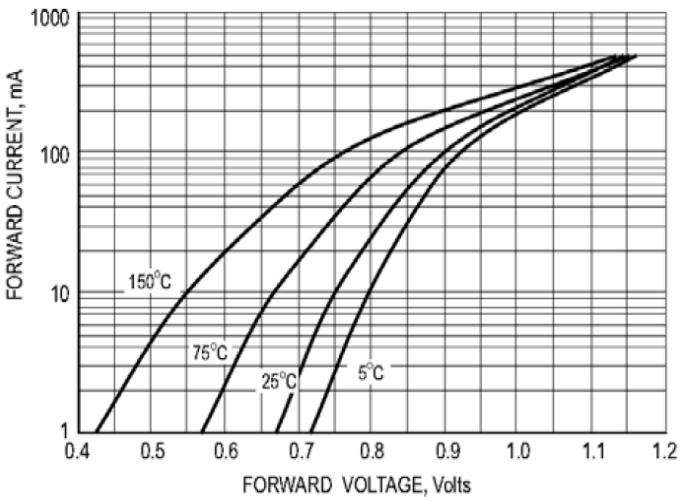


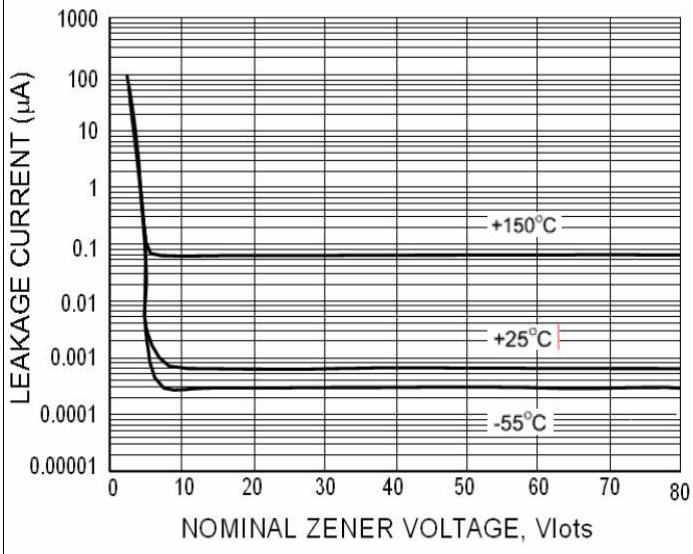
Fig.6 TYPICAL FORWARD VOLTAGE



MMSZ2V4CWF THRU MMSZ75VCWF

Typical Characteristics

Fig.7 TYPICAL LEAKGE CURRENT



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