LITE-ON SEMICONDUCTORS

MMSZ2V4bBWF THRU MMSZ75VBWF

SURFACE MOUNT
ZENER DIODE

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

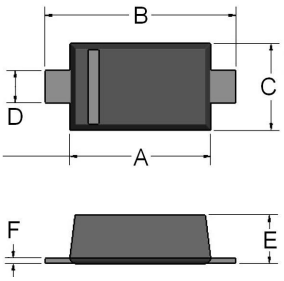
FEATURES

- Wide Zener Voltage Range Selection, 2.4V to 75V
- VZ Tolerance Selection of ±2% (B 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

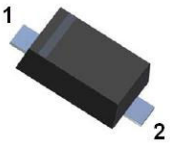


SOD-123F		
DIM.	MIN.	MAX.
A	2.50	2.70
B	3.30	3.70
C	1.50	1.70
D	0.50	0.70
E	0.80	1.00
F	0.05	0.20
All Dimensions in millimeter		

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

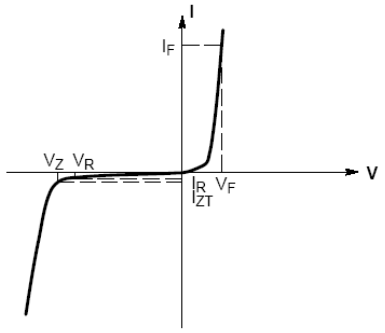
Characteristic	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
Storage Temperature Range	T_{STG}	-65 to +150	°C
Operating Temperature Range	T_{OPR}	-65 to +150	°C

Device Marking :

Device P/N	Marking	Pin Diagram	Equivalent Circuit Diagram
MMSZxxxBWF	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
MMSZ2V4BWF	2V4B	2.35	2.4	2.45	5	100	1	564	45	1
MMSZ2V7BWF	2V7B	2.65	2.7	2.75	5	100	1	564	18	1
MMSZ3V0BWF	3V0B	2.94	3.0	3.06	5	100	1	564	9	1
MMSZ3V3BWF	3V3B	3.23	3.3	3.37	5	95	1	564	4.5	1
MMSZ3V6BWF	3V6B	3.53	3.6	3.67	5	90	1	564	4.5	1
MMSZ3V9BWF	3V9B	3.82	3.9	3.98	5	90	1	564	2.7	1
MMSZ4V3BWF	4V3B	4.21	4.3	4.39	5	90	1	564	2.7	1
MMSZ4V7BWF	4V7B	4.61	4.7	4.79	5	80	1	470	2.7	2
MMSZ5V1BWF	5V1B	5.00	5.1	5.20	5	60	1	451	1.8	2
MMSZ5V6BWF	5V6B	5.49	5.6	5.71	5	40	1	376	0.9	2
MMSZ6V2BWF	6V2B	6.08	6.2	6.32	5	10	1	141	2.7	4
MMSZ6V8BWF	6V8B	6.66	6.8	6.94	5	15	1	75	1.8	4
MMSZ7V5BWF	7V5B	7.35	7.5	7.65	5	15	1	75	0.9	5
MMSZ8V2BWF	8V2B	8.04	8.2	8.36	5	15	1	75	0.63	5
MMSZ9V1BWF	9V1B	8.92	9.1	9.28	5	15	1	94	0.45	6
MMSZ10VBWF	10VB	9.80	10	10.20	5	20	1	141	0.18	7
MMSZ11VBWF	11VB	10.78	11	11.22	5	20	1	141	0.09	8
MMSZ12VBWF	12VB	11.76	12	12.24	5	25	1	141	0.09	8
MMSZ13VBWF	13VB	12.74	13	13.26	5	30	1	160	0.09	8
MMSZ15VBWF	15VB	14.70	15	15.30	5	30	1	188	0.045	10.5
MMSZ16VBWF	16VB	15.68	16	16.32	5	40	1	188	0.045	11.2
MMSZ18VBWF	18VB	17.64	18	18.36	5	45	1	212	0.045	12.6
MMSZ20VBWF	20VB	19.60	20	20.40	5	55	1	212	0.045	14.0
MMSZ22VBWF	22VB	21.56	22	22.44	5	55	1	235	0.045	15.4
MMSZ24VBWF	24VB	23.52	24	24.48	5	70	1	235	0.045	16.8
MMSZ27VBWF	27VB	26.46	27	27.54	2	80	0.5	282	0.045	18.9
MMSZ30VBWF	30VB	29.40	30	30.60	2	80	0.5	282	0.045	21.0
MMSZ33VBWF	33VB	32.34	33	33.66	2	80	0.5	306	0.045	23.0
MMSZ36VBWF	36VB	35.28	36	36.72	2	90	0.5	329	0.045	25.2
MMSZ39VBWF	39VB	38.22	39	39.78	2	130	0.5	329	0.045	27.3
MMSZ43VBWF	43VB	42.14	43	43.86	2	150	0.5	353	0.045	30.1
MMSZ47VBWF	47VB	46.06	47	47.94	2	170	0.5	353	0.045	33.0
MMSZ51VBWF	51VB	49.98	51	52.02	2	180	0.5	376	0.045	35.7
MMSZ56VBWF	56VB	54.88	56	57.12	2	200	0.5	400	0.045	39.2
MMSZ62VBWF	62VB	60.76	62	63.24	2	215	0.5	423	0.045	43.4
MMSZ68VBWF	68VB	66.64	68	69.36	2	240	0.5	447	0.045	47.6
MMSZ75VBWF	75VB	73.50	75	76.50	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 ±2%.
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}.

MMSZ2V4BWF THRU MMSZ75VBWF
Typical Characteristics

Fig.1 Power Derating Curve

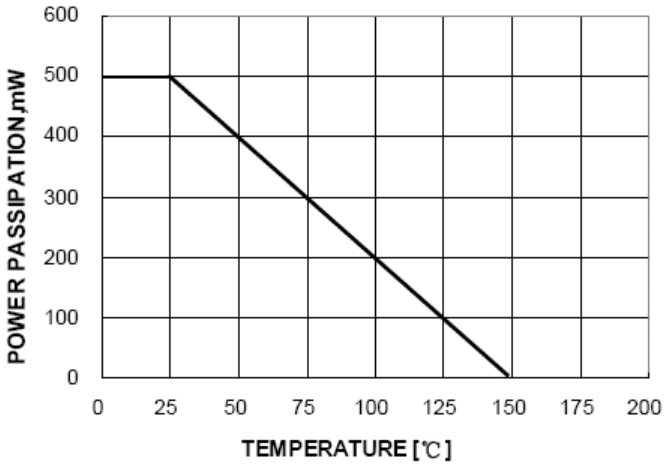


Fig.2 Typical Zener Breakdown Characteristics

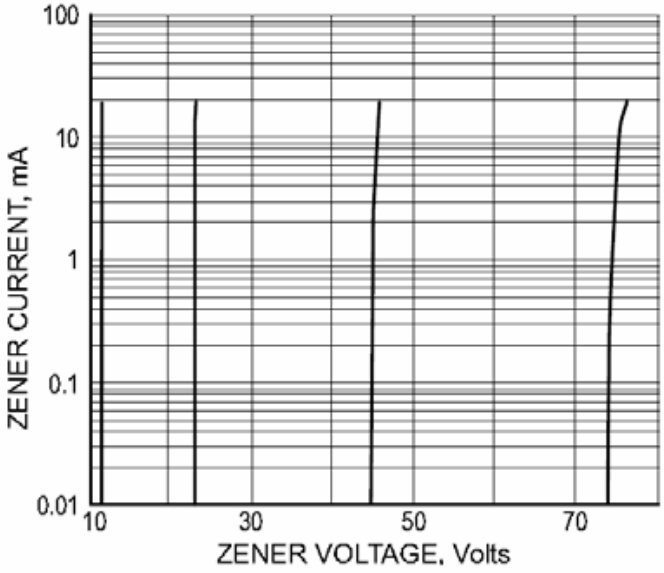


Fig.3 Typical Zener Breakdown Characteristics

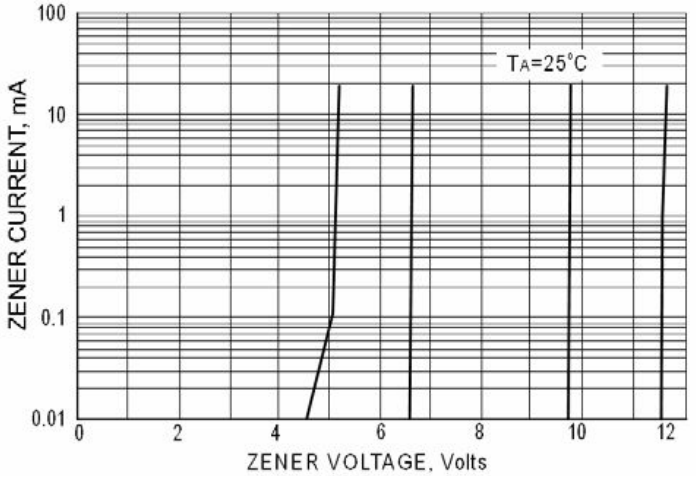


Fig.4 Typical Total Capacitance vs. Nominal Zener Voltage

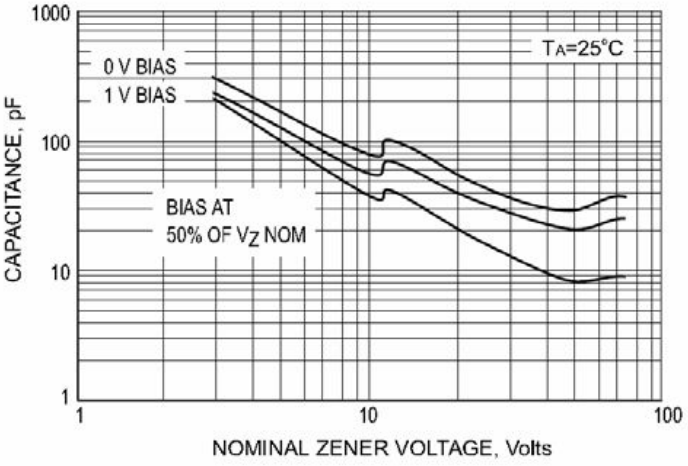


Fig.5 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

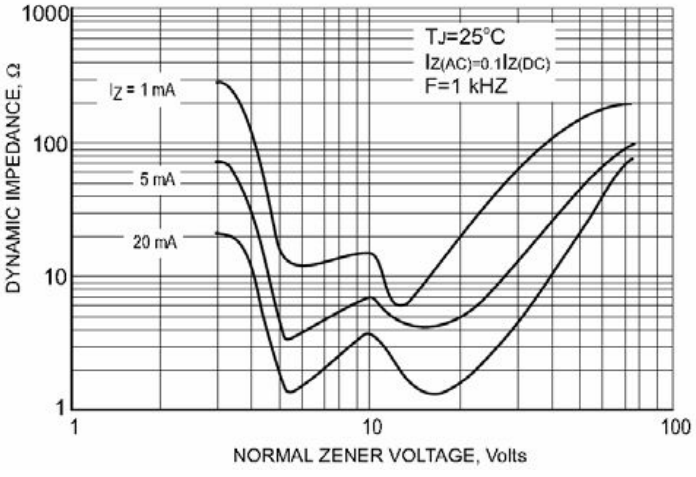
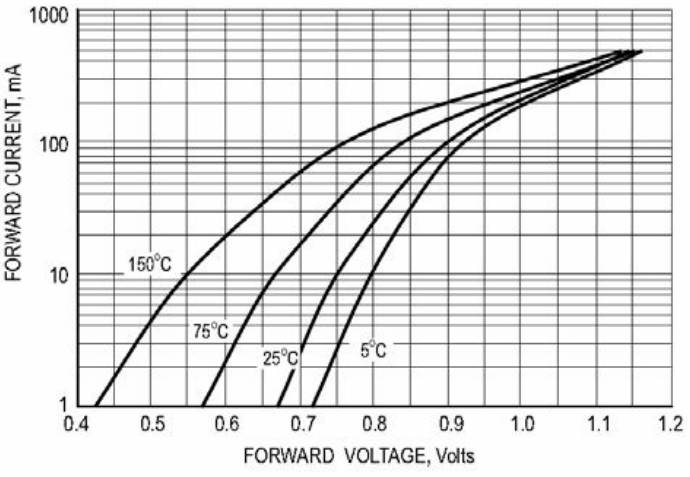


Fig.6 TYPICAL FORWARD VOLTAGE



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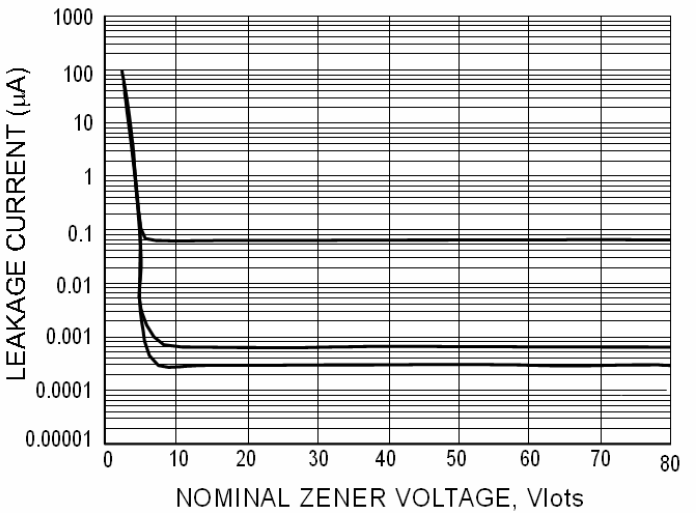
Typical Characteristics

Fig.7 TYPICAL LEAKGE CURRENT



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