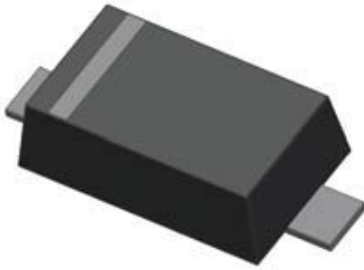


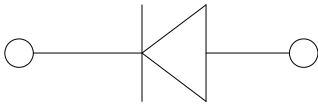


Zener Diodes



Features

- High reliability
- Very sharp reverse characteristic
- Low reverse current level



Mechanical Data

- **Package:** SOD123F
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Forward Voltage at IF =10mA	V _F	V	0.9
Power Dissipation at Ta=75°C	P _D	mW	500
Storage Temperature Range	T _{stg}	°C	-65~+150
Maximum Junction Temperature	T _j	°C	-65~+150
Operating Temperature range	T _{OPR}	°C	-40~+85

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMSZ2V0CWF THRU MMSZ75VCWF	F1	Approximate 0.0084	3000	30000	180000	7" reel



MMSZ2V0CWF THRU MMSZ75VCWF

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

Part Number	Marking	V _Z at I _{ZT}			I _{ZT} mA	Z _{ZT} at I _{ZT}	I _{ZK} mA	Z _{ZK} at I _{ZK}	IR @ V _R uA	V _R V	Temperature Coefficient	
		V	Ω	Ω		Sz(mv/K) I _Z =5mA						
						Min		Max			Min	Max
MMSZ2V0CWF	2V0Z	1.9	2	2.1	5	100	1	564	120	0.5	-3.5	0
MMSZ2V2CWF	2V2Z	2.09	2.2	2.31	5	100	1	564	120	0.7	-3.5	0
MMSZ2V4CWF	2V4Z	2.28	2.4	2.52	5	100	1	564	45	1	-3.5	0
MMSZ2V7CWF	2V7Z	2.57	2.7	2.84	5	100	1	564	18	1	-3.5	0
MMSZ3V0CWF	3V0Z	2.85	3	3.15	5	100	1	564	9	1	-3.5	0
MMSZ3V3CWF	3V3Z	3.14	3.3	3.47	5	95	1	564	4.5	1	-3.5	0
MMSZ3V6CWF	3V6Z	3.42	3.6	3.78	5	90	1	564	4.5	1	-3.5	0
MMSZ3V9CWF	3V9Z	3.71	3.9	4.1	5	90	1	564	2.7	1	-3.5	0
MMSZ4V3CWF	4V3Z	4.09	4.3	4.52	5	90	1	564	2.7	1	-3.5	0
MMSZ4V7CWF	4V7Z	4.47	4.7	4.94	5	80	1	470	2.7	2	-3.5	0.2
MMSZ5V1CWF	5V1Z	4.85	5.1	5.36	5	60	1	451	1.8	2	-2.7	1.2
MMSZ5V6CWF	5V6Z	5.32	5.6	5.88	5	40	1	376	0.9	2	-2.0	2.5
MMSZ6V2CWF	6V2Z	5.89	6.2	6.51	5	10	1	141	2.7	4	0.4	3.7
MMSZ6V8CWF	6V8Z	6.46	6.8	7.14	5	15	1	75	1.8	4	1.2	4.5
MMSZ7V5CWF	7V5Z	7.11	7.5	7.86	5	15	1	75	0.9	5	2.5	5.3
MMSZ8V2CWF	8V2Z	7.79	8.2	8.61	5	15	1	75	0.63	5	3.2	6.2
MMSZ9V1CWF	9V1Z	8.65	9.1	9.56	5	15	1	94	0.45	6	3.8	7.0
MMSZ10VCWF	10VZ	9.5	10	10.5	5	20	1	141	0.18	7	4.5	8.0
MMSZ11VCWF	11VZ	10.45	11	11.55	5	20	1	141	0.09	8	5.4	9.0
MMSZ12VCWF	12VZ	11.4	12	12.6	5	25	1	141	0.09	8	6.0	10.0
MMSZ13VCWF	13VZ	12.35	13	13.65	5	30	1	160	0.09	8	7.0	11.0
MMSZ15VCWF	15VZ	14.25	15	15.75	5	30	1	188	0.045	10.5	9.2	13.0
MMSZ16VCWF	16VZ	15.2	16	16.8	5	40	1	188	0.045	11.2	10.4	14.0
MMSZ18VCWF	18VZ	17.1	18	18.9	5	45	1	212	0.045	12.6	12.4	16.0
MMSZ20VCWF	20VZ	19	20	21	5	55	1	212	0.045	14	14.4	18.0
MMSZ22VCWF	22VZ	20.9	22	23.1	5	55	1	235	0.045	15.4	16.4	20.0
MMSZ24VCWF	24VZ	22.8	24	25.2	5	70	1	235	0.045	16.8	18.4	22.0
MMSZ27VCWF	27VZ	25.65	27	28.35	2	80	0.5	282	0.045	18.9	21.4	25.3
MMSZ30VCWF	30VZ	28.5	30	31.5	2	80	0.5	282	0.045	21	24.4	29.4
MMSZ33VCWF	33VZ	31.35	33	34.65	2	80	0.5	306	0.045	23	27.4	33.4
MMSZ36VCWF	36VZ	34.2	36	37.8	2	90	0.5	329	0.045	25.2	30.4	37.4
MMSZ39VCWF	39VZ	37.05	39	40.95	2	130	0.5	329	0.045	27.3	33.4	41.2
MMSZ43VCWF	43VZ	40.85	43	45.15	2	150	0.5	353	0.045	30.1	37.6	46.6
MMSZ47VCWF	47VZ	44.65	47	49.35	2	170	0.5	353	0.045	33	42.0	51.8
MMSZ51VCWF	51VZ	48.45	51	53.55	2	180	0.5	376	0.045	35.7	46.6	57.2
MMSZ56VCWF	56VZ	53.2	56	58.8	2	200	0.5	400	0.045	39.2	52.2	63.8
MMSZ62VCWF	62VZ	58.9	62	65.1	2	215	0.5	423	0.045	43.4	58.8	71.6
MMSZ68VCWF	68VZ	64.6	68	71.4	2	240	0.5	447	0.045	47.6	65.6	79.8
MMSZ75VCWF	75VZ	71.25	75	78.75	2	255	0.5	470	0.045	52.5	73.4	88.6

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 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}.
5. C Capacitance =600pF Maximum @ V_R=0V, f=1MHZ for MMSZ2V0CW to MMSZ4V7CW
 =250pF Maximum @ V_R=0V, f=1MHZ for MMSZ5V1CW to MMSZ10VCW
 =120pF Maximum @ V_R=0V, f=1MHZ for MMSZ11VCW to MMSZ75VCW



MMSZ2V0CWF THRU MMSZ75VCWF

■ Characteristics (Typical)

Fig.1 Typical Forward Voltage

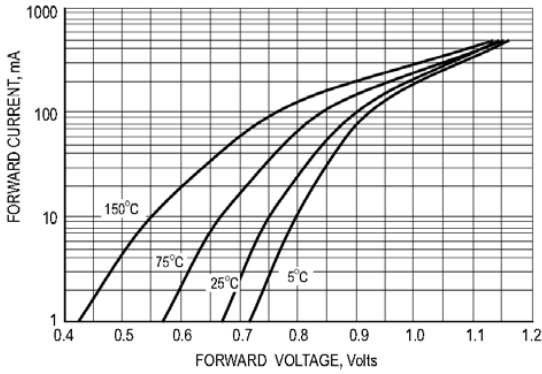


Fig.2 Effect of Zener Voltage on Zener Impedance

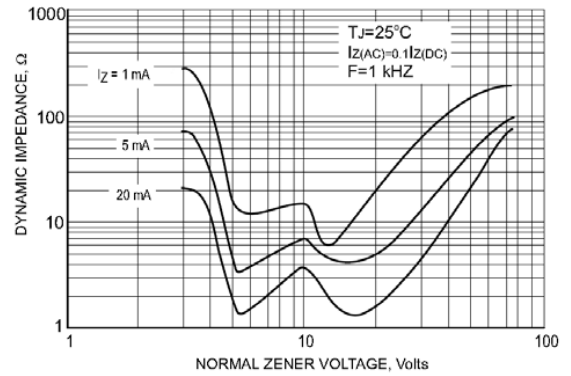


Fig.3 Power Dissipation VS Ambient Temp

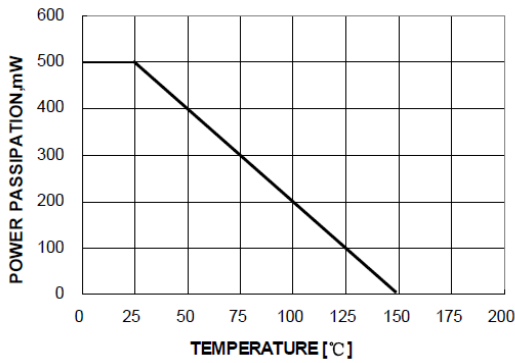


Fig.4 Typical Capacitance

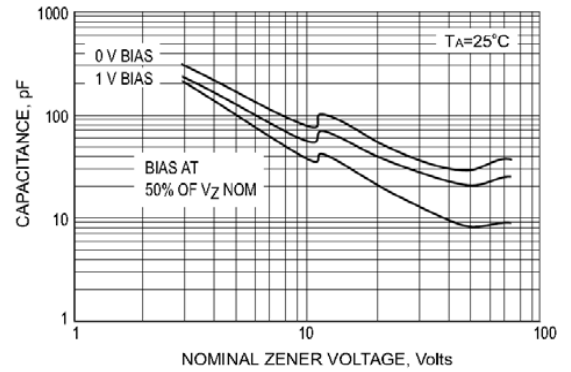


Fig.5 Zener Breakdown Characteristics

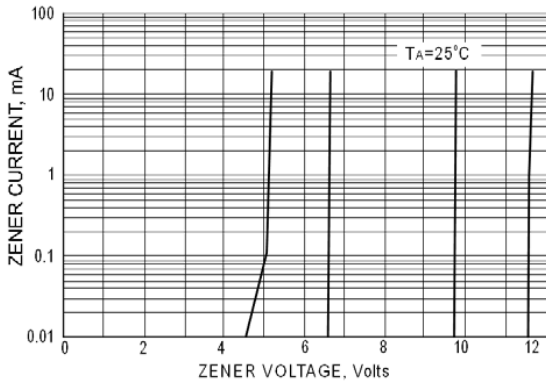


Fig.6 Zener Breakdown Characteristics

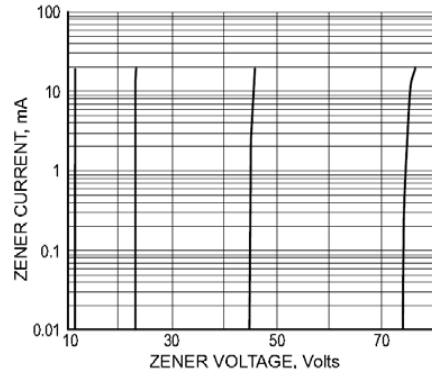
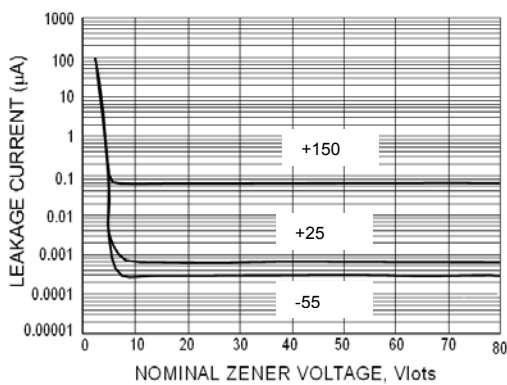


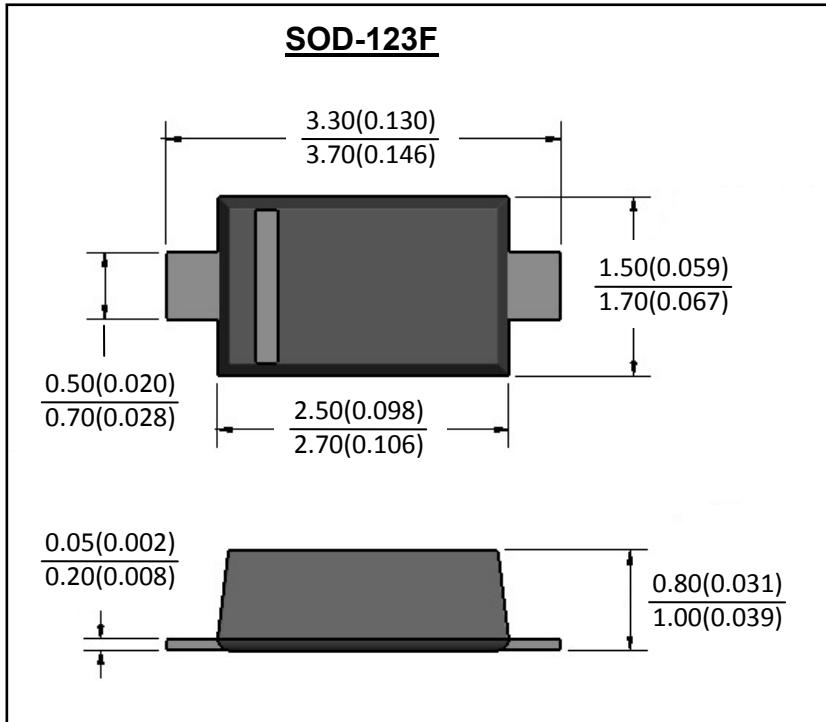
Fig.7 Typical Leakage Current



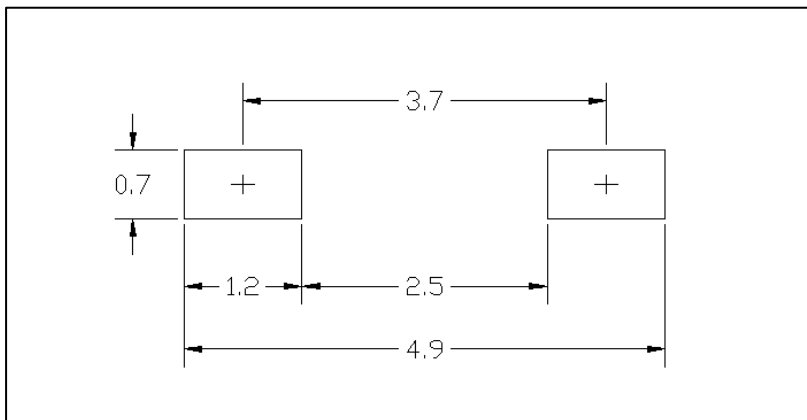


MMSZ2V0CWF THRU MMSZ75VCWF

■ Outline Dimensions



■ Soldering Footprint





MMSZ2V0CWF THRU MMSZ75VCWF

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