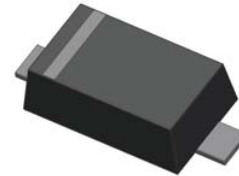


500mW SOD-123 SURFACE MOUNT Flat Lead Surface Mount Plastic Package Zener Voltage Regulators

Green Product



Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

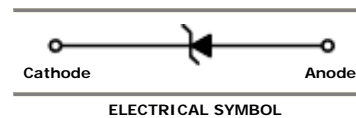
Symbol	Parameter	Value	Units
P_D	Power Dissipation	500	mW
T_{STG}	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
T_{OPR}	Operating Temperature Range	-65 to +150	$^\circ\text{C}$

These ratings are limiting values above which the serviceability of the diode may be impaired.

SOD-123 Flat Lead

Specification Features:

- Wide Zener Voltage Range Selection, 4.3V to 75V
- VZ Tolerance Selection of $\pm 2\%$
- Flat Lead SOD-123 Plastic Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode



Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	$Z_{ZK} @ I_{ZK} = 0.25\text{mA}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
		Min	Nom	Max					
MMSZ5229CW	229C	4.214	4.3	4.386	20	22	2000	5	1
MMSZ5230CW	230C	4.606	4.7	4.794	20	19	1900	5	2
MMSZ5231CW	231C	4.998	5.1	5.202	20	17	1600	5	2
MMSZ5232CW	232C	5.488	5.6	5.712	20	11	1600	5	3
MMSZ5233CW	233C	5.88	6.0	6.12	20	7	1600	5	3.5
MMSZ5234CW	234C	6.076	6.2	6.324	20	7	1000	5	4
MMSZ5235CW	235C	6.664	6.8	6.936	20	5	750	3	5
MMSZ5236CW	236C	7.35	7.5	7.65	20	6	500	3	6
MMSZ5237CW	237C	8.036	8.2	8.364	20	8	500	3	6.5
MMSZ5238CW	238C	8.526	8.7	8.874	20	8	600	3	6.5
MMSZ5239CW	239C	8.918	9.1	9.282	20	10	600	3	7
MMSZ5240CW	240C	9.8	10	10.2	20	17	600	3	8
MMSZ5241CW	241C	10.78	11	11.22	20	22	600	2	8.4
MMSZ5242CW	242C	11.76	12	12.24	20	30	600	1	9.1
MMSZ5243CW	243C	12.74	13	13.26	9.5	13	600	0.5	9.9
MMSZ5244CW	244C	13.72	14	14.28	9	15	600	0.1	10
MMSZ5245CW	245C	14.7	15	15.3	8.5	16	600	0.1	11
MMSZ5246CW	246C	15.68	16	16.32	7.8	17	600	0.1	12
MMSZ5247CW	247C	16.66	17	17.34	7.4	19	600	0.1	13
MMSZ5248CW	248C	17.64	18	18.36	7	21	600	0.1	14
MMSZ5249CW	249C	18.62	19	19.38	6.6	23	600	0.1	14
MMSZ5250CW	250C	19.6	20	20.4	6.2	25	600	0.1	15

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	$Z_{ZK} @ I_{ZK} = 0.25\text{mA}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
		Min	Nom	Max					
MMSZ5251CW	251C	21.56	22	22.44	5.6	29	600	0.1	17
MMSZ5252CW	252C	23.52	24	24.48	5.2	33	600	0.1	18
MMSZ5253CW	253C	24.5	25	25.5	5	35	600	0.1	19
MMSZ5254CW	254C	26.46	27	27.54	4.6	41	600	0.1	21
MMSZ5255CW	255C	27.44	28	28.56	4.5	44	600	0.1	21
MMSZ5256CW	256C	29.4	30	30.6	4.2	49	600	0.1	23
MMSZ5257CW	257C	32.34	33	33.66	3.8	58	700	0.1	25
MMSZ5258CW	258C	35.28	36	36.72	3.4	70	700	0.1	27
MMSZ5259CW	259C	38.22	39	39.78	3.2	80	800	0.1	30
MMSZ5260CW	260C	42.14	43	43.86	3	93	900	0.1	33
MMSZ5261CW	261C	46.06	47	47.94	2.7	105	1000	0.1	36
MMSZ5262CW	262C	49.98	51	52.02	2.5	125	1100	0.1	39
MMSZ5263CW	263C	54.88	56	57.12	2.2	150	1300	0.1	43
MMSZ5264CW	264C	58.8	60	61.2	2.1	170	1400	0.1	46
MMSZ5265CW	265C	60.76	62	63.24	2.0	185	1400	0.1	47
MMSZ5266CW	266C	66.64	68	69.36	1.8	230	1600	0.1	52
MMSZ5267CW	267C	73.5	75	76.5	1.7	270	1700	0.1	56

 V_F Forward Voltage = 900mV Maximum @ $I_F = 10$ mA for all types

Notes:

1. The zener voltage (V_Z) is tested under pulse condition of 1mS.
2. The device numbers listed have a standard tolerance on the nominal zener voltage of $\pm 2\%$.
3. 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} .
4. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Tak Cheong Electronics representative.

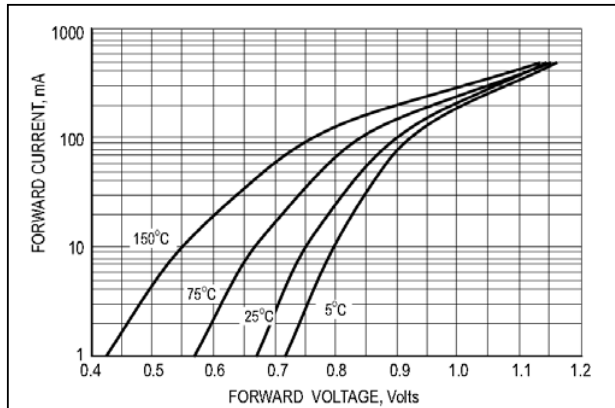
TYPICAL CHARACTERISTIC CURVES


Fig.1 TYPICAL FORWARD VOLTAGE

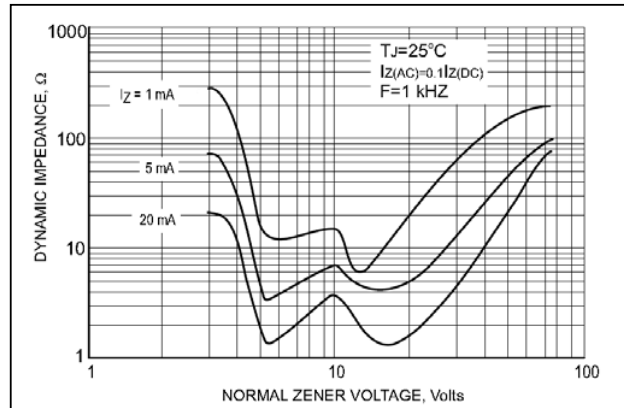


Fig.2 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

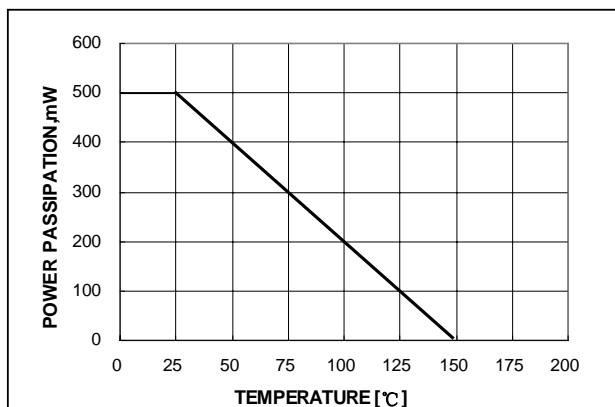


Fig.3 POWER DISSIPATION VS. AMBIENT TEMP.

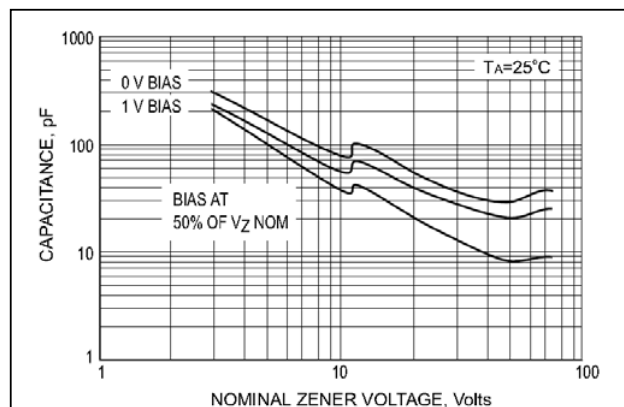


Fig.4 TYPICAL CAPACITANCE

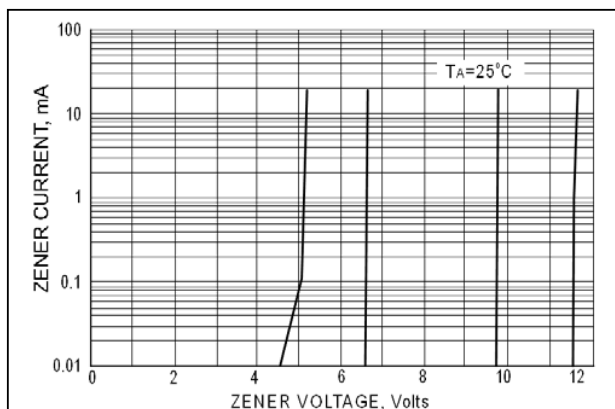


Fig.5 ZENER BREAKDOWN CHARACTERISTICS

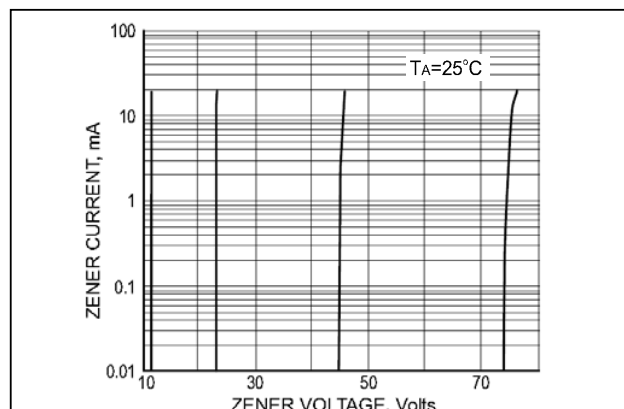
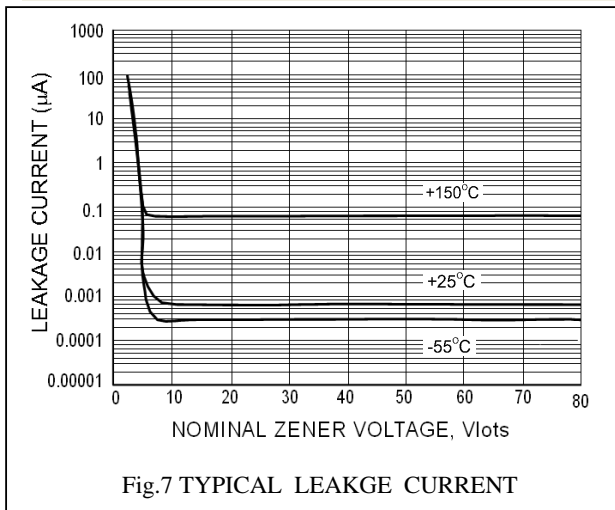
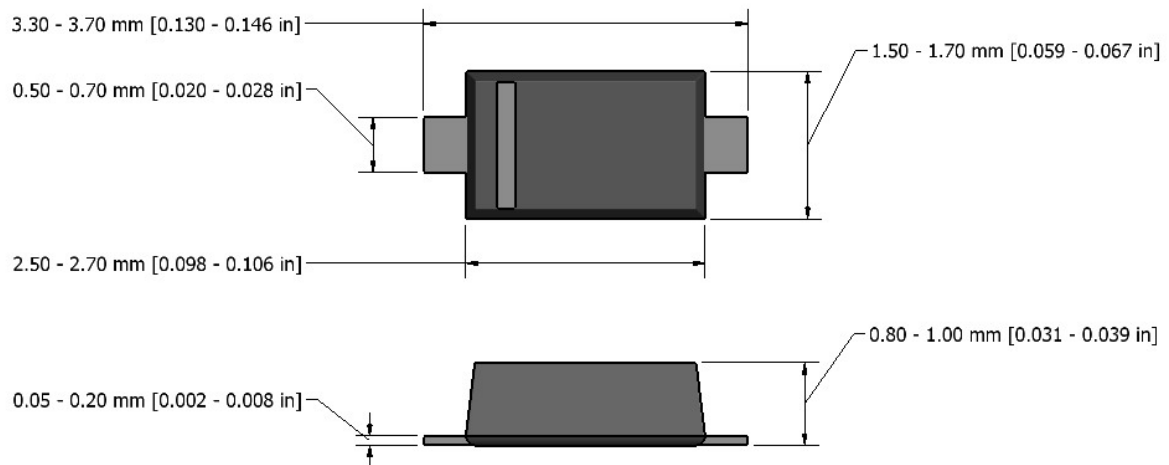


Fig.6 ZENER BREAKDOWN CHARACTERISTICS



Flat Lead SOD-123 Package Outline



Note: Dimensions are exclusive of Currs, Mold Flash & Tie Car extrusions.

NOTICE

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Tak Cheong Semiconductor Co., Ltd., or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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