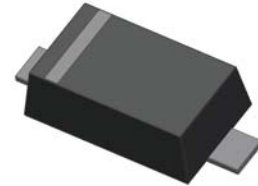


## 500mW SOD-123 SURFACE MOUNT Flat Lead Surface Mount Plastic Package Zener Voltage Regulators

Green Product



SOD-123 Flat Lead

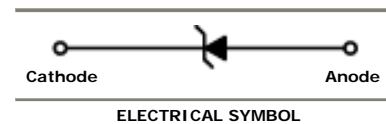
### Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

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.

### 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)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$Z_{ZK} @ I_{ZK} = 0.25\text{mA}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) 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

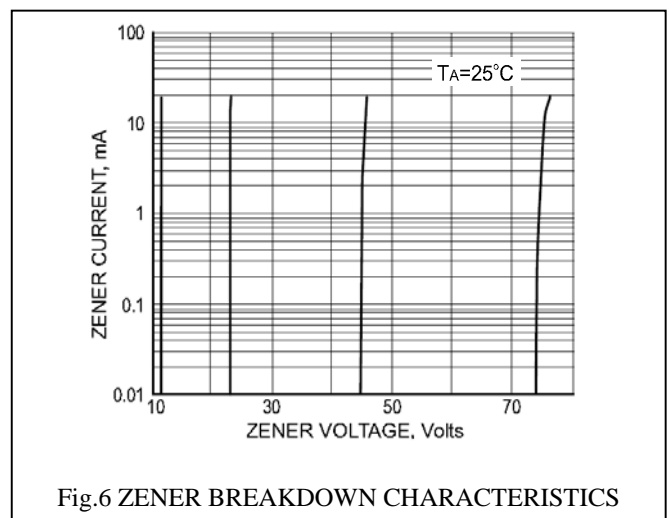
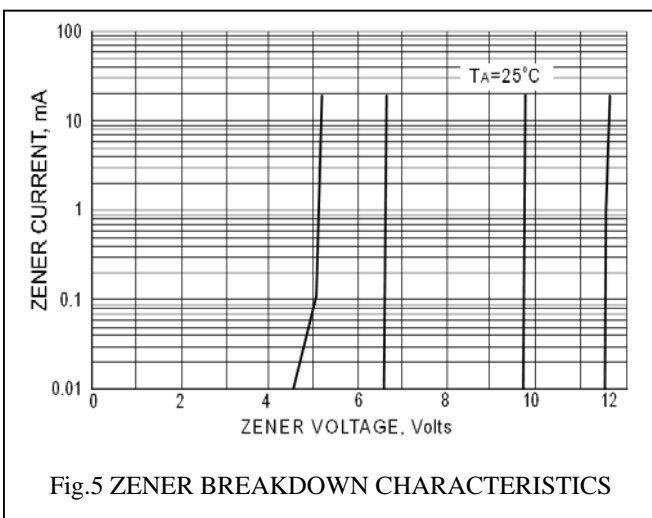
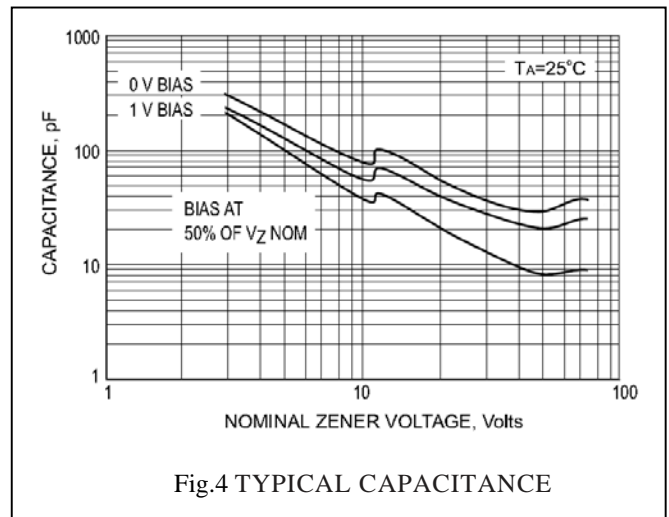
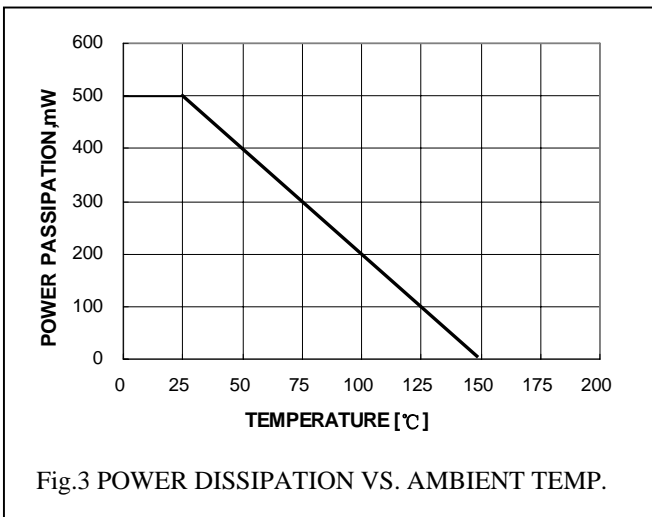
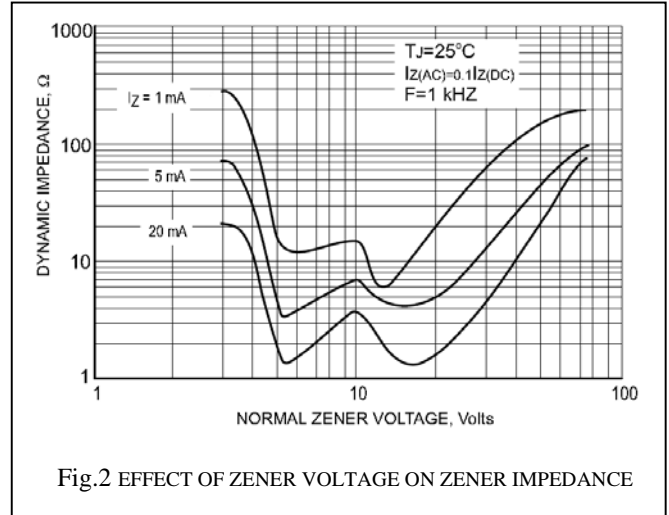
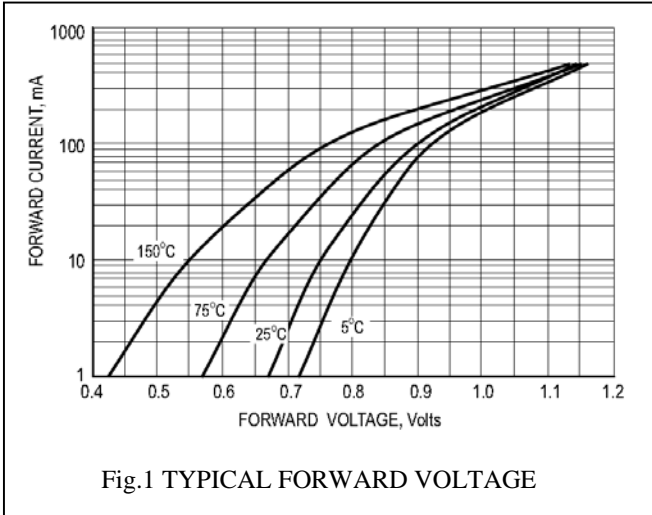
**Electrical Characteristics**  $T_A = 25^\circ\text{C}$  unless otherwise noted

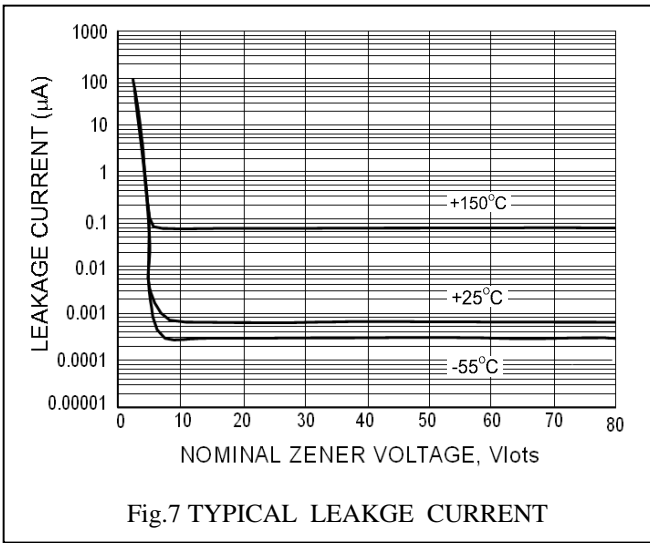
Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			$I_{ZT}$ (mA)	$Z_{ZT} @ I_{ZT}$ ( $\Omega$ ) Max	$Z_{ZK} @ I_{ZK} = 0.25\text{mA}$ ( $\Omega$ ) Max	$I_R @ V_R$ ( $\mu\text{A}$ ) Max	$V_R$ (Volts)
		Min	Nom	Max					
MMSZ5251CW	251C	21.56	22	22.44	5.6	29	600	0.1	17
MMSZ5252CW	252C	23.52	24	24.48	5.2	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

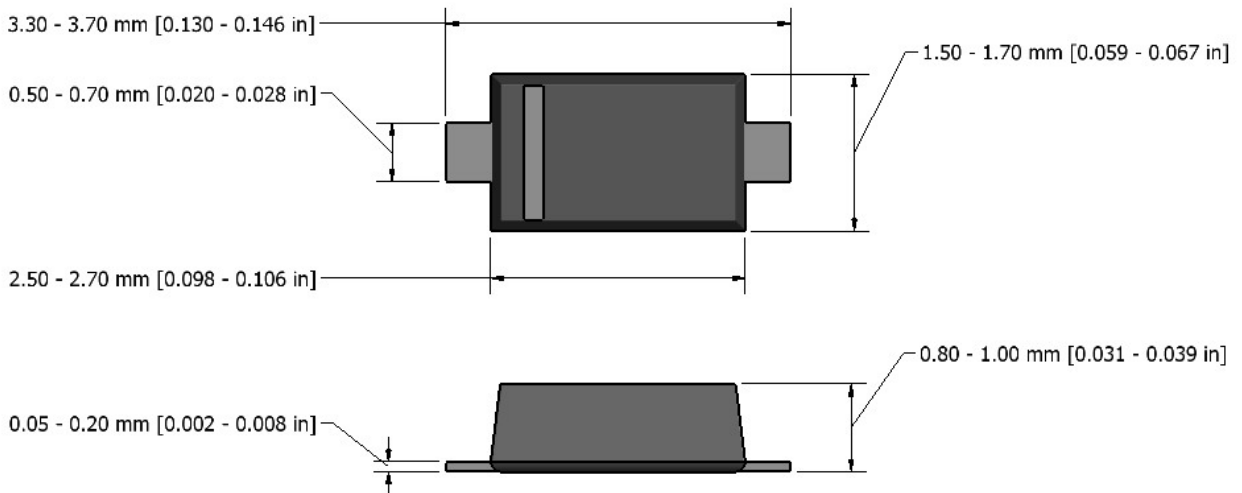
**Notes:**

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**




**Flat Lead SOD-123 Package Outline**



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