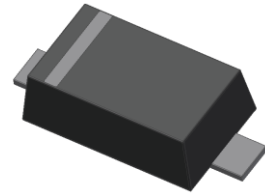


500mW SOD-123 SURFACE MOUNT Flat Lead Surface Mount Plastic Package Zener Voltage Regulators

Green Product



SOD-123 Flat Lead

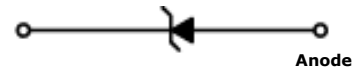
Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

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:

- Zener Voltage Range 15V (MMSZ5245C-E3-08-CN)
- VZ Tolerance Selection of $\pm 2\%$
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode
- Weight: approx. 0.01g
- AEC-Q101 Qualified



ELECTRICAL SYMBOL

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					
MMSZ5229C	229C	4.214	4.3	4.386	20	22	2000	5	1
MMSZ5230C	230C	4.606	4.7	4.794	20	19	1900	5	2
MMSZ5231C	231C	4.998	5.1	5.202	20	17	1600	5	2
MMSZ5232C	232C	5.488	5.6	5.712	20	11	1600	5	3
MMSZ5233C	233C	5.88	6.0	6.12	20	7	1600	5	3.5
MMSZ5234C	234C	6.076	6.2	6.324	20	7	1000	5	4
MMSZ5235C	235C	6.664	6.8	6.936	20	5	750	3	5
MMSZ5236C	236C	7.35	7.5	7.65	20	6	500	3	6
MMSZ5237C	237C	8.036	8.2	8.364	20	8	500	3	6.5
MMSZ5238C	238C	8.526	8.7	8.874	20	8	600	3	6.5
MMSZ5239C	239C	8.918	9.1	9.282	20	10	600	3	7
MMSZ5240C	240C	9.8	10	10.2	20	17	600	3	8
MMSZ5241C	241C	10.78	11	11.22	20	22	600	2	8.4
MMSZ5242C	242C	11.76	12	12.24	20	30	600	1	9.1
MMSZ5243C	243C	12.74	13	13.26	9.5	13	600	0.5	9.9
MMSZ5244C	244C	13.72	14	14.28	9	15	600	0.1	10
MMSZ5245C	245C	14.7	15	15.3	8.5	16	600	0.1	11
MMSZ5246C	246C	15.68	16	16.32	7.8	17	600	0.1	12
MMSZ5247C	247C	16.66	17	17.34	7.4	19	600	0.1	13
MMSZ5248C	248C	17.64	18	18.36	7	21	600	0.1	14
MMSZ5249C	249C	18.62	19	19.38	6.6	23	600	0.1	14
MMSZ5250C	250C	19.6	20	20.4	6.2	25	600	0.1	15

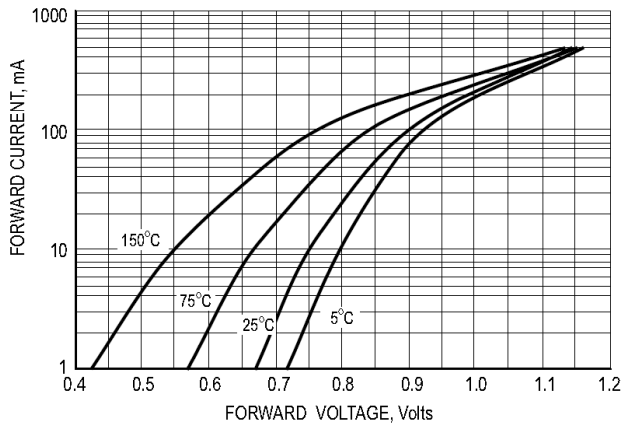
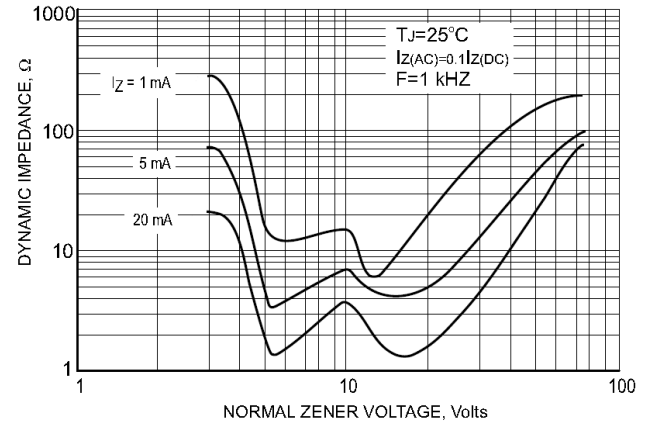
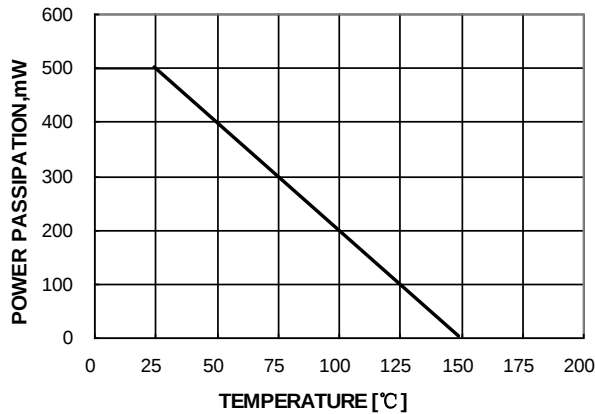
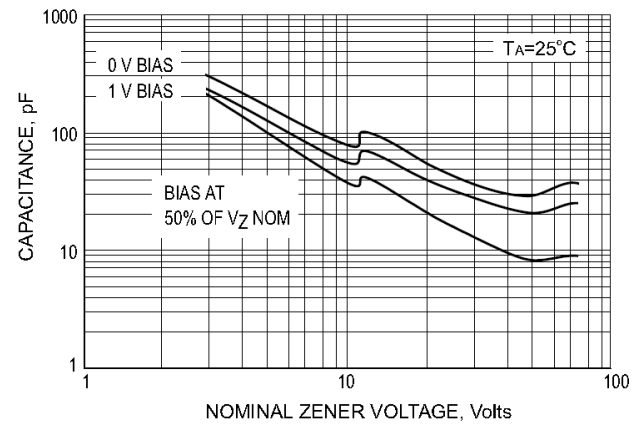
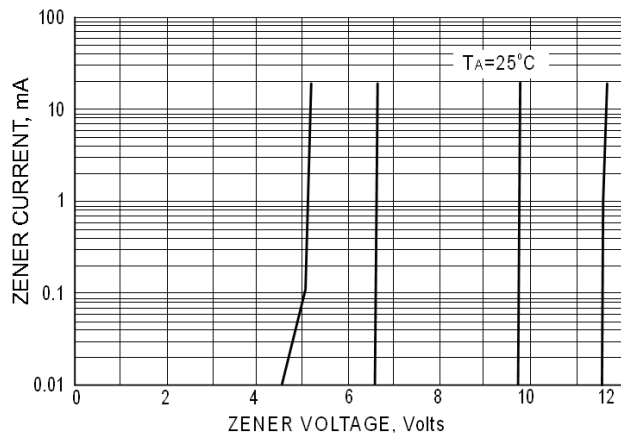
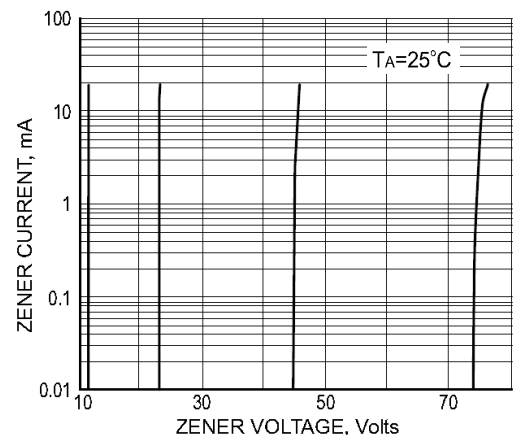
Electrical Characteristics
 $T_A = 25^\circ\text{C}$ unless otherwise noted

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					
MMSZ5251C	251C	21.56	22	22.44	5.6	29	600	0.1	17
MMSZ5252C	252C	23.52	24	24.48	5.2	33	600	0.1	18
MMSZ5253C	253C	24.5	25	25.5	5	35	600	0.1	19
MMSZ5254C	254C	26.46	27	27.54	4.6	41	600	0.1	21
MMSZ5255C	255C	27.44	28	28.56	4.5	44	600	0.1	21
MMSZ5256C	256C	29.4	30	30.6	4.2	49	600	0.1	23
MMSZ5257C	257C	32.34	33	33.66	3.8	58	700	0.1	25
MMSZ5258C	258C	35.28	36	36.72	3.4	70	700	0.1	27
MMSZ5259C	259C	38.22	39	39.78	3.2	80	800	0.1	30
MMSZ5260C	260C	42.14	43	43.86	3	93	900	0.1	33
MMSZ5261C	261C	46.06	47	47.94	2.7	105	1000	0.1	36
MMSZ5262C	262C	49.98	51	52.02	2.5	125	1100	0.1	39
MMSZ5263C	263C	54.88	56	57.12	2.2	150	1300	0.1	43
MMSZ5264C	264C	58.8	60	61.2	2.1	170	1400	0.1	46
MMSZ5265C	265C	60.76	62	63.24	2.0	185	1400	0.1	47
MMSZ5266C	266C	66.64	68	69.36	1.8	230	1600	0.1	52
MMSZ5267C	267C	73.5	75	76.5	1.7	270	1700	0.1	56

 V_F Forward Voltage = 900mV Maximum @ $I_F = 10\text{ mA}$ for all types

Notes:

1. The zener voltage (V_Z) is tested under pulse condition of 1mS.
2. The device numCers 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} .

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

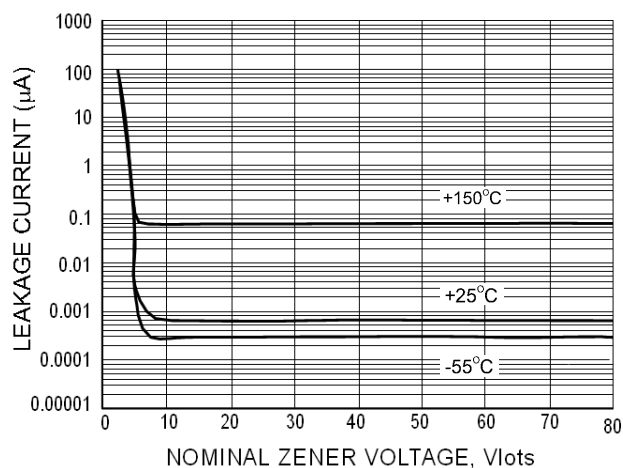
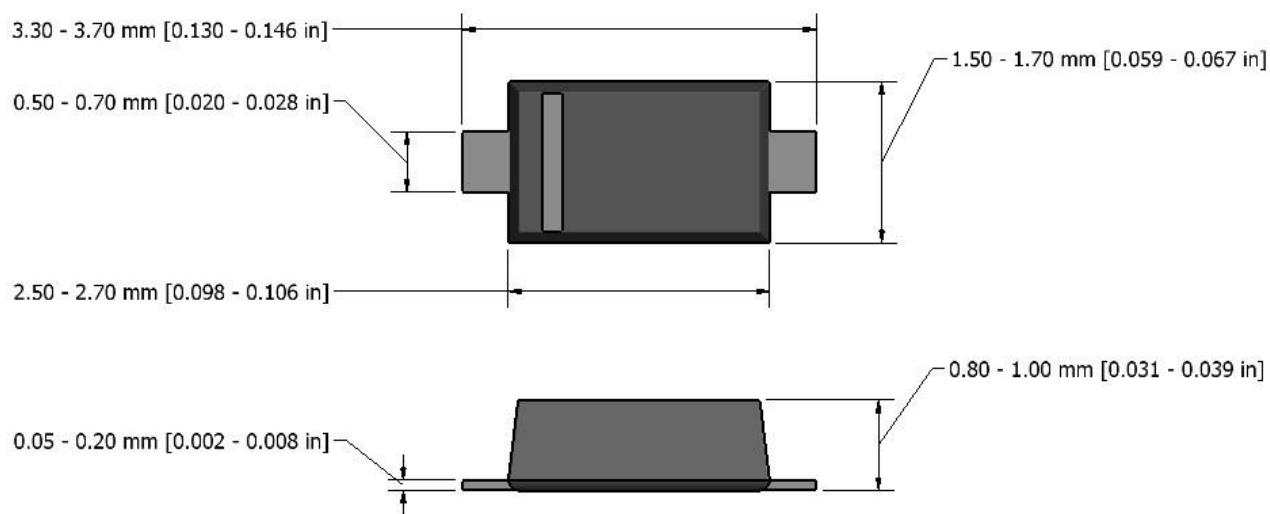


Fig.7 TYPICAL LEAKGE CURRENT

Flat Lead SOD-123 Package Outline



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

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