

500mW SOD-123 SURFACE MOUNT

Flat Lead Surface Mount Plastic Package

Zener Voltage Regulators

Green Product



SOD-123 Flat Lead

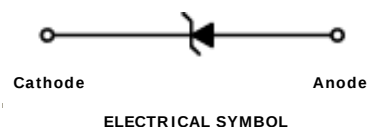
Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

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 18 V (MMSZ5248BT1G-CN)
- VZ Tolerance Selection of $\pm 5\%$
- 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					
MMSZ5221B	Z2V4	2.28	2.4	2.52	20	30	1200	100	1
MMSZ5222B	Z2V5	2.38	2.5	2.63	20	30	1250	100	1
MMSZ5223B	Z2V7	2.57	2.7	2.84	20	30	1300	75	1
MMSZ5224B	Z2V8	2.66	2.8	2.94	20	30	1400	75	1
MMSZ5225B	Z3V0	2.85	3.0	3.15	20	29	1600	50	1
MMSZ5226B	Z3V3	3.14	3.3	3.47	20	28	1600	25	1
MMSZ5227B	Z3V6	3.42	3.6	3.78	20	24	1700	15	1
MMSZ5228B	Z3V9	3.71	3.9	4.10	20	23	1900	10	1
MMSZ5229B	Z4V3	4.09	4.3	4.52	20	22	2000	5	1
MMSZ5230B	Z4V7	4.47	4.7	4.94	20	19	1900	5	2
MMSZ5231B	Z5V1	4.85	5.1	5.36	20	17	1600	5	2
MMSZ5232B	Z5V6	5.32	5.6	5.88	20	11	1600	5	3
MMSZ5233B	Z6V0	5.70	6.0	6.30	20	7	1600	5	3.5
MMSZ5234B	Z6V2	5.89	6.2	6.51	20	7	1000	5	4
MMSZ5235B	Z6V8	6.46	6.8	7.14	20	5	750	3	5
MMSZ5236B	Z7V5	7.13	7.5	7.88	20	6	500	3	6
MMSZ5237B	Z8V2	7.79	8.2	8.61	20	8	500	3	6.5
MMSZ5238B	Z8V7	8.27	8.7	9.14	20	8	600	3	6.5
MMSZ5239B	Z9V1	8.65	9.1	9.56	20	10	600	3	7
MMSZ5240B	Z10V	9.50	10	10.50	20	17	600	3	8
MMSZ5241B	Z11V	10.45	11	11.55	20	22	600	2	8.4
MMSZ5242B	Z12V	11.40	12	12.60	20	30	600	1	9.1
MMSZ5243B	Z13V	12.35	13	13.65	9.5	13	600	0.5	9.9

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					
MMSZ5244B	Z14V	13.30	14	14.70	9	15	600	0.1	10
MMSZ5245B	Z15V	14.25	15	15.75	8.5	16	600	0.1	11
MMSZ5246B	Z16V	15.20	16	16.80	7.8	17	600	0.1	12
MMSZ5247B	Z17V	16.15	17	17.85	7.4	19	600	0.1	13
MMSZ5248B	Z18V	17.10	18	18.90	7	21	600	0.1	14
MMSZ5249B	Z19V	18.05	19	19.95	6.6	23	600	0.1	14
MMSZ5250B	Z20V	19.00	20	21.00	6.2	25	600	0.1	15
MMSZ5251B	Z22V	20.90	22	23.10	5.6	29	600	0.1	17
MMSZ5252B	Z24V	22.80	24	25.20	5.2	33	600	0.1	18
MMSZ5253B	Z25V	23.75	25	26.25	5	35	600	0.1	19
MMSZ5254B	Z27V	25.65	27	28.35	4.6	41	600	0.1	21
MMSZ5255B	Z28V	26.60	28	29.40	4.5	44	600	0.1	21
MMSZ5256B	Z30V	28.50	30	31.50	4.2	49	600	0.1	23
MMSZ5257B	Z33V	31.35	33	34.65	3.8	58	700	0.1	25
MMSZ5258B	Z36V	34.20	36	37.80	3.4	70	700	0.1	27
MMSZ5259B	Z39V	37.05	39	40.95	3.2	80	800	0.1	30
MMSZ5260B	Z43V	40.85	43	45.15	3	93	900	0.1	33
MMSZ5261B	Z47V	44.65	47	49.35	2.7	105	1000	0.1	36
MMSZ5262B	Z51V	48.45	51	53.55	2.5	125	1100	0.1	39
MMSZ5263B	Z56V	53.20	56	58.80	2.2	150	1300	0.1	43
MMSZ5264B	Z60V	57.00	60	63.00	2.1	170	1400	0.1	46
MMSZ5265B	Z62V	58.90	62	65.10	2.0	185	1400	0.1	47
MMSZ5266B	Z68V	64.60	68	71.40	1.8	230	1600	0.1	52
MMSZ5267B	Z75V	71.25	75	78.75	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 numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
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} .

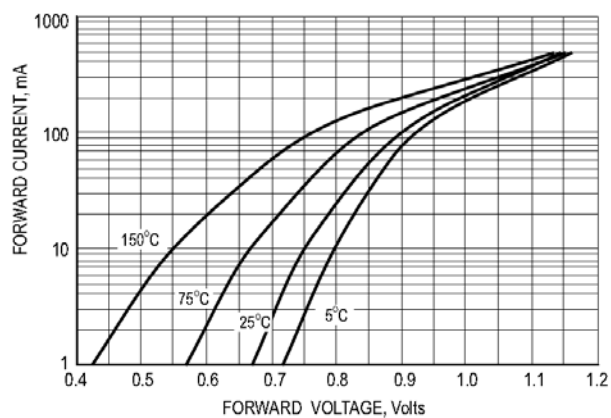
RATING AND CHARACTERISTIC CURVES


Fig.1 TYPICAL FORWARD VOLTAGE

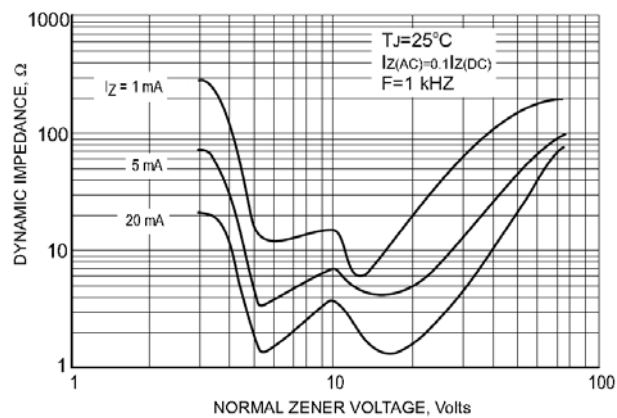


Fig.2 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

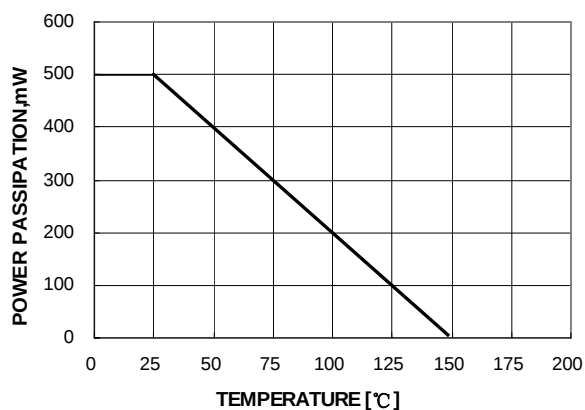


Fig.3 POWER DISSIPATION VS. AMBIENT TEMP.

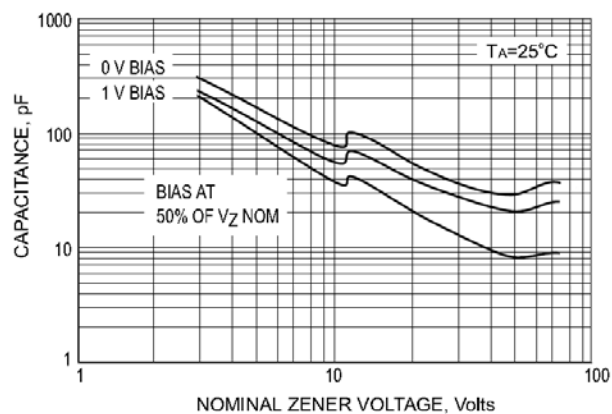


Fig.4 TYPICAL CAPACITANCE

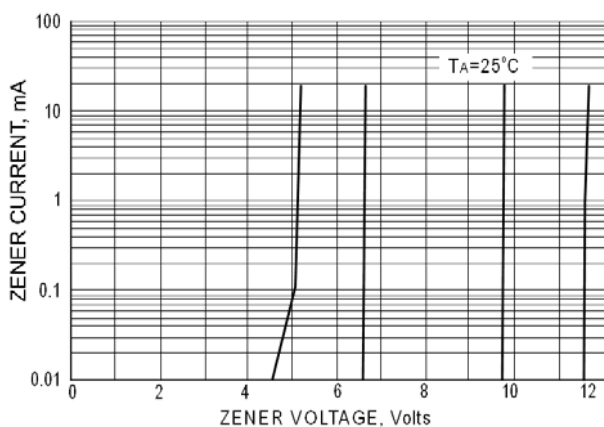


Fig.5 ZENER BREAKDOWN CHARACTERISTICS

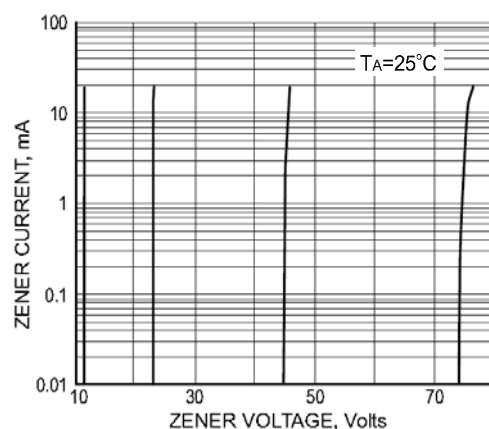


Fig.6 ZENER BREAKDOWN CHARACTERISTICS

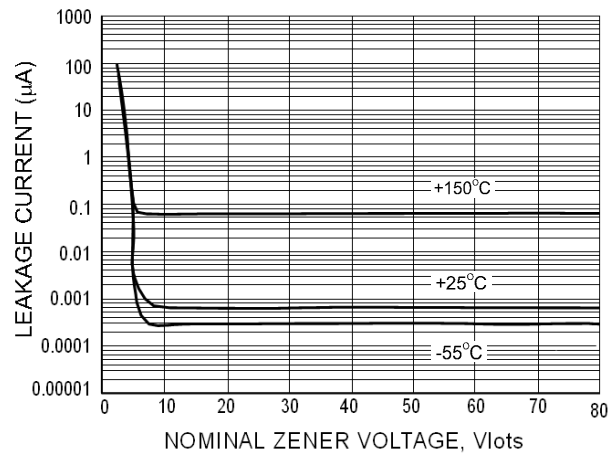
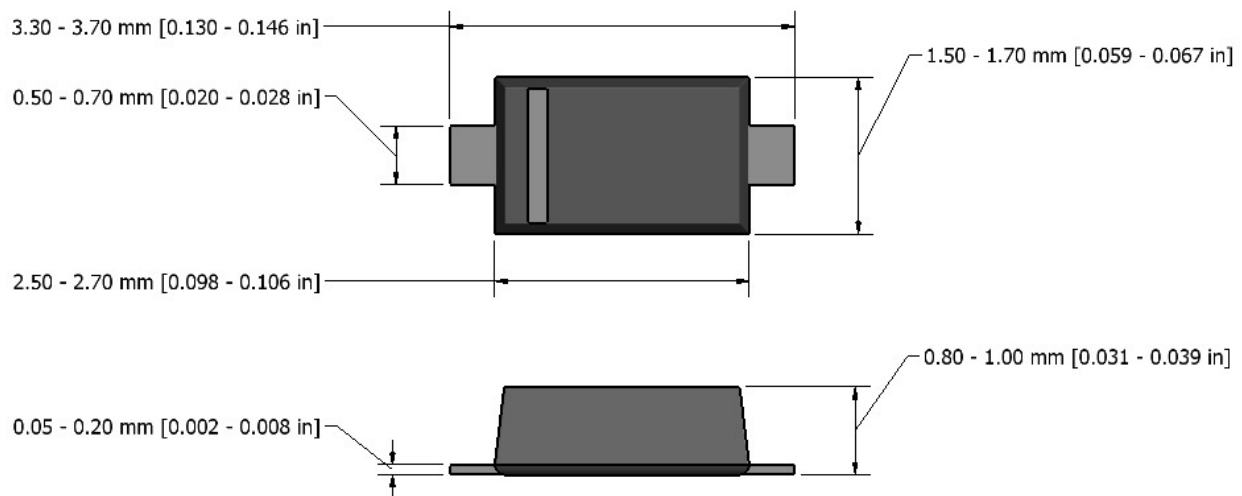


Fig.7 TYPICAL LEAKGE CURRENT

Flat Lead SOD-123 Package Outline



Note: Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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