GOOD-ARK SEMICONDUCTOR

MMSZ52xxB Series

Surface Mount Zener Diodes

Vz Range: 2.4V to 75V Power Dissipation: 500mW

Features

- Constant voltage control
- Wide voltage range selection 2.4V to 75V
- RoHS compliant/green EMC
- Matte tin (Sn) lead finish
- Cathode band/device marking refer to table list

RoHS COMPLIANT

SOD-123

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Units
Power Dissipation	P_D	500	mW
Maximum Regulator Current	I_{ZM}	P_D/V_Z	mA
Forward Voltage (@ I_F=10mA)	V_F	0.9	V
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

MPN	Marking	Zener Voltage Range			Test Current	Maximum Zener Impedance		Maximum Reverse Leakage Current	
		V_Z @ I_{ZT}				Z_{ZT} @ I_{ZT}	Zzk@1zk= 0.25mA	I_R	@V_R
		Nom	Min	Max	Izt				
		(V)	(V)	(V)	mA	Ω	Ω	uA	V
MMSZ5221B	C1	2.4	2.28	2.52	20	30	1200	100	1
MMSZ5222B	C2	2.5	2.38	2.63	20	30	1200	100	1
MMSZ5223B	C3	2.7	2.57	2.84	20	30	1300	75	1
MMSZ5225B	C5	3.0	2.85	3.15	20	30	1600	50	1
MMSZ5226B	G1	3.3	3.14	3.47	20	28	1600	25	1
MMSZ5227B	G2	3.6	3.42	3.78	20	24	1700	15	1
MMSZ5228B	G3	3.9	3.71	4.1	20	23	1900	10	1
MMSZ5229B	G4	4.3	4.09	4.52	20	22	2000	5	1
MMSZ5230B	G5	4.7	4.47	4.94	20	19	1900	5	2

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MPN	Marking	Zener Voltage Range			Test Current	Maximum Zener Impedance		Maximum Reverse Leakage Current	
		Vz @ Izt				Zzt @ Izt	Zzk@1zk= 0.25mA	I_R	@V_R
		Nom	Min	Max	Izt				
		(V)	(V)	(V)	mA	Ω	Ω	uA	V
MMSZ5231B	E1	5.1	4.85	5.36	20	17	1600	5	2
MMSZ5232B	E2	5.6	5.32	5.88	20	11	1600	5	3
MMSZ5233B	E3	6.0	5.70	6.30	20	7	1600	5	3.5
MMSZ5234B	E4	6.2	5.89	6.51	20	7	1000	5	4
MMSZ5235B	E5	6.8	6.46	7.14	20	5	750	3	5
MMSZ5236B	F1	7.5	7.13	7.88	20	6	500	3	6
MMSZ5237B	F2	8.2	7.79	8.61	20	8	500	3	6.5
MMSZ5238B	F3	8.7	8.27	9.14	20	8	600	3	6.5
MMSZ5239B	F4	9.1	8.65	9.56	20	10	600	3	7
MMSZ5240B	F5	10	9.50	10.50	20	17	600	3	8
MMSZ5241B	H1	11	10.45	11.55	20	22	600	2	8.4
MMSZ5242B	H2	12	11.40	12.60	20	30	600	1	9.1
MMSZ5243B	H3	13	12.35	13.65	9.5	13	600	0.5	9.9
MMSZ5244B	H4	14	13.30	14.70	9.0	15	600	0.1	10
MMSZ5245B	H5	15	14.25	15.75	8.5	16	600	0.1	11
MMSZ5246B	J1	16	15.20	16.80	7.8	17	600	0.1	12
MMSZ5247B	J2	17	16.15	17.85	7.4	19	600	0.1	13
MMSZ5248B	J3	18	17.10	18.90	7.0	21	600	0.1	14
MMSZ5250B	J5	20	19.00	21.00	6.2	25	600	0.1	15
MMSZ5251B	K1	22	20.90	23.10	5.6	29	600	0.1	17
MMSZ5252B	K2	24	22.80	25.20	5.2	33	600	0.1	18
MMSZ5253B	K3	25	23.75	26.25	5.0	35	600	0.1	19
MMSZ5254B	K4	27	25.65	28.35	5.0	41	600	0.1	21
MMSZ5255B	K5	28	26.60	29.40	4.5	44	600	0.1	21
MMSZ5256B	M1	30	28.50	31.50	4.2	49	600	0.1	23
MMSZ5257B	M2	33	31.35	34.65	3.8	58	700	0.1	25
MMSZ5258B	M3	36	34.20	37.80	3.4	70	700	0.1	27
MMSZ5259B	M4	39	37.05	40.95	3.2	80	800	0.1	30
MMSZ5260B	M5	43	40.85	45.15	3.0	93	900	0.1	33
MMSZ5261B	N1	47	44.65	49.35	2.7	105	1000	0.1	36
MMSZ5262B	N2	51	48.45	53.55	2.5	125	1100	0.1	39
MMSZ5263B	N3	56	53.20	58.80	2.2	150	1300	0.1	43
MMSZ5265B	N5	62	58.90	65.10	2.0	185	1400	0.1	47
MMSZ5267B	P2	75	71.25	78.75	1.7	270	1700	0.1	56

Typical Characteristic Curves

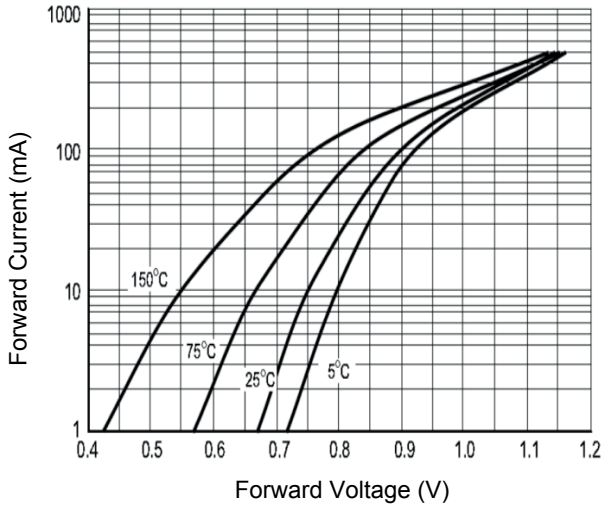

Figure 1. Typical Forward Voltage

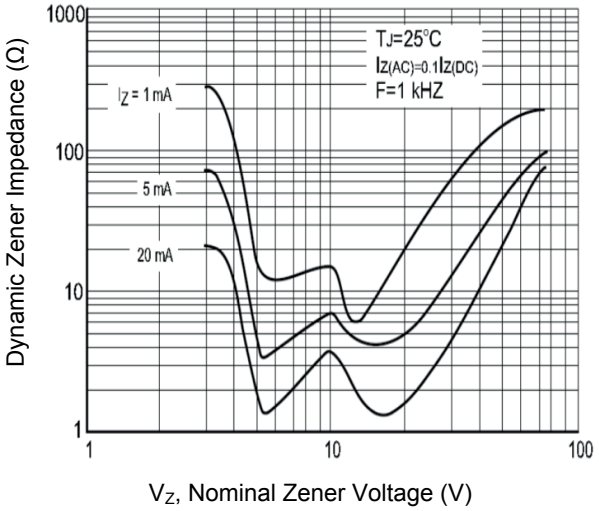

Figure 2. Effect of Zener Voltage on Zener Impedance

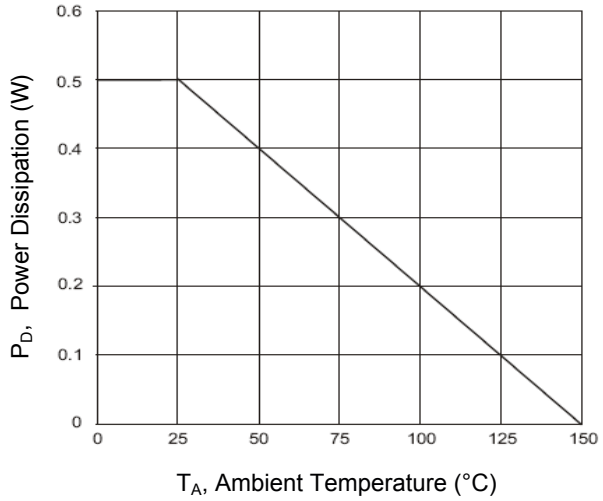

Figure 3. Power Dissipation vs. T_A

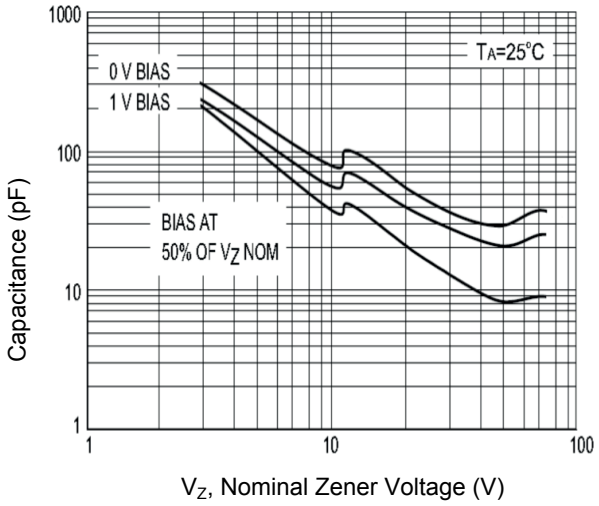

Figure 4. Typical Capacitance

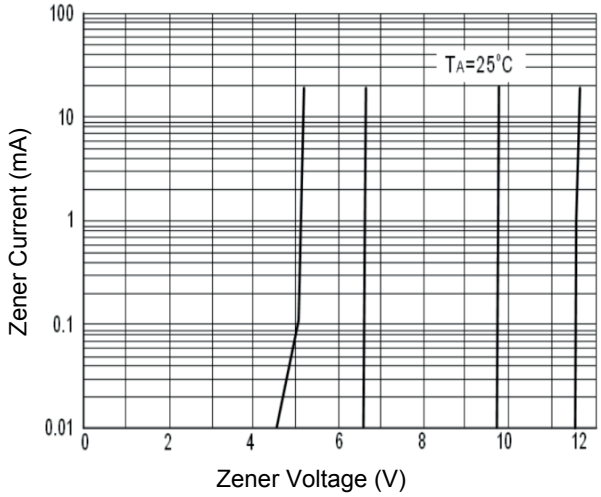

Figure 5. Zener Breakdown Characteristics

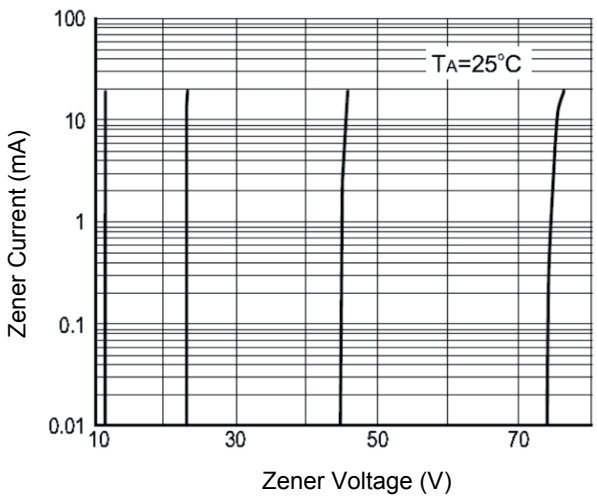

Figure 6. Zener Breakdown Characteristics

Typical Characteristic Curves

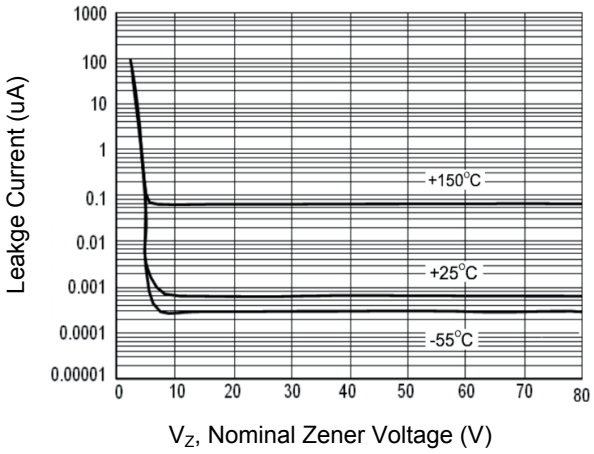

Figure 7. Typical Leakge Current

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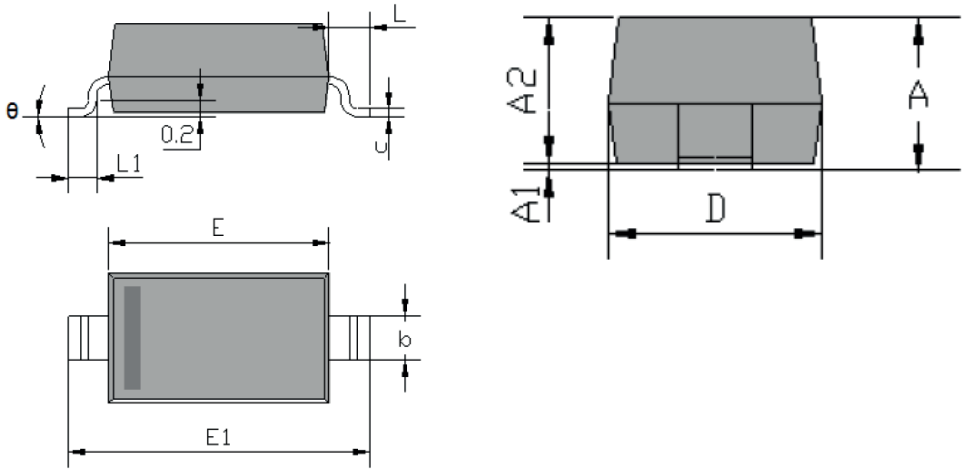
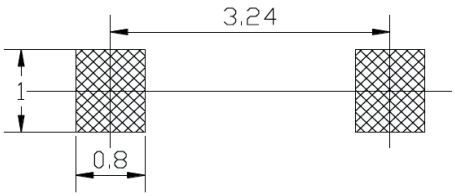
Package Outline Dimensions (SOD-123)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.05	1.25	0.041	0.049
A1	0.00	0.10	0.000	0.004
A2	1.05	1.15	0.041	0.045
b	0.45	0.65	0.018	0.026
c	0.08	0.15	0.003	0.006
D	1.50	1.70	0.059	0.067
E	2.60	2.80	0.102	0.110
E1	3.55	3.85	0.140	0.152
L	0.50 REF		0.020 REF	
L1	0.25	0.45	0.010	0.018
θ	0°	8°	0°	8°

Recommended Pad Layout



Unit: mm

Order Information

Device	Package	Marking	Packaging	SPQ
MMSZ52xxB	SOD-123	See Marking Code	Tape & Reel	3,000 Pcs / Reel