THE DATASHEET OF

MMSZ5258B

GOOD-ARK SEMICONDUCTOR

MMSZ52xxB Series

Surface Mount Zener Diodes

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

Features

- Low zener impedance
- High stability and high reliability
- General purpose, medium current
- Ideal for automated assembly process

RoHS COMPLIANT

SOD-123

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

Parameter	Symbol	Value	Unit
Forward Voltage[1] @ I_F=10mA	V_F	0.9	V
Power Dissipation[2]	P_D	500	mW
Thermal Resistance, Junction to Ambient[3]	$R_{\theta JA}$	340	°C/W
Thermal Resistance, Junction to Lead[3]	$R_{\theta JL}$	150	°C/W
Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Note:

1. Short duration test pulse used to minimize self-heating effect
2. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm²
3. Thermal resistance measured with infrared scan method.

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

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
MMSZ5221B	C1	2.4	2.28	2.52	20	30	1200	100	1
MMSZ5222B	C2	2.5	2.38	2.63	20	30	1250	100	1
MMSZ5223B	C3	2.7	2.57	2.84	20	30	1300	75	1
MMSZ5224B	C4	2.8	2.66	2.94	20	30	1400	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	7.5	19	600	0.1	13
MMSZ5248B	J3	18	17.10	18.90	7.0	21	600	0.1	14
MMSZ5249B	J4	19	18.05	19.95	6.6	23	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
MMSZ5264B	N4	60	57.00	63.00	2.1	170	1400	0.1	46
MMSZ5265B	N5	62	58.90	65.10	2.0	185	1400	0.1	47
MMSZ5266B	P1	68	64.60	71.40	1.8	230	1600	0.1	52
MMSZ5267B	P2	75	71.25	78.75	1.7	270	1700	0.1	56

Ratings and Characteristic Curves

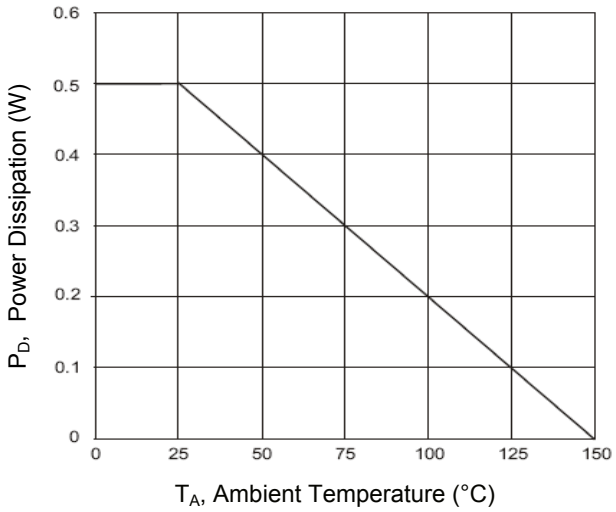

Figure 1. Power Derating Curve

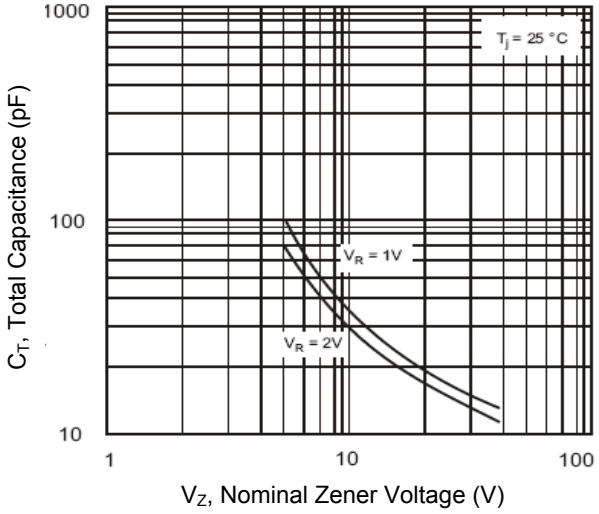

Figure 2. Total Capacitance vs. Nominal Zener Voltage

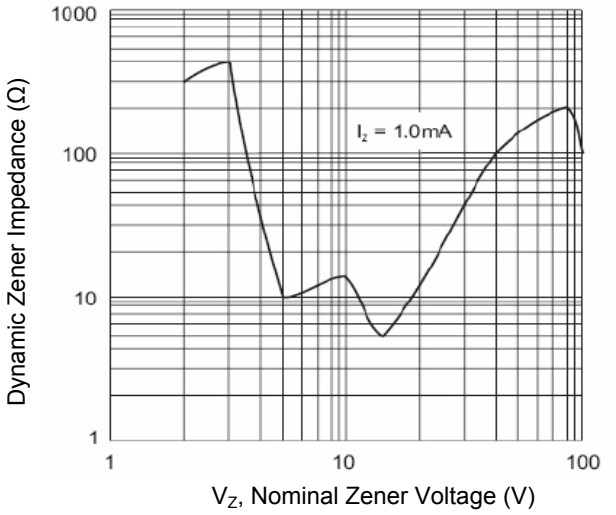

Figure 3. Zener Voltage vs. Zener Impedance

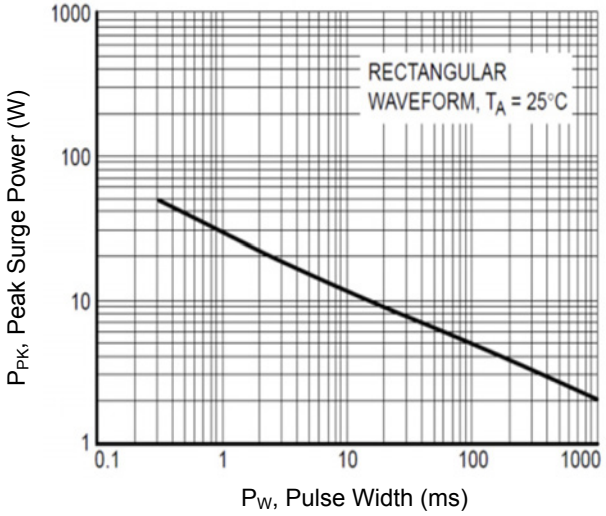

Figure 4. Maximum Non-repetitive Surge Power

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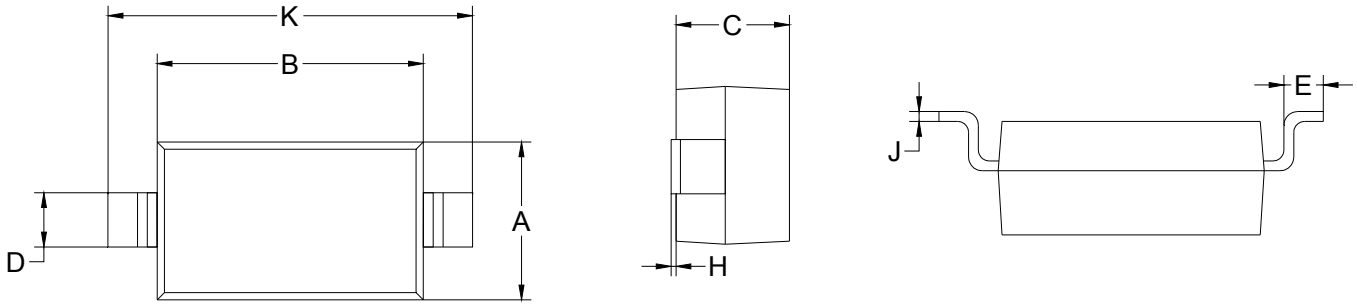
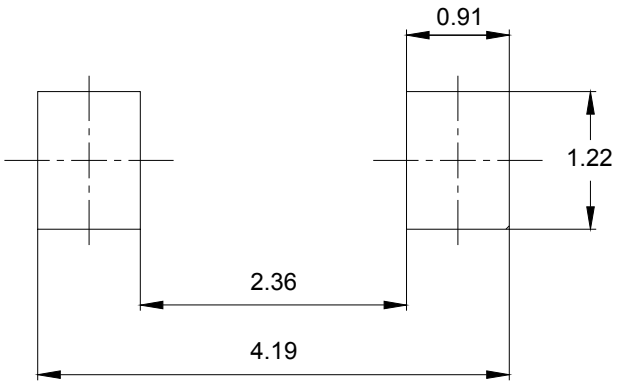
Package Outline Dimensions (SOD-123)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.750	0.055	0.069
B	2.500	2.850	0.098	0.112
C	1.150 TYP		0.045 TYP	
D	0.550 TYP		0.022 TYP	
E	0.200	0.450	0.008	0.018
H	0.000	0.100	0.000	0.004
J	0.100 TYP		0.004 TYP	
K	3.500	3.850	0.138	0.152

Recommended Pad Layout



Unit: mm

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