Features

- Zener Voltages from 2.4V - 75V
- V_Z – Tolerance ± 5%
- Planar Die Construction
- ESD Rating of 16KV per Human Body Model
- Halogen Free. “Green” Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

500 mW
Zener Diode
2.4 to 75 Volts

Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance : 340°C/W Junction to Ambient(Note 2)

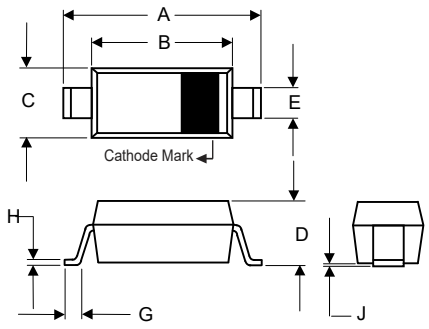
Parameter	Symbol	Rating	Conditions
Power Dissipation	P_D	500mW	Note 3
Maximum Forward Voltage	V_F	0.9V	I_F=10mA

Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Note: 2. On FR - 4 Board With Minimum Recommended Solder Pad Layout

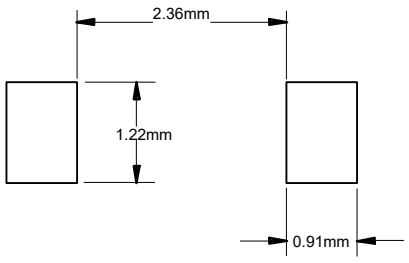
Note: 3. Mounted on 5.0mm2(0.013mm Thick) Land Areas.

SOD-123



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.071	1.40	1.80	
D	----	0.053	----	1.35	
E	0.018	0.026	0.45	0.65	
G	0.006	----	0.15	----	
H	----	0.010	----	0.25	
J	----	0.004	----	0.10	

SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Nominal Zener Voltage(4,5)		Maximum Zener Impedance(6)			Maximum Reverse Leakage Current		Maximum Zener Voltage Temp	Marking Code
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R	V_R		
	V	mA	Ω	Ω	mA	μA	V	%/°C	
MMSZ5221B	2.4	20	30	1200	0.25	100	1.0	-0.085	C1
MMSZ5222B	2.5	20	30	1250	0.25	100	1.0	-0.085	C2
MMSZ5223B	2.7	20	30	1300	0.25	75	1.0	-0.080	C3
MMSZ5225B	3.0	20	29	1600	0.25	50	1.0	-0.075	C5
MMSZ5226B	3.3	20	28	1600	0.25	25	1.0	-0.070	G1
MMSZ5227B	3.6	20	24	1700	0.25	15	1.0	-0.065	G2
MMSZ5228B	3.9	20	23	1900	0.25	10	1.0	-0.060	G3
MMSZ5229B	4.3	20	22	2000	0.25	5.0	1.0	±0.055	G4
MMSZ5230B	4.7	20	19	1900	0.25	5.0	2.0	±0.030	G5
MMSZ5231B	5.1	20	17	1600	0.25	5.0	2.0	±0.030	E1
MMSZ5232B	5.6	20	11	1600	0.25	5.0	3.0	+0.038	E2
MMSZ5233B	6.0	20	7.0	1600	0.25	5.0	3.5	+0.040	E3
MMSZ5234B	6.2	20	7.0	1000	0.25	5.0	4.0	+0.045	E4
MMSZ5235B	6.8	20	5.0	750	0.25	3.0	5.0	+0.050	E5
MMSZ5236B	7.5	20	6.0	500	0.25	3.0	6.0	+0.058	F1
MMSZ5237B	8.2	20	8.0	500	0.25	3.0	6.5	+0.062	F2
MMSZ5238B	8.7	20	8.0	600	0.25	3.0	6.5	+0.065	F3
MMSZ5239B	9.1	20	10	600	0.25	3.0	7.0	+0.068	F4
MMSZ5240B	10	20	17	600	0.25	3.0	8.0	+0.075	F5
MMSZ5241B	11	20	22	600	0.25	2.0	8.4	+0.076	H1
MMSZ5242B	12	20	30	600	0.25	1.0	9.1	+0.077	H2
MMSZ5243B	13	9.5	13	600	0.25	0.5	9.9	+0.079	H3
MMSZ5244B	14	9.0	15	600	0.25	0.1	10.5	+0.081	H4
MMSZ5245B	15	8.5	16	600	0.25	0.1	11	+0.082	H5
MMSZ5246B	16	7.8	17	600	0.25	0.1	12	+0.083	J1
MMSZ5248B	18	7.0	21	600	0.25	0.1	14	+0.085	J3
MMSZ5250B	20	6.2	25	600	0.25	0.1	15	+0.086	J5
MMSZ5251B	22	5.6	29	600	0.25	0.1	17	+0.087	K1
MMSZ5252B	24	5.2	33	600	0.25	0.1	18	+0.088	K2
MMSZ5254B	27	4.6	41	600	0.25	0.1	21	+0.090	K4
MMSZ5255B	28	4.5	44	600	0.25	0.1	21	+0.091	K5
MMSZ5256B	30	4.2	49	600	0.25	0.1	23	+0.091	M1
MMSZ5257B	33	3.8	58	700	0.25	0.1	25	+0.092	M2
MMSZ5258B	36	3.4	70	700	0.25	0.1	27	+0.093	M3
MMSZ5259B	39	3.2	80	800	0.25	0.1	30	+0.094	M4
MMSZ5260B	43	3.0	93	900	0.25	0.1	33	+0.095	M5
MMSZ5261B	47	2.7	105	1000	0.25	0.1	36	+0.095	N1
MMSZ5262B	51	2.5	125	1100	0.25	0.1	39	+0.096	N2
MMSZ5263B	56	2.2	150	1300	0.25	0.1	43	+0.097	M8
MMSZ5265B	62	2.0	185	1400	0.25	0.1	47	+0.098	N5
MMSZ5267B	75	1.7	270	1700	0.25	0.1	56	+0.099	P2

NOTE:

Note: 4 Standard Zener Voltage Tolerance is ±5% With a "B" suffix (e.g.: MMSZ5225B),Suffix "C" is ±2 % Tolerance

Note: 5 Zener Voltage (V_Z) Measurement.Guarantees the Zener Voltage When Measured at 90 Seconds While Maintaining the Lead Temperature (T_L) at 25°C, From the Diode Body.

Note: 6 Zener Impedance (Z_Z) Derivation. 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 on I_{ZT} or I_{ZK}.

Electrical Characteristics @ 25°C Unless Otherwise Specified

MCC Part Number	Nominal Zener Voltage(4,5)		Maximum Zener Impedance(6)			Maximum Reverse Leakage Current		Maximum Zener Voltage Temp	Marking Code
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{Zk} @ I_{ZK}	I_{ZK}	I_R	V_R		
	V	mA	Ω	Ω	mA	μA	V	%/°C	
MMSZ5229C	4.3	20	22	2000	0.25	5.0	1.0	±0.055	2G4
MMSZ5230C	4.7	20	19	1900	0.25	5.0	2.0	±0.030	2G5
MMSZ5231C	5.1	20	17	1600	0.25	5.0	2.0	±0.030	2E1
MMSZ5232C	5.6	20	11	1600	0.25	5.0	3.0	+0.038	2E2
MMSZ5233C	6.0	20	7.0	1600	0.25	5.0	3.5	+0.040	2E3
MMSZ5234C	6.2	20	7.0	1000	0.25	5.0	4.0	+0.045	2E4
MMSZ5235C	6.8	20	5.0	750	0.25	3.0	5.0	+0.050	2E5
MMSZ5236C	7.5	20	6.0	500	0.25	3.0	6.0	+0.058	2F1
MMSZ5237C	8.2	20	8.0	500	0.25	3.0	6.0	+0.062	2F2
MMSZ5238C	8.7	20	8.0	600	0.25	3.0	6.5	+0.065	2F3
MMSZ5239C	9.1	20	10	600	0.25	3.0	6.5	+0.068	2F4
MMSZ5240C	10	20	17	600	0.25	3.0	8.0	+0.075	2F5
MMSZ5241C	11	20	22	600	0.25	3.0	8.4	+0.076	2H1
MMSZ5242C	12	20	30	600	0.25	2.0	9.1	+0.077	2H2
MMSZ5243C	13	9.5	13	600	0.25	1.0	9.9	+0.079	2H3
MMSZ5244C	14	9.0	15	600	0.25	0.5	10.5	+0.081	2H4
MMSZ5245C	15	8.5	16	600	0.25	0.5	11	+0.082	H5
MMSZ5246C	16	7.8	17	600	0.25	0.1	12	+0.083	2J1
MMSZ5248C	18	7.0	21	600	0.25	0.1	14	+0.085	2J3
MMSZ5250C	20	6.2	25	600	0.25	0.1	15	+0.086	2J5
MMSZ5251C	22	5.6	29	600	0.25	0.1	17	+0.087	2K1
MMSZ5252C	24	5.2	33	600	0.25	0.1	18	+0.088	2K2
MMSZ5254C	27	4.6	41	600	0.25	0.1	21	+0.090	2K4
MMSZ5255C	28	4.5	44	600	0.25	0.1	21	+0.091	2K5
MMSZ5256C	30	4.2	49	600	0.25	0.1	23	+0.091	2M1
MMSZ5257C	33	3.8	58	700	0.25	0.1	25	+0.092	2M2
MMSZ5258C	36	3.4	70	700	0.25	0.1	27	+0.093	2M3/M3
MMSZ5259C	39	3.2	80	800	0.25	0.1	30	+0.094	2M4
MMSZ5260C	43	3.0	93	900	0.25	0.1	33	+0.095	M5
MMSZ5261C	47	2.7	105	1000	0.25	0.1	36	+0.095	N1

NOTE:

Note: 4 Standard Zener Voltage Tolerance is ±5% With a "B" suffix (e.g.: MMSZ5225B),Suffix "C" is ±2 % Tolerance

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Curve Characteristics

Fig. 1 - Power Derating Curve

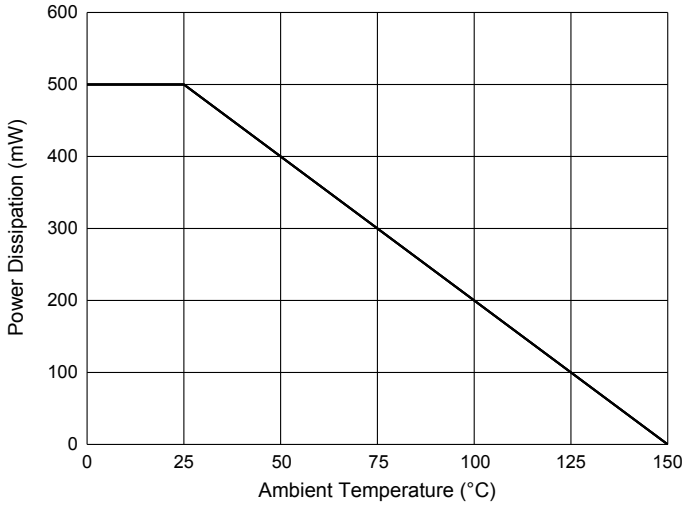


Fig. 2 - Typical Zener Breakdown Characteristics

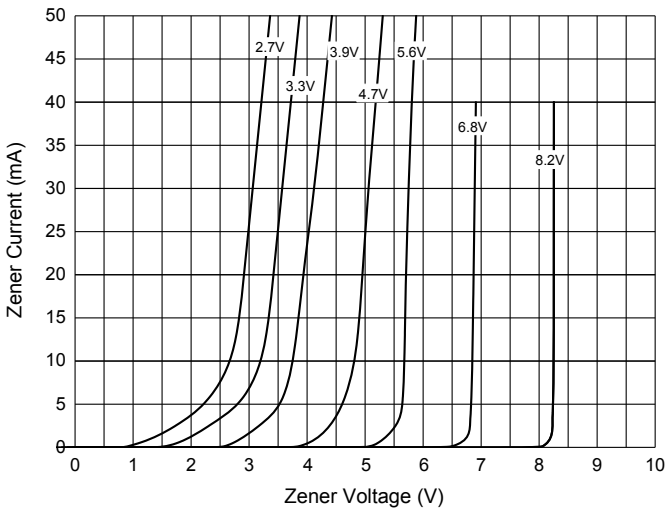


Fig. 3 - Typical Zener Breakdown Characteristics

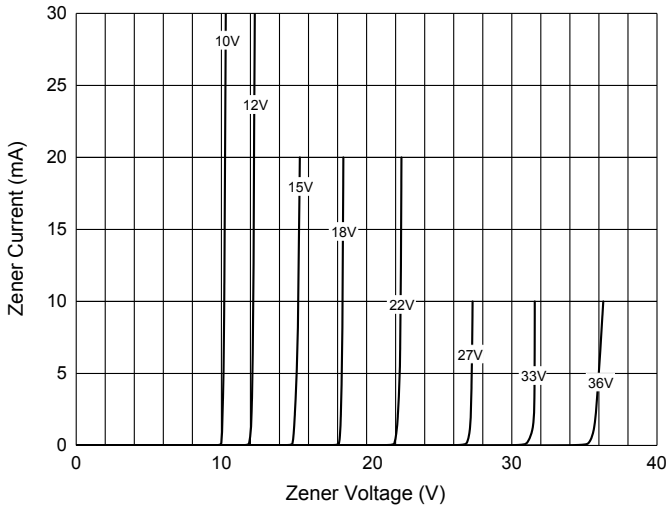
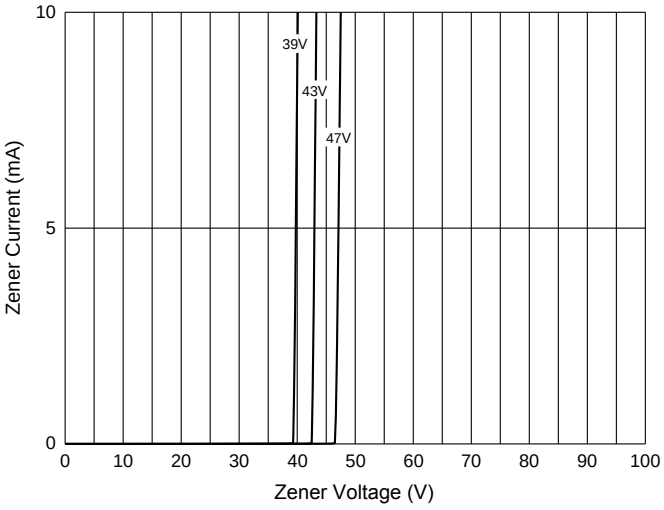


Fig. 4 - Typical Zener Breakdown Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

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