



**THE DATASHEET OF  
MMSZ5241B\_R1\_00001**



## MMSZ5221B ~ MMSZ5267B Series

### SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE**

2.4 to 75 Volt

**POWER**

500 mWatt

**SOD-123**

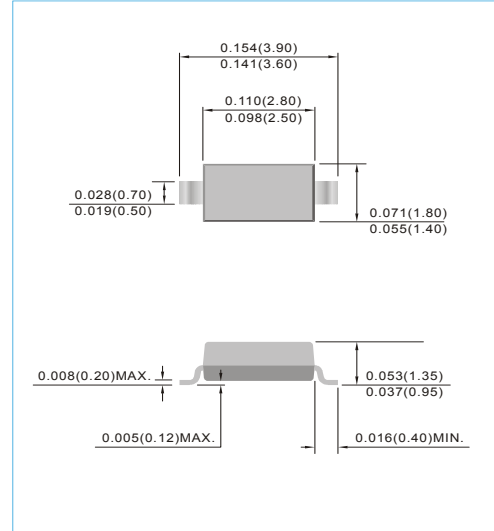
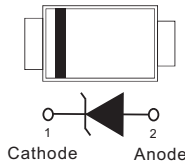
Unit : inch(mm)

#### FEATURES

- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### MECHANICAL DATA

- Case : SOD-123, Molded Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0104 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Total Power Dissipation (Notes A)	P <sub>D</sub>	500	mW
Typical Thermal Resistance (Notes B) (Notes A)	R <sub>θJA</sub>	430 325	°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub>	-55 to +150	°C

NOTES : A. Mounted on 100cm<sup>2</sup>(1mm thick) copper areas.

B. Mounted on a FR4 PCB, single-sided copper, mini pad.

## MMSZ5221B ~ MMSZ5267B Series

Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Marking Code
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	
MMSZ5221B	2.4	2.28	2.52	30	20	1200	0.25	100	1	C1
MMSZ5222B	2.5	2.38	2.63	30	20	1250	0.25	100	1	C2
MMSZ5223B	2.7	2.57	2.84	30	20	1300	0.25	75	1	C3
MMSZ5224B	2.8	2.66	2.94	30	20	1400	0.25	75	1	C4
MMSZ5225B	3	2.85	3.15	30	20	1600	0.25	50	1	C5
MMSZ5226B	3.3	3.14	3.47	28	20	1600	0.25	25	1	D1
MMSZ5227B	3.6	3.42	3.78	24	20	1700	0.25	15	1	D2
MMSZ5228B	3.9	3.71	4.1	23	20	1900	0.25	10	1	D3
MMSZ5229B	4.3	4.09	4.52	22	20	2000	0.25	5	1	D4
MMSZ5230B	4.7	4.47	4.94	19	20	1900	0.25	5	2	D5
MMSZ5231B	5.1	4.85	5.36	17	20	1600	0.25	5	2	E1
MMSZ5232B	5.6	5.32	5.88	11	20	1600	0.25	5	3	E2
MMSZ5233B	6.0	5.70	6.30	7	20	1600	0.25	5	3.5	E3
MMSZ5234B	6.2	5.89	6.51	7	20	1000	0.25	5	4	E4
MMSZ5235B	6.8	6.46	7.14	5	20	750	0.25	3	5	E5
MMSZ5236B	7.5	7.13	7.88	6	20	500	0.25	3	6	F1
MMSZ5237B	8.2	7.79	8.61	8	20	500	0.25	3	6	F2
MMSZ5238B	8.7	8.27	9.14	8	20	600	0.25	3	6.5	F3
MMSZ5239B	9.1	8.65	9.56	10	20	600	0.25	3	6.5	F4
MMSZ5240B	10	9.5	10.5	17	20	600	0.25	3	8	F5
MMSZ5241B	11	10.45	11.55	22	20	600	0.25	2	8.4	H1
MMSZ5242B	12	11.4	12.6	30	20	600	0.25	1	9.1	H2
MMSZ5243B	13	12.35	13.65	13	9.5	600	0.25	0.5	9.9	H3
MMSZ5244B	14	13.3	14.7	15	9	600	0.25	0.1	10.5	H4
MMSZ5245B	15	14.25	15.75	16	8.5	600	0.25	0.1	11	H5
MMSZ5246B	16	15.2	16.8	17	7.8	600	0.25	0.1	12	J1
MMSZ5247B	17	16.15	17.85	19	7.5	600	0.25	0.1	13	J2
MMSZ5248B	18	17.1	18.9	21	7	600	0.25	0.1	14	J3
MMSZ5249B	19	18.05	19.95	23	6.6	600	0.25	0.1	14	J4
MMSZ5250B	20	19	21	25	6.2	600	0.25	0.1	15	J5
MMSZ5251B	22	20.9	23.1	29	5.6	600	0.25	0.1	17	K1
MMSZ5252B	24	22.8	25.2	33	5.2	600	0.25	0.1	18	K2
MMSZ5253B	25	23.75	26.25	35	5.0	600	0.25	0.1	19	K3
MMSZ5254B	27	25.65	28.35	41	5	600	0.25	0.1	21	K4
MMSZ5255B	28	26.6	29.4	44	4.5	600	0.25	0.1	21	K5
MMSZ5256B	30	28.5	31.5	49	4.2	600	0.25	0.1	23	M1
MMSZ5257B	33	31.35	34.65	58	3.8	700	0.25	0.1	25	M2
MMSZ5258B	36	34.2	37.8	70	3.4	700	0.25	0.1	27	M3
MMSZ5259B	39	37.05	40.95	80	3.2	800	0.25	0.1	30	M4
MMSZ5260B	43	40.85	45.15	93	3	900	0.25	0.1	33	M5
MMSZ5261B	47	44.65	49.35	105	2.7	1000	0.25	0.1	36	N1
MMSZ5262B	51	48.45	53.55	125	2.5	1100	0.25	0.1	39	N2

## MMSZ5221B ~ MMSZ5267B Series

Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Marking Code
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>ZT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	
MMSZ5263B	56	53.2	58.8	150	2.2	1300	0.25	0.1	43	N3
MMSZ5264B	60	57	63	170	2.1	1400	0.25	0.1	46	N4
MMSZ5265B	62	58.9	65.1	185	2	1500	0.25	0.1	47	N5
MMSZ5266B	68	64.6	71.4	230	1.8	1600	0.25	0.1	52	P1
MMSZ5267B	75	71.25	78.75	270	1.7	1400	0.25	0.1	56	P2

## MMSZ5221B ~ MMSZ5267B Series



Fig.1 TEMPERATURE COEFFICIENTS



Fig.2 TEMPERATURE COEFFICIENTS

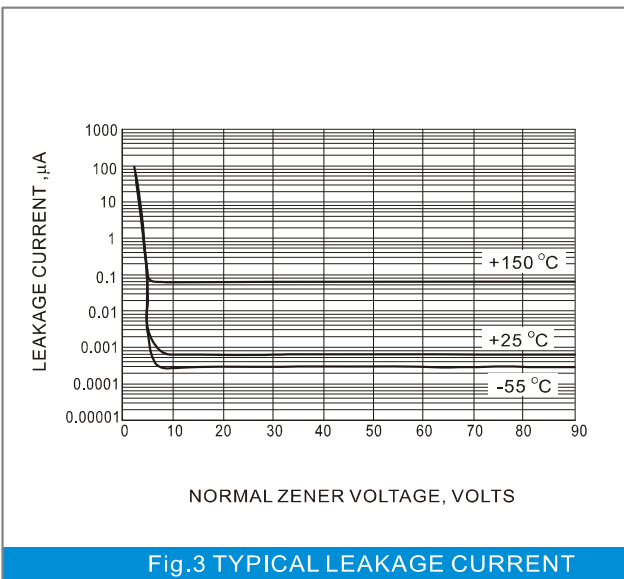


Fig.3 TYPICAL LEAKAGE CURRENT

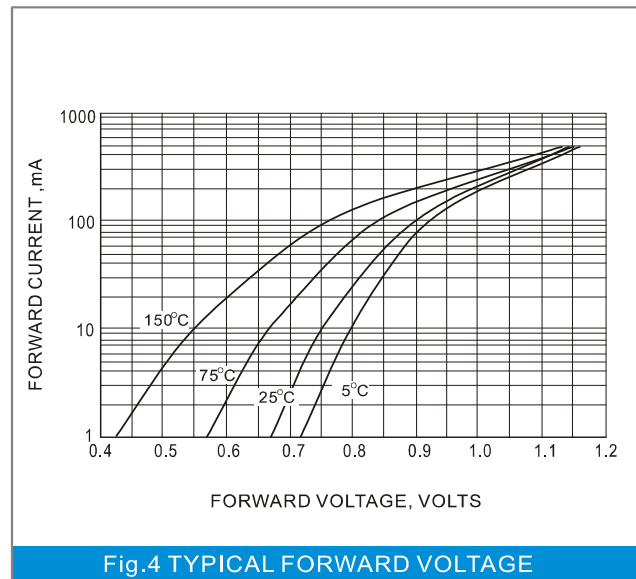


Fig.4 TYPICAL FORWARD VOLTAGE

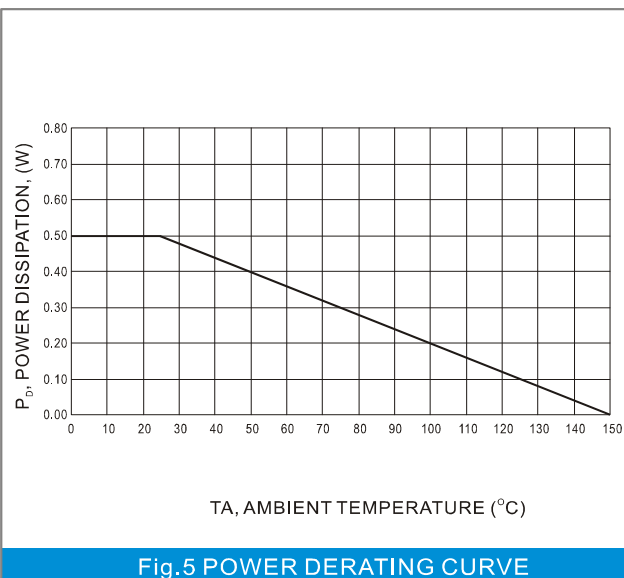


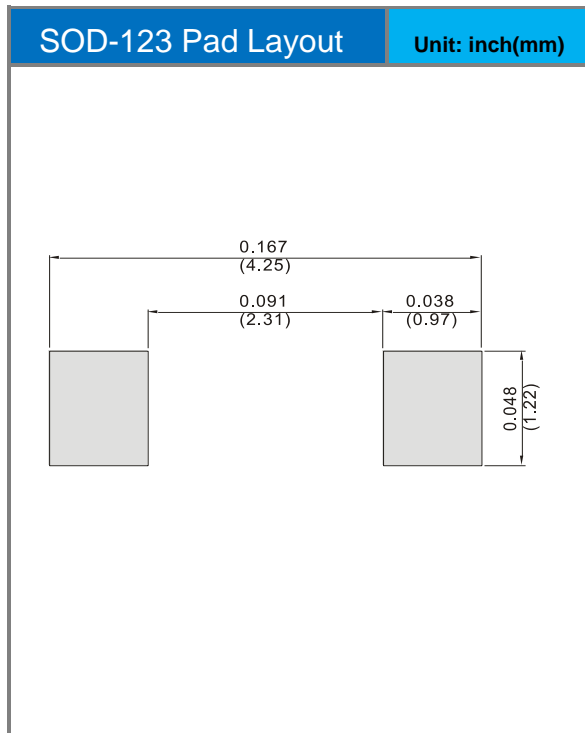
Fig.5 POWER DERATING CURVE

## MMSZ5221B ~ MMSZ5267B Series

### Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MMSZ52xxB	SOD-123	3K pcs / 7" reel	See Table

### Mounting Pad Layout



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