



# MMBZ5221B SERIES

## SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE** 2.4 to 51 Volts **POWER** 410 mWatts

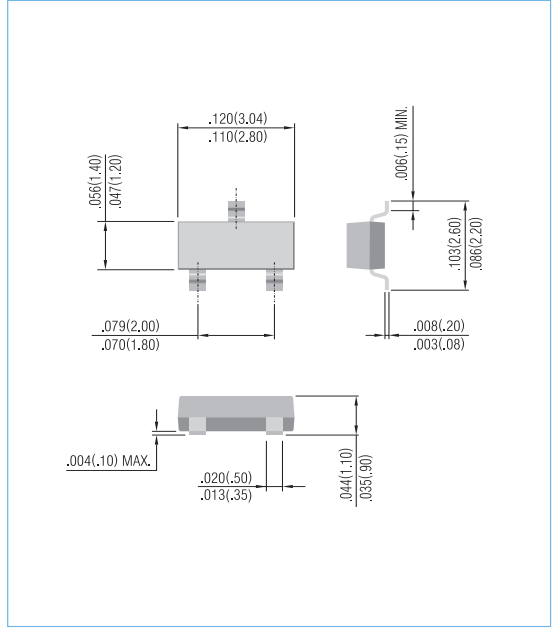
**SOT-23** Unit: inch ( mm )

### FEATURES

- Planar Die construction
- 410mW Power Dissipation
- Zener Voltages from 2.4V-51V
- Ideally Suited for Automated Assembly Processes
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: SOT-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity :See Diagram Below
- Approx. Weight: 0.008 gram
- Mounting Position : Any



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Maximum Power Dissipation (Notes A) at 25°C	P <sub>D</sub>	410	mW
Operating Junction and Storage Temperature Range	T <sub>J</sub>	-55 to +150	°C

**NOTES:**

A. Mounted on 5.0mm<sup>2</sup>(.013mm thick) land areas.



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Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Marking Code	Package
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>T</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		
410 mWatts Zener Diodes											
MMBZ5221B	2.4	2.28	2.52	30	20.0	1200	0.25	100	1.0	C1	SOT-23
MMBZ5222B	2.5	2.38	2.63	30	20.0	1250	0.25	100	1.0	C2	SOT-23
MMBZ5223B	2.7	2.57	2.84	30	20.0	1300	0.25	75	1.0	C3	SOT-23
MMBZ5225B	3.0	2.85	3.15	30	20.0	1600	0.25	50	1.0	C5	SOT-23
MMBZ5226B	3.3	3.14	3.47	28	20.0	1600	0.25	25	1.0	D1	SOT-23
MMBZ5227B	3.6	3.42	3.78	24	20.0	1700	0.25	15	1.0	D2	SOT-23
MMBZ5228B	3.9	3.71	4.10	23	20.0	1900	0.25	10	1.0	D3	SOT-23
MMBZ5229B	4.3	4.09	4.52	22	20.0	2000	0.25	5.0	1.0	D4	SOT-23
MMBZ5230B	4.7	4.47	4.94	19	20.0	1900	0.25	5.0	2.0	D5	SOT-23
MMBZ5231B	5.1	4.85	5.36	17	20.0	1600	0.25	5.0	2.0	E1	SOT-23
MMBZ5232B	5.6	5.32	5.88	11	20.0	1600	0.25	5.0	3.0	E2	SOT-23
MMBZ5234B	6.2	5.89	6.51	7	20.0	1000	0.25	5.0	4.0	E4	SOT-23
MMBZ5235B	6.8	6.46	7.14	5	20.0	750	0.25	3.0	5.0	E5	SOT-23
MMBZ5236B	7.5	7.13	7.88	6	20.0	500	0.25	3.0	6.0	F1	SOT-23
MMBZ5237B	8.2	7.79	8.61	8	20.0	500	0.25	3.0	6.0	F2	SOT-23
MMBZ5238B	8.7	8.27	9.14	8	20.0	600	0.25	3.0	6.5	F3	SOT-23
MMBZ5239B	9.1	8.65	9.56	10	20.0	600	0.25	3.0	6.5	F4	SOT-23
MMBZ5240B	10	9.50	10.50	17	20.0	600	0.25	3.0	8.0	F5	SOT-23
MMBZ5241B	11	10.45	11.55	22	20.0	600	0.25	2.0	8.4	H1	SOT-23
MMBZ5242B	12	11.40	12.60	30	20.0	600	0.25	1.0	9.1	H2	SOT-23
MMBZ5243B	13	12.35	13.65	13	9.5	600	0.25	0.5	9.9	H3	SOT-23
MMBZ5244B	14	13.30	14.70	15	9.0	600	0.25	0.1	10.5	H4	SOT-23
MMBZ5245B	15	14.25	15.75	16	8.5	600	0.25	0.1	11.0	H5	SOT-23
MMBZ5246B	16	15.20	16.80	17	7.8	600	0.25	0.1	12.0	J1	SOT-23
MMBZ5247B	17	16.15	17.85	19	8.0	600	0.25	0.1	13.0	J2	SOT-23
MMBZ5248B	18	17.10	18.90	21	7.0	600	0.25	0.1	14.0	J3	SOT-23
MMBZ5250B	20	19.00	21.00	25	6.2	600	0.25	0.1	15.0	J5	SOT-23
MMBZ5251B	22	20.90	23.10	29	5.6	600	0.25	0.1	17.0	K1	SOT-23
MMBZ5252B	24	22.80	25.20	33	5.2	600	0.25	0.1	18.0	K2	SOT-23
MMBZ5254B	27	25.65	28.35	41	5.0	600	0.25	0.1	21.0	K4	SOT-23
MMBZ5255B	28	26.60	29.40	44	4.5	600	0.25	0.1	21.0	K5	SOT-23
MMBZ5256B	30	28.50	31.50	49	4.2	600	0.25	0.1	23.0	M1	SOT-23
MMBZ5257B	33	31.35	34.65	58	3.8	700	0.25	0.1	25.0	M2	SOT-23
MMBZ5258B	36	34.20	37.80	70	3.4	700	0.25	0.1	27.0	M3	SOT-23
MMBZ5259B	39	37.05	40.95	80	3.2	800	0.25	0.1	30.0	M4	SOT-23
MMBZ5260B	43	40.85	45.15	93	3.0	900	0.25	0.1	33.0	M5	SOT-23
MMBZ5261B	47	44.65	49.35	105	2.7	1000	0.25	0.1	36.0	N1	SOT-23
MMBZ5262B	51	48.45	53.55	125	2.5	1100	0.25	0.1	39.0	N2	SOT-23



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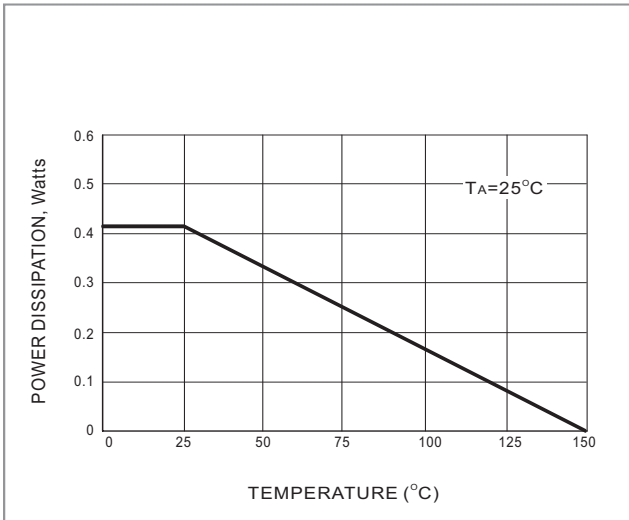


Fig.1 STEADY STATE POWER DERATING

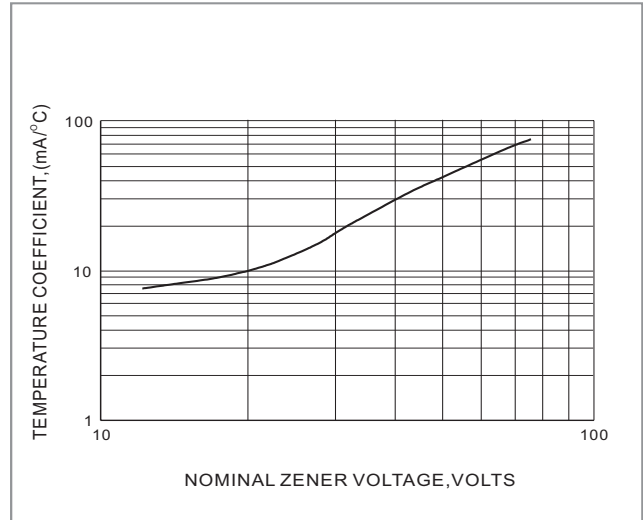


Fig.2 TEMPERATURE COEFFICIENTS

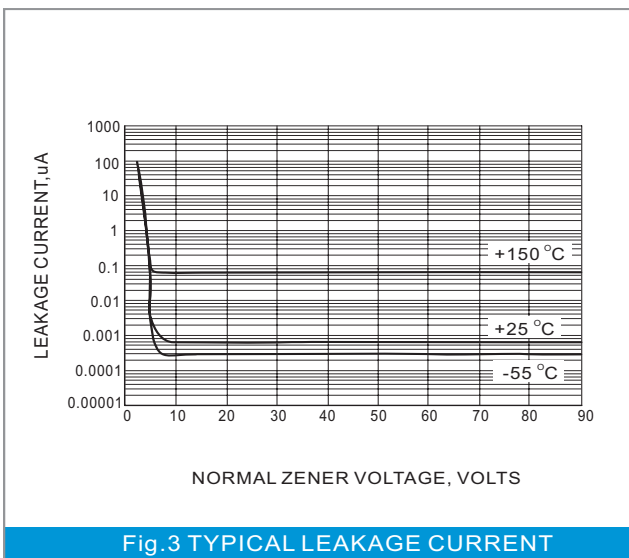


Fig.3 TYPICAL LEAKAGE CURRENT

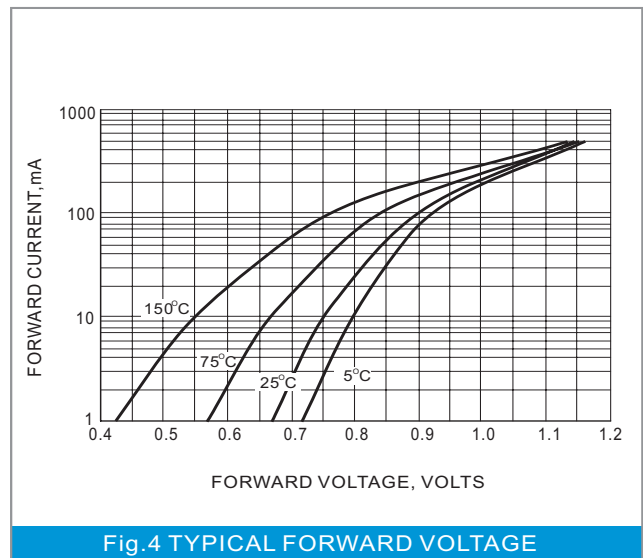
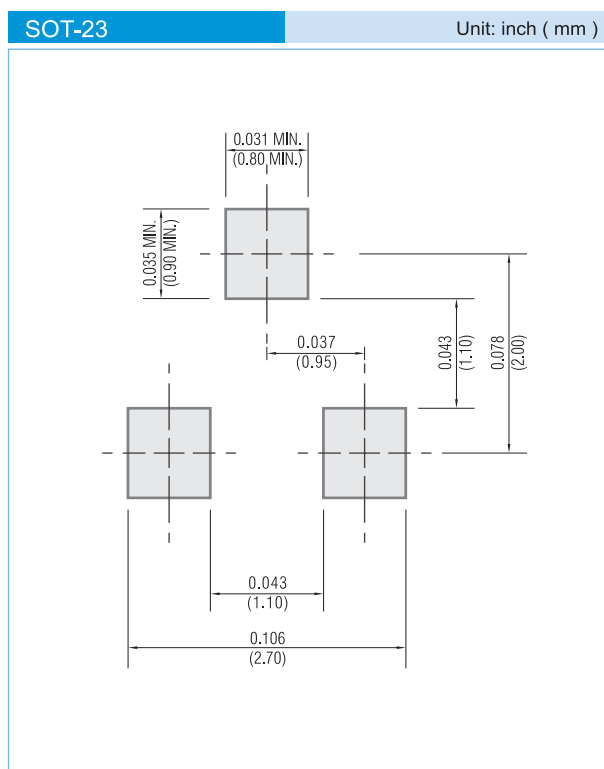


Fig.4 TYPICAL FORWARD VOLTAGE



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 3K per 7" plastic Reel

## LEGAL STATEMENT

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