



# MMBZ5229A SERIES

## SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE** 4.3 to 51 Volt **POWER** 410 mWatt

**SOT-23**

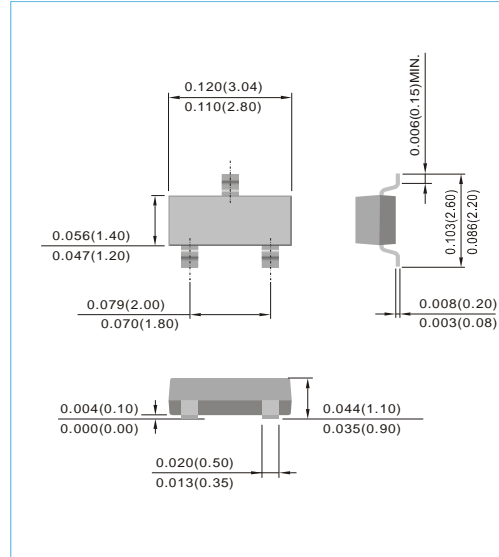
Unit : inch(mm)

### FEATURES

- Planar Die construction
- 410mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams

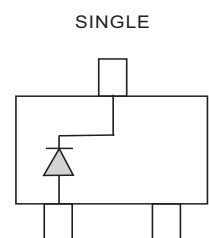


## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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
	V <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>TT</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	
MMBZ5229A	4.3	4.21	4.39	22	20.0	2000	0.25	5.0	1.0	D4
MMBZ5230A	4.7	4.61	4.79	19	20.0	1900	0.25	5.0	2.0	D5
MMBZ5231A	5.1	5.00	5.20	17	20.0	1600	0.25	5.0	2.0	E1
MMBZ5232A	5.6	5.49	5.71	11	20.0	1600	0.25	5.0	3.0	E2
MMBZ5233A	6.0	5.88	6.12	7	20.0	1600	0.25	5.0	3.5	E3
MMBZ5234A	6.2	6.08	6.32	7	20.0	1000	0.25	5.0	4.0	E4
MMBZ5235A	6.8	6.66	6.94	5	20.0	750	0.25	3.0	5.0	E5
MMBZ5236A	7.5	7.35	7.65	6	20.0	500	0.25	3.0	6.0	F1
MMBZ5237A	8.2	8.04	8.36	8	20.0	500	0.25	3.0	6.0	F2
MMBZ5238A	8.7	8.53	8.87	8	20.0	600	0.25	3.0	6.5	F3
MMBZ5239A	9.1	8.92	9.28	10	20.0	600	0.25	3.0	6.5	F4
MMBZ5240A	10	9.80	10.20	17	20.0	600	0.25	3.0	8.0	F5
MMBZ5241A	11	10.78	11.22	22	20.0	600	0.25	2.0	8.4	H1
MMBZ5242A	12	11.76	12.24	30	20.0	600	0.25	1.0	9.1	H2
MMBZ5243A	13	12.74	13.26	13	9.5	600	0.25	0.5	9.9	H3
MMBZ5244A	14	13.72	14.28	15	9.0	600	0.25	0.1	10.5	H4
MMBZ5245A	15	14.70	15.30	16	8.5	600	0.25	0.1	11.0	H5
MMBZ5246A	16	15.68	16.32	17	7.8	600	0.25	0.1	12.0	J1
MMBZ5247A	17	16.66	17.34	19	7.5	600	0.25	0.1	13.0	J2
MMBZ5248A	18	17.64	18.36	21	7.0	600	0.25	0.1	14.0	J3
MMBZ5249A	19	18.62	19.38	23	6.6	600	0.25	0.1	14.0	J4
MMBZ5250A	20	19.60	20.40	25	6.2	600	0.25	0.1	15.0	J5
MMBZ5251A	22	21.56	22.44	29	5.6	600	0.25	0.1	17.0	K1
MMBZ5252A	24	23.52	24.48	33	5.2	600	0.25	0.1	18.0	K2
MMBZ5253A	25	24.50	25.50	35	5.0	600	0.25	0.1	19.0	K3
MMBZ5254A	27	26.46	27.54	41	5.0	600	0.25	0.1	21.0	K4
MMBZ5255A	28	27.44	28.56	44	4.5	600	0.25	0.1	21.0	K5
MMBZ5256A	30	29.40	30.60	49	4.2	600	0.25	0.1	23.0	M1
MMBZ5257A	33	32.34	33.66	58	3.8	700	0.25	0.1	25.0	M2
MMBZ5258A	36	35.28	36.72	70	3.4	700	0.25	0.1	27.0	M3
MMBZ5259A	39	38.22	39.78	80	3.2	800	0.25	0.1	30.0	M4
MMBZ5260A	43	42.14	43.86	93	3	900	0.25	0.1	33.0	M5
MMBZ5261A	47	46.06	47.94	105	2.7	1000	0.25	0.1	36.0	N1
MMBZ5262A	51	49.98	52.02	125	2.5	1100	0.25	0.1	39.0	N2



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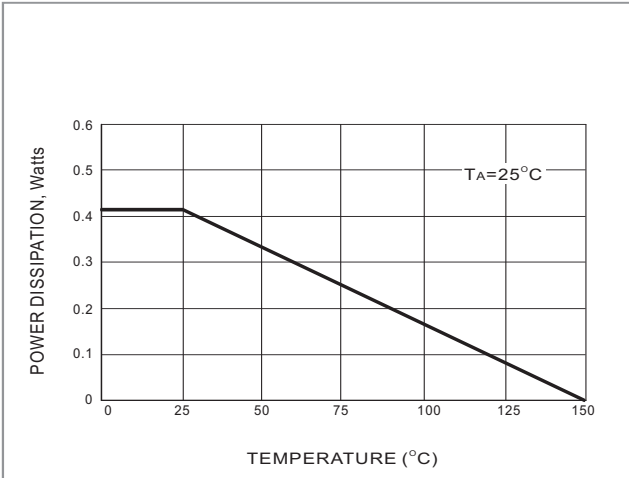


Fig. 1 STEADY STATE POWER DERATING

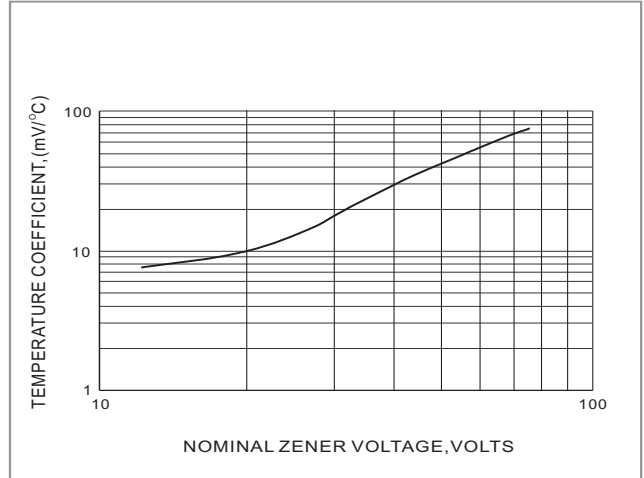


Fig. 2 TEMPERATURE COEFFICIENTS

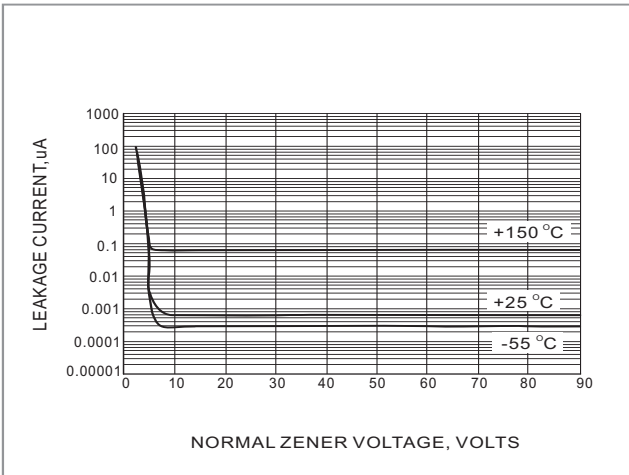


Fig. 3 TYPICAL LEAKAGE CURRENT

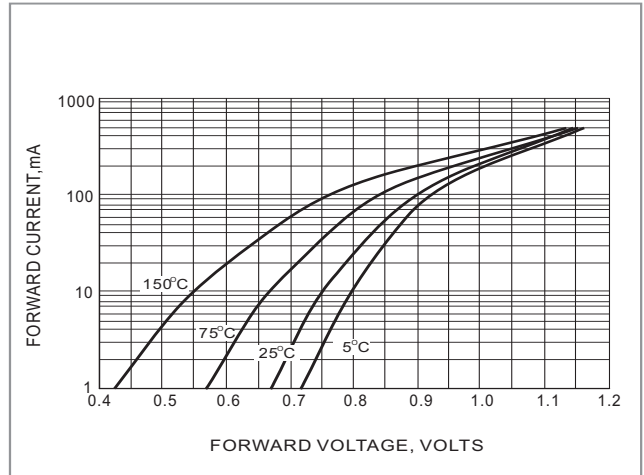


Fig. 4 TYPICAL FORWARD VOLTAGE

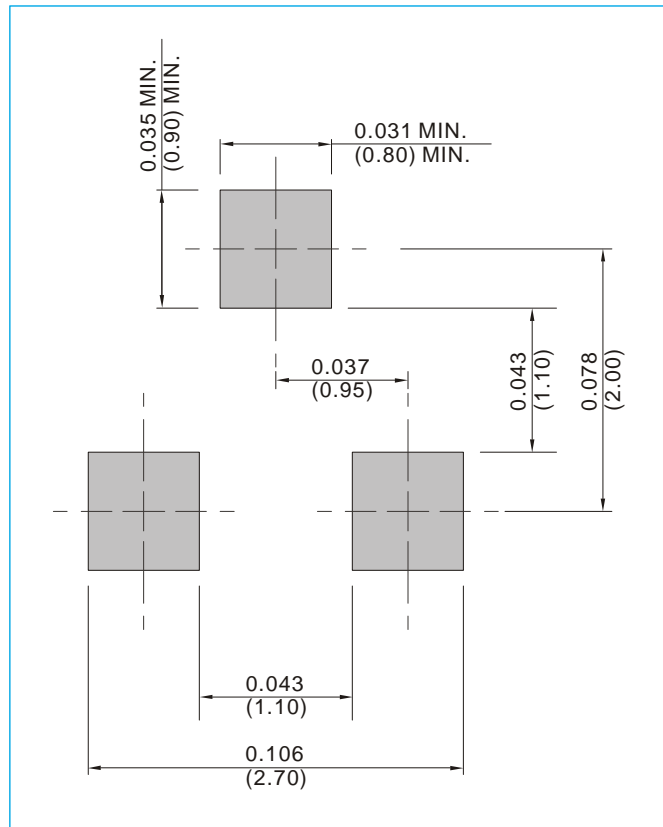


## MMBZ5229A SERIES

### MOUNTING PAD LAYOUT

**SOT-23**

Unit : inch(mm)



### ORDER INFORMATION

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



## MMBZ5229A SERIES

### Part No\_packing code\_Version

MMBZ5229A\_R1\_00001

MMBZ5229A\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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