



# MMSZ5229AS SERIES

## SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE** 4.3 to 51 Volt

**POWER** 200 mWatt

**SOD-323**

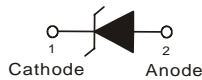
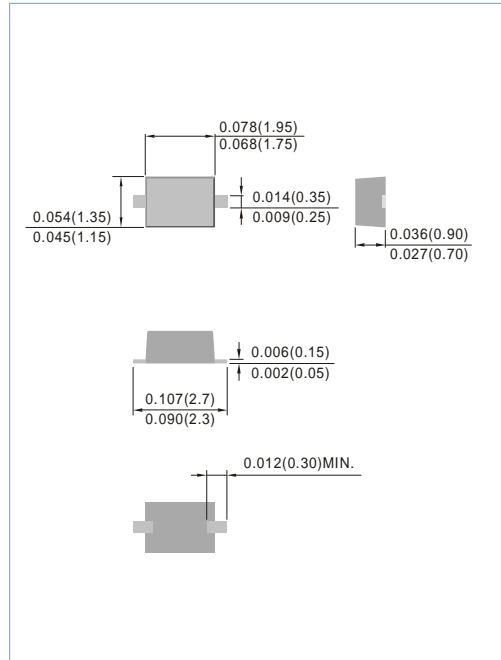
Unit : inch(mm)

### FEATURES

- Planar Die construction
- 200mW 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: SOD-323, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band cathode
- Appox Weight: 0.00014 ounces, 0.0041 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Power Dissipation @ $T_A=25^{\circ}\text{C}$ (Note A)	$P_D$	200	mW
Operating Junction and Storage Temperature Range	$T_J$	-55 to +150	$^{\circ}\text{C}$

### NOTES:

A. Mounted on 5 mm<sup>2</sup>(0.013mm 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>VT</sub> @ I <sub>ZT</sub>		Z <sub>VK</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	
200 mWatts Zener Diodes										
MMSZ5229AS	4.3	4.21	4.39	22	20	2000	0.25	5	1	D4
MMSZ5230AS	4.7	4.61	4.79	19	20	1900	0.25	5	2	D5
MMSZ5231AS	5.1	5	5.2	17	20	1600	0.25	5	2	E1
MMSZ5232AS	5.6	5.49	5.71	11	20	1600	0.25	5	3	E2
MMSZ5234AS	6.2	6.08	6.32	7	20	1000	0.25	5	4	E4
MMSZ5235AS	6.8	6.66	6.94	5	20	750	0.25	3	5	E5
MMSZ5236AS	7.5	7.35	7.65	6	20	500	0.25	3	6	F1
MMSZ5237AS	8.2	8.04	8.36	8	20	500	0.25	3	6	F2
MMSZ5238AS	8.7	8.53	8.87	8	20	600	0.25	3	6.5	F3
MMSZ5239AS	9.1	8.92	9.28	10	20	600	0.25	3	6.5	F4
MMSZ5240AS	10	9.8	10.2	17	20	600	0.25	3	8	F5
MMSZ5241AS	11	10.78	11.22	22	20	600	0.25	2	8.4	H1
MMSZ5242AS	12	11.76	12.24	30	20	600	0.25	1	9.1	H2
MMSZ5243AS	13	12.74	13.26	13	9.5	600	0.25	0.5	9.9	H3
MMSZ5244AS	14	13.72	14.28	15	9	600	0.25	0.1	10.5	H4
MMSZ5245AS	15	14.7	15.3	16	8.5	600	0.25	0.1	11	H5
MMSZ5246AS	16	15.68	16.32	17	7.8	600	0.25	0.1	12	J1
MMSZ5247AS	17	16.66	17.34	19	7.5	600	0.25	0.1	13	J2
MMSZ5248AS	18	17.64	18.36	21	7	600	0.25	0.1	14	J3
MMSZ5250AS	20	19.6	20.4	25	6.2	600	0.25	0.1	15	J5
MMSZ5251AS	22	21.56	22.44	29	5.6	600	0.25	0.1	17	K1
MMSZ5252AS	24	23.52	24.48	33	5.2	600	0.25	0.1	18	K2
MMSZ5254AS	27	26.46	27.54	41	5	600	0.25	0.1	21	K4
MMSZ5255AS	28	27.44	28.56	44	4.5	600	0.25	0.1	21	K5
MMSZ5256AS	30	29.4	30.6	49	4.2	600	0.25	0.1	23	M1
MMSZ5257AS	33	32.34	33.66	58	3.8	700	0.25	0.1	25	M2
MMSZ5258AS	36	35.28	36.72	70	3.4	700	0.25	0.1	27	M3
MMSZ5259AS	39	38.22	39.78	80	3.2	800	0.25	0.1	30	M4
MMSZ5260AS	43	42.14	43.86	93	3	900	0.25	0.1	33	M5
MMSZ5261AS	47	46.06	47.94	105	2.7	1000	0.25	0.1	36	N1
MMSZ5262AS	51	49.98	52.02	125	2.5	1100	0.25	0.1	39	N2



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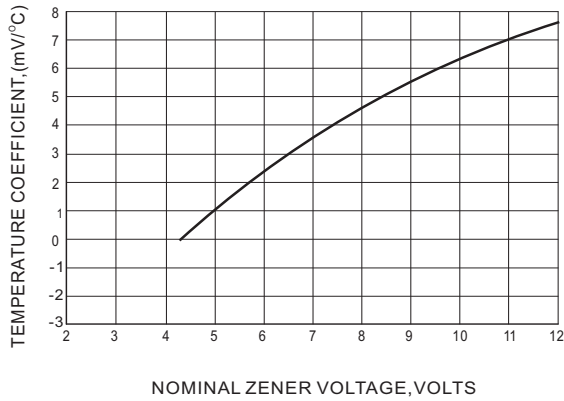


Fig.1 TEMPERATURE COEFFICIENTS

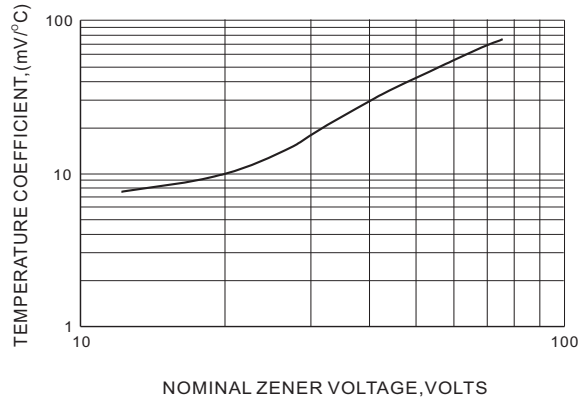


Fig.2 TEMPERATURE COEFFICIENTS

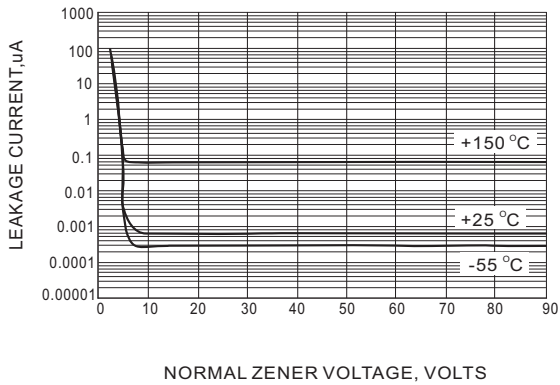


Fig. TYPICAL LEAKAGE CURRENT

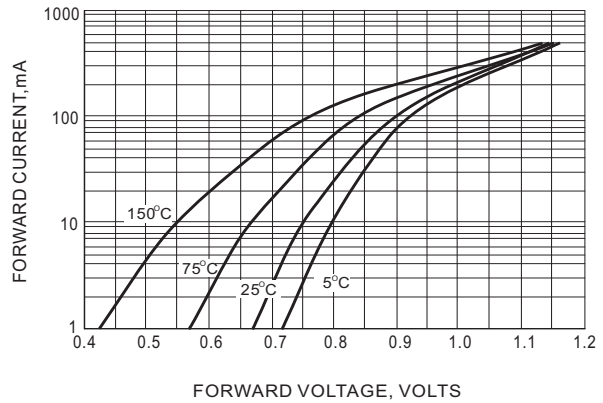


Fig.4 TYPICAL FORWARD VOLTAGE

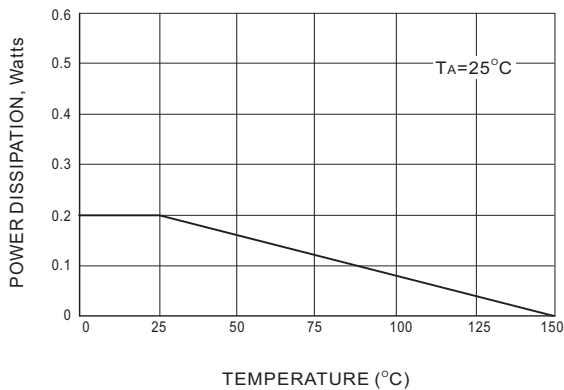


Fig.5 STEADY STATE POWER DERATING

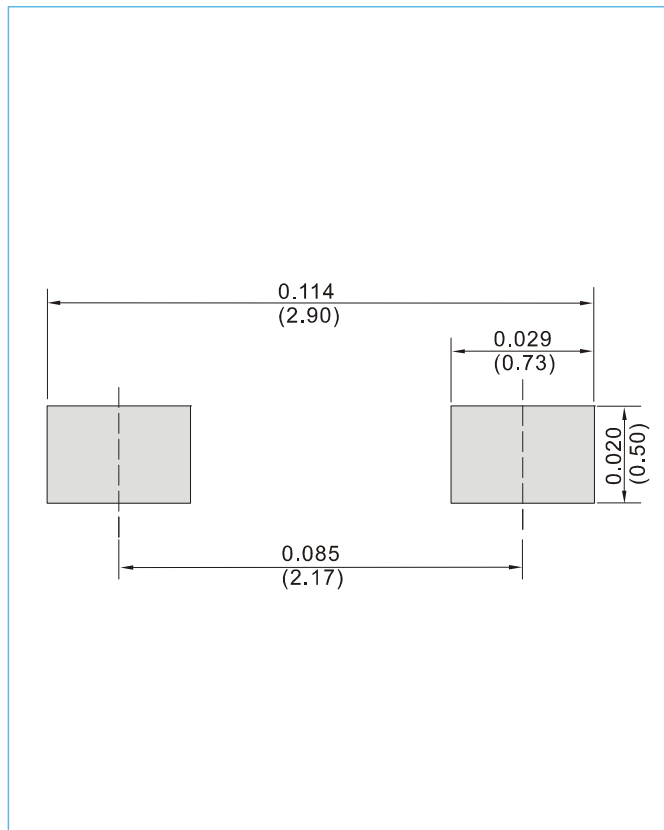


## MMSZ5229AS SERIES

### MOUNTING PAD LAYOUT

SOD-323

Unit : inch(mm)



### ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 5K per 7" plastic Reel



## MMSZ5229AS SERIES

### Part No\_packing code\_Version

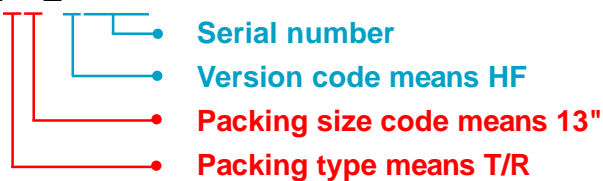
MMSZ5229AS\_R1\_00001

MMSZ5229AS\_R2\_00001

### For example :

**RB500V-40\_R2\_00001**

Part No.



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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