



# MMSZ5229AS-AU SERIES

## SURFACE MOUNT SILICON ZENER DIODES

**VOLTAGE** 4.3 to 51 Volt

**POWER** 200 mWatt

**SOD-323**

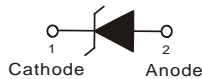
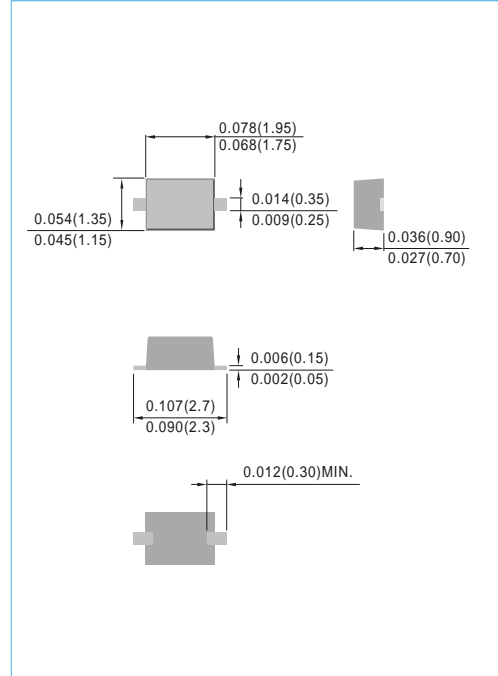
Unit : inch(mm)

### FEATURES

- Planar Die construction
- 200mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- 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
- Approx 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 5.0mm<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>KT</sub> @ I <sub>ZT</sub>		Z <sub>KK</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-AU	4.3	4.21	4.39	22	20	2000	0.25	5	1	D4
MMSZ5230AS-AU	4.7	4.61	4.79	19	20	1900	0.25	5	2	D5
MMSZ5231AS-AU	5.1	5	5.2	17	20	1600	0.25	5	2	E1
MMSZ5232AS-AU	5.6	5.49	5.71	11	20	1600	0.25	5	3	E2
MMSZ5234AS-AU	6.2	6.08	6.32	7	20	1000	0.25	5	4	E4
MMSZ5235AS-AU	6.8	6.66	6.94	5	20	750	0.25	3	5	E5
MMSZ5236AS-AU	7.5	7.35	7.65	6	20	500	0.25	3	6	F1
MMSZ5237AS-AU	8.2	8.04	8.36	8	20	500	0.25	3	6	F2
MMSZ5238AS-AU	8.7	8.53	8.87	8	20	600	0.25	3	6.5	F3
MMSZ5239AS-AU	9.1	8.92	9.28	10	20	600	0.25	3	6.5	F4
MMSZ5240AS-AU	10	9.8	10.2	17	20	600	0.25	3	8	F5
MMSZ5241AS-AU	11	10.78	11.22	22	20	600	0.25	2	8.4	H1
MMSZ5242AS-AU	12	11.76	12.24	30	20	600	0.25	1	9.1	H2
MMSZ5243AS-AU	13	12.74	13.26	13	9.5	600	0.25	0.5	9.9	H3
MMSZ5244AS-AU	14	13.72	14.28	15	9	600	0.25	0.1	10.5	H4
MMSZ5245AS-AU	15	14.7	15.3	16	8.5	600	0.25	0.1	11	H5
MMSZ5246AS-AU	16	15.68	16.32	17	7.8	600	0.25	0.1	12	J1
MMSZ5247AS-AU	17	16.66	17.34	19	7.5	600	0.25	0.1	13	J2
MMSZ5248AS-AU	18	17.64	18.36	21	7	600	0.25	0.1	14	J3
MMSZ5250AS-AU	20	19.6	20.4	25	6.2	600	0.25	0.1	15	J5
MMSZ5251AS-AU	22	21.56	22.44	29	5.6	600	0.25	0.1	17	K1
MMSZ5252AS-AU	24	23.52	24.48	33	5.2	600	0.25	0.1	18	K2
MMSZ5254AS-AU	27	26.46	27.54	41	5	600	0.25	0.1	21	K4
MMSZ5255AS-AU	28	27.44	28.56	44	4.5	600	0.25	0.1	21	K5
MMSZ5256AS-AU	30	29.4	30.6	49	4.2	600	0.25	0.1	23	M1
MMSZ5257AS-AU	33	32.34	33.66	58	3.8	700	0.25	0.1	25	M2
MMSZ5258AS-AU	36	35.28	36.72	70	3.4	700	0.25	0.1	27	M3
MMSZ5259AS-AU	39	38.22	39.78	80	3.2	800	0.25	0.1	30	M4
MMSZ5260AS-AU	43	42.14	43.86	93	3	900	0.25	0.1	33	M5
MMSZ5261AS-AU	47	46.06	47.94	105	2.7	1000	0.25	0.1	36	N1
MMSZ5262AS-AU	51	49.98	52.02	125	2.5	1100	0.25	0.1	39	N2



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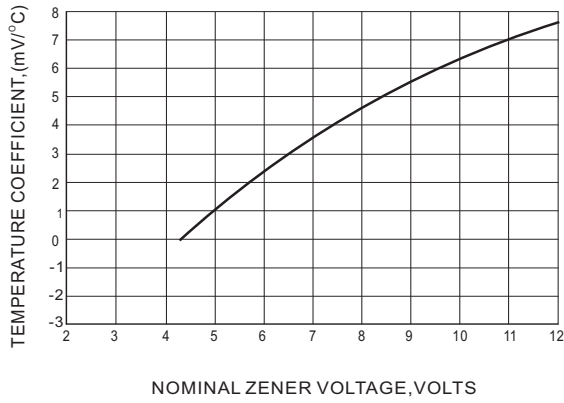


Fig.1 TEMPERATURE COEFFICIENTS

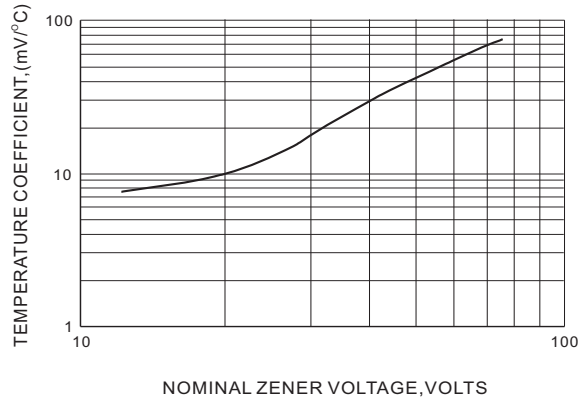


Fig.2 TEMPERATURE COEFFICIENTS

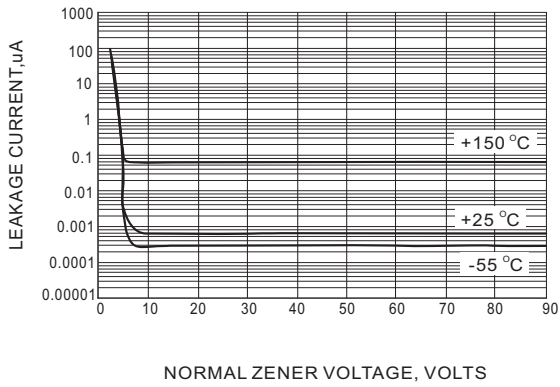


Fig. TYPICAL LEAKAGE CURRENT

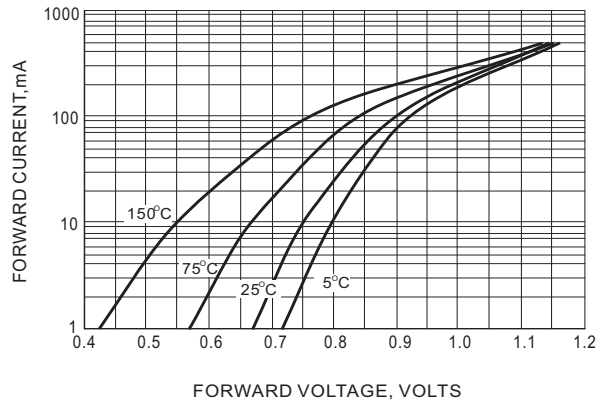


Fig.4 TYPICAL FORWARD VOLTAGE

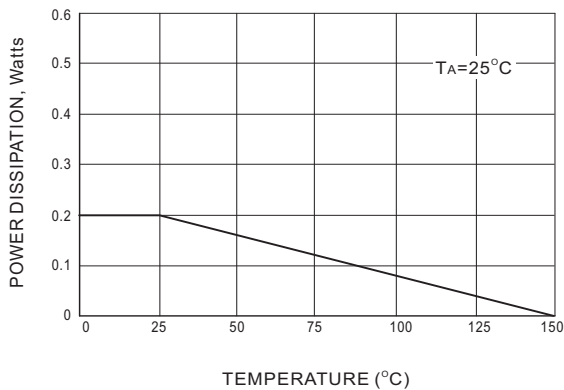
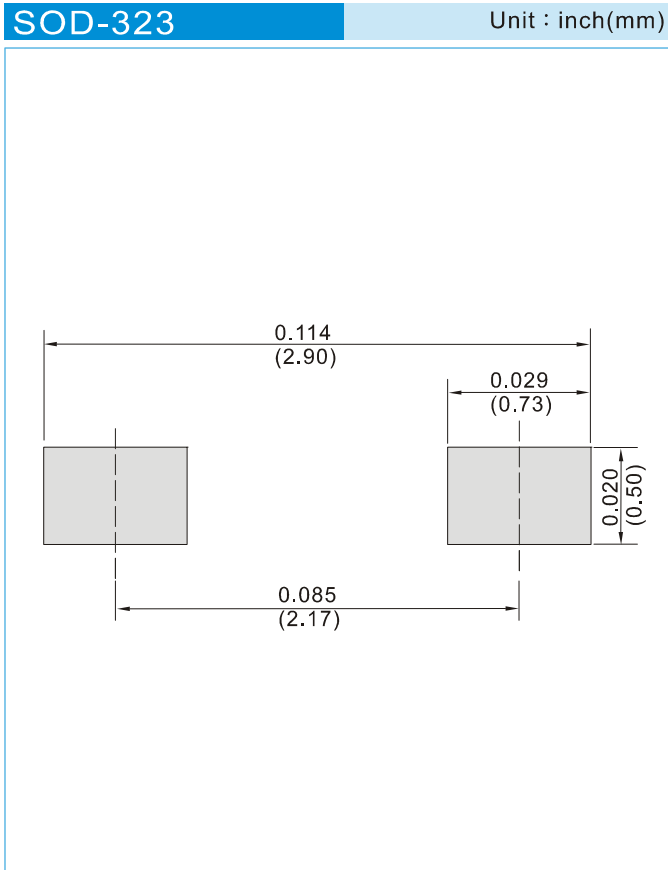


Fig.5 STEADY STATE POWER DERATING



## MMSZ5229AS-AU SERIES

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

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



## MMSZ5229AS-AU SERIES

### Part No\_packing code\_Version

MMSZ5229AS-AU\_R1\_000A1

MMSZ5229AS-AU\_R2\_000A1

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)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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