



MMSZ5229A-AU SERIES

SURFACE MOUNT SILICON ZENER DIODES

VOLTAGE 4.3 to 51 Volt **POWER** 500 mWatt

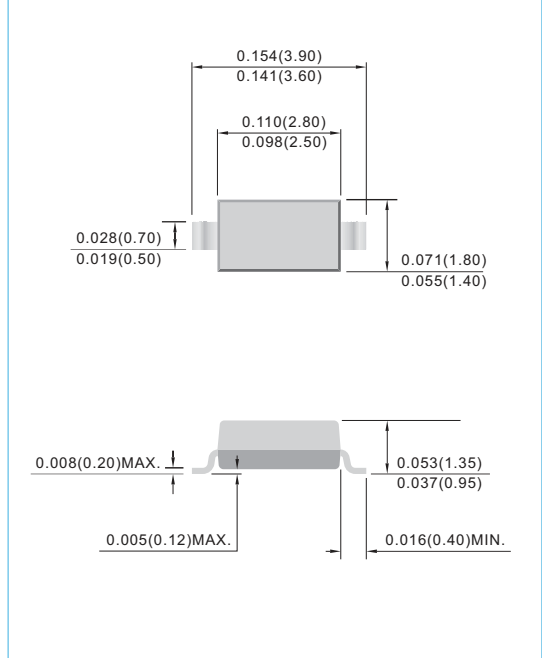
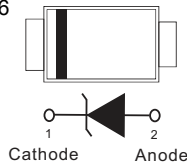
SOD-123 Unit : inch(mm)

FEATURES

- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)
- AEC-Q101 qualified

MECHANICAL DATA

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram Below
- Apprx. Weight: 0.0004 ounces, 0.01 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Maximum Power Dissipation@T _A =25°C (Notes A)	P _D	500	mW
Operating Junction and Storage Temperature Range	T _J	-50 to +150	°C

NOTES:

- A. Mounted on 5.0mm²(0.013mm thick) land areas.
- B. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.



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Part Number	Nominal Zener Voltage			Max. Zener Impedance				Max Reverse Leakage Current		Marking Code
	V _Z @ I _{ZT}			Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	
500 mWatts Zener Diodes										
MMSZ5229A-AU	4.3	4.21	4.39	22	20.0	2000	0.25	5.0	1.0	D4
MMSZ5230A-AU	4.7	4.61	4.79	19	20.0	1900	0.25	5.0	2.0	D5
MMSZ5231A-AU	5.1	5.00	5.20	17	20.0	1600	0.25	5.0	2.0	E1
MMSZ5232A-AU	5.6	5.49	5.71	11	20.0	1600	0.25	5.0	3.0	E2
MMSZ5234A-AU	6.2	6.08	6.32	7	20.0	1000	0.25	5.0	4.0	E4
MMSZ5235A-AU	6.8	6.66	6.94	5	20.0	750	0.25	3.0	5.0	E5
MMSZ5236A-AU	7.5	7.35	7.65	6	20.0	500	0.25	3.0	6.0	F1
MMSZ5237A-AU	8.2	8.04	8.36	8	20.0	500	0.25	3.0	6.0	F2
MMSZ5238A-AU	8.7	8.53	8.87	8	20	600	0.25	3.0	6.5	F3
MMSZ5239A-AU	9.1	8.92	9.28	10	20.0	600	0.25	3.0	6.5	F4
MMSZ5240A-AU	10	9.80	10.20	17	20.0	600	0.25	3.0	8.0	F5
MMSZ5241A-AU	11	10.78	11.22	22	20.0	600	0.25	3.0	8.4	H1
MMSZ5242A-AU	12	11.76	12.24	30	20.0	600	0.25	2.0	9.1	H2
MMSZ5243A-AU	13	12.74	13.26	13	9.5	600	0.25	1.0	9.9	H3
MMSZ5244A-AU	14	13.72	14.28	15	9.0	600	0.25	0.5	10.5	H4
MMSZ5245A-AU	15	14.70	15.30	16	8.5	600	0.25	0.5	11.0	H5
MMSZ5246A-AU	16	15.68	16.32	17	7.8	600	0.25	0.1	12.0	J1
MMSZ5247A-AU	17	16.66	17.34	19	7.5	600	0.25	0.1	13.0	J2
MMSZ5248A-AU	18	17.64	18.36	21	7.0	600	0.25	0.1	14.0	J3
MMSZ5250A-AU	20	19.60	20.40	25	6.2	600	0.25	0.1	15.0	J5
MMSZ5251A-AU	22	21.56	22.44	29	5.6	600	0.25	0.1	17.0	K1
MMSZ5252A-AU	24	23.52	24.48	33	5.2	600	0.25	0.1	18.0	K2
MMSZ5254A-AU	27	26.46	27.54	41	5.0	600	0.25	0.1	21.0	K4
MMSZ5255A-AU	28	27.44	28.56	44	4.5	600	0.25	0.1	21.0	K5
MMSZ5256A-AU	30	29.40	30.60	49	4.2	600	0.25	0.1	23.0	M1
MMSZ5257A-AU	33	32.34	33.66	58	3.8	700	0.25	0.1	25.0	M2
MMSZ5258A-AU	36	35.28	36.72	70	3.4	700	0.25	0.1	27.0	M3
MMSZ5259A-AU	39	38.22	39.78	80	3.2	800	0.25	0.1	30.0	M4
MMSZ5260A-AU	43	42.14	43.86	93	3.0	900	0.25	0.1	33.0	M5
MMSZ5261A-AU	47	46.06	47.94	105	2.7	1000	0.25	0.1	36.0	N1
MMSZ5262A-AU	51	49.98	52.02	125	2.5	1100	0.25	0.1	39.0	N2



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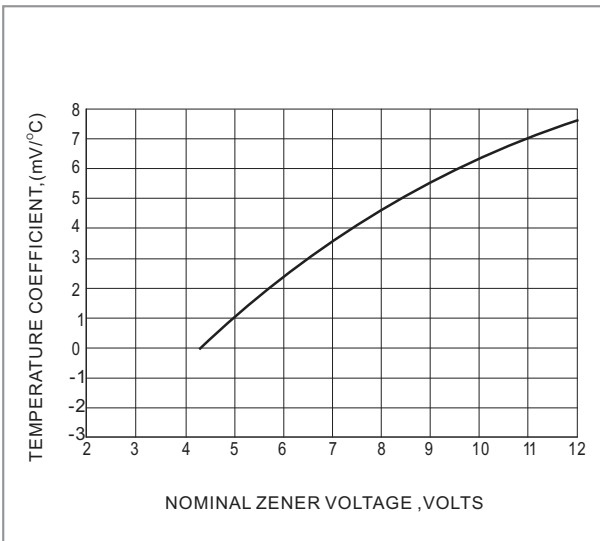


Fig. 1 TEMPERATURE COEFFICIENTS

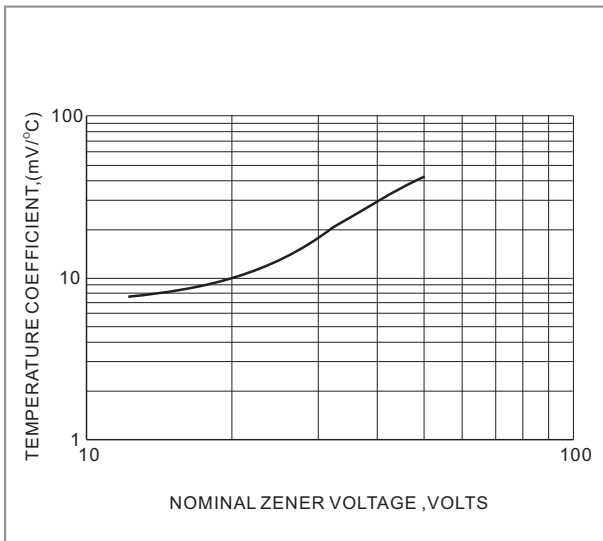


Fig. 2 TEMPERATURE COEFFICIENTS

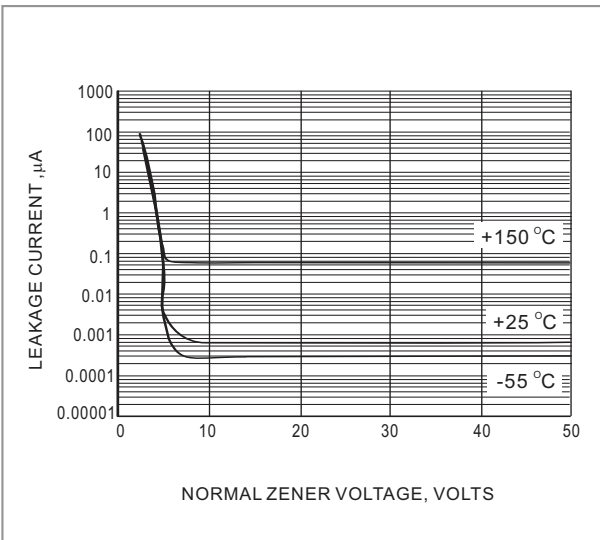


Fig. 3 TYPICAL LEAKAGE CURRENT

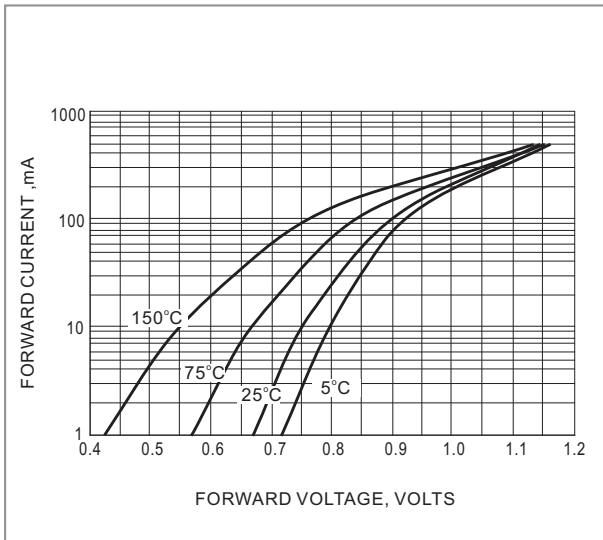


Fig. 4 TYPICAL FORWARD VOLTAGE

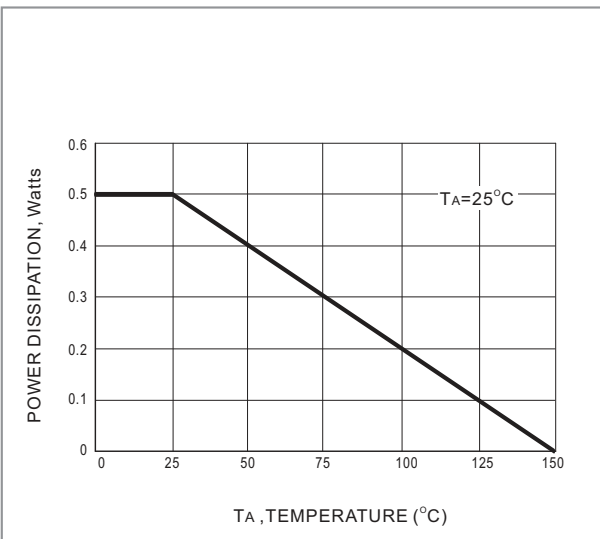


Fig. 5 STEADY STATE POWER DERATING

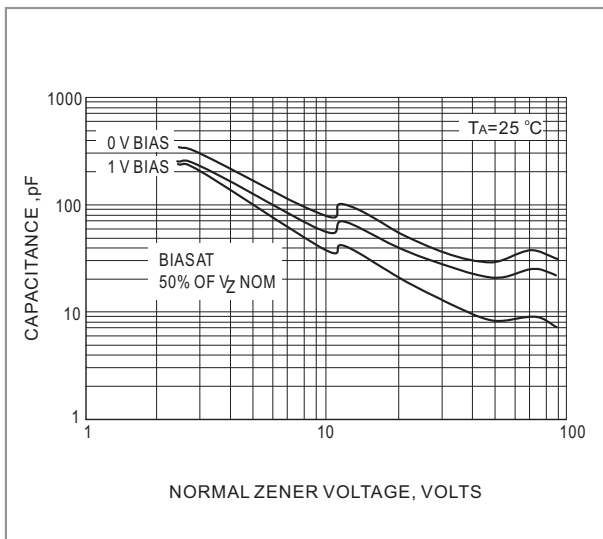


Fig. 6 TYPICAL CAPACITANCE



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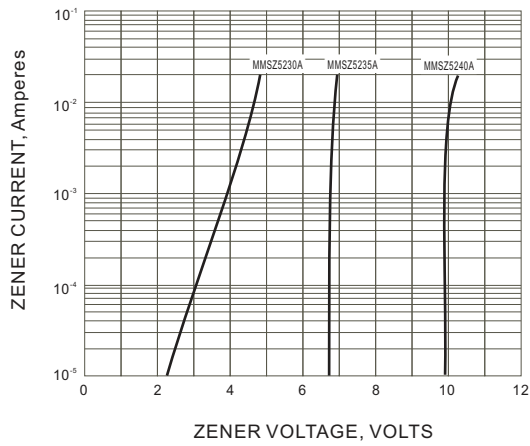


Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT

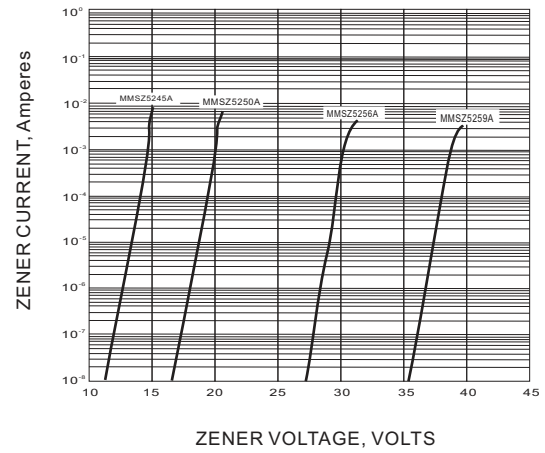
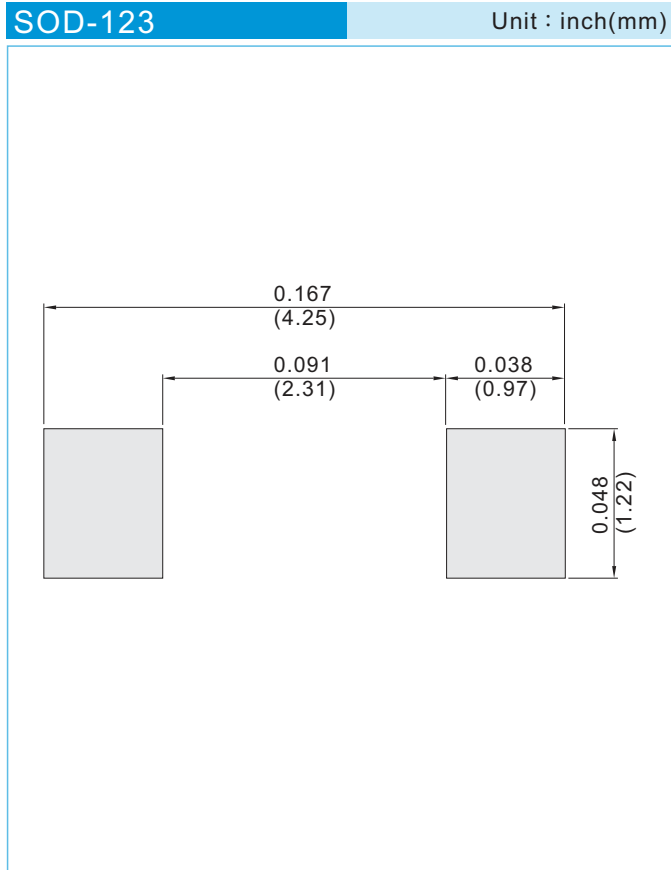


Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 10K per 13" plastic Reel
T/R - 3K per 7" plastic Reel



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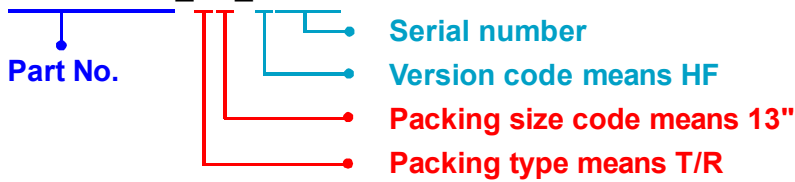
Part No_packing code_Version

MMSZ5229A-AU_R1_000A1

MMSZ5229A-AU_R2_000A1

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th 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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