PANJIT SEMI CONDUCTOR

MMSZ5221B~MMSZ5262B

SURFACE MOUNT SILICON ZENER DIODES

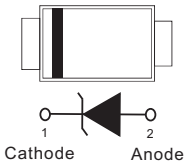
VOLTAGE 2.4 to 51 Volt **POWER** 500 mWatt

FEATURES

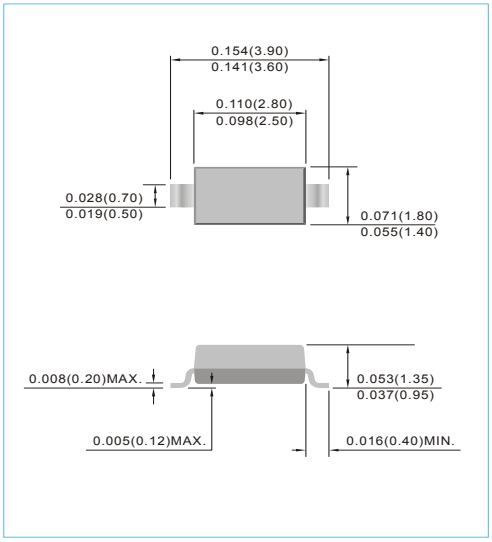
- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounce, 0.0103 gram



SOD-123 Unit : inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Total Power Dissipation (Notes A)	P_D	500	mW
Typical Thermal Resistance (Notes B) (Notes A)	$R_{\theta JA}$	430 325	$^oC/W$
Operating Junction and StorageTemperature Range	T_J	-55 to +150	^oC

NOTES : A. Mounted on 100cm²(1mm thick) copper areas.

B. Mounted on a FR4 PCB, single-sided copper, mini pad.

PANJIT SEMI CONDUCTOR

MMSZ5221B~MMSZ5262B

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	
MMSZ5221B	2.4	2.28	2.52	30	20	1200	0.25	100	1	C1
MMSZ5222B	2.5	2.38	2.63	30	20	1250	0.25	100	1	C2
MMSZ5223B	2.7	2.57	2.84	30	20	1300	0.25	75	1	C3
MMSZ5224B	2.8	2.66	2.94	30	20	1400	0.25	75	1	C4
MMSZ5225B	3	2.85	3.15	30	20	1600	0.25	50	1	C5
MMSZ5226B	3.3	3.14	3.47	28	20	1600	0.25	25	1	D1
MMSZ5227B	3.6	3.42	3.78	24	20	1700	0.25	15	1	D2
MMSZ5228B	3.9	3.71	4.1	23	20	1900	0.25	10	1	D3
MMSZ5229B	4.3	4.09	4.52	22	20	2000	0.25	5	1	D4
MMSZ5230B	4.7	4.47	4.94	19	20	1900	0.25	5	2	D5
MMSZ5231B	5.1	4.85	5.36	17	20	1600	0.25	5	2	E1
MMSZ5232B	5.6	5.32	5.88	11	20	1600	0.25	5	3	E2
MMSZ5233B	6.0	5.70	6.30	7	20	1600	0.25	5	3.5	E3
MMSZ5234B	6.2	5.89	6.51	7	20	1000	0.25	5	4	E4
MMSZ5235B	6.8	6.46	7.14	5	20	750	0.25	3	5	E5
MMSZ5236B	7.5	7.13	7.88	6	20	500	0.25	3	6	F1
MMSZ5237B	8.2	7.79	8.61	8	20	500	0.25	3	6	F2
MMSZ5238B	8.7	8.27	9.14	8	20	600	0.25	3	6.5	F3
MMSZ5239B	9.1	8.65	9.56	10	20	600	0.25	3	6.5	F4
MMSZ5240B	10	9.5	10.5	17	20	600	0.25	3	8	F5
MMSZ5241B	11	10.45	11.55	22	20	600	0.25	2	8.4	H1
MMSZ5242B	12	11.4	12.6	30	20	600	0.25	1	9.1	H2
MMSZ5243B	13	12.35	13.65	13	9.5	600	0.25	0.5	9.9	H3
MMSZ5244B	14	13.3	14.7	15	9	600	0.25	0.1	10.5	H4
MMSZ5245B	15	14.25	15.75	16	8.5	600	0.25	0.1	11	H5
MMSZ5246B	16	15.2	16.8	17	7.8	600	0.25	0.1	12	J1
MMSZ5247B	17	16.15	17.85	19	7.5	600	0.25	0.1	13	J2
MMSZ5248B	18	17.1	18.9	21	7	600	0.25	0.1	14	J3
MMSZ5249B	19	18.05	19.95	23	6.6	600	0.25	0.1	14	J4
MMSZ5250B	20	19	21	25	6.2	600	0.25	0.1	15	J5
MMSZ5251B	22	20.9	23.1	29	5.6	600	0.25	0.1	17	K1
MMSZ5252B	24	22.8	25.2	33	5.2	600	0.25	0.1	18	K2
MMSZ5253B	25	23.75	26.25	35	5.0	600	0.25	0.1	19	K3
MMSZ5254B	27	25.65	28.35	41	5	600	0.25	0.1	21	K4
MMSZ5255B	28	26.6	29.4	44	4.5	600	0.25	0.1	21	K5
MMSZ5256B	30	28.5	31.5	49	4.2	600	0.25	0.1	23	M1
MMSZ5257B	33	31.35	34.65	58	3.8	700	0.25	0.1	25	M2
MMSZ5258B	36	34.2	37.8	70	3.4	700	0.25	0.1	27	M3
MMSZ5259B	39	37.05	40.95	80	3.2	800	0.25	0.1	30	M4
MMSZ5260B	43	40.85	45.15	93	3	900	0.25	0.1	33	M5
MMSZ5261B	47	44.65	49.35	105	2.7	1000	0.25	0.1	36	N1
MMSZ5262B	51	48.45	53.55	125	2.5	1100	0.25	0.1	39	N2

MMSZ5221B~MMSZ5262B

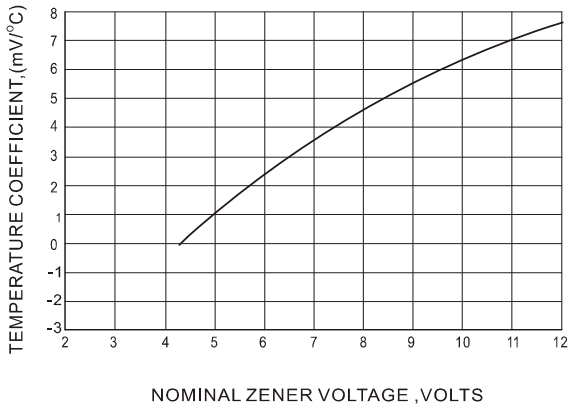


Fig.1 TEMPERATURE COEFFICIENTS

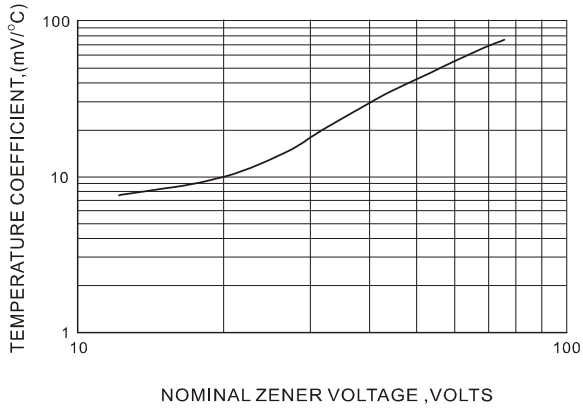


Fig.2 TEMPERATURE COEFFICIENTS

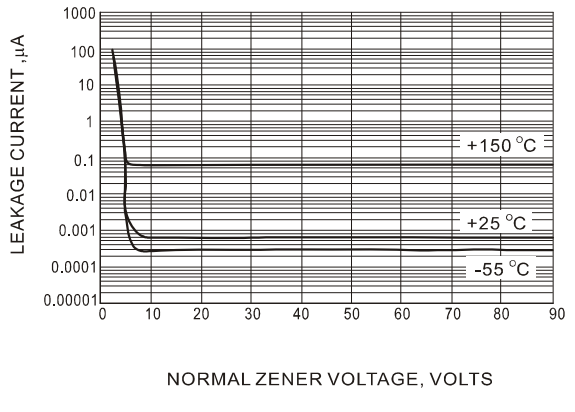


Fig.3 TYPICAL LEAKAGE CURRENT

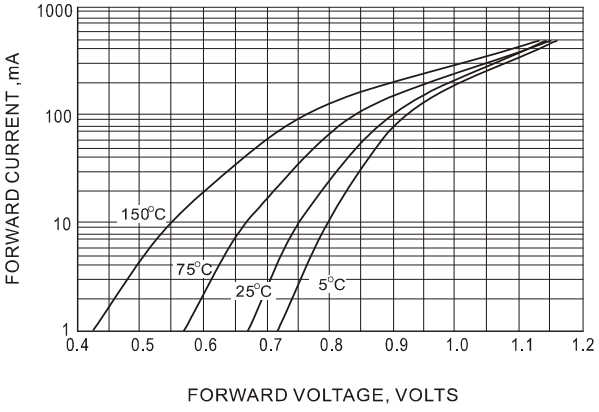


Fig.4 TYPICAL FORWARD VOLTAGE

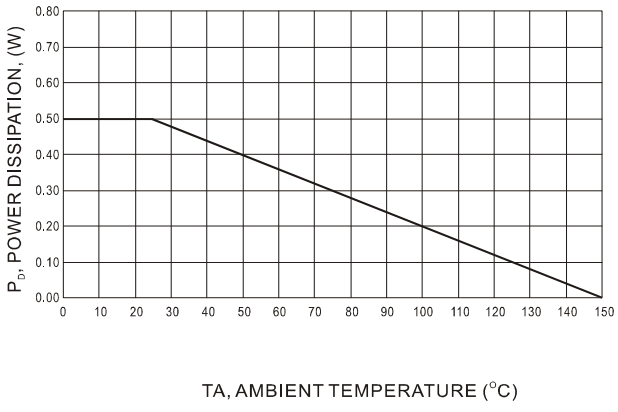
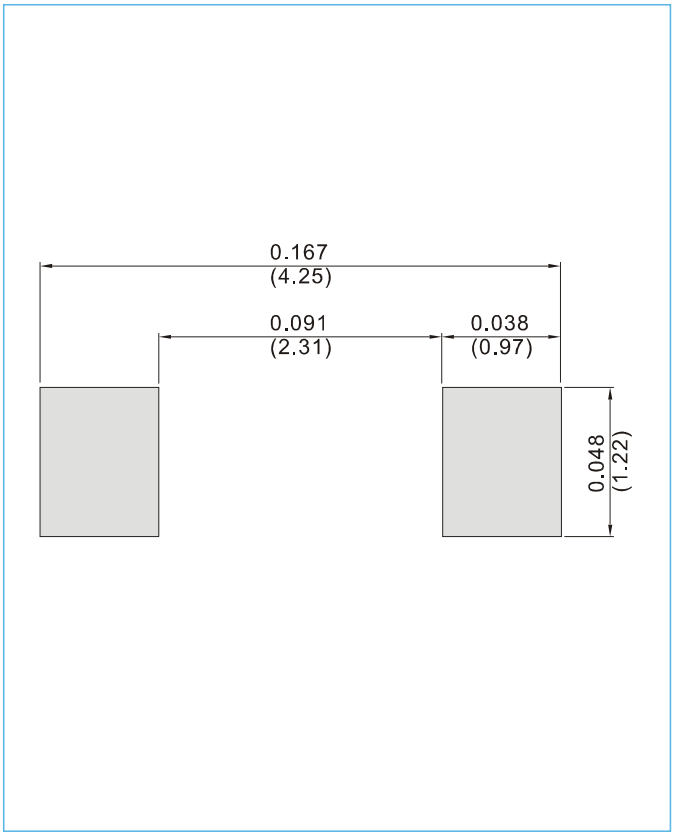


Fig.5 POWER DERATING CURVE

MMSZ5221B~MMSZ5262B

MOUNTING PAD LAYOUT

SOD-123 Unit : inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 10K per 13" plastic Reel

  T/R - 3K per 7" plastic Reel

MMSZ5221B~MMSZ5262B

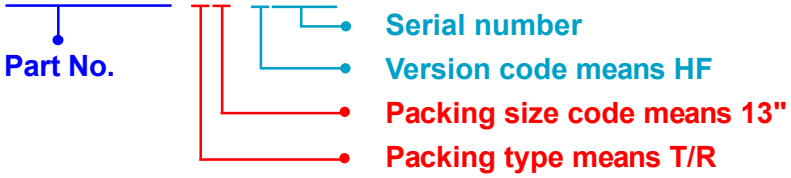
Part No_packing code_Version

MMSZ5221B_R1_00001

MMSZ5221B_R2_00001

For example :

RB500V-40_R2_00001



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

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.