



MMBZ5221BTW~MMBZ5262BTW

SURFACE MOUNT SILICON ZENER DIODES

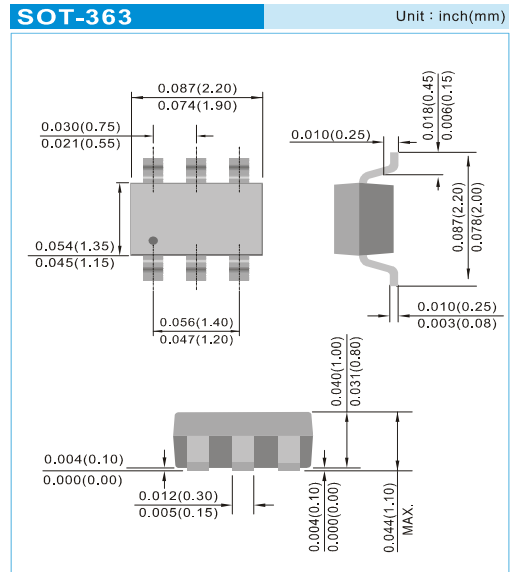
VOLTAGE 2.4 to 51 Volt **POWER** 200 mWatt

FEATURES

- Planar Die Construction
- 200mW Power Dissipation
- Zener Voltages from 2.4~51V
- 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)

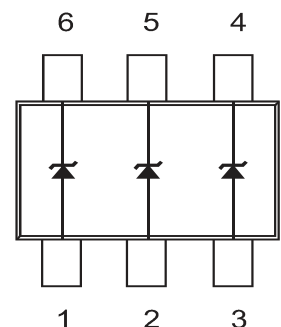
MECHANICAL DATA

- Case: SOT-363, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0002 ounces, 0.006 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNITS
Power Dissipation (Note A)	P _D	200	mW
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (Notes B)	I _{FSM}	2	A
Operating Junction Temperature and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C



NOTES :

- A. Mounted on 5mm² (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 _{KT} @ I _{ZT}		Z _{KZ} @ I _{ZK}		I _R @ V _R		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V	
200 mWatts Zener Diodes										
MMBZ5221BTW	2.4	2.28	2.52	30	20.0	1200	0.25	100	1.0	C1
MMBZ5222BTW	2.5	2.38	2.63	30	20.0	1250	0.25	100	1.0	C2
MMBZ5223BTW	2.7	2.57	2.84	30	20.0	1300	0.25	75	1.0	C3
MMBZ5224BTW	2.8	2.66	2.94	30	20.0	1400	0.25	75	1.0	C4
MMBZ5225BTW	3.0	2.85	3.15	30	20.0	1600	0.25	50	1.0	C5
MMBZ5226BTW	3.3	3.14	3.47	28	20.0	1600	0.25	25	1.0	D1
MMBZ5227BTW	3.6	3.42	3.78	24	20.0	1700	0.25	15	1.0	D2
MMBZ5228BTW	3.9	3.71	4.10	23	20.0	1900	0.25	10	1.0	D3
MMBZ5229BTW	4.3	4.09	4.52	22	20.0	2000	0.25	5.0	1.0	D4
MMBZ5230BTW	4.7	4.47	4.94	19	20.0	1900	0.25	5.0	2.0	D5
MMBZ5231BTW	5.1	4.85	5.36	17	20.0	1600	0.25	5.0	2.0	E1
MMBZ5232BTW	5.6	5.32	5.88	11	20.0	1600	0.25	5.0	3.0	E2
MMBZ5233BTW	6.0	5.70	6.30	7	20.0	1600	0.25	5.0	3.5	E3
MMBZ5234BTW	6.2	5.89	6.51	7	20.0	1000	0.25	5.0	4.0	E4
MMBZ5235BTW	6.8	6.46	7.14	5	20.0	750	0.25	3.0	5.0	E5
MMBZ5236BTW	7.5	7.13	7.88	6	20.0	500	0.25	3.0	6.0	F1
MMBZ5237BTW	8.2	7.79	8.61	8	20.0	500	0.25	3.0	6.5	F2
MMBZ5238BTW	8.7	8.27	9.14	8	20.0	600	0.25	3.0	6.5	F3
MMBZ5239BTW	9.1	8.65	9.56	10	20.0	600	0.25	3.0	7.0	F4
MMBZ5240BTW	10	9.50	10.50	17	20.0	600	0.25	3.0	8.0	F5
MMBZ5241BTW	11	10.45	11.55	22	20.0	600	0.25	2.0	8.4	H1
MMBZ5242BTW	12	11.40	12.60	30	20.0	600	0.25	1.0	9.1	H2
MMBZ5243BTW	13	12.35	13.65	13	9.5	600	0.25	0.5	9.9	H3
MMBZ5244BTW	14	13.30	14.70	15	9.0	600	0.25	0.1	10.5	H4
MMBZ5245BTW	15	14.25	15.75	16	8.5	600	0.25	0.1	11.0	H5
MMBZ5246BTW	16	15.20	16.80	17	7.8	600	0.25	0.1	12.0	J1
MMBZ5247BTW	17	16.15	17.85	19	7.5	600	0.25	0.1	13.0	J2
MMBZ5248BTW	18	17.10	18.90	21	7.0	600	0.25	0.1	14.0	J3
MMBZ5249BTW	19	18.05	19.95	23	6.6	600	0.25	0.1	14.0	J4
MMBZ5250BTW	20	19.00	21.00	25	6.2	600	0.25	0.1	15.0	J5
MMBZ5251BTW	22	20.90	23.10	29	5.6	600	0.25	0.1	17.0	K1
MMBZ5252BTW	24	22.80	25.20	33	5.2	600	0.25	0.1	18.0	K2
MMBZ5253BTW	25	23.75	26.25	35	5.0	600	0.25	0.1	19.0	K3
MMBZ5254BTW	27	25.65	28.35	41	5.0	600	0.25	0.1	21.0	K4
MMBZ5255BTW	28	26.60	29.40	44	4.5	600	0.25	0.1	21.0	K5
MMBZ5256BTW	30	28.50	31.50	49	4.2	600	0.25	0.1	23.0	M1
MMBZ5257BTW	33	31.35	34.65	58	3.8	700	0.25	0.1	25.0	M2
MMBZ5258BTW	36	34.20	37.80	70	3.4	700	0.25	0.1	27.0	M3
MMBZ5259BTW	39	37.05	40.95	80	3.2	800	0.25	0.1	30.0	M4
MMBZ5260BTW	43	40.85	45.15	93	3.0	900	0.25	0.1	33.0	M5
MMBZ5261BTW	47	44.65	49.35	105	2.7	1000	0.25	0.1	36.0	N1
MMBZ5262BTW	51	48.45	53.55	125	2.5	1100	0.25	0.1	39.0	N2



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CHARACTERISTIC CURVES

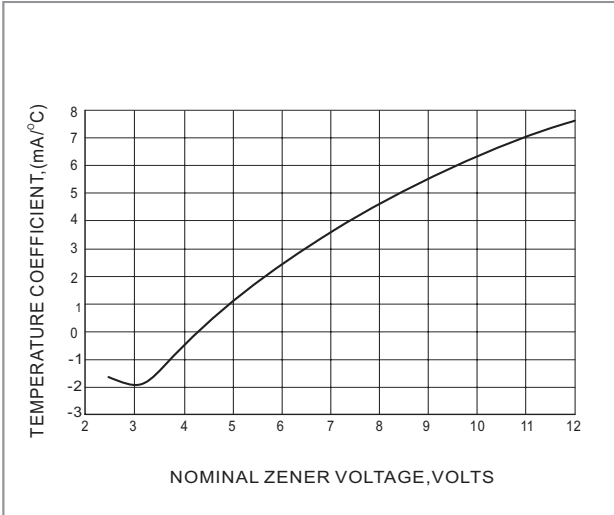


Fig.1 TEMPERATURE COEFFICIENTS

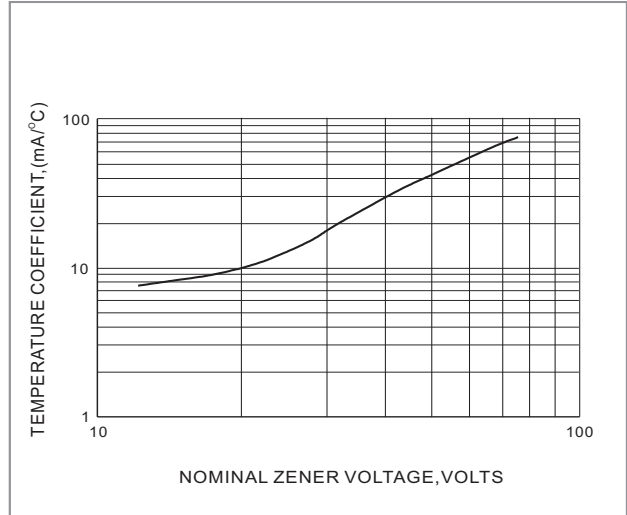


Fig.2 TEMPERATURE COEFFICIENTS

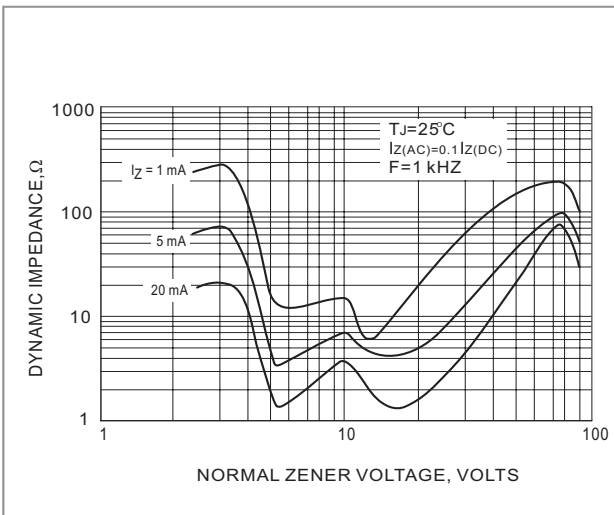


Fig.3 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

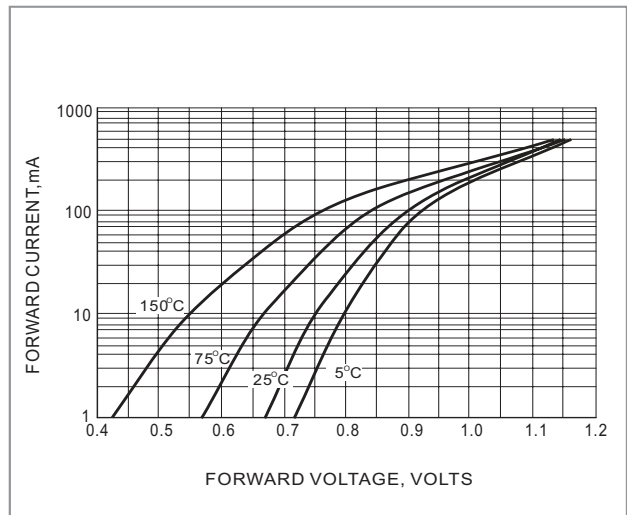


Fig.4 TYPICAL FORWARD VOLTAGE

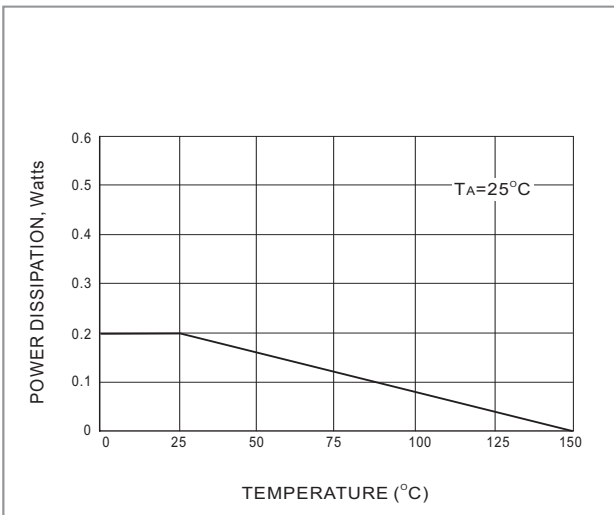


Fig.5 STEADY STATE POWER DERATING

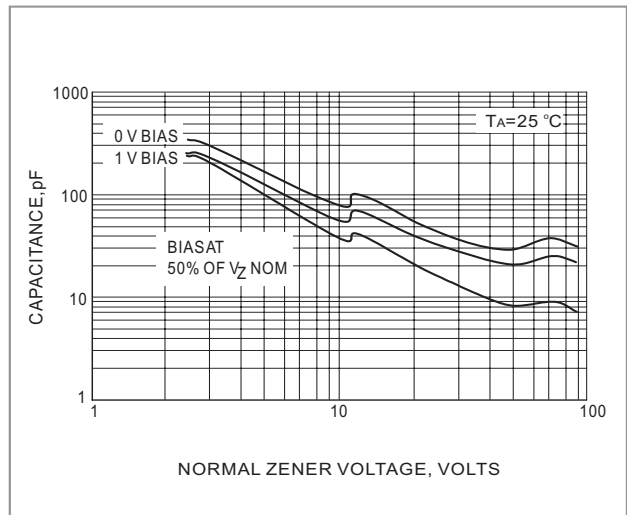


Fig.6 TYPICAL CAPACITANCE



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CHARACTERISTIC CURVES

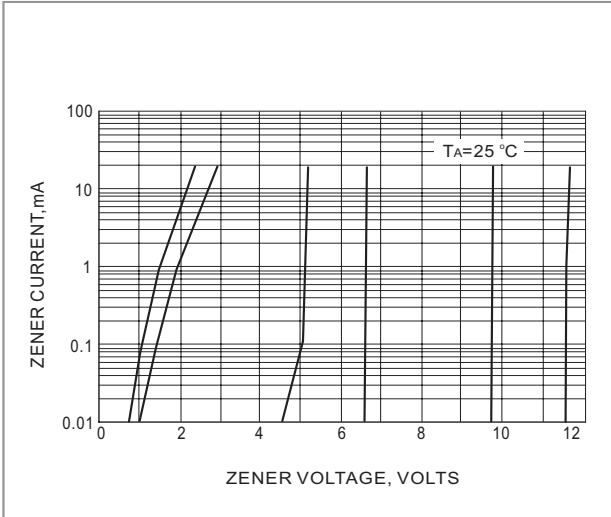


Fig.7 ZENER VOLTAGE VERSUS ZENER CURRENT

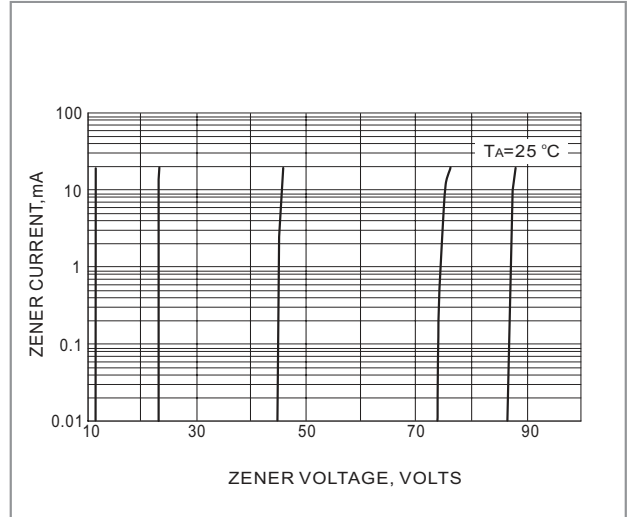


Fig.8 ZENER VOLTAGE VERSUS ZENER CURRENT

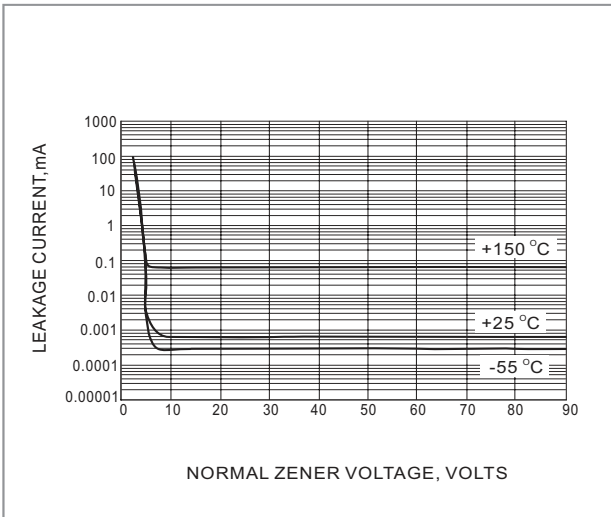
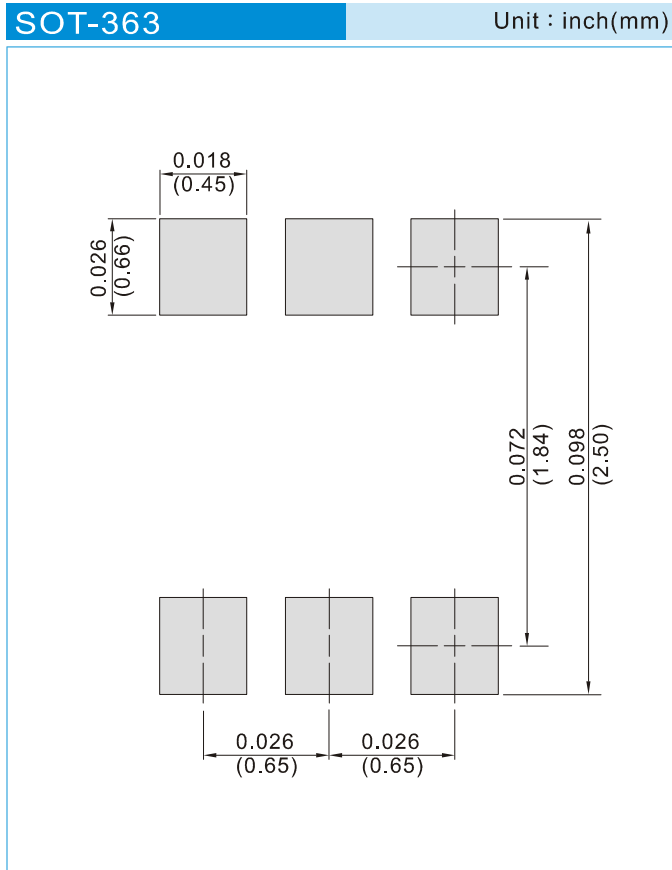


Fig.9 TYPICAL LEAKAGE CURRENT



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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

MMBZ5221BTW_R1_00001

MMBZ5221BTW_R2_00001

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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