



# MMBZ5221BV~MMBZ5262BV

## SURFACE MOUNT SILICON ZENER DIODES

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

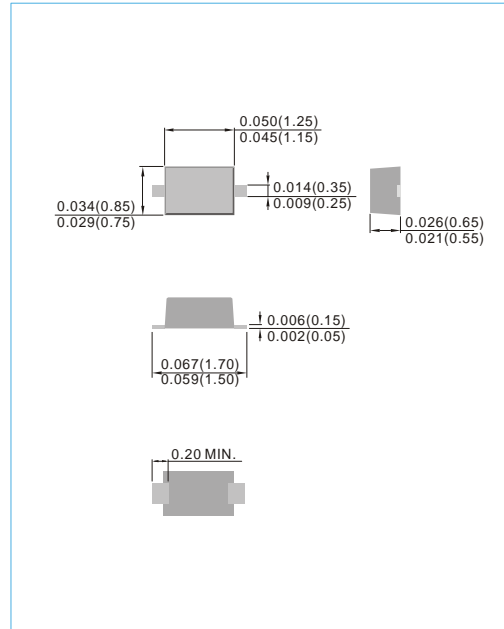
**SOD-523**    Unit : inch(mm)

### FEATURES

- Planar Die construction
- 200mW Power Dissipation
- Zener Voltages from 2.4V~75V
- 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-523, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Standard packaging : 8mm tape
- Approx. Weight : 0.00005 ounces, 0.0014 grams.



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Maximum Power Dissipation (Notes A) at 25°C	P <sub>D</sub>	200	mW
Operating Junction and Storage Temperature Range	T <sub>J</sub>	-55 to +150	°C

### NOTES:

- A. Mounted on 5.0mm<sup>2</sup>(.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 <sub>Z</sub> @ I <sub>ZT</sub>			Z <sub>VT</sub> @ I <sub>ZT</sub>		Z <sub>ZK</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										
MMBZ5221BV	2.4	2.28	2.52	30	20	1200	0.25	100	1	C1
MMBZ5222BV	2.5	2.38	2.63	30	20	1250	0.25	100	1	C2
MMBZ5223BV	2.7	2.57	2.84	30	20	1300	0.25	75	1	C3
MMBZ5225BV	3	2.85	3.15	30	20	1600	0.25	50	1	C5
MMBZ5226BV	3.3	3.14	3.47	28	20	1600	0.25	25	1	D1
MMBZ5227BV	3.6	3.42	3.78	24	20	1700	0.25	15	1	D2
MMBZ5228BV	3.9	3.71	4.1	23	20	1900	0.25	10	1	D3
MMBZ5229BV	4.3	4.09	4.52	22	20	2000	0.25	5	1	D4
MMBZ5230BV	4.7	4.47	4.94	19	20	1900	0.25	5	2	D5
MMBZ5231BV	5.1	4.85	5.36	17	20	1600	0.25	5	2	E1
MMBZ5232BV	5.6	5.32	5.88	11	20	1600	0.25	5	3	E2
MMBZ5234BV	6.2	5.89	6.51	7	20	1000	0.25	5	4	E4
MMBZ5235BV	6.8	6.46	7.14	5	20	750	0.25	3	5	E5
MMBZ5236BV	7.5	7.13	7.88	6	20	500	0.25	3	6	F1
MMBZ5237BV	8.2	7.79	8.61	8	20	500	0.25	3	6.5	F2
MMBZ5238BV	8.7	8.27	9.14	8	20	600	0.25	3	6.5	F3
MMBZ5239BV	9.1	8.65	9.56	10	20	600	0.25	3	7	F4
MMBZ5240BV	10	9.5	10.5	17	20	600	0.25	3	8	F5
MMBZ5241BV	11	10.45	11.55	22	20	600	0.25	2	8.4	H1
MMBZ5242BV	12	11.4	12.6	30	20	600	0.25	1	9.1	H2
MMBZ5243BV	13	12.35	13.65	13	9.5	600	0.25	0.5	9.9	H3
MMBZ5244BV	14	13.3	14.7	15	9	600	0.25	0.1	10.5	H4
MMBZ5245BV	15	14.25	15.75	16	8.5	600	0.25	0.1	11	H5
MMBZ5246BV	16	15.2	16.8	17	7.8	600	0.25	0.1	12	J1
MMBZ5247BV	17	16.15	17.85	19	7.5	600	0.25	0.1	13	J2
MMBZ5248BV	18	17.1	18.9	21	7	600	0.25	0.1	14	J3
MMBZ5250BV	20	19	21	25	6.2	600	0.25	0.1	15	J5
MMBZ5251BV	22	20.9	23.1	29	5.6	600	0.25	0.1	17	K1
MMBZ5252BV	24	22.8	25.2	33	5.2	600	0.25	0.1	18	K2
MMBZ5254BV	27	25.65	28.35	41	5	600	0.25	0.1	21	K4
MMBZ5255BV	28	26.6	29.4	44	4.5	600	0.25	0.1	21	K5
MMBZ5256BV	30	28.5	31.5	49	4.2	600	0.25	0.1	23	M1
MMBZ5257BV	33	31.35	34.65	58	3.8	700	0.25	0.1	25	M2
MMBZ5258BV	36	34.2	37.8	70	3.4	700	0.25	0.1	27	M3
MMBZ5259BV	39	37.05	40.95	80	3.2	800	0.25	0.1	30	M4
MMBZ5260BV	43	40.85	45.15	93	3	900	0.25	0.1	33	M5
MMBZ5261BV	47	44.65	49.35	105	2.7	1000	0.25	0.1	36	N1
MMBZ5262BV	51	48.45	53.55	125	2.5	1100	0.25	0.1	39	N2



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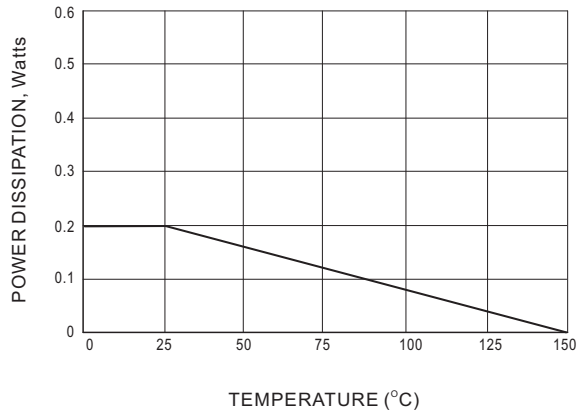


Fig.1 STEADY STATE POWER DERATING

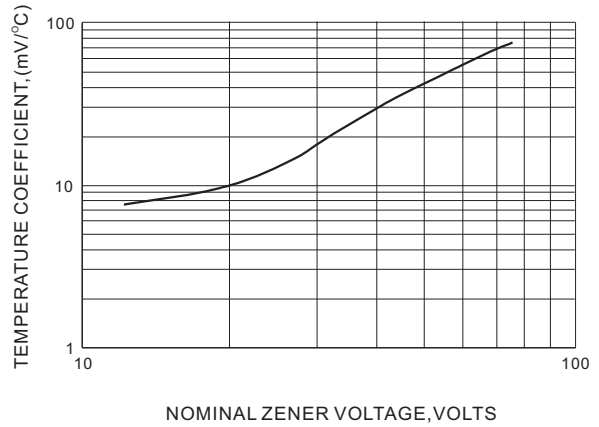


Fig.2 TEMPERATURE COEFFICIENTS

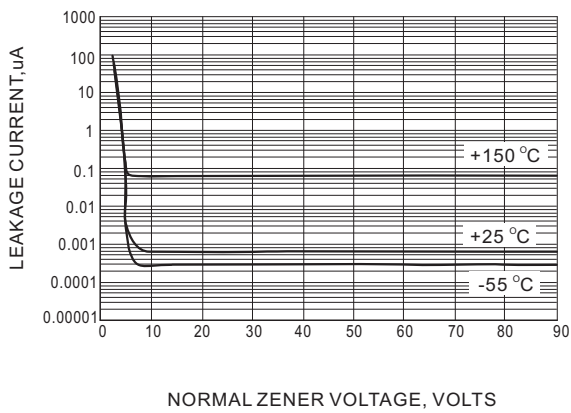


Fig.3 TYPICAL LEAKAGE CURRENT

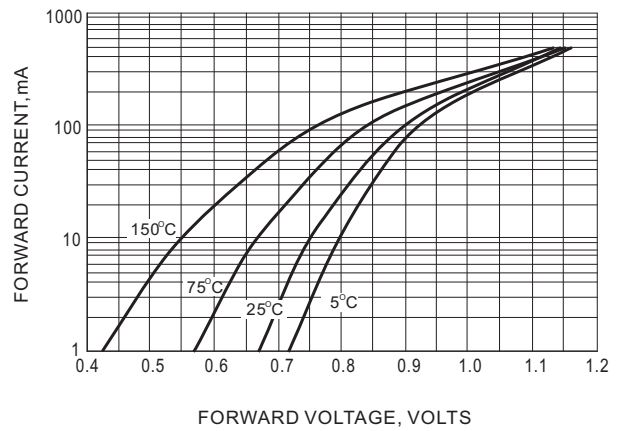
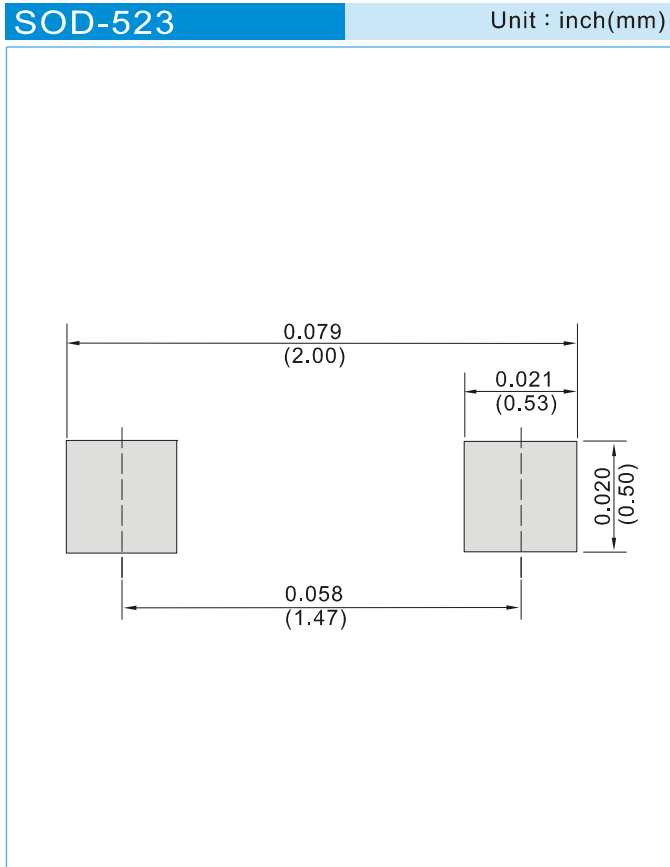


Fig.4 TYPICAL FORWARD VOLTAGE



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### MOUNTING PAD LAYOUT



### ORDER INFORMATION

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



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**Part No\_packing code\_Version**

MMBZ5221BV\_R1\_00001

MMBZ5221BV\_R2\_00001

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)	<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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