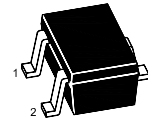
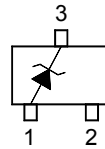


# MMBZ5221BW~MMBZ5259BW

## SILICON PLANAR ZENER DIODES



SOT-323 Plastic Package

1. Anode 3. Cathode

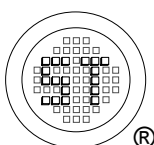
### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Power Dissipation	$P_D$	200	mW
Operating Junction and Storage Temperature Range	$T_j, T_{Stg}$	- 65 to + 150	$^\circ\text{C}$

### Characteristics ( $T_a = 25\text{ }^\circ\text{C}$ unless otherwise noted, $V_F < 0.9\text{ V}$ at $I_F = 10\text{ mA}$ )

Type	Marking Code	Zener Voltage Range <sup>1)</sup>			Dynamic Resistance			Reverse Leakage Current	
		$V_{Znom}$ V	$I_{ZT}$ mA	for $V_{ZT}$ V	$Z_{ZT}$ Max. ( $\Omega$ )	$Z_{ZK}$ Max. ( $\Omega$ )	at $I_{ZK}$ mA	$I_R$ Max. ( $\mu\text{A}$ )	at $V_R$ V
MMBZ5221BW	HA	2.4	20	2.28...2.52	30	1200	0.25	100	1
MMBZ5223BW	HB	2.7	20	2.57...2.84	30	1300	0.25	75	1
MMBZ5225BW	HC	3	20	2.85...3.15	30	1600	0.25	50	1
MMBZ5226BW	HD	3.3	20	3.14...3.47	28	1600	0.25	25	1
MMBZ5227BW	HE	3.6	20	3.42...3.78	24	1700	0.25	15	1
MMBZ5228BW	HF	3.9	20	3.71...4.1	23	1900	0.25	10	1
MMBZ5229BW	HH	4.3	20	4.09...4.52	22	2000	0.25	5	1
MMBZ5230BW	HJ	4.7	20	4.47...4.94	19	1900	0.25	5	2
MMBZ5231BW	HK	5.1	20	4.85...5.36	17	1600	0.25	5	2
MMBZ5232BW	HM	5.6	20	5.32...5.88	11	1600	0.25	5	3
MMBZ5234BW	HN	6.2	20	5.89...6.51	7	1000	0.25	5	4
MMBZ5235BW	HP	6.8	20	6.46...7.14	5	750	0.25	3	5
MMBZ5236BW	HR	7.5	20	7.13...7.88	6	500	0.25	3	6
MMBZ5237BW	HX	8.2	20	7.79...8.61	8	500	0.25	3	6.5
MMBZ5239BW	HY	9.1	20	8.65...9.56	10	600	0.25	3	7
MMBZ5240BW	HZ	10	20	9.5...10.5	17	600	0.25	3	8
MMBZ5241BW	JA	11	20	10.45...11.55	22	600	0.25	2	8.4
MMBZ5242BW	JB	12	20	11.4...12.6	30	600	0.25	1	9.1
MMBZ5243BW	JC	13	9.5	12.35...13.65	13	600	0.25	0.5	9.9
MMBZ5245BW	JD	15	8.5	14.25...15.75	16	600	0.25	0.1	11
MMBZ5246BW	JE	16	7.8	15.2...16.8	17	600	0.25	0.1	12
MMBZ5248BW	JF	18	7	17.1...18.9	21	600	0.25	0.1	14
MMBZ5250BW	JH	20	6.2	19...21	25	600	0.25	0.1	15
MMBZ5251BW	JJ	22	5.6	20.9...23.1	29	600	0.25	0.1	17
MMBZ5252BW	JK	24	5.2	22.8...25.2	33	600	0.25	0.1	18
MMBZ5254BW	JM	27	5	25.65...28.35	41	600	0.25	0.1	21
MMBZ5256BW	JN	30	4.2	28.5...31.5	49	600	0.25	0.1	23
MMBZ5257BW	JP	33	3.8	31.35...34.65	58	700	0.25	0.1	25
MMBZ5258BW	JR	36	3.4	34.2...37.8	70	700	0.25	0.1	27
MMBZ5259BW	JX	39	3.2	37.05...40.95	80	800	0.25	0.1	30

<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .



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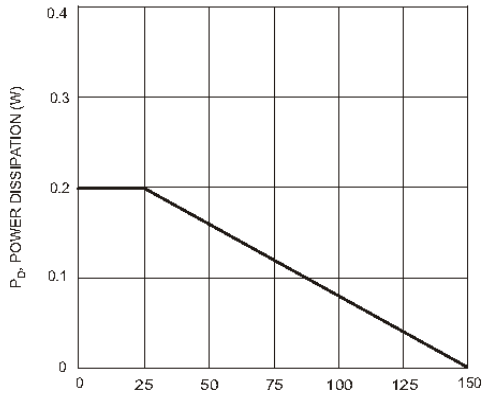


Fig. 1 Power Dissipation vs Ambient Temperature

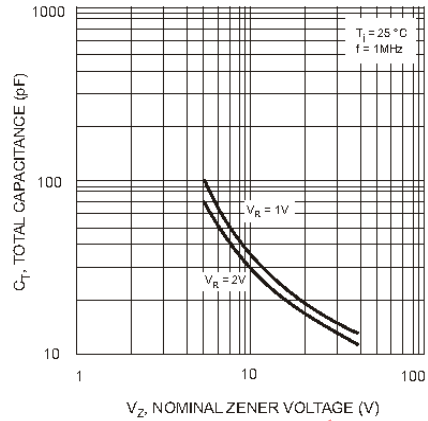


Fig. 2 Total Capacitance vs Nominal Zener Voltage

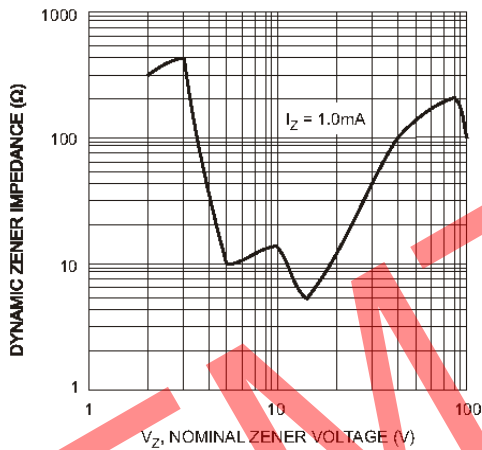


Fig. 3 Zener Voltage vs. Zener Impedance

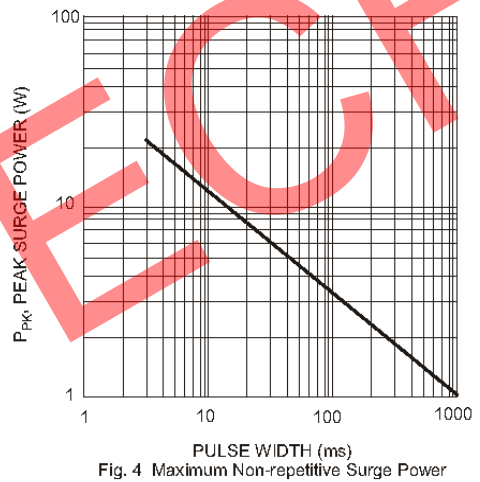


Fig. 4 Maximum Non-repetitive Surge Power

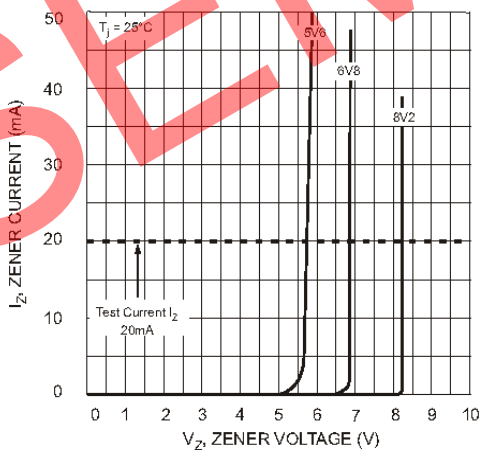


Fig. 5 Zener Breakdown Characteristics

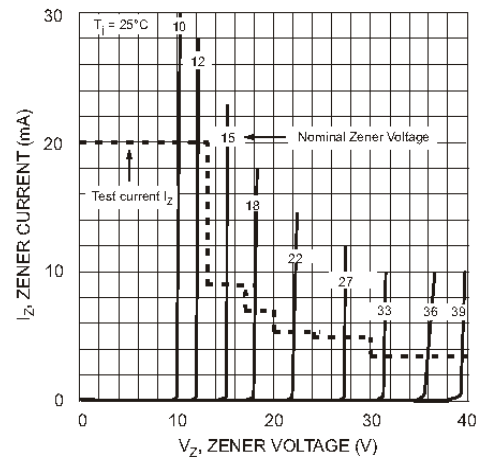
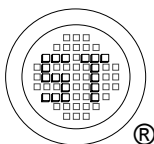


Fig. 6 Zener Breakdown Characteristics



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ISO/TS 16949 : 2009 Certificate No. 05103  
 ISO 14001 : 2004 Certificate No. 7116  
 ISO 9001 : 2008 Certificate No. 0506088  
 BS-OHSAS 18001 : 2007 Certificate No. 7116  
 IECQ QC 080000 Certificate No. FC18P14851

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