

# **Maximum Ratings** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Chai	racteristic	Symbol	Value	Unit
Forward Voltage	@ I <sub>F</sub> = 10mA	$V_{F}$	0.9	V

### **Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P <sub>D</sub>	200	mW
Thermal Resistance, Junction to Ambient Air (Note 6)	$R_{ hetaJA}$	625	°C/W
Operating and Storage Temperature Range	T <sub>J,</sub> T <sub>STG</sub>	-65 to +150	°C

Notes: 6. Mounted on FR4 PC Board with recommended pad layout which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.

# **Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

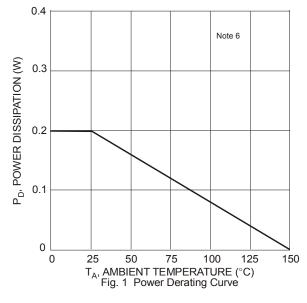
<b>T</b>	Mandala a	Zener Voltage Range (Note 7)		Test Current	Maximum Zener Impedance (Note 8)		Maximum Reverse Leakage Current (Note 7)		
Type Number	Marking Code		Vz@IzT		I <sub>ZT</sub>	Z <sub>ZT</sub> @ I <sub>ZT</sub>	<b>Z<sub>ZK</sub> @ I<sub>ZK</sub></b> = 0.25mA	I <sub>R</sub>	@ V <sub>R</sub>
		Nom (V)	Min (V)	Max (V)	mA	2	2	μΑ	V
MMBZ5221BW	KC1	2.4	2.28	2.52	20	30	1200	100	1.0
MMBZ5223BW	KC3	2.7	2.57	2.84	20	30	1300	75	1.0
MMBZ5225BW	KC5	3.0	2.85	3.15	20	30	1600	50	1.0
MMBZ5226BW	KG1	3.3	3.14	3.47	20	28	1600	25	1.0
MMBZ5227BW	KG2	3.6	3.42	3.78	20	24	1700	15	1.0
MMBZ5228BW	KG3	3.9	3.71	4.10	20	23	1900	10	1.0
MMBZ5229BW	KG4	4.3	4.09	4.52	20	22	2000	5.0	1.0
MMBZ5230BW	KG5	4.7	4.47	4.94	20	19	1900	5.0	2.0
MMBZ5231BW	KE1	5.1	4.85	5.36	20	17	1600	5.0	2.0
MMBZ5232BW	KE2	5.6	5.32	5.88	20	11	1600	5.0	3.0
MMBZ5233BW	KE3	6	5.70	6.30	20	7.0	1600	5.0	3.5
MMBZ5234BW	KE4	6.2	5.89	6.51	20	7.0	1000	5.0	4.0
MMBZ5235BW	KE5	6.8	6.46	7.14	20	5.0	750	3.0	5.0
MMBZ5236BW	KF1	7.5	7.13	7.88	20	6.0	500	3.0	6.0
MMBZ5237BW	KF2	8.2	7.79	8.61	20	8.0	500	3.0	6.5
MMBZ5238BW	KF3	8.7	8.27	9.14	20	8	600	3	6.5
MMBZ5239BW	KF4	9.1	8.65	9.56	20	10	600	3.0	7.0
MMBZ5240BW	KF5	10	9.50	10.50	20	17	600	3.0	8.0
MMBZ5241BW	KH1	11	10.45	11.55	20	22	600	2.0	8.4
MMBZ5242BW	KH2	12	11.40	12.60	20	30	600	1.0	9.1
MMBZ5243BW	KH3	13	12.35	13.65	9.5	13	600	0.5	9.9
MMBZ5245BW	KH5	15	14.25	15.75	8.5	16	600	0.1	11
MMBZ5246BW	KJ1	16	15.20	16.80	7.8	17	600	0.1	12
MMBZ5248BW	KJ3	18	17.10	18.90	7.0	21	600	0.1	14
MMBZ5250BW	KJ5	20	19.00	21.00	6.2	25	600	0.1	15
MMBZ5251BW	KK1	22	20.90	23.10	5.6	29	600	0.1	17
MMBZ5252BW	KK2	24	22.80	25.20	5.2	33	600	0.1	18
MMBZ5254BW	KK4	27	25.65	28.35	5.0	41	600	0.1	21
MMBZ5255BW	KK5	28	26.60	29.40	4.5	44	600	0.1	21
MMBZ5256BW	KM1	30	28.50	31.50	4.2	49	600	0.1	23
MMBZ5257BW	KM2	33	31.35	34.65	3.8	58	700	0.1	25
MMBZ5258BW	KM3	36	34.20	37.80	3.4	70	700	0.1	27
MMBZ5259BW	KM4	39	37.05	40.95	3.2	80	800	0.1	30

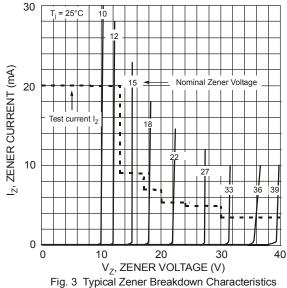
Notes: 7. Short duration pulse test used to minimize self-heating effect.

8. f = 1KHz.









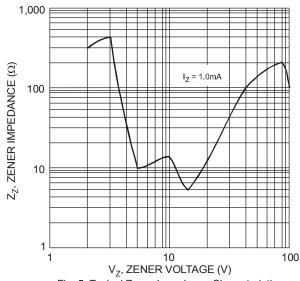


Fig. 5 Typical Zener Impedence Characteristics

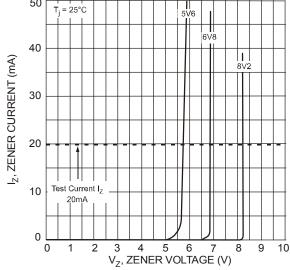


Fig. 2 Typical Zener Breakdown Characteristics

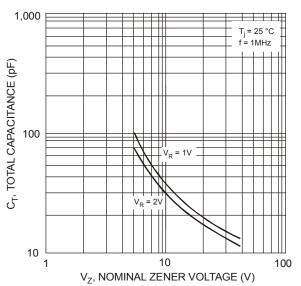


Fig. 4 Typical Total Capacitance vs. Nominal Zener Voltage

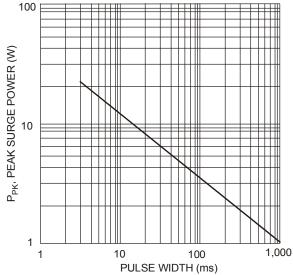
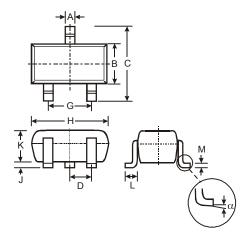


Fig. 6 Maximum Non-repetitive Surge Power



## **Package Outline Dimensions**

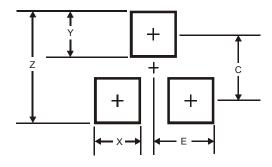
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for latest version.



SOT323				
Dim	Min	Max	Тур	
Α	0.25	0.40	0.30	
В	1.15	1.35	1.30	
С	2.00	2.20	2.10	
D	-	-	0.65	
G	1.20	1.40	1.30	
Н	1.80	2.20	2.15	
J	0.0	0.10	0.05	
K	0.90	1.00	1.00	
L	0.25	0.40	0.30	
М	0.10	0.18	0.11	
α	0°	8°	-	
All Dimensions in mm				

# **Suggested Pad Layout**

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for latest version.



Dimensions	Value (in mm)
Z	2.8
Х	0.7
Υ	0.9
С	1.9
E	1.0



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