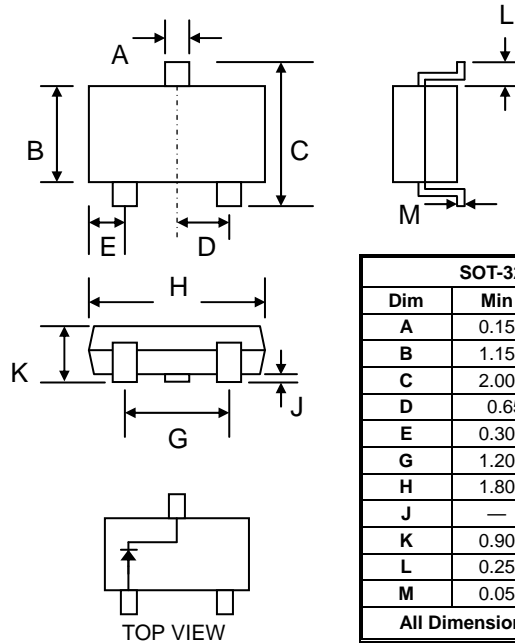


Features

- Planar Die Construction
- 200mW Power Dissipation
- 2.4V – 51V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-0

Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (approx.)
- Mounting Position: Any
- Marking: Device Code
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 5**



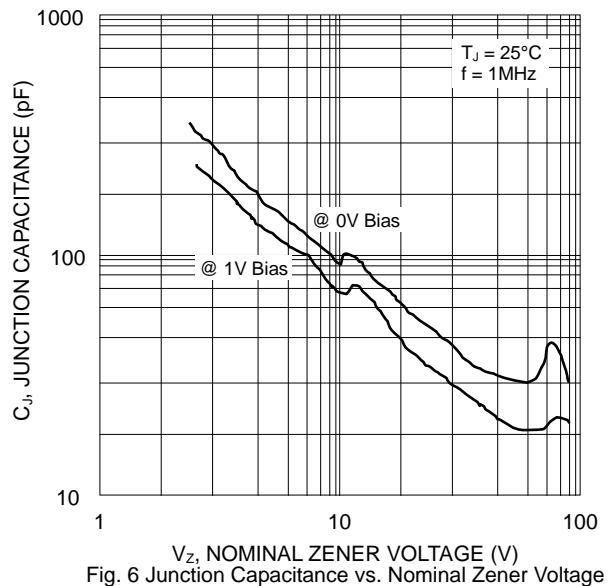
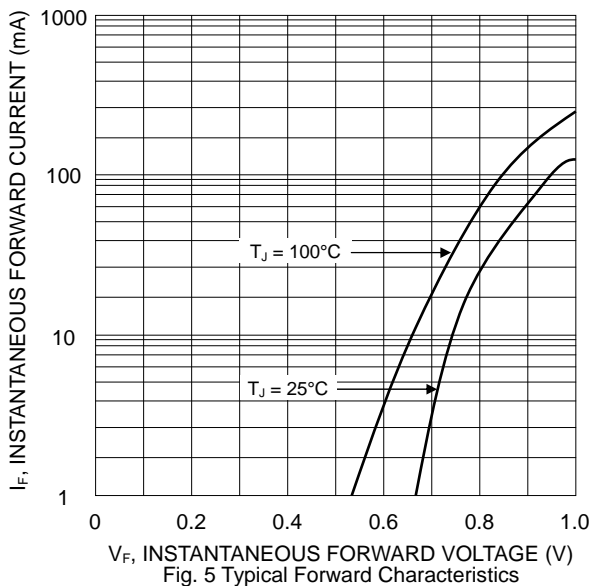
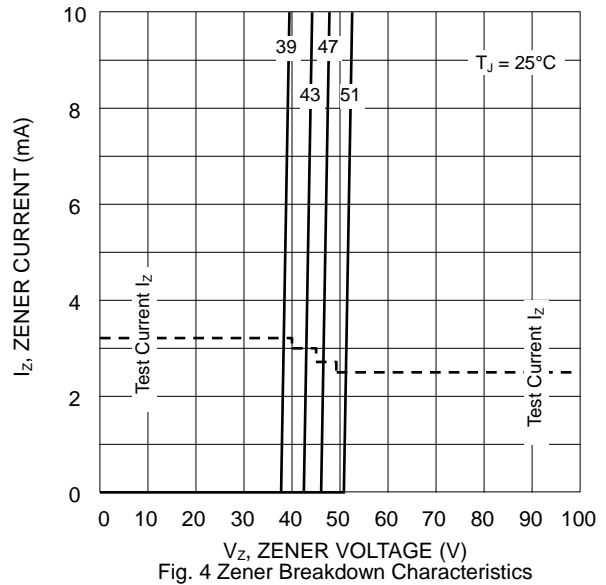
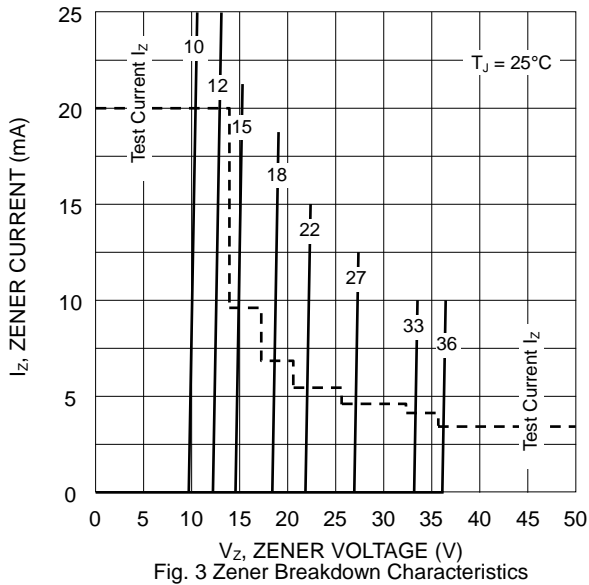
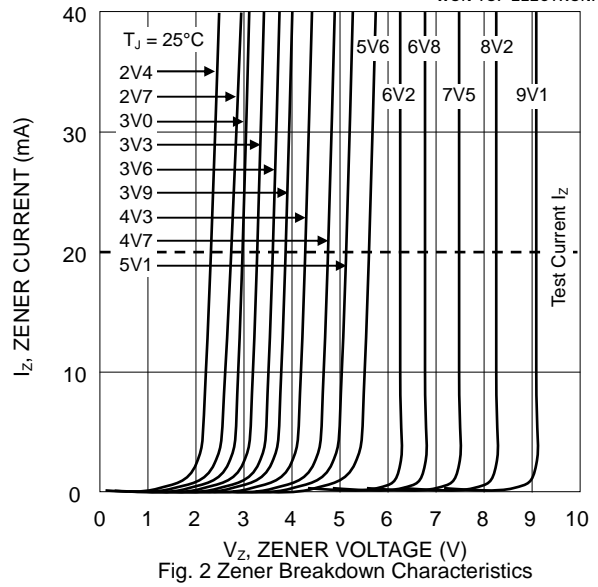
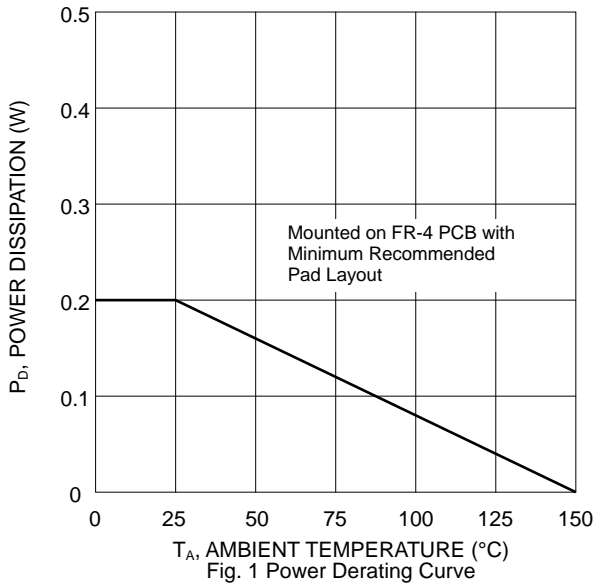
SOT-323		
Dim	Min	Max
A	0.15	0.40
B	1.15	1.35
C	2.00	2.30
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	—	0.10
K	0.90	1.10
L	0.25	—
M	0.05	0.15
All Dimensions in mm		

Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A = 25^{\circ}\text{C}$ (Note 1)	P_D	200	mW
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Thermal Resistance Junction to Ambient (Note 1, 2)	R_{JA}	625	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^{\circ}\text{C}$

Note: 1. Mounted on FR-4 PCB with minimum recommended pad layout.
 2. Thermal resistance measurement obtained via infrared scan method.

MMBZ5221BW – MMBZ5262BW

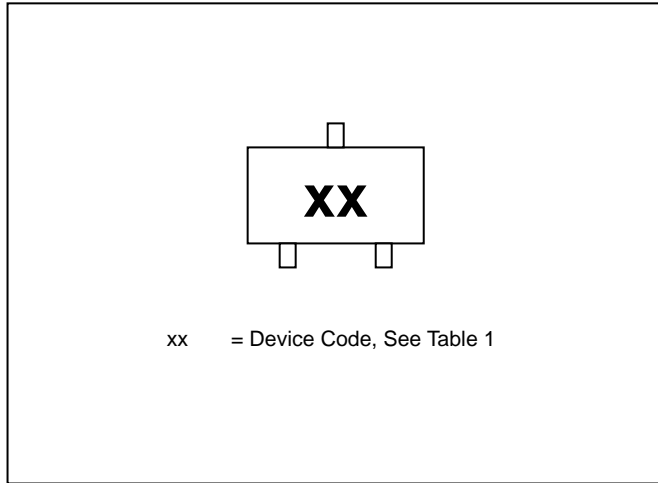


Electrical Characteristics (@T_A=25°C unless otherwise specified) Table 1

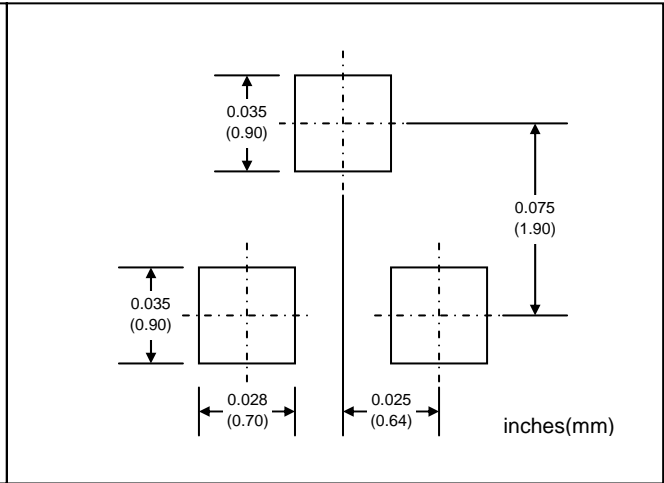
Type Number (Note 1)	Device Marking Code (Note 2)		Zener Voltage Range (Note 3)			Maximum Zener Impedance (Note 4)				Max Reverse Leakage Current		Typical Temp. Coefficient of Zener Voltage
			V _Z @ I _{ZT}			Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R	@ V _R	
	TW	CN	Nom (V)	Min (V)	Max (V)	()	(mA)	()	(mA)	(μA)	(V)	(%/°C)
MMBZ5221BW	C1	KC1	2.4	2.28	2.52	30	20	1200	0.25	100	1.0	-0.075
MMBZ5222BW	C2	KC2	2.5	2.38	2.63	30	20	1250	0.25	100	1.0	-0.075
MMBZ5223BW	C3	KC3	2.7	2.57	2.84	30	20	1300	0.25	75	1.0	-0.075
MMBZ5225BW	C5	KC5	3.0	2.85	3.15	29	20	1600	0.25	50	1.0	-0.075
MMBZ5226BW	D1	KG1	3.3	3.14	3.47	28	20	1600	0.25	25	1.0	-0.070
MMBZ5227BW	D2	KG2	3.6	3.42	3.78	24	20	1700	0.25	15	1.0	-0.065
MMBZ5228BW	D3	KG3	3.9	3.71	4.10	23	20	1900	0.25	10	1.0	-0.060
MMBZ5229BW	D4	KG4	4.3	4.09	4.52	22	20	2000	0.25	5.0	1.0	-0.055
MMBZ5230BW	D5	KG5	4.7	4.47	4.94	19	20	1900	0.25	5.0	2.0	±0.030
MMBZ5231BW	E1	KE1	5.1	4.85	5.36	17	20	1600	0.25	5.0	2.0	±0.030
MMBZ5232BW	E2	KE2	5.6	5.32	5.88	11	20	1600	0.25	5.0	3.0	+0.038
MMBZ5233BW	E3	KE3	6.0	5.70	6.30	7.0	20	1600	0.25	5.0	3.5	+0.038
MMBZ5234BW	E4	KE4	6.2	5.89	6.51	7.0	20	1000	0.25	5.0	4.0	+0.045
MMBZ5235BW	E5	KE5	6.8	6.46	7.14	5.0	20	750	0.25	3.0	5.0	+0.050
MMBZ5236BW	F1	KF1	7.5	7.13	7.88	6.0	20	500	0.25	3.0	6.0	+0.058
MMBZ5237BW	F2	KF2	8.2	7.79	8.61	8.0	20	500	0.25	3.0	6.5	+0.062
MMBZ5238BW	F3	KF3	8.7	8.27	9.14	8.0	20	600	0.25	3.0	6.5	+0.065
MMBZ5239BW	F4	KF4	9.1	8.65	9.56	10	20	600	0.25	3.0	7.0	+0.068
MMBZ5240BW	F5	KF5	10	9.50	10.50	17	20	600	0.25	3.0	8.0	+0.075
MMBZ5241BW	H1	KH1	11	10.45	11.55	22	20	600	0.25	2.0	8.4	+0.076
MMBZ5242BW	H2	KH2	12	11.40	12.60	30	20	600	0.25	1.0	9.1	+0.077
MMBZ5243BW	H3	KH3	13	12.35	13.65	13	9.5	600	0.25	0.5	9.9	+0.079
MMBZ5245BW	H5	KH5	15	14.25	15.75	16	8.5	600	0.25	0.1	11	+0.082
MMBZ5246BW	J1	KJ1	16	15.20	16.80	17	7.8	600	0.25	0.1	12	+0.083
MMBZ5248BW	J3	KJ3	18	17.10	18.90	21	7.0	600	0.25	0.1	14	+0.085
MMBZ5250BW	J5	KJ5	20	19.00	21.00	25	6.2	600	0.25	0.1	15	+0.086
MMBZ5251BW	K1	KK1	22	20.90	23.10	29	5.6	600	0.25	0.1	17	+0.087
MMBZ5252BW	K2	KK2	24	22.80	25.20	33	5.2	600	0.25	0.1	18	+0.087
MMBZ5254BW	K4	KK4	27	25.65	28.35	41	4.6	600	0.25	0.1	21	+0.090
MMBZ5255BW	K5	KK5	28	26.60	29.40	44	4.5	600	0.25	0.1	21	+0.091
MMBZ5256BW	M1	KM1	30	28.50	31.50	49	4.2	600	0.25	0.1	23	+0.091
MMBZ5257BW	M2	KM2	33	31.35	34.65	58	3.8	700	0.25	0.1	25	+0.092
MMBZ5258BW	M3	KM3	36	34.20	37.80	70	3.4	700	0.25	0.1	27	+0.093
MMBZ5259BW	M4	KM4	39	37.05	40.95	80	3.2	800	0.25	0.1	30	+0.094
MMBZ5260BW	M5	KM5	43	40.85	45.15	93	3.0	900	0.25	0.1	33	+0.095
MMBZ5261BW	N1	KN1	47	44.65	49.35	105	2.7	1000	0.25	0.1	36	+0.095
MMBZ5262BW	N2	KN2	51	48.45	53.55	125	2.5	1100	0.25	0.1	39	+0.096

- Note: 1. Type numbers listed have standard tolerance on the nominal zener voltage of ±5%.
 2. TW: Marking code for Taiwan plant. CN: Marking code for China plant.
 3. Measured with pulse test current I_Z at ambient temperature 25°C.
 4. f = 1KHz

MARKING INFORMATION

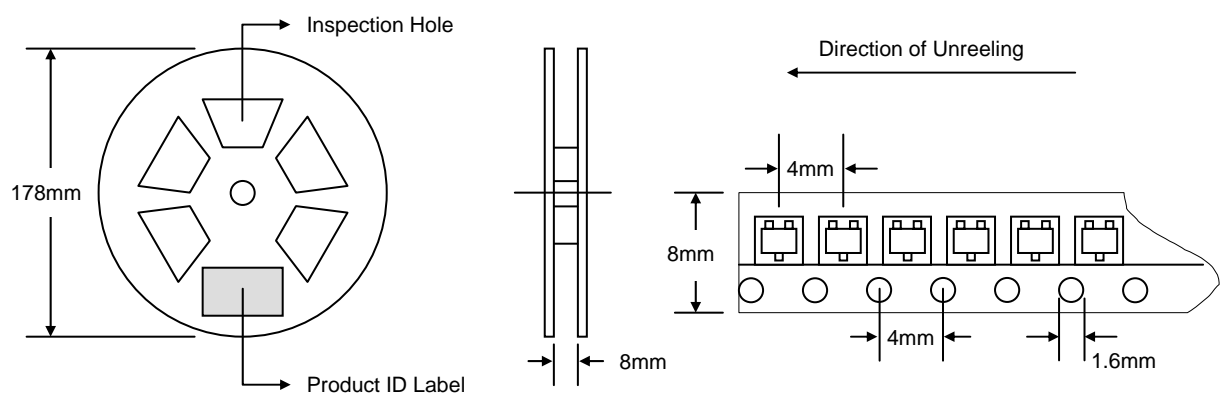


RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL




Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	10.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
MMBZ52xxBW-T1	SOT-323	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, MMBZ5221BW-T1-LF.**

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