

SMT-Type Zener Diode

MMBZ5221B-MMBZ5267B

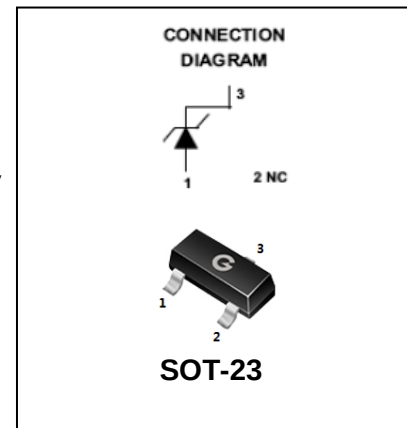
FEATURES

- Large selection of zener voltages: 2.4V ~ 75V
- Tight voltage tolerance: $\pm 5\%$ for B-series
- Ultra low-profile package well suited for automated assembly
- MSL Class 1 compatible

HF

Mechanical Data

- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



APPLICATIONS

- General voltage regulation
- Mobile & handheld systems

ORDERING INFORMATION

Part Number	Marking	Package
MMBZ5221B – MMBZ5267B	See Electrical Characteristics	SOT-23

MAXIMUM RATING (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @ $I_F=10\text{mA}$	V_F	0.9	V
Power Dissipation (Collector)	P_C	350	mW
Thermal Resistance (Junction-to-Ambient)	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Thermal Resistance (Junction-to-Case)	$R_{\theta JC}$	295	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Note: These ratings are limiting values above which the serviceability of the diodes may be impaired.

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ELECTRICAL CHARACTERISTICS (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Part Number	Marking Code	Zener Voltage V_Z (V)			@ I_{ZT} (mA)	Maximum Zener Impedance			Maximum Reverse Current I_R (μA)	@ V_R (V)
		Min.	Typ.	Max.		Z_{ZT} (Ω) @ I_{ZT}	Z_{ZK} (Ω)	@ I_{ZK} (mA)		
MMBZ5221B	KC1	2.28	2.40	2.52	20.0	30	1200	0.25	100.0	1.0
MMBZ5222B	KC2	2.38	2.50	2.63	20.0	30	1250	0.25	100.0	1.0
MMBZ5223B	KC3	2.57	2.70	2.84	20.0	30	1300	0.25	75.0	1.0
MMBZ5225B	KC5	2.85	3.00	3.15	20.0	30	1600	0.25	50.0	1.0
MMBZ5226B	KG1	3.14	3.30	3.47	20.0	28	1600	0.25	25.0	1.0
MMBZ5227B	KG2	3.42	3.60	3.78	20.0	24	1700	0.25	15.0	1.0
MMBZ5228B	KG3	3.71	3.90	4.10	20.0	23	1900	0.25	10.0	1.0
MMBZ5229B	KG4	4.09	4.30	4.52	20.0	22	2000	0.25	5.0	1.0
MMBZ5230B	KG5	4.47	4.70	4.94	20.0	19	1900	0.25	5.0	2.0
MMBZ5231B	KE1	4.85	5.10	5.36	20.0	17	1600	0.25	5.0	2.0
MMBZ5232B	KE2	5.32	5.60	5.88	20.0	11	1600	0.25	5.0	3.0
MMBZ5233B	KE3	5.70	6.00	6.30	20.0	7	1600	0.25	5.0	3.5
MMBZ5234B	KE4	5.89	6.20	6.51	20.0	7	1000	0.25	5.0	4.0
MMBZ5235B	KE5	6.46	6.80	7.14	20.0	5	750	0.25	3.0	5.0
MMBZ5236B	KF1	7.13	7.50	7.88	20.0	6	500	0.25	3.0	6.0
MMBZ5237B	KF2	7.79	8.20	8.61	20.0	8	500	0.25	3.0	6.5
MMBZ5238B	KF3	8.27	8.70	9.14	20.0	8	600	0.25	3.0	6.5
MMBZ5239B	KF4	8.65	9.10	9.56	20.0	10	600	0.25	3.0	7.0
MMBZ5240B	KF5	9.50	10.00	10.50	20.0	17	600	0.25	3.0	8.0
MMBZ5241B	KH1	10.45	11.00	11.55	20.0	22	600	0.25	2.0	8.4
MMBZ5242B	KH2	11.40	12.00	12.60	20.0	30	600	0.25	1.0	9.1
MMBZ5243B	KH3	12.35	13.00	13.65	9.5	13	600	0.25	0.5	9.9
MMBZ5244B	KH4	13.30	14.00	14.70	9.0	15	600	0.25	0.1	10.0
MMBZ5245B	KH5	14.25	15.00	15.75	8.5	16	600	0.25	0.1	11.0
MMBZ5246B	KJ1	15.20	16.00	16.80	7.8	17	600	0.25	0.1	12.0
MMBZ5247B	KJ2	16.15	17.00	17.85	7.5	19	600	0.25	0.1	13.0
MMBZ5248B	KJ3	17.10	18.00	18.90	7.0	21	600	0.25	0.1	14.0
MMBZ5250B	KJ5	19.00	20.00	21.00	6.2	25	600	0.25	0.1	15.0
MMBZ5251B	KK1	20.90	22.00	23.10	5.6	29	600	0.25	0.1	17.0
MMBZ5252B	KK2	22.80	24.00	25.20	5.2	33	600	0.25	0.1	18.0
MMBZ5253B	KK3	23.75	25.00	26.25	5.0	35	600	0.25	0.1	19.0
MMBZ5254B	KK4	25.65	27.00	28.35	5.0	41	600	0.25	0.1	21.0
MMBZ5255B	KK5	26.60	28.00	29.40	4.5	44	600	0.25	0.1	21.0
MMBZ5256B	KM1	28.50	30.00	31.50	4.2	49	600	0.25	0.1	23.0
MMBZ5257B	KM2	31.35	33.00	34.65	3.8	58	700	0.25	0.1	25.0
MMBZ5258B	KM3	34.20	36.00	37.80	3.4	70	700	0.25	0.1	27.0
MMBZ5259B	KM4	37.05	39.00	40.95	3.2	80	800	0.25	0.1	30.0
MMBZ5260B	KM5	40.85	43.00	45.15	3.0	93	900	0.25	0.1	33.0
MMBZ5261B	KN1	44.65	47.00	49.35	2.7	105	1000	0.25	0.1	36.0
MMBZ5262B	KN2	48.45	51.00	53.55	2.5	125	1100	0.25	0.1	39.0
MMBZ5263B	KM8	53.20	56.00	58.80	2.2	150	1300	0.25	0.1	43.0
MMBZ5265B	KN5	58.90	62.00	65.10	2.0	185	1400	0.25	0.1	47.0
MMBZ5267B	KP2	71.25	75.00	78.75	1.7	270	1700	0.25	0.1	56.0

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TYPICAL CHARACTERISTICS (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

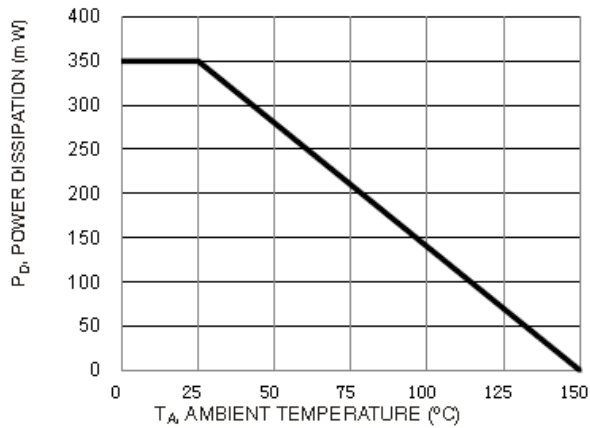


Fig. 1 Power Dissipation vs Ambient Temperature

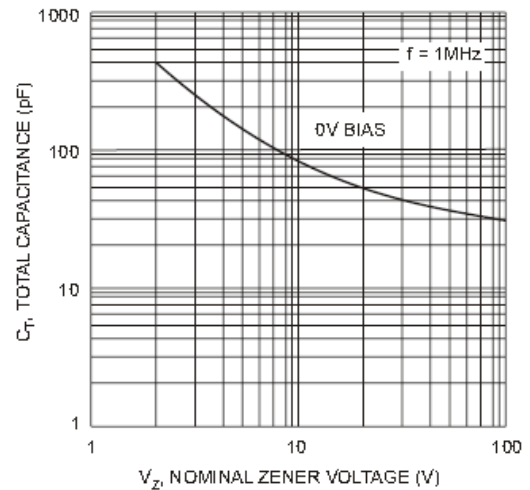


Fig. 2 Typical Capacitance

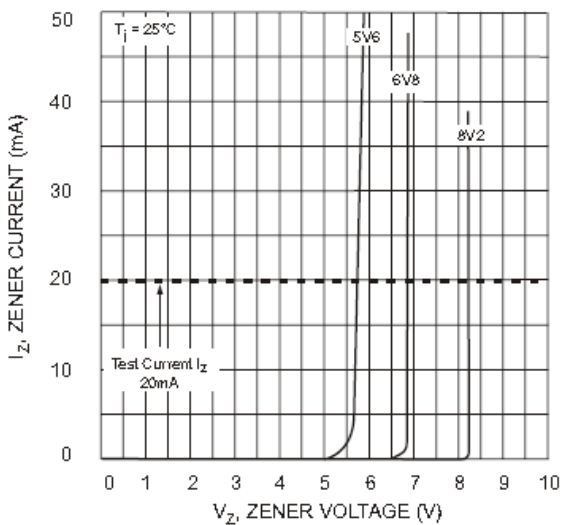


Fig. 3 Zener Breakdown Characteristics

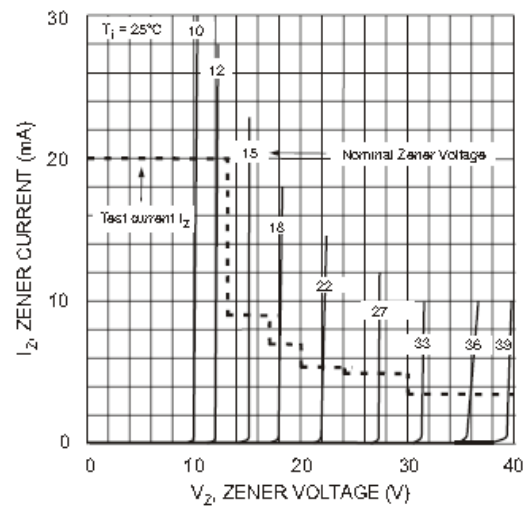


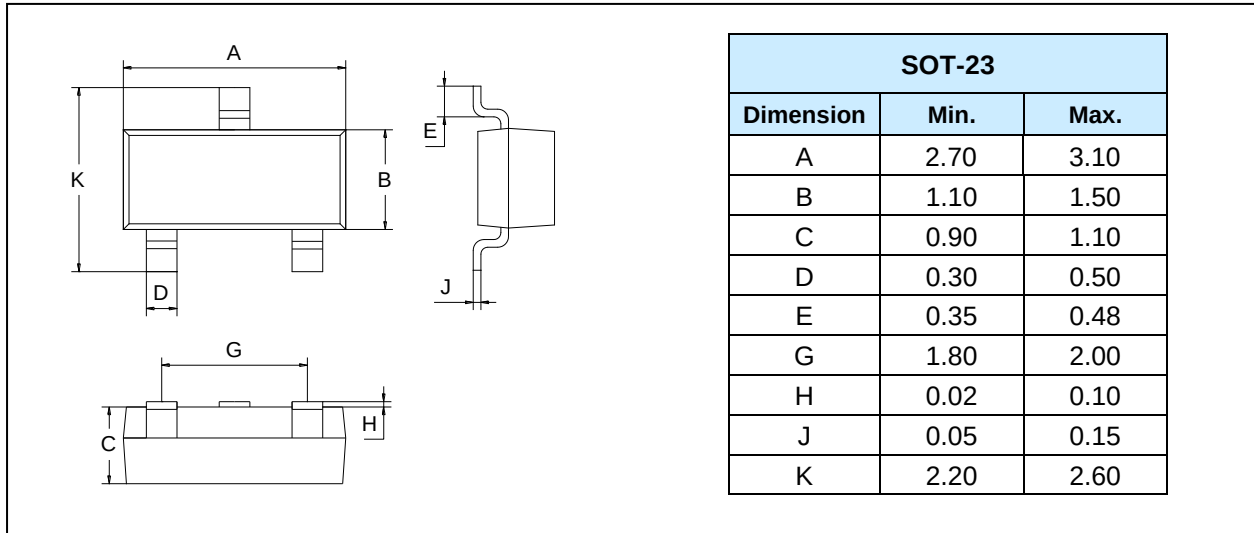
Fig. 4 Zener Breakdown Characteristics

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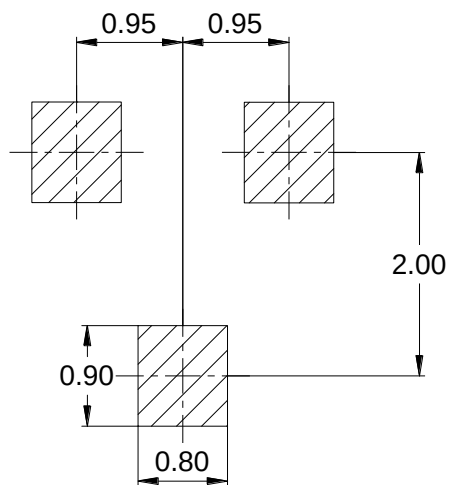
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PACKAGE OUTLINE (Unit: mm)

Plastic surface mounted package



MOUNTING PAD LAYOUT (Unit: mm)



PACKAGE INFORMATION

Part Number	Package	Shipping Quantity
MMBZ5221B – MMBZ5267B	SOT-23	3000pcs / Tape & Reel