



# MMXZ5221B THRU MMXZ5259B

**200 mW**  
**Zener Diodes**  
**2.4 to 39 Volts**

## Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Planar Die construction
- Zener Voltages from 2.4V - 39V and 200mW Power Dissipation
- Ideally Suited for Automated Assembly Processes

## Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Approx. Weight: 0.008 gram
- Mounting Position: Any
- Storage & Operating Junction Temperature: -55°C to +150°C

### Maximum Ratings @ 25°C Unless Otherwise Specified

Forward Current	I <sub>F</sub>	100	mA
Maximum Forward Voltage	V <sub>F</sub>	1.2	V
Power Dissipation (Notes A)	P <sub>(AV)</sub>	200	mWatt
Peak Forward Surge Current (Notes B)	I <sub>FSM</sub>	2.0	Amps

#### 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.



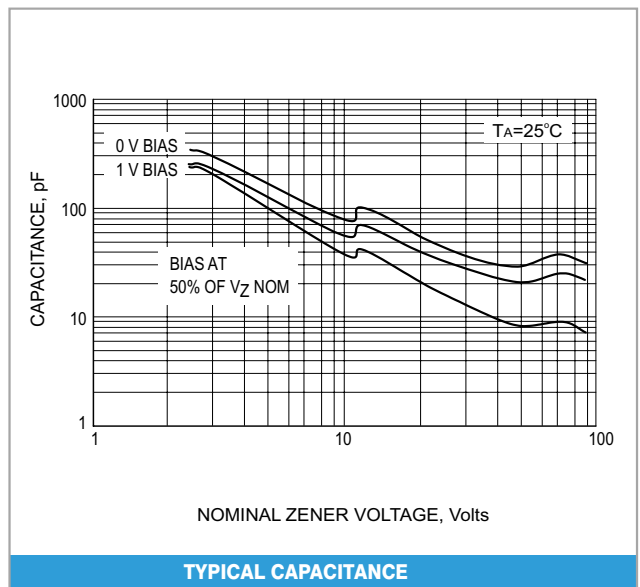
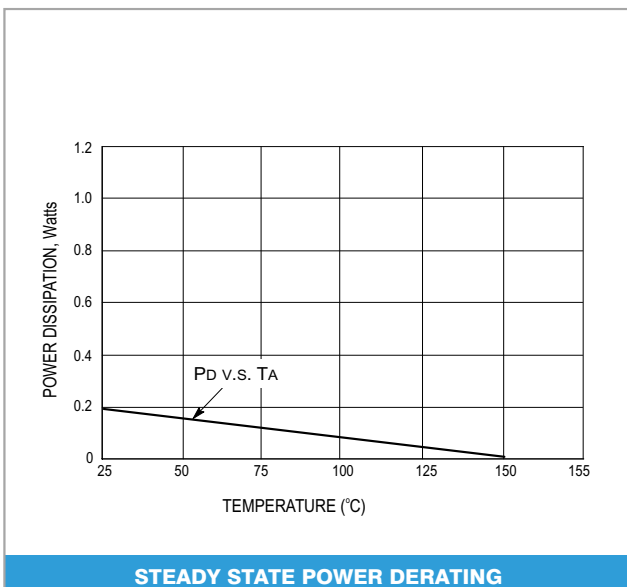
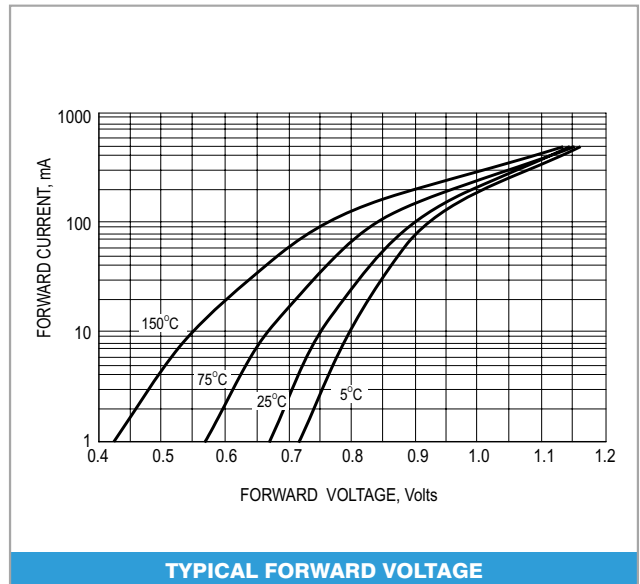
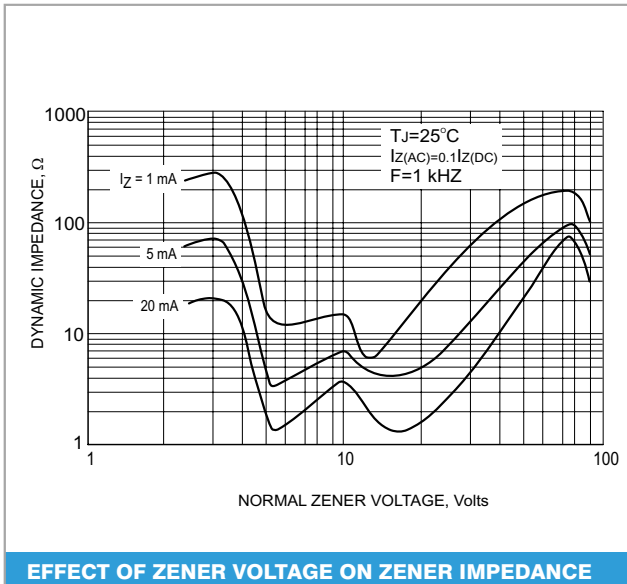
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## Electrical Characteristics @ 25°C Unless Otherwise Specified

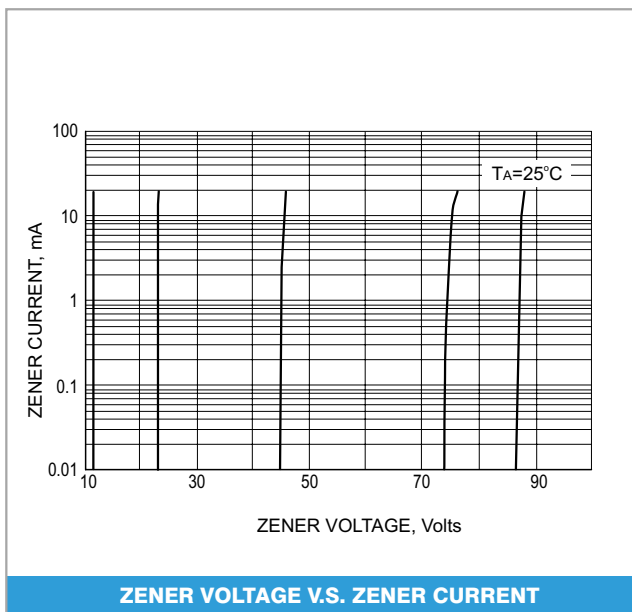
MCC PART NUMBER	Marking	NORMAL ZENER VOLTAGE	TEST CURRENT I <sub>zt</sub>	MAXIMUM ZENER IMPEDANCE 'B' SUFFIX ONLY		MAXIMUM REVERSE LEAKAGE CURRENT		MAXIMUM ZENER VOLTAGE TEMP COEFFICIENT 'B' SUFFIX ONLY
		V <sub>z</sub> @ I <sub>zt</sub>		Z <sub>zt</sub> @ I <sub>zt</sub>	Z <sub>zk</sub> @ I <sub>zk</sub> =0.25mA	I <sub>r</sub> @ V <sub>r</sub>		
		VOLTS	mA	OHMS	OHMS	uA	VOLTS	%/°C
MMXZ5221B	C1	2.4	20	30	1200	100	1.0	-0.085
MMXZ5222B	C2	2.5	20	30	1250	100	1.0	-0.085
MMXZ5223B	C3	2.7	20	30	1300	75	1.0	-0.080
MMXZ5225B	C5	3.0	20	29	1600	50	1.0	-0.075
MMXZ5226B	G1/D1	3.3	20	28	1600	25	1.0	-0.070
MMXZ5227B	G2/D2	3.6	20	24	1700	15	1.0	-0.065
MMXZ5228B	G3/D3	3.9	20	23	1900	10	1.0	-0.060
MMXZ5229B	G4/D4	4.3	20	22	2000	5.0	1.0	±0.055
MMXZ5230B	G5/D5	4.7	20	19	1900	5.0	2.0	±0.030
MMXZ5231B	E1	5.1	20	17	1600	5.0	2.0	±0.030
MMXZ5232B	E2	5.6	20	11	1600	5.0	3.0	+0.038
MMXZ5234B	E4	6.2	20	7.0	1000	5.0	4.0	+0.045
MMXZ5235B	E5	6.8	20	5.0	750	3.0	5.0	+0.050
MMXZ5236B	F1	7.5	20	6.0	500	3.0	6.0	+0.058
MMXZ5237B	F2	8.2	20	8.0	500	3.0	6.5	+0.062
MMXZ5239B	F4	9.1	20	10	600	3.0	7.0	+0.068
MMXZ5240B	F5	10	20	17	600	3.0	8.0	+0.075
MMXZ5241B	H1	11	20	22	600	2.0	8.4	+0.076
MMXZ5242B	H2	12	20	30	600	1.0	9.1	+0.077
MMXZ5243B	H3	13	9.5	13	600	0.5	9.9	+0.079
MMXZ5245B	H5	15	8.5	16	600	0.1	11	+0.082
MMXZ5246B	J1	16	7.8	17	600	0.1	12	+0.083
MMXZ5248B	J3	18	7.0	21	600	0.1	14	+0.085
MMXZ5250B	J5	20	6.2	25	600	0.1	15	+0.086
MMXZ5251B	K1	22	5.6	29	600	0.1	17	+0.087
MMXZ5252B	K2	24	5.2	33	600	0.1	18	+0.088
MMXZ5254B	K4	27	4.6	41	600	0.1	21	+0.090
MMXZ5255B	K5	28	4.5	44	600	0.1	21	+0.091
MMXZ5256B	M1	30	4.2	49	600	0.1	23	+0.091
MMXZ5257B	M2	33	3.8	58	700	0.1	25	+0.092
MMXZ5258B	M3	36	3.4	70	700	0.1	27	+0.093
MMXZ5259B	M4	39	3.2	80	800	0.1	30	+0.094

NOTE:

1. Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
2. Specials Available Include:
  - A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
  - B. Matched sets.
3. Zener Voltage (V<sub>z</sub>) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T<sub>L</sub>) at 30°C, from the diode body.
4. Zener Impedance (Z<sub>z</sub>) Derivation. The zener impedance is derived from the 60 cycle ac voltage, which results when an AC current having an rms value equal to 10% of the dc zener current (I<sub>zt</sub> or I<sub>zk</sub>) is superimposed on I<sub>zt</sub> or I<sub>zk</sub>.
5. Surge Current (I<sub>r</sub>) Non-Repetitive. The rating listed in the electrical characteristics table is maximum peak, non-repetitive, reverse surge current of 1/2 square wave or equivalent sine wave pulse of 1/120 second duration superimposed on the test current, I<sub>zt</sub>, per JEDEC registration; however, actual device capability is as described in Figure 5.



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Micro Commercial Components

### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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