Micro Commercial Components
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MMXZ5221B THRU MMXZ5259B

200 mW

Zener Diodes

2.4 to 39 Volts

Features

- Planar Die construction
- 200mW Power Dissipation
- Zener Voltages from 2.4V - 39V
- Ideally Suited for Automated Assembly Processes

Mechanical Data

- Case: SOD-323 Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Approx. Weight: 0.008 gram
- Mounting Position: Any
- Storage & Operating Junction Temperature: -55°C to +150°C

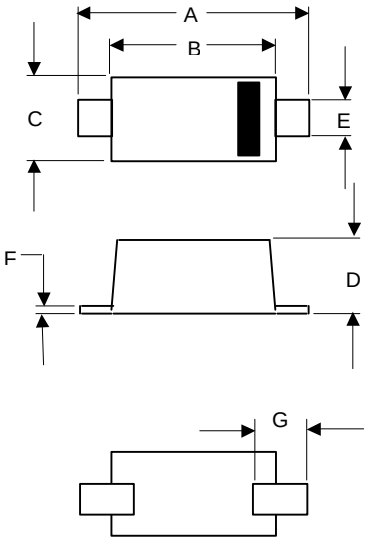
Maximum Ratings @ 25°C Unless Otherwise Specified

Zener Current	I_F	**100**	**mA**
Maximum Forward Voltage	V_F	**1.2**	**V**
Power Dissipation (Notes A)	$P_{(AV)}$	**200**	**mWatt**
Peak Forward Surge Current (Notes B)	I_{FSM}	**2.0**	**Amps**

NOTES:

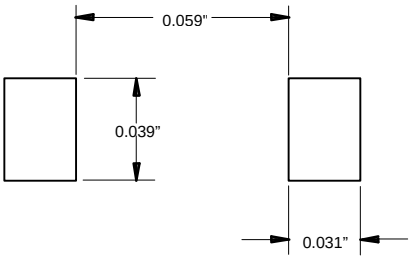
A. Mounted on 5.0mm2(.013mm thick) land areas.
B. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

SOD323



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.090	.107	2.30	2.70	
B	.068	.078	1.75	1.95	
C	.045	.054	1.15	1.35	
D	.027	.038	0.70	0.95	
E	.009	.014	0.25	0.35	
F	.002	.006	0.05	0.15	
G	.012	---	0.30	---	

SUGGESTED SOLDER PAD LAYOUT



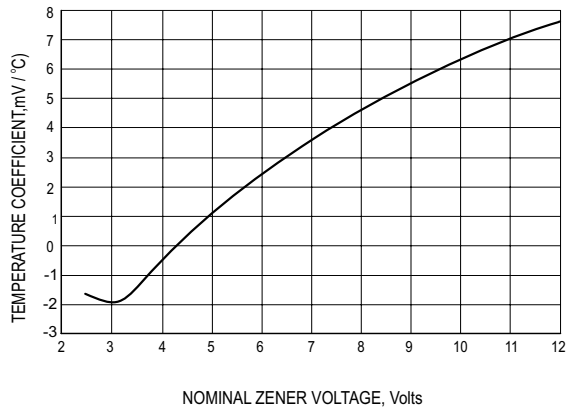
MMXZ5221B thru MMXZ5259B

Electrical Characteristics @ 25°C Unless Otherwise Specified

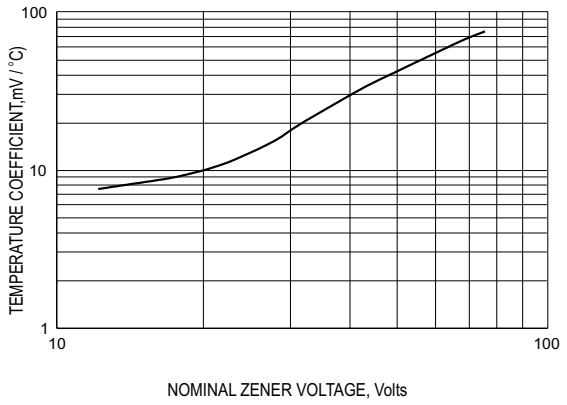
MCC PART NUMBER	Marking	NORMAL ZENER VOLTAGE Vz@ Izt	TEST CURRENT Izt	MAXIMUM ZENER IMPEDANCE 'B' SUFFIX ONLY Zzt @ Izt	Zzk @ Izk=0.25mA	MAXIMUM REVERSE LEAKAGE CURRENT Ir @ Vr		MAXIMUM ZENER VOLTAGE TEMP COEFFICIENT 'B' SUFFIX ONLY
		VOLTS	mA	OHMS	OHMS	uA	VOLTS	%/°C
MMXZ5221B	C1	2.4	20	30	1200	100	1.0	-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	D1	3.3	20	28	1600	25	1.0	-0.070
MMXZ5227B	D2	3.6	20	24	1700	15	1.0	-0.065
MMXZ5228B	D3	3.9	20	23	1900	10	1.0	-0.060
MMXZ5229B	D4	4.3	20	22	2000	5.0	1.0	±0.055
MMXZ5230B	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:

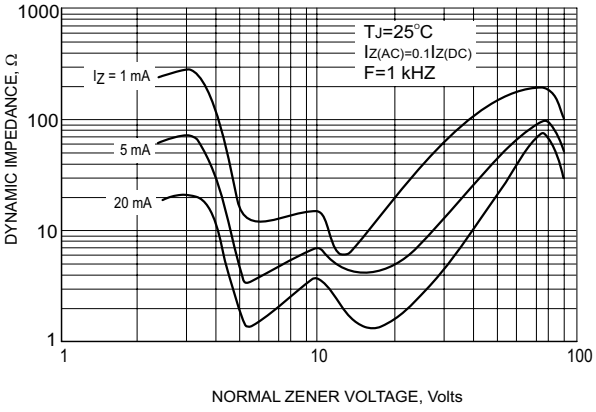
1. Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
2. Specials Available Include:
   A. Nominal zener voltages between the voltages shown and tighter voltage tolerances.
   B. Matched sets.
3. Zener Voltage (V_Z) Measurement. Guarantees the zener voltage when measured at 90 seconds while maintaining the lead temperature (T_L) at 30°C, from the diode body.
4. Zener Impedance (Z_Z) 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_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}.
5. Surge Current (I_R) 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_{ZT}, per JEDEC registration; however, actual device capability is as described in Figure 5.



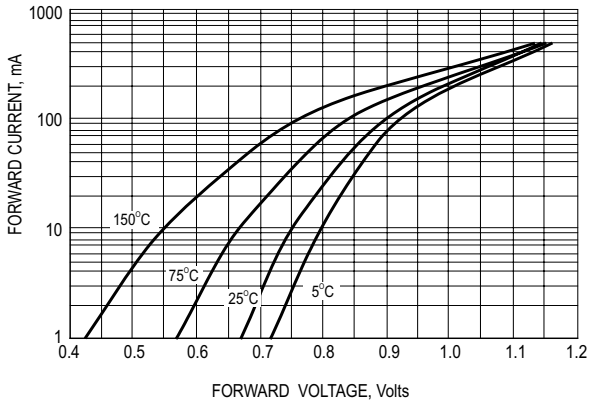
TYPICAL REVERSE CURRENT



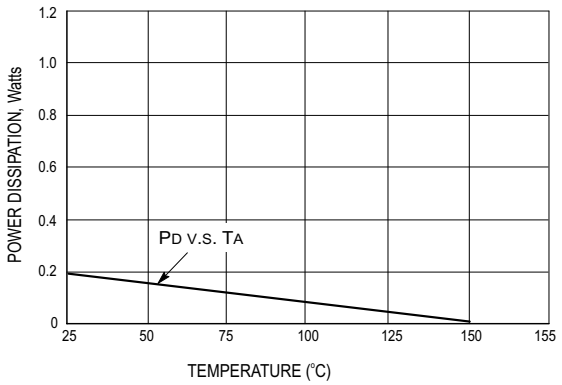
STEADY STATE POWER DERATING



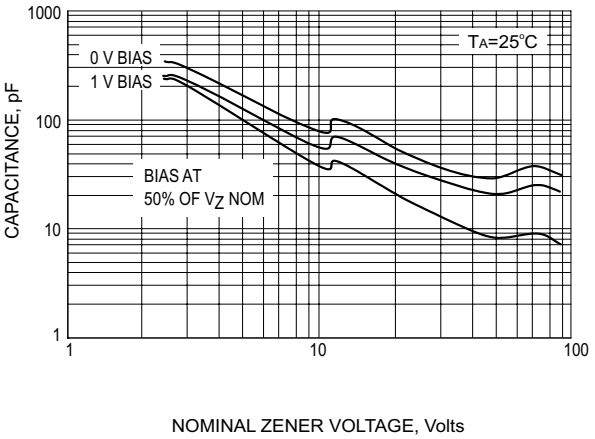
EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE



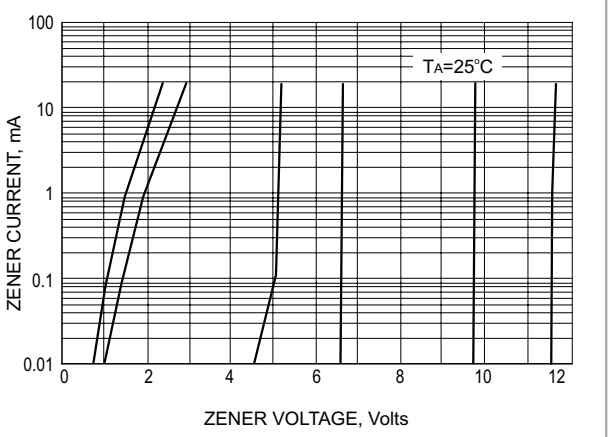
TYPICAL FORWARD VOLTAGE



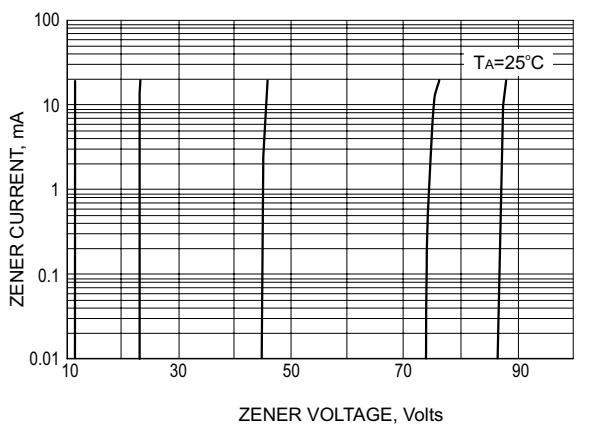
STEADY STATE POWER DERATING



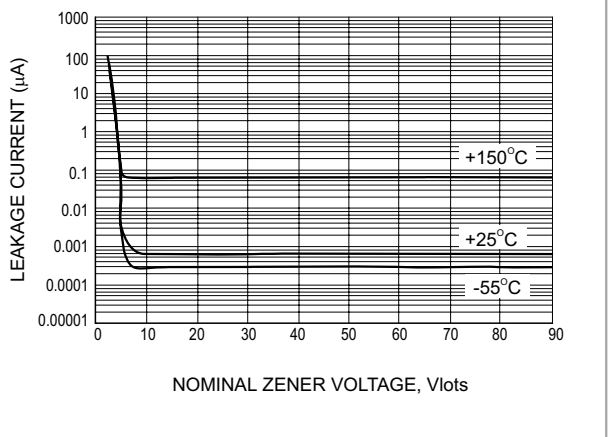
TYPICAL CAPACITANCE



ZENER VOLTAGE V.S. ZENER CURRENT



ZENER VOLTAGE V.S. ZENER CURRENT



TYPICAL LEAKGE CURRENT