

ZMM5221 THRU ZMM5262

0.5W SILICON PLANAR
ZENER DIODES

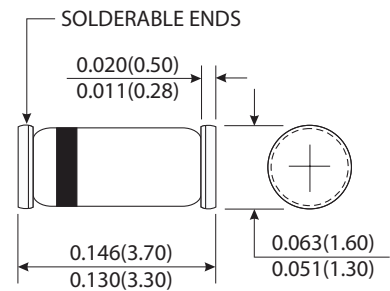
Features

- Standards Zener voltage tolerance is $\pm 20\%$. Add suffix "A" for $\pm 10\%$ tolerance and suffix "B" for $\pm 5\%$ tolerance other tolerance, non standards and higher zener voltage upon request.
- These diode are also available in DO-35 case with type designation 1N5221 thru 1N5262

Mechanical Data

- Case : MELF(DO-35) glass case
- Weight : Approx. 0.05 gram

MELF (DO-35)



Dimensions in inches and (millimeters)

Absolute Maximum Ratings (Limiting Values) (TA=25 °C)

	Symbols	Value	Units
Zener current see table "Characteristics"			
Power dissipation at TA=75 °C	P _{tot}	500 ¹⁾	mW
Junction Temperature	T _J	175	°C
Storage Temperature range	T _{STG}	-65 to +175	°C

1) Valid provided that electrodes are kept at ambient temperature

Electrical Characteristics (TA=25 °C)

	Symbols	Min.	Typ.	Max.	Units
Thermal resistance junction to ambient	R _{θJA}			300 ¹⁾	°C/W
Forward voltage at I _F =200mA	V _F			1.1	V

1) Valid provided that electrodes are kept at ambient temperature



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Type	Nominal Zener Voltage	Test Current	Maximum zener impedance ¹⁾		Typical Temperature Coefficient	Maximum Reverse Leakage Current			Maximum Regulator Current ²⁾
	at I _{ZT} V _{ZV}	I _{ZT} mA	at I _{ZT} Z _{ZT} Ω	at I _{ZK} =0.25mA Z _{ZK} I _{ZT} mA	α _{VZ} %/K	I _R μA	Test-Voltage Suffix A V _{RV}	Suffix B V _{RV}	I _{ZM} mA
ZMM5221	2.4	20	30	1200	-0.085	100	0.95	1.0	191
ZMM5222	2.5	20	30	1250	-0.085	100	0.95	1.0	182
ZMM5223	2.7	20	30	1300	-0.080	75	0.95	1.0	168
ZMM5224	2.8	20	30	1400	-0.080	75	0.95	1.0	162
ZMM5225	3.0	20	29	1600	-0.075	50	0.95	1.0	152
ZMM5226	3.3	20	28	1600	-0.070	25	0.95	1.0	138
ZMM5227	3.6	20	24	1700	-0.065	15	0.95	1.0	126
ZMM5228	3.9	20	23	1900	-0.060	10	0.95	1.0	115
ZMM5229	4.3	20	22	2000	-0.055	5	0.95	1.0	106
ZMM5230	4.7	20	19	1900	±0.030	5	1.9	2.0	97
ZMM5231	5.1	20	17	1600	±0.030	5	1.9	2.0	89
ZMM5232	5.6	20	11	1600	+0.038	5	2.9	3.0	81
ZMM5233	6.0	20	7	1600	+0.038	5	3.3	3.5	76
ZMM5234	6.2	20	7	1000	+0.045	5	3.8	4.0	73
ZMM5235	6.8	20	5	750	+0.050	3	4.8	5.0	67
ZMM5236	7.5	20	6	500	+0.058	3	5.7	6.0	61
ZMM5237	8.2	20	8	500	+0.062	3	6.2	6.5	55
ZMM5238	8.7	20	8	600	+0.065	3	6.2	6.5	52
ZMM5239	9.1	20	10	600	+0.068	3	6.7	7.0	50
ZMM5240	10	20	17	600	+0.075	3	7.6	8.0	45
ZMM5241	11	20	22	600	+0.076	2	8.0	8.4	41
ZMM5242	12	20	30	600	+0.077	1	8.7	9.1	38
ZMM5243	13	9.5	13	600	+0.079	0.5	9.4	9.9	35
ZMM5244	14	9.0	15	600	+0.082	0.1	9.5	10	32
ZMM5245	15	8.5	16	600	+0.082	0.1	10.5	11	30
ZMM5246	16	7.8	17	600	+0.083	0.1	11.4	12	28
ZMM5247	17	7.4	19	600	+0.084	0.1	12.4	13	27
ZMM5248	18	7.0	21	600	+0.085	0.1	13.3	14	25
ZMM5249	19	6.6	23	600	+0.086	0.1	13.3	14	24
ZMM5250	20	6.2	25	600	+0.086	0.1	14.3	15	23
ZMM5251	22	5.6	29	600	+0.087	0.1	16.2	17	21
ZMM5252	24	5.2	33	600	+0.087	0.1	17.1	18	19.1
ZMM5253	25	5.0	35	600	+0.089	0.1	18.1	19	18.2
ZMM5254	27	4.6	41	600	+0.090	0.1	20	21	16.8
ZMM5255	28	4.5	44	600	+0.091	0.1	20	21	16.2
ZMM5256	30	4.2	49	600	+0.091	0.1	22	23	15.1
ZMM5257	33	3.8	58	700	+0.092	0.1	24	25	13.8
ZMM5258	36	3.4	70	700	+0.093	0.1	26	27	12.6
ZMM5259	39	3.2	80	800	+0.094	0.1	29	30	11.6
ZMM5260	43	3.0	93	900	+0.095	0.1	31	33	10.6
ZMM5261	47	2.7	105	1000	+0.095	0.1	34	36	9.7
ZMM5262	51	2.5	125	1100	+0.096	0.1	37	39	8.9

1) The zener impedance is derived from the 1kHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I_{ZT} or I_{ZK}) is superimposed on I_{ZT} or I_{ZK}. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

2) Valid provided that leads are kept at ambient temperature at a distance of 8mm from case.

3) Measured with device junction in thermal equilibrium.

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Admissible power dissipation versus ambient temperature
(Valid provided that electrodes are kept at ambient temperature)

