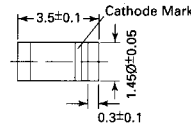


**Silicon Planar Zener Diodes**

Standard Zener voltage tolerance is  $\pm 20\%$ . Add suffix "A" for  $\pm 10\%$  tolerance and suffix "B" for  $\pm 5\%$  tolerance. Other tolerance, non standard and higher Zener voltages upon request.



Glass case MiniMELF

Weight approx. 0.05g  
Dimensions in mm

These diodes are also available in DO-35 case with the type designation 1N5225... 1N5262.

These diodes are delivered taped.  
Details see "Taping".

**Absolute Maximum Ratings** ( $T_a = 25\text{ }^\circ\text{C}$ )

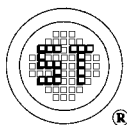
	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Power Dissipation at $T_{amb} = 75\text{ }^\circ\text{C}$	$P_{tot}$	500 <sup>1)</sup>	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-65 to + 175	$^\circ\text{C}$

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

**Characteristics** at  $T_{amb} = 25\text{ }^\circ\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{thA}$	-	-	0.3 <sup>1)</sup>	K/mW
Forward Voltage at $I_F = 200\text{ mA}$	$V_F$	-	-	1.1	V

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.



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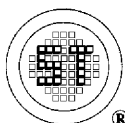
# ZMM 5225 ... ZMM 5262

Type	Nominal Zener voltage <sup>3)</sup> at $I_{ZT}$ $V_Z$ V	Test current $I_{ZT}$ mA	Maximum Zener Impedance <sup>1)</sup>		Typical temperature coefficient $\alpha_{VZ}$ %/K	Maximum reverse leakage current			Maximum regulator current <sup>2)</sup> $I_{ZM}$ mA
			at $I_{ZT}$ $Z_{ZT}$ $\Omega$	at $I_{ZT} = 0.25$ mA $Z_{ZK}$ $\Omega$		$I_R$ $\mu$ A	Test voltage Suffix A $V_R$ V	Suffix B $V_R$ V	
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	$\pm 0.030$	5	1.9	2.0	97
ZMM5231	5.1	20	17	1600	$\pm 0.030$	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	4.4	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

<sup>1)</sup> The Zener Impedance is derived from the 60 Hz 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.

<sup>2)</sup> Valid provided that electrodes are kept at ambient temperature.

<sup>3)</sup> Measured under thermal equilibrium and DC test conditions.



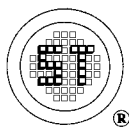
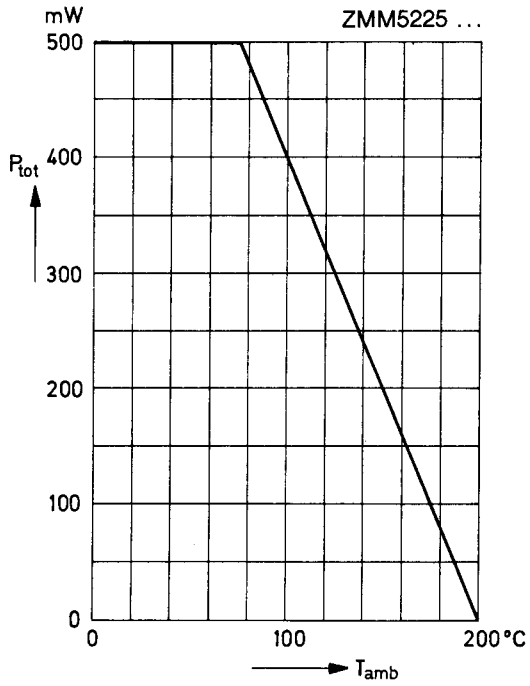
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## Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept  
at ambient temperature



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