

ZMM5225 thru ZMM5267

Zener Diodes

Zener Voltage Range: 3.0 to 75 Volts Power Dissipation: 500mW

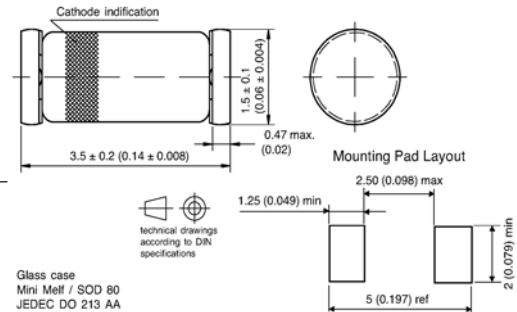
Features

- ◆ Silicon Planar Power Zener Diodes.
- ◆ Standard Zener voltage tolerance is $\pm 5\%$ with a "B" suffix, and $\pm 10\%$ with a "A" suffix . Other tolerances are available upon request.
- ◆ These diodes are also available in DO-35 case with the type designation 1N5221 ... 1N5281.



Mechanical Data

- ◆ Case: MiniMELF Glass Case (SOD-80)
- ◆ Weight: approx. 0.05g



Maximum Ratings and Thermal Characteristics

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Zener current (see Table "Characteristics")			
Power dissipation at $T_{\text{amb}} = 75^\circ\text{C}$	P_{tot}	500 ⁽¹⁾	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	300 ⁽¹⁾	$^\circ\text{C/W}$
Maximum junction temperature	T_J	175	$^\circ\text{C}$
Storage temperature range	T_S	-65 to +175	$^\circ\text{C}$

Notes: 1. Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics

(T_A=25°C unless otherwise noted) Maximum V_F=1.25V at I_F=200mA

Type number	Nominal zener voltage ⁽³⁾ at I _{ZT} V _Z (Volts)	Test current I _{ZT} (mA)	Maximum zener impedance ⁽²⁾		Typical temperature coefficient α _{VZ} (% / °C)	Maximum regulator current ⁽²⁾ I _{ZM} (mA)	Maximum reverse leakage current	
			at I _{ZT} Z _{ZT} (Ω)	at I _{ZT} =0.25mA Z _{ZK} (Ω)			I _R (μA)	Test voltage V _R (Volts)
ZMM5225	3.0	20	29	1600	-0.075	152	50	1.0
ZMM5226	3.3	20	28	1600	-0.070	138	25	1.0
ZMM5227	3.6	20	24	1700	-0.065	126	15	1.0
ZMM5228	3.9	20	23	1900	-0.060	115	10	1.0
ZMM5229	4.3	20	22	2000	-0.055	106	5.0	1.0
ZMM5230	4.7	20	19	1900	+0.030	97	5.0	2.0
ZMM5231	5.1	20	17	1600	+0.030	89	5.0	2.0
ZMM5232	5.6	20	11	1600	+0.038	81	5.0	3.0
ZMM5233	6.0	20	7	1600	+0.038	76	5.0	3.5
ZMM5234	6.2	20	7	1000	+0.045	73	5.0	4.0
ZMM5235	6.8	20	5	750	+0.050	67	3.0	5.0
ZMM5236	7.5	20	6	500	+0.058	61	3.0	6.0
ZMM5237	8.2	20	8	500	+0.062	55	3.0	6.5
ZMM5238	8.7	20	8	600	+0.065	52	3.0	6.5
ZMM5239	9.1	20	10	600	+0.068	50	3.0	7.0
ZMM5240	10	20	17	600	+0.075	45	3.0	8.0
ZMM5241	11	20	22	600	+0.076	41	2.0	8.4
ZMM5242	12	20	30	600	+0.077	38	1.0	9.1
ZMM5243	13	9.5	13	600	+0.079	35	0.5	9.9
ZMM5244	14	9.0	15	600	+0.082	32	0.1	10
ZMM5245	15	8.5	16	600	+0.082	30	0.1	11
ZMM5246	16	7.8	17	600	+0.083	28	0.1	12
ZMM5247	17	7.4	19	600	+0.084	27	0.1	13
ZMM5248	18	7.0	21	600	+0.085	25	0.1	14
ZMM5249	19	6.6	23	600	+0.086	24	0.1	14
ZMM5250	20	6.2	25	600	+0.086	23	0.1	15
ZMM5251	22	5.6	29	600	+0.087	21	0.1	17
ZMM5252	24	5.2	33	600	+0.087	19.1	0.1	18
ZMM5253	25	5.0	35	600	+0.089	18.2	0.1	19
ZMM5254	27	4.6	41	600	+0.090	16.8	0.1	21
ZMM5255	28	4.5	44	600	+0.091	16.2	0.1	21
ZMM5256	30	4.2	49	600	+0.091	15.1	0.1	23
ZMM5257	33	3.8	58	700	+0.092	13.8	0.1	25
ZMM5258	36	3.4	70	700	+0.093	12.6	0.1	27
ZMM5259	39	3.2	80	800	+0.094	11.6	0.1	30
ZMM5260	43	3.0	93	900	+0.095	10.6	0.1	33
ZMM5261	47	2.7	105	1000	+0.095	9.7	0.1	36
ZMM5262	51	2.5	125	1100	+0.096	8.9	0.1	39
ZMM5263	56	2.2	150	1300	+0.096	-	0.1	43
ZMM5264	60	2.1	170	1400	+0.097	-	0.1	46
ZMM5265	62	2.0	185	1400	+0.097	-	0.1	47
ZMM5266	68	1.8	230	1600	+0.097	-	0.1	52
ZMM5267	75	1.7	270	1700	+0.098	-	0.1	56

- Notes:**
- 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
 - Valid provided that electrodes are kept at ambient temperature
 - Tested under thermal equilibrium and DC test conditions

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

