1N5221 thru 1N5281

Zener Diodes

Zener Voltage Range: 2.4 to 200 Volts Power Dissipation: 500mW

Features

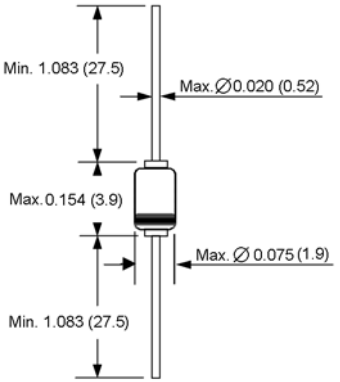
- Silicon Planar Power Zener Diodes.
- Standard Zener voltage tolerance is ±5% with a “B” suffix, and ±10% with a “A” suffix . Other tolerances are available upon request.
- These diodes are also available in Mini-MELF case with the type designation ZMM5225...ZMM5267.



DO-204AH (DO-35 Glass)

Mechanical Data

- Case: DO-35 Glass Case
- Weight: approx. 0.13 gram



Dimensions in inches and (millimeters)

Maximum Ratings and Thermal Characteristics

(T_A=25°C unless otherwise noted)

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

Notes: 1. Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

Electrical Characteristics

(T_J=25°C unless otherwise noted) **Maximum V_F=1.1V at I_F=200mA**

Type number	Nominal zener voltage (3) at I_{ZT} V_Z (Volts)	Test current I_{ZT} (mA)	Maximum zener impedance (1) at I_{ZT} Z_{ZT} (Ω)	Maximum zener impedance (1) at I_{ZK}=0.25mA Z_{ZK} (Ω)	Typical temperature coefficient αvz (% / K)	Maximum regulator current (2) I_{ZM} (mA)	Maximum reverse leakage current I_R (uA)	Maximum reverse leakage current Test voltage V_R (Volts)
1N5221	2.4	20	30	1200	-0.085	-	100	1.0
1N5222	2.5	20	30	1250	-0.085	-	100	1.0
1N5223	2.7	20	30	1300	-0.080	-	75	1.0
1N5224	2.8	20	30	1400	-0.080	-	75	1.0
1N5225	3.0	20	29	1600	-0.075	152	50	1.0
1N5226	3.3	20	28	1600	-0.070	138	25	1.0
1N5227	3.6	20	24	1700	-0.065	126	15	1.0
1N5228	3.9	20	23	1900	-0.060	115	10	1.0
1N5229	4.3	20	22	2000	-0.055	106	5.0	1.0
1N5230	4.7	20	19	1900	±0.030	97	5.0	2.0
1N5231	5.1	20	17	1600	±0.030	89	5.0	2.0
1N5232	5.6	20	11	1600	+0.038	81	5.0	3.0
1N5233	6.0	20	7	1600	+0.038	76	5.0	3.5
1N5234	6.2	20	7	1000	+0.045	73	5.0	4.0
1N5235	6.8	20	5	750	+0.050	67	3.0	5.0
1N5236	7.5	20	6	500	+0.058	61	3.0	6.0
1N5237	8.2	20	8	500	+0.062	55	3.0	6.5
1N5238	8.7	20	8	600	+0.065	52	3.0	6.5
1N5239	9.1	20	10	600	+0.068	50	3.0	7.0
1N5240	10	20	17	600	+0.075	45	3.0	8.0
1N5241	11	20	22	600	+0.076	41	2.0	8.4
1N5242	12	20	30	600	+0.077	38	1.0	9.1
1N5243	13	9.5	13	600	+0.079	35	0.5	9.9
1N5244	14	9.0	15	600	+0.082	32	0.1	10
1N5245	15	8.5	16	600	+0.082	30	0.1	11
1N5246	16	7.8	17	600	+0.083	28	0.1	12
1N5247	17	7.4	19	600	+0.084	27	0.1	13
1N5248	18	7.0	21	600	+0.085	25	0.1	14
1N5249	19	6.6	23	600	+0.086	24	0.1	14
1N5250	20	6.2	25	600	+0.086	23	0.1	15
1N5251	22	5.6	29	600	+0.087	21	0.1	17
1N5252	24	5.2	33	600	+0.087	19.1	0.1	18
1N5253	25	5.0	35	600	+0.089	18.2	0.1	19
1N5254	27	4.6	41	600	+0.090	16.8	0.1	21
1N5255	28	4.5	44	600	+0.091	16.2	0.1	21
1N5256	30	4.2	49	600	+0.091	15.1	0.1	23
1N5257	33	3.8	58	700	+0.092	13.8	0.1	25
1N5258	36	3.4	70	700	+0.093	12.6	0.1	27
1N5259	39	3.2	80	800	+0.094	11.6	0.1	30
1N5260	43	3.0	93	900	+0.095	10.6	0.1	33
1N5261	47	2.7	105	1000	+0.095	9.7	0.1	36
1N5262	51	2.5	125	1100	+0.096	8.9	0.1	39
1N5263	56	2.2	150	1300	+0.096	-	0.1	43
1N5264	60	2.1	170	1400	+0.097	-	0.1	46
1N5265	62	2.0	185	1400	+0.097	-	0.1	47
1N5266	68	1.8	230	1600	+0.097	-	0.1	52
1N5267	75	1.7	270	1700	+0.098	-	0.1	56
1N5268	82	1.5	330	1700	+0.098	-	0.1	62
1N5269	87	1.4	370	2000	+0.099	-	0.1	68
1N5270	91	1.4	400	2200	+0.099	-	0.1	69
1N5271	100	1.3	500	2300	+0.100	-	0.1	75
1N5272	110	1.2	700	-	+0.100	-	0.1	83
1N5273	120	1.0	950	-	+0.100	-	0.1	90
1N5274	130	0.95	1100	-	+0.110	-	0.1	98
1N5275	140	0.90	1300	-	+0.110	-	0.1	105
1N5276	150	0.85	1500	-	+0.110	-	0.1	113
1N5277	160	0.80	1700	-	+0.115	-	0.1	120
1N5278	170	0.74	1900	-	+0.115	-	0.1	127
1N5279	180	0.68	2200	-	+0.120	-	0.1	135
1N5280	190	0.66	2400	-	+0.120	-	0.1	142
1N5281	200	0.65	2500	-	+0.120	-	0.1	150

Notes: 1. The Zener Impedance is derived from the 1 KHZ 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 at a distance of 10 mm from case are kept at ambient temperature.

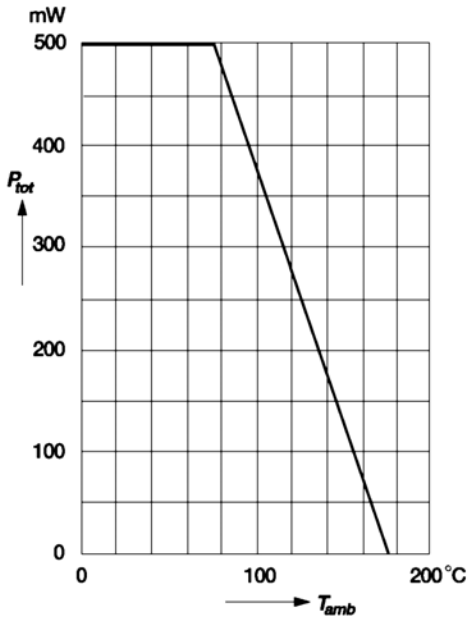
3. Measured with device junction in thermal equilibrium.

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

Admissible power dissipation versus ambient temperature

Valid provided that leads at a distance of 10 mm from case are kept at ambient temperature



Pulse thermal resistance versus pulse duration

Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature

