

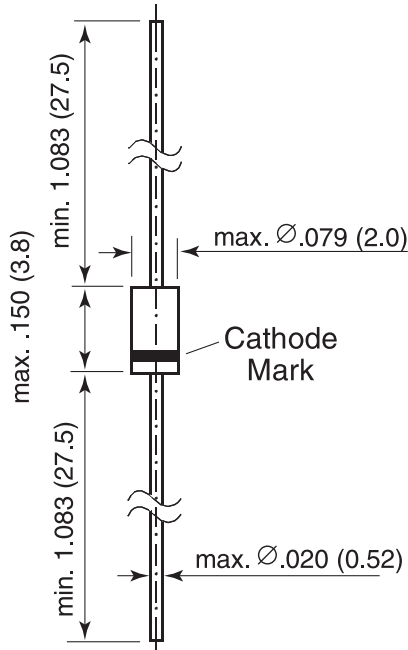


# Zener Diodes

Zener Voltage Range 3.0 to 75V  
Power Dissipation 500mW



DO-204AH  
(DO-35 Glass)



Dimensions in inches and (millimeters)

## Features

- Silicon Planar Power Zener Diodes.
- Standard Zener voltage tolerance is  $\pm 5\%$  with a "B" suffix. Other tolerances are available upon request.
- These diodes are also available in MiniMELF case with the type designation ZMM5225 ... ZMM5267, SOT-23 case with the type designation MMBZ5265 ... MMBZ5267 and SOD-23 case with the types designation MMSZ5225 ... MMSZ5267

## Mechanical Data

Case: DO-35 Glass Case

Weight: approx. 0.13g

### Packaging codes/options:

D7/10K per 13" reel, (52mm tape), 20K/box

D8/10K per Ammo tape (52mm tape), 20K/box

## Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Zener Current (see Table "Characteristics")			
Power Dissipation at T <sub>amb</sub> = 75°C	P <sub>tot</sub>	500 <sup>(1)</sup>	mW
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	300 <sup>(1)</sup>	°C/W
Maximum Junction Temperature	T <sub>j</sub>	175	°C
Storage Temperature Range	T <sub>s</sub>	-65 to +175	°C

**Note:**

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

# 1N5225 thru 1N5267

Vishay Semiconductors  
formerly General Semiconductor



## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted) Maximum V<sub>F</sub> = 1.1V at I<sub>F</sub> = 200mA

Type	Nominal Zener Voltage <sup>(3)</sup> at I <sub>ZT</sub> V <sub>Z</sub> (V)	Test Current I <sub>ZT</sub> (mA)	Maximum Zener Impedance <sup>(1)</sup>		Typical Temperature Coefficient α <sub>VZ</sub> (% / °C)	Maximum Reverse Leakage Current		Maximum Regulator Current <sup>(2)</sup> I <sub>ZM</sub> (mA)
			at I <sub>ZT</sub> Z <sub>ZT</sub> (Ω)	at I <sub>ZK</sub> = 0.25mA Z <sub>ZK</sub> (Ω)		I <sub>R</sub> (μA)	Test Voltage V <sub>R</sub> (V)	
1N5225	3.0	20	29	1600	-0.075	50	1.0	152
1N5226	3.3	20	28	1600	-0.070	25	1.0	138
1N5227	3.6	20	24	1700	-0.065	15	1.0	126
1N5228	3.9	20	23	1900	-0.060	10	1.0	115
1N5229	4.3	20	22	2000	-0.055	5.0	1.0	106
1N5230	4.7	20	19	1900	±0.030	5.0	2.0	97
1N5231	5.1	20	17	1600	±0.030	5.0	2.0	89
1N5232	5.6	20	11	1600	+0.038	5.0	3.0	81
1N5233	6.0	20	7	1600	+0.038	5.0	3.5	76
1N5234	6.2	20	7	1000	+0.045	5.0	4.0	73
1N5235	6.8	20	5	750	+0.050	3.0	5.0	67
1N5236	7.5	20	6	500	+0.058	3.0	6.0	61
1N5237	8.2	20	8	500	+0.062	3.0	6.5	55
1N5238	8.7	20	8	600	+0.065	3.0	6.5	52
1N5239	9.1	20	10	600	+0.068	3.0	7.0	50
1N5240	10	20	17	600	+0.075	3.0	8.0	45
1N5241	11	20	22	600	+0.076	2.0	8.4	41
1N5242	12	20	30	600	+0.077	1.0	9.1	38
1N5243	13	9.5	13	600	+0.079	0.5	9.9	35
1N5244	14	9.0	15	600	+0.082	0.1	10	32
1N5245	15	8.5	16	600	+0.082	0.1	11	30
1N5246	16	7.8	17	600	+0.083	0.1	12	28
1N5247	17	7.4	19	600	+0.084	0.1	13	27
1N5248	18	7.0	21	600	+0.085	0.1	14	25
1N5249	19	6.6	23	600	+0.086	0.1	14	24
1N5250	20	6.2	25	600	+0.086	0.1	15	23
1N5251	22	5.6	29	600	+0.087	0.1	17	21
1N5252	24	5.2	33	600	+0.087	0.1	18	19.1
1N5253	25	5.0	35	600	+0.089	0.1	19	18.2
1N5254	27	4.6	41	600	+0.090	0.1	21	16.8
1N5255	28	4.5	44	600	+0.091	0.1	21	16.2
1N5256	30	4.2	49	600	+0.091	0.1	23	15.1
1N5257	33	3.8	58	700	+0.092	0.1	25	13.8
1N5258	36	3.4	70	700	+0.093	0.1	27	12.6
1N5259	39	3.2	80	800	+0.094	0.1	30	11.6
1N5260	43	3.0	93	900	+0.095	0.1	33	10.6
1N5261	47	2.7	105	1000	+0.095	0.1	36	9.7
1N5262	51	2.5	125	1100	+0.096	0.1	39	8.9
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	-

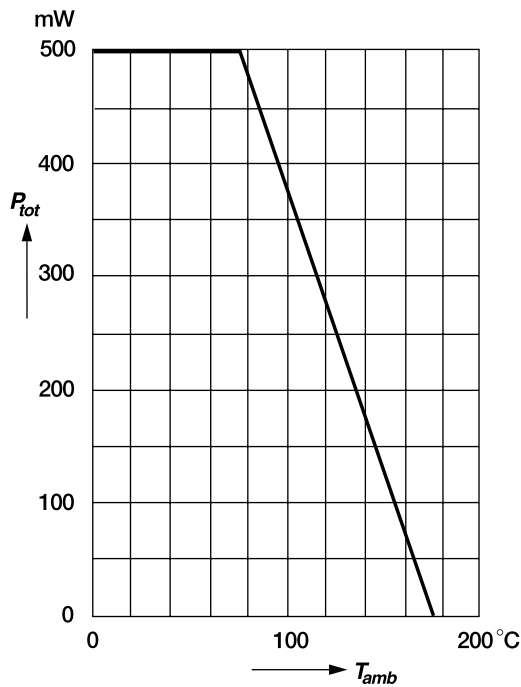
### Notes:

- (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<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. 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 ( $T_A = 25^\circ\text{C}$ 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

