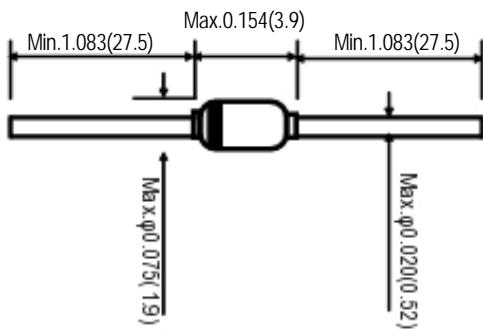


Zener Diodes

Power Dissipation:500mW

V_Z RANGE: 2.4 to 200 VOLTS

DO-204AH (DO - 35 Glass)



Dimensions in inches and (millimeters)

FEATURES

- . Silicon Planar Power Zener Diodes
- . Standard Zener voltage tolerance is 5% .Add suffix "A" for 3% tolerance.Other Zener voltages and tolerances are available upon request.
- . These diodes are also available in the MELF case with type designation ZM5225 thru ZM5267

MECHANICAL DATA

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

Maximum Ratings & Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	SYMBOL	Value	UNITS
Zener Current(see table "Characteristics")			
Power Dissipation at Tamb=50°C	P _{tot}	500 ⁽¹⁾	mW
Thermal resistance Junction to Ambient Air	R _{θJA}	300 ⁽¹⁾	°C/W
Junction Temperature	T _j	175	°C
Storage Temperature Range	T _s	-55 to 150	°C

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

Electrical Characteristics (Tj=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 (V)	Test current I _{ZT} (mA)	Maximum Zener impedance ⁽¹⁾		Typical temperature coefficient A _{vz} (%/K)	Maximum regulator current ⁽²⁾ I _{ZM} (mA)	Maximum reverse leakage current	
			Z _{ZT} at I _{ZT} (Ω)	Z _{ZK} (Ω)			I _R (μA)	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	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	1.0
1N5230	4.7	20	19	1900	± 0.030	97	5	2.0
1N5231	5.1	20	17	1600	± 0.030	89	5	2.0
1N5232	5.6	20	11	1600	+ 0.038	81	5	3.0
1N5233	6	20	7	1600	+ 0.038	76	5	3.5
1N5234	6.2	20	7	1000	+ 0.045	73	5	4.0
1N5235	6.8	20	5	750	+ 0.050	67	3	5.0
1N5236	7.5	20	6	500	+ 0.058	61	3	6.0
1N5237	8.2	20	8	500	+ 0.062	55	3	6.5
1N5238	8.7	20	8	600	+ 0.065	52	3	6.5
1N5239	9.1	20	10	600	+ 0.068	50	3	7.0
1N5240	10	20	17	600	+ 0.075	45	3	8.0
1N5241	11	20	22	600	+ 0.076	41	2	8.4
1N5242	12	20	30	600	+ 0.077	38	1	9.1
1N5243	13	9.5	13	600	+ 0.079	35	0.5	9.9
1N5244	14	9	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	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	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

Notes:

(1)The Zener impedance is derived from the 1KHz 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 electrodes at a distance of 10mm from case are kept at ambient temperature

(3)Measured under thermal equilibrium and DC test conditions

Electrical Characteristics (Tj=25°C unless otherwise noted). Maximum Vf=1.1V at If=200mA

Type number	Nominal Zener voltage ⁽³⁾ at I _{ZT} V _Z (V)	Test current I _{ZT} (mA)	Maximum Zener impedance ⁽¹⁾		Typical temperature coefficient A _{vz} (%/K)	Maximum regulator current ⁽²⁾ I _{ZM} (mA)	Maximum reverse leakage current	
			Z _{ZT} at I _{ZT} (Ω)	Z _{ZK} (Ω)			I _R (u A)	Test voltage V _R (Volts)
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	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	185	1400	0.097	—	0.1	47
1N5266	68	1.8	230	1600	0.097	—	0.1	52
1N5267	75	1.7	170	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	950	—	0.100	—	0.1	90
1N5274	130	0.95	1100	—	0.110	—	0.1	98
1N5275	140	0.9	1300	—	0.110	—	0.1	105
1N5276	150	0.85	1500	—	0.110	—	0.1	113
1N5277	160	0.8	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 1KHZ 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 elimi

(2)Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature

(3)Measured under thermal equilibrium and DC test conditions

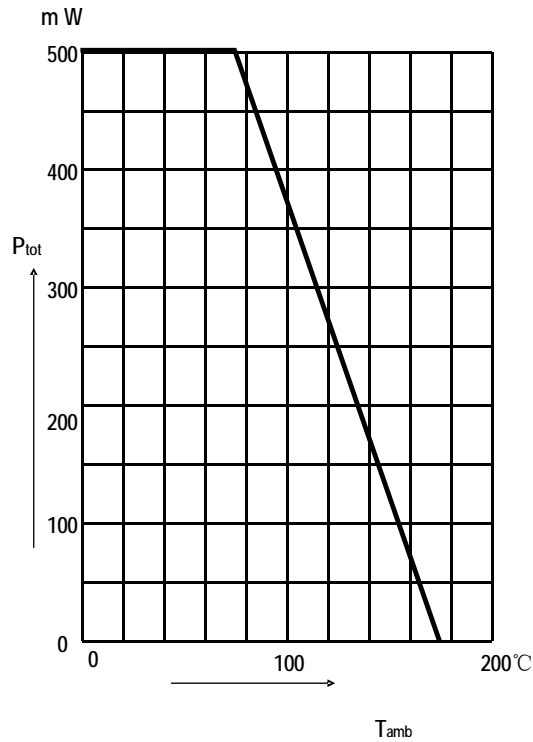
Ratings and Characteristic Curves

(TA=25°C unless otherwise noted)

Admissible power dissipation

Versus ambient temperature

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



Pulse thermal resistance

verse pulse duration

valid provided that leads at a distance of 4 mm from case
temperature at a distance of 10 mm from case

