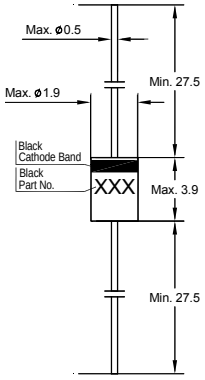
SILICON PLANAR ZENER DIODES

1N5220...1N5267

Standard Zener voltage tolerance is ± 20%. Add suffix "A" for ± 10% Tolerance, suffix "B" for ± 5% tolerance, suffix "C" for ± 2% tolerance, Other tolerance, non standard and higher Zener voltages are upon request.



Glass Case DO-35
Dimensions in mm

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation at T_{amb} = 75 °C	P_{tot}	500 [1)]	mW
Junction Temperature	T_j	200	°C
Storage Temperature Range	T_S	- 65 to + 200	°C
[1)] Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.			

Characteristics at T_a = 25 °C

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	0.3 [1)]	K/mW
Forward Voltage at I_F = 200 mA	V_F	1.1	V
[1)] Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.			

1N5220...1N5281

Type	Zener Voltage Range		Maximum Zener Impedance[1]			Maximum Reverse Leakage Current		Temp. Coefficient of Zener Voltage
	V_{Znom} [3] V	I_{ZT} mA	r_{ZJT} Ω	r_{ZJK} Ω	at I_{ZK} mA	I_R [2] μA	at V_R V	TK_{VZ} %/K
1N5220	2.2	20	30	1150	0.25	100	1	<-0.085
1N5221	2.4	20	30	1200	0.25	100	1	<-0.085
1N5222	2.5	20	30	1250	0.25	100	1	<-0.085
1N5223	2.7	20	30	1300	0.25	75	1	<-0.080
1N5224	2.8	20	30	1400	0.25	75	1	<-0.080
1N5225	3	20	29	1600	0.25	50	1	<-0.075
1N5226	3.3	20	28	1600	0.25	25	1	<-0.070
1N5227	3.6	20	24	1700	0.25	15	1	<-0.065
1N5228	3.9	20	23	1900	0.25	10	1	<-0.060
1N5229	4.3	20	22	2000	0.25	5	1	<-0.055
1N5230	4.7	20	19	1900	0.25	5	2	<±0.030
1N5231	5.1	20	17	1600	0.25	5	2	<±0.030
1N5232	5.6	20	11	1600	0.25	5	3	<+0.038
1N5233	6	20	7	1600	0.25	5	3.5	<+0.038
1N5234	6.2	20	7	1000	0.25	5	4	<+0.045
1N5235	6.8	20	5	750	0.25	3	5	<+0.050
1N5236	7.5	20	6	500	0.25	3	6	<+0.058
1N5237	8.2	20	8	500	0.25	3	6.5	<+0.062
1N5238	8.7	20	8	600	0.25	3	6.5	<+0.065
1N5239	9.1	20	10	600	0.25	3	7	<+0.068
1N5240	10	20	17	600	0.25	3	8	<+0.075
1N5241	11	20	22	600	0.25	2	8.4	<+0.076
1N5242	12	20	30	600	0.25	1	9.1	<+0.077
1N5243	13	9.5	13	600	0.25	0.5	9.9	<+0.079
1N5244	14	9	15	600	0.25	0.1	10	<+0.082
1N5245	15	8.5	16	600	0.25	0.1	11	<+0.082
1N5246	16	7.8	17	600	0.25	0.1	12	<+0.083
1N5247	17	7.4	19	600	0.25	0.1	13	<+0.084
1N5248	18	7	21	600	0.25	0.1	14	<+0.085
1N5249	19	6.6	23	600	0.25	0.1	14	<+0.086
1N5250	20	6.2	25	600	0.25	0.1	15	<+0.086
1N5251	22	5.6	29	600	0.25	0.1	17	<+0.087
1N5252	24	5.2	33	600	0.25	0.1	18	<+0.088
1N5253	25	5	35	600	0.25	0.1	19	<+0.089
1N5254	27	4.6	41	600	0.25	0.1	21	<+0.090
1N5255	28	4.5	44	600	0.25	0.1	21	<+0.091
1N5256	30	4.2	49	600	0.25	0.1	23	<+0.091
1N5257	33	3.8	58	700	0.25	0.1	25	<+0.092
1N5258	36	3.4	70	700	0.25	0.1	27	<+0.093
1N5259	39	3.2	80	800	0.25	0.1	30	<+0.094
1N5260	43	3	93	900	0.25	0.1	33	<+0.095
1N5261	47	2.7	105	1000	0.25	0.1	36	<+0.095
1N5262	51	2.5	125	1100	0.25	0.1	39	<+0.096
1N5263	56	2.2	150	1300	0.25	0.1	43	<+0.096
1N5264	60	2.1	170	1400	0.25	0.1	46	<+0.097
1N5265	62	2	185	1400	0.25	0.1	47	<+0.097
1N5266	68	1.8	230	1600	0.25	0.1	52	<+0.097
1N5267	75	1.7	270	1700	0.25	0.1	56	<+0.098

[1] 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.

[2] Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

[3] Tested with pulses t_p = 20 ms.

Admissible power dissipation versus ambient temperature
Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature