SEMICONDUCTOR

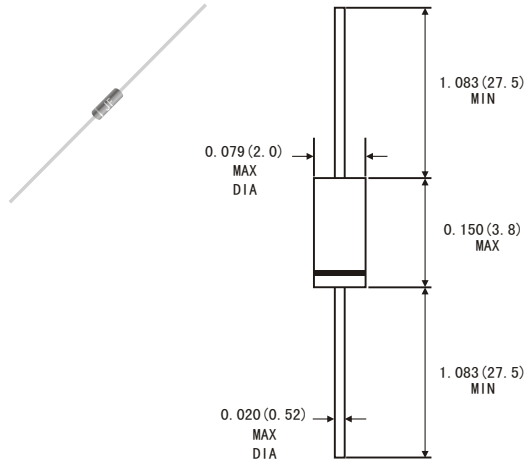
1N5220 THRU 1N5281

0.5W SILICON PLANAR ZENER DIODES

FEATURES

- Standard zener voltage tolerance is ±20%.Add suffix "A" for ±10% tolerance and suffix "B" for ±5% tolerance , suffix ″C″for ±2% tolerance. Other tolerance, non standard and higher zener voltages are upon request.
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

DO-35



Dimensions in inches and (millimeters)

MECHANICAL DATA

- *Case*: DO-35 glass case
- *Polarity*: Color band denotes cathode end
- *Weight*: Approx. 0.13 gram

ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) (T_A=25℃)

	Symbols	*Value*	*Units*
Zener current see table "Characteristics"			
Power dissipation at T_A=75℃	P_{tot}	500[1)]	mW
Junction temperature	T_J	200	℃
Storage temperature range	T_{STG}	-65 to+200	℃
1) Valid provided that a distance of 8mm from case is kept at ambient temperature			

ELECTRICAL CHARACTERISTICS (T_A=25℃)

	Symbols	*Min*	*Typ*	*Max*	*Units*
Thermal resistance junction to ambient air	$R_{\theta JA}$			0.3[1)]	K/mW
Forward voltage at I_F=200mA	V_F			1.1	V
1) Valid provided that a distance of 8mm from case is kept at ambient temperature					

1N5220 THRU 1N5266 SILICON PLANAR ZENER DIODES

Type	Zener Voltage range 1)		Maximum zener impedance 2)			Maximum Reverse Leakage Current		Temp. Coefficient of zener voltage
	V_{ZNOM} 3)	I_{ZT}	r_{Zjt} and r_{Zjk} at I_{ZK}			I_R 2) at V_R		TK_{VZ}
	V	mA	Ω	Ω	mA	μA	V	%/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 THRU 1N5281 SILICON PLANAR ZENER DIODES

Type	Zener Voltage range 1)		Maximum zener impedance 2)			Maximum Reverse Leakage Current		Temp Coefficient of zener voltage
	V_{ZNOM} 3)	I_{ZT}	r_{Zjt} and r_{Zjk} at I_{ZK}			I_R 2) at V_R		TK_{VZ}
	V	mA	Ω	Ω	mA	μA	V	%/K
1N5267	75	1.7	<270	<1700	0.25	<0.1	56	<+0.098
1N5268	82	1.5	<330	<2000	0.25	<0.1	62	<+0.098
1N5269	87	1.4	<370	<2200	0.25	<0.1	68	<+0.099
1N5270	91	1.4	<400	<2300	0.25	<0.1	69	<+0.099
1N5271	100	1.3	<500	--	--	<0.1	75	<+0.100
1N5272	110	1.2	<700	--	--	<0.1	83	<+0.100
1N5273	120	1	<950	--	--	<0.1	90	<+0.100
1N5274	130	0.95	<1100	--	--	<0.1	98	<+0.110
1N5275	140	0.9	<1300	--	--	<0.1	105	<+0.110
1N5276	150	0.85	<1500	--	--	<0.1	113	<+0.110
1N5277	160	0.8	<1700	--	--	<0.1	120	<+0.115
1N5278	170	0.74	<1900	--	--	<0.1	127	<+0.115
1N5279	180	0.68	<2200	--	--	<0.1	135	<+0.120
1N5280	190	0.66	<2400	--	--	<0.1	142	<+0.120
1N5281	200	0.65	<2500	--	--	<0.1	150	<+0.120

1) Tested with pulses tp=20ms.
2) The zener impedance is derived from the 50Hz 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 elimunate unstable units.
3) Measured under thermal equilibrium and DC test conditions.
4) Valid provided that leads at a distance of 8mm from case are kept at ambient temperature.

Admissible power dissipation versus ambient temperature
(Valid provided that leads at a distance of 10mm from case
are kept at ambient temperature)