

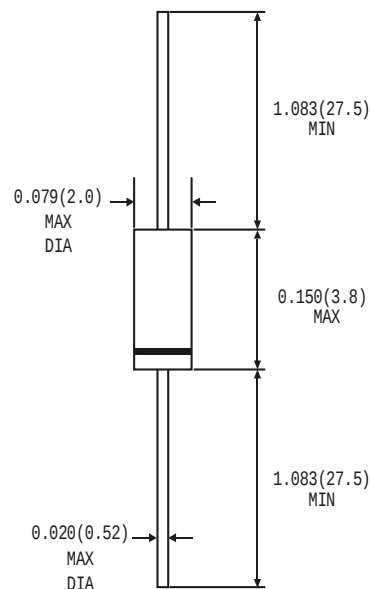
FEATURES

- Standards zener voltage tolerance is $\pm 20\%$. Add suffix "A" for $\pm 10\%$ tolerance and suffix "B" for $\pm 5\%$ tolerance other tolerance, non standards and higher zener voltage upon request

MECHANICAL DATA

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

DO-35



Dimensions in inches and (millimeters)

ABSOLUTE MAXIMUM RATINGS(LIMITING VALUES) ($T_A = 25^\circ\text{C}$)

	<i>Symbols</i>	<i>Value</i>	<i>Units</i>
Zener current see table "Characteristics"			
Power dissipation at $T_A = 75^\circ\text{C}$	P_{tot}	500 ¹⁾	mW
Junction temperature	T_J	175	$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +200	$^\circ\text{C}$
1) Valid provided that a distance of 8mm from case are kept at ambient temperature			

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

	<i>Symbols</i>	<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Units</i>
Thermal resistance junction to ambient air	R_{THA}			0.3 ¹⁾	K/mW
Forward voltage at $I_F = 200\text{mA}$	V_F			1.1	V
1) Valid provided that a distance of 8mm from case are kept at ambient temperature					

1N5221 THRU 1N5249 SILICON PLANAR ZENER DIODES

Type	Zener Voltage range ¹⁾		Maximum zener impedance ¹⁾			Maximum Reverse Leakage Current		Temp. Coefficient of zener voltage
	V _{ZNOM} ³⁾	I _{ZT}	r _{zj} and r _{zk} at I _{ZK}			I _R ²⁾ at V _R		TK _{Vz}
	V	mA	Ω	Ω	mA	μA	V	%/K
1N5221	2.4	20	<30	<1200	0.25	<100	1.0	<-0.085
1N5222	2.5			<1250		<100		<-0.085
1N5223	2.7			<1300		<75		<-0.080
1N5224	2.8			<1400		<75		<-0.080
1N5225	3.0		<29	<1600		<50		<-0.075
1N5226	3.3		<28	<1600		<25		<-0.070
1N5227	3.6		<24	<1700		<15		<-0.065
1N5228	3.9		<23	<1900		<10		<-0.060
1N5229	4.3		<22	<2000		5	<+0.055	
1N5230	4.7		<19	<1900			2.0	<+0.030
1N5231	5.1		<17	<1600			2.0	<+0.030
1N5232	5.6		<11	<1600			3.0	<+0.038
1N5233	6.0		<7	<1600			3.5	<+0.038
1N5234	6.2		<7	<1000			4.0	<+0.045
1N5235	6.8		<5	<750		3	5.0	<+0.050
1N5236	7.5		<6	<500			6.0	<+0.058
1N5237	8.2		<8	<500			6.5	<+0.062
1N5238	8.7		<8	<600			6.5	<+0.065
1N5239	9.1		<10				7.0	<+0.068
1N5240	10		<17				8.0	<+0.075
1N5241	11		<22			<2	8.4	<+0.076
1N5242	12		<30			<1	9.1	<+0.077
1N5243	13	9.5	<13			<0.5	9.9	<+0.079
1N5244	14	9.0	<15	<0.1		10	<+0.082	
1N5245	15	8.5	<16			11	<+0.082	
1N5246	16	7.8	<17			12	<+0.083	
1N5247	17	7.4	<19			13	<+0.084	
1N5248	18	7.0	<21			14	<+0.085	
1N5249	19	6.6	<23			14	<+0.086	

1N5250 THRU 1N5281 SILICON PLANAR ZENER DIODES

Type	Zener Voltage range ¹⁾		Maximum zener impedance ¹⁾			Maximum Reverse Leakage Current		Temp Coefficient of zener voltage
	V _{ZNOM} ³⁾	I _{ZT}	I _{ZT} and I _{ZK} at I _{ZK}			I _R ²⁾ at V _R		TK _{VZ}
	V	mA	Ω	Ω	mA	μA	V	%/K
1N5250	20	6.2	<25	<600	0.25	<0.1	15	< +0.086
1N5251	22	5.6	<29				17	< +0.087
1N5252	24	5.2	<33				18	< +0.088
1N5253	25	5.0	<35				19	< +0.089
1N5254	27	4.6	<41				21	< +0.090
1N5255	28	4.5	<44				21	< +0.091
1N5256	30	4.2	<49				23	< +0.091
1N5257	33	3.8	<58	<700			25	< +0.092
1N5258	36	3.4	<70	<700			27	< +0.093
1N5259	39	3.2	<80	<800			30	< +0.094
1N5260	43	3.0	<93	<900			33	< +0.095
1N5261	47	2.7	<105	<1000			36	< +0.095
1N5262	51	2.5	<125	<1100			39	< +0.096
1N5263	56	2.2	<150	<1300			43	< +0.096
1N5264	60	2.1	<170	<1400			46	< +0.097
1N5265	62	2.0	<185	<1400			47	< +0.097
1N5266	68	1.8	<230	<1600			52	< +0.097
1N5267	75	1.7	<270	<1700			56	< +0.098
1N5268	82	1.5	<330	<2000			62	< +0.098
1N5269	87	1.4	<370	<2200			68	< +0.099
1N5270	91	1.4	<400	<2300			69	< +0.099
1N5271	100	1.3	<500	--	--		75	< +0.100
1N5272	110	1.2	<700	--	--		83	< +0.100
1N5273	120	1.0	<950	--	--		90	< +0.100
1N5274	130	0.95	<1100	--	--		98	< +0.110
1N5275	140	0.90	<1300	--	--		105	< +0.110
1N5276	150	0.85	<1500	--	--		113	< +0.110
1N5277	160	0.80	<1700	--	--		120	< +0.115
1N5278	170	0.74	<1900	--	--		127	< +0.115
1N5279	180	0.68	<2200	--	--		135	< +0.120
1N5280	190	0.66	<2400	--	--		142	< +0.120
1N5281	200	0.65	<2500	--	--		150	< +0.120

1) The zener impedance is derived from the 60Hz 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 8mm from case are kept at ambient temperature.

3) Measured under thermal equilibrium and DC test conditions.

1N5221 THRU 1N5281 SILICON PLANAR ZENER DIODES

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

