

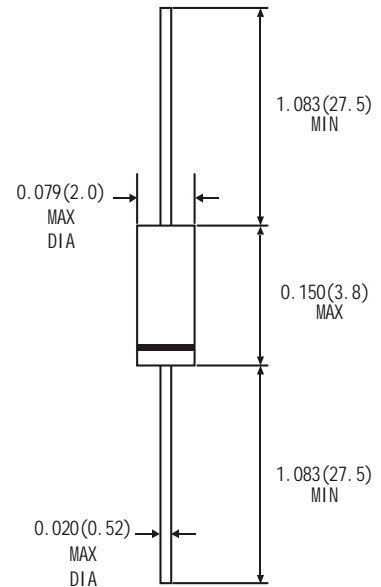
FEATURES

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

	Symbols	Value	Units
Zener current see table "Characteristics"			
Power dissipation at $T_A = 75\text{ C}^\circ$	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 ($T_A = 25\text{ C}^\circ$)

	Symbols	Min	Typ	Max	Units
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 _{Z(NOM)} ³⁾	I _{ZT}	I _{ZP} and I _{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				<+0.055	
1N5230	4.7		<19	<1900				2.0	<+0.030
1N5231	5.1		<17	<1600			5	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					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	<600	<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 _{ZK} 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)

