

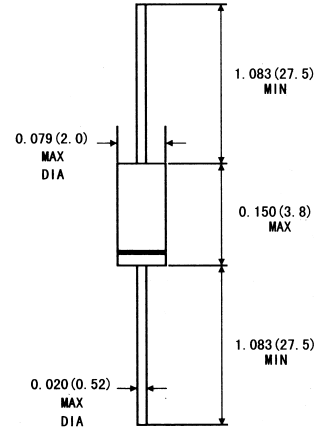
## FEATURES

- 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. 0.13gram

### DO-35



Dimensions in inches and (millimeters)

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

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

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

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

**1N5221..1N5249 SILICON PLANAR ZENER DIODES**

Type	Zener Voltage Range <sup>1)</sup>		Maximum zener impedance <sup>1)</sup>			Maximum Reverse Leakage Current		Temp.Coefficient of zener diode	
	V <sub>ZNOM 3)</sub>	I <sub>ZT</sub>	r <sub>zjt</sub> and r <sub>zjk</sub> at I <sub>zk</sub>			I <sub>R 2)</sub> at V <sub>R</sub>		TKvz	
	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	2.6			<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
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	<0.5		9.9		<+0.079		
1N5244	14	9.0	0.1		10		<+0.082		
1N5245	15	8.5			11	<+0.082			
1N5246	16	7.8			12	<+0.083			
1N5247	17	7.4			13	<+0.084			
1N5248	18	7.0		14	<+0.085				
1N5249	19	6.6		14	<+0.086				

**1N5250..1N5281 SILICON PLANAR ZENER DIODES**

Type	Zener Voltage Range <sup>1)</sup>		Maximum zener impedance <sup>1)</sup>			Maximum Reverse Leakage Current		Temp.Coefficient of zener diode	
	V <sub>ZNOM 3)</sub>	I <sub>ZT</sub>	r <sub>zjt</sub> and r <sub>zjk</sub> at I <sub>zk</sub>			I <sub>R 2)</sub> at V <sub>R</sub>		TKvz	
	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			

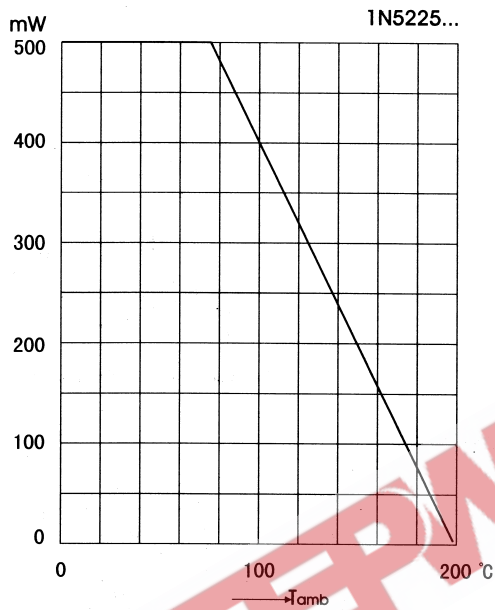
(1)The Zener impedance is derived from the 60Hz Ac voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I<sub>ZT</sub>) is suprimposed on I<sub>ZT</sub> or I<sub>ZK</sub> Zener impedance is measured at two points to insure a sharp knee on the breakdown curve 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..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)



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