

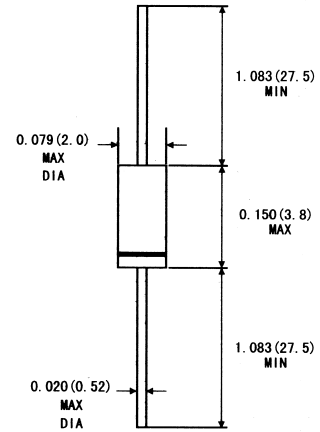
**FEATURES**

- . Silicon planar power zener diodes
- . 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)(TA=25°C )**

	Symbols	Value	Units
Zener current see table "Characteristics"			
Power dissipation at TA=75°C	P <sub>tot</sub>	500 <sup>1)</sup>	mW
Junction temperature	T <sub>J</sub>	175	°C
Storage temperature range	T <sub>STG</sub>	-65 to + 175	°C

1)Valid provided that at a distance of 8mm from case are kept at ambient temperature(DO-35)

**ELECTRICAL CHARACTERISTICS(TA=25°C )**

	Symbols	Min.	Typ.	Max.	Units
Thermal resistance junction to ambient	R <sub>θJA</sub>			300 <sup>1)</sup>	°C/W
Forward voltage at I <sub>F</sub> =200mA	V <sub>F</sub>			1.5	

1)Valid provided that leads at a distance of 8mm from case are kept at ambient temperature

**1N957..1N978 SILICON PLANAR ZENER DIODES**

Type	Zener Voltage Range <sup>3)</sup>		Maximum zener impedance <sup>1)</sup>			Typical Temperature coefficient	Maximum Reverse Leakage Current			Maximum Regulator Current I <sub>ZM 2)</sub>	
	V <sub>ZNOM</sub> V	I <sub>ZT</sub> mA	Z <sub>ZT</sub> Ω	Z <sub>ZK</sub> Ω	I <sub>ZK</sub> mA		I <sub>R 2)</sub> μA	Test-Voltage			
								suffix A V	suffix B V		
1N957	6.8	18.5	4.5	700	1	0.050	150	4.9	5.2	47	
1N958	7.5	16.5	5.5		0.5	0.058		75	5.4	5.7	42
1N959	8.2	15				0.062		50	5.9	6.2	38
1N960	9.1	14				0.068	10	6.6	6.9	35	
1N961	10	12.5				5	0.25	0.075	5	7.2	7.6
1N962	11	11.5	0.076		8			8.4		28	
1N963	12	10.5	11.5		0.077			8.6	9.1	26	
1N964	13	9.5	13		0.079			5	9.4	9.9	24
1N965	15	8.5	16		0.082				10.8	11.4	21
1N966	16	7.8	17		0.083				11.5	12.2	19
1N967	18	7	21		0.085	13	13.7		17		
1N968	20	6.2	25		0.086	14.4	15.2		15		
1N969	22	5.6	29		0.087	15.8	16.7		14		
1N970	24	5.2	33	0.088	17.3	18.2	14				
1N971	27	4.6	41	0.090	19.4	20.6	11				
1N972	30	4.2	49	0.091	21.6	22.8	10				
1N973	33	3.8	58	0.092	23.8	25.1	9.0				
1N974	36	3.4	70	0.093	25.9	27.4	8.5				
1N975	39	3.2	80	0.094	28.1	29.7	7.8				
1N976	43	3	93	0.095	31	32.7	7.0				
1N977	47	2.7	105	0.095	33.8	35.8	6.4				
1N978	51	2.5	125	0.096	36.7	38.8	5.9				

**Notes:**

- (1) The Zener impedance is derived from the 1kHz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (I<sub>ZT</sub>) is superimposed on I<sub>ZT</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 are kept at ambient temperature at a distance of 8mm from case
- (3) Measured with device junction in thermal equilibrium.