

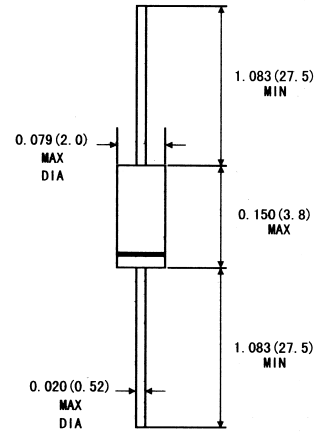
FEATURES

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

	Symbols	Value	Units
Zener current see table "Characteristics"			
Power dissipation at $T_A=75^\circ\text{C}$	P_{tot}	500 ¹⁾	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(DO-35)

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

	Symbols	Min.	Typ.	Max.	Units
Thermal resistance junction to ambient	$R_{\theta JA}$			300 ¹⁾	$^\circ\text{C}/\text{W}$
Forward voltage at $I_F=200\text{mA}$	V_F			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 ³⁾		Maximum zener impedance ¹⁾			Typical Temperature coefficient	Maximum Reverse Leakage Current			Maximum Regulator Current I _{ZM 2)}					
	V _{ZNOM} V	I _{ZT} mA	Z _{ZT} Ω	Z _{ZK} Ω	I _{ZK} mA		I _{R 2)} 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
1N961	10	12.5	5		0.25	0.075	5				7.2	7.6			32
1N962	11	11.5						5	0.076	8	8.4	28			
1N963	12	10.5	11.5					750	0.082	5	8.6	9.1	26		
1N964	13	9.5	13								0.083	10.8	11.4	21	
1N965	15	8.5	16												0.085
1N966	16	7.8	17								0.086	14.4	15.2	15	
1N967	18	7	21												0.087
1N968	20	6.2	25								0.088	17.3	18.2	14	
1N969	22	5.6	29												0.090
1N970	24	5.2	33								0.091	21.6	22.8	10	
1N971	27	4.6	41	0.092											23.8
1N972	30	4.2	49								0.093	25.9	27.4	8.5	
1N973	33	3.8	58	0.094											28.1
1N974	36	3.4	70								0.095	31	32.7	7.0	
1N975	39	3.2	80	0.095	33.8	35.8	6.4								
1N976	43	3	93								0.096	36.7	38.8	5.9	
1N977	47	2.7	105												
1N978	51	2.5	125	1500											

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_{ZT}) is superimposed on I_{ZT}. 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.