

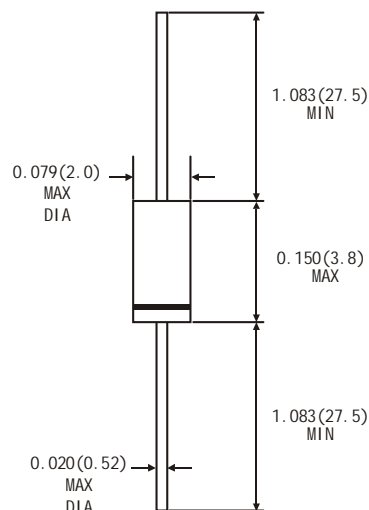
### FEATURES

- 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. 0.13 gram

### DO-35



Dimensions in inches and (millimeters)

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

	<i>Symbols</i>	<i>Value</i>	<i>Units</i>
Zener current see table "Characteristics"			
Power dissipation at $T_A=25^\circ\text{C}$	$P_{tot}$	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 a distance of 8mm from case are kept at ambient temperature

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

	<i>Symbols</i>	<i>Min</i>	<i>Typ</i>	<i>Max</i>	<i>Units</i>
Thermal resistance junction to ambient air	$R_{\theta JA}$			300 <sup>1)</sup>	$^\circ\text{C/W}$
Forward voltage at $I_F=200\text{mA}$	$V_F$			1.5	

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

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</sub> <sup>2)</sup>		
	V <sub>ZNOM</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub>	Z <sub>ZK</sub>	I <sub>ZK</sub>		I <sub>R</sub> <sup>2)</sup>	Test-Voltage				
								Suffix A	Suffix B			
V	mA	Ω	Ω	mA	%/°C	μ A	V	V	mA			
1N957	6.8	18.5	4.5	700	1.0	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	0.075	7.2	7.6	32		
1N962	11	11.5	5		0.076						8.0	8.4
1N963	12	10.5	11.5		750	0.25	0.077	8.6	9.1	26		
1N964	13	9.5	13				5	0.079	9.4	9.9	24	
1N965	15	8.5	16									10.8
1N966	16	7.8	17				11.5	12.2	19			
1N967	18	7.0	21	13.0						13.7	17	
1N968	20	6.2	25				14.4	15.2	15			
1N969	22	5.6	29	15.8						16.7	14	
1N970	24	5.2	33				17.3	18.2	14			
1N971	27	4.6	41	19.4						20.6	11	
1N972	30	4.2	49				1000	0.091	21.6			22.8
1N973	33	3.8	58	0.092	23.8	25.1				9.0		
1N974	36	3.4	70								0.093	
1N975	39	3.2	80	0.094	28.1	29.7				7.8		
1N976	43	3.0	93				1500	0.095	31.0		32.7	7.0
1N977	47	2.7	105	0.095	33.8	35.8				6.4		
1N978	51	2.5	125									

- 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 8 mm from case.
- (3)Measured with device junction in thermal equilibrium.