

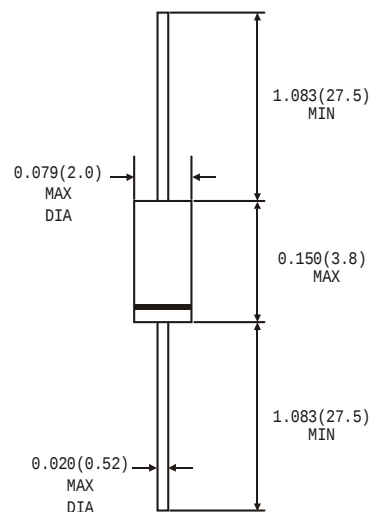
FEATURES

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

	<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 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 a distance of 8mm from case are kept at ambient temperature

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

	<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 ¹⁾	$^\circ\text{C/W}$
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 ³⁾		Maximum zener impedance ¹⁾			Typical Temperature Coefficient	Maxmum Reverse Leakage Current			Maximum Regulator Current I _{ZM} ²⁾
	V _{ZNOM}	I _{ZT}	Z _{ZT}	Z _{ZK}	I _{ZK}		I _R ²⁾	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				0.075	5	7.2	7.6	32
1N962	11	11.5	5		0.076	8.0		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	7.0	21	0.085	13.0		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	1000	0.093	25.9	27.4	8.5		
1N975	39	3.2	80		0.094	28.1	29.7	7.8		
1N976	43	3.0	93		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	1500	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_{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 8 mm from case.

(3)Measured with device junction in thermal equilibrium.