

# 1N957 THRU 1N978

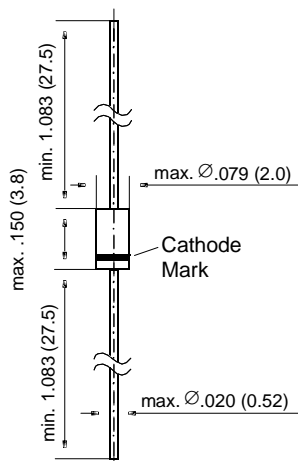
## ZENER DIODES

### FEATURES

- ◆ Silicon Planar Power Zener Diodes
- ◆ Standard Zener voltage tolerance is  $\pm 5\%$  for "B" suffix. Other tolerances are available upon request.



### DO-35



Dimensions are in inches and (millimeters)

### MECHANICAL DATA

**Case:** DO-35 Glass Case

**Weight:** approx. 0.13 g

### MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNIT
Zener Current (see Table "Characteristics")			
Power Dissipation at $T_L = 75^\circ\text{C}$	$P_{\text{tot}}$	500 <sup>(1)</sup>	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 65 to +175	$^\circ\text{C}$

**NOTES:**

(1)  $T_L$  is measured 3/8" from body.

	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance Junction to Ambient Air	$R_{\text{thJA}}$	-	-	300 <sup>(1)</sup>	$^\circ\text{C/W}$
Forward Voltage at $I_F = 200 \text{ mA}$	$V_F$	-	-	1.5	Volts

**NOTES:**

(1) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.

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## ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Type Number	Nominal Zener Voltage $V_Z^{(3)}$ (Volts)	Test Current $I_{ZT}$ (mA)	Maximum Zener Impedance <sup>(1)</sup>			Maximum Regulator Current $I_{ZM}^{(2)}$ (mA)	Maximum Reverse Current	
			$Z_{ZT}$ @ $I_{ZT}$ ( $\Omega$ )	$Z_{ZK}$ @ $I_{ZK}$ ( $\Omega$ )	$I_{ZK}$ (mA)		$I_R$ Maximum ( $\mu$ A)	Test Voltage Vdc (Volts)
1N957B	6.8	18.5	4.5	700	1	47	150	5.2
1N958B	7.5	16.5	5.5	700	0.5	42	75	5.7
1N959B	8.2	15	6.5	700	0.5	38	50	6.2
1N960B	9.1	14	7.5	700	0.5	35	25	6.9
1N961B	10	12.5	8.5	700	0.25	32	10	7.6
1N962B	11	11.5	9.5	700	0.25	28	5	8.4
1N963B	12	10.5	11.5	700	0.25	26	5	9.1
1N964B	13	9.5	13	700	0.25	24	5	9.9
1N965B	15	8.5	16	700	0.25	21	5	11.4
1N966B	16	7.8	17	700	0.25	19	5	12.2
1N967B	18	7	21	750	0.25	17	5	13.7
1N968B	20	6.2	25	750	0.25	15	5	15.2
1N969B	22	5.6	29	750	0.25	14	5	16.7
1N970B	24	5.2	33	750	0.25	13	5	18.2
1N971B	27	4.6	41	750	0.25	11	5	20.6
1N972B	30	4.2	49	1000	0.25	10	5	22.8
1N973B	33	3.8	58	1000	0.25	9.2	5	25.1
1N974B	36	3.4	70	1000	0.25	8.5	5	27.4
1N975B	39	3.2	80	1000	0.25	7.8	5	29.7
1N976B	43	3	93	1500	0.25	7	5	32.7
1N977B	47	2.7	105	1500	0.25	6.4	5	35.8
1N978B	51	2.5	125	1500	0.25	5.9	5	38.8

### NOTES:

- (1) The Zener Impedance is derived from the 1 KHz 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 at a distance of 3/8" from case are kept at ambient temperature.
- (3) Measured with device junction in thermal equilibrium.