

- 1N962B-1 THRU 1N986B-1 AVAILABLE IN JAN, JANTX AND JANTXV PER MIL-PRF-19500/117
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

1N957 thru 1N986B  
and  
1N962B-1 thru 1N986B-1

## MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C  
Storage Temperature: -65°C to +175°C  
DC Power Dissipation: 500 mW @ +50°C  
Power Derating: 4 mW / °C above +50°C  
Forward Voltage @ 200mA: 1.1volts maximum

### ELECTRICAL CHARACTERISTICS @ 25°C

JEDEC TYPE NUMBER (NOTE 1)	NOMINAL ZENER VOLTAGE $V_Z$ (NOTE 2)	ZENER TEST CURRENT $I_{ZT}$ mA	MAXIMUM ZENER IMPEDANCE (NOTE 3)			MAX. DC ZENER CURRENT $I_{ZM}$ mA	MAX. REVERSE LEAKAGE CURRENT $I_R @ V_R$	
			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$\mu A$	VOLTS
			OHMS	OHMS				
1N957B	6.8	18.5	4.5	700	1.0	55	5	5.2
1N958B	7.5	16.5	5.5	700	.5	50	5	5.7
1N959B	8.2	15.0	6.5	700	.5	45	5	6.2
1N960B	9.1	14.0	7.5	700	.5	41	5	6.9
1N961B	10	12.5	8.5	700	.25	38	2	7.6
1N962B	11	11.5	9.5	700	.25	32	1	8.4
1N963B	12	10.5	11.5	700	.25	31	1	9.1
1N964B	13	9.5	13	700	.25	28	0.5	9.9
1N965B	15	8.5	16	700	.25	25	0.5	11
1N966B	16	7.8	17	700	.25	24	0.5	12
1N967B	18	7.0	21	750	.25	20	0.5	14
1N968B	20	6.2	25	750	.25	18	0.5	15
1N969B	22	5.6	29	750	.25	16	0.5	17
1N970B	24	5.2	33	750	.25	15	0.5	18
1N971B	27	4.6	41	750	.25	13	0.5	21
1N972B	30	4.2	49	1000	.25	12	0.5	23
1N973B	33	3.8	58	1000	.25	11	0.5	25
1N974B	36	3.4	70	1000	.25	10	0.5	27
1N975B	39	3.2	90	1000	.25	9.5	0.5	30
1N976B	43	3.0	93	1500	.25	8.8	0.5	33
1N977B	47	2.7	105	1500	.25	7.9	0.5	36
1N978B	51	2.5	125	1500	.25	7.4	0.5	39
1N979B	56	2.2	150	2000	.25	6.8	0.5	43
1N980B	62	2.0	185	2000	.25	6.0	0.5	47
1N981B	68	1.8	230	2000	.25	5.5	0.5	52
1N982B	75	1.7	270	2000	.25	5.0	0.5	56
1N983B	82	1.5	330	3000	.25	4.6	0.5	62
1N984B	91	1.4	400	3000	.25	4.1	0.5	69
1N985B	100	1.3	500	3000	.25	3.7	0.5	76
1N986B	110	1.1	750	4000	.25	3.3	0.5	84

- NOTE 1** Zener voltage tolerance on "B" suffix is  $\pm 5\%$ . Suffix letter A denotes +10%. No Suffix denotes  $\pm 20\%$  tolerance, "C" suffix denotes  $\pm 2\%$  and "D" suffix denotes  $\pm 1\%$ .
- NOTE 2** Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of  $25^\circ\text{C} \pm 3^\circ\text{C}$ .
- NOTE 3** Zener impedance is derived by superimposing on  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$



FIGURE 1

## DESIGN DATA

**CASE:** Hermetically sealed glass case. DO – 35 outline.

**LEAD MATERIAL:** Copper clad steel.

**LEAD FINISH:** Tin / Lead

**THERMAL RESISTANCE:** ( $R_{\theta JEC}$ ): 250 °C/W maximum at L = .375 inch

**THERMAL IMPEDANCE:** ( $Z_{\theta JX}$ ): 35 °C/W maximum

**POLARITY:** Diode to be operated with the banded (cathode) end positive.

**MOUNTING POSITION:** Any.



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# 1N957 thru 1N986B INCLUDING -1 VERSIONS

FIGURE 2



POWER DERATING CURVE



FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT