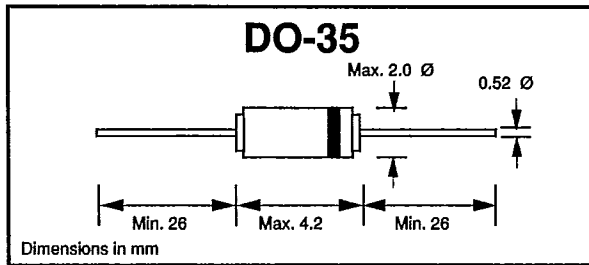




**International
Semiconductor, Inc.**

1N5221B thru 1N5263B Glass Zener Diodes

Voltage: 2.4 to 56 Volts, 500 Milliwatts



SPECIFICATIONS

Voltage Ratings: $\pm 5\%$ Normal Voltage is measured after 40 msec operation.

Power Dissipation: 500 mW at $T_a = 25^\circ\text{C}$

Temperature: Storage is -65 to 175°C ; Junction is 175°C .

Dimensions: DO-35 outline (see outline)

Marking: Cathode band plus 1N52XXX

Case: Axial leaded, hermetically sealed glass packages

Mounting Position: Any

FEATURES

International Semiconductor carries a complete voltage series of JEDEC Zener Diodes in the popular 500 Milliwatt power rating. This series has excellent operating characteristics that reflect the superior capabilities of silicon diffused junctions with double heat sink construction.

The standard International Semiconductor voltage tolerance is $\pm 5\%$ (suffix B). Tighter tolerances such as $\pm 2\%$ and $\pm 1\%$ and looser tolerances such as 10% (suffix A) and 20% (no suffix) are available on special order.

The devices are intended for general use as low power voltage regulators and highly reliable voltage reference sources.

Diodes are axial leaded, hermetically sealed glass packages offering protection in all common environmental conditions.

Device Type	Nominal Zener Voltage V_Z at I_{ZT} Volts	Test Current I_{ZT} mA	Maximum Zener Impedance Z_{ZT} @ I_{ZT} Ohms	Typical Temperature Coefficient	Maximum Reverse Leakage Current				Maximum Regulator Current I_{ZM} (μA)
					I_R μA	Suffix A Volts	Suffix B Volts	No Suffix I_R @ V_R used for Suffix A (μA)	
1N5221B	2.4	20	30	-0.065	100	0.95	1.0	200	191
1N5222B	2.5	20	30	-0.065	100	0.95	1.0	200	182
1N5223B	2.7	20	30	-0.060	75	0.95	1.0	150	168
1N5224B	2.8	20	30	-0.060	75	0.95	1.0	150	162
1N5225B	3.0	20	29	-0.075	50	0.95	1.0	100	151
1N5226B	3.3	20	28	-0.070	25	0.95	1.0	100	138
1N5227B	3.6	20	24	-0.065	15	0.95	1.0	100	126
1N5228B	3.9	20	23	-0.060	10	0.95	1.0	75	115
1N5229B	4.3	20	22	± 0.055	5	0.95	1.0	50	106
1N5230B	4.7	20	19	± 0.030	5	1.9	2.0	50	97
1N5231B	5.1	20	17	± 0.030	5	1.9	2.0	50	89
1N5232B	5.6	20	11	± 0.036	5	2.9	3.0	50	61
1N5233B	6.0	20	7	± 0.036	5	3.3	3.5	50	76
1N5234B	6.2	20	7	± 0.045	3	3.8	4.0	50	73
1N5235B	6.8	20	5	± 0.050	3	4.8	5.0	30	67
1N5236B	7.5	20	6	± 0.058	3	5.7	6.0	30	61
1N5237B	8.2	20	8	± 0.062	3	6.2	6.5	30	55
1N5238B	8.7	20	8	± 0.065	3	6.2	6.5	30	52
1N5239B	9.1	20	10	± 0.068	3	6.7	7.0	30	50
1N5240B	10	20	17	± 0.075	2	7.5	8.0	30	45
1N5241B	11	20	22	± 0.076	1	8.0	8.4	30	41
1N5242B	12	20	30	± 0.077	0.5	8.7	9.1	10	38
1N5243B	13	9.5	13	± 0.079	0.1	9.4	9.9	10	35
1N5244B	14	9.0	15	± 0.082	0.1	9.5	10	10	32
1N5245B	15	8.5	16	± 0.082	0.1	10.5	11	10	30
1N5246B	16	7.8	17	± 0.083	0.1	11.4	12	10	28
1N5247B	17	7.4	19	± 0.084	0.1	12.4	13	10	27
1N5248B	18	7.0	21	± 0.085	0.1	13.3	14	10	25
1N5249B	19	6.6	23	± 0.086	0.1	13.3	14	10	24
1N5250B	20	6.2	25	± 0.086	0.1	14.3	15	10	23
1N5251B	22	5.6	29	± 0.087	0.1	16.2	17	10	21.2
1N5252B	24	5.2	33	± 0.087	0.1	17.1	18	10	19.1
1N5253B	25	5.0	35	± 0.089	0.1	18.1	19	10	18.2
1N5254B	27	4.8	41	± 0.090	0.1	20	21	10	16.8
1N5255B	28	4.5	44	± 0.091	0.1	20	21	10	16.2
1N5256B	30	4.2	49	± 0.091	0.1	22	23	10	15.1
1N5257B	33	3.8	58	± 0.092	0.1	24	25	10	13.8
1N5258B	36	3.4	70	± 0.093	0.1	26	27	10	12.6
1N5259B	39	3.2	80	± 0.094	0.1	29	30	10	11.5
1N5260B	43	3.0	93	± 0.095	0.1	31	33	10	10.6
1N5261B	47	2.7	105	± 0.095	0.1	34	36	10	9.7
1N5262B	51	2.5	125	± 0.096	0.1	37	39	10	8.9
1N5263B	56	2.2	150	± 0.096	0.1	41	43	10	8.1

Higher voltages available on special order.

Corporate Offices:

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Phone (908) 396-0322 FAX (908) 396-0410

Sales Office:

574 E. Alamo, #40
Chandler, AZ 85225

Phone (602) 497-8172 FAX (602) 497-8173



**International
Semiconductor, Inc.**

T-11-11

1N5221B thru 1N5263B Glass Zener Diodes Maximum Ratings and Characteristics

Figure 1: Steady State Power Derating

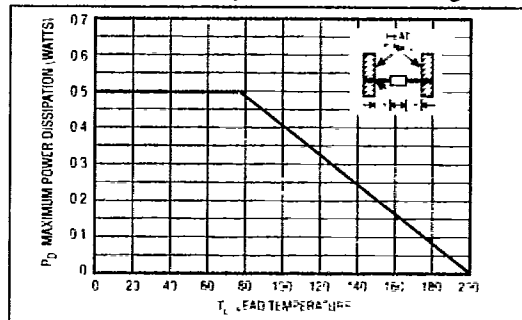


Figure 2: Typical Thermal Resistance

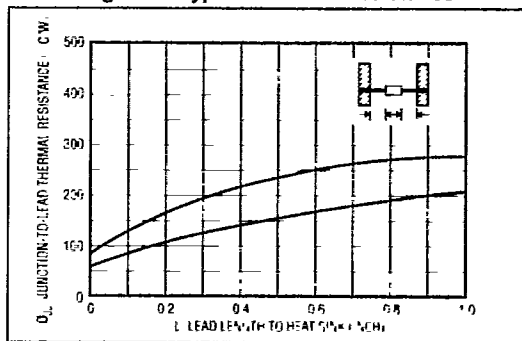


Figure 3: Typical Leakage Current

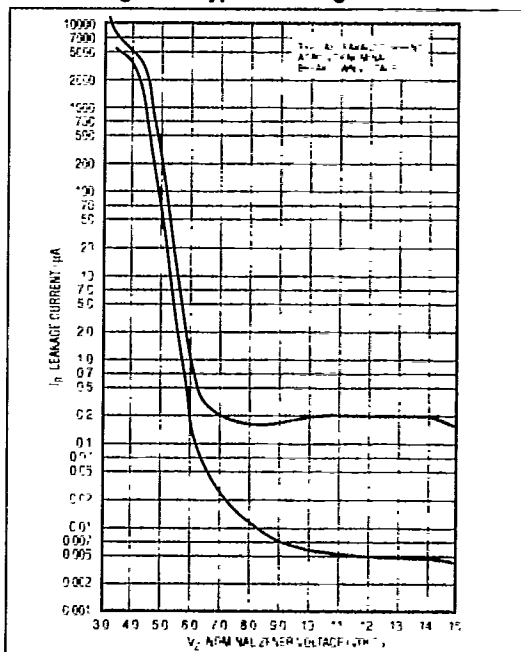


Figure 4: Effect of Zener Current on Zener Impedance

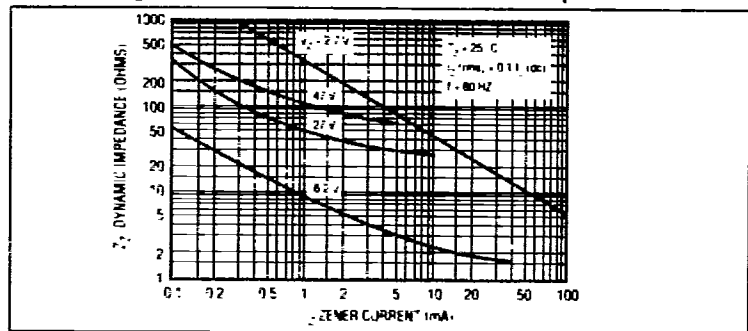


Figure 5: Zener Voltage vs. Zener Current - $V_Z = 1$ thru 6 Volts

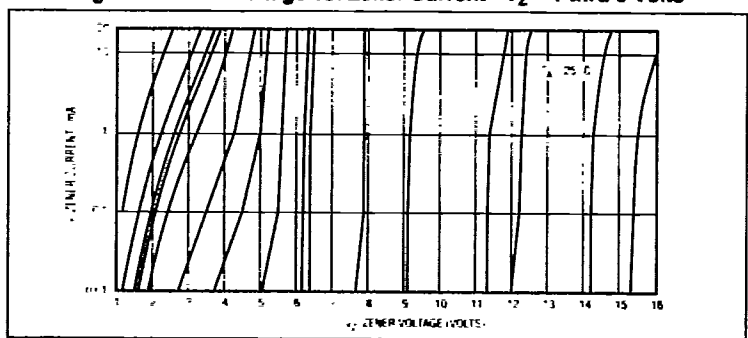


Figure 6: Zener Voltage vs. Zener Current - $V_Z = 15$ thru 30 Volts

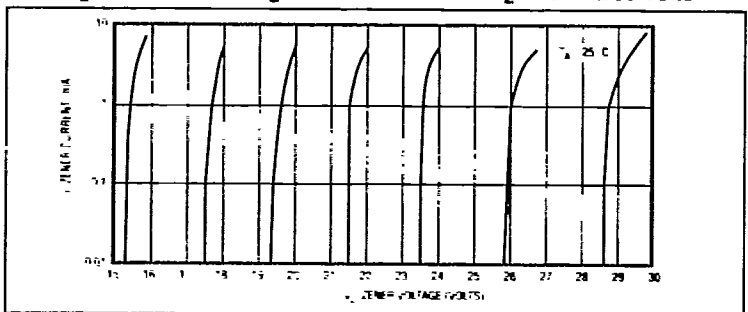
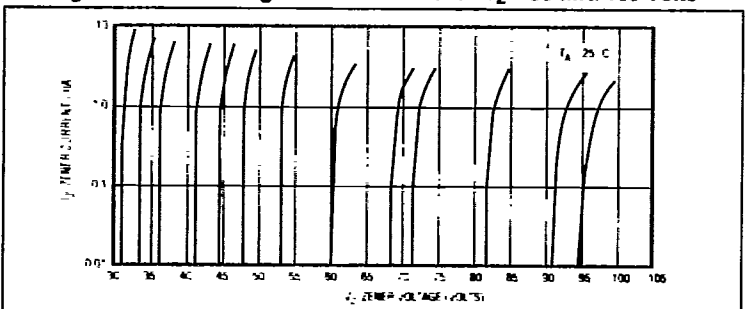


Figure 7: Zener Voltage vs. Zener Current - $V_Z = 30$ thru 105 Volts



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