- **1N5518-1 THRU 1N5546B-1 AVAILABLE IN JAN, JANTX AND JANTXV PER MIL-PRF-19500/437**
- **LOW REVERSE LEAKAGE CHARACTERISTICS**
- **LOW NOISE CHARACTERISTICS**
- **DOUBLE PLUG CONSTRUCTION**
- **METALLURGICALLY BONDED**

1N5518 thru 1N5546D and 1N5518B-1 thru 1N5546B-1

MAXIMUM RATINGS

Junction and 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: 1.1 volts maximum

ELECTRICAL CHARACTERISTICS @ 25°C

JEDEC TYPE NUMBER (NOTE 1)	NOMINAL ZENER VOLTAGE V_Z@ 1_{ZT} (NOTE 2)	ZENER TEST CURRENT 1_{ZT}	MAX. ZENER IMPEDANCE B-C-D SUFFIX Z_{ZT} @ 1_{ZT} (NOTE 3)	MAXIMUM REVERSE LEAKAGE CURRENT I_R (NOTE 4)	V_R = VOLTS NON & A-SUFFIX	V_R = VOLTS B-C-D-SUFFIX	B-C-D SUFFIX MAXIMUM DC ZENER CURRENT 1_{ZM}	B-C-D SUFFIX MAX. NOISE DENSITY @$1_{Z=250\mu}$ A N_D	REGULATION FACTOR ^3V_Z (NOTE 5)	LOW V_Z CURRENT 1_{ZL}
	VOLTS	mAdc	OHMS	μ Adc			mAdc	μ V/ $\sqrt{HZ}$	VOLTS	mAdc
1N5518B	3.3	20	26	5.0	0.90	1.0	115	0.5	0.90	2.0
1N5519B	3.6	20	24	3.0	0.90	1.0	105	0.5	0.90	2.0
1N5520B	3.9	20	22	1.0	0.90	1.0	98	0.5	0.85	2.0
1N5521B	4.3	20	18	3.0	1.0	1.5	88	0.5	0.75	2.0
1N5522B	4.7	10	22	2.0	1.5	2.0	81	0.5	0.60	1.0
1N5523B	5.1	5.0	26	2.0	2.0	2.5	75	0.5	0.65	0.25
1N5524B	5.6	3.0	30	2.0	3.0	3.5	68	1.0	0.30	0.25
1N5525B	6.2	1.0	30	1.0	4.5	5.0	61	1.0	0.20	0.01
1N5526B	6.8	1.0	30	1.0	5.5	6.2	56	1.0	0.10	0.01
1N5527B	7.5	1.0	35	0.5	6.0	6.8	51	2.0	0.05	0.01
1N5528B	8.2	1.0	40	0.5	6.5	7.5	46	4.0	0.05	0.01
1N5529B	9.1	1.0	45	0.1	7.0	8.2	42	4.0	0.05	0.01
1N5530B	10.0	1.0	60	0.05	8.0	9.1	38	4.0	0.10	0.01
1N5531B	11.0	1.0	80	0.05	9.0	9.9	35	5.0	0.20	0.01
1N5532B	12.0	1.0	90	0.05	9.5	10.8	32	10	0.20	0.01
1N5533B	13.0	1.0	90	0.01	10.5	11.7	29	15	0.20	0.01
1N5534B	14.0	1.0	100	0.01	11.5	12.6	27	20	0.20	0.01
1N5535B	15.0	1.0	100	0.01	12.5	13.5	25	20	0.20	0.01
1N5536B	16.0	1.0	100	0.01	13.0	14.4	24	20	0.20	0.01
1N5537B	17.0	1.0	100	0.01	14.0	15.3	22	20	0.20	0.01
1N5538B	18.0	1.0	100	0.01	15.0	16.2	21	20	0.20	0.01
1N5539B	19.0	1.0	100	0.01	16.0	17.1	20	20	0.20	0.01
1N5540B	20.0	1.0	100	0.01	17.0	18.0	19	20	0.20	0.01
1N5541B	22.0	1.0	100	0.01	18.0	19.8	17	20	0.25	0.01
1N5542B	24.0	1.0	100	0.01	20.0	21.6	16	20	0.30	0.01
1N5543B	25.0	1.0	100	0.01	21.0	22.4	15	20	0.35	0.01
1N5544B	28.0	1.0	100	0.01	23.0	25.2	14	20	0.40	0.01
1N5545B	30.0	1.0	100	0.01	24.0	27.0	13	20	0.45	0.01
1N5546B	33.0	1.0	100	0.01	28.0	29.7	12	20	0.50	0.01

NOTE 1 No Suffix type numbers are ±20% with guaranteed limits for only V_Z, I_R, and V_F. Units with "A" suffix are ±10% with guaranteed limits for V_Z, I_R, and V_F. Units with guaranteed limits for all six parameters are indicated by a "B" suffix for ±5.0% units, "C" suffix for ±2.0% and "D" suffix for ±1.0%.

NOTE 2 Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of 25°C ± 3°C.

NOTE 3 Zener impedance is derived by superimposing on 1_{ZT} A 60Hz rms a.c. current equal to 10% of 1_{ZT}.

NOTE 4 Reverse leakage currents are measured at V_R as shown on the table.

NOTE 5 ^{3}VZ is the maximum difference between VZ at lZT and V_Z at I_{ZL} measured with the device junction in thermal equilibrium at the ambient temperature of +25°C ±3°C.

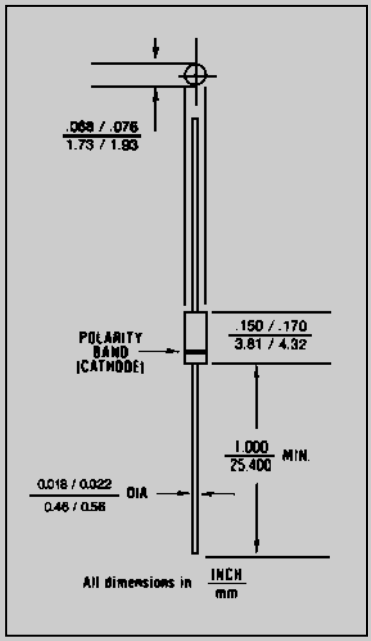

FIGURE 1

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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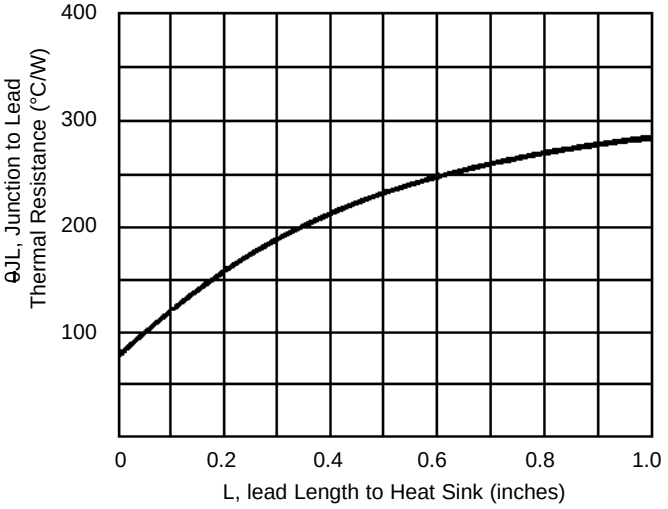

FIGURE 2

TYPICAL THERMAL RESISTANCE

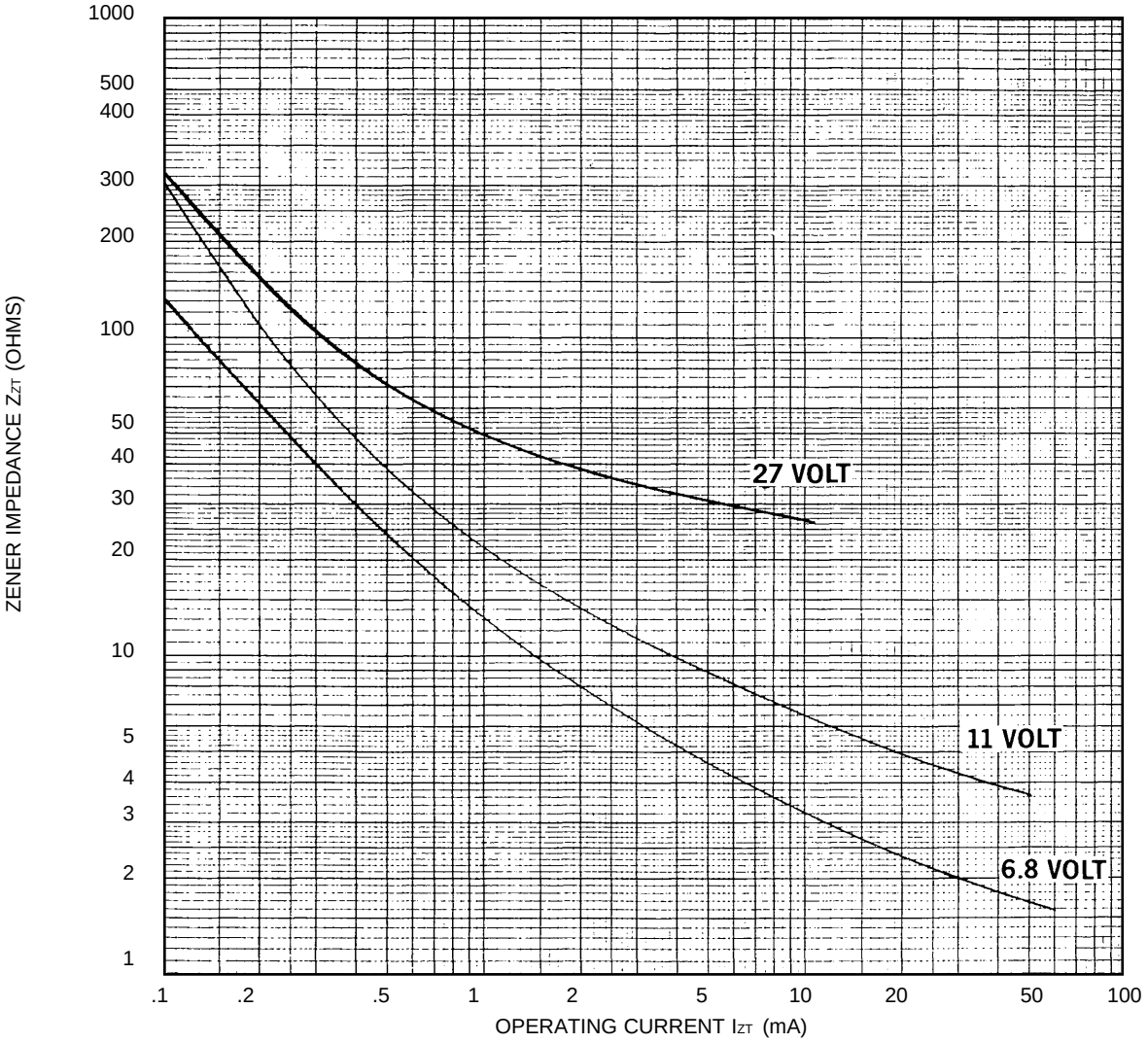

FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT