



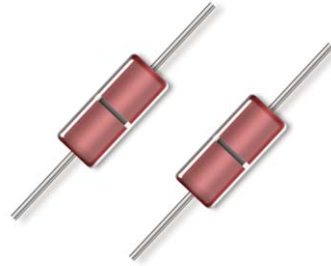
# Low Noise Zener Diode Series

## 1N5518B-1 thru 1N5546B-1



### Features

- 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
- Also available in DO-213 MELF style package.



### 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 Specifications @ +25 °C (Unless Otherwise Specified)

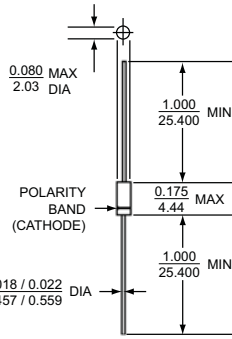
JEDEC TYPE Number (Note 1)	Normal Zener Voltage $V_Z @ I_{ZT}$	Zener Test Current $I_{ZT}$	Maximum Zener Impedance B-C-D Suffix $Z_{ZT} @ I_{ZT}$	Maximum Reverse Leakage Current			B-C-D Suffix Maximum DC Zener Current $I_{ZM}$	B-C-D Suff Maximum Noise Density @ $I_Z=250 \mu A N_D$	Regulation Factor $\Delta V_Z$ (Note 2)	Low $V_Z$ Current $I_{ZL}$
				$I_R$	$V_R = \text{Volts}$					
					$\mu A_{dc}$	NON & A- Suffix				
Volts	mA	Ohms	$\mu A_{dc}$			mAdc	$\mu V / \sqrt{Hz}$	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	0.8	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  $\pm 20\%$  with guaranteed limits for only  $V_Z$ ,  $I_R$ , and  $V_F$ . Units with "A" suffix are  $\pm 10\%$  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  $\pm 5.0\%$  units, "C" suffix for  $\pm 2.0\%$  and "D" suffix for  $\pm 1.0\%$ .

NOTE 2: Delta  $V_Z$  is the maximum difference between  $V_Z @ I_{ZT}$  and  $V_Z @ I_{ZL}$  measured with the device junction in thermal equilibrium.



**Outline Drawing**



All dimensions in  $\frac{\text{INCH}}{\text{mm}}$

**LEADED DESIGN DATA**

**CASE:** Hermetically sealed, DO – 35

**LEAD MATERIAL:** Copper clad steel

**LEAD FINISH:** Tin / Lead

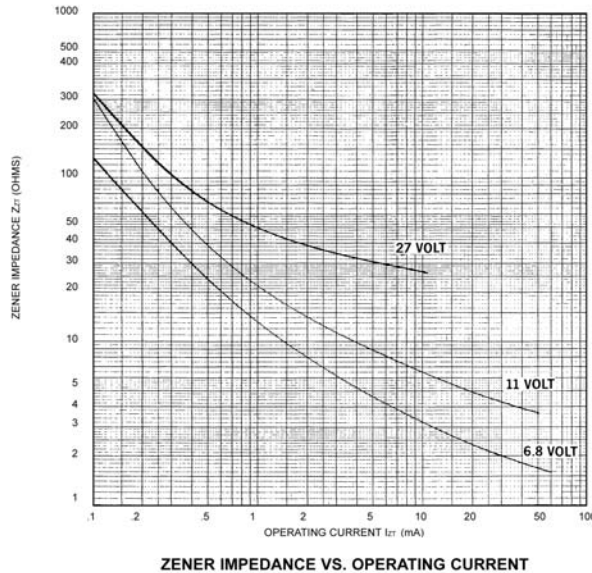
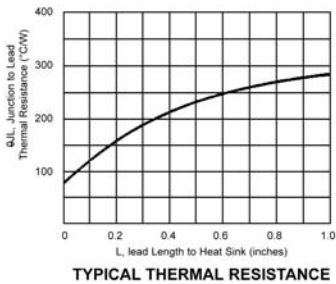
**THERMAL RESISTANCE:** ( $R_{\theta JEC}$ ): 250 °C/W maximum at L = 0.375 in

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

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

**MOUNTING POSITION:** Any

**Graphs**



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