

1N5518B-1 thru 1N5546B-1

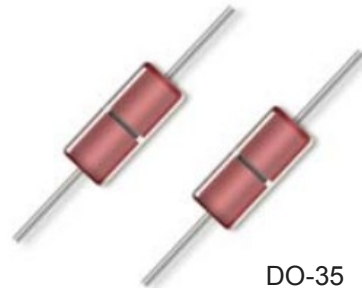


Low Noise Zener Diode Series

Rev. V2

Features

- 1N5518 - 1N5546 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.



DO-35

Electrical Specifications: $T_A = +25^\circ\text{C}$ (unless otherwise specified)

JEDEC TYPE Number (Note1)	Normal Zener Voltage VZ @ IZT	Zener Test Current IZT	Maximum Zener Impedance B-C-D Suffix ZZT @ IZT	Maximum Reverse Leakage Current			B-C-D Suffix Maximum DC Zener Current IZM	B-C-D Suffix Maximum Noise Density @ IZ=250 mA ND	Regulation Factor ΔV_Z (Note 2)	Low VZ Current IZL
				IR	VR = Volts					
	Volts	mA	Ohms	m Adc	NON & A- Suffix	B-C-D-Suffix	mAdc	mV / $\sqrt{\text{Hz}}$	Volts	mAdc
1N5518B-1	3.3	20	26	5.0	0.90	1.0	115	0.5	0.90	2.0
1N5519B-1	3.6	20	24	3.0	0.90	1.0	105	0.5	0.90	2.0
1N5520B-1	3.9	20	22	1.0	0.90	1.0	98	0.5	0.85	2.0
1N5521B-1	4.3	20	18	3.0	1.0	1.5	88	0.5	0.75	2.0
1N5522B-1	4.7	10	22	2.0	1.5	2.0	81	0.5	0.60	1.0
1N5523B-1	5.1	5.0	26	2.0	2.0	2.5	75	0.5	0.65	0.25
1N5524B-1	5.6	3.0	30	2.0	3.0	3.5	68	1.0	0.30	0.25
1N5525B-1	6.2	1.0	30	1.0	4.5	5.0	61	1.0	0.20	0.01
1N5526B-1	6.8	1.0	30	1.0	5.5	6.2	56	1.0	0.10	0.01
1N5527B-1	7.5	1.0	35	0.5	6.0	6.8	51	2.0	0.05	0.01
1N5528B-1	8.2	1.0	40	0.5	6.5	7.5	46	4.0	0.05	0.01
1N5529B-1	9.1	1.0	45	0.1	7.0	8.2	42	4.0	0.05	0.01
1N5530B-1	10.0	1.0	60	0.05	8.0	9.1	38	4.0	0.10	0.01
1N5531B-1	11.0	1.0	80	0.05	9.0	9.9	35	5.0	0.20	0.01
1N5532B-1	12.0	1.0	90	0.05	9.5	0.8	32	10	0.20	0.01
1N5533B-1	13.0	1.0	90	0.01	10.5	11.7	29	15	0.20	0.01
1N5534B-1	14.0	1.0	100	0.01	11.5	12.6	27	20	0.20	0.01
1N5535B-1	15.0	1.0	100	0.01	12.5	13.5	25	20	0.20	0.01

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Electrical Specifications: $T_A = +25^\circ\text{C}$ (unless otherwise specified)

JEDEC TYPE Number (Note1)	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 Suffix Maximum Noise Density @ $I_Z = 250 \text{ mA}$ ND	Regulation Factor ΔV_Z (Note 2)	Low VZ Current I_{ZL}
				IR	VR = Volts					
					m Adc	NON & A- Suffix				
Volts	mA	Ohms	m Adc			mAdc	mV / $\sqrt{\text{Hz}}$	Volts	mAdc	
1N5536B-1	16.0	1.0	100	0.01	13.0	14.4	24	20	0.20	0.01
1N5537B-1	17.0	1.0	100	0.01	14.0	15.3	22	20	0.20	0.01
1N5538B-1	18.0	1.0	100	0.01	15.0	16.2	21	20	0.20	0.01
1N5539B-1	19.0	1.0	100	0.01	16.0	17.1	20	20	0.20	0.01
1N5540B-1	20.0	1.0	100	0.01	17.0	18.0	19	20	0.20	0.01
1N5541B-1	22.0	1.0	100	0.01	18.0	19.8	17	20	0.25	0.01
1N5542B-1	24.0	1.0	100	0.01	20.0	21.6	16	20	0.30	0.01
1N5543B-1	25.0	1.0	100	0.01	21.0	22.4	15	20	0.35	0.01
1N5544B-1	28.0	1.0	100	0.01	23.0	25.2	14	20	0.40	0.01
1N5545B-1	30.0	1.0	100	0.01	24.0	27.0	13	20	0.45	0.01
1N5546B-1	33.0	1.0	100	0.01	28.0	29.7	12	20	0.50	0.01

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%.
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.

Absolute Maximum Ratings

Parameter	Absolute Maximum
Steady State Power Dissipation	500 mW @ +50°C
Forward Voltage	1.1 V @ 200 mA
DC Power Derating	4 mW / °C above +50°C
Operating & Storage Temperature	-65°C to +175°C

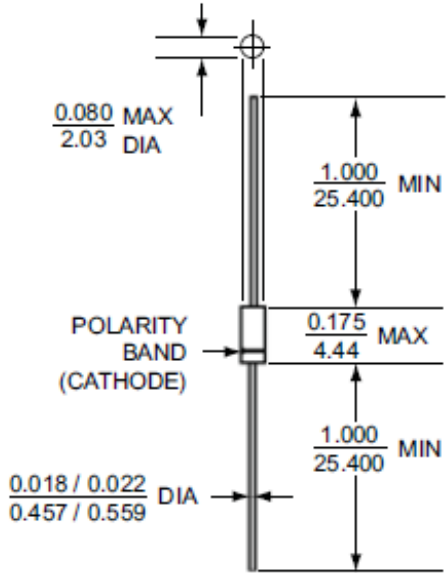
1N5518B-1 thru 1N5546B-1



Low Noise Zener Diode Series

Rev. V2

Outline Drawing



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

DESIGN DATA

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

LEAD MATERIAL: Copper clad steel.

LEAD FINISH: Tin / Lead

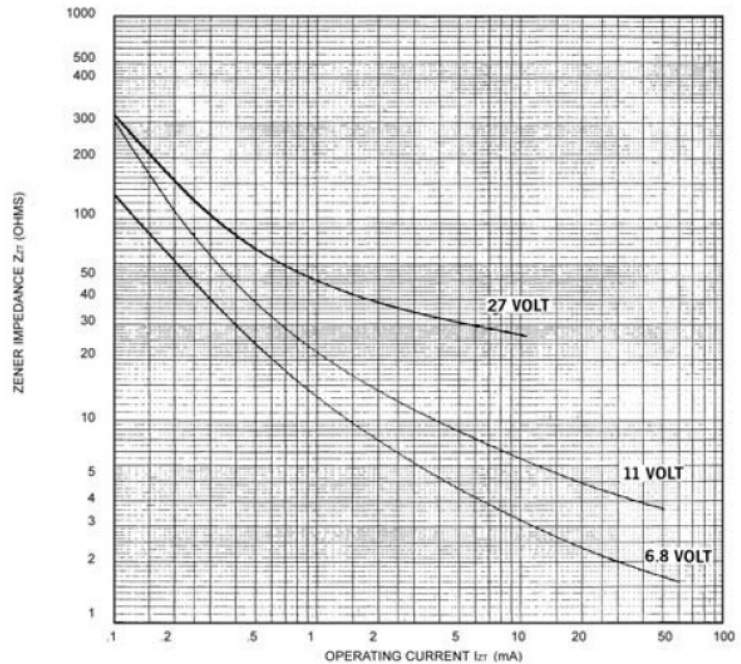
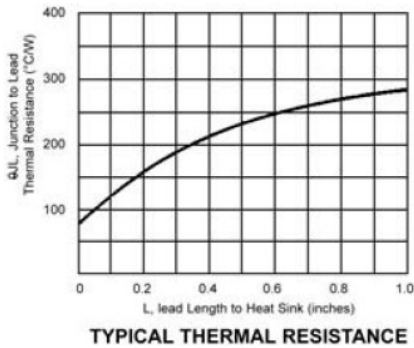
THERMAL RESISTANCE: ($R_{\theta JEC}$): 250 °C/W maximum at L = .375 inch

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

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

MOUNTING POSITION: ANY.

Graphs



ZENER IMPEDANCE VS. OPERATING CURRENT

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