



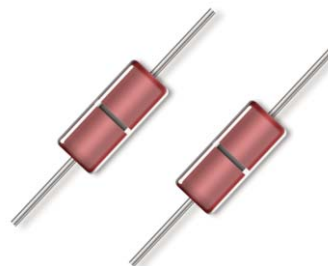
Low Noise Zener Diode Series

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)

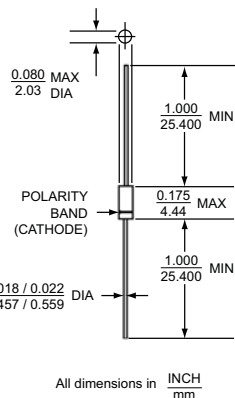
JEDEC TYPE Number (Note 1)	Normal Zener Voltage $V_Z @ I_{ZT}$	Zener Test Current I_{ZT}	Maximum Zener Impedance B-C-D Suffix $Z_{ZT} @ I_{ZT}$	Maximum Reverse Leakage Current			B-C-D Suffix Maximum DC Zener Current I_{ZM}	B-C-D Suffix Maximum Noise Density $@ I_Z = 250 \mu A N_D$	Regulation Factor ΔV_Z (Note 2)	Low V_Z Current I_{ZL}
	Volts	mA	Ohms	I_R μA_{dc}	$V_R = \text{Volts}$		mA _{dc}	$\mu V / \sqrt{Hz}$	Volts	mA _{dc}
					NON & A- Suffix	B-C-D- Suffix				
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



LEADED DESIGN DATA

CASE: Hermetically sealed, DO – 35

LEAD MATERIAL: Copper clad steel

LEAD FINISH: Tin / Lead

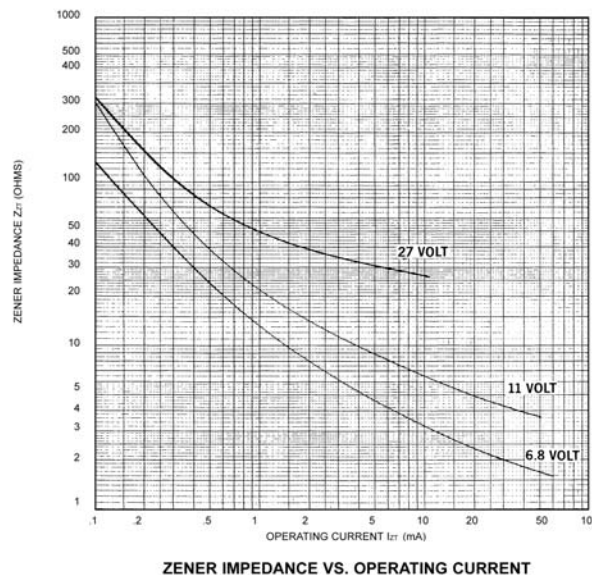
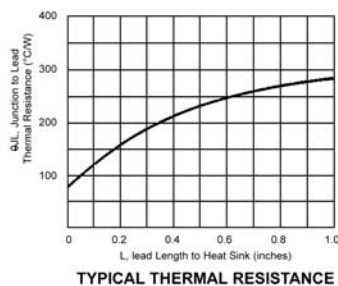
THERMAL RESISTANCE: ($R_{\theta JEC}$): 250 °C/W maximum at L = 0.375 in

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

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

MOUNTING POSITION: Any

Graphs



Aeroflex / Metelics, Inc.

975 Stewart Drive,
Sunnyvale, CA 94085
Tel: (408) 737-8181
Fax: (408) 733-7645

Sales: 888-641-SEMI (7364)

Hi-Rel Components

9 Hampshire Street,
Lawrence, MA 01840
Tel: (603) 641-3800
Fax: (978) 683-3264

www.aeroflex.com/metelicsHRC

www.aeroflex.com/metelics

54 Grenier Field Road,
Londonderry, NH 03053
Tel: (603) 641-3800
Fax: (603)-641-3500

metelics-sales@aeroflex.com

ISO 9001: 2008 certified companies



Aeroflex / Metelics, Inc. reserves the right to make changes to any products and services herein at any time without notice. Consult Aeroflex or an authorized sales representative to verify that the information in this data sheet is current before using this product. Aeroflex does not assume any responsibility or liability arising out of the application or use of any product or service described herein, except as expressly agreed to in writing by Aeroflex; nor does the purchase, lease, or use of a product or service from Aeroflex convey a license under any patent rights, copyrights, trademark rights, or any other of the intellectual rights of Aeroflex or of third parties.

Copyright 2009 Aeroflex / Metelics. All rights reserved.



Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.