

1N5518BUR-1 thru 1N5546BUR-1

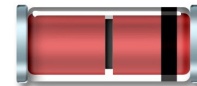
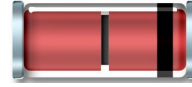


Zener Diode Series, 500 mW

Rev. V4

Features

- Available in JAN, JANTX and JANTXV PER MIL-PRF-19500/437
- Low Reverse Leakage Characteristics
- Leadless Package for Surface Mount
- Metallurgically Bonded
- Also available in DO-35 Axial Lead Glass Package.



Electrical Specifications: $T_A = +25^\circ\text{C}$ (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 ZZT @ 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 V_Z Current I_{ZL}
				IR	VR = Volts					
	Volts	mA	Ohms	μA	NON & A- Suffix	B-C-D-Suffix	mA	$\mu\text{V} / \sqrt{\text{Hz}}$	Volts	mA
1N5518BUR-1	3.3	20	26	5.0	0.90	1.0	115	0.5	0.90	2.0
1N5519BUR-1	3.6	20	24	3.0	0.90	1.0	105	0.5	0.90	2.0
1N5520BUR-1	3.9	20	22	1.0	0.90	1.0	98	0.5	0.85	2.0
1N5521BUR-1	4.3	20	18	3.0	1.0	1.5	88	0.5	0.75	2.0
1N5522BUR-1	4.7	10	22	2.0	1.5	2.0	81	0.5	0.60	1.0
1N5523BUR-1	5.1	5.0	26	2.0	2.0	2.5	75	0.5	0.65	0.25
1N5524BUR-1	5.6	3.0	30	2.0	3.0	3.5	68	1.0	0.30	0.25
1N5525BUR-1	6.2	1.0	30	1.0	4.5	5.0	61	1.0	0.20	0.01
1N5526BUR-1	6.8	1.0	30	1.0	5.5	6.2	56	1.0	0.10	0.01
1N5527BUR-1	7.5	1.0	35	0.5	6.0	6.8	51	2.0	0.05	0.01
1N5528BUR-1	8.2	1.0	40	0.5	6.5	7.5	46	4.0	0.05	0.01
1N5529BUR-1	9.1	1.0	45	0.1	7.0	8.2	42	4.0	0.05	0.01
1N5530BUR-1	10.0	1.0	60	0.05	8.0	9.1	38	4.0	0.10	0.01
1N5531BUR-1	11.0	1.0	80	0.05	9.0	9.9	35	5.0	0.20	0.01
1N5532BUR-1	12.0	1.0	90	0.05	9.5	0.8	32	10	0.20	0.01
1N5533BUR-1	13.0	1.0	90	0.01	10.5	11.7	29	15	0.20	0.01
1N5534BUR-1	14.0	1.0	100	0.01	11.5	12.6	27	20	0.20	0.01
1N5535BUR-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 (Note 1)	Normal Zener Voltage V_Z @ 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					
					μA	NON & A- Suffix				
Volts	mA	Ohms	μA			mA	$\mu\text{V} / \sqrt{\text{Hz}}$	Volts	mA	
1N5536BUR-1	16.0	1.0	100	0.01	13.0	14.4	24	20	0.20	0.01
1N5537BUR-1	17.0	1.0	100	0.01	14.0	15.3	22	20	0.20	0.01
1N5538BUR-1	18.0	1.0	100	0.01	15.0	16.2	21	20	0.20	0.01
1N5539BUR-1	19.0	1.0	100	0.01	16.0	17.1	20	20	0.20	0.01
1N5540BUR-1	20.0	1.0	100	0.01	17.0	18.0	19	20	0.20	0.01
1N5541BUR-1	22.0	1.0	100	0.01	18.0	19.8	17	25	0.25	0.01
1N5542BUR-1	24.0	1.0	100	0.01	20.0	21.6	16	30	0.30	0.01
1N5543BUR-1	25.0	1.0	100	0.01	21.0	22.4	15	35	0.35	0.01
1N5544BUR-1	28.0	1.0	100	0.01	23.0	25.2	14	40	0.40	0.01
1N5545BUR-1	30.0	1.0	100	0.01	24.0	27.0	13	45	0.45	0.01
1N5546BUR-1	33.0	1.0	100	0.01	28.0	29.7	12	50	0.50	0.01

1. No Suffix type numbers are +20% with guaranteed limits for only VZ, IR, and VF. Units with "A" suffix are +10% with guaranteed limits for VZ, IR, and VF. 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. Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of $25^\circ\text{C} \pm 3^\circ\text{C}$.
3. Zener impedance is derived by superimposing on IZT @ 60Hz rms a.c. current equal to 10% of IZT.
4. Reverse leakage currents are measured at VR as shown on the table.
5. ΔV_Z is the maximum difference between VZ at IZT and VZ at IZL measured with the device junction in thermal equilibrium.

Absolute Maximum Ratings

Parameter	Absolute Maximum
DC Power Dissipation	500 mW @ $T_L = +50^\circ\text{C}$
Forward Voltage	1.1 V @ 200 mA
DC Power Derating	10 mW / $^\circ\text{C}$ above $+125^\circ\text{C}$
Junction & Storage Temperature	-65°C to $+175^\circ\text{C}$

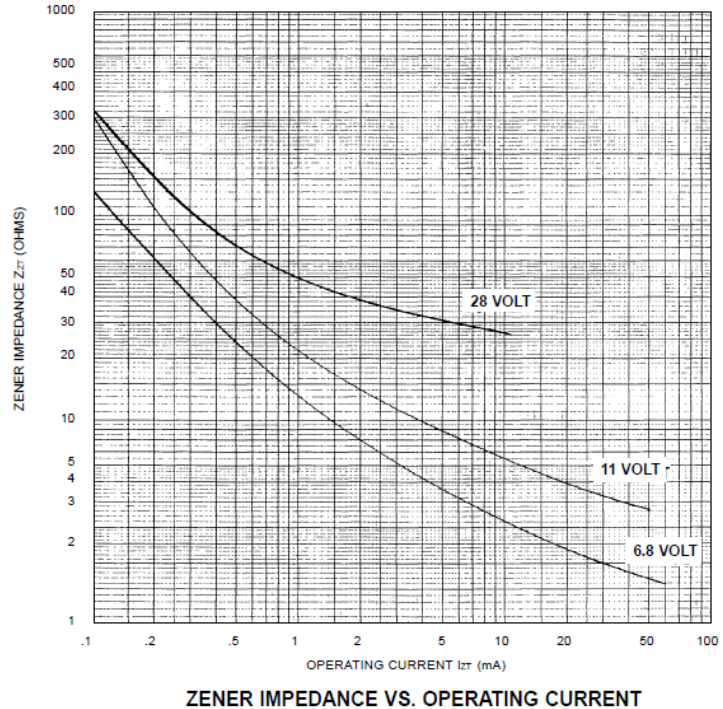
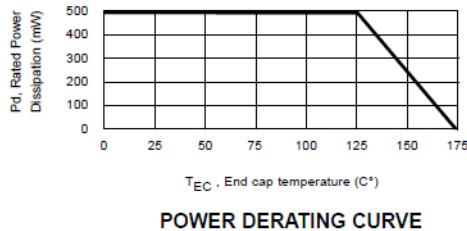
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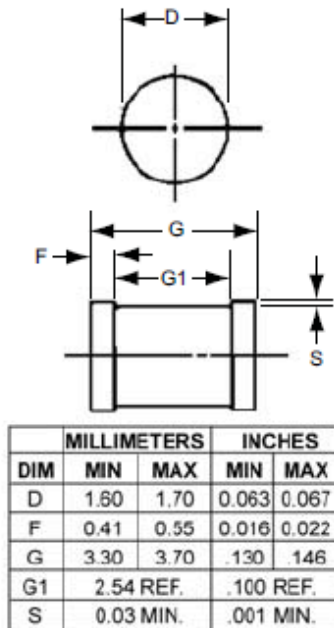
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Graphs



Outline Drawing



DESIGN DATA

CASE: DO-213AA, Hermetically sealed glass case. (MELF, SOD-80, LL34)

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\theta JEC}$): 100 °C/W maximum at L = 0 inch

THERMAL IMPEDANCE: ($Z_{\theta JX}$): 25 °C/W maximum

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

MOUNTING SURFACE SELECTION: The Axial Coefficient of Expansion (COE) of this Device is Approximately +6PPM/°C. The COE of the Mounting Surface System Should Be Selected To Provide A Suitable Match With This Device.

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