

1N821UR-1 thru 1N829UR-1 & 1N821AUR-1 thru 1N829AUR-1

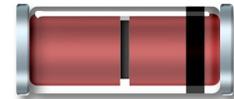
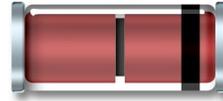


Temperature Compensated Zener Reference Diode Series

Rev. V3

Features

- 1N821UR-1, 1N823UR-1, 1N825UR-1, 1N827UR-1 and 1N829UR-1 available in JAN, JANTX, JANTXV and JANS per MIL-PRF-19500/159
- “A” commercial versions can be up screened
- Metallurgically Bonded, Double Plug Construction
- 500 mW Power Handling
- Glass Surface Mount (MELF) DO-213AA Style Package
- Also Available in a Hermetically sealed axial DO-35



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

JEDEC Type #	Nominal Zener Voltage $V_Z @ I_{ZT}$	Zener Test Current I_{ZT}	Maximum Zener Impedance ¹	Voltage Temperature Stability ΔV_{ZT} max. ²	Effective Temperature Coefficient
	V	mA	Ω	mV	%/ $^\circ\text{C}$
1N821UR-1 1N821AUR-1	5.89 - 6.51	7.5	15 10	96	0.01
1N823UR-1 1N823AUR-1	5.89 - 6.51	7.5	15 10	48	0.005
1N825UR-1 1N825AUR-1	5.89 - 6.51	7.5	15 10	19	0.002
1N826UR-1	6.2 - 6.9	7.5	15	20	0.002
1N827UR-1 1N827AUR-1	5.89 - 6.51	7.5	15 10	9	0.001
1N828UR-1	6.2 - 6.9	7.5	15	10	0.001
1N829UR-1 1N829AUR-1	5.89 - 6.51	7.5	15 10	5	0.0005

1. Zener impedance is derived by superimposing on I_{ZT} A 60Hz rms a.c. current equal to 10% of I_{ZT} .
2. The maximum allowable change observed over the entire temperature range i.e., the diode voltage will not exceed the specified mV at any discrete temperature between the established limits, per JEDEC standard No. 5.

Absolute Maximum Ratings

Parameter	Absolute Maximum
DC Power Dissipation	500 mW @ $T_A = +25^\circ\text{C}$
Power Derating	3.33 mW/ $^\circ\text{C}$ above $T_A = +25^\circ\text{C}$
Operating & Storage Temperature	-55°C to $+175^\circ\text{C}$
Maximum Zener Current ⁽¹⁾	70 mA dc

Note 1: To guarantee voltage temperature stability, it is necessary to maintain the proper $I_Z = 7.5$ mA dc.

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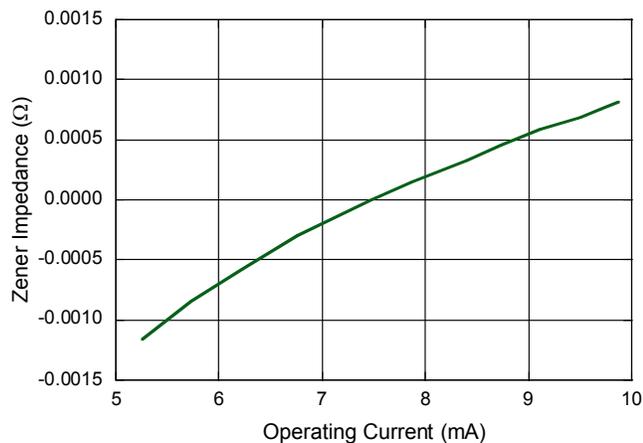


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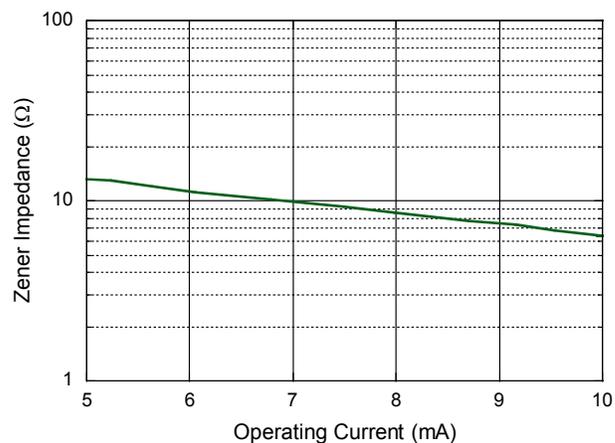
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Typical Performance Curves

Change in Temperature Coefficient



Zener Impedance

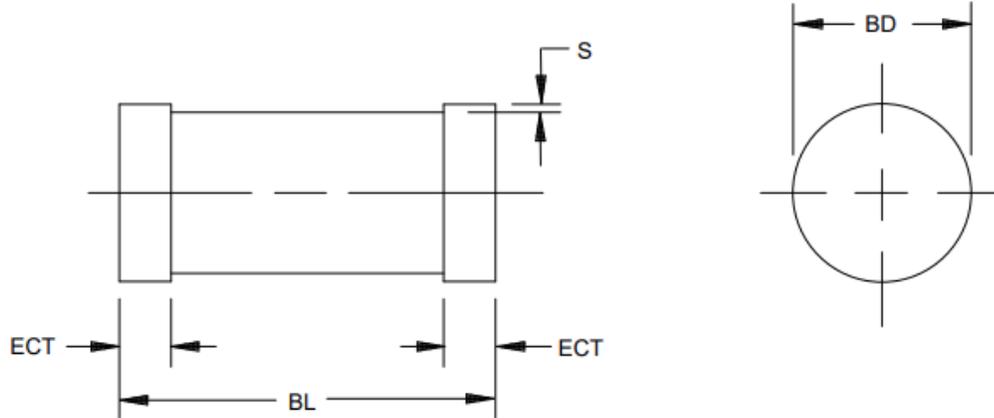


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Outline Drawing (DO-213AA)



Symbol	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	.063	.067	1.60	1.70
BL	.130	.146	3.30	3.71
ECT	.016	.022	0.41	0.56
S	.001 min		0.03 min	

NOTES:

1. Dimensions are in inches. Millimeters are given for general information only.
- * 2. In accordance with ASME Y14.5, diameters are equivalent to ϕx symbology.
- * 3. Dimension S is optional however the glass body diameter shall not exceed endcap diameter.

* FIGURE 2. Physical dimensions of DO-213AA package (1N821UR-1 through 1N829UR-1).

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