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# Temperature Compensated Zener Reference Diode Series

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



## Features

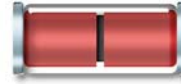
- 1N821UR-1, 1N823UR-1, 1N825UR-1, 1N827UR-1 and 1N829UR-1 and A versions available in JAN, JANTX, JANTXV, JANS
- Metallurgically Bonded, Double Plug Construction

## Maximum Ratings

Operating & Storage Temperature: -65°C to +175°C

DC Power Dissipation: 500mW @ +50°C

Power Derating: 4 mW / °C above +50°C



## REVERSE LEAKAGE CURRENT

$$I_R = 2 \mu A @ 25^\circ C \text{ \& } V_R = 3 Vdc$$

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

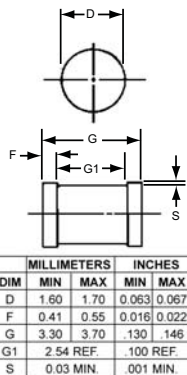
JEDEC TYPE Number  (Note 1)	Normal Zener Voltage $V_Z @ I_{ZT}$	Zener Test Current $I_{ZT}$	Maximum Zener Impedance (Note 1) $Z_{ZT}$	Voltage Temperature Stability ${}^3V_{ZT}$ -55° to +100°C (Note 2)	Effective Temperature Coefficient
	Volts	mA	Ohms	mV	%/°C
1N821UR	5.9–6.5	7.5	15	96	0.01
1N821AUR	5.9–6.5	7.5	10	96	0.01
1N822UR †	5.9–6.5	7.5	15	96	0.01
1N823UR	5.9–6.5	7.5	15	48	0.005
1N823AUR	5.9–6.5	7.5	10	48	0.005
1N824UR †	5.9–6.5	7.5	15	48	0.005
1N825UR	5.9–6.5	7.5	15	19	0.002
1N825AUR	5.9–6.5	7.5	10	19	0.002
1N826UR	6.2–6.9	7.5	15	20	0.002
1N827UR	5.9–6.5	7.5	15	9	0.001
1N827AUR	5.9–6.5	7.5	10	9	0.001
1N828UR	6.2–6.9	7.5	15	10	0.001
1N829UR	5.9–6.5	7.5	15	5	0.0005
1N829AUR	5.9–6.5	7.5	10	5	0.0005

† Double Anode: Electrical Specifications Apply Under Both Bias Polarities.

NOTE 1: Zener impedance is derived by superimposing on  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$ .

NOTE 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.

## Outline Drawing



### LEADED DESIGN DATA

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

**LEAD FINISH:** Tin / Lead

**POLARITY:** Cathode end is banded.

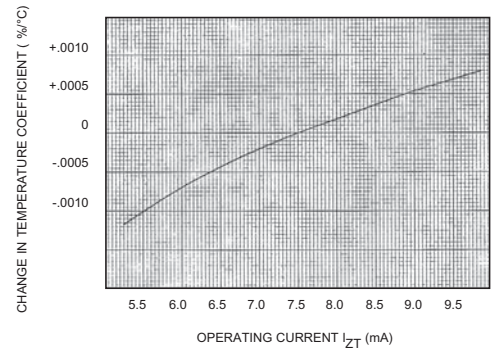
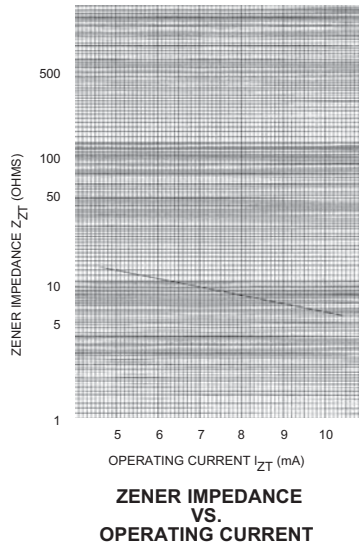
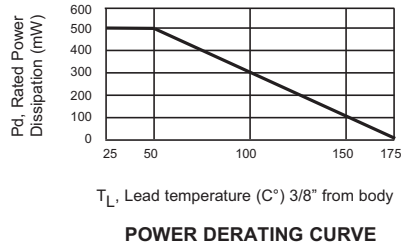
**MOUNTING POSITION:** Any.

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





Graphs



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