

- 1N3821AUR-1 thru 1N3828AUR-1 AVAILABLE IN JAN, JANTX AND JANTXV  
PER MIL-PRF-19500/115
- LEADLESS PACKAGE FOR SURFACE MOUNT
- DOUBLE PLUG CONSTRUCTION
- METALLURGICALLY BONDED

1N3821AUR-1  
thru  
1N3828AUR-1  
and  
CDLL3821 thru CDLL 3828A

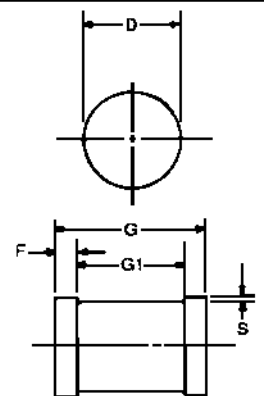
## MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C  
Storage Temperature: -65°C to +175°C  
DC Power Dissipation: 1 watt @  $T_{EC} = 125^{\circ}C$   
Power Derating: 20 mW / °C above  $T_{EC} = 125^{\circ}C$   
Forward Voltage @ 200mA = 1.2 volts maximum

## ELECTRICAL CHARACTERISTICS @ 25°C

CDI TYPE NUMBER (NOTE 1)	NOMINAL ZENER VOLTAGE $V_Z @ 1ZT$ (NOTE 3)	ZENER TEST CURRENT 1ZT	MAXIMUM ZENER IMPEDANCE		MAX. DC ZENER CURRENT 1ZM	MAX. REVERSE LEAKAGE CURRENT $I_R @ V_R$	
			$Z_{ZT} @ 1ZT$	$Z_{ZK} @ 1ZK=1mA$ (NOTE 2)		$\mu A$	VOLTS
			OHMS	OHMS			
CDLL3821	3.3	76	10	400	276	100	1
CDLL3821A	3.3	76	10	400	276	100	1
CDLL3822	3.6	69	10	400	252	75	1
CDLL3822A	3.6	69	10	400	252	75	1
CDLL3823	3.9	64	9	400	238	25	1
CDLL3823A	3.9	64	9	400	238	25	1
CDLL3824	4.3	58	9	400	213	5	1
CDLL3824A	4.3	58	9	400	213	5	1
CDLL3825	4.7	53	8	500	194	5	1
CDLL3825A	4.7	53	8	500	194	5	1
CDLL3826	5.1	49	7	550	178	3	1
CDLL3826A	5.1	49	7	550	178	3	1
CDLL3827	5.6	45	5	600	162	3	2
CDLL3827A	5.6	45	5	600	162	3	2
CDLL3828	6.2	41	2	700	146	3	3
CDLL3828A	6.2	41	2	700	146	3	3

- NOTE 1** No suffix =  $\pm 10\%$  tolerance on nominal Zener voltage, suffix "A" signifies  $\pm 5\%$ , "C" suffix signifies  $\pm 2\%$  and "D" suffix signifies  $\pm 1\%$ .
- NOTE 2** Zener impedance is derived by superimposing on 1ZT A 60Hz rms a.c. current equal to 10% of 1ZT.
- NOTE 3** Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of  $25^{\circ}C \pm 3^{\circ}C$ .



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
D	2.39	2.66	.094	.105
F	0.41	0.55	.016	.022
G	4.80	5.20	.189	.205
G1	4.11 REF.		.159 REF.	
S	0.03 MIN.		.001 MIN.	

FIGURE 1

## DESIGN DATA

**CASE:** DO-213AB, Hermetically sealed glass case. (MELF, LL41)

**LEAD FINISH:** Tin / Lead

**THERMAL RESISTANCE:** ( $R_{\theta JEC}$ ): 50  $^{\circ}C/W$  maximum at L = 0 inch

**THERMAL IMPEDANCE:** ( $Z_{\theta JX}$ ): 15  $^{\circ}C/W$  maximum

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

**MOUNTING POSITION:** Any.

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

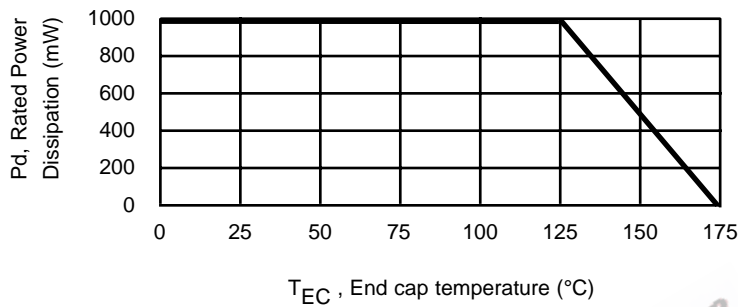


**COMPENSATED DEVICES INCORPORATED**

22 COREY STREET, MELROSE, MASSACHUSETTS 02176  
PHONE (781) 665-1071 FAX (781) 665-7379  
WEBSITE: <http://www.cdi-diodes.com> E-mail: [mail@cdi-diodes.com](mailto:mail@cdi-diodes.com)

# 1N3821AUR-1 thru 1N3828AUR-1 and CDLL3821A thru CDLL3828A

FIGURE 2



POWER DERATING CURVE

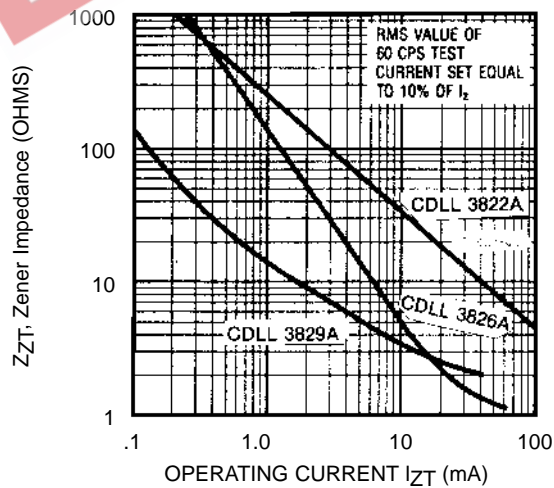


FIGURE 3  
ZENER IMPEDANCE  
VS.  
OPERATING CURRENT