

- 1N3821AUR-1 thru 1N3828AUR-1 AVAILABLE INJAN, JANTX AND JAN-TXV

PER MIL-PRF-19500/115

- LEADLESS PACKAGE FOR SURFACE MOUNT
- DOUBLE PLUG CONSTRUCTION

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 $V_Z @ 1Z_T$ (NOTE 3) | ZENER TEST CURRENT $1Z_T$ | MAXIMUM ZENER IMPEDANCE | | MAX. DC ZENER CURRENT $1Z_M$ | MAX. REVERSE LEAKAGE CURRENT $I_R @ V_R$ | |
|---------------------------------------|---|------------------------------------|-------------------------|---------------------------------|---------------------------------------|--|-------|
| | | | $Z_{ZT} @ 1Z_T$ | $Z_{ZK} @ 1Z_K=1mA$ (NOTE 2) | | μA | 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 $1Z_T$ A 60Hz rms a.c. current equal to 10% of $1Z_T$.

NOTE 3 Zener voltage is measured with the device junction in thermal equilibrium at an ambient temperature of $25^{\circ}C \pm 3^{\circ}C$.

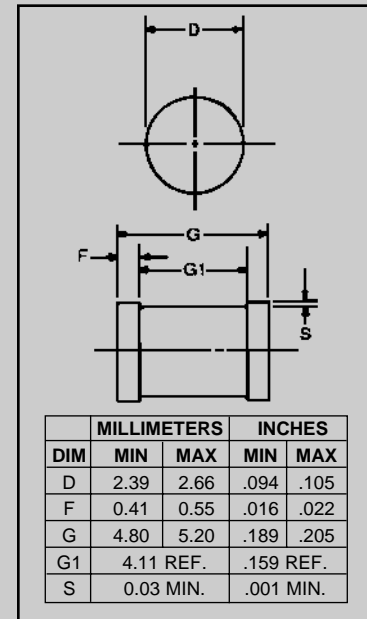


FIGURE 1

DESIGN DATA

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

LEAD FINISH: Tin / Lead

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

THERMAL IMPEDANCE: ($Z_{\theta JX}$): 15 °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/°C. The COE of the Mounting Surface System Should Be Selected To Provide A Suitable Match With This Device.

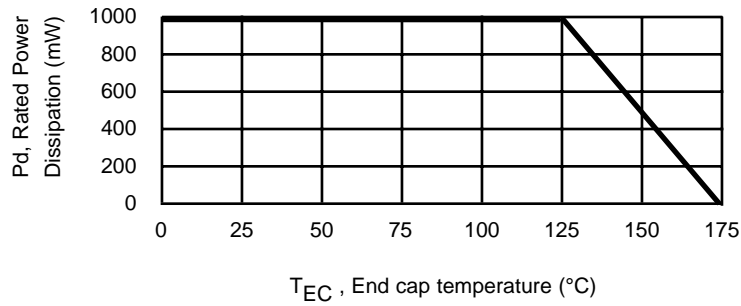


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1N3821AUR-1 thru 1N3828AUR-1 and CDLL3821A thru CDLL3828A

FIGURE 2



POWER DERATING CURVE

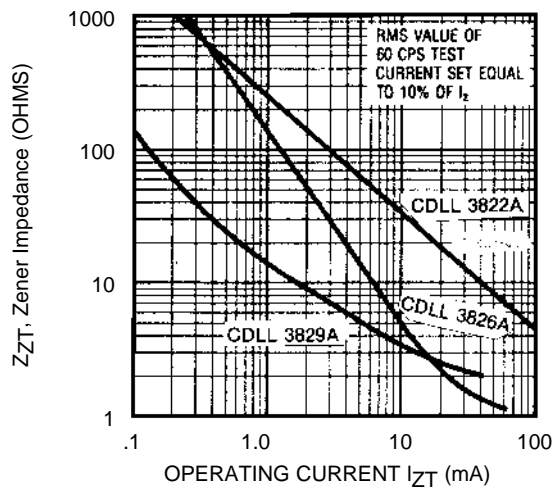


FIGURE 3
ZENER IMPEDANCE
VS.
OPERATING CURRENT