

- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
- LEADLESS PACKAGE FOR SURFACE MOUNT
- 12.8 VOLT NOMINAL ZENER VOLTAGE $\pm 5\%$
- LOW NOISE
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

CDLL4896
thru
CDLL4915A

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
DC Power Dissipation: 500mW @ +50°C
Power Derating: 4 mW / °C above +50°C

REVERSE LEAKAGE CURRENT

$I_R = 15\mu\text{A}$ @ 25°C & $V_R = 8\text{Vdc}$

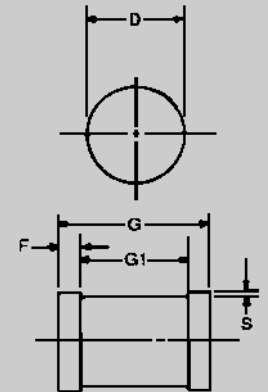
ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| CDI TYPE NUMBER (Note 3) | TEST CURRENT I_{ZT} | VOLTAGE TEMPERATURE STABILITY $\%V_{ZT}$ (Note 2) | TEMPERATURE RANGE | EFFECTIVE TEMPERATURE COEFFICIENT | MAXIMUM DYNAMIC IMPEDANCE Z_{ZT} (Note 1) | MAXIMUM NOISE DENSITY N_D |
|-----------------------------|--------------------------|---|-------------------|-----------------------------------|---|--------------------------------|
| | mA | mV | °C | %/°C | OHMS | $\mu\text{V}/\text{Hz}$ |
| CDLL4896 | 0.5 | 96 | +25 to +100 | 0.01 | 400 | 0.8 |
| CDLL4896A | 0.5 | 198 | -55 to +100 | 0.01 | 400 | 0.8 |
| CDLL4897 | 0.5 | 48 | +25 to +100 | 0.005 | 400 | 0.8 |
| CDLL4897A | 0.5 | 99 | -55 to +100 | 0.005 | 400 | 0.8 |
| CDLL4898 | 0.5 | 19 | +25 to +100 | 0.002 | 400 | 0.8 |
| CDLL4898A | 0.5 | 40 | -55 to +100 | 0.002 | 400 | 0.8 |
| CDLL4899 | 0.5 | 10 | +25 to +100 | 0.001 | 400 | 0.8 |
| CDLL4899A | 0.5 | 20 | -55 to +100 | 0.001 | 400 | 0.8 |
| CDLL4900 | 1.0 | 96 | +25 to +100 | 0.01 | 200 | 0.4 |
| CDLL4900A | 1.0 | 198 | -55 to +100 | 0.01 | 200 | 0.4 |
| CDLL4901 | 1.0 | 48 | +25 to +100 | 0.005 | 200 | 0.4 |
| CDLL4901A | 1.0 | 99 | -55 to +100 | 0.005 | 200 | 0.4 |
| CDLL4902 | 1.0 | 19 | +25 to +100 | 0.002 | 200 | 0.4 |
| CDLL4902A | 1.0 | 40 | -55 to +100 | 0.002 | 200 | 0.4 |
| CDLL4903 | 1.0 | 10 | +25 to +100 | 0.001 | 200 | 0.4 |
| CDLL4903A | 1.0 | 20 | -55 to +100 | 0.001 | 200 | 0.4 |
| CDLL4904 | 2.0 | 96 | +25 to +100 | 0.01 | 100 | 0.25 |
| CDLL4904A | 2.0 | 198 | -55 to +100 | 0.01 | 100 | 0.25 |
| CDLL4905 | 2.0 | 48 | +25 to +100 | 0.005 | 100 | 0.25 |
| CDLL4905A | 2.0 | 99 | -55 to +100 | 0.005 | 100 | 0.25 |
| CDLL4906 | 2.0 | 19 | +25 to +100 | 0.002 | 100 | 0.25 |
| CDLL4906A | 2.0 | 40 | -55 to +100 | 0.002 | 100 | 0.25 |
| CDLL4907 | 2.0 | 10 | +25 to +100 | 0.001 | 100 | 0.25 |
| CDLL4907A | 2.0 | 20 | -55 to +100 | 0.001 | 100 | 0.25 |
| CDLL4908 | 4.0 | 96 | +25 to +100 | 0.01 | 50 | 0.22 |
| CDLL4908A | 4.0 | 198 | -55 to +100 | 0.01 | 50 | 0.22 |
| CDLL4909 | 4.0 | 48 | +25 to +100 | 0.005 | 50 | 0.22 |
| CDLL4909A | 4.0 | 99 | -55 to +100 | 0.005 | 50 | 0.22 |
| CDLL4910 | 4.0 | 19 | +25 to +100 | 0.002 | 50 | 0.22 |
| CDLL4910A | 4.0 | 40 | -55 to +100 | 0.002 | 50 | 0.22 |
| CDLL4911 | 4.0 | 10 | +25 to +100 | 0.001 | 50 | 0.22 |
| CDLL4911A | 4.0 | 20 | -55 to +100 | 0.001 | 50 | 0.22 |
| CDLL4912 | 7.5 | 96 | +25 to +100 | 0.01 | 25 | 0.20 |
| CDLL4912A | 7.5 | 198 | -55 to +100 | 0.01 | 25 | 0.20 |
| CDLL4913 | 7.5 | 48 | +25 to +100 | 0.005 | 25 | 0.20 |
| CDLL4913A | 7.5 | 99 | -55 to +100 | 0.005 | 25 | 0.20 |
| CDLL4914 | 7.5 | 19 | +25 to +100 | 0.002 | 25 | 0.20 |
| CDLL4914A | 7.5 | 40 | -55 to +100 | 0.002 | 25 | 0.20 |
| CDLL4915 | 7.5 | 10 | +25 to +100 | 0.001 | 25 | 0.20 |
| CDLL4915A | 7.5 | 20 | -55 to +100 | 0.001 | 25 | 0.20 |

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, per JEDEC standard No.5.

NOTE 3 Zener voltage range equals 12.8 volts $\pm 5\%$.



| DIM | MILLIMETERS | | INCHES | |
|-----|-------------|------|-----------|-------|
| | MIN | MAX | MIN | MAX |
| D | 1.60 | 1.70 | 0.063 | 0.067 |
| F | 0.41 | 0.55 | 0.016 | 0.022 |
| G | 3.30 | 3.70 | .130 | .146 |
| G1 | 2.54 REF. | | .100 REF. | |
| S | 0.03 MIN. | | .001 MIN. | |

FIGURE 1

DESIGN DATA

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

LEAD FINISH: Tin / Lead

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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CDLL4896 thru CDLL4915A

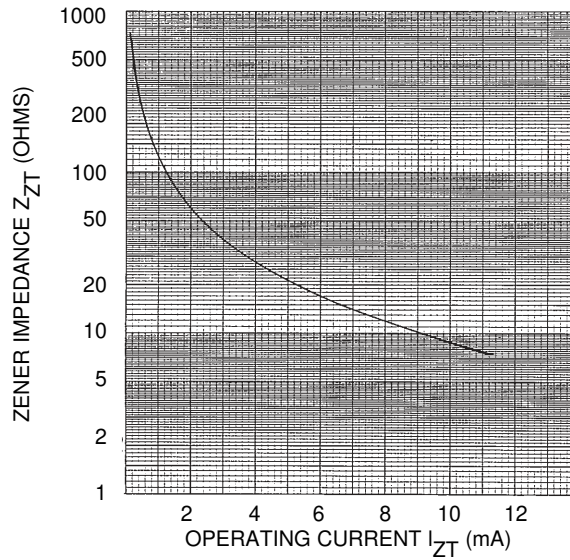


FIGURE 2

ZENER IMPEDANCE VS. OPERATING CURRENT

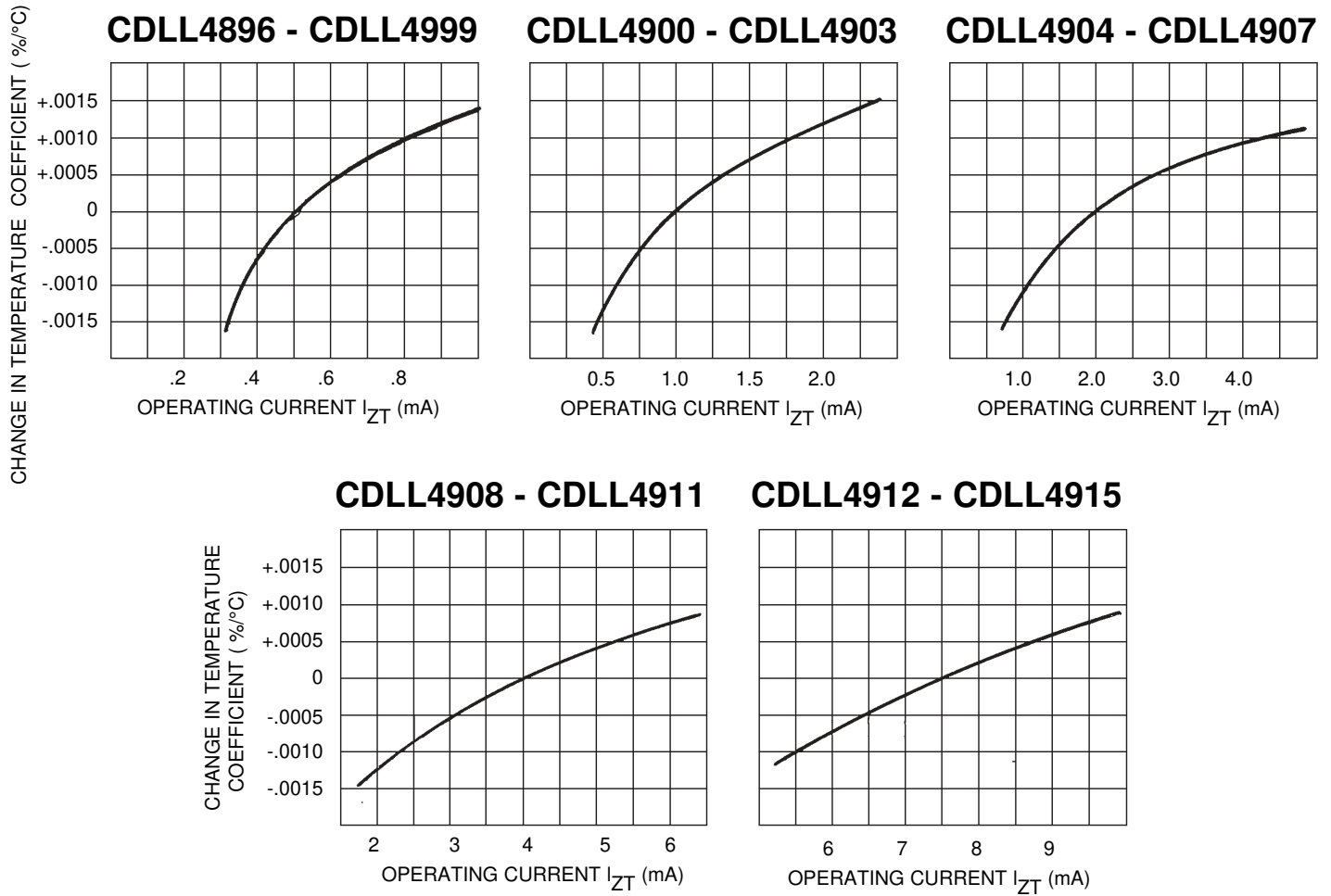


FIGURE 3

TYPICAL CHANGE OF TEMPERATURE COEFFICIENT WITH CHANGE IN OPERATING CURRENT