

- TEMPERATURE COMPENSATED ZENER REFERENCE DIODES
- LEADLESS PACKAGE FOR SURFACE MOUNT
- 8.5 VOLT NOMINAL ZENER VOLTAGE $\pm 5\%$
- LOW CURRENT RANGE: 0.5 TO 1.0 mA
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

CDLL4775
thru
CDLL4784A

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

$I_R = 10\mu A$ @ 25°C & $V_R = 6V_{dc}$

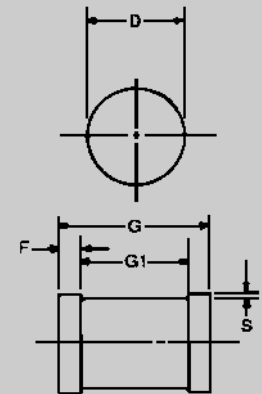
ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| CDI TYPE NUMBER | ZENNER VOLTAGE | ZENER TEST CURRENT | MAXIMUM DYNAMIC IMPEDANCE | VOLTAGE TEMPERATURE STABILITY | TEMPERATURE RANGE | EFFECTIVE TEMPERATURE COEFFICIENT |
|-----------------|----------------|--------------------|---------------------------|-----------------------------------|-------------------|-----------------------------------|
| | $V_Z @ 1 Z_T$ | I_{ZT} | Z_{ZT} | $\frac{\Delta V_Z}{V_Z \Delta T}$ | | |
| | (Note 3) | | (Note 1) | MAXIMUM (Note 2) | | |
| | VOLTS | mA | OHMS | mV | °C | % / °C |
| CDLL4775 | 8.5 | 0.5 | 200 | 64 | 0 to + 75 | 0.01 |
| CDLL4775A | 8.5 | 0.5 | 200 | 132 | -55 to + 100 | 0.01 |
| CDLL4776 | 8.5 | 0.5 | 200 | 32 | 0 to + 75 | 0.005 |
| CDLL4776A | 8.5 | 0.5 | 200 | 66 | -55 to + 100 | 0.005 |
| CDLL4777 | 8.5 | 0.5 | 200 | 13 | 0 to + 75 | 0.002 |
| CDLL4777A | 8.5 | 0.5 | 200 | 26 | -55 to + 100 | 0.002 |
| CDLL4778 | 8.5 | 0.5 | 200 | 6.4 | 0 to + 75 | 0.001 |
| CDLL4778A | 8.5 | 0.5 | 200 | 13 | -55 to + 100 | 0.001 |
| CDLL4779 | 8.5 | 0.5 | 200 | 3.2 | 0 to + 75 | 0.0005 |
| CDLL4779A | 8.5 | 0.5 | 200 | 6.6 | -55 to + 100 | 0.0005 |
| CDLL4780 | 8.5 | 1.0 | 100 | 64 | 0 to + 75 | 0.01 |
| CDLL4780A | 8.5 | 1.0 | 100 | 132 | -55 to + 100 | 0.01 |
| CDLL4781 | 8.5 | 1.0 | 100 | 32 | 0 to + 75 | 0.005 |
| CDLL4781A | 8.5 | 1.0 | 100 | 66 | -55 to + 100 | 0.005 |
| CDLL4782 | 8.5 | 1.0 | 100 | 13 | 0 to + 75 | 0.002 |
| CDLL4782A | 8.5 | 1.0 | 100 | 26 | -55 to + 100 | 0.002 |
| CDLL4783 | 8.5 | 1.0 | 100 | 6.4 | 0 to + 75 | 0.01 |
| CDLL4783A | 8.5 | 1.0 | 100 | 13 | -55 to + 100 | 0.01 |
| CDLL4784 | 8.5 | 1.0 | 100 | 3.2 | 0 to + 75 | 0.0005 |
| CDLL4784A | 8.5 | 1.0 | 100 | 6.6 | -55 to + 100 | 0.0005 |

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.

NOTE 3 Zener voltage range equals 8.5 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.



CDLL4775 thru CDLL4784A

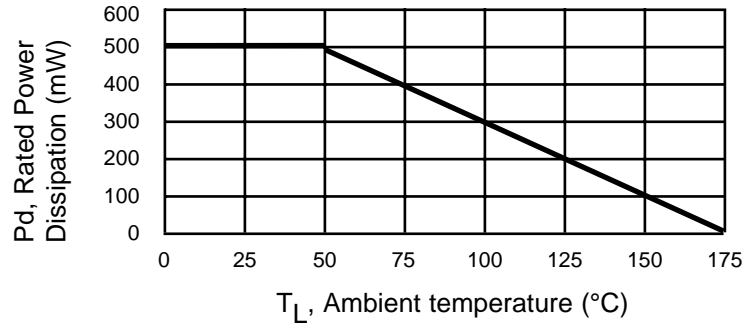


FIGURE 2
POWER DERATING CURVE

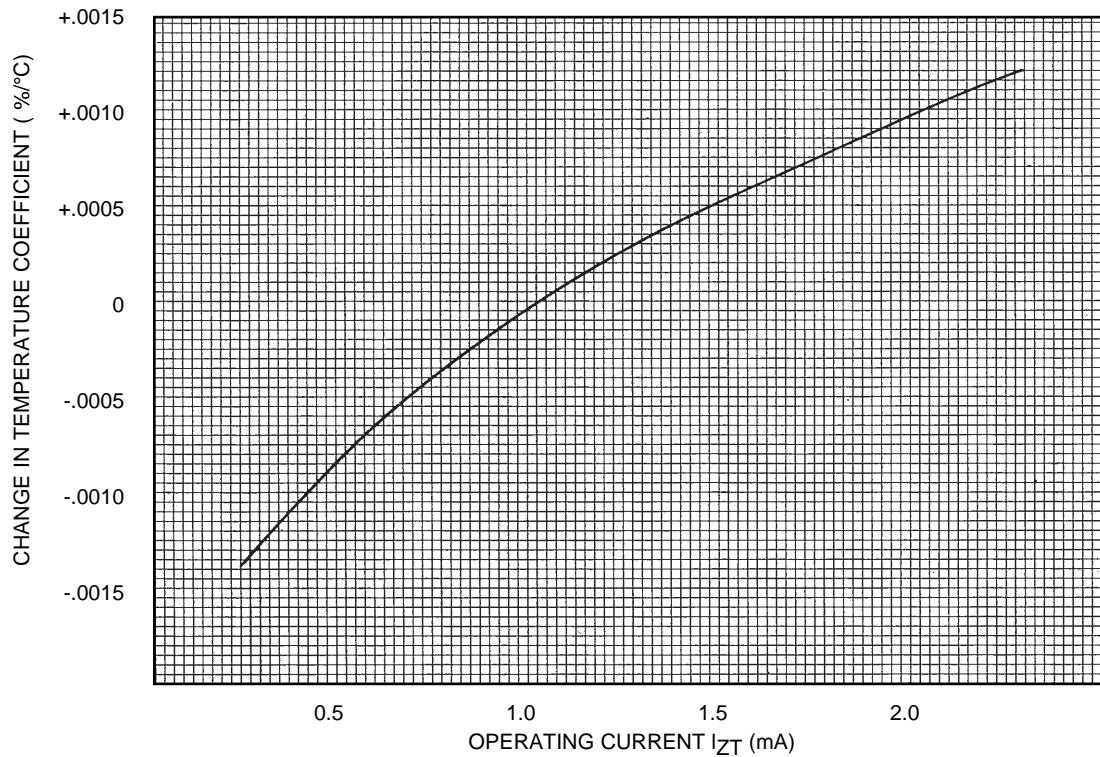


FIGURE 3
TYPICAL CHANGE OF TEMPERATURE COEFFICIENT
WITH CHANGE IN OPERATING CURRENT