

- 1 WATT ZENER DIODES
- LEADLESS PACKAGE FOR SURFACE MOUNT
- DOUBLE PLUG CONSTRUCTION
- METALLURGICALLY BONDED

**CDLL4728  
thru  
CDLL4764A  
and  
CDLL1W110**

### MAXIMUM RATINGS

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

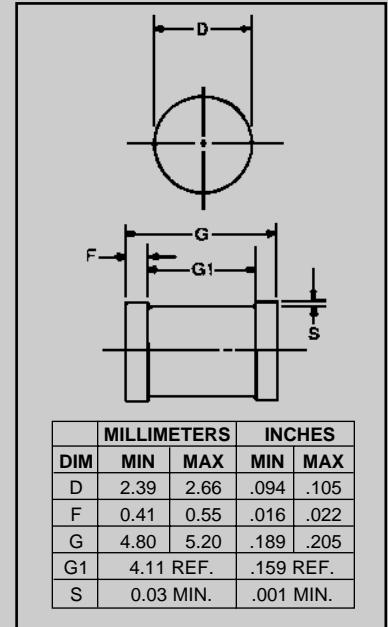
### ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified.

| CDI TYPE NUMBER | NOMINAL ZENER VOLTAGE $V_Z$ | TEST CURRENT $I_{ZT}$ | MAXIMUM ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ | MAXIMUM REVERSE CURRENT $I_R @ V_R$ | TEST VOLTAGE $V_R$ | MAXIMUM KNEE IMPEDANCE $Z_{ZK} @ I_{ZK}$ | TEST CURRENT $I_{ZK}$ |
|-----------------|-----------------------------|-----------------------|---|-------------------------------------|--------------------|--|-----------------------|
|                 | (Note 1&3)<br>VOLTS         | mA                    | (Note 2)<br>OHMS                          | $\mu A$                             | VOLTS              | (Note 2)<br>OHMS                         | mA                    |
| CDLL4728A       | 3.3                         | 76                    | 10  | 100                                 | 1                  | 400                                      | 1.0                   |
| CDLL4729A       | 3.6                         | 69                    | 10  | 100                                 | 1                  | 400                                      | 1.0                   |
| CDLL4730A       | 3.9                         | 64                    | 9   | 100                                 | 1                  | 400                                      | 1.0                   |
| CDLL4731A       | 4.3                         | 58                    | 9   | 10                                  | 1                  | 400                                      | 1.0                   |
| CDLL4732A       | 4.7                         | 53                    | 8   | 10                                  | 1                  | 500                                      | 1.0                   |
| CDLL4733A       | 5.1                         | 49                    | 7   | 5                                   | 1                  | 550                                      | 1.0                   |
| CDLL4734A       | 5.6                         | 45                    | 5   | 5                                   | 2                  | 600                                      | 1.0                   |
| CDLL4735A       | 6.2                         | 41                    | 2   | 5                                   | 3                  | 700                                      | 1.0                   |
| CDLL4736A       | 6.8                         | 37                    | 3.5                                       | 3                                   | 4                  | 700                                      | 1.0                   |
| CDLL4737A       | 7.5                         | 34                    | 4.0                                       | 3                                   | 5                  | 700                                      | 0.5                   |
| CDLL4738A       | 8.2                         | 31                    | 4.5                                       | 3                                   | 6                  | 700                                      | 0.5                   |
| CDLL4739A       | 9.1                         | 28                    | 5.0                                       | 3                                   | 7                  | 700                                      | 0.5                   |
| CDLL4740A       | 10                          | 25                    | 7   | 3                                   | 7.6                | 700                                      | 0.25                  |
| CDLL4741A       | 11                          | 23                    | 8   | 2                                   | 8.4                | 700                                      | 0.25                  |
| CDLL4742A       | 12                          | 21                    | 9   | 1                                   | 9.1                | 700                                      | 0.25                  |
| CDLL4743A       | 13                          | 29                    | 10  | 0.5                                 | 9.9                | 700                                      | 0.25                  |
| CDLL4744A       | 15                          | 17                    | 14  | 0.1                                 | 11.4               | 700                                      | 0.25                  |
| CDLL4745A       | 16                          | 15.5                  | 16  | 0.1                                 | 12.2               | 700                                      | 0.25                  |
| CDLL4746A       | 18                          | 14                    | 20  | 0.1                                 | 13.7               | 750                                      | 0.25                  |
| CDLL4747A       | 20                          | 12.5                  | 22  | 0.1                                 | 15.2               | 750                                      | 0.25                  |
| CDLL4748A       | 22                          | 11.5                  | 23  | 0.1                                 | 16.7               | 750                                      | 0.25                  |
| CDLL4749A       | 24                          | 10.5                  | 25  | 0.1                                 | 18.2               | 750                                      | 0.25                  |
| CDLL4750A       | 27                          | 9.5                   | 35  | 0.1                                 | 20.6               | 750                                      | 0.25                  |
| CDLL4751A       | 30                          | 8.5                   | 40  | 0.1                                 | 22.8               | 1000                                     | 0.25                  |
| CDLL4752A       | 33                          | 7.5                   | 45  | 0.1                                 | 25.1               | 1000                                     | 0.25                  |
| CDLL4753A       | 36                          | 7.0                   | 50  | 0.1                                 | 27.4               | 1000                                     | 0.25                  |
| CDLL4754A       | 39                          | 6.5                   | 60  | 0.1                                 | 29.7               | 1000                                     | 0.25                  |
| CDLL4755A       | 43                          | 6.0                   | 70  | 0.1                                 | 32.7               | 1500                                     | 0.25                  |
| CDLL4756A       | 47                          | 5.5                   | 80  | 0.1                                 | 35.8               | 1500                                     | 0.25                  |
| CDLL4757A       | 51                          | 5.0                   | 95  | 0.1                                 | 38.8               | 1500                                     | 0.25                  |
| CDLL4758A       | 56                          | 4.5                   | 110                                       | 0.1                                 | 42.6               | 2000                                     | 0.25                  |
| CDLL4759A       | 62                          | 4.0                   | 125                                       | 0.1                                 | 47.1               | 2000                                     | 0.25                  |
| CDLL4760A       | 68                          | 3.7                   | 150                                       | 0.1                                 | 51.7               | 2000                                     | 0.25                  |
| CDLL4761A       | 75                          | 3.3                   | 175                                       | 0.1                                 | 56.0               | 2000                                     | 0.25                  |
| CDLL4762A       | 82                          | 3.0                   | 200                                       | 0.1                                 | 62.2               | 3000                                     | 0.25                  |
| CDLL4763A       | 91                          | 2.8                   | 250                                       | 0.1                                 | 69.2               | 3000                                     | 0.25                  |
| CDLL4764A       | 100                         | 2.5                   | 350                                       | 0.1                                 | 76.0               | 3000                                     | 0.25                  |
| CDLL1W110A      | 110                         | 2.3                   | 450                                       | 0.1                                 | 83.6               | 4000                                     | 0.25                  |

**NOTE 1** "A" suffix =  $\pm 5\%$ , no suffix =  $\pm 10\%$ , "C" SUFFIX =  $\pm 2\%$  and "D" suffix =  $\pm 1\%$ .

**NOTE 2** Zener impedance is derived by superimposing on  $I_{ZT}$  A 60Hz rms a.c. current equal to 10% of  $I_{ZT}$  or  $I_{ZK}$ .

**NOTE 3** Nominal 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:** ( $R_{\theta JC}$ ):  
100 °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 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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# CDLL4728 thru CDLL4764A and CDLL1W110

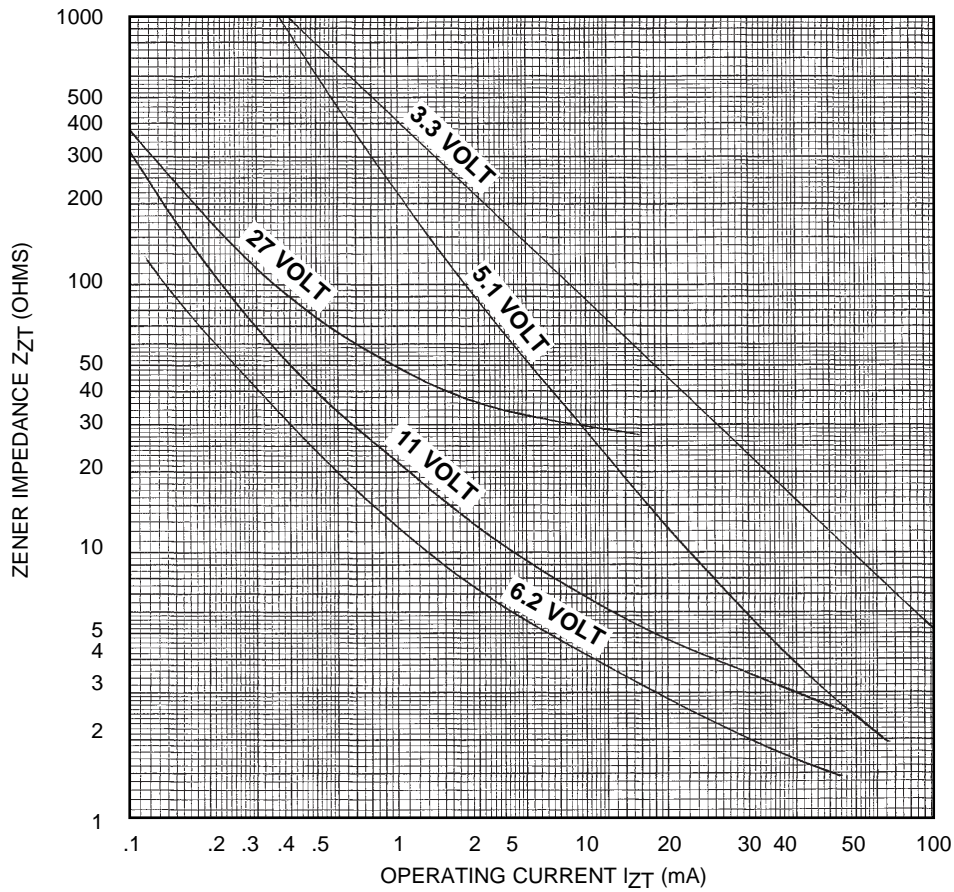


FIGURE 3

ZENER IMPEDANCE VS. OPERATING CURRENT