



Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

**DL4728  
THRU  
DL4761**

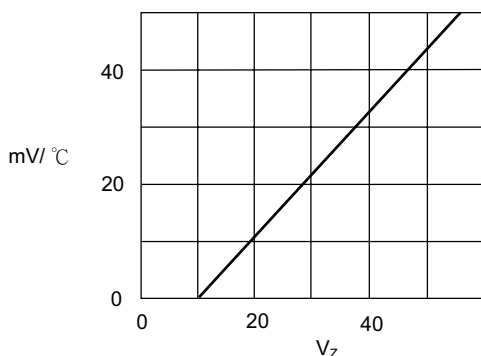
## Features

- High Reliability
- Very Sharp Reverse Characteristic
- Low Reverse Current Level
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Moisture Sensitivity Level 1

## Maximum Ratings

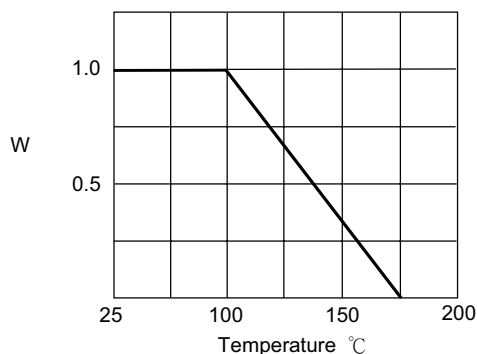
- Operating Temperature: -65 °C to +175 °C
- Storage Temperature: -65 °C to +175 °C
- 1 Watt DC Power Dissipation
- Maximum Thermal Resistance: 100K/W Junction To Ambient
- Test Conditions:  $I = 9.5\text{mm}(3/8")$ ,  $T_L = \text{constant}$
- Maximum Forward Voltage @ 200mA: 1.2 Volts

Figure 1 - Typical Temperature Coefficient



Typical Temperature Coefficient (mV/ °C) – versus – Zener Voltage ( $V_z$ )

Figure 2 - Derating Curve

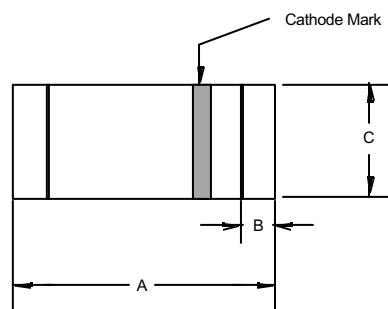


Power Dissipation (W) - Versus - Temperature °C

Notes: 1. Lead in Glass Exemption Applied, see EU Directive Annex Notes 5.

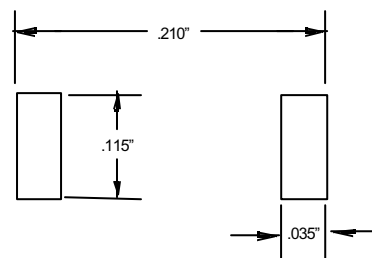
**1 Watt  
Zener Diode  
3.3 to 75 Volts**

## GLASS MELF



| DIM | INCHES |      | MM   |      | NOTE    |
|-----|--------|------|------|------|---------|
|     | MIN    | MAX  | MIN  | MAX  |         |
| A   | .190   | .205 | 4.80 | 5.20 |         |
| B   | ---    | .022 | ---  | .55  | Nominal |
| C   | .095   | .105 | 2.40 | 2.67 | Ø       |

## SUGGESTED SOLDER PAD LAYOUT



# DL4728 thru DL4761

## ELECTRICAL CHARACTERISTICS @25°C

| MCC<br>PART<br>NUMBER | ZENER<br>VOLTAGE<br>V <sub>Z</sub><br><br>VOLTS | TEST<br>CURRENT<br>I <sub>ZT</sub><br><br>mA | MAXIMUM<br>DYNAMIC<br>IMPEDANCE<br>Z <sub>ZT</sub> @ I <sub>ZT</sub><br><br>OHMS | MAXIMUM<br>REVERSE<br>CURRENT<br>I <sub>R</sub> @ V <sub>R</sub><br><br>μA | TEST<br>VOLTAGE<br>V <sub>R</sub><br><br>VOLTS | MAXIMUM<br>REGULATOR<br>CURRENT<br>I <sub>ZM</sub><br>TA = 50°C<br>mA | MAXIMUM<br>KNEE<br>IMPEDANCE<br>Z <sub>ZK</sub> @ I <sub>ZK</sub><br><br>OHMS | TEST<br>CURRENT<br>I <sub>ZK</sub><br><br>mA | MAXIMUM<br>SURGE<br>CURRENT<br>I <sub>S</sub><br><br>mA |
|-----------------------|---|--|--|--|--|---|---|--|---|
| DL4728                | 3.3   | 76   | 10   | 100  | 1  | 276   | 400   | 1.0  | 1280  |
| DL4729                | 3.6   | 69   | 10   | 100  | 1  | 252   | 400   | 1.0  | 1260  |
| DL4730                | 3.9   | 64   | 9  | 50   | 1  | 234   | 400   | 1.0  | 1190  |
| DL4731                | 4.3   | 58   | 9  | 10   | 1  | 217   | 400   | 1.0  | 1070  |
| DL4732                | 4.7   | 53   | 8  | 10   | 1  | 193   | 500   | 1.0  | 970   |
| DL4733                | 5.1   | 49   | 7  | 10   | 1  | 178   | 550   | 1.0  | 890   |
| DL4734                | 5.6   | 45   | 5  | 10   | 2  | 162   | 600   | 1.0  | 810   |
| DL4735                | 6.2   | 41   | 2  | 10   | 3  | 146   | 700   | 1.0  | 730   |
| DL4736                | 6.8   | 37   | 3.5  | 10   | 4  | 133   | 700   | 1.0  | 660   |
| DL4737                | 7.5   | 34   | 4.0  | 10   | 5  | 121   | 700   | 0.5  | 605   |
| DL4738                | 8.2   | 31   | 4.5  | 10   | 6  | 110   | 700   | 0.5  | 550   |
| DL4739                | 9.1   | 28   | 5.0  | 10   | 7  | 100   | 700   | 0.5  | 500   |
| DL4740                | 10  | 25   | 7  | 10   | 7.6  | 91  | 700   | 0.25   | 454   |
| DL4741                | 11  | 23   | 8  | 5  | 8.4  | 83  | 700   | 0.25   | 414   |
| DL4742                | 12  | 21   | 9  | 5  | 9.1  | 76  | 700   | 0.25   | 380   |
| DL4743                | 13  | 19   | 10   | 5  | 9.9  | 69  | 700   | 0.25   | 344   |
| DL4744                | 15  | 17   | 14   | 5  | 11.4   | 61  | 700   | 0.25   | 304   |
| DL4745                | 16  | 15.5   | 16   | 5  | 12.2   | 57  | 700   | 0.25   | 285   |
| DL4746                | 18  | 14   | 20   | 5  | 13.7   | 50  | 750   | 0.25   | 250   |
| DL4747                | 20  | 12.5   | 22   | 5  | 15.2   | 45  | 750   | 0.25   | 225   |
| DL4748                | 22  | 11.5   | 23   | 5  | 16.7   | 41  | 750   | 0.25   | 205   |
| DL4749                | 24  | 10.5   | 25   | 5  | 18.2   | 38  | 750   | 0.25   | 190   |
| DL4750                | 27  | 9.5  | 35   | 5  | 20.6   | 34  | 750   | 0.25   | 170   |
| DL4751                | 30  | 8.5  | 40   | 5  | 22.8   | 30  | 1000  | 0.25   | 150   |
| DL4752                | 33  | 7.5  | 45   | 5  | 25.1   | 27  | 1000  | 0.25   | 135   |
| DL4753                | 36  | 7.0  | 50   | 5  | 27.4   | 25  | 1000  | 0.25   | 125   |
| DL4754                | 39  | 6.5  | 60   | 5  | 29.7   | 23  | 1000  | 0.25   | 115   |
| DL4755                | 43  | 6.0  | 70   | 5  | 32.7   | 22  | 1500  | 0.25   | 110   |
| DL4756                | 47  | 5.5  | 80   | 5  | 35.8   | 19  | 1500  | 0.25   | 95  |
| DL4757                | 51  | 5.0  | 95   | 5  | 38.8   | 18  | 1500  | 0.25   | 90  |
| DL4758                | 56  | 4.5  | 110  | 5  | 42.6   | 16  | 2000  | 0.25   | 80  |
| DL4759                | 62  | 4.0  | 125  | 5  | 47.1   | 14  | 2000  | 0.25   | 70  |
| DL4760                | 68  | 3.7  | 150  | 5  | 51.7   | 13  | 2000  | 0.25   | 65  |
| DL4761                | 75  | 3.3  | 175  | 5  | 56.0   | 12  | 2000  | 0.25   | 60  |

NOTE 1 The JEDEC type numbers shown have A 5% tolerance on nominal zener voltage.

No suffix signifies 10% tolerance, A signifies 5% tolerance, C signifies 2% tolerance.

NOTE 2 The zener impedance is derived from the 60Hz AC voltage, which results when an AC current having an rms value equal to 10% of the DC zener current (I<sub>ZT</sub> or I<sub>ZK</sub>) is superimposed on I<sub>ZT</sub> or I<sub>ZK</sub>. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and eliminate unstable units.

NOTE 3 The reverse surge current is measured at 25°C ambient using a 1/2 square wave or equivalent sine wave pulse 1/120 second duration superimposed on I<sub>ZT</sub>

NOTE 4 Voltage measurements to be performed 90 seconds after application of DC current.

## Ordering Information :

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 5Kpcs/Reel |

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