



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

**DL4728A  
THRU  
DL4761A**

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

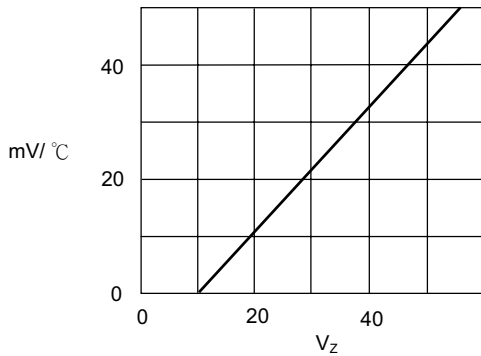
**Features**

- 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**

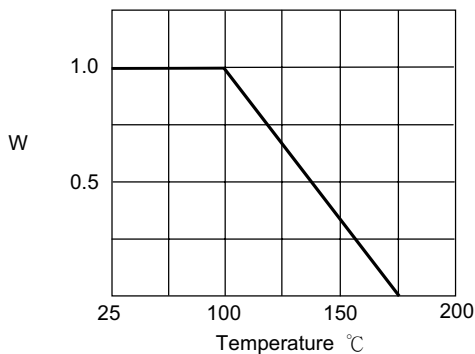
- Operating Temperature: -65 °C to +175 °C
- Storage Temperature: -65 °C to +175 °C
- 1 Watt DC Power Dissipation
- Maximum Thermal Resistance: 100K/W Junction To Ambient  
Test Conditions:  $I = 9.5\text{mm}(3/8")$ ,  $T_L = \text{constant}$
- Maximum Forward Voltage @ 200mA: 1.2 Volts

Figure 1 - Typical Temperature Coefficient



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

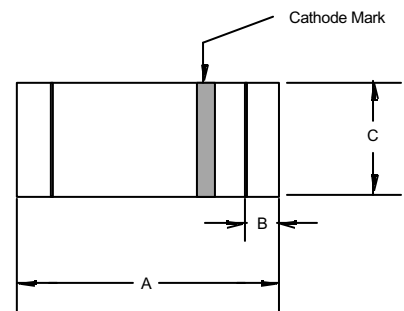
Figure 2 - Derating Curve



Power Dissipation (W) - Versus - Temperature °C

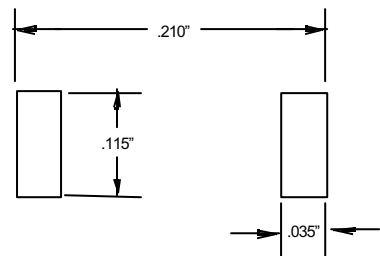
Notes: 1. Lead in Glass Exemption Applied, see EU Directive Annex Notes 7(C)-I.

**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	∅

**SUGGESTED SOLDER  
PAD LAYOUT**



# DL4728A thru DL4761A

## ELECTRICAL CHARACTERISTICS @25°C

MCC PART NUMBER	ZENER VOLTAGE $V_Z$ VOLTS	TEST CURRENT $I_{ZT}$ mA	MAXIMUM DYNAMIC IMPEDANCE $Z_{ZT} @ I_{ZT}$ OHMS	MAXIMUM REVERSE CURRENT $I_R @ V_R$ $\mu$ A	TEST VOLTAGE $V_R$ VOLTS	MAXIMUM REGULATOR CURRENT $I_{ZM}$ TA = 50°C mA	MAXIMUM KNEE IMPEDANCE $Z_{ZK} @ I_{ZK}$ OHMS	TEST CURRENT $I_{ZK}$ mA	MAXIMUM SURGE CURRENT $I_S$ mA
DL4728A	3.3	76	10	100	1	276	400	1.0	1280
DL4729A	3.6	69	10	100	1	252	400	1.0	1260
DL4730A	3.9	64	9	50	1	234	400	1.0	1190
DL4731A	4.3	58	9	10	1	217	400	1.0	1070
DL4732A	4.7	53	8	10	1	193	500	1.0	970
DL4733A	5.1	49	7	10	1	178	550	1.0	890
DL4734A	5.6	45	5	10	2	162	600	1.0	810
DL4735A	6.2	41	2	10	3	146	700	1.0	730
DL4736A	6.8	37	3.5	10	4	133	700	1.0	660
DL4737A	7.5	34	4.0	10	5	121	700	0.5	605
DL4738A	8.2	31	4.5	10	6	110	700	0.5	550
DL4739A	9.1	28	5.0	10	7	100	700	0.5	500
DL4740A	10	25	7	10	7.6	91	700	0.25	454
DL4741A	11	23	8	5	8.4	83	700	0.25	414
DL4742A	12	21	9	5	9.1	76	700	0.25	380
DL4743A	13	19	10	5	9.9	69	700	0.25	344
DL4744A	15	17	14	5	11.4	61	700	0.25	304
DL4745A	16	15.5	16	5	12.2	57	700	0.25	285
DL4746A	18	14	20	5	13.7	50	750	0.25	250
DL4747A	20	12.5	22	5	15.2	45	750	0.25	225
DL4748A	22	11.5	23	5	16.7	41	750	0.25	205
DL4749A	24	10.5	25	5	18.2	38	750	0.25	190
DL4750A	27	9.5	35	5	20.6	34	750	0.25	170
DL4751A	30	8.5	40	5	22.8	30	1000	0.25	150
DL4752A	33	7.5	45	5	25.1	27	1000	0.25	135
DL4753A	36	7.0	50	5	27.4	25	1000	0.25	125
DL4754A	39	6.5	60	5	29.7	23	1000	0.25	115
DL4755A	43	6.0	70	5	32.7	22	1500	0.25	110
DL4756A	47	5.5	80	5	35.8	19	1500	0.25	95
DL4757A	51	5.0	95	5	38.8	18	1500	0.25	90
DL4758A	56	4.5	110	5	42.6	16	2000	0.25	80
DL4759A	62	4.0	125	5	47.1	14	2000	0.25	70
DL4760A	68	3.7	150	5	51.7	13	2000	0.25	65
DL4761A	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.

Suffix 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 ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ . 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  $I_{ZT}$

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



Micro Commercial Components

Ordering Information :

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

**\*\*\*IMPORTANT NOTICE\*\*\***

**Micro Commercial Components Corp.** reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp .** does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp .** and all the companies whose products are represented on our website, harmless against all damages.

**\*\*\*LIFE SUPPORT\*\*\***

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

**\*\*\*CUSTOMER AWARENESS\*\*\***

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.