



Micro Commercial Components  
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# 1N4728 THRU 1N4764

## 1.0 Watt

## Zener Diode

## 3.3 to 100 Volts

### Features

- Hermetic Glass Package
- Silicon Planar Zener Diodes
- These diodes are also available in the MELF case with type designation DL4728 thru DL4764.

### Mechanical Data

- Case: DO-41 Molded Glass
- Polarity: is indicated by cathode band.
- Weight: 0.378 grams (Approx.)

### Maximum Ratings

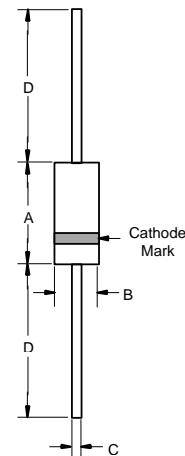
- Operating Temperature:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature:  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- For capacitive load, derate current by 20%

Electrical Characteristics @  $25^{\circ}\text{C}$  Unless Otherwise Specified

DC Power Dissipation	$P_d$	1.0W	$T_A=100^{\circ}\text{C}$
Peak Forward Surge Current	$I_{FSM}$	See Page 2	
Thermal Resistance	$R_{\theta JA}$	$100^{\circ}\text{C/W}$	Note 1
Power Derating from $100^{\circ}\text{C}$	$P_{tot}$	$10\text{mW}/^{\circ}\text{C}$	

**Note:** (1) Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature.

DO-41G



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.166	0.205	4.10	7.60	
B	0.080	0.107	2.00	3.60	Diameter
C	0.026	0.034	0.70	0.90	Diameter
D	1.000	-----	25.40	-----	

# 1N4728 thru 1N4764



## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted). Maximum V<sub>F</sub> = 1.2V at I<sub>F</sub> = 200mA

MCC PART NUMBER	ZENER VOLTAGE V <sub>Z</sub>	TEST CURRENT I <sub>ZT</sub>	MAXIMUM DYNAMIC IMPEDANCE Z <sub>ZT</sub> @ I <sub>ZT</sub>	MAXIMUM REVERSE CURRENT I <sub>R</sub> @ V <sub>R</sub>	TEST VOLTAGE V <sub>R</sub>	MAXIMUM REGULATOR CURRENT I <sub>ZM</sub> T <sub>A</sub> = 50°C	MAXIMUM KNEE IMPEDANCE Z <sub>ZK</sub> @ I <sub>ZK</sub>	TEST CURRENT I <sub>ZK</sub>	MAXIMUM SURGE CURRENT I <sub>S</sub>	MAXIMUM TEMPERATURE COEFFICIENT @ I <sub>ZT</sub>
	VOLTS	mA	OHMS	μA	VOLTS	mA	OHMS	mA	mA	%/°C
1N4728	3.3	76	10	100	1	276	400	1.0	1380	-0.08
1N4729	3.6	69	10	100	1	252	400	1.0	1260	-0.08
1N4730	3.9	64	9	50	1	234	400	1.0	1190	-0.07
1N4731	4.3	58	9	10	1	217	400	1.0	1070	-0.07
1N4732	4.7	53	8	10	1	193	500	1.0	970	-0.03 to +0.04
1N4733	5.1	49	7	10	1	178	550	1.0	890	-0.03 to +0.04
1N4734	5.6	45	5	10	2	162	600	1.0	810	0.045
1N4735	6.2	41	2	10	3	146	700	1.0	730	0.055
1N4736	6.8	37	3.5	10	4	133	700	1.0	660	0.06
1N4737	7.5	34	4.0	10	5	121	700	0.5	605	0.065
1N4738	8.2	31	4.5	10	6	110	700	0.5	550	0.07
1N4739	9.1	28	5.0	10	7	100	700	0.5	500	0.075
1N4740	10	25	7	10	7.6	91	700	0.25	454	0.08
1N4741	11	23	8	5	8.4	83	700	0.25	414	0.08
1N4742	12	21	9	5	9.1	76	700	0.25	380	0.085
1N4743	13	19	10	5	9.9	69	700	0.25	344	0.085
1N4744	15	17	14	5	11.4	61	700	0.25	304	0.09
1N4745	16	15.5	16	5	12.2	57	700	0.25	285	0.09
1N4746	18	14	20	5	13.7	50	750	0.25	250	0.09
1N4747	20	12.5	22	5	15.2	45	750	0.25	225	0.09
1N4748	22	11.5	23	5	16.7	41	750	0.25	205	0.095
1N4749	24	10.5	25	5	18.2	38	750	0.25	190	0.095
1N4750	27	9.5	35	5	20.6	34	750	0.25	170	0.095
1N4751	30	8.5	40	5	22.8	30	1000	0.25	150	0.095
1N4752	33	7.5	45	5	25.1	27	1000	0.25	135	0.095
1N4753	36	7.0	50	5	27.4	25	1000	0.25	125	0.095
1N4754	39	6.5	60	5	29.7	23	1000	0.25	115	0.095
1N4755	43	6.0	70	5	32.7	22	1500	0.25	110	0.095
1N4756	47	5.5	80	5	35.8	19	1500	0.25	95	0.095
1N4757	51	5.0	95	5	38.8	18	1500	0.25	90	0.095
1N4758	56	4.5	110	5	42.6	16	2000	0.25	80	0.095
1N4759	62	4.0	125	5	47.1	14	2000	0.25	70	0.095
1N4760	68	3.7	150	5	51.7	13	2000	0.25	65	0.095
1N4761	75	3.3	175	5	56.0	12	2000	0.25	60	0.095
1N4762	82	3.0	200	5	62.2	11	3000	0.25	55	-----
1N4763	91	2.8	250	5	69.2	10	3000	0.25	50	-----
1N4764	100	2.5	350	5	76.0	9	3000	0.25	45	-----

- Note** 1: The JEDEC type number shown with an A suffix have a 5% tolerance on nominal zener voltage. No suffix signifies a 10% tolerance, C signifies 2%, and D suffix signifies 1% tolerance.
- 2: The Zener impedance is derived from the 60 Hz 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.
- 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>.
- 4: Voltage measurements to be performed 90 seconds after application of DC current.

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

### Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

