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1N4728 THRU 1N4756

**1.0 Watt
Zener Diode
3.3 to 47 Volts**

Features

- Hermetic Glass Package
- Silicon Planar Zener Diodes
- These diodes are also available in the MELF case with type designation DL4728 thru DL4756

Mechanical Data

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

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- For capacitive load, derate current by 20%

Electrical Characteristics @ 25°C Unless Otherwise Specified

DC Power Dissipation	P_d	1.0W	$T_A < 50^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	See Page 2	
Thermal Resistance	$R_{\theta JA}$	100°C/W	Note 1
Power Derating from 100°C	P_{tot}	10mW/°C	

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

DO-41G

DIMENSIONS					NOTE
DIM	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 1N4756

Electrical Characteristics (T_A = 25°C unless otherwise noted). Maximum V_F = 1.2V at I_F = 200mA

PART NUMBER	ZENER VOLTAGE V _Z	TEST CURRENT I _{ZT}	MAXIMUM DYNAMIC IMPEDANCE Z _{ZT} @ I _{ZT}	MAXIMUM REVERSE CURRENT I _R @ V _R	TEST VOLTAGE V _R	MAXIMUM REGULATOR CURRENT I _{ZM} T _A = 50°C	MAXIMUM KNEE IMPEDANCE Z _{ZK} @ I _{ZK}	TEST CURRENT I _{ZK}	MAXIMUM SURGE CURRENT I _S	MAXIMUM TEMPERATURE COEFFICIENT @ I _{ZT}
	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

- 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_{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.
 - 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}.
 - 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

