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
- Marking : Cathode band and type number
- Weight: 0.309 grams (Approx.)

Maximum Ratings

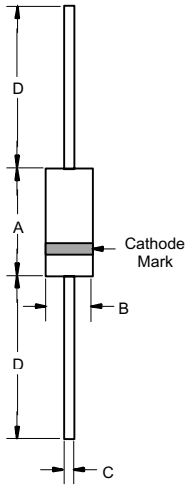
- Operating Temperature: -65°C to +200°C
- Storage Temperature: -65°C to +200°C
- For capacitive load, derate current by 20%

Electrical Characteristics @ 25°C Unless Otherwise Specified

DC Power Dissipation	P_d	1.0W	$T_A \leq 50^oC$
Forward Voltage Drop	V_F	1.2V	
Thermal Resistance	R_{thJA}	100K/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					
DIM	INCHES		MM		NOTE
	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	-----	

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

MCC Part Number	Zener Voltage	Test Current	Maximum Dynamic Impedance			Maximum Reverse Leakage Current		Surge Current	Maximum Regulator Current
	V_Z @I_{ZT}	I_{ZT}	Z_{ZT} @I_{ZT}	Z_{ZK} @I_{ZK}	I_{ZK}	I_R @V_R	V_R	I_R	I_{ZM}
	Volts	mA	OHMS	OHMS	mA	uA	Volts	mA	mA
1N4728	3.3	76	10	400	1	100	1	1380	276
1N4729	3.6	69	10	400	1	100	1	1260	252
1N4730	3.9	64	9	400	1	50	1	1190	234
1N4731	4.3	58	9	400	1	10	1	1070	217
1N4732	4.7	53	8	500	1	10	1	970	193
1N4733	5.1	49	7	550	1	10	1	890	178
1N4734	5.6	45	5	600	1	10	2	810	162
1N4735	6.2	41	2	700	1	10	3	730	146
1N4736	6.8	37	3.5	700	1	10	4	660	133
1N4737	7.5	34	4	700	0.5	10	5	605	121
1N4738	8.2	31	4.5	700	0.5	10	6	550	110
1N4739	9.1	28	5	700	0.5	10	7	500	100
1N4740	10	25	7	700	0.25	10	7.6	454	91
1N4741	11	23	8	700	0.25	5	8.4	414	83
1N4742	12	21	9	700	0.25	5	9.1	380	76
1N4743	13	19	10	700	0.25	5	9.9	344	69
1N4744	15	17	14	700	0.25	5	11.4	304	61
1N4745	16	15.5	16	700	0.25	5	12.2	285	57
1N4746	18	14	20	750	0.25	5	13.7	250	50
1N4747	20	12.5	22	750	0.25	5	15.2	225	45
1N4748	22	11.5	23	750	0.25	5	16.7	205	41
1N4749	24	10.5	25	750	0.25	5	18.2	190	38
1N4750	27	9.5	35	750	0.25	5	20.6	170	34
1N4751	30	8.5	40	1000	0.25	5	22.8	150	30
1N4752	33	7.5	45	1000	0.25	5	25.1	135	27
1N4753	36	7	50	1000	0.25	5	27.4	125	25
1N4754	39	6.5	60	1000	0.25	5	29.7	115	23
1N4755	43	6	70	1500	0.25	5	32.7	110	22
1N4756	47	5.5	80	1500	0.25	5	35.8	95	19
1N4757	51	5	95	1500	0.25	5	38.8	90	18
1N4758	56	4.5	110	2000	0.25	5	42.6	80	16
1N4759	62	4	125	2000	0.25	5	47.1	70	14
1N4760	68	3.7	150	2000	0.25	5	51.7	65	13
1N4761	75	3.3	175	2000	0.25	5	56	60	12
1N4762	82	3	200	3000	0.25	5	62.2	55	11
1N4763	91	2.8	250	3000	0.25	5	69.2	50	10
1N4764	100	2.5	350	3000	0.25	5	76	45	9

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 tobe performed 90 seconds after application of DC current.

5: RoHs Compliant already and Pb-free sticker on reel , box & carton indicated RoHs compliant .

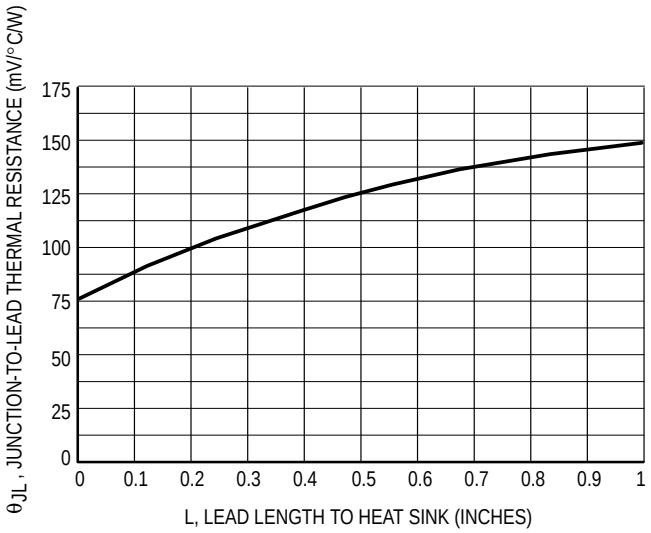


Figure 1. Typical Thermal Resistance versus Lead Length

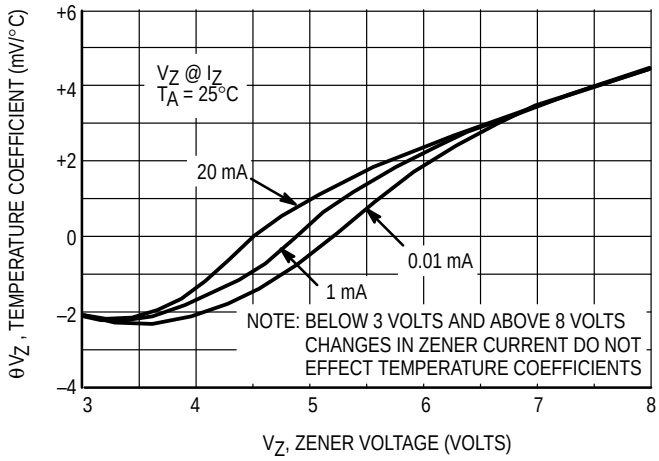


Figure 2. Effect of Zener Current

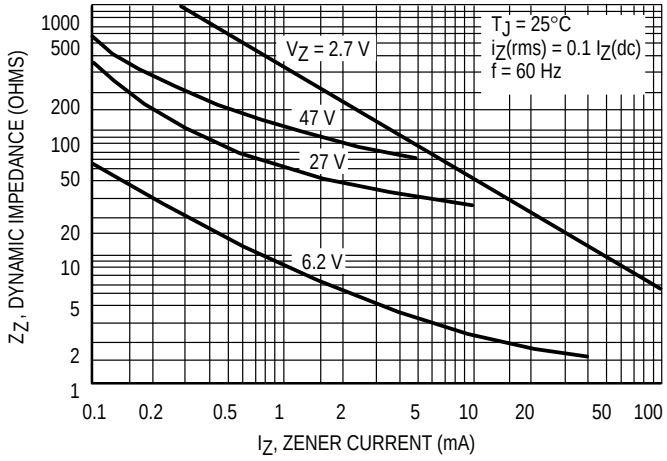


Figure 3. Effect of Zener Current on Zener Impedance

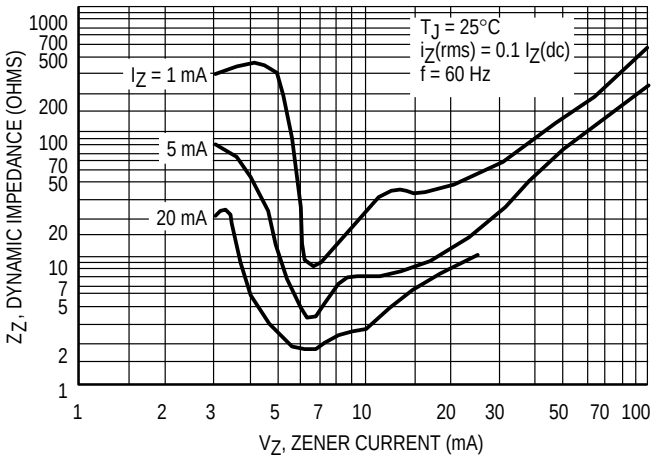
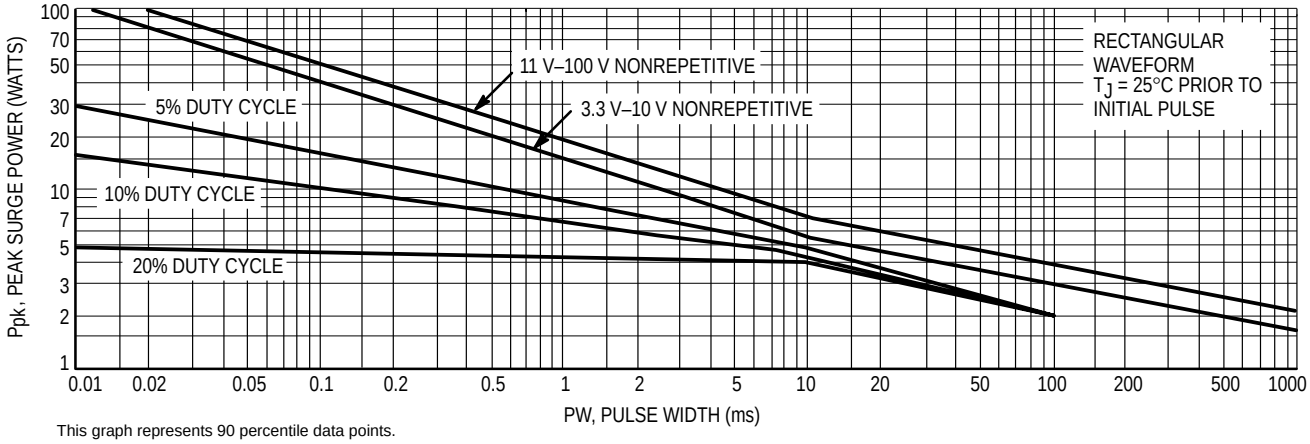


Figure 4. Effect of Zener Voltage on Zener Impedance



This graph represents 90 percentile data points.
For worst case design characteristics, multiply surge power by 2/3.

Figure 5. Maximum Surge Power

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