1N4728 thru 1N4764

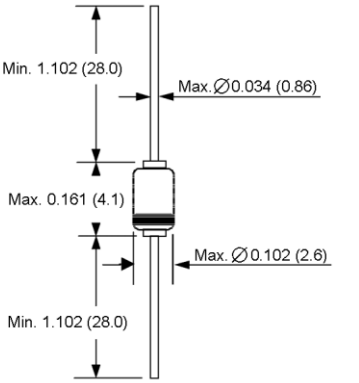
Zener Diodes

V_Z Range: 3.3 to 100 Volts Power Dissipation: 1.0W

Features

- ◆ Silicon Planar Power Zener Diodes.
- ◆ For use in stabilizing and clipping circuits with high power rating.
- ◆ Standard Zener voltage tolerance is ±10%. Add suffix "A" for ±5% tolerance. Other Zener voltages and tolerances are available upon request.
- ◆ These diodes are also available in the MELF case with type designation ZM4728 thru ZM4764
- ◆ For bidirectional product, contact local Technical Sales office.

DO-204AL (DO-41 Glass)



Dimensions in inches and (millimeters)

Mechanical Data

- ◆ Case: DO-41 Glass Case
- ◆ Weight: approx. 0.35g

Maximum Ratings and Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Zener current		See Next Page	
Power dissipation at T_{amb}=50°C	P_{tot}	1.0 (1)	W
Thermal resistance junction to ambient air	$R_{\theta JA}$	170 (1)	°C/W
Junction temperature	T_j	200	°C
Storage temperature range	T_S	-65 to +200	°C

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

Electrical Characteristics

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

Type number	Nominal zener voltage (3) at I_{ZT} V_Z (Volts)	Test current I_{ZT} (mA)	Maximum zener impedance (1)			Maximum reverse leakage current		Surge current at T_A=25°C I_R (mA)	Maximum regulator current (2) at T_A=50°C I_{ZM} (mA)
			Z_{ZT} at I_{ZT} (Ω)	Z_{ZK} (Ω)	at I_{ZK} (mA)	I_R (uA)	at V_R (Volts)		
1N4728	3.3	76	10	400	1.0	100	1	1380	276
1N4729	3.6	69	10	400	1.0	100	1	1260	252
1N4730	3.9	64	9	400	1.0	50	1	1190	234
1N4731	4.3	58	9	400	1.0	10	1	1070	217
1N4732	4.7	53	8	500	1.0	10	1	970	193
1N4733	5.1	49	7	550	1.0	10	1	890	178
1N4734	5.6	45	5	600	1.0	10	2	810	162
1N4735	6.2	41	2	700	1.0	10	3	730	146
1N4736	6.8	37	3.5	700	1.0	10	4	660	133
1N4737	7.5	34	4.0	700	0.5	10	5	605	121
1N4738	8.2	31	4.5	700	0.5	10	6	550	110
1N4739	9.1	28	5.0	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	7.0	50	1000	0.25	5	27.4	125	25
1N4754	39	6.5	60	1000	0.25	5	29.7	115	23
1N4755	43	6.0	70	1500	0.25	5	32.7	110	22
1N4756	47	5.5	80	1500	0.25	5	35.8	95	19
1N4757	51	5.0	95	1500	0.25	5	38.8	90	18
1N4758	56	4.5	110	2000	0.25	5	42.6	80	16
1N4759	62	4.0	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	56.0	60	12
1N4762	82	3.0	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	76.0	45	9

Notes: 1. The Zener impedance is derived from the 1KHZ AC voltage which results when an AC current having an RMS value equal to 10% of the 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 to eliminate unstable units

2. Valid provided that electrodes at a distance of 10 mm from case are kept at ambient temperature

3. Measured under thermal equilibrium and DC test conditions

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°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