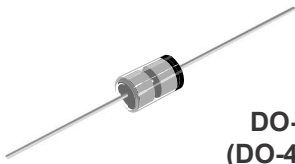


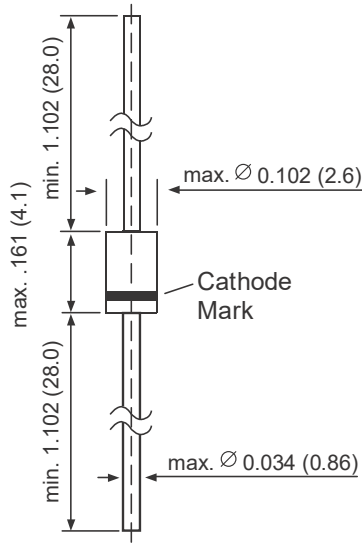


## Zener Diodes

**V<sub>z</sub> Range** 3.3 to 100V  
**Power Dissipation** 1.0W



**DO-204AL**  
**(DO-41 Glass)**



*Dimensions in inches  
and (millimeters)*

### Features

- Silicon Planar Power Zener Diodes
- For use in stabilizing and clipping circuits with high power rating.
- Standard Zener voltage tolerance is  $\pm 10\%$ . Add suffix "A" for  $\pm 5\%$  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.

### Mechanical Data

**Case:** DO-41 Glass Case

**Weight:** approx. 0.35g

**Packaging Codes/Options:**

- D9/5K per 13" reel (52mm tape), 10K/box
- E1/5K per Ammo mag. (52mm tape), 10K/box

### Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Zener Current		See Next Page	
Power Dissipation at T <sub>amb</sub> = 50°C	P <sub>tot</sub>	1.0 <sup>(1)</sup>	W
Thermal Resistance Junction to Ambient Air	R <sub>θJA</sub>	170 <sup>(1)</sup>	°C/W
Junction Temperature	T <sub>j</sub>	200	°C
Storage Temperature Range	T <sub>s</sub>	-65 to +200	°C

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

# 1N4728 thru 1N4764

Vishay Semiconductors  
formerly General Semiconductor



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

Type	Nominal Zener voltage <sup>(3)</sup> at I <sub>ZT</sub> V <sub>Z</sub> (V)	Test current I <sub>ZT</sub> (mA)	Maximum Zener impedance <sup>(1)</sup>			Maximum reverse leakage current		Surge current at T <sub>A</sub> = 25°C I <sub>R</sub> (mA)	Maximum regulator current <sup>(2)</sup> at T <sub>A</sub> = 50°C I <sub>ZM</sub> (mA)
			Z <sub>ZT</sub> at I <sub>ZT</sub> (Ω)	Z <sub>ZK</sub> (Ω)	at I <sub>ZK</sub> (mA)	I <sub>R</sub> (μA)	at V <sub>R</sub> (V)		
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<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 to eliminate unstable units
- (2) Valid provided that electrodes at a distance of 10mm from case are kept at ambient temperature
- (3) Measured under thermal equilibrium and DC test conditions



**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

