



1N4728AG ~ 1N4761AG

V_Z : 3.3 to 100V

P_D : 1.0 Watt

FEATURES :

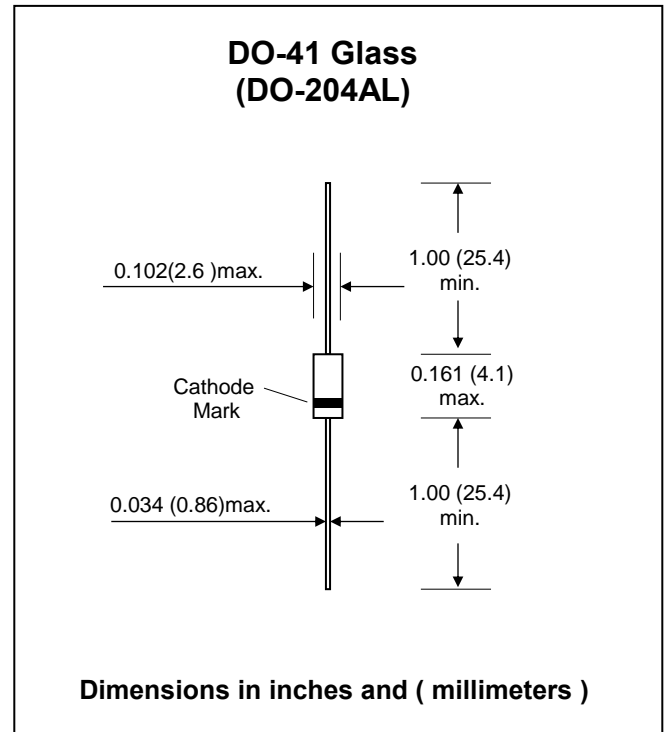
- Silicon planar power zener diodes.
- For use in stabilizing and clipping circuits with high power rating.
- Standard zener voltage tolerance is $\pm 5\%$
- Other tolerances are available upon request.
- **Pb / RoHS Free**

MECHANICAL DATA :

Case: DO-41 Glass Case

Weight: approx. 0.35g

ZENER DIODES



Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|--|-----------------|--------------------|-------|
| Zener Current see Table "Characteristics" | | | |
| Maximum Forward Voltage at $I_F = 200$ mA. | V_F | 1.2 | V |
| Power Dissipation | P_D | 1.0 ⁽¹⁾ | W |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 100 ⁽¹⁾ | K / W |
| Junction temperature | T_J | 175 | °C |
| Storage temperature range | T_S | -55 to + 175 | °C |

Note:

(1) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.



ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

| Type No. | Zener Voltage ⁽³⁾ | | | Maximum Zener Impedance ⁽¹⁾ | | | Maximum Reverse Leakage Current | | Maximum Regulator Current | Maximum Surge Current | |
|----------|--------------------------------------|------|------|--|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|---------------------------|--------------------------------|-----------------|
| | V _Z (V) @ I _{ZT} | | | I _{ZT} | Z _{ZT} @ I _{ZT} | Z _{ZK} @ I _{ZK} | I _{ZK} | I _R @ V _R | | I _{ZM} ⁽²⁾ | I _{RM} |
| | Min. | Nom. | Max. | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) | (mA) |
| 1N4728G | 3.1 | 3.3 | 3.5 | 76.0 | 10 | 400 | 1.0 | 100 | 1.0 | 276 | 1380 |
| 1N4729G | 3.4 | 3.6 | 3.8 | 69.0 | 10 | 400 | 1.0 | 100 | 1.0 | 252 | 1260 |
| 1N4730G | 3.7 | 3.9 | 4.1 | 64.0 | 9.0 | 400 | 1.0 | 50 | 1.0 | 234 | 1190 |
| 1N4731G | 4.1 | 4.3 | 4.5 | 58.0 | 9.0 | 400 | 1.0 | 10 | 1.0 | 217 | 1070 |
| 1N4732G | 4.5 | 4.7 | 4.9 | 53.0 | 8.0 | 500 | 1.0 | 10 | 1.0 | 193 | 970 |
| 1N4733G | 4.8 | 5.1 | 5.4 | 49.0 | 7.0 | 550 | 1.0 | 10 | 1.0 | 178 | 890 |
| 1N4734G | 5.3 | 5.6 | 5.9 | 45.0 | 5.0 | 600 | 1.0 | 10 | 2.0 | 162 | 810 |
| 1N4735G | 5.9 | 6.2 | 6.5 | 41.0 | 2.0 | 700 | 1.0 | 10 | 3.0 | 146 | 730 |
| 1N4736G | 6.5 | 6.8 | 7.1 | 37.0 | 3.5 | 700 | 1.0 | 10 | 4.0 | 133 | 660 |
| 1N4737G | 7.1 | 7.5 | 7.9 | 34.0 | 4.0 | 700 | 0.5 | 10 | 5.0 | 121 | 605 |
| 1N4738G | 7.8 | 8.2 | 8.6 | 31.0 | 4.5 | 700 | 0.5 | 10 | 6.0 | 110 | 550 |
| 1N4739G | 8.6 | 9.1 | 9.6 | 28.0 | 5.0 | 700 | 0.5 | 10 | 7.0 | 100 | 500 |
| 1N4740G | 9.5 | 10 | 10.5 | 25.0 | 7.0 | 700 | 0.25 | 10 | 7.6 | 91 | 454 |
| 1N4741G | 10.5 | 11 | 11.6 | 23.0 | 8.0 | 700 | 0.25 | 5.0 | 8.4 | 83 | 414 |
| 1N4742G | 11.4 | 12 | 12.6 | 21.0 | 9.0 | 700 | 0.25 | 5.0 | 9.1 | 76 | 380 |
| 1N4743G | 12.4 | 13 | 13.7 | 19.0 | 10 | 700 | 0.25 | 5.0 | 9.9 | 69 | 344 |
| 1N4744G | 14.3 | 15 | 15.8 | 17.0 | 14 | 700 | 0.25 | 5.0 | 11.4 | 61 | 305 |
| 1N4745G | 15.2 | 16 | 16.8 | 15.5 | 16 | 700 | 0.25 | 5.0 | 12.2 | 57 | 285 |
| 1N4746G | 17.1 | 18 | 18.9 | 14.0 | 20 | 750 | 0.25 | 5.0 | 13.7 | 50 | 250 |
| 1N4747G | 19.0 | 20 | 21.0 | 12.5 | 22 | 750 | 0.25 | 5.0 | 15.2 | 45 | 225 |
| 1N4748G | 20.9 | 22 | 23.1 | 11.5 | 23 | 750 | 0.25 | 5.0 | 16.7 | 41 | 205 |
| 1N4749G | 22.8 | 24 | 25.2 | 10.5 | 25 | 750 | 0.25 | 5.0 | 18.2 | 38 | 190 |
| 1N4750G | 25.7 | 27 | 28.4 | 9.5 | 35 | 750 | 0.25 | 5.0 | 20.6 | 34 | 170 |
| 1N4751G | 28.5 | 30 | 31.5 | 8.5 | 40 | 1000 | 0.25 | 5.0 | 22.8 | 30 | 150 |
| 1N4752G | 31.4 | 33 | 34.7 | 7.5 | 45 | 1000 | 0.25 | 5.0 | 25.1 | 27 | 135 |
| 1N4753G | 34.2 | 36 | 37.8 | 7.0 | 50 | 1000 | 0.25 | 5.0 | 27.4 | 25 | 125 |
| 1N4754G | 37.1 | 39 | 41.0 | 6.5 | 60 | 1000 | 0.25 | 5.0 | 29.7 | 23 | 115 |
| 1N4755G | 40.9 | 43 | 45.2 | 6.0 | 70 | 1500 | 0.25 | 5.0 | 32.7 | 22 | 110 |
| 1N4756G | 44.7 | 47 | 49.4 | 5.5 | 80 | 1500 | 0.25 | 5.0 | 35.8 | 19 | 95 |
| 1N4757G | 48.5 | 51 | 53.6 | 5.0 | 95 | 1500 | 0.25 | 5.0 | 38.8 | 18 | 90 |
| 1N4758G | 53.2 | 56 | 58.8 | 4.5 | 110 | 2000 | 0.25 | 5.0 | 42.6 | 16 | 80 |
| 1N4759G | 58.9 | 62 | 65.1 | 4.0 | 125 | 2000 | 0.25 | 5.0 | 47.1 | 14 | 70 |
| 1N4760G | 64.6 | 68 | 71.4 | 3.7 | 150 | 2000 | 0.25 | 5.0 | 51.7 | 13 | 65 |
| 1N4761G | 71.3 | 75 | 78.8 | 3.3 | 175 | 2000 | 0.25 | 5.0 | 56.0 | 12 | 60 |

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 10mm from case are kept at ambient temperature
- (3) Measured under thermal equilibrium and DC test conditions.
- (4) Standard Zener voltage tolerance is ± 5% tolerance. Other Zener voltages and tolerances are available upon request.