



GOOD-ARK

1N4728 THRU 1N4764

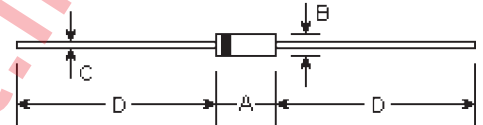
SILICON PLANAR POWER ZENER DIODES

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 tolerances available upon request.

DO-41



| DIMENSIONS | | | | | Note |
|------------|--------|-------|------|------|------|
| DIM | inches | | mm | | |
| | Min. | Max. | Min. | Max. | |
| A | - | 0.169 | - | 4.3 | |
| B | - | 0.110 | - | 2.8 | ϕ |
| C | - | 0.031 | - | 0.8 | ϕ |
| D | 1.102 | - | 28.0 | - | |

Absolute Maximum Ratings ($T_g=25^\circ\text{C}$)

| | Symbols | Values | Units |
|---|-----------|------------------|------------------|
| Zener current see Table "Characteristics" | | | |
| Power dissipation at $T_{amb}=25^\circ\text{C}$ | P_{tot} | 1 ⁽¹⁾ | W |
| Junction temperature | T_j | 200 | $^\circ\text{C}$ |
| Storage temperature range | T_s | -65 to +200 | $^\circ\text{C}$ |

Note:

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

Characteristics at $T_{amb}=25^\circ\text{C}$

| | Symbols | Min. | Typ. | Max. | Units |
|--|-----------|------|------|--------------------|-------|
| Thermal resistance junction to ambient Air | R_{thA} | - | - | 170 ⁽¹⁾ | K/W |
| Forward voltage at $I_F=200\text{mA}$ | V_F | - | - | 1.2 | V |

Note:

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

| Type | Zener voltage range ³⁾ | | Maximum Zener Impedance ¹⁾ | | | Reverse leakage current | | Surge current at $T_A=25^\circ\text{C}$ | Maximum regulator current ²⁾ |
|--------|-----------------------------------|----------|---------------------------------------|----------|------|-------------------------|------|---|---|
| | V_{znom} | I_{zT} | r_{zT} and r_{zk} at I_{zK} | | | I_R at V_R | | I_R | I_{zM} |
| | V | mA | Ω | Ω | mA | μA | V | mA | mA |
| 1N4728 | 3.3 | 76 | 10 | 400 | 1.0 | 150 | 1 | 1375 | 275 |
| 1N4729 | 3.6 | 69 | 10 | 400 | 1.0 | 100 | 1 | 1260 | 252 |
| 1N4730 | 3.9 | 64 | 9 | 400 | 1.0 | 100 | 1 | 1190 | 234 |
| 1N4731 | 4.3 | 58 | 9 | 400 | 1.0 | 50 | 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 60 Hz 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 leads at a distance of 8 mm from case are kept at ambient temperature.

(3) Measured under thermal equilibrium and DC test conditions.

RATINGS AND CHARACTERISTIC CURVES

Admissible power dissipation versus ambient temperature

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

