

1N47-SERIES

ZENER DIODES

Zener Voltage: 3.3-100V Peak Pulse Power: 1.0W

FEATURE

- ◆ Low zener impedance
- ◆ Low regulation factor
- ◆ Glass passivated junction
- ◆ High temperature soldering guaranteed:
260°C/10S/9.5mm lead length at 5 lbs tension

MECHANICAL DATA

Case: JEDEC DO-41 (GLASS) molded glass body

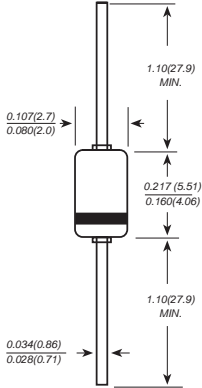
Terminals: Plated axial leads, solderable per MIL-STD 750, method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 ounce, 0.35 grams

DO-41 (GLASS)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | VALUE | UNITS |
|---|------------------|--------------|-------|
| Zener Current see Table Characteristics | | | |
| Power Dissipation at Tamb=25°C(Note 1) | P _{tot} | 1000 | mW |
| Junction Temperature | T _j | 200 | °C |
| Storage Temperature Range | T _{STG} | -65 to + 200 | °C |
| Thermal resistance junction ambient(Note 1) | R _{qJA} | 170 | °C/W |
| Forward voltage at I _F =200mA | V _F | 1.2 | V |

Note 1: Valid provided that leads at a distance of 10mm from case are kept at ambient temperature

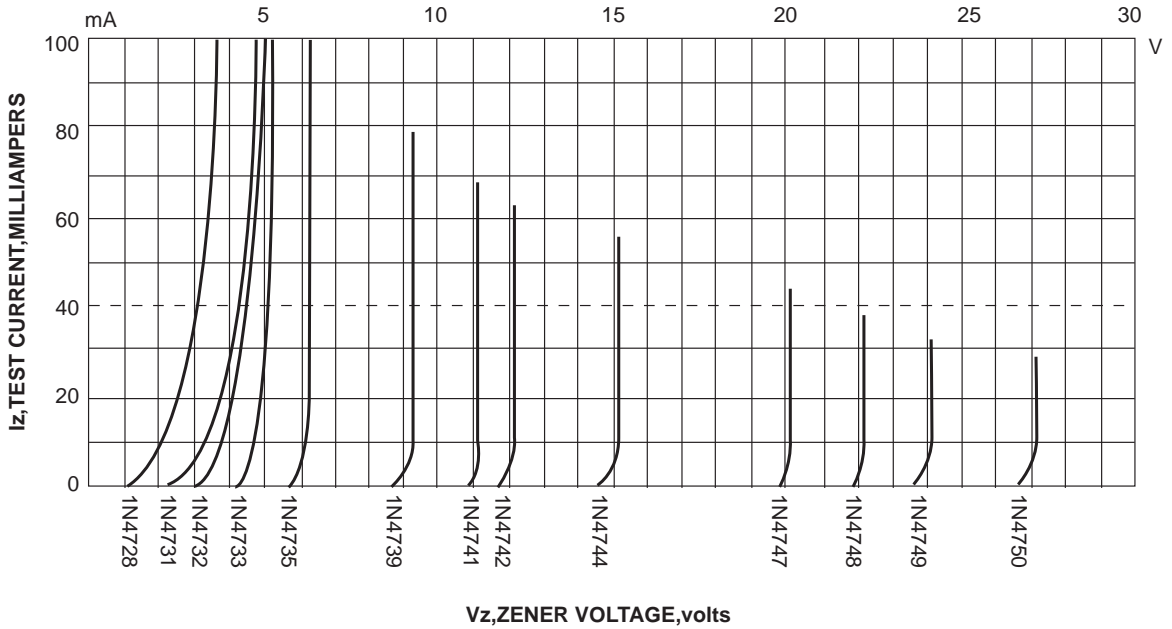
ELECTRICAL CHARACTERISTICS (at TA=25°C unless otherwise noted)

| Device Type | Nominal Zener Voltage Vz@IzT | Test Current IzT | Maximum Zener Impedance | | Maximum Reverse Leakage Current | | IzK | Max. Surge Current Ir@25°C | Maximum Regulator Current IzM |
|-------------|------------------------------|------------------|-------------------------|---------|---------------------------------|-------|------|----------------------------|-------------------------------|
| | | | ZzT@IzT | ZzT@IzK | Ir | @VR | | | |
| | Volts | mA | Ohms | Ohms | uA | Volts | mA | mA | mA |
| 1N4728A | 3.3 | 76 | 10 | 400 | 100 | 1.0 | 1.0 | 1380 | 276 |
| 1N4729A | 3.6 | 69 | 10 | 400 | 100 | 1.0 | 1.0 | 1260 | 252 |
| 1N4730A | 3.9 | 64 | 9.0 | 400 | 50 | 1.0 | 1.0 | 1170 | 234 |
| 1N4731A | 4.3 | 58 | 9.0 | 400 | 10 | 1.0 | 1.0 | 1085 | 217 |
| 1N4732A | 4.7 | 53 | 8.0 | 500 | 10 | 1.0 | 1.0 | 965 | 193 |
| 1N4733A | 5.1 | 49 | 7.0 | 550 | 10 | 1.0 | 1.0 | 890 | 178 |
| 1N4734A | 5.6 | 45 | 5.0 | 600 | 10 | 2.0 | 1.0 | 810 | 162 |
| 1N4735A | 6.2 | 41 | 2.0 | 700 | 10 | 3.0 | 1.0 | 730 | 146 |
| 1N4736A | 6.8 | 37 | 3.5 | 700 | 10 | 4.0 | 1.0 | 660 | 133 |
| 1N4737A | 7.5 | 34 | 4.0 | 700 | 10 | 5.0 | 0.5 | 605 | 121 |
| 1N4738A | 8.2 | 31 | 4.5 | 700 | 10 | 6.0 | 0.5 | 550 | 110 |
| 1N4739A | 9.1 | 28 | 5.0 | 700 | 10 | 7.0 | 0.5 | 500 | 100 |
| 1N4740A | 10 | 25 | 7.0 | 700 | 10 | 7.6 | 0.25 | 454 | 91 |
| 1N4741A | 11 | 23 | 8.0 | 700 | 5.0 | 8.4 | 0.25 | 414 | 83 |
| 1N4742A | 12 | 21 | 9.0 | 700 | 5.0 | 9.1 | 0.25 | 380 | 76 |
| 1N4743A | 13 | 19 | 10 | 700 | 5.0 | 9.9 | 0.25 | 344 | 69 |
| 1N4744A | 15 | 17 | 14 | 700 | 5.0 | 11.4 | 0.25 | 304 | 61 |
| 1N4745A | 16 | 15.5 | 16 | 700 | 5.0 | 12.2 | 0.25 | 285 | 57 |
| 1N4746A | 18 | 14 | 20 | 750 | 5.0 | 13.7 | 0.25 | 250 | 50 |
| 1N4747A | 20 | 12.5 | 22 | 750 | 5.0 | 15.2 | 0.25 | 225 | 45 |
| 1N4748A | 22 | 11.5 | 23 | 750 | 5.0 | 16.7 | 0.25 | 205 | 41 |
| 1N4749A | 24 | 10.5 | 25 | 750 | 5.0 | 18.2 | 0.25 | 190 | 38 |
| 1N4750A | 27 | 9.5 | 35 | 750 | 5.0 | 20.6 | 0.25 | 170 | 34 |
| 1N4751A | 30 | 8.5 | 40 | 1000 | 5.0 | 22.8 | 0.25 | 150 | 30 |
| 1N4752A | 33 | 7.5 | 45 | 1000 | 5.0 | 25.1 | 0.25 | 135 | 27 |
| 1N4753A | 36 | 7.0 | 50 | 1000 | 5.0 | 27.4 | 0.25 | 125 | 25 |
| 1N4754A | 39 | 6.5 | 60 | 1000 | 5.0 | 29.7 | 0.25 | 115 | 23 |
| 1N4755A | 43 | 6.0 | 70 | 1500 | 5.0 | 32.7 | 0.25 | 110 | 22 |
| 1N4756A | 47 | 5.5 | 80 | 1500 | 5.0 | 35.8 | 0.25 | 95 | 19 |
| 1N4757A | 51 | 5.0 | 95 | 1500 | 5.0 | 38.8 | 0.25 | 90 | 18 |
| 1N4758A | 56 | 4.5 | 110 | 2000 | 5.0 | 42.6 | 0.25 | 80 | 16 |
| 1N4759A | 62 | 4.0 | 125 | 2000 | 5.0 | 47.1 | 0.25 | 70 | 14 |
| 1N4760A | 68 | 3.7 | 150 | 2000 | 5.0 | 51.7 | 0.25 | 65 | 13 |
| 1N4761A | 75 | 3.3 | 175 | 2000 | 5.0 | 56.0 | 0.25 | 60 | 12 |
| 1N4762A | 82 | 3.0 | 200 | 3000 | 5.0 | 62.2 | 0.25 | 55 | 11 |
| 1N4763A | 91 | 2.8 | 250 | 3000 | 5.0 | 69.2 | 0.25 | 50 | 10 |
| 1N4764A | 100 | 2.5 | 350 | 3000 | 5.0 | 76.0 | 0.25 | 45 | 9 |

Note 1: Suffix "A" indicate ±5% tolerance

RATINGS AND CHARACTERISTIC CURVES 1N47 SERIES

Breakdown characteristics



Admissible power dissipation versus ambient temperature

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

