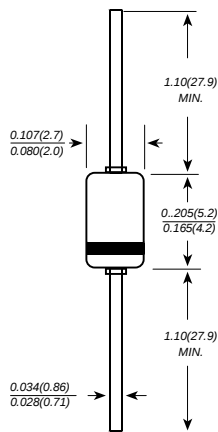


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## 1N47-SERIES ZENER DIODES

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

### DO-41(GLASS)



Dimensions in inches and (millimeters)

### 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

### 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 <sub>tot</sub> | 1000         | mW    |
| Junction Temperature                        | T <sub>j</sub>   | 200          | °C    |
| Storage Temperature Range                   | T <sub>STG</sub> | -65 to + 200 | °C    |
| Thermal resistance junction ambient(Note 1) | R <sub>θJA</sub> | 170          | °C/W  |
| Forward voltage at I <sub>F</sub> =200mA    | V <sub>F</sub>   | 1.2          | V     |

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

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**ELECTRICAL CHARACTERISTICS (at T<sub>A</sub>=25°C unless otherwise noted)**

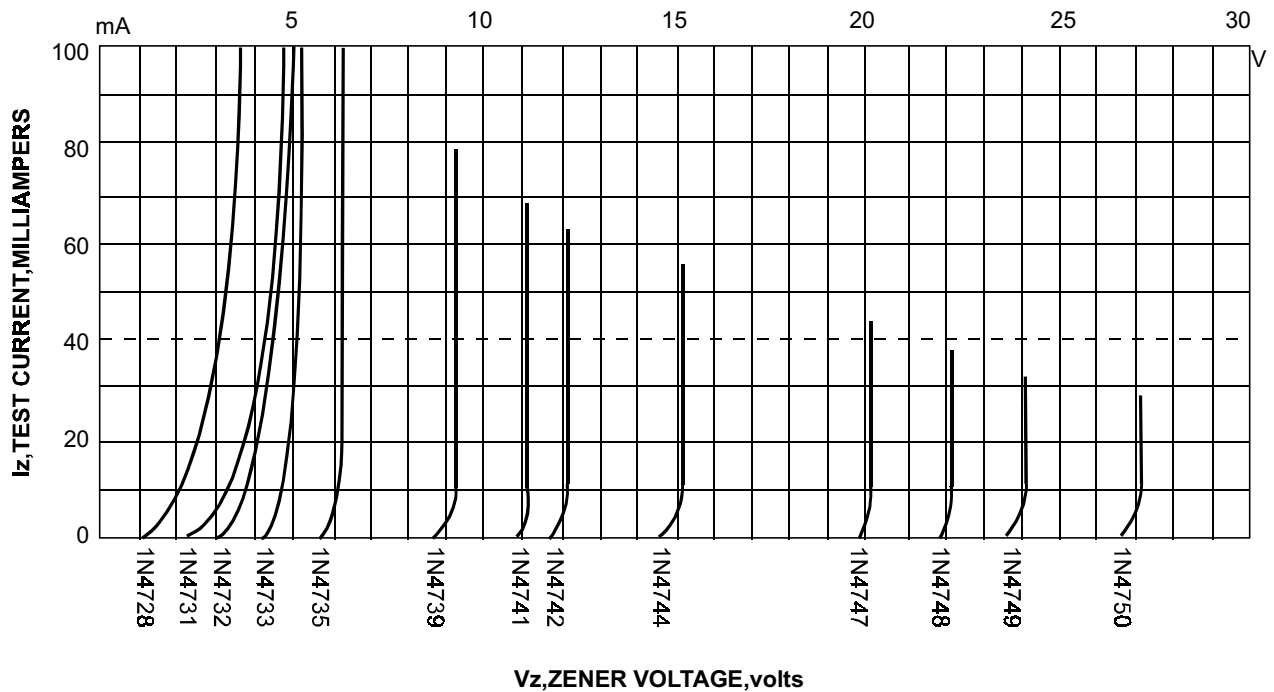
| Device Type | Nominal Zener Voltage<br>V <sub>Z</sub> @I <sub>ZT</sub> | Test Current<br>I <sub>ZT</sub> | Maximum Zener Impedance         |                                 | Maximum Reverse Leakage Current |                 | I <sub>ZK</sub> | Max.Surge Current<br>I <sub>R</sub> @25°C | Maximum Regulator Current<br>I <sub>ZM</sub> |
|-------------|----------------------------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-----------------|-----------------|-------------------------------------------|----------------------------------------------|
|             | Volts                                                    | mA                              | Z <sub>T</sub> @I <sub>ZT</sub> | Z <sub>T</sub> @I <sub>ZK</sub> | I <sub>R</sub>                  | @V <sub>R</sub> |                 |                                           |                                              |
|             |                                                          |                                 | Ohms                            | Ohms                            | μA                              | Volts           |                 |                                           |                                              |
| 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

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## 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

