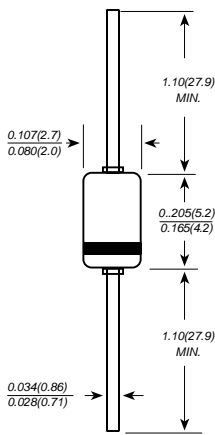


Data Sheet 2591 Rev. A

**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.

|   | <b>SYMBOLS</b>   | <b>VALUE</b> | <b>UNITS</b> |
|---|------------------|--------------|--------------|
| 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 TA=25°C unless otherwise noted)**

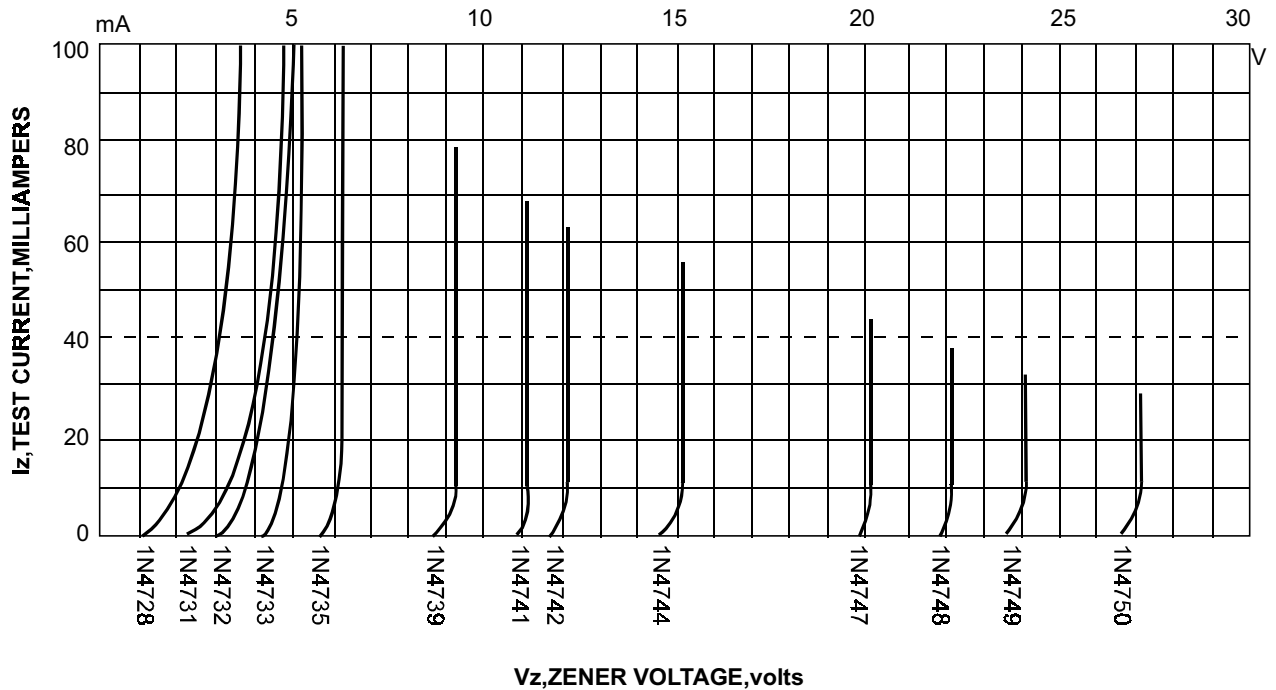
| Device Type | Nominal Zener Voltage<br>Vz@IzT | Test Current<br>IzT | Maximum Zener Impedance |         | Maximum Reverse Leakage Current |      | Izk   | Max.Surge Current<br>Ir@25°C | Maximum Regulator Current<br>IzM |
|-------------|---------------------------------|---------------------|-------------------------|---------|---------------------------------|------|-------|------------------------------|----------------------------------|
|             | Volts                           |                     | ZzT@IzT                 | ZzT@Izk | IR                              | @VR  |       |                              |                                  |
|             |                                 |                     | mA                      | Ohms    | Ohms                            | µA   | Volts | 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

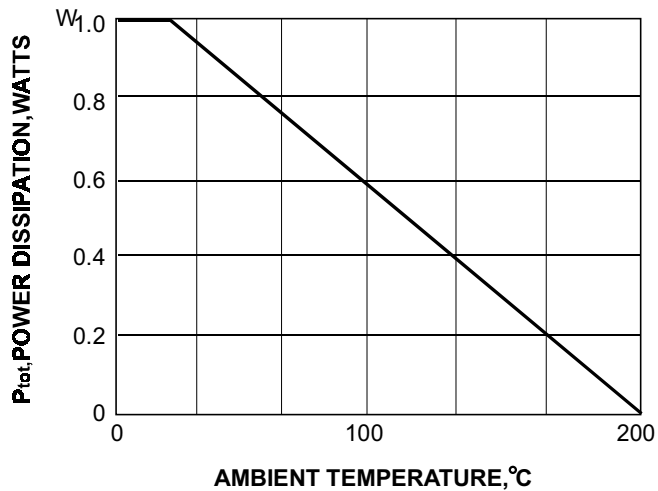
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**RATINGS AND CHARACTERISTIC CURVES 1N47 SERIES**

**Breakdown characteristics**



**Admissible power dissipation versus ambient temperature**  
 Valid provided that leads are kept at ambient temperature at a distance of 10mm from case



**TECHNICAL DATA**

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