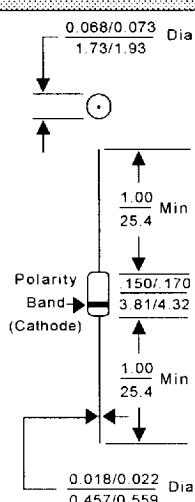


# ZENER DIODES, GLASS PACKAGE, LOW CURRENT

| 500mW             | Nominal Zener Voltage at $I_z$ | Zener Test Current | Maximum Zener Impedance |        |                                         |        | Maximum Reverse Leakage Current at $T_A = 25^\circ\text{C}$ |        |               |        | Max Zener Current | Outline                                                                             |
|-------------------|--------------------------------|--------------------|-------------------------|--------|-----------------------------------------|--------|-------------------------------------------------------------|--------|---------------|--------|-------------------|-------------------------------------------------------------------------------------|
|                   |                                |                    | $Z_{rz}$ @ $I_z$ (Ohms) |        | $Z_{rz}$ @ $I_z = 0.25\text{mA}$ (Ohms) |        | $I_r$ ( $\mu\text{A}$ )                                     |        | $V_r$ (Volts) |        |                   |                                                                                     |
|                   |                                |                    | Suffix                  |        | Suffix                                  |        | Suffix                                                      |        | Suffix        |        |                   |                                                                                     |
|                   |                                |                    | B, C, D                 | A, Non | B, C, D                                 | A, Non | B, C, D                                                     | A, Non | B, C, D       | A, Non |                   |                                                                                     |
| JEDEC Part Number | $V_z$ (V)                      | $I_z$ (mA)         | B, C, D                 | A, Non | B, C, D                                 | A, Non | B, C, D                                                     | A, Non | B, C, D       | A, Non | $I_{z\max}$ (mA)  | Inches/millimeters                                                                  |
| 1N5985            | 2.4                            | 5.0                | 100                     | 110    | 1800                                    | 2000   | 100                                                         | 100    | 1.0           | 0.5    | 208               |  |
| 1N5986            | 2.7                            | 5.0                | 100                     | 110    | 1900                                    | 2200   | 75                                                          | 100    | 1.0           | 0.5    | 185               |                                                                                     |
| 1N5987            | 3.0                            | 5.0                | 95                      | 100    | 2000                                    | 2300   | 50                                                          | 100    | 1.0           | 0.5    | 167               |                                                                                     |
| 1N5988            | 3.3                            | 5.0                | 95                      | 100    | 2200                                    | 2400   | 25                                                          | 75     | 1.0           | 0.5    | 152               |                                                                                     |
| 1N5989            | 3.6                            | 5.0                | 90                      | 95     | 2300                                    | 2500   | 15                                                          | 50     | 1.0           | 0.5    | 139               |                                                                                     |
| 1N5990            | 3.9                            | 5.0                | 90                      | 95     | 2400                                    | 2500   | 10                                                          | 25     | 1.0           | 1.0    | 128               |                                                                                     |
| 1N5991            | 4.3                            | 5.0                | 88                      | 90     | 2500                                    | 2500   | 5.0                                                         | 15     | 1.0           | 1.0    | 116               |                                                                                     |
| 1N5992            | 4.7                            | 5.0                | 70                      | 90     | 2600                                    | 2500   | 3.0                                                         | 10     | 1.5           | 1.0    | 106               |                                                                                     |
| 1N5993            | 5.1                            | 5.0                | 50                      | 88     | 2200                                    | 2500   | 2.0                                                         | 5.0    | 2.0           | 1.0    | 98                |                                                                                     |
| 1N5994            | 5.6                            | 5.0                | 25                      | 70     | 2050                                    | 2200   | 2.0                                                         | 3.0    | 3.0           | 1.5    | 89                |                                                                                     |
| 1N5995            | 6.2                            | 5.0                | 10                      | 50     | 1800                                    | 2050   | 1.0                                                         | 2.0    | 4.0           | 2.0    | 81                |                                                                                     |
| 1N5996            | 6.8                            | 5.0                | 8.0                     | 25     | 1300                                    | 1800   | 1.0                                                         | 2.0    | 5.2           | 3.0    | 74                |                                                                                     |
| 1N5997            | 7.5                            | 5.0                | 7.0                     | 10     | 750                                     | 1300   | 0.5                                                         | 1.0    | 6.0           | 4.0    | 67                |                                                                                     |
| 1N5998            | 8.2                            | 5.0                | 7.0                     | 15     | 600                                     | 750    | 0.5                                                         | 1.0    | 6.5           | 5.2    | 61                |                                                                                     |
| 1N5999            | 8.7                            | 5.0                | 10                      | 18     | 600                                     | 600    | 0.1                                                         | 0.5    | 7.0           | 6.0    | 55                |                                                                                     |
| 1N6000            | 9.1                            | 5.0                | 15                      | 22     | 600                                     | 600    | 0.1                                                         | 0.5    | 8.0           | 6.5    | 50                |                                                                                     |
| 1N6001            | 10                             | 5.0                | 18                      | 25     | 600                                     | 600    | 0.1                                                         | 0.1    | 8.4           | 7.0    | 45                |                                                                                     |
| 1N6002            | 11                             | 5.0                | 22                      | 32     | 600                                     | 600    | 0.1                                                         | 0.1    | 9.1           | 8.0    | 42                |                                                                                     |
| 1N6003            | 12                             | 5.0                | 25                      | 36     | 600                                     | 600    | 0.1                                                         | 0.1    | 9.9           | 8.4    | 38                |                                                                                     |
| 1N6004            | 13                             | 5.0                | 32                      | 42     | 600                                     | 600    | 0.1                                                         | 0.1    | 11            | 9.1    | 33                |                                                                                     |
| 1N6005            | 16                             | 5.0                | 36                      | 48     | 600                                     | 600    | 0.1                                                         | 0.1    | 12            | 9.9    | 31                |                                                                                     |
| 1N6006            | 18                             | 5.0                | 42                      | 55     | 600                                     | 600    | 0.1                                                         | 0.1    | 14            | 11     | 28                |                                                                                     |
| 1N6007            | 20                             | 5.0                | 48                      | 62     | 600                                     | 600    | 0.1                                                         | 0.1    | 15            | 12     | 25                |                                                                                     |
| 1N6008            | 22                             | 5.0                | 55                      | 70     | 600                                     | 600    | 0.1                                                         | 0.1    | 17            | 14     | 23                |                                                                                     |
| 1N6009            | 24                             | 5.0                | 62                      | 78     | 600                                     | 600    | 0.1                                                         | 0.1    | 18            | 15     | 21                |                                                                                     |
| 1N6010            | 27                             | 5.0                | 70                      | 88     | 600                                     | 700    | 0.1                                                         | 0.1    | 21            | 17     | 19                |                                                                                     |
| 1N6011            | 30                             | 5.0                | 78                      | 95     | 600                                     | 700    | 0.1                                                         | 0.1    | 23            | 18     | 17                |                                                                                     |
| 1N6012            | 36                             | 5.0                | 88                      | 110    | 700                                     | 800    | 0.1                                                         | 0.1    | 25            | 21     | 15                |                                                                                     |
| 1N6013            | 39                             | 5.0                | 95                      | 130    | 700                                     | 900    | 0.1                                                         | 0.1    | 27            | 23     | 14                |                                                                                     |
| 1N6014            | 43                             | 5.0                | 130                     | 170    | 800                                     | 1000   | 0.1                                                         | 0.1    | 30            | 25     | 13                |                                                                                     |
| 1N6015            | 47                             | 5.0                | 150                     | 180    | 900                                     | 1100   | 0.1                                                         | 0.1    | 33            | 27     | 12                |                                                                                     |
| 1N6016            | 51                             | 5.0                | 170                     | 200    | 1000                                    | 1300   | 0.1                                                         | 0.1    | 36            | 30     | 11                |                                                                                     |
| 1N6017            | 56                             | 5.0                | 180                     | 225    | 1300                                    | 1400   | 0.1                                                         | 0.1    | 39            | 33     | 9.8               |                                                                                     |
| 1N6018            | 62                             | 5.0                | 200                     | 240    | 1400                                    | 1600   | 0.1                                                         | 0.1    | 43            | 36     | 8.9               |                                                                                     |
| 1N6019            | 68                             | 5.0                | 225                     | 265    | 1400                                    | 1700   | 0.1                                                         | 0.1    | 47            | 39     | 8.0               |                                                                                     |
| 1N6020            | 75                             | 5.0                | 240                     | 280    | 1600                                    | 2000   | 0.1                                                         | 0.1    | 52            | 43     | 7.4               |                                                                                     |
| 1N6021            | 82                             | 5.0                | 265                     | 300    | 1700                                    | 2300   | 0.1                                                         | 0.1    | 56            | 47     | 6.7               |                                                                                     |
| 1N6022            | 91                             | 5.0                | 280                     | 350    | 2000                                    | 2600   | 0.1                                                         | 0.1    | 62            | 52     | 6.1               |                                                                                     |
| 1N6023            | 100                            | 5.0                | 300                     | 400    | 2300                                    | 3000   | 0.1                                                         | 0.1    | 69            | 56     | 5.5               |                                                                                     |
| 1N6024            | 110                            | 5.0                | 500                     | 800    | 2600                                    | 4000   | 0.1                                                         | 0.1    | 76            | 62     | 5.0               |                                                                                     |
| 1N6025            | 120                            | 2.0                | 650                     | 950    | 3000                                    | 4500   | 0.1                                                         | 0.1    | 84            | 69     | 4.5               |                                                                                     |
| 1N6026            | 130                            | 2.0                | 800                     | 1250   | 4000                                    | 5000   | 0.1                                                         | 0.1    | 91            | 76     | 4.2               |                                                                                     |
| 1N6027            | 140                            | 2.0                | 950                     | 1400   | 4500                                    | 5500   | 0.1                                                         | 0.1    | 99            | 84     | 3.8               |                                                                                     |
| 1N6028            | 150                            | 2.0                | 1250                    | 1700   | 5000                                    | 6000   | 0.1                                                         | 0.1    | 114           | 91     | 3.3               |                                                                                     |
| 1N6029            | 160                            | 2.0                | 1400                    | 2000   | 5500                                    | 7000   | 0.1                                                         | 0.1    | 122           | 99     | 3.1               |                                                                                     |
| 1N6030            | 180                            | 2.0                | 1700                    | 2350   | 6000                                    | 8000   | 0.1                                                         | 0.1    | 137           | 114    | 2.8               |                                                                                     |
| 1N6031            | 200                            | 2.0                | 2000                    | 2700   | 7000                                    | 9000   | 0.1                                                         | 0.1    | 152           | 122    | 2.5               |                                                                                     |

All Dimensions in  $\frac{\text{Inches}}{\text{mm}}$

**DO-35**

**FEATURES:**

- Low Noise
- Zener Voltage: 1.8 to 100 volts
- Hermetically sealed glass package
- Especially suited for low current, low noise operation at 250  $\mu\text{A}$

**MAXIMUM RATINGS:**

- Junction Temperature:  $-65^\circ\text{C}$  to  $+200^\circ\text{C}$
- Storage temperature:  $-65^\circ\text{C}$  to  $+200^\circ\text{C}$
- DC Power Dissipation: 400 mW at  $T_A = 75^\circ\text{C}$
- Derate above  $75^\circ\text{C}$ : 2.66 mW/ $^\circ\text{C}$
- Forward Voltage: 1N4099-1N4135: 1.0 volts max at 200 mA  
1N4614-1N4627: 1.0 volts max at 100 mA

Standard B Suffix Voltage Tolerance is  $\pm 5\%$ .  
Suffix A =  $\pm 10\%$ ,  $\pm 2\%$  and  $\pm 1\%$  available on special order

**Package Quantities** Bulk - 1,000  
Reel - 10,000