



Features

- Glass passivated junction
- Good clamping ability
- Available in Normal and Reverse polarity
- Metric and UNF thread type

Mechanical Characteristics

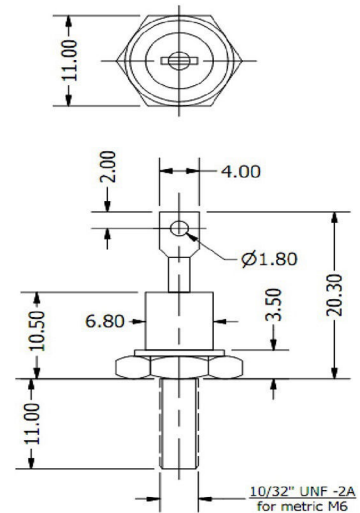
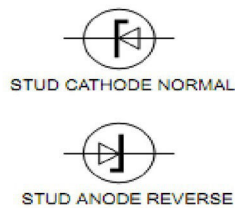
- Hermetically sealed DO-4 outline
- Polarity: Indicated by direction of Zener symbol
- External surfaces corrosion resistant & terminal Solderable
- Weight: 6 grams

Electrical Data

- DC Power Dissipation: **10 Watts**
- Voltage Range 6.8 – 200 Volts
- Operating temperature -65°C to +175°C
- Derating: 80 mW/°C above 50°C
- Forward Voltage @ 2.0A: 1.4 Volts



DO-203AA (DO-4)



ALL DIMENSIONS IN MM





10W Zener Diodes

| Electrical Characteristics (T _c = 25°C unless otherwise specified) | | | | | | | | |
|---|---|---|---|---|---|---|---------------------|------------------------|
| Type number | Nominal Zener Voltage V _Z @I _{ZT} (Volts) | Zener Test Current I _{ZT} (mA) | Max Zener Impedance | | Max DC Zener Current I _{ZM} @75°C (mA) | Typical Temp. Coeff. a _{vz} (%/°C) | Max Reverse Current | |
| | | | Z _{ZT} @I _{ZT} (Ohms) | Z _{ZK} @1mA(I _{ZK}) (Ohms) | | | I _R (µA) | V _R (Volts) |
| 1N2970 | 6.8 | 370 | 1.2 | 500 | 1320 | 0.040 | 150 | 5.2 |
| 1N2971 | 7.5 | 335 | 1.3 | 250 | 1180 | 0.045 | 100 | 5.7 |
| 1N2972 | 8.2 | 305 | 1.5 | 250 | 1040 | 0.048 | 50 | 6.2 |
| 1N2973 | 9.1 | 275 | 2.0 | 250 | 960 | 0.051 | 25 | 6.9 |
| 1N2974 | 10 | 250 | 3 | 250 | 860 | 0.055 | 25 | 7.6 |
| 1N2975 | 11 | 230 | 3 | 250 | 780 | 0.060 | 10 | 8.4 |
| 1N2976 | 12 | 210 | 3 | 250 | 720 | 0.065 | 10 | 9.1 |
| 1N2977 | 13 | 190 | 3 | 250 | 660 | 0.065 | 10 | 9.9 |
| 1N2978 | 14 | 180 | 3 | 250 | 600 | 0.070 | 10 | 10.5 |
| 1N2979 | 15 | 170 | 3 | 250 | 560 | 0.070 | 10 | 11.4 |
| 1N2980 | 16 | 155 | 4 | 250 | 530 | 0.070 | 10 | 12.2 |
| 1N2981 | 17 | 145 | 4 | 250 | 500 | 0.075 | 10 | 13.0 |
| 1N2982 | 18 | 140 | 4 | 250 | 460 | 0.075 | 10 | 13.7 |
| 1N2983 | 19 | 130 | 4 | 250 | 440 | 0.075 | 10 | 14.0 |
| 1N2984 | 20 | 125 | 4 | 250 | 420 | 0.075 | 10 | 15.2 |
| 1N2985 | 22 | 115 | 5 | 250 | 380 | 0.080 | 10 | 16.7 |
| 1N2986 | 24 | 105 | 5 | 250 | 350 | 0.080 | 10 | 18.2 |
| 1N2987 | 25 | 100 | 6 | 250 | 310 | 0.080 | 10 | 18.2 |
| 1N2988 | 27 | 95 | 7 | 250 | 300 | 0.085 | 10 | 20.6 |
| 1N2989 | 30 | 85 | 8 | 300 | 280 | 0.085 | 10 | 22.8 |
| 1N2990 | 33 | 75 | 9 | 300 | 260 | 0.085 | 10 | 25.1 |
| 1N2991 | 36 | 70 | 10 | 300 | 230 | 0.085 | 10 | 27.4 |
| 1N2992 | 39 | 65 | 11 | 300 | 210 | 0.090 | 10 | 29.7 |
| 1N2993 | 43 | 60 | 12 | 400 | 195 | 0.090 | 10 | 32.7 |
| 1N2994 | 45 | 55 | 13 | 400 | 185 | 0.090 | 10 | 33.0 |
| 1N2995 | 47 | 55 | 14 | 400 | 175 | 0.090 | 10 | 35.8 |
| 1N2996 | 50 | 50 | 15 | 500 | 165 | 0.090 | 10 | 36.0 |
| 1N2997 | 51 | 50 | 15 | 500 | 160 | 0.090 | 10 | 38.8 |
| 1N2998 | 52 | 50 | 15 | 500 | 160 | 0.090 | 10 | 39.0 |
| 1N2999 | 56 | 45 | 16 | 500 | 150 | 0.090 | 10 | 42.6 |
| 1N3000 | 62 | 40 | 17 | 600 | 130 | 0.090 | 10 | 47.1 |
| 1N3001 | 68 | 37 | 18 | 600 | 120 | 0.090 | 10 | 51.7 |
| 1N3002 | 75 | 33 | 22 | 600 | 110 | 0.090 | 10 | 56.0 |
| 1N3003 | 82 | 30 | 25 | 700 | 100 | 0.090 | 10 | 62.2 |
| 1N3004 | 91 | 28 | 35 | 800 | 85 | 0.090 | 10 | 69.2 |
| 1N3005 | 100 | 25 | 40 | 900 | 80 | 0.090 | 10 | 76.0 |
| 1N3006 | 105 | 25 | 45 | 1000 | 75 | 0.095 | 10 | 76.0 |
| 1N3007 | 110 | 23 | 55 | 1100 | 72 | 0.095 | 10 | 83.6 |
| 1N3008 | 120 | 20 | 75 | 1200 | 67 | 0.095 | 10 | 91.2 |
| 1N3009 | 130 | 19 | 100 | 1300 | 62 | 0.095 | 10 | 98.8 |
| 1N3010 | 140 | 18 | 125 | 1400 | 58 | 0.095 | 10 | 100.0 |
| 1N3011 | 150 | 17 | 175 | 1500 | 54 | 0.095 | 10 | 114.0 |
| 1N3012 | 160 | 16 | 200 | 1600 | 50 | 0.095 | 10 | 121.6 |
| 1N3013 | 175 | 14 | 250 | 1750 | 46 | 0.095 | 10 | 135.0 |
| 1N3014 | 180 | 14 | 260 | 1850 | 45 | 0.095 | 10 | 136.8 |
| 1N3015 | 200 | 12 | 300 | 2000 | 40 | 0.100 | 10 | 152.0 |

- Zener impedance is derived from 60Hz AC voltage which results when AC current RMS value (which equals 10% of the DC zener current) is superimposed on I_Z
 - I_{ZM} values are derived for a ±5% V_Z tolerance
- Standard voltage tolerances are ±5% (B suffix), ±10% (A suffix) & ±20% (no suffix)**





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