

POWER ZENERS

1 Watt, Industrial

UZ8706 SERIES
UZ8806 SERIES

FEATURES

- High Surge Ratings
- A Quarter the Size of Conventional 1 Watt Zeners
- Impervious to Moisture

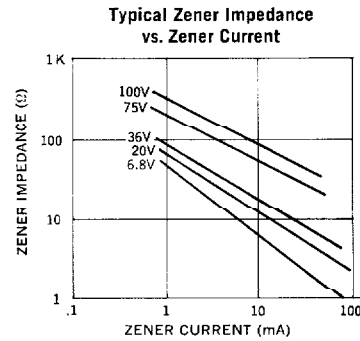
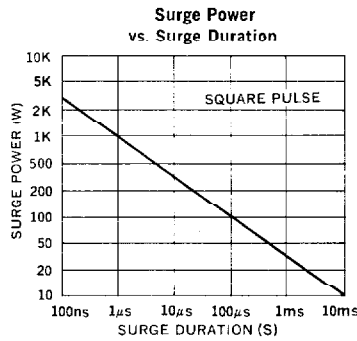
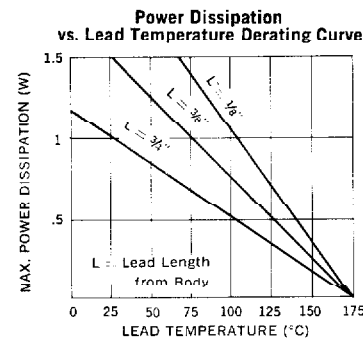
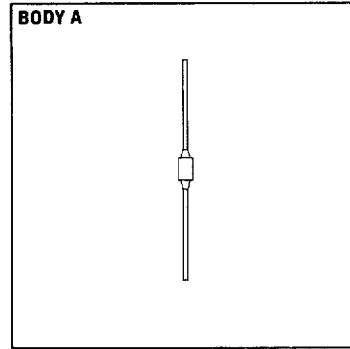
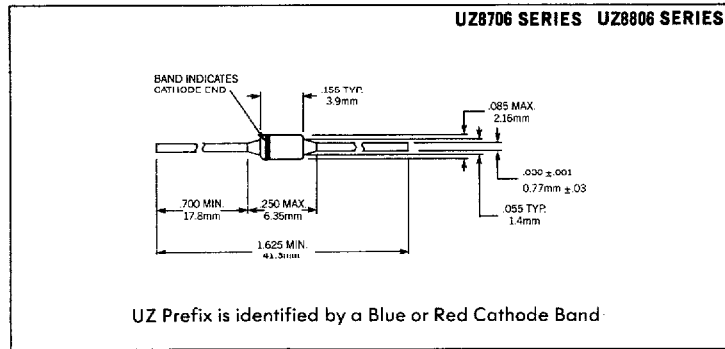
DESCRIPTION

One watt zener diodes, hermetically sealed in glass.

ABSOLUTE MAXIMUM RATINGS

| | |
|---|-------------------------------------|
| Zener Voltage, V_z | 6.8 to 200V |
| Continuous Current | See Table |
| Surge Current (8.3ms) | See Table |
| Surge Power | See Graph |
| Power | See Lead Temperature Derating Curve |
| Storage and Operating Temperature | -65°C to +175°C |

MECHANICAL SPECIFICATIONS



| Type | | Electrical Specifications at 25°C | | | | | | | Maximum Ratings | |
|----------------|-----------------|---|---------------------------------|--|---------------------------------|------------------------|-------------------------|--|---|---|
| | | Nominal Zener Voltage † V _Z @ I _{ZT} | Test Current I _{ZT} | Max. Zener Impedance § Z _Z @ I _{ZT} | Maximum Reverse Leakage Current | | | Typ. Temp. Coefficient T.C. @ I _{ZT} | Maximum Continuous Current * I _{ZM} | Maximum Surge Current ‡ I _S |
| | | | | | I _R @ V _R | ± 5% V _R | ± 10% V _R | | | |
| ± 5% Tolerance | ± 10% Tolerance | Volts | mA | Ohms | µA | Volts | Volts | %/°C | mA | Amps |
| UZ 8706 | UZ 8806 | 6.8 | 37 | 3.5 | 2.0 | 5.2 | 4.9 | 0.04 | 140 | 5.00 |
| UZ 8707 | UZ 8807 | 7.5 | 34 | 4.0 | 30 | 5.7 | 5.4 | 0.04 | 125 | 4.50 |
| UZ 8708 | UZ 8808 | 8.2 | 31 | 4.5 | 10 | 6.2 | 5.9 | 0.05 | 115 | 3.90 |
| UZ 8709 | UZ 8809 | 9.1 | 28 | 5.0 | 3.0 | 6.9 | 6.6 | 0.05 | 105 | 3.37 |
| UZ 8710 | UZ 8810 | 10 | 25 | 7.0 | 2.0 | 7.6 | 7.2 | 0.06 | 95 | 2.77 |
| UZ 8712 | UZ 8812 | 12 | 23 | 9.0 | 1.0 | 9.1 | 8.6 | 0.07 | 85 | 2.25 |
| UZ 8713 | UZ 8813 | 13 | 21 | 10 | 0.5 | 9.9 | 9.3 | 0.07 | 80 | 2.25 |
| UZ 8714 | UZ 8814 | 14 | 19 | 12 | 0.5 | 10.6 | 10.1 | 0.07 | 74 | 2.25 |
| UZ 8715 | UZ 8815 | 15 | 17 | 14 | 0.5 | 11.4 | 10.8 | 0.07 | 63 | 1.65 |
| UZ 8716 | UZ 8816 | 16 | 15.5 | 16 | 0.5 | 12.1 | 11.5 | 0.07 | 60 | 1.65 |
| UZ 8718 | UZ 8818 | 18 | 14.0 | 20 | 0.5 | 13.7 | 12.9 | 0.08 | 52 | 1.12 |
| UZ 8720 | UZ 8820 | 20 | 12.5 | 22 | 0.5 | 15.2 | 14.4 | 0.08 | 47 | 1.12 |
| UZ 8722 | UZ 8820 | 22 | 11.5 | 23 | 0.5 | 16.7 | 15.8 | 0.08 | 43 | 1.12 |
| UZ 8724 | UZ 8824 | 24 | 10.5 | 25 | 0.5 | 18.2 | 17.3 | 0.08 | 40 | 0.825 |
| UZ 8727 | UZ 8827 | 27 | 9.5 | 35 | 0.5 | 20.5 | 19.4 | 0.09 | 35 | 0.825 |
| UZ 8730 | UZ 8830 | 30 | 8.5 | 40 | 0.5 | 22.8 | 21.6 | 0.09 | 31 | 0.825 |
| UZ 8733 | UZ 8833 | 33 | 7.5 | 45 | 0.5 | 25.1 | 23.7 | 0.09 | 28 | 0.675 |
| UZ 8736 | UZ 8836 | 36 | 7.0 | 50 | 0.5 | 27.3 | 25.9 | 0.09 | 26 | 0.562 |
| UZ 8740 | UZ 8840 | 40 | 6.5 | 62 | 0.5 | 30.4 | 28.8 | 0.095 | 24 | 0.562 |
| UZ 8745 | UZ 8845 | 45 | 6.0 | 75 | 0.5 | 34.2 | 32.4 | 0.095 | 22 | 0.450 |
| UZ 8750 | UZ 8850 | 50 | 5.0 | 85 | 0.5 | 38.0 | 36.0 | 0.095 | 20 | 0.450 |
| UZ 8756 | UZ 8856 | 56 | 4.5 | 110 | 0.5 | 42.5 | 40.3 | 0.095 | 17 | 0.390 |
| UZ 8760 | UZ 8860 | 60 | 4.0 | 125 | 0.5 | 45.6 | 43.2 | 0.095 | 15 | 0.337 |
| UZ 8770 | UZ 8870 | 70 | 3.7 | 150 | 0.5 | 53.2 | 50.4 | 0.095 | 14 | 0.337 |
| UZ 8775 | UZ 8875 | 75 | 3.3 | 175 | 0.5 | 57.0 | 54.0 | 0.095 | 12 | 0.277 |
| UZ 8780 | UZ 8880 | 80 | 3.0 | 200 | 0.5 | 60.8 | 57.6 | 0.095 | 11 | 0.225 |
| UZ 8790 | UZ 8890 | 90 | 2.8 | 250 | 0.5 | 68.4 | 64.8 | 0.095 | 10 | 0.225 |
| UZ 8110 | UZ 8210 | 100 | 2.5 | 350 | 0.5 | 76.0 | 72.0 | 0.10 | 9.5 | 0.225 |
| UZ 8111 | UZ 8211 | 110 | 2.3 | 450 | 0.5 | 83.6 | 79.2 | 0.10 | 8.5 | 0.165 |
| UZ 8112 | UZ 8212 | 120 | 2.0 | 550 | 0.5 | 91.2 | 86.4 | 0.10 | 8.0 | 0.112 |
| UZ 8113 | UZ 8213 | 130 | 1.9 | 700 | 0.5 | 98.8 | 93.6 | 0.10 | 7.2 | 0.112 |
| UZ 8114 | UZ 8214 | 140 | 1.8 | 850 | 0.5 | 106 | 100 | 0.10 | 6.8 | 0.112 |
| UZ 8115 | UZ 8215 | 150 | 1.7 | 1000 | 0.5 | 114 | 108 | 0.10 | 6.3 | 0.112 |
| UZ 8116 | UZ 8216 | 160 | 1.6 | 1100 | 0.5 | 121 | 115 | 0.10 | 5.9 | 0.082 |
| UZ 8117 | UZ 8217 | 170 | 1.5 | 1200 | 0.5 | 129 | 122 | 0.10 | 5.6 | 0.082 |
| UZ 8118 | UZ 8218 | 180 | 1.4 | 1300 | 0.5 | 137 | 129 | 0.10 | 5.2 | 0.056 |
| UZ 8119 | UZ 8219 | 190 | 1.3 | 1400 | 0.5 | 144 | 137 | 0.10 | 5.0 | 0.056 |
| UZ 8120 | UZ 8220 | 200 | 1.2 | 1500 | 0.5 | 152 | 144 | 0.10 | 4.7 | 0.056 |

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†All zener voltages are measured with an automated test set using a 35 millisecond test time. Longer or shorter test times will have a corresponding effect on the measured value due to heating effects.

§Zener impedance is derived from the 60-cycle AC voltage created when AC current with RMS value of 10% of DC zener test current is superimposed on the test current.

*Ratings are based on free air. T_A is 25°C. For use at 1.5 watts see derating curve.

‡Figures shown are for a peak sinusoidal surge current of 8.3 ms duration using 60 cycle AC. The 8.3 ms square pulse rating is 71% of the value shown.