



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



POWER ZENERS

3 Watt

UZ706 SERIES
UZ806 SERIES
UZ706HR2 SERIES
UZ806HR2 SERIES

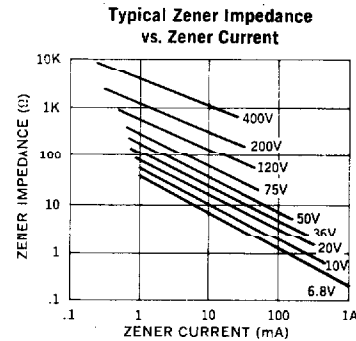
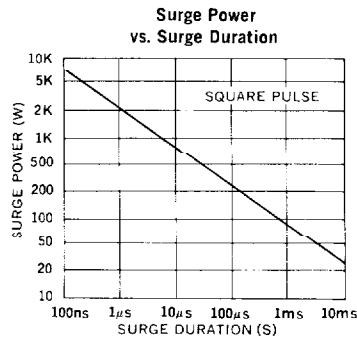
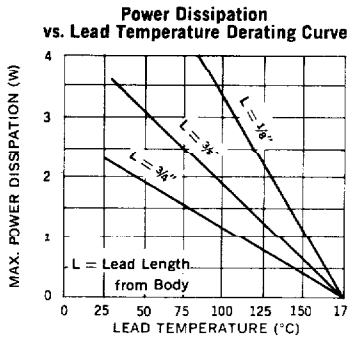
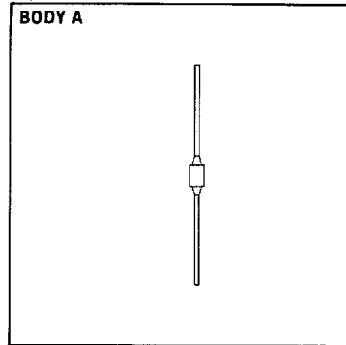
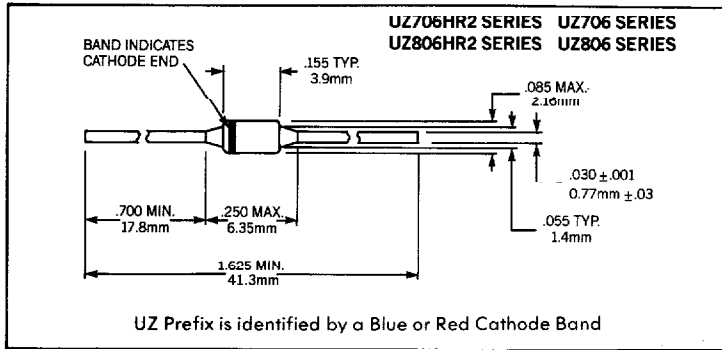
FEATURES

- 10 Times Greater Surge Rating than Conventional 1 Watt Types
- Small Physical Size

ABSOLUTE MAXIMUM RATINGS

| | |
|---|-------------------------------------|
| Zener Voltage, V_z | 6.8 to 400V |
| 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



OPTIONAL HIGH RELIABILITY (HR2) SCREENING

The following tests are performed on 100% of the devices specified UZ706 through UZ140HR2.

| SCREEN | MIL-STD-750 METHOD | CONDITIONS |
|----------------------------------|--------------------|--|
| 1. High Temperature | 1032 | 24 Hours @ $T_A = 175^\circ\text{C}$ |
| 2. Temperature Cycling | 1051 | C, 20 Cycles, -65 to +175°C. No dwell required @ 25°C ≥ 10 min. at extremes |
| 3. Hermetic Seal @ Gross Leak | 1071 | E, ZYGLO |
| 4. Interim Electrical Parameters | GO/NO GO | $V_z + I_R$ @ 25°C |
| 5. Power Burn-in | 1038 | B, 96 Hours, $T_A = 25^\circ\text{C}$, I_z adjusted so that $150^\circ\text{C} \leq T_j \leq 175^\circ\text{C}$ |
| 6. Final Electrical Parameters | GO/NO GO | $V_z + I_R$ @ 25°C PDA = 10% (Final Electricals) |

| Type * | | Electrical Specifications at 25°C | | | | | | | Maximum Ratings | |
|---------------|----------------------|---|---------------------------------|----------------------------------|---------------------------------|---------------------|----------------------|--|---|--|
| | | Nominal Zener Voltage † V _Z @ I _{ZT} | Test Current I _{ZT} | Max. Zener Impedance ‡ | Maximum Reverse Leakage Current | | | Typ. Temp. Coefficient T _C @ I _{ZT} | Maximum Continuous Current * I _{ZM} | Maximum Surge Current †† I _S |
| | | | | Z _Z @ I _{ZT} | I _R @ V _R | ± 5% V _R | ± 10% V _R | | | |
| ±5% Tolerance | Jedec** Registration | Volts | mA | Ohms | µA | Volts | Volts | %/°C | mA | Amps |
| UZ706/706HR2 | 1N5063 | 6.8 | 75 | 2 | 500 | 5.2 | 4.9 | .04 | 440 | 10.0 |
| UZ707/707HR2 | 1N5064 | 7.5 | 75 | 2 | 300 | 5.7 | 5.4 | .04 | 400 | 8.0 |
| UZ708/708HR2 | 1N5065 | 8.2 | 75 | 3 | 200 | 6.2 | 5.9 | .05 | 360 | 7.0 |
| UZ709/709HR2 | 1N5066 | 9.1 | 75 | 3 | 100 | 6.9 | 6.6 | .05 | 330 | 6.0 |
| UZ710/710HR2 | 1N5067 | 10.0 | 75 | 4 | 40 | 7.6 | 7.2 | .06 | 300 | 5.0 |
| UZ712/712HR2 | 1N4883 | 12 | 65 | 5 | 10 | 9.1 | 8.6 | .07 | 250 | 4.0 |
| UZ713/713HR2 | 1N5069 | 13 | 50 | 6 | 10 | 9.9 | 9.3 | .07 | 230 | 4.0 |
| UZ714/714HR2 | 1N5070 | 14 | 50 | 6 | 10 | 10.6 | 10.1 | .07 | 210 | 4.0 |
| UZ715/715HR2 | 1N5071 | 15 | 50 | 6 | 10 | 11.4 | 10.8 | .07 | 200 | 3.0 |
| UZ716/716HR2 | 1N5072 | 16 | 50 | 7 | 5 | 12.2 | 11.5 | .07 | 185 | 3.0 |
| UZ718/718HR2 | 1N5073 | 18 | 40 | 8 | 5 | 13.7 | 12.9 | .08 | 170 | 2.0 |
| UZ720/720HR2 | 1N4884 | 20 | 40 | 9 | 5 | 15.2 | 14.4 | .08 | 150 | 2.0 |
| UZ722/722HR2 | 1N5074 | 22 | 30 | 10 | 5 | 16.7 | 15.8 | .08 | 135 | 2.0 |
| UZ724/724HR2 | 1N5075 | 24 | 30 | 10 | 5 | 18.2 | 17.3 | .08 | 125 | 1.5 |
| UZ727/727HR2 | 1N5076 | 27 | 25 | 12 | 1 | 20.6 | 19.4 | .09 | 110 | 1.5 |
| UZ730/730HR2 | 1N5077 | 30 | 25 | 15 | 1 | 22.8 | 21.6 | .090 | 100 | 1.5 |
| UZ733/733HR2 | 1N5078 | 33 | 20 | 21 | 1 | 25.1 | 23.7 | .090 | 90 | 1.2 |
| UZ736/736HR2 | 1N5079 | 36 | 20 | 21 | 1 | 27.4 | 25.9 | .090 | 85 | 1.0 |
| UZ740/740HR2 | 1N5081 | 40 | 20 | 27 | 1 | 30.4 | 28.8 | .095 | 75 | 1.0 |
| UZ745/745HR2 | 1N5003 | 45 | 15 | 37 | 1 | 34.2 | 32.4 | .095 | 65 | 0.8 |
| UZ750/750HR2 | 1N5085 | 50 | 15 | 50 | 1 | 38.0 | 36.0 | .095 | 60 | 0.8 |
| UZ756/756HR2 | 1N5087 | 56 | 10 | 70 | 1 | 42.6 | 40.3 | .095 | 55 | 0.7 |
| UZ760/760HR2 | 1N5088 | 60 | 10 | 70 | 1 | 45.7 | 43.2 | .095 | 50 | 0.6 |
| UZ770/770HR2 | 1N5091 | 70 | 10 | 90 | 1 | 53.3 | 50.5 | .095 | 45 | 0.6 |
| UZ775/775HR2 | 1N5092 | 75 | 10 | 100 | 1 | 56.0 | 54.0 | .095 | 40 | 0.5 |
| UZ780/780HR2 | 1N5093 | 80 | 10 | 115 | 1 | 60.8 | 57.7 | .095 | 35 | 0.4 |
| UZ790/790HR2 | 1N4096 | 90 | 8.0 | 150 | 1 | 68.5 | 64.8 | .095 | 30 | 0.4 |
| UZ110/110HR2 | 1N4097 | 100 | 5.0 | 175 | 1 | 76.0 | 72.0 | .100 | 30 | 0.4 |
| UZ111/111HR2 | 1N5096 | 110 | 5.0 | 250 | 1 | 83.6 | 79.2 | .100 | 25 | 0.3 |
| UZ112/112HR2 | 1N5097 | 120 | 5.0 | 325 | 1 | 91.2 | 86.4 | .100 | 25 | 0.2 |
| UZ113/113HR2 | 1N5098 | 130 | 5.0 | 375 | 1 | 98.8 | 93.6 | .100 | 20 | 0.20 |
| UZ114/114HR2 | 1N5099 | 140 | 5.0 | 550 | 1 | 106 | 101 | .100 | 20 | 0.20 |
| UZ115/115HR2 | 1N4098 | 150 | 5.0 | 650 | 1 | 114 | 108 | .100 | 20 | 0.20 |
| UZ116/116HR2 | 1N5100 | 160 | 4.0 | 700 | 1 | 122 | 115 | .100 | 20 | 0.15 |
| UZ117/117HR2 | 1N5101 | 170 | 4.0 | 750 | 1 | 129 | 122 | .100 | 18 | 0.15 |
| UZ118/118HR2 | 1N5102 | 180 | 4.0 | 850 | 1 | 137 | 129 | .100 | 18 | 0.10 |
| UZ119/119HR2 | 1N6103 | 190 | 4.0 | 900 | 1 | 144 | 137 | .100 | 15 | 0.10 |
| UZ120/120HR2 | 1N5104 | 200 | 4.0 | 950 | 1 | 152 | 144 | .100 | 15 | 0.10 |
| UZ122/122HR2 | 1N5105 | 220 | 3.0 | 1100 | 1 | 167 | 158 | .100 | 15 | 0.09 |
| UZ124/124HR2 | 1N5106 | 240 | 3.0 | 1300 | 1 | 182 | 173 | .105 | 12 | 0.09 |
| UZ126/126HR2 | 1N5107 | 260 | 3.0 | 1500 | 1 | 198 | 187 | .105 | 12 | 0.08 |
| UZ128/128HR2 | 1N5109 | 280 | 3.0 | 1700 | 1 | 213 | 202 | .105 | 10 | 0.08 |
| UZ130/130HR2 | 1N5110 | 300 | 3.0 | 1900 | 1 | 228 | 216 | .105 | 10 | 0.07 |
| UZ132/132HR2 | 1N5111 | 320 | 2.0 | 2100 | 1 | 243 | 230 | .105 | 9 | 0.07 |
| UZ134/134HR2 | 1N5113 | 340 | 2.0 | 2400 | 1 | 258 | 245 | .110 | 9 | 0.06 |
| UZ136/136HR2 | 1N5114 | 360 | 2.0 | 2700 | 1 | 274 | 259 | .110 | 8 | 0.06 |
| UZ138/138HR2 | 1N5115 | 380 | 2.0 | 3000 | 1 | 289 | 274 | .110 | 8 | 0.06 |
| UZ140/140HR2 | 1N5117 | 400 | 2.0 | 3500 | 1 | 304 | 288 | .110 | 7 | 0.06 |

* Specify 20% voltage tolerance by changing first numeral of type number from 7 to 9. (UZ709 becomes UZ909) or from 1 to 3 (UZ111 becomes UZ311).
 Specify 10% voltage tolerance by changing first numeral of type number from 7 to 8. (UZ709 becomes UZ809) or from 1 to 2 (UZ111 becomes UZ211).

** Jedec registration applies to ±5% tolerance zeners only.

† All zener voltages are measured with an automated test set using a 35 ms 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.

* Maximum current based on 3 watt rating. See lead temperature derating curves for proper mounting methods.

†† Figures shown are for a peak sinusoidal surge current of 0.3ms duration using 60 cycle AC. The 0.3ms square pulse rating is 71% of the value shown.