

# DIGITRON SEMICONDUCTORS

## UZ8706, UZ8806 SERIES

## POWER ZENERS

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).

Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

### MAXIMUM RATING

<b>Zener Voltage (<math>V_Z</math>):</b>	6.8 to 200V
<b>Continuous Current:</b>	See Table
<b>Surge Current ( 8.3 ms):</b>	See Table
<b>Surge Power:</b>	See Graph
<b>Power:</b>	See Lead Temperature Derating Curve
<b>Storage and Operating Temperature:</b>	-65°C to +175°C

### ELECTRICAL CHARACTERISTICS

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. Coeff. 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
UZ8706	UZ8806	6.8	37	3.5	50	5.2	4.9	0.04	140	5.00
UZ8707	UZ8807	7.5	34	4.0	30	5.7	5.4	0.04	125	4.50
UZ8708	UZ8808	8.2	31	4.5	10	6.2	5.9	0.05	115	3.90
UZ8709	UZ8809	9.1	28	5.0	3.0	6.9	6.6	0.05	105	3.37
UZ8710	UZ8810	10	25	7.0	2.0	7.6	7.2	0.06	95	2.77
UZ8712	UZ8812	12	23	9.0	1.0	9.1	8.6	0.07	85	2.25
UZ8713	UZ8813	13	21	10	0.5	9.9	9.3	0.07	80	2.25
UZ8714	UZ8814	14	19	12	0.5	10.6	10.1	0.07	74	2.25
UZ8715	UZ8815	15	17	14	0.5	11.4	10.8	0.07	63	1.65
UZ8716	UZ8816	16	15.5	16	0.5	12.1	11.5	0.07	60	1.65
UZ8718	UZ8818	18	14.0	20	0.5	13.7	12.9	0.08	52	1.12
UZ8720	UZ8820	20	12.5	22	0.5	15.2	14.4	0.08	47	1.12
UZ8722	UZ8822	22	11.5	23	0.5	16.7	15.8	0.08	43	1.12
UZ8724	UZ8824	24	10.5	25	0.5	18.2	17.3	0.08	40	0.825
UZ8727	UZ8827	27	9.5	35	0.5	20.5	19.4	0.09	35	0.825
UZ8730	UZ8830	30	8.5	40	0.5	22.8	21.6	0.09	31	0.825
UZ8733	UZ8833	33	7.5	45	0.5	25.1	23.7	0.09	28	0.675
UZ8736	UZ8836	36	7.0	50	0.5	27.3	25.9	0.09	26	0.562
UZ8740	UZ8840	40	6.5	62	0.5	30.4	28.8	0.095	24	0.562
UZ8745	UZ8845	45	6.0	75	0.5	34.2	32.4	0.095	22	0.450
UZ8750	UZ8850	50	5.0	85	0.5	38.0	36.0	0.095	20	0.450
UZ8756	UZ8856	56	4.5	110	0.5	42.5	40.3	0.095	17	0.390
UZ8760	UZ8860	60	4.0	125	0.5	45.6	43.2	0.095	15	0.337
UZ8770	UZ8870	70	3.7	150	0.5	53.2	50.4	0.095	14	0.337
UZ8775	UZ8875	75	3.3	175	0.5	57.0	54.0	0.095	12	0.277
UZ8780	UZ8880	80	3.0	200	0.5	60.8	57.6	0.095	11	0.225
UZ8790	UZ8890	90	2.8	250	0.5	68.4	64.8	0.095	10	0.225
UZ8110	UZ8210	100	2.5	350	0.5	76.0	72.0	.10	9.5	0.225
UZ8111	UZ8211	110	2.3	450	0.5	83.6	79.2	.10	8.5	0.165
UZ8112	UZ8212	120	2.0	550	0.5	91.2	86.4	.10	8.0	0.112
UZ8113	UZ8213	130	1.9	700	0.5	98.8	93.6	.10	7.2	0.112
UZ8114	UZ8214	140	1.8	850	0.5	106	100	.10	6.8	0.112

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**POWER ZENERS**

**1 WATT**

## ELECTRICAL CHARACTERISTICS

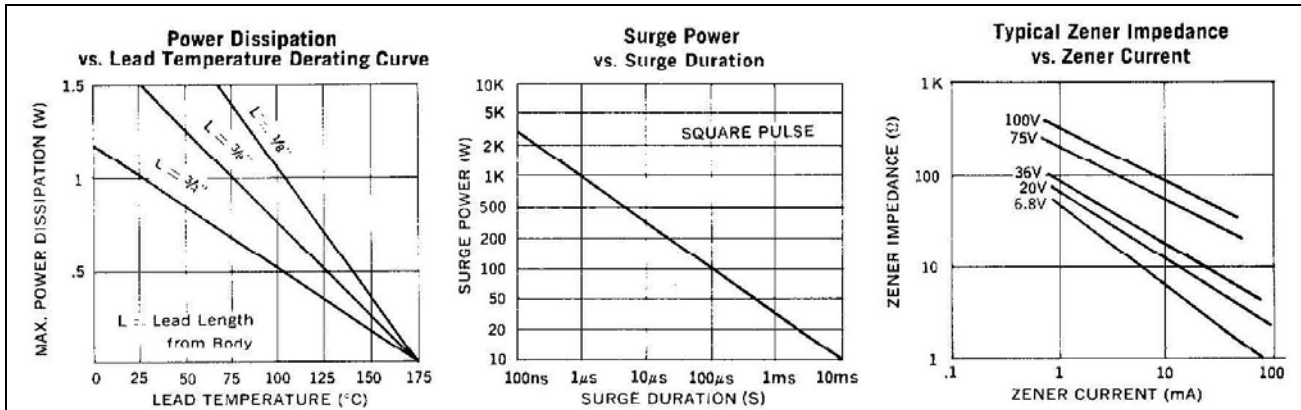
Type		Electrical Specifications at 25°C						Maximum Ratings		
		Nominal Zener Voltage † V <sub>Z</sub> @ I <sub>ZT</sub>	Test Current I <sub>ZT</sub>	Max. Zener Impedance § Z <sub>Z</sub> @ I <sub>ZT</sub>	Maximum Reverse Leakage Current			Typ. Temp. Coeff. T.C. @ I <sub>ZT</sub>	Maximum Continuous Current ★ I <sub>ZM</sub>	Maximum Surge Current ‡ I <sub>S</sub>
					I <sub>R</sub> @ V <sub>R</sub>	±5% V <sub>R</sub>	±10% V <sub>R</sub>			
±5% Tolerance	±10% Tolerance	Volts	mA	Ohms	µA	Volts	Volts	%/°C	mA	Amps
<b>UZ8115</b>	<b>UZ8215</b>	150	1.7	1000	0.5	114	108	.10	6.3	0.112
<b>UZ8116</b>	<b>UZ8216</b>	160	1.6	1100	0.5	121	115	.10	5.9	0.082
<b>UZ8117</b>	<b>UZ8217</b>	170	1.5	1200	0.5	129	122	.10	5.6	0.082
<b>UZ8118</b>	<b>UZ8218</b>	180	1.4	1300	0.5	137	129	.10	5.2	0.056
<b>UZ8119</b>	<b>UZ8219</b>	190	1.3	1400	0.5	144	137	.10	5.0	0.056
<b>UZ8120</b>	<b>UZ8220</b>	200	1.2	1500	0.5	152	144	.10	4.7	0.056

† 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.

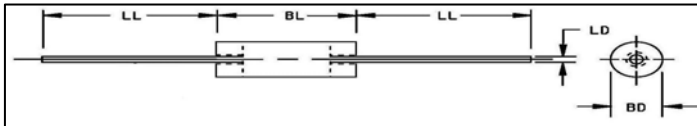
★ Ratings are based on free air. T<sub>A</sub> = 25°C. For use at 1.5 watts, see derating curve.

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



## MECHANICAL CHARACTERISTICS

<b>Case:</b>	Glass
<b>Marking:</b>	Body Painted, Alpha-Numeric
<b>Polarity:</b>	Cathode Band



	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
<b>BD</b>	-	.095	-	2.413
<b>BL</b>	-	0.185	-	4.699
<b>LD</b>	.027	.033	0.686	0.838
<b>LL</b>	.700	-	17.78	-