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

Zener Voltage (V_Z):	6.8 to 200V
Continuous Current:	See Table
Surge Current (8.3 ms):	See Table
Surge Power:	See Graph
Power:	See Lead Temperature Derating Curve
Storage and Operating Temperature:	-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

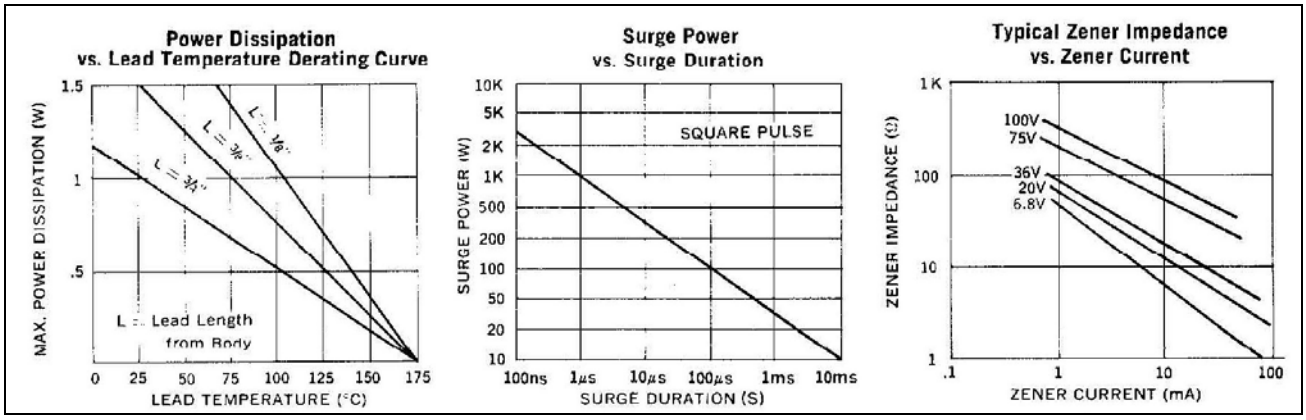
Type		Electrical Specifications at 25°C							Maximum Ratings	
		Nominal Zener Voltage † V_Z @ I_{ZT}	Test Current I_{ZT}	Max. Zener Impedance § Z_Z @ I_{ZT}	Maximum Reverse Leakage Current			Typ. Temp. Coeff. T.C. @ I_{ZT}	Maximum Continuous Current ★ I_{ZM}	Maximum Surge Current ‡ I_S
					I_R @ V_R	±5% V_R	±10% V_R			
±5% Tolerance	±10% Tolerance	Volts	mA	Ohms	µA	Volts	Volts	%/°C	mA	Amps
UZ8115	**UZ8215**	150	1.7	1000	0.5	114	108	.10	6.3	0.112
UZ8116	**UZ8216**	160	1.6	1100	0.5	121	115	.10	5.9	0.082
UZ8117	**UZ8217**	170	1.5	1200	0.5	129	122	.10	5.6	0.082
UZ8118	**UZ8218**	180	1.4	1300	0.5	137	129	.10	5.2	0.056
UZ8119	**UZ8219**	190	1.3	1400	0.5	144	137	.10	5.0	0.056
UZ8120	**UZ8220**	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.

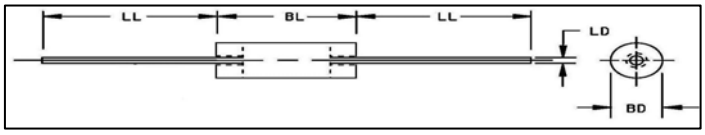
★Ratings are based on free air. T_A = 25°C. For use at 1.5 watts, see derating curve.

‡ 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

Case:	Glass
Marking:	Body Painted, Alpha-Numeric
Polarity:	Cathode Band



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

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