

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

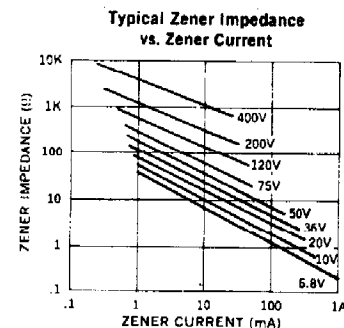
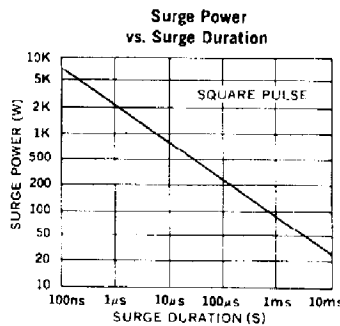
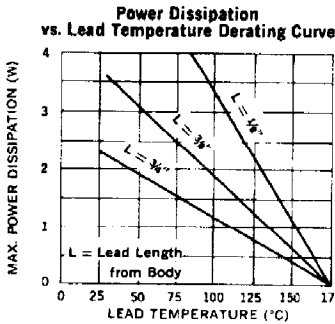
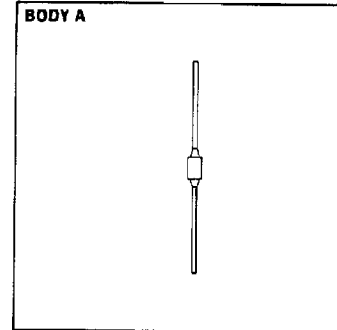
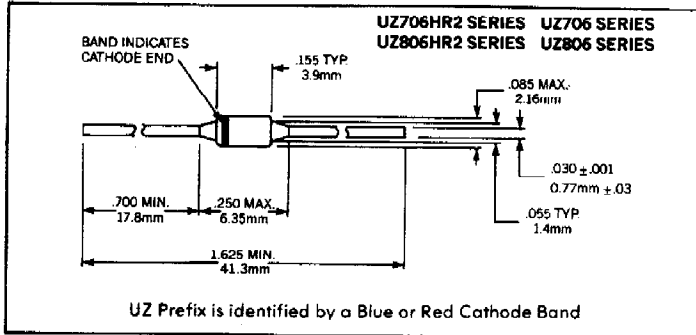
DESCRIPTION

Fused-in-glass metallurgically bonded
3 watt zener diodes.

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

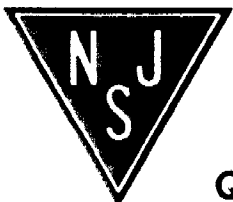
MECHANICAL SPECIFICATIONS



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°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°C, I _Z adjusted so that 150°C ≤ T _J ≤ 175°C
6. Final Electrical Parameters	GO/NO GO	V _Z + I _R @ 25°C PDA = 10% (Final Electricals)



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

UZ706 SERIES
 UZ806 SERIES
 UZ706HR2 SERIES
 UZ806HR2 SERIES

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
		6.8	75	2	500	5.2	4.9	.04	440	10.0
		7.5	75	2	300	5.7	5.4	.04	400	8.0
		8.2	75	3	200	6.2	5.9	.05	360	7.0
		9.1	75	3	100	6.9	6.6	.05	330	6.0
		10.0	75	4	40	7.6	7.2	.06	300	5.0
		12	65	5	10	9.1	8.6	.07	250	4.0
		13	50	6	10	9.9	9.3	.07	230	4.0
		14	50	6	10	10.6	10.1	.07	210	4.0
		15	50	6	10	11.4	10.8	.07	200	3.0
		16	50	7	5	12.2	11.5	.07	185	3.0
		18	40	8	5	13.7	12.9	.08	170	2.0
		20	40	9	5	15.2	14.4	.08	150	2.0
		22	30	10	5	16.7	15.8	.08	135	2.0
		24	30	10	5	18.2	17.3	.08	125	1.5
		27	25	12	1	20.6	19.4	.09	110	1.5
		30	25	15	1	22.8	21.6	.090	100	1.5
		33	20	21	1	25.1	23.7	.090	90	1.2
		36	20	21	1	27.4	25.9	.090	85	1.0
		40	20	27	1	30.4	28.8	.095	75	1.0
		45	15	37	1	34.2	32.4	.095	65	0.8
		50	15	50	1	38.0	36.0	.095	60	0.8
		56	10	70	1	42.6	40.3	.095	55	0.7
		60	10	70	1	45.7	43.2	.095	50	0.6
		70	10	90	1	53.3	50.5	.095	45	0.6
		75	10	100	1	56.0	54.0	.095	40	0.5
		80	10	115	1	60.8	57.7	.095	35	0.4
		90	8.0	150	1	68.5	64.8	.095	30	0.4
		100	5.0	175	1	76.0	72.0	.100	30	0.4
		110	5.0	250	1	83.6	79.2	.100	25	0.3
		120	5.0	325	1	91.2	86.4	.100	25	0.2
		130	5.0	375	1	98.8	93.6	.100	20	0.20
		140	5.0	550	1	106	101	.100	20	0.20
		150	5.0	650	1	114	108	.100	20	0.20
		160	4.0	700	1	122	115	.100	20	0.15
		170	4.0	750	1	129	122	.100	18	0.15
		180	4.0	850	1	137	129	.100	18	0.10
		190	4.0	900	1	144	137	.100	15	0.10
		200	4.0	950	1	152	144	.100	15	0.10
		220	3.0	1100	1	167	158	.100	15	0.09
		240	3.0	1300	1	182	173	.105	12	0.09
		260	3.0	1500	1	198	187	.105	12	0.08
		280	3.0	1700	1	213	202	.105	10	0.08
		300	3.0	1900	1	228	216	.105	10	0.07
		320	2.0	2100	1	243	230	.105	9	0.07
		340	2.0	2400	1	258	245	.110	9	0.06
		360	2.0	2700	1	274	259	.110	8	0.06
		380	2.0	3000	1	289	274	.110	8	0.06
		400	2.0	3500	1	304	288	.110	7	0.06