

# POWER ZENERS

## 3 Watt

# 1N5063 - 1N5117

### FEATURES

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

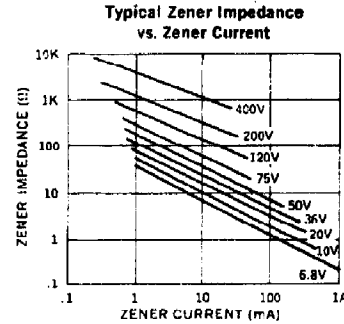
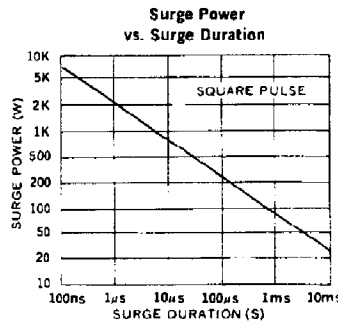
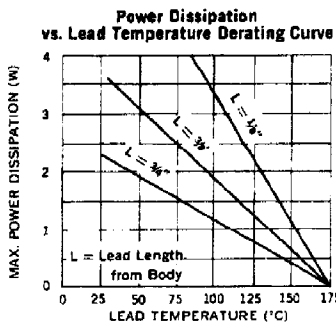
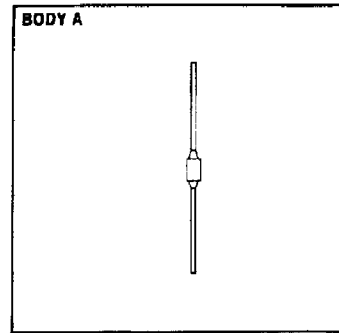
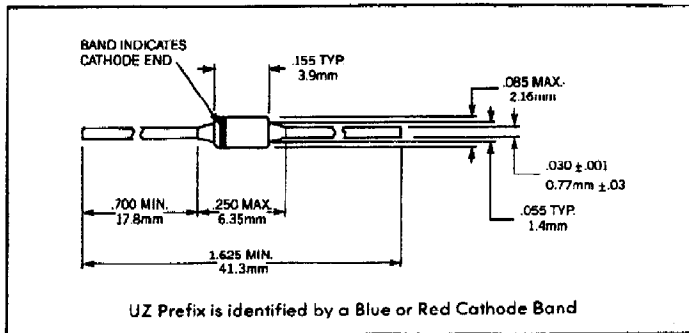
### DESCRIPTION

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:

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)



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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 ‡	Maximum Reverse Leakage Current			Typ. Temp. Coefficient T <sub>C</sub> @ I <sub>ZT</sub>	Maximum Continuous Current * I <sub>ZM</sub>	Maximum Surge Current † I <sub>SM</sub>	
			Z <sub>Z</sub> @ I <sub>ZT</sub>	I <sub>R</sub> @ V <sub>R</sub>	± 5% V <sub>R</sub>	± 10% V <sub>R</sub>				%/°C
Jedec** Registration	Volts	mA	Ohms	µA	Volts	Volts	%/°C	mA	Amps	
1N5063	6.8	75	2	500	5.2	4.9	.04	440	10.0	
1N5064	7.5	75	2	300	5.7	5.4	.04	400	8.0	
1N5065	8.2	75	3	200	6.2	5.9	.05	360	7.0	
1N5066	9.1	75	3	100	6.9	6.6	.05	330	6.0	
1N5067	10.0	75	4	40	7.6	7.2	.06	300	5.0	
1N4883	12	65	5	10	9.1	8.6	.07	250	4.0	
1N5069	13	50	6	10	9.9	9.3	.07	230	4.0	
1N5070	14	50	6	10	10.6	10.1	.07	210	4.0	
1N5071	15	50	6	10	11.4	10.8	.07	200	3.0	
1N5072	16	50	7	5	12.2	11.5	.07	185	3.0	
1N5073	18	40	8	5	13.7	12.9	.08	170	2.0	
1N4884	20	40	9	5	15.2	14.4	.08	150	2.0	
1N5074	22	30	10	5	16.7	15.8	.08	135	2.0	
1N5075	24	30	10	5	18.2	17.3	.08	125	1.5	
1N5076	27	25	12	1	20.6	19.4	.09	110	1.5	
1N5077	30	25	15	1	22.8	21.6	.090	100	1.5	
1N5078	33	20	21	1	25.1	23.7	.090	90	1.2	
1N5079	36	20	21	1	27.4	25.9	.090	85	1.0	
1N5081	40	20	27	1	30.4	28.8	.095	75	1.0	
1N5083	45	15	37	1	34.2	32.4	.095	65	0.8	
1N5085	50	15	50	1	38.0	36.0	.095	60	0.8	
1N5087	56	10	70	1	42.6	40.3	.095	55	0.7	
1N5088	60	10	70	1	45.7	43.2	.095	50	0.6	
1N5091	70	10	90	1	53.3	50.5	.095	45	0.6	
1N5092	75	10	100	1	56.0	54.0	.095	40	0.5	
1N5093	80	10	115	1	60.8	57.7	.095	35	0.4	
1N4096	90	8.0	150	1	68.5	64.8	.095	30	0.4	
1N4097	100	5.0	175	1	76.0	72.0	.100	30	0.4	
1N5096	110	5.0	250	1	83.6	79.2	.100	25	0.3	
1N5097	120	5.0	325	1	91.2	86.4	.100	25	0.2	
1N5098	130	5.0	375	1	98.8	93.6	.100	20	0.20	
1N5099	140	5.0	550	1	106	101	.100	20	0.20	
1N4098	150	5.0	650	1	114	108	.100	20	0.20	
1N5100	160	4.0	700	1	122	115	.100	20	0.15	
1N5101	170	4.0	750	1	129	122	.100	18	0.15	
1N5102	180	4.0	850	1	137	129	.100	18	0.10	
1N5103	190	4.0	900	1	144	137	.100	15	0.10	
1N5104	200	4.0	950	1	152	144	.100	15	0.10	
1N5105	220	3.0	1100	1	167	158	.100	15	0.09	
1N5106	240	3.0	1300	1	182	173	.105	12	0.09	
1N5107	260	3.0	1500	1	198	187	.105	12	0.08	
1N5109	280	3.0	1700	1	213	202	.105	10	0.08	
1N5110	300	3.0	1900	1	228	216	.105	10	0.07	
1N5111	320	2.0	2100	1	243	230	.105	9	0.07	
1N5113	340	2.0	2400	1	258	245	.110	9	0.06	
1N5114	360	2.0	2700	1	274	259	.110	8	0.06	
1N5115	380	2.0	3000	1	289	274	.110	8	0.06	
1N5117	400	2.0	3500	1	304	288	.110	7	0.06	