SURFACE MOUNT POWER ZENERS

SM4461-SM4496

T-11-15

3.0W, Military

FEATURES

- Small Convenient Surface Mount Package
- Thermally Efficient
- Reliable Fused-In-Glass, Hermetic Construction
- Low Reverse Current to 50nA
- Less Than ¼ Size of Conventional 1W Leaded Zeners

DESCRIPTION

Fused-in-glass, metallurgically bonded 3.0W zeners, in a hermetic surface mount configuration desirable for power applications when board space and surface density constraints are paramount.

ABSOLUTE MAXIMUM RATINGS

Zener Voltage, V_Z ..... 6.8 to 200V
Continuous Current ..... see table
Surge Current, 8.3mS ..... see table
Surge Power ..... see graph
Power ..... see end cap temperature derating curve
Storage and Operating Temperature ..... -65°C to +175°C

MECHANICAL SPECIFICATIONS

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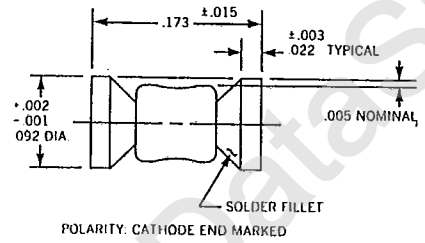
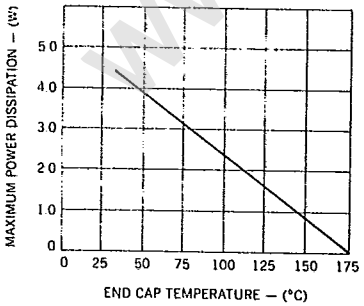


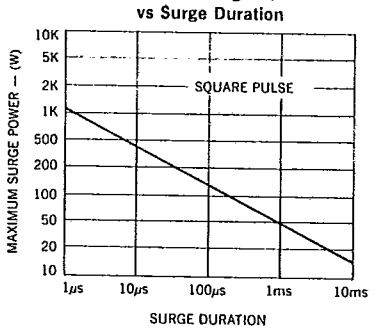
MELF "A" BODY

3 times actual size

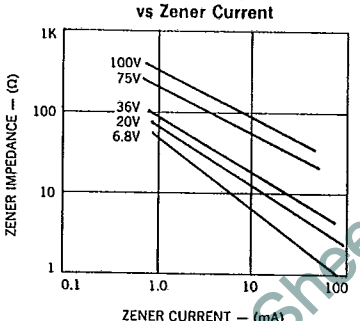
Power Dissipation vs End Cap Temperature Derating Curve



Maximum Surge Power vs Surge Duration



Typical Zener Impedance vs Zener Current



UNITRODE

SM4461-SM4496

ELECTRICAL SPECIFICATIONS (@ 25°C) **MAXIMUM RATINGS**

Type	Nominal Zener Voltage† V_Z @ I_{ZT}	Test Current I_{ZT}	Maximum Zener Impedance Z_Z @ I_{ZT}	Maximum Zener Impedance Z_{ZK} @ I_{ZK}	I_{ZK}	Voltage** Regulation $\Delta BV_{Max.}$	Maximum Reverse Leakage Current I_R @ V_R	Maximum Reverse Leakage Current V_R	Maximum Cont. Current I_{ZM}	Maximum Surge Current† I_S
±5% Tolerance	Volts	mA	Ohms	Ohms	Volts	μA	Volts	%/°C	mA	Amps
SM4461	6.8	37	2.5	200	1.0	.30	5.0	4.08	420	5.0
SM4462	7.5	34	2.5	400	.5	.35	1.0	4.50	382	4.5
SM4463	8.2	31	3.0	400	.5	.40	.50	4.92	348	3.9
SM4464	9.1	28	4.0	500	.5	.45	.30	5.46	314	3.4
SM4465	10	25	5.0	500	.25	.50	.30	8.0	286	3.0
SM4466	11	23	6.0	550	.25	.55	.30	8.8	260	2.6
SM4467	12	21	7.0	550	.25	.60	.20	9.6	238	2.4
SM4468	13	19	8.0	550	.25	.65	.10	10.4	220	2.2
SM4469	15	17	9.0	600	.25	.75	.05	12.0	190	1.8
SM4470	16	15.5	10.0	600	.25	.80	.05	12.8	180	1.6
SM4471	18	14	11.0	650	.25	.83	.05	14.4	158	1.4
SM4472	20	12.5	12.0	650	.25	.95	.05	16.0	142	1.2
SM4473	22	11.5	14	650	.25	1.0	.05	17.6	130	1.1
SM4474	24	10.5	16	700	.25	1.1	.05	19.2	120	.90
SM4475	27	9.5	18	700	.25	1.3	.05	21.6	106	.80
SM4476	30	8.5	20	750	.25	1.4	.05	24.0	96	.75
SM4477	33	7.5	25	800	.25	1.5	.05	26.4	86	.66
SM4478	36	7.0	27	850	.25	1.7	.05	28.8	80	.60
SM4479	39	6.5	30	900	.25	1.8	.05	31.2	74	.54
SM4480	43	6.0	40	950	.25	1.9	.05	34.4	66	.48
SM4481	47	5.5	50	1000	.25	2.1	.05	37.6	60	.45
SM4482	51	5.0	60	1100	.25	2.3	.05	40.8	56	.42
SM4483	56	4.5	70	1300	.25	2.5	.05	44.8	52	.39
SM4484	62	4.0	80	1500	.25	2.7	.05	49.6	46	.35
SM4485	68	3.7	100	1700	.25	3.0	.05	54.4	42	.32
SM4486	75	3.3	130	2000	.25	3.3	.05	60.0	38	.29
SM4487	82	3.0	160	2500	.25	3.6	.05	65.6	34	.26
SM4488	91	2.8	200	3000	.25	4.0	.05	72.8	32	.23
SM4489	100	2.5	250	3100	.25	4.4	.25	80.0	28	.20
SM4490	110	2.0	300	4000	.25	5.0	.25	88.0	26	.19
SM4491	120	2.0	400	4500	.25	5.5	.25	96.0	24	.18
SM4492	130	1.9	500	5000	.25	6.0	.25	104	22	.16
SM4493	150	1.7	700	6000	.25	7.0	.25	120	19	.14
SM4494	160	1.6	1000	6500	.25	8.0	.25	128	17.8	.12
SM4495	180	1.4	1300	7000	.25	10.0	.25	144	15.8	.10
SM4496	200	1.2	1500	8000	.25	12.0	.25	160	14.4	.08

† 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.

** 3V is obtained by measuring the voltage change when the test current is changed from 10% to 50% of I_Z max. under DC conditions. During this measurement the end cap temperature is maintained at 25°C.

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