



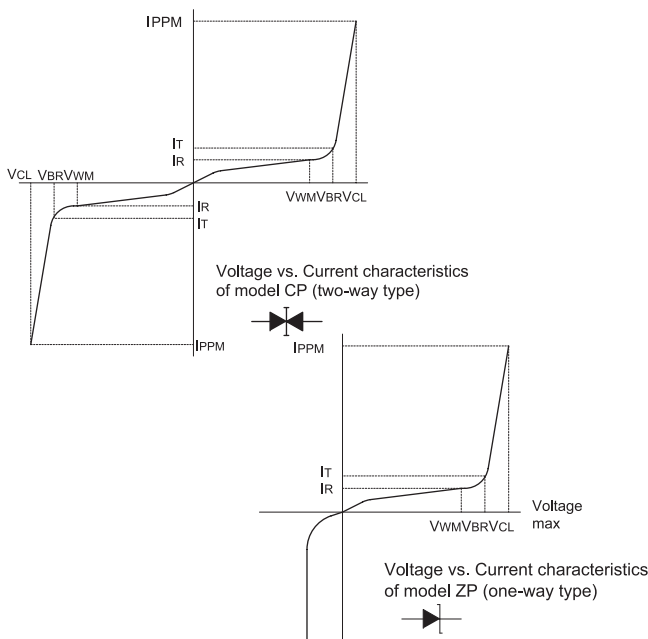
RSSA

The Silicon Surge Absorber is available in five series that support the countermeasure against a wide range of surge from low to high, including electrostatic discharges and lightning surges. The device may also be used as a constant voltage device where high voltage or high power is required.

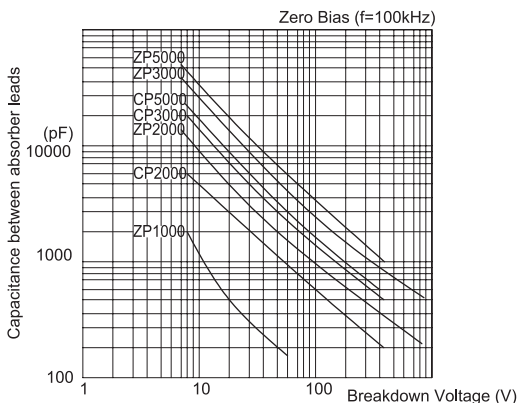
Features

- Fast response to rapid surge (10^{-12} sec).
- Almost no performance degradation against repetitive surge.
- Very low internal resistance during operation.
- Very small leak current.
- Mesa chip design provides high invulnerability to impulse surges.

Electrical Specifications

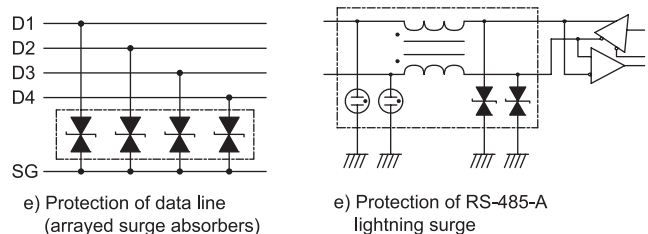
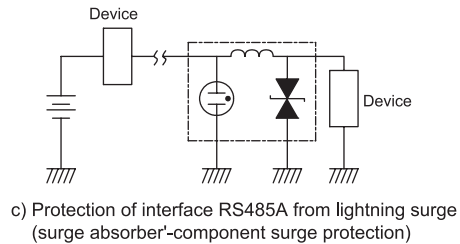
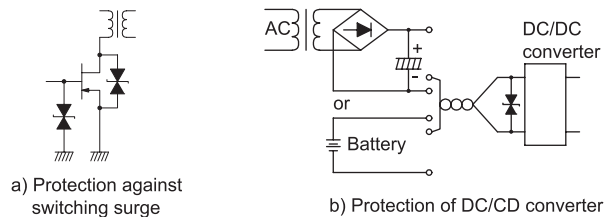


Typical capacitance between absorber's lead vs. Breakdown voltage



- **Breakdown Voltage (V_{BR})**
Voltage at which avalanche current may begin to flow, normally the voltage between the surge absorber's leads when 1mA of current is applied.
- **Standoff Voltage (V_{WM})**
A maximum voltage that can be applied to the surge absorber continuously.
- **Reverse Leakage Current (I_R)**
A maximum current flowing through the surge absorber when the standoff voltage is applied to the surge absorber.
- **Peak Surge Current (I_{PPM})**
A maximum surge current that can flow through the surge absorber, but not repetitively. The waveform in the table is 8/20 μ sec.
- **Peak Clamp Voltage (V_{CL})**
a maximum voltage that may be generated between the surge absorber's leads when the peak surge current is applied to the surge absorber.
- **Maximum Allowable Power (P_{PPM})**
 $(P_{PPM}) = (V_{PPM}) \times (I_{PPM})$

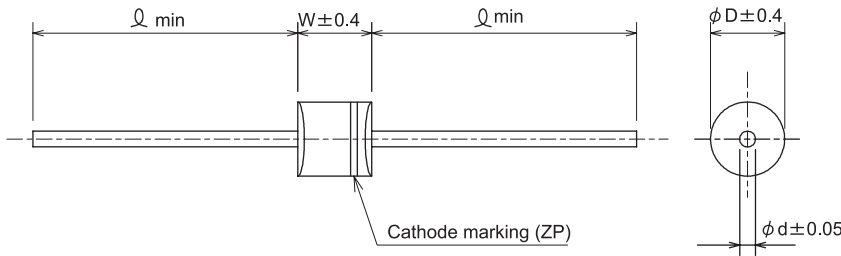
Applications





ZP · CP SERIES

SILICON SURGE ABSORBER



- Dimensions

Series	D	W	d	L
1000	2.8	5.0	0.6	20
1500	5.3	9.7	1.0	20
2000	5.3	9.7	1.0	20
3000	8.5	8.6	1.0	20
5000	9.7	12.3	1.2	20

Electrical Specifications

1000 Series

Power Dissipation: 1W (6kW@ 8/20µsec)

Model Number	Breakdown voltage		Standoff voltage		Surge waveform 8/20µsec	
	V _{BR} (V)	I _T (mA)	V _{WM} (V)	I _R (µA)	I _{PPM} (A)	V _{CL} (V)
□□1007	7.5	1	6.05	200	419	14.3
Z P 1010	10	1	8.10	10	311	19.5
□□1012	12	1	9.72	5	267	22.7
□□1016	16	1	12.9	5	213	28.4
□□1018	18	1	14.5	5	178	34.0
Z P 1027	27	1	21.8	5	120	50.5
Z P 1040	40	1	32.4	5	83	73.0
□□1050	50	1	40.5	5	68.9	88.0
Z P 1060	60	1	48.6	5	52.6	114
Z P 1075	75	1	60.7	5	42.2	142
Z P 1120	120	1	97.0	5	27.3	222

1500 Series

Power Dissipation: 2W (15kW@ 8/20µsec)

Model Number	Breakdown voltage		Standoff voltage		Surge waveform 8/20µsec	
	V _{BR} (V)	I _T (mA)	V _{WM} (V)	I _P (µA)	I _{PPM} (A)	V _{CL} (V)
□□1.5K007	7.5	10	6.05	1000	1034	14.5
□□1.5K018	18	1	14.5	5	462	32.5
□□1.5K022	22	1	17.8	5	382	39.3
□□1.5K033	33	1	26.8	5	253	59.0
□□1.5K047	47	1	38.1	5	178	84.0

2000 Series

Power Dissipation: 3W (18kW@ 8/20µsec)

Model Number	Breakdown voltage		Standoff voltage		Surge waveform 8/20µsec	
	V _{BR} (V)	I _T (mA)	V _{WM} (V)	I _P (µA)	I _{PPM} (A)	V _{CL} (V)
ZP2006	6.8	10	5.50	2000	1343	13.4
CP2007	7.5	10	6.05	1000	1241	14.5
□□2008	8.2	10	6.63	400	1161	15.5
□□2010	10	1	8.10	20	968	18.6
□□2012	12	1	9.72	5	829	21.7
□□2015	15	1	12.1	5	662	27.2
□□2018	18	1	14.5	5	554	32.5
□□2022	22	1	17.8	5	458	39.3
□□2027	27	1	21.8	5	373	48.3
□□2033	33	1	26.8	5	305	59.0
□□2039	39	1	31.6	5	258	69.7
□□2047	47	1	38.1	5	214	84.0
□ □2056	56	1	45.5	5	180	100
□□2068	68	1	55.1	5	148	121
□□2082	82	1	66.4	5	123	146
□□2100	100	1	81.0	5	101	178
□□2120	120	1	97.0	5	85.0	212
□□2150	150	1	121	5	68.0	265
□□2180	180	1	146	5	57.0	317
□□2220	220	1	175	5	46.5	388
□□2250	250	1	202	5	40.7	442
□□2300	300	1	243	5	34.0	529
□□2350	350	1	284	5	29.1	618
□□2400	400	1	324	5	25.5	706
□ □2440	440	1	356	5	23.2	776
ZP2500	500	1	405	5	20.3	884
ZP2600	600	1	486	5	17.0	1058
ZP2700	700	1	567	5	14.5	1236
ZP2800	800	1	648	5	12.7	1412
ZP2880	880	1	713	5	11.7	1552



Power Dissipation: 5W (34kW@ 8/20μsec)

3000 Series

Model Number	Breakdown voltage		Standoff voltage		Surge waveform 8/20μsec	
	V _{BR} (V)	I _T (mA)	V _{WM} (V)	I _R (μA)	I _{PPM} (A)	V _{CL} (V)
ZP3006	6.8	10	5.50	5000	2556	13.3
CP3007	7.5	10	6.05	2000	2313	14.7
□□3008	8.2	10	6.63	2000	2208	15.4
□□3010	10	1	8.10	100	1717	19.8
□□3012	12	1	9.72	10	1429	23.8
□□3015	15	1	12.1	10	1145	29.7
□□3018	18	1	14.5	10	955	35.6
□□3022	22	1	17.8	10	780	43.6
□□3027	27	1	21.8	10	636	53.5
□□3033	33	1	26.8	10	521	63.5
□□3039	39	1	31.6	10	440	77.2
□□3047	47	1	38.1	10	365	93.1
□□3056	56	1	45.5	10	307	111
□□3068	68	1	55.1	10	252	135
□□3082	82	1	66.4	10	210	162
□□3100	100	1	81.0	10	172	198
□□3120	120	1	97.0	10	143	238
□□3150	150	1	121	10	114	297
□□3180	180	1	146	10	96.0	356
□□3220	220	1	175	10	80.0	436
□□3250	250	1	202	10	69.0	495
□□3300	300	1	243	10	57.2	594
□□3350	350	1	284	10	49.1	693
□□3400	400	1	324	10	42.4	792
□□3440	440	1	356	10	39.0	871
ZP3500	500	1	405	10	34.5	990
ZP3600	600	1	486	10	28.5	1188
ZP3700	700	1	567	10	24.5	1386
ZP3800	800	1	648	10	21.2	1584
ZP3880	880	1	713	10	19.5	1742

Power Dissipation: 6W (44kW@ 8/20μsec)

5000 Series

Model Number	Breakdown voltage		Standoff voltage		Surge waveform 8/20μsec	
	V _{BR} (V)	I _T (mA)	V _{WM} (V)	I _R (μA)	I _{PPM} (A)	V _{CL} (V)
ZP5006	6.8	10	5.50	5000	3283	13.6
CP5007	7.5	10	6.05	2000	2963	15.1
□□5008	8.2	10	6.63	2000	2819	15.9
□□5010	10	1	8.10	100	2426	18.5
□□5012	12	1	9.72	10	2034	22.1
□□5015	15	1	12.1	10	1621	27.6
□□5018	18	1	14.5	10	1352	33.1
□□5022	22	1	17.8	10	1104	40.5
□□5027	27	1	21.8	10	901	49.7
□□5033	33	1	26.8	10	737	60.7
□□5039	39	1	31.6	10	622	71.9
□□5047	47	1	38.1	10	517	86.5
□□5056	56	1	45.5	10	434	103
□□5068	68	1	55.1	10	358	126
□□5082	82	1	66.4	10	298	150
□□5100	100	1	81.0	10	244	184
□□5120	120	1	97.0	10	202	221
□□5150	150	1	121	10	162	276
□□5180	180	1	146	10	135	331
□□5220	220	1	175	10	110	404
□□5250	250	1	202	10	97.1	460
□□5300	300	1	243	10	79.7	552
□□5350	350	1	284	10	68.3	644
□□5400	400	1	324	10	59.7	736
□□5440	440	1	356	10	54.3	809