LPS Low-Impedance & Long Life

Features

- Used in communication equipments, switching power supply, Industrial measuring instruments, etc.
- Load life 3000~10000hrs at 105°C
- Safety vent construction design

Specifications

Item	Performance Characteristics	
Operating Temperature Range	-40 to +105°C	-25 to +105°C
Rated voltage Range	6.3 to 100 VDC	160 to 450 VDC
Capacitance Range	22 to 15000 μF	1 to 330 μF
Capacitance Tolerance	±20%(120Hz, +20°C)	
Leakage Current (+20°C, max.)	I≦0.01 CV or 2(μA) After 2minute whichever is greater measured with rated working voltage applied.	I≦0.03 CV or 3(μA) After 2minute with rated working voltage applied..

Dissipation Factor (tanδ)

Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
D.F.(%)max	22	19	16	14	12	10	9	8	12	12	12	15	15	17

For Capacitance > 1000μF , add 2% per another 1000μF (+20°C, at 120Hz)

Low Temperature Characteristics (at 120Hz)

Impedance ratio max.

Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450
Z (-25°C)/Z(+20°C)	4	3	3	3	3	3	2	2	3	3	3	5	5	6
Z (-40°C)/Z(+20°C)	8	6	4	3	3	3	3	3	-	-	-	-	-	-

For Capacitance Value 1000μF , add 0.5 per another 1000μF for -25°C/+20°C
For Capacitance Value 1000μF , add 1 per another 1000μF for -40°C/+20°C

Load Life

Standard

Dϕ	Life hours
≦8ϕ	3000 ~ 10000
≧10ϕ	5000 ~ 10000

Test conditions
Duration time : as above
Ambient temperature:+105°C
Applied voltage: Rated DC working voltage
After test requirements:at+20°C
Capacitance change:≦±25%of the initial measured value
Dissipation Factor: ≦200% of the initial specified value
Leakage current: ≦The initial specified value

Shelf Life

Test conditions
Duration time :1000Hrs
Ambient temperature:+105°C
Applied voltage: None
After test requirements at +20°C: Same limits as Load life.
Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.

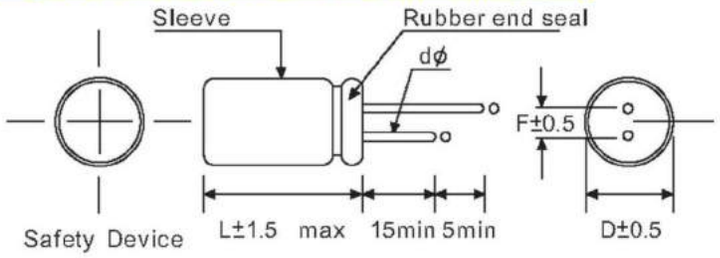
Multiplier for Ripple Current VS, Frequency

CAP(μF)/Hz		50(60)	120	400	1K	10K	10K~
Multiplier	CAP≦10	0.47	0.59	0.76	0.85	0.97	1.0
	10<CAP≦100	0.52	0.62	0.80	0.89	0.97	1.0
	100<CAP≦10	0.58	0.72	0.84	0.90	0.98	1.0
	1000<CAP	0.63	0.78	0.87	0.91	0.98	1.0

Multiplier for Ripple Current VS, Temperature

Temperature (°C)	45	60	70	85	105
Multiplier	2.10	1.90	1.65	1.40	1.00

Diagram of Dimensions: (Unit: mm)



Dϕ	5	6.3	8	10	13	16	18
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5
dϕ	0.5			0.6		0.8	

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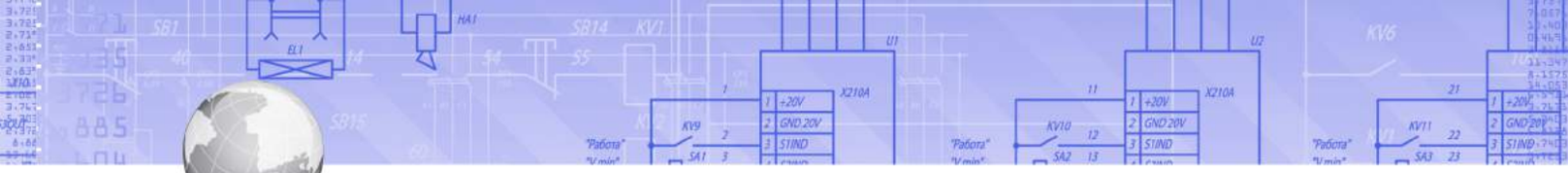
Case Size

φD x L (mm)

W.V. {S.V.} / μF	6.3 {8}			10 {13}			16 {20}		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
68	6x11	150	0.60	-	-	-	-	-	-
100	-	-	-	5x11	250	0.50	6x11	380	0.32
220	-	-	-	6x11	350	0.39	6x11 8x11	400 450	0.30 0.25
270	-	-	-	8x11	390	0.30	8x11	470	0.21
330	8x11	390	0.42	8x11	460	0.27	8x11	590	0.156
470	6x11 8x11	380 450	0.14 0.25	8x11 8x14	550 600	0.25 0.23	8x11 8x14 10x12	680 700 750	0.145 0.140 0.124
560	8x11	490	0.23	10x12	635	0.16	10x12	785	0.105
680	8x11	520	0.21	10x12	765	0.11	10x12 10x15	915 940	0.10 0.092
820	8x16	620	0.19	10x15	890	0.10	10x17	1140	0.078
1000	8x16 10x12	840 750	0.12 0.17	8x20 10x12 10x15	950 850 1040	0.095 0.10 0.076	10x14 10x16 10x20	1150 1170 1200	0.075 0.070 0.065
1200	10x15	762	0.16	10x17	1100	0.067	10x25	1340	0.061
1500	10x17	830	0.14	10x20	1260	0.062	13x21	1520	0.056
1800	10x20	940	0.11	10x25	1430	0.058	13x21	1600	0.047
2200	10x25	1470	0.095	10x25 13x21	1600 1650	0.050 0.041	13x26	1900	0.038
2700	10x25	1480	0.079	13x21	1655	0.035	13x26	2100	0.033
3300	13x21	1650	0.060	13x26	1700	0.031	16x26	2410	0.030
4700	13x30	2100	0.036	16x26	2100	0.030	16x31	2680	0.026
5600	13x30	2240	0.034	16x26	2290	0.028	16x36	2760	0.025
6800	16x26	2400	0.032	16x31	2650	0.026	18x36	2900	0.024
8200	16x31	2650	0.027	16x36	2770	0.026	18x36	3050	0.024
10000	16x36	2700	0.024	18x36	2850	0.024	18x41	3550	0.024
15000	18x36	2950	0.023	-	-	-	-	-	-

•Ripple Current(mA,rms)at 105°C 100KHz

•Max Impedance {Ω} at 20°C 100KHz



Case Size

φD x L (mm)

W.V. {S.V.} / μF	25 {32}			35 {44}			50 {63}		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
0.47	-	-	-	-	-	-	5x11	16	13
2.2	-	-	-	-	-	-	5x11	33	2.2
4.7	-	-	-	-	-	-	5x11	60	2.7
10	-	-	-	-	-	-	5x11	100	1.8
22	-	-	-	-	-	-	6x11	110	1.7
47	-	-	-	-	-	-	6x11	210	0.9
100	6x11 8x11	300 330	0.38 0.37	6x11 8x11	390 450	0.30 0.25	8x11 10x12	465 480	0.22 0.17
120				8x11	460	0.220	10x12	500	0.156
150	8x11	390	0.31	8x11	510	0.191	10x12	560	0.132
180	8x11	430	0.25	10x12	630	0.172	10x15	660	0.114
220	6x11 8x11	510 550	0.20 0.15	10x12	750	0.114	10x17	780	0.096
270	10x12	720	0.125	10x15	910	0.095	10x20	960	0.078
330	8x11 8x16 10x12	710 820 730	0.13 0.12 0.114	10x17	1050	0.079	10x25	1150	0.065
470	8x14 8x20 10x12 10x15	900 1000 910 1010	0.090 0.080 0.088 0.076	10x15 10x20	1100 1200	0.070 0.065	13x21	1400	0.055
560	10x17	1050	0.072	10x25	1300	0.061	13x21	1560	0.050
680	10x20	1220	0.065	13x21	1570	0.056	13x26	1830	0.044
820	10x25	1410	0.052	13x21	1700	0.048	13x30	1790	0.036
1000	10x30 13x16 13x21	1600 1580 1650	0.045 0.050 0.045	13x26	1900	0.042	16x26	2100	0.036
1200	13x21	1720	0.041	13x30	2130	0.038	16x31	2300	0.036
1500	13x26	1940	0.038	16x26	2270	0.036	16x36	2430	0.034
1800	13x26	2050	0.036	16x31	2350	0.035	16x36	2600	0.034
2200	16x16 16x26 13x21	2060 2100 2070	0.050 0.035 0.036	16x26 16x31	2500 2630	0.035 0.034	18x36	2680	0.032
2700	16x26	2340	0.031	16x36	2780	0.029	18x41	2780	0.027
3300	16x21 16x31	2400 2580	0.031 0.026	18x36	2900	0.026	18x41	2980	0.025
4700	16x36	2960	0.024	18x41	3000	0.024	-	-	-
5600	18x36	3100	0.024	-	-	-	-	-	-
6800	18x41	3550	0.024	-	-	-	-	-	-

•Ripple Current(mA,rms)at 105°C 100KHz

•Max Impedance {Ω} at 20°C 100KHz

Case Size

φD x L (mm)

W.V. {S.V.} / μF	63 {79}			100 {125}			160 {200}		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
3.3	-	-	-	-	-	-	8x11	70	4.31
4.7	-	-	-	-	-	-	8x11	72	4.16
5.6	-	-	-	-	-	-	10x12	91	3.61
6.8	-	-	-	-	-	-	10x15	110	3.12
10	-	-	-	6x11	135	1.20	10x17	120	2.69
22	-	-	-	8x11	220	0.85	10x20	205	1.30
33	8x11	270	0.61	10x12	320	0.69	13x21	260	1.10
47	8x11	300	0.56	10x12 10x16	370 420	0.58 0.50	13x21	320	0.91
56	8x11	330	0.38	10x12	400	0.43	13x21	340	0.67
68	10x12	420	0.21	10x17	470	0.35	13x26	410	0.56
100	10x12 10x15	500 530	0.17 0.14	10x25 13x16 13x21	560 540 560	0.30 0.29 0.29	16x26	500	0.47
120	10x17	550	0.125	10x25	660	0.22	16x26	520	0.35
150	10x17	600	0.111	13x21	780	0.174	16x31	660	0.26
180	10x20	720	0.096	13x21	820	0.142	16x36	760	0.22
220	10x25 13x21	810 900	0.080 0.075	13x26 16x26	880 970	0.13 0.11	16x36	820	0.19
270	13x21	1060	0.065	13x30	1120	0.11	18x36	890	0.18
330	13x21	1250	0.055	16x26	1440	0.10	18x41	1000	0.16
470	13x26 13x30	1620 1650	0.053 0.050	16x31	1650	0.09	-	-	-
560	13x26	1680	0.049	16x36 18x35	1720 1750	0.085 0.083	-	-	-
680	13x30 16x25	1950 2000	0.043 0.040	18x36	1790	0.080	-	-	-
820	16x26	2150	0.038	18x32 18x36	1770 1840	0.075 0.071	-	-	-
1000	16x31 16x36	2350 2400	0.034 0.033	18x41	1930	0.066	-	-	-
1200	16x36	2550	0.032	-	-	-	-	-	-
1500	18x36	2710	0.031	-	-	-	-	-	-
1800	18x41	3000	0.027	-	-	-	-	-	-

•Ripple Current(mA,rms)at 105°C 100KHz

•Max Impedance {Ω} at 20°C 100KHz

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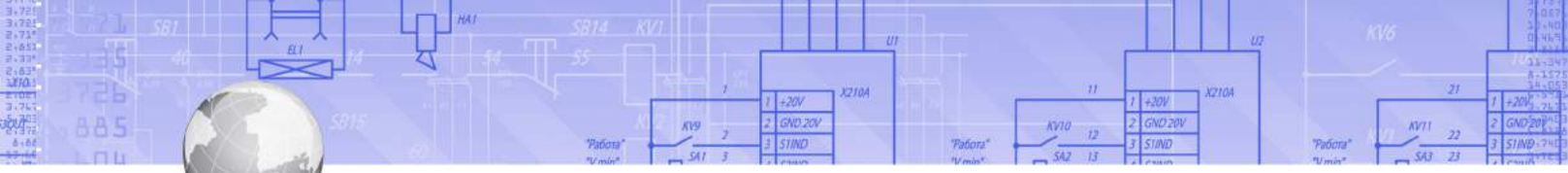

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Case Size

φD x L (mm)

W.V. {S.V.} / μF	200 {250}			250 {300}			350 {400}		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
1	-	-	-	-	-	-	8x11	58	6.35
2.2	-	-	-	8x11	72	4.12	10x12	86	4.02
3.3	8x11	71	4.25	8x11	75	3.85	10x15	100	3.52
4.7	10x12	85	4.12	10x12	100	2.95	10x20	110	2.77
5.6	10x12	92	3.55	10x12	115	2.71	10x20	124	2.58
6.8	10x15	115	2.71	10x15	140	1.86	10x25	150	1.65
10	10x15	132	2.02	10x15	160	1.4	10x25	180	1.35
22	10x20	205	1.20	10x20	210	1.3	13x21	220	1.22
33	13x21	260	0.62	13x21	260	0.9	13x26	290	0.86
47	13x26	380	0.51	13x26	405	0.45	16x31	430	0.62
56	13x26	400	0.45	13x26	420	0.42	16x36	460	0.60
68	16x26	450	0.35	16x26	490	0.38	16x36	475	0.56
100	16x26 16x31	580 600	0.19 0.17	16x31	675	0.25	18x36	513	0.55
120	16x31	640	0.17	16x36	730	0.24	18x41	560	0.52
150	16x36	670	0.16	18x31	750	0.23	-	-	-
180	18x31	770	0.15	18x36	830	0.21	-	-	-
220	18x41	860	0.14	18x41	910	0.20	-	-	-

•Ripple Current(mA,rms)at 105°C 100KHz

•Max Impedance {Ω} at 20°C 100KHz

W.V. {S.V.} / μF	400 {450}			450 {500}		
	Size	Ripple	Impedance	Size	Ripple	Impedance
1	8x11	36	16.5	10x12	36	17.35
2.2	10x12	65	9.58	10x15	60	10.25
3.3	10x15	86	5.01	10x20	80	5.65
4.7	8x16 10x20	95 120	4.95 4.82	10x20 10x25	105 115	5.5 5.01
5.6	10x25	130	4.81	13x21	125	4.92
6.8	10x25 13x21	160 170	3.55 3.40	13x21	145	4.05
10	10x20 13x21	190 200	3.75 3.32	13x21 13x26	150 165	3.90 3.78
22	13x21 13x26 16x20	290 305 305	3.0 2.65 2.65	13x26	255	2.8
33	16x26	335	1.21	16x26	330	2.2
47	16x31	560	0.92	16x36	550	1.02
56	16x36	600	0.85	18x31	580	0.95
68	18x31	750	0.75	18x36	700	0.78
100	16x36 18x36 18x41	800 850 900	0.60 0.65 0.52	18x36 22x30 22x42	800 810 850	0.70 0.65 0.55

•Ripple Current(mA,rms)at 105°C 100KHz

•Max Impedance {Ω} at 20°C 100KHz