



LPS Low-Impedance & Long Life

Features

- Used in communication equipments, switching power supply, Industrial measuring instruments, etc.
- Load life 2000~5000hrs at 105°C (8000-10000 hrs upon request)
- 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 uF	1 to 330 uF																											
Capacitance Tolerance	±20%(120Hz, +20°C)																												
Leakage Current (+20°C, max.)	I ≤ 0.01 CV or 2(uA) After 2minute whichever is greater measured with rated working voltage applied.	I ≤ 0.03 CV or 3(uA) After 2minute with rated working voltage applied..																											
Dissipation Factor (tanδ)	<table border="1"> <tr> <td>Working Voltage (VDC)</td> <td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td> </tr> <tr> <td>D.F.(%)max</td> <td>22</td><td>19</td><td>16</td><td>14</td><td>12</td><td>10</td><td>9</td><td>8</td> </tr> </table>		Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	D.F.(%)max	22	19	16	14	12	10	9	8									
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	D.F.(%)max	22	19	16	14	12	10	9	8																				
	<table border="1"> <tr> <td>Working Voltage (VDC)</td> <td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td> </tr> <tr> <td>D.F.(%)max</td> <td>12</td><td>12</td><td>12</td><td>15</td><td>15</td><td>17</td> </tr> </table>		Working Voltage (VDC)	160	200	250	350	400	450	D.F.(%)max	12	12	12	15	15	17													
Working Voltage (VDC)	160	200	250	350	400	450																							
D.F.(%)max	12	12	12	15	15	17																							
For Capacitance > 1000uF , add 2% per another 1000uF (+20°C, at 120Hz)																													
Impedance ratio max.																													
Low Temperature Characteristics (120Hz)	<table border="1"> <tr> <td>Working Voltage (VDC)</td> <td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td>2</td><td>2</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td> </tr> </table>		Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	Z-25°C/Z+20°C	4	3	3	3	3	3	2	2	Z-40°C/Z+20°C	8	6	4	3	3	3	3	3
	Working Voltage (VDC)	6.3	10	16	25	35	50	63	100																				
	Z-25°C/Z+20°C	4	3	3	3	3	3	2	2																				
	Z-40°C/Z+20°C	8	6	4	3	3	3	3	3																				
<table border="1"> <tr> <td>Working Voltage (VDC)</td> <td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>3</td><td>3</td><td>3</td><td>5</td><td>5</td><td>6</td> </tr> </table>		Working Voltage (VDC)	160	200	250	350	400	450	Z-25°C/Z+20°C	3	3	3	5	5	6														
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Z-25°C/Z+20°C	3	3	3	5	5	6																							
For Capacitance Value 1000uF , add 0.5 per another 1000uF for -25°C/+20°C add 1 per another 1000uF for -40°C/+20°C																													
Test conditions																													
Load Life	Duration time : as right 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	<table border="1"> <tr> <td>Dφ</td> <td>Life hours</td> </tr> <tr> <td>8 φ</td> <td>3000</td> </tr> <tr> <td>≥ 10 φ</td> <td>5000</td> </tr> </table>	Dφ	Life hours	8 φ	3000	≥ 10 φ	5000																					
	Dφ	Life hours																											
8 φ	3000																												
≥ 10 φ	5000																												
Shelf Life	Test conditions Duration time :500Hrs Ambient temperature:+105°C Applied voltage: None After test requirements at +20°C: Some limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																												

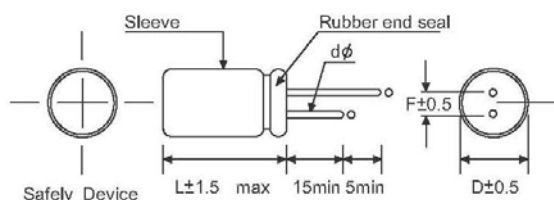
Multiplier For Ripple Current VS. Frequency

CAP(uF) \ 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

Ø DxL (mm)

uF	WV {SV}	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)at105°C100KHz

Max Impedance {Ω} at 20°C 100KHZ



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Case Size

Ø DxL (mm)

WV {SV} uF	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	300	0.38	6x11	390	0.30	8x11	465	0.22
	8x11	330	0.37	8x11	450	0.25	10x12	480	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	510	0.20	10x12	750	0.114	10x17	780	0.096
	8x11	550	0.15						
270	10x12	720	0.125	10x15	910	0.095	10x20	960	0.078
330	8x11	710	0.13	10x17	1050	0.079	10x25	1150	0.065
	8x16	820	0.12						
	10x12	730	0.114						
470	8x14	900	0.090	10x15 10x20	1100 1200	0.070 0.065	13x21	1400	0.055
	8x20	1000	0.080						
	10x12	910	0.088						
	10x15	1010	0.076						
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	10x25	1600	0.045	13x26	1900	0.042	16x26	2100	0.036
	13x16	1580	0.050						
	13x21	1650	0.045						
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	2060	0.050	16x26 16x31	2500 2630	0.035 0.034	18x36	2680	0.032
	16x26	2100	0.035						
	13x21	2070	0.036						
2700	16x26	2340	0.031	16x36	2780	0.029	18x41	2780	0.027
3300	16x21	2400	0.031	18x36	2900	0.026	18x41	2980	0.025
	16x31	2580	0.026						
4700	16x36	2960	0.024	18x41	3000	0.024	-	-	-
5600	18x36	3100	0.024	-	-	-	-	-	-
6800	18x41	3550	0.024	-	-	-	-	-	-

Ripple Current(mA,rms)at105°C100KHz

Max Impedance {Ω} at 20°C 100KHZ



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Case Size

Ø DxL (mm)

WV {SV} uF	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)at105°C100KHz

Max Impedance {Ω} at 20°C 100KHZ



LPS Low-Impedance & Long Life

Case Size

Ø DxL (mm)

WV {SV} uF	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)at105°C 100KHz

Max Impedance {Ω} at 20°C 100KH

Case Size

Ø DxL (mm)

WV {SV} uF	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)at105°C 100KHz

Max Impedance {Ω} at 20°C 100KHZ