



LHK General Purpose, 105°C



Features

- Used in communication equipments, switching power supply, etc.
- 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	0.1 to 15000 µF	0.47 to 470 µF																																										
Capacitance Tolerance	±20%(120Hz, +20°C)																																											
Leakage Current (+20°C, max.)	I ≤ 0.01 CV or 3(µA) After 1minute whichever is greater measured with rated working voltage applied.	I ≤ 0.03 CV or 3(µA) After 1minute 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><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>23</td><td>20</td><td>16</td><td>14</td><td>12</td><td>10</td><td>10</td><td>10</td><td>15</td><td>15</td><td>16</td><td>20</td><td>20</td><td>20</td> </tr> </table>														Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	D.F.(%)max	23	20	16	14	12	10	10	10	15	15	16	20	20	20
	Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450																													
D.F.(%)max	23	20	16	14	12	10	10	10	15	15	16	20	20	20																														
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	2	2	2	2	2	2	3	3	3	5	6	15																													
Z (-40°C)/Z(+20°C) 8 6 4 4 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	Test conditions Duration time : 2000Hrs Ambient temperature:+105°C Applied voltage: Rated DC working voltage After test requirements:at+20°C After test requirements:≤±20% 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.																																											

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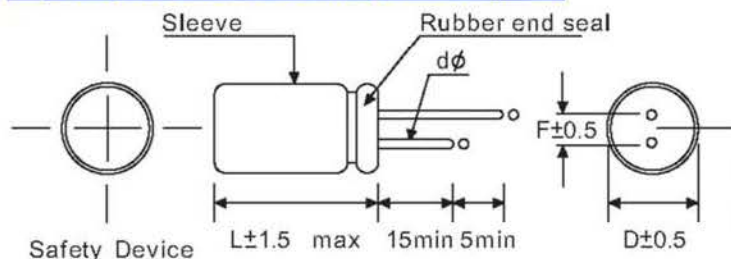
Multiplier for Ripple Current VS, Frequency

CAP(µF)/Hz	50(60)	120	400	1K	10K	50-100K
CAP≤10	0.8	1.0	1.30	1.45	1.65	1.70
10<CAP≤100	0.8	1.0	1.23	1.36	1.48	1.53
100<CAP≤1000	0.8	1.0	1.16	1.25	1.35	1.38
1000<CAP	0.8	1.0	1.11	1.18	1.25	1.28

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	22	25	
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	12	
dφ	0.5		0.6			0.8				1.0

1604
053
7756
7392
0571



LHK General Purpose, 105°C

Case Size

φD x L (mm)

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μF	W.V. {S.V.}	6.3 {8}		10 {13}		16 {20}		25 {32}		35 {44}	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1						5x11	9	5x11	9	5x11	11
4.7								5x11	27	5x11	29
6.8								5x11	35	5x11	38
10						5x11	38	5x11	40	5x11	42
22				5x11	50	5x11	56	5x11	60	5x11	62
33		5x11	56	5x11	60	5x11	65	5x11	70	5x11	78
47		5x11	68	5x11	72	5x11	100	5x11	105	5x11 6.3x11	110 115
68		5x11	77	5x11	82	5x11	105	6.3x11	120	6.3x11	140
100		5x11	98	5x11	110	5x11	115	5x11	135	6.3x11	165
						6.3x11	135	6.3x11	150	8x11	175
220		5x11	160	5x11	170	6.3x11	220	6x11	230	8x11	300
		6.3x11	180	6.3x11	180	8x11	230	8x11	240	8x14	325
330		6.3x11	200	6.3x11	260	8x11	300	8x11	230	8x11	330
				8x11	280				10x12	285	8x20
470		6.3x11	280	6.3x11	300	8x11	380	8x14	415	8x20	500
		8x11	310	8x11	315	8x14	390	10x12	445	10x12	460
560		8x11	320	8x11	330	10x12	410	10x15	450	10x15	540
									10x12	465	10x20
680		8x11	360	8x11	400	8x14	470	10x12	465	10x15	540
				8x14	410				10x15	520	
820		8x11	390	10x12	480	10x15	550	10x15	600	10x15	750
				10x12	420				10x17	640	
1000		8x11	420	8x11	490	10x12	580	10x15	640	10x15	760
				10x12	460				8x14	500	10x12
1500		10x15	620	10x12	530	10x15	600	13x16	850	10x20	810
				10x15	580				10x12	590	13x16
2200		10x17	780	10x12	530	13x16	1020	16x16	900	13x16	860
				10x20	900				10x12	530	13x16
2700		10x20	850	10x15	580	13x21	1100	16x26	910	13x21	910
				13x21	920				10x15	630	13x21
3300		10x20	970	10x12	580	13x21	1220	16x26	910	13x21	970
				13x21	1010				10x12	580	13x21
4700		10x25	1160	10x12	580	13x21	1220	16x26	1180	13x21	1260
				13x21	1200				10x12	580	13x21
5600		13x26	1320	10x12	580	13x21	1220	16x26	1210	13x21	1290
				13x26	1510				10x12	580	13x21
6800		16x26	1470	10x12	580	13x21	1220	16x26	1250	13x21	1300
				16x26	1680				10x12	580	13x21
8200		16x26	1520	10x12	580	13x21	1220	16x26	1270	13x21	1300
				16x31	1740				10x12	580	13x21
10000		16x26	1690	10x12	580	13x21	1220	16x26	1290	13x21	1300
				16x31	1740				10x12	580	13x21
15000		16x36	2080	10x12	580	13x21	1220	16x26	1290	13x21	1300
				18x36	2190				10x12	580	13x21

•Ripple Current (mA, rms) at 105°C 120Hz



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Case Size

φD x L (mm)

μF	W.V. {S.V.}	50 {63}		63 {79}		100 {125}		160 {200}		200 {250}	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.1		5x11	1.3	5x11	1.3	5x11	1.3	-	-	-	-
0.22		5x11	2.9	5x11	2.9	5x11	2.9	-	-	-	-
0.33		5x11	4.2	5x11	4.2	5x11	4.2	-	-	-	-
0.47		5x11	8	5x11	8	5x11	8	5x11	12	5x11	12
1		5x11	14	5x11	14	5x11	15	5x11	17	6.3x11	17
2.2		5x11	20	5x11	21	5x11 6x11	22 24	6.3x11	26	6.3x11	33
3.3		5x11	26	5x11	28	5x11	30	6.3x11	32	6.3x11	43
4.7		5x11	32	5x11	34	5x11	36	6.3x11 8x11	36 42	8x11	51
6.8		5x11	40	5x11	42	6.3x11	47	8x11	56	10x12	63
10		5x11 6x11	50 55	5x11	51	6.3x11	60	8x11 10x12	75 78	10x12 10x15	83 90
22		5x11	75	5x11 6.3x11	75 85	6.3x11 8x11	98 105	10x15	105	10x20	135
33		5x11 6.3x11	90 95	6.3x11 8x11	105 115	8x11 10x12	145 155	10x20	170	13x21	180
47		6.3x11	120	6.3x11 8x11	145 155	10x12 10x15	170 180	13x21	210	13x21 13x26	220 230
68		8x11	155	8x11	185	10x15 10x17	240 250	13x26	280	16x26	300
100		8x11	200	8x11 10x12	220 240	10x15 10x20	250 270	13x26 16x26	320 330	16x26	360
220		8x16 10x12 10x15 10x17	355 350 360 365	10x17 10x20	400 430	13x26 16x26	530 560	16x36	580	18x36	590
330		10x15 10x17 10x20	435 450 470	10x20 13x21	500 570	16x26	680	18x32	710	18x32 18x36	590 740
470		10x20 13x21	590 610	13x21 13x26 16x26	640 700 720	16x26 16x31	840 860	18x36 18x41	870 880	22x42	890
560		13x21	660	13x26	770	16x36	880	-	-	-	-
680		13x21 13x26	730 770	16x26	880	16x36	920	-	-	-	-
820		13x26	850	16x26	920	18x32	970	-	-	-	-
1000		13x26 16x21 16x26	900 950 1010	16x26 16x36	1150 1220	18x41	1250	-	-	-	-
1500		16x31	1300	18x32	1350	22x42	1500	-	-	-	-
2200		16x26 16x31 18x36	1400 1450 1550	18x36 22x42	1590 2100	25x44	1880	-	-	-	-
2700		18x36	1610	22x42	1720	-	-	-	-	-	-
3300		18x36	1780	22x42	1900	-	-	-	-	-	-
4700		22x42	2050	25x44	2200	-	-	-	-	-	-
5600		25x44	2160	-	-	-	-	-	-	-	-
6800		25x44	2280	-	-	-	-	-	-	-	-
10000		25x44	2800	-	-	-	-	-	-	-	-

•Ripple Current (mA, rms) at 105°C 120Hz

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LHK General Purpose, 105°C

Case Size

φD x L (mm)

μF	W.V. {S.V.}	250 {300}		350 {400}		400 {450}		450 {500}	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47		5x11	12	6.3x11	15	6.3x11	15	6.3x11	15
1		6.3x11	17	6.3x11	20	6x11 8x11	20 22	8x11	22
2.2		6x11 8x11	35 36	10x12	39	8x11 10x12	35 39	10x12 10x17	39 50
3.3		8x11	43	10x12	53	10x12 10x15	53 55	10x15 10x20	53 55
4.7		8x11 10x12	48 51	10x12 10x15	63 66	8x11 8x14 10x12 10x15 10x17 10x20	60 63 63 69 70 72	10x20	64
6.8		10x12	70	10x15	79	10x15	85	10x20	75
10		10x15	90	10x20	110	10x12 10x15 10x17 10x20 13x21	98 100 110 112 115	13x21 13x26 16x26	92 98 98
22		10x20 13x21	115 160	13x26	180	13x21 16x26	170 190	16x26 16x31	175 180
33		13x21 13x26	175 180	16x26	190	13x26 16x16 16x21 16x26	200 200 210 220	16x36	210
47		13x26 16x26	240 260	16x31	250	16x26 16x31 16x36 18x21	280 300 350 270	16x26 16x36	250 280
68		16x26	320	16x31	330	16x31 16x36 18x26	340 355 350	18x31 18x36	320 330
100		16x31	400	18x36	420	18x31 18x36	435 450	18x36 22x32	430 500

•Ripple Current (mA, rms) at 105°C 120Hz