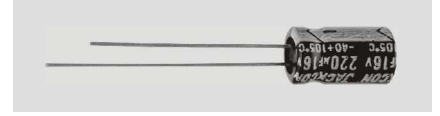


# JACKCON Electrolytic Capacitors

## LHK Series 105°C 高溫度標準型製品系列

### 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 220 µF																																									
Capacitance Tolerance	±20%(120Hz, +20°C)																																										
Leakage Current(+20°C, max.)	1 ≤ 0.01 CV or 3(µA) After 1 minute whichever is greater measured with rated working voltage applied.	1 ≤ 0.03 CV or 3(µA) After 1 minute 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>18</td> <td>16</td> <td>13</td> <td>11</td> <td>10</td> <td>8</td> <td>7</td> <td>7</td> </tr> </table> <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> <p>For Capacitance &gt; 1000µF , add 2% per another 1000µF (+20°C, at 120Hz)</p>		Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	D.F.(%)max	18	16	13	11	10	8	7	7	Working Voltage (VDC)	160	200	250	350	400	450	D.F.(%)max	12	12	12	15	15	17									
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Low Temperature Characteristics (120Hz)	<p>Impedance ratio max.</p> <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>2</td> <td>2</td> <td>2</td> <td>2</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> <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>2</td> <td>2</td> <td>3</td> <td>5</td> <td>6</td> <td>15</td> </tr> </table> <p>For Capacitance Value 1000µF , add 0.5 per another 1000µF for -25°C/+20°C add 1 per another 1000µF for -40°C/+20°C</p>		Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	Z-25°C/Z+20°C	4	3	2	2	2	2	2	2	Z-40°C/Z+20°C	8	6	4	3	3	3	3	3	Working Voltage (VDC)	160	200	250	350	400	450	Z-25°C/Z+20°C	2	2	3	5	6	15
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Z-25°C/Z+20°C	4	3	2	2	2	2	2	2																																			
Z-40°C/Z+20°C	8	6	4	3	3	3	3	3																																			
Working Voltage (VDC)	160	200	250	350	400	450																																					
Z-25°C/Z+20°C	2	2	3	5	6	15																																					
Load Life	<p>Test conditions                      Duration time :2000Hrs                      Ambient temperature: +105°C                      Applied voltage: Rated DC working voltage                      After test requirements: ≤ ±20% of the initial measured value                      Dissipation Factor: ≤ 200% of the initial specified value                      Leakage current: ≤ The initial specified value</p>																																										
Shelf Life	<p>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.</p>																																										

### Multiplier for Ripple Current vs. Frequency

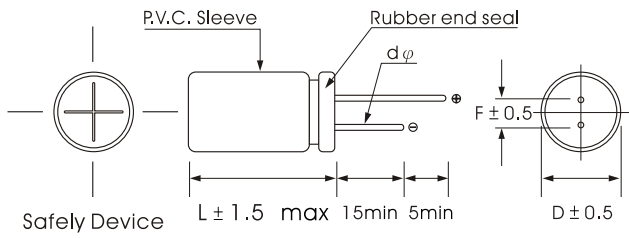
CAP (uf)\Hz		50(60)	120	400	1 K	10 K	50K-100K
Multiplier	CAP ≤ 10	0.8	1	1.30	1.45	1.65	1.70
	10 < CAP ≤ 100	0.8	1	1.23	1.36	1.48	1.53
	100 < CAP ≤ 1000	0.8	1	1.16	1.25	1.35	1.38
	1000 < CAP	0.8	1	1.11	1.18	1.25	1.28

### Multiplier for Ripple Current vs. Temperature

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

# JACKCON Electrolytic Capacitors

Diagram of Dimensions: (Unit:mm)



D φ	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
d φ	0.5		0.6		0.8		1.0		

## Case Size

φ DXL(mm)

WV(SV) μF	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.1						5x11	5x11	5x11	-	-	-	-	-	-
0.22						5x11	5x11	5x11	-	-	-	-	-	-
0.33						5x11	5x11	5x11	-	-	-	-	-	-
0.47						5x11	5x11	5x11	5x11	5x11	5x11	6.3x11	6.3x11	6.3x11
1						5x11	5x11	5x11	5x11	6.3x11	6.3x11	6.3x11	8x11.5	8x11.5
2.2						5x11	5x11	5x11	6.3x11	6.3x11	8x11.5	10x12.5	10x12.5	10x12.5
3.3						5x11	5x11	5x11	6.3x11	6.3x11	8x11.5	10x12.5	10x12.5 10x16	10x16 10x20
4.7				5x11	5x11	5x11	5x11	5x11	6.3x11 8x11.5	8x11.5	10x12.5	10x12.5 10x16	10x16	10x20
10			5x11	5x11	5x11	5x11	5x11	6.3x11	8x11.5 10x12.5	10x12.5 10x16	10x16	10x20	13x20	13x20 13x25
22		5x11	5x11	5x11	5x11	5x11	5x11 6.3x11	6.3x11 8x11.5	10x16	10x20	10x20	13x25	16x25	16x25 16x31.5
33	5x11	5x11	5x11	5x11	5x11	5x11 6.3x11	6.3x11 8x11.5	8x11.5 10x12.5	10x20	13x20	13x20 13x25	16x25	16x25	16x35.5
47	5x11	5x11	5x11	5x11	5x11 6.3x11	6.3x11	6.3x11 8x11.5	10x12.5 10x16	13x20	13x20 13x25	13x25	16x31.5	16x31.5	16x35.5
100	5x11	5x11	5x11 6.3x11	6.3x11	6.3x11 8x11.5	8x11.5	8x11.5	10x20	13x25 16x25	16x25	16x31.5	18x36	18x36	-
220	5x11 6.3x11	6.3x11	6.3x11 8x11.5	8x11.5	8x11.5 10x12.5	10x12.5 10x16	10x16 10x20	13x25 16x25	16x35.5	18x35.5	-	-	-	-
330	6.3x11	6.3x11 8x11.5	8x11.5	8x11.5 10x12.5	10x12.5 10x16	10x16 10x20	13x20	13x25	18x31.5	18x35.5	-	-	-	-
470	6.3x11 8x11.5	6x11 8x11.5	8x11.5 10x12.5	8x14 10x12.5	10x16 10x20	13x20	13x25 16x25	16x25 16x31.5	18x35	18x41	-	-	-	-
1000	8x11.5	8x14 10x12.5	8x16 10x15 10x17	10x15 10x17 10x20	10x25 13x20	13x25 16x25	16x35.5	18x41	-	-	-	-	-	-
2200	10x20	10x17 10x20	10x20 13x20	13x20 16x16	16x25 16x31.5	16x35.5	18x35.5	25x50	-	-	-	-	-	-
3300	10x20 13x20	10x20 13x20	13x21 13x25	16x25 16x31.5	16x35.5	18x35.5	22x41	-	-	-	-	-	-	-
4700	13x20 13x25	13x21 13x25	16x25	16x31.5	18x35.5	22x41	25x45	-	-	-	-	-	-	-
6800	16x25	16x25	16x31.5	18x35.5	22x42	25x45	-	-	-	-	-	-	-	-
10000	16x25 16x31.5	16x35.5 18x35.5	18x35 18x41	22x42	25x50	25x50	-	-	-	-	-	-	-	-
15000	16x35.5 18x35.5	18x35	22x50	22x50	-	-	-	-	-	-	-	-	-	-

# JACKCON Electrolytic Capacitors

## Maximum Ripple Current

mA, rms, 120Hz at 105 °C

WV(SV) μF	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
0.1	→					8	8	10	-	-	-	-	-	-
0.22	→					8	8	10	-	-	-	-	-	-
0.33	→					8	8	10	-	-	-	-	-	-
0.47	→					11	11	12	12	12	12	15	15	15
1	→					17	17	17	17	17	17	22	22	22
2.2	→					25	28	33	33	33	36	39	39	39
3.3	→					35	35	40	40	43	43	53	53	53
4.7	→			31	40	42	45	48	48	51	51	63	69	75
10	→		60	60	60	65	70	80	80	83	90	115	115	120
22	→	70	75	90	95	100	100	130	135	135	160	180	200	200
33	65	75	85	95	105	120	130	170	180	180	180	190	190	210
47	80	95	130	130	130	150	170	230	230	230	240	250	250	280
100	130	180	180	190	210	250	300	390	390	420	450	460	520	-
220	200	250	260	320	340	410	470	620	720	750	-	-	-	-
330	300	300	340	420	480	520	680	760	880	910	-	-	-	-
470	320	380	450	540	580	760	880	1000	1120	1150	-	-	-	-
1000	580	600	680	880	1100	1150	1350	1550	-	-	-	-	-	-
2200	1050	1000	1200	1550	1650	2090	2300	3390	-	-	-	-	-	-
3300	1050	1350	1600	1750	2200	2280	2360	-	-	-	-	-	-	-
4700	1350	1800	2100	2360	2380	2500	3800	-	-	-	-	-	-	-
6800	1900	2150	2500	2600	3490	4110	-	-	-	-	-	-	-	-
10000	2000	2350	2600	3710	4170	4300	-	-	-	-	-	-	-	-
15000	2550	2700	3890	4720	-	-	-	-	-	-	-	-	-	-