

# Datasheet

## Aluminium Electrolytic Capacitor, LHK

RS Stock number 707-6278



### Specifications:

Item	Performance Characteristics	
Operating Temperature Range	-40 to +105°C	-25 to +105°C
Rated Voltage Range	10 to 100 VDC	160 to 450 VDC
Capacitance Tolerance	+ 20% (120Hz, +20°C)	
Leakage Current (at 20°C)	10V ~ 100V DC	160V ~ 450V DC
	$I \leq 0.02CV + 3 (\mu A)$	$I \leq 0.05CV + 4 (\mu A)$
I: Leakage current ( $\mu A$ ) C: Rated capacitance ( $\mu F$ ) V: Working voltage (V) After 5 minutes applying the DC working voltage		
Surge Voltage (20°C)	W.V	10 16 25 35 50 60 100 160 160 200 250 350 400 450
	S.V	13 20 32 44 63 79 125 200 200 250 300 400 450 500
Dissipation Factor (120Hz, 20°C)	W.V	10 16 25 35 50 63 100 160 200 250 350 400 450
	Tan $\delta$	
For capacitance > 1000 $\mu$ F, add 2% per another 1000 $\mu$ (+20°C at 120Hz)		

### Specifications:

Item	Performance Characteristics																																										
Temperature Characteristics	Impedance ratio max.																																										
	<table border="1"> <thead> <tr> <th>W.V</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>-25°C/+20°C</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>8</td> <td>8</td> <td>8</td> <td>12</td> <td>15</td> <td>16</td> </tr> <tr> <td>-40°C/+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>6</td> <td>6</td> <td>10</td> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table>	W.V	10	16	25	35	50	63	100	160	200	250	350	400	450	-25°C/+20°C	4	3	3	2	2	2	2	8	8	8	12	15	16	-40°C/+20°C	8	6	4	3	3	3	3	6	6	10	-	-	-
	W.V	10	16	25	35	50	63	100	160	200	250	350	400	450																													
-25°C/+20°C	4	3	3	2	2	2	2	8	8	8	12	15	16																														
-40°C/+20°C	8	6	4	3	3	3	3	6	6	10	-	-	-																														
Load Test	After 1000 hours application of W.V at +105°C. The capacitor shall meet the following limits. <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td><math>\leq \pm 20\%</math> of initial value</td> </tr> <tr> <td>Tang</td> <td><math>\leq \pm 20\%</math> of initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td><math>\leq \pm</math> initial specified value</td> </tr> </tbody> </table>	Capacitance Change	$\leq \pm 20\%$ of initial value	Tang	$\leq \pm 20\%$ of initial specified value	Leakage Current	$\leq \pm$ initial specified value																																				
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Shelf Test	After 500 hours application of W.V AT +105°C. This capacitor shall meet the following limits. <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td><math>\leq \pm 20\%</math> of initial value</td> </tr> <tr> <td>Tang</td> <td><math>\leq \pm 200\%</math> of initial specified value</td> </tr> <tr> <td>Leakage Current</td> <td><math>\leq \pm 200\%</math> of initial specified value</td> </tr> </tbody> </table>	Capacitance Change	$\leq \pm 20\%$ of initial value	Tang	$\leq \pm 200\%$ of initial specified value	Leakage Current	$\leq \pm 200\%$ of initial specified value																																				
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### Diagram of Dimensions:



Unit (mm)

(Unit: mm)

D	5	6	8	10	13	16	18	20	22	25
φd	0.6	0.6	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.8

**Features:**

- Used in communication equipment's, switching power supply, etc.
- Safety vent construction design

**Ripple Current & Frequency Multipliers**

Freq.(Hz) Cap.(µF)	50(60)	120	500	1K	10KUP
Under 100	0.70	1.00	1.30	1.40	1.50
100 < C ≤ 1000	0.75	1.00	1.20	1.30	1.35
1000 up above	0.80	1.00	1.10	1.12	1.15

**Case Size**

Ø D x L (mm)

WV µF	10		16		25		35		50		63		100	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47								▶	6x13	8	6x13	8	6x13	10
1								▶	6x13	12	6x13	12	6x13	14
2.2								▶	6x13	18	6x13	20	6x13	22
3.3								▶	6x13	23	6x13	24	6x13	27
4.7								▶	6x13	27	6x13	29	6x13	34
10				▶	6x13	40	6x13	40	6x13	40	6x13	48	8x16	58
22				▶	6x13	48	6x13	59	6x13	62	6x13	81	8x20	100
33		▶	6x13	58	6x13	65	6x13	69	8x16	88	8x16	99	8x20	135
47	6x13	60	6x13	73	6x13	77	6x13	105	8x16	115	8x16	138	10x21	150
100	6x13	98	6x16	102	8x16	140	8x16	205	8x16	252	10x21	280	13x22	300
220	8x16	170	8x16	220	8x16	260	8x16	305	10x20	320	13x22	394	16x28	505
330	8x16	243	8x16	250	10x21	320	10x21	350	13x22	415	13x26	505	16x33	660
470	8x16	315	10x17	385	10x21	420	13x22	530	13x26	640	16x26	715	18x36	875
1000	10x21	480	13x22	615	13x26	760	13x26	820	16x33	955	16x36	1150		
2200	13x22	940	13x26	1000	16x28	1050	16x36	1165	18x36	1680	22x42	1980		
3300	13x26	1150	16x33	1340	16x36	1500	18x36	1800	22x42	2080				
4700	16x28	1400	16x36	1580	18x36	1980	22x42	2100						

Ripple Current(mA, rms)at 105□ 120Hz

**Case size:**

uF \ WV	160		200		250		350		400		450	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
0.47	6x13	10	6x13	10	6x13	10	6x13	10	6x16	10	6x16	10
1	6x13	10	6x16	10	6x16	11	8x16	11	8x16	13	8x16	13
2.2	8x16	16	8x16	16	8x16	21	10x17	26	10x17	32	10x17	32
3.3	8x16	26	10x17	26	10x17	26	10x17	30	10x21	33	10x21	33
4.7	8x16	36	10x17	38	10x17	40	10x21	49	13x22	52	13x22	52
10	10x21	60	10x21	68	10x21	78	13x22	84	13x24	86	16x28	90
22	13x22	82	13x22	92	13x27	92	16x33	86	16x33	86	16x33	91
33	13x22	105	16x28	116	16x33	116	16x36	116	18x36	135		
47	16x28	175	16x33	238	16x33	238	16x36	238				
100	16x33	410	18x36	460	18x36	460						
220	22x42	515	22x42	585								

Ripple Current(mA, rms)at 105□ 120Hz