

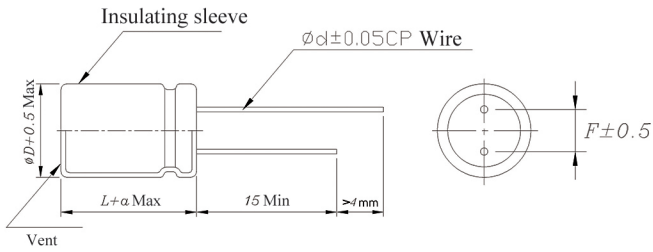
# LKX

- ◆ 105°C 7000~12000 Hours
- ◆ Slim Type, Φ6.3~Φ18, High Ripple Current
- ◆ RoHS Compliant



## ■ Specification

Items	Characteristics												
Operation Temperature Range	35 ~ 100V.DC -40°C ~ +105°C ; 160 ~ 450V.DC -40°C ~ +105°C												
Rated Voltage	35 ~ 450V.DC												
Capacitance Tolerance	±20% (25±2°C 120HZ)												
Leakage Current(μA)	35 ~ 100VV I ≤ 0.01CV or 3μA whichever is greater C:rated capacitance(μF) V:rated voltage(V) 2 minutes reading												
	160 ~ 450VV I ≤ 0.02CV+10 (μA) C:rated capacitance(μF) V:rated voltage(V) 2 minutes reading												
Dissipation Factor (25±2°C 120Hz)	Rated Voltage(V)	35	50	63	80	100	160						
	tgδ	0.12	0.10	0.09	0.09	0.08	0.16						
	Rated Voltage(V)	200	250	350	400	450							
	tgδ	0.20	0.20	0.20	0.20	0.25							
For those with rated capacitance larger than 1000μF, when the rated capacitance is increased by 1000μF, then tgδ will be increased by 0.02													
Temperature Characteristics (120Hz)	Rated Voltage(V)	35	50	63	80	100	160	200	250	350	400	450	
	Z(-40°C)/Z(20°C)	3	3	3	3	3	3	3	3	5	5	6	
Endurance	After standard test time with applying the rated voltage with the rated ripple current in the oven at 105°C, the following specification shall be satisfied after 16 hours at 25±2°C.												
		35 ~ 100V.DC					160 ~ 450V.DC						
	Capacitance change	within±25% of the initial value					within±20% of the initial value						
	Dissipation Factor	Not more than 200% of the specified value											
	Leakage current	Not more than the specified value											
	Load life( hours)	Φ6.3					35V ~ 100V			160V ~ 450V			
≥Φ8					L ≤ 20		10000hrs		10000hrs				
					L ≥ 25		10000hrs		12000hrs				
Shelf Life At High Temperature	After leaving capacitors under no load at 105°C for 1000 hours, the following specification shall be satisfied at 25±2°C.												
	Capacitance change	within±20% of the initial value											
	Dissipation Factor	Not more than 200% of the specified value											
	Leakage current	Not more than 200% of the specified value											

**Standard Size** (Unit: mm)


	D	6.3	8	10	12.5	16	18
	d	0.5	0.6	0.6	0.6	0.8	0.8
	F	2.5	3.5	5.0	5.0	7.5	7.5
α	35 ~ 100V.DC	2.0					
	160 ~ 450V.DC	2.5					

Remark: capacitors with diameter more than 6.3 have safety vent

**Ripple Current Correction Factor**
**① 35WV ~ 100WV**

Frequency(Hz)		120	1K	10K	100K≤
Coefficient	≤33μF	0.42	0.70	0.90	1.00
	39μF ~ 270μF	0.50	0.73	0.92	1.00
	330μF ~ 680μF	0.55	0.77	0.94	1.00
	820μF and above	0.60	0.80	0.96	1.00

**① 160WV ~ 450WV**

Frequency(Hz)		50(60)	120	500	1K	10K≤
Coefficient	160 ~ 250WV	0.80	1.00	1.20	1.30	1.40
	350 ~ 450WV	0.80	1.00	1.25	1.40	1.50

**■ Standard Size**

Voltage (V)		35			50			63			80		
Items Capacitance (μF)	Size D×L(mm)	Ripple Current	Ripple Current	Size D×L(mm)	Ripple Current	Ripple Current	Size D×L(mm)	Ripple Current	Ripple Current	Size D×L(mm)	Ripple Current	Ripple Current	
		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)	
47										6.3×20	0.455	0.91	
56										6.3×20	0.515	1.03	
82							6.3×20	0.455	0.91	8×20	0.635	1.27	
100							8×20	0.515	1.03	8×25	0.655	1.33	
120				6.3×20	0.58	1.16				8×30	0.785	1.57	
150							8×20	0.63	1.27				
180	6.3×20	0.605	1.21				8×25	0.665	1.33	8×40	1.01	2.02	
220				8×20	0.74	1.48	8×25	0.785	1.57	8×50	1.2	2.41	
220										10×30	1.05	2.1	
270				8×30	0.87	1.74				10×30	1.05	2.1	
330	8×20	0.924	1.68				8×40	1.11	2.02	10×35	1.3	2.6	
330							10×30	1.04	1.88				
390	8×25	0.951	1.73	8×40	1.22	2.23	8×50	1.32	2.41	10×50	1.71	3.12	
390				10×25	1.09	2	10×30	1.16	2.1				
470	8×30	1.11	2.03	8×50	1.45	2.65	10×35	1.18	2.14	12.5×35	1.97	3.59	
470				10×30	1.22	2.22							
560				10×35	1.68	3.07	10×40	1.43	2.6				
560							12.5×25	1.24	1.24				
680	8×40	1.41	2.57	10×40	1.55	2.82	10×50	1.71	3.12				
680	10×25	1.21	2.2				12.5×30	1.44	2.63				
820	8×50	1.82	3.04	10×50	2.02	3.37	12.5×35	2.15	3.59				
820	10×30	1.48	2.47	12.5×25	1.74	2.9							
1000	10×35	2.08	3.48	12.5×30	2.31	3.86							
1200	10×40	1.87	3.12										
1200	12.5×25	1.62	2.7										
1500	10×50	2.21	3.69										
1800	12.5×30	2.50	4.17										

Voltage (V)		100			160			200			250		
Items Capacitance (μF)	Size D×L(mm)	Ripple Current	Ripple Current	Size D×L(mm)	Ripple Current	Ripple Current	Size D×L(mm)	Ripple Current	Ripple Current	Size D×L(mm)	Ripple Current	Ripple Current	
		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)	
27										8×25	0.3	0.42	
33	6.3×20	0.382	0.91										
39	8×20	0.699	1.399				8×25	0.3	0.42	8×30	0.37	0.518	
47										8×35	0.45	0.63	
47										10×25	0.37	0.518	

**■ Standard Size**

Voltage (V)	100			160			200			250			
	Items Capacitance ( $\mu$ F)	Size D×L(mm)	Ripple Current (mA/r.m.s /105°C120Hz)	Ripple Current (mA/r.m.s /105°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /105°C120Hz)	Ripple Current (mA/r.m.s /105°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /105°C120Hz)	Ripple Current (mA/r.m.s /105°C100KHz)	Size D×L(mm)	Ripple Current (mA/r.m.s /105°C120Hz)	Ripple Current (mA/r.m.s /105°C100KHz)
56		8×20	0.736	1.473	8×25	0.32	0.448	8×30	0.37	0.518	8×40	0.51	0.714
56											10×30	0.42	0.588
68		8×20	0.775	1.55	8×30	0.37	0.518	8×40	0.45	0.63	8×50	0.59	0.826
68								10×25	0.43	0.602	10×35	0.49	0.686
82		8×25	0.665	1.33	8×35	0.43	0.602	8×45	0.51	0.714	10×40	0.61	0.854
82					10×25	0.43	0.602	10×30	0.5	0.7	12.5×25	0.54	0.756
100		8×30	0.785	1.57	8×40	0.49	0.686	8×50	0.6	0.84	10×45	0.68	0.952
100								10×40	0.63	0.882	12.5×30	0.69	0.966
120		8×40	1.01	2.02	8×50	0.57	0.798	10×45	0.75	1.05	10×50	0.73	1.02
120		10×30	0.94	1.88	10×30	0.54	0.756	12.5×25	0.65	0.91	12.5×35	0.79	1.1
150		8×50	1.2	2.41	10×40	0.67	0.938	10×50	0.83	1.16	12.5×40	0.74	1.03
150		10×30	1.05	2.1	12.5×25	0.66	0.924	12.5×30	0.8	1.12	16×31.5	0.89	1.24
180					10×50	0.8	1.12	12.5×45	0.91	1.27	12.5×50	0.97	1.35
180					12.5×30	0.77	1.07	16×25	0.85	1.19	16×31.5	0.95	1.33
180											18×25	0.88	1.23
220		10×40	1.3	2.6	12.5×35	0.89	1.24	12.5×45	1.09	1.52	12.5×50	1.13	1.58
220					16×25	0.93	1.3	16×31.5	1.01	1.41	16×35.5	1.11	1.55
220								18×25	1	1.4	18×31.5	1.1	1.54
270		10×50	1.56	3.12	12.5×40	1.01	1.41	12.5×50	1.26	1.76	16×40	1.27	1.77
270								16×35.5	1.18	1.65	18×35.5	1.23	1.72
270								18×31.5	1.16	1.62			
330		12.5×35	1.97	3.59	12.5×50	1.2	1.68	16×40	1.36	1.9	16×50	1.48	2.07
330					16×31.5	1.2	1.68	18×31.5	1.3	1.82	18×40	1.42	1.98
330					18×25	1.18	1.65						
390					12.5×50	1.35	1.89	16×45	1.43	2	18×45	1.59	2.22
390					16×35.5	1.34	1.87	18×35.5	1.43	2			
390					18×31.5	1.4	1.96						
470					16×40	1.52	2.12	16×50	1.58	2.21	18×50	1.83	2.56
470					18×35.5	1.58	2.21	18×40	1.58	2.21			
560					16×50	1.79	2.5	18×45	1.77	2.47			
560					18×40	1.78	2.49						
680					18×45	2	2.8						
820					18×50	2.23	3.12						

**■ Standard Size**

Voltage (V)		350			400			450		
Items Capacitance (μF)	Size D×L(mm)	Ripple Current	Ripple Current	Size D×L(mm)	Ripple Current	Ripple Current	Size D×L(mm)	Ripple Current	Ripple Current	
		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)		(mA/r.m.s /105°C120Hz)	(mA/r.m.s /105°C100KHz)	
12				8×25	0.17	0.255	8×30	0.15	0.225	
15				8×30	0.2	0.3	8×40	0.19	0.285	
15							10×25	0.16	0.245	
18				8×35	0.23	0.345	8×45	0.21	0.315	
18				10×25	0.21	0.316	10×30	0.19	0.278	
22	8×30	0.25	0.375	8×40	0.26	0.39				
22				10×25	0.24	0.36				
27	8×35	0.29	0.435							
33	8×40	0.33	0.495	8×50	0.3	0.45	10×40	0.36	0.54	
33	10×25	0.31	0.465	10×35	0.29	0.435	12.5×30	0.37	0.555	
39	8×45	0.37	0.555	10×40	0.4	0.6	10×50	0.41	0.615	
39	10×30	0.36	0.54	12.5×25	0.36	0.54	12.5×35	0.42	0.63	
47	10×35	0.41	0.615	10×45	0.45	0.675	12.5×40	0.48	0.72	
47	12.5×25	0.38	0.566	12.5×30	0.44	0.66	16×25	0.44	0.66	
56	10×40	0.47	0.705	10×50	0.52	0.78	12.5×45	0.53	0.795	
56	12.5×30	0.44	0.661	12.5×35	0.5	0.75	16×31.5	0.51	0.765	
68	10×50	0.55	0.825	12.5×40	0.58	0.87	12.5×50	0.62	0.93	
68	12.5×30	0.46	0.696	16×25	0.51	0.765	16×35.5	0.59	0.885	
68							18×25	0.57	0.855	
82				12.5×45	0.65	0.975	16×40	0.68	1.02	
82				16×31.5	0.61	0.915	18×31.5	0.65	0.975	
82				18×25	0.61	0.915				
100				12.5×50	0.75	1.12	16×45	0.73	1.1	
100				16×35.5	0.74	1.11	18×35.5	0.74	1.11	
100				18×31.5	0.74	1.11				
120				16×40	0.8	1.2	16×50	0.82	1.22	
120				18×35.5	0.79	1.18	18×40	0.83	1.24	
150				16×50	0.95	1.42	18×45	0.95	1.42	
150				18×40	0.91	1.36				
180				18×45	1.04	1.56				