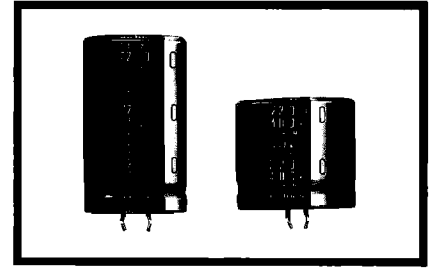
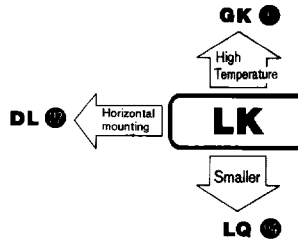


**LK** Snap-in Terminal Type, Standard series



Approved by Reliability Center for Electronic Component, Japan-Certification No. RCJ-03-25C

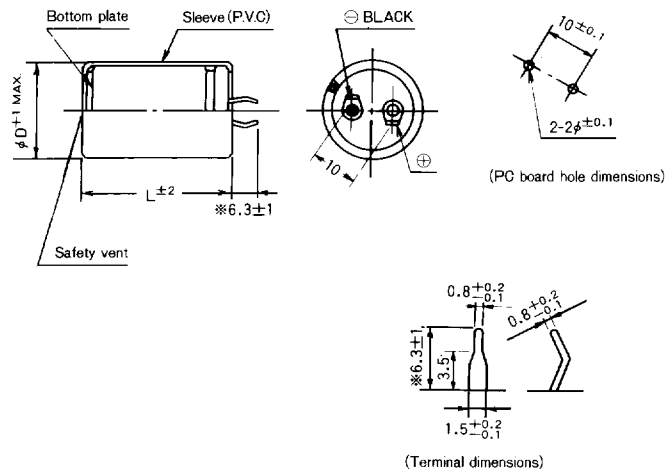
- Standard snap-in terminal series.
- Extended capacitance ranges based on the numerical values in E12 series under JIS.



## Specifications

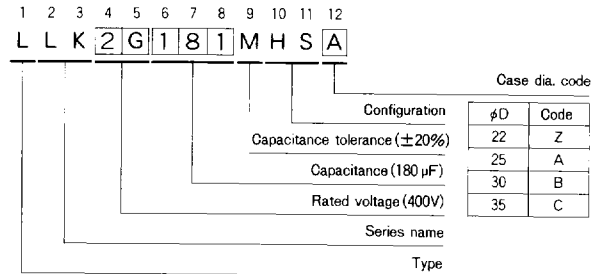
Item	Performance Characteristics																									
Operating Temperature Range	-40~+85°C (16~250V), -25~+85°C (400~450V)																									
Voltage Range	16~450V																									
Capacitance Range	47~33000μF																									
Capacitance Tolerance	±20% (120Hz, 20°C)																									
Leakage Current	$I \leq 3 \sqrt{CV}$ (μA) (After 5 minutes' application of rated voltage) (C: Capacitance (μF), V: Voltage (V))																									
tan δ	Measurement frequency: 120Hz, Temperature: 20°C																									
	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>tan δ (MAX.)</td> <td>0.5</td> <td>0.4</td> <td>0.35</td> <td>0.3</td> <td>0.25</td> <td>0.2</td> <td>0.2</td> <td>0.15</td> <td>0.10</td> <td>0.10</td> <td>0.20</td> <td>0.20</td> </tr> </tbody> </table>	Rated voltage (V)	16	25	35	50	63	80	100	160	200	250	400	450	tan δ (MAX.)	0.5	0.4	0.35	0.3	0.25	0.2	0.2	0.15	0.10	0.10	0.20
Rated voltage (V)	16	25	35	50	63	80	100	160	200	250	400	450														
tan δ (MAX.)	0.5	0.4	0.35	0.3	0.25	0.2	0.2	0.15	0.10	0.10	0.20	0.20														
Stability at Low Temperature	Measurement frequency: 120Hz																									
	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>16~100</th> <th>160~250</th> <th>400~450</th> </tr> </thead> <tbody> <tr> <td>Impedance ratio Z-25°C/Z+20°C</td> <td>4</td> <td>3</td> <td>8</td> </tr> <tr> <td>ZT/Z20 (MAX.) Z-40°C/Z+20°C</td> <td>15</td> <td>12</td> <td>—</td> </tr> </tbody> </table>	Rated voltage (V)	16~100	160~250	400~450	Impedance ratio Z-25°C/Z+20°C	4	3	8	ZT/Z20 (MAX.) Z-40°C/Z+20°C	15	12	—													
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Capacitance change	Within ±20% of initial value																									
tan δ	200% or less of initial specified value																									
Load Life	After an application of rated voltage (maximum value of DC voltage overlapped by an allowable ripple current) for 2000 hours at 85°C, capacitors meet the characteristics requirements listed at right.																									
Shelf Life	After leaving capacitors under no load at 85°C for 1000 hours, they meet the requirements listed at right.																									
	<table border="1"> <tbody> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> <tr> <td>Capacitance change</td> <td>Within ±15% of initial value</td> </tr> <tr> <td>tan δ</td> <td>150% or less of initial specified value</td> </tr> </tbody> </table>	Leakage current	Initial specified value or less	Capacitance change	Within ±15% of initial value	tan δ	150% or less of initial specified value																			
	Leakage current	Initial specified value or less																								
Capacitance change	Within ±15% of initial value																									
tan δ	150% or less of initial specified value																									
Marking	Printed with white color letter on black sleeve.																									
Applicable Standards	JIS C-5141 and JIS C-5102.																									

## Drawing



※ Shorter terminal (4.0±0.5) is also available upon request.

## Type numbering system (Example: 400V 180μF)



# ALUMINUM ELECTROLYTIC CAPACITORS

**LK** series

■ Dimensions

DXL (mm)

Cap. (µF)	V (Code)		16 (1C)				25 (1E)				35 (1V)				50 (1H)			
	Code	#D	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
2200	222													22×25				
														1.85				
2700	272													22×30				
														2.10				
3300	332									22×25				22×35	25×25			
										2.20				2.35	2.35			
3900	392									22×30				22×35	25×30			
										2.25				2.50	2.50			
4700	472						22×25			22×30	25×25			22×40	25×35	30×25		
							1.90			2.40	2.40			2.80	2.80	2.80		
5600	562						22×30			22×35	25×30			22×45	25×40	30×30		
							2.25			2.75	2.75			3.30	3.30	3.30		
6800	682	22×25					22×35	25×25		22×40	25×35	30×25		22×50	25×40	30×35		
		2.50					2.55	2.55		2.95	2.95	2.95		3.80	3.80	3.80		
8200	822	22×30					22×40	25×30	30×25	22×45	25×40	30×30		25×50	30×40	35×30		
		2.65					3.10	3.10	3.20	3.45	3.50	3.45		4.30	4.35	4.25		
10000	103	22×30	25×25				22×45	25×35	30×30		25×45	30×35			30×45	35×35		
		2.85	2.85				3.40	3.40	3.40		4.00	4.00			4.75	4.70		
12000	123	22×35	25×30				22×50	25×40	30×30		25×50	30×40	35×30		30×50	35×40		
		3.25	3.25				4.00	3.90	3.85		4.45	4.50	4.40		5.30	5.25		
15000	153	22×40	25×35	30×25			25×45	30×35	35×30		30×45	35×35			35×45			
		3.70	3.75	3.65			3.75	4.45	4.45		5.00	5.00			5.90			
18000	183	22×50	25×40	30×30				30×40	35×35		30×50	35×40			35×50			
		4.35	4.25	4.20				5.00	5.10		5.55	5.50			6.50			
22000	223		25×45	30×35	35×30			30×50	35×40				35×50					
			4.80	4.80	4.80			5.80	5.75				6.25					
27000	273			30×40	35×30				35×50									
				5.20	5.15				6.60									
33000	333			30×45	35×40													
				5.80	5.90													

Cap. (µF)	V (Code)		63 (1J)				80 (1K)				100 (2A)			
	Code	#D	22	25	30	35	22	25	30	35	22	25	30	35
820	821										22×25			
											1.20			
1000	102										22×30	25×25		
											1.50	1.50		
1200	122						22×25				22×35	25×30		
							1.30				1.75	1.75		
1500	152						22×30	25×25			22×40	25×30	30×25	
							1.80	1.80			1.95	1.90	1.95	
1800	182	22×25					22×35	25×30			22×45	25×35	30×30	
		1.70					2.05	2.05			2.30	2.20	2.30	
2200	222	22×30	25×25				22×40	25×30	30×25		22×50	25×40	30×30	
		2.30	2.30				2.30	2.30	2.30		2.65	2.60	2.55	
2700	272	22×35	25×30				22×45	25×35	30×30		25×45	30×35	35×30	
		2.40	2.45				2.50	2.45	2.50		2.85	2.85	2.95	
3300	332	22×40	25×35	30×25			22×50	25×40	30×30			30×40	35×35	
		2.75	2.80	2.75			2.95	2.85	2.80			3.45	3.45	
3900	392	22×45	25×35	30×30				25×45	30×35			30×45	35×35	
		3.00	2.90	3.00				3.20	3.20			3.85	3.75	
4700	472	22×50	25×40	30×30				25×50	30×40	35×30			35×40	
		3.30	3.25	3.20				3.75	3.80	3.70			4.30	
5600	562		25×45	30×35				30×45	35×35				35×50	
			3.75	3.75				4.40	4.35				5.10	
6800	682			30×40	35×30			30×50	35×40					
				4.20	4.15			4.80	4.80					
8200	822			30×45	35×35				35×45					
				4.70	4.65				5.35					
10000	103				35×40									
					5.20									
12000	123				35×50									Case size
					6.10									Allowable ripple

Allowable Ripple (A rms) at 85°C 120Hz

# ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

**LK** series

■ Dimensions

DXL(mm)

Cap.(μF)	V (Code) Code	#D	160(2C)				200(2D)				250(2E)						
			22	25	30	35	22	25	30	35	22	25	30	35			
180	181													22×25 0.95			
220	221					22×25 1.10								22×30 1.15	25×25 1.15		
270	271					22×30 1.25								22×35 1.25	25×30 1.25		
330	331		22×25 1.30			22×30 1.40	25×25 1.40							22×40 1.45	25×30 1.45	30×25 1.45	
390	391		22×30 1.50	25×25 1.55		22×35 1.60	25×30 1.60							22×45 1.70	25×35 1.70	30×30 1.70	
470	471		22×35 1.75	25×30 1.75		22×40 1.80	25×35 1.80	30×25 1.75						22×50 1.90	25×40 1.90	30×35 1.90	35×25 1.90
560	561		22×35 1.90	25×30 1.90	30×25 1.95	22×45 2.00	25×35 2.00	30×30 2.05						25×45 2.15	30×35 2.15	35×30 2.15	
680	681		22×40 2.15	25×35 2.20	30×30 2.20		25×40 2.25	30×35 2.25	35×25 2.30						30×40 2.40	35×30 2.35	
820	821		22×50 2.45	25×40 2.45	30×30 2.45	35×25 2.50	25×50 2.55	30×40 2.60	35×30 2.50						30×45 2.75	35×35 2.75	
1000	102			25×45 2.80	30×35 2.80	35×30 2.85		30×45 2.95	35×35 2.90							35×40 3.00	
1200	122			25×50 3.10	30×40 3.20	35×35 3.25		30×50 3.40	35×40 3.40							35×50 3.50	
1500	152				30×45 3.70	35×40 3.75			35×45 3.80								
1800	182					35×40 4.00			35×50 4.15								
2200	222					35×50 4.50											

Cap.(μF)	V (Code) Code	#D	400(2G)				450(2W)										
			22	25	30	35	22	25	30	35							
47	470						22×25 0.49										
56	560						22×30 0.57										
68	680		22×25 0.58				22×30 0.63	25×25 0.63									
82	820		22×30 0.60				22×35 0.74	25×30 0.75									
100	101		22×30 0.77	25×25 0.77			22×40 0.88	25×35 0.89	30×25 0.86								
120	121		22×35 0.86	25×30 0.86			22×45 0.96	25×40 0.98	30×30 0.96	35×25 0.99							
150	151		22×40 0.97	25×30 0.92	30×25 0.96			25×45 1.10	30×35 1.10	35×30 1.13							
180	181		22×45 1.10	25×35 1.06	30×30 1.11	35×25 1.13	25×50 1.24	30×40 1.18	35×30 1.22								
220	221		22×50 1.25	25×40 1.22	30×35 1.28	35×30 1.32		30×45 1.42	35×35 1.40								
270	271			25×50 1.39	30×40 1.47	35×30 1.46		30×50 1.62	35×40 1.61								
330	331				30×45 1.68	35×35 1.70			35×45 1.83								
390	391				30×50 1.95	35×40 1.93			35×50 2.10								
470	471					35×45 2.23											
560	561					35×50 2.54											

Allowable Ripple (A rms) at 85°C 120Hz

● Frequency coefficient of allowable ripple current

Coeff.	Frequency (Hz)	50	60	120	1 k	10k~
		16~100V	0.88	0.90	1.00	1.15
	160~250V	0.85	0.88	1.00	1.15	1.20
	400・450V	0.88	0.90	1.00	1.10	1.15

● Allowable ripple current vs. Ambient temperature

Ambient temp.(°C)	~+45	+60	+70	+85
Coefficient	1.48	1.42	1.30	1.00