

LQ series Snap-in Terminal Type, Standard



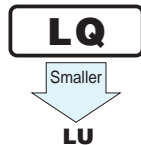
RCJ Approved



Anti-Solvent Feature
(Through 100V only)

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

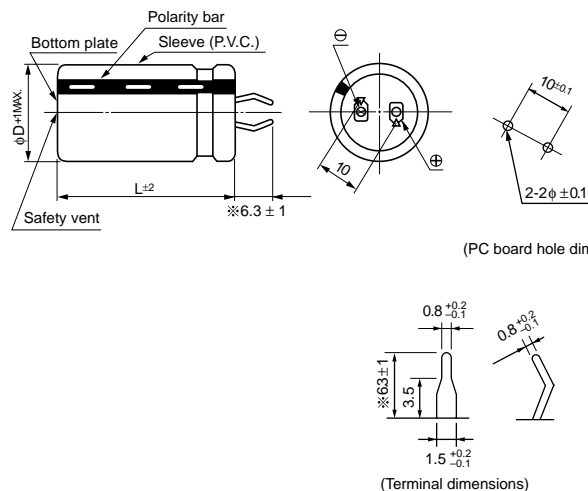
- Rated capacitances available based on the numerical values in E-12 series. (Size : $\phi 22 \sim \phi 35$)



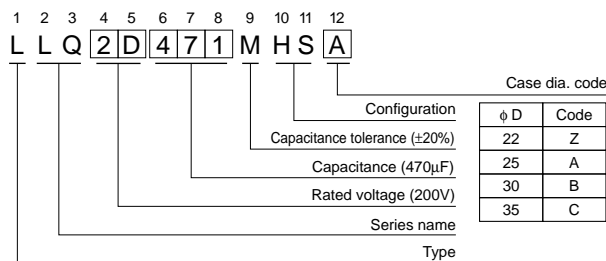
Specifications

Item	Performance Characteristics																											
Operating Temperature Range	—40 ~ +85°C (16 ~ 250V), —25 ~ +85°C (400 ~ 450V)																											
Voltage Range	16 ~ 450V																											
Capacitance Range	56 ~ 56000 μ F																											
Capacitance Tolerance	$\pm 20\%$ at 120Hz, 20°C																											
Leakage Current	$I \leq 3\sqrt{CV}$ (μ A) (After 5 minutes' application of rated voltage) [C: Capacitance(μ F), V: Voltage(V)]																											
tan δ	Measurement frequency : 120Hz, Temperature : 20°C																											
	<table border="1"> <tr> <th>Rated voltage(V)</th> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>160</td> <td>180</td> <td>200</td> <td>250</td> <td>400</td> <td>450</td> </tr> <tr> <th>tan δ (MAX.)</th> <td>0.50</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.20</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> </tr> </table>	Rated voltage(V)	16	25	35	50	63	80	100	160	180	200	250	400	450	tan δ (MAX.)	0.50	0.40	0.35	0.30	0.25	0.20	0.20	0.15	0.15	0.15	0.15	0.20
Rated voltage(V)	16	25	35	50	63	80	100	160	180	200	250	400	450															
tan δ (MAX.)	0.50	0.40	0.35	0.30	0.25	0.20	0.20	0.15	0.15	0.15	0.15	0.20	0.20															
Stability at Low Temperature	Measurement frequency : 120Hz																											
	Rated voltage(V)	16 ~ 100	160 ~ 250	400 ~ 450																								
	Impedance ratio ZT/Z20(MAX.)	Z—25°C/Z + 20°C Z—40°C/Z + 20°C	4 15	3 12	8 —																							
Load Life	After an application of DC voltage (in the range of rated DC voltage even after over-lapping the specified ripple current) for 2000 hours at 85°C, capacitors shall meet the characteristics requirements indicated at right.	Capacitance change	Within $\pm 20\%$ of initial value																									
		tan δ	200% or less of initial specified value																									
		Leakage current	Initial specified value or less																									
Shelf Life	After leaving capacitors under no load at 85°C for 1000 hours, they meet the requirements listed at right.	Capacitance change	Within $\pm 15\%$ of initial value																									
		tan δ	150% or less of initial specified value																									
		Leakage current	Initial specified value or less																									
Marking	Printed with white color letter on black sleeve.																											
Applicable Standards	JIS C 5141 and JIS C 5102.																											

Drawing



Type numbering system (Example : 200V 470 μ F)



※ Shorter terminal (4.0 ± 0.5) is also available upon request.
Please refer to page 153 (LU series) for schematic of dimensions.

Frequency coefficient of allowable ripple current

Frequency(Hz)	50	60	120	1 k	10k ~	
Coeff.	16 ~ 100V	0.88	0.90	1.00	1.15	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

Minimum order quantity : 50pcs.

Dimension table in next pages.



■ Dimensions

D×L(mm)

Cap.(μF)	V(Code) φD Code	16V(1C)				25V(1E)				35V(1V)				50V(1H)			
		22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
3300	332													22×30	25×25		
														2.35	2.35		
3900	392									22×25				22×35	25×30		
										2.16				2.66	2.68		
4700	472									22×30	25×25			22×40	25×35	30×25	35×25
										2.42	2.42			3.02	3.07	2.98	3.30
5600	562					22×25				22×35				22×45	25×40	30×30	
						2.11				2.66				3.40	3.47	3.42	
6800	682					22×30	25×25			22×40	25×30	30×25		22×50	25×40	30×35	
						2.47	2.47			2.97	2.82	2.93		3.84	3.74	3.93	
8200	822	22×25				22×35				22×45	25×35			25×50	30×40	35×30	
		2.55				2.86				3.29	3.17			4.44	4.47	4.36	
10000	103	22×30				22×40	25×30	30×25		22×50	25×40	30×30				30×45	35×35
		2.89				3.31	3.15	3.27		3.75	3.65	3.60				5.08	5.01
12000	123	22×30	25×25			22×45	25×35	30×30			25×45	30×35	35×30			30×50	35×40
		3.01	3.01			3.77	3.63	3.80			4.15	4.14	4.27			5.72	5.69
15000	153	22×35	25×30	30×25		22×50	25×40					30×40	35×35				35×45
		3.45	3.48	3.61		4.21	4.10					4.77	4.95				6.56
18000	183	22×40	25×35				25×45	30×35	35×30			30×45	35×40				35×50
		3.84	3.91				4.53	4.52	4.66			5.30	5.52				7.14
22000	223	22×50	25×40	30×30				30×45	35×35				35×45				
		4.52	4.40	4.34				5.33	5.26				6.20				
27000	273		25×45	30×35				30×50	35×40				35×50				
			4.96	4.95				5.96	5.93				6.89				
33000	333			30×40	35×30				35×45								
				5.60	5.46				6.65								
39000	393			30×45	35×35				35×50								
				6.21	6.12				7.31								
47000	473			30×50	35×40												
				6.93	6.89												
56000	563				35×45												
					7.69												

Cap.(μF)	V(Code) φD Code	63V(1J)				80V(1K)				100V(2A)			
		22	25	30	35	22	25	30	35	22	25	30	35
1200	122					22×25				22×30	25×25		
						1.66				2.11	2.11		
1500	152					22×30				22×35	25×30	30×25	
						1.96				2.45	2.47	2.56	
1800	182	22×25				22×30	25×25			22×40	25×35		
		1.82				2.11	2.11			2.77	2.81		
2200	222	22×30	25×25			22×35	25×30	30×25		22×45	25×40	30×30	
		2.14	2.14			2.44	2.46	2.56		3.15	3.21	3.17	
2700	272	22×35	25×30			22×40	25×35			25×45	30×35	35×30	
		2.49	2.52			2.82	2.86			3.66	3.65	3.77	
3300	332	22×35	25×30	30×25		22×45	25×40	30×30		25×50	30×40		
		2.72	2.74	2.84		3.23	3.29	3.25		4.15	4.18		
3900	392	22×40	25×35			22×50	25×45	30×35			30×45	35×35	
		3.09	3.13			3.62	3.71	3.70			4.67	4.61	
4700	472	22×50	25×40	30×30	35×25		25×50	30×40	35×30		30×50	35×40	
		3.69	3.59	3.54	3.25		4.20	4.23	4.12		5.26	5.23	
5600	562		25×45	30×35				30×45	35×35			35×45	
			4.01	4.00				4.70	4.64			5.88	
6800	682		25×50	30×40	35×30			30×50	35×40				
			4.52	4.55	4.44			5.27	5.24				
8200	822			30×45	35×35				35×45				
				5.12	5.05				5.89				
10000	103			30×50	35×40				35×50				
				5.78	5.75				6.63				
12000	123				35×45								Case size
					6.47								Allowable ripple

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



■ Dimensions

D×L(mm)

V(Code)		160V(2C)				180V(2Z)				200V(2D)				250V(2E)			
Cap.(μF)	Code	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35
220	221													22×25			
														1.15			
270	271									22×25				22×30	25×25		
										1.25				1.25	1.25		
330	331					22×25				22×30				22×35	25×30		
						1.35				1.40				1.45	1.45		
390	391	22×25				22×30				22×30	25×25			22×40	25×30	30×25	
		1.55				1.55				1.60	1.60			1.70	1.70	1.70	
470	471	22×30	25×25			22×35	25×25			22×35	25×30			22×45	25×35	30×30	
		1.75	1.75			1.75	1.75			1.80	1.80			1.90	1.90	1.90	
560	561	22×35	25×30			22×40	25×30			22×40	25×35	30×25		22×50	25×40	30×30	35×25
		1.90	1.90			2.00	2.00			2.00	2.00	2.00		2.15	2.15	2.15	2.15
680	681	22×40	25×30	30×25		22×45	25×35	30×25		22×45	25×40	30×30			25×45	30×35	35×30
		2.15	2.15	2.15		2.25	2.25	2.25		2.30	2.25	2.30			2.35	2.35	2.35
820	821	22×45	25×35	30×30		22×50	25×40	30×30	35×25	22×50	25×45	30×35	35×30			30×40	35×35
		2.45	2.45	2.45		2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50			2.75	2.75
1000	102	22×50	25×40	30×30	35×25		25×45	30×35	35×30			30×40	35×30			30×45	35×40
		2.80	2.80	2.80	2.80		2.85	2.85	2.85			2.95	2.95			3.00	3.00
1200	122		25×45	30×35	35×30		25×50	30×40	35×30			30×45	35×35				35×45
			3.25	3.25	3.25		3.30	3.30	3.30			3.40	3.40				3.50
1500	152			30×40	35×35			30×45	35×35			30×50	35×40				35×50
				3.75	3.75			3.75	3.75			3.80	3.80				4.00
1800	182			30×50	35×40				35×45				35×45				
				4.00	4.00				4.05				4.15				
2200	222				35×45				35×50				35×50				
					4.50				4.60				4.70				
2700	272				35×50												
					5.15												

V(Code)		400V(2G)				450V(2W)			
Cap.(μF)	Code	22	25	30	35	22	25	30	35
56	560					22×25			
						0.59			
68	680					22×30			
						0.63			
82	820	22×25				22×30	25×25		
		0.72				0.78	0.78		
100	101	22×30				22×35	25×30		
		0.77				0.92	0.92		
120	121	22×30	25×25			22×40	25×35	30×25	
		0.94	0.94			1.06	1.08	1.05	
150	151	22×35	25×30			22×50	25×40	30×30	
		1.13	0.92			1.28	1.25	1.23	
180	181	22×40	25×35	30×25		25×45	30×40		
		1.27	1.06	1.26		1.41	1.48		
220	221	22×45	25×40	30×30	35×25	25×50	30×40	35×30	
		1.45	1.22	1.46	1.50	1.59	1.60	1.57	
270	271		25×45	30×35	35×30		30×45	35×35	
			1.69	1.68	1.46		1.83	1.80	
330	331		25×50	30×40	35×30		30×50	35×40	
			1.92	1.93	1.88		2.08	2.06	
390	391			30×45	35×35			35×45	
				2.16	2.13			2.31	
470	471			30×50	35×40			35×50	
				2.43	2.42			2.47	
560	561				35×45				
					2.72				
680	681				35×50				
					3.08				

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