ALUMINUM ELECTROLYTIC CAPACITORS

LQ High temperature and long life Series

■ Features : 105℃ 5000 hours , Wide temperature range for LF , Longer life than HW, Snap-in terminal, High ripple current

■ Recommended Applications: Smoothing circuit, TV/Monitor,Adapter, SMPS

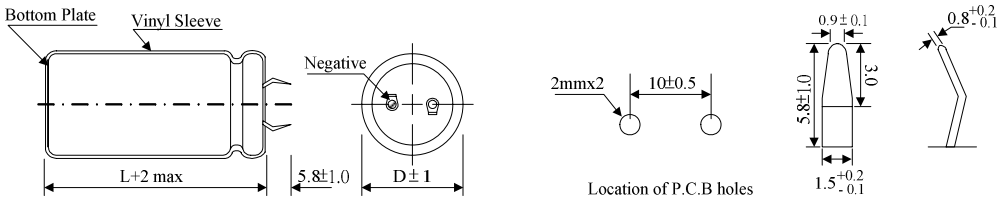
■ Corresponding product to RoHS

LQ
↑
LJ
Long Life

■ Specifications

Item	Characteristics
Operating Temperature Range	-25 ~ +105℃
Rated Voltage Range	160 ~ 450VDC
Capacitance Range	56 ~ 2200μF
Capacitance Tolerance	± 20 % at 120Hz , 20℃
Leakage Current (MAX) (20℃)	I≦0.02CV or 3mA whichever is smaller(After rated voltage applied for 5 minutes) I= Leakage Current (μA) C = Nominal Capacitance (μF) V= Rated Voltage (V)
Dissipation Factor (MAX) (tan δ) (120Hz ,20℃)	Dissipation Factor(tan δ)shall not exceed the values showed in the table of standard rating
Endurance	After applying rated voltage with rated Ripple current for 5000hrs at 105℃, the capacitor shall meet the following requirement. Capacitance Change: Within±20% of the initial value Dissipation Factor: Not more than 200% of the specified value Leakage Current: Not more than the specified value
Shelf Life	After placed at 105℃without voltage applied for 1000 hours, the capacitor shall meet the same requirements as Endurance.

■ Diagram of Dimensions



■ Multiplier for Ripple Current

Frequency coefficient

Freq. (Hz)	50	60	120	400	1K	2.4K	5K	10K
Coefficient	0.8	0.85	1.0	1.14	1.23	1.3	1.36	1.4

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■Dimensions,Max Dissipation Factor,Max Permissible Ripple Current,Max Equivalent Series Resistance

Capacitance (μF)	Rated (Surge) Voltage											
	160(200)						180(225)					
	φ DxL				tan δ	ESR	φ DxL				tan δ	ESR
	Ripple Current						Ripple Current					
270	22x25				0.15	0.737	22x25				0.15	0.737
	0.85						0.85					
330	22x30				0.15	0.603	22x30				0.15	0.603
	1.00						1.10					
390	22x30	25x25			0.15	0.51	22x35	25x25			0.15	0.51
	1.15	1.15					1.32	1.25				
470	22x35	25x30			0.15	0.423	22x40	25x30			0.15	0.423
	1.30	1.30					1.47	1.40				
560	22x40	25x30	30x25		0.15	0.355	22x45	25x35	30x25		0.15	0.355
	1.57	1.50	1.54				1.70	1.63	1.60			
680	22x45	25x35	30x30		0.15	0.293	22x50	25x40	30x30	35x25	0.15	0.293
	1.75	1.70	1.77				1.87	1.82	1.80	1.84		
820	22x50	25x40	30x30	35x25	0.15	0.243		25x45	30x35	35x30	0.15	0.243
	2.03	1.97	1.95	1.99				2.05	2.05	2.11		
1000		25x45	30x35	35x30	0.15	0.199		25x50	30x40	35x30	0.15	0.199
		2.15	2.15	2.21				2.27	2.29	2.25		
1200			30x40	35x35	0.15	0.166			30x45	35x35	0.15	0.166
			2.45	2.52					2.57	2.55		
1500			30x50	35x40	0.15	0.133				35x40	0.15	0.133
			2.75	2.75						2.85		
1800				35x45	0.15	0.111				35x50	0.15	0.111
				3.00						3.10		
2200				35x50	0.15	0.09						
				3.50								

Capacitance (μF)	Rated (Surge) Voltage											
	200(250)						250(300)					
	φ DxL				tan δ	ESR	φ DxL				tan δ	ESR
	Ripple Current						Ripple Current					
150							22x25				0.15	1.330
							0.75					
180							22x30				0.15	1.110
							0.85					
220	22x25				0.15	0.905	22x30	25x25			0.15	0.905
	0.85						1.00	1.00				
270	22x30				0.15	0.737	22x35	25x25			0.15	0.737
	1.00						1.22	1.15				
330	22x30	25x25			0.15	0.603	22x40	25x30			0.15	0.603
	1.15	1.15					1.36	1.30				
390	22x35	25x30			0.15	0.510	22x45	25x35	30x25	35x25	0.15	0.510
	1.30	1.30					1.54	1.48	1.45	1.59		
470	22x40	25x35	30x25		0.15	0.423	22x50	25x40	30x30	35x30	0.15	0.423
	1.52	1.54	1.49				1.78	1.75	1.72	1.88		
560	22x45	25x35	30x30		0.15	0.355		25x40	30x35	35x30	0.15	0.355
	1.7	1.65	1.72					1.80	1.89	1.94		
680		25x45	30x35	35x30	0.15	0.293		25x50	30x40	35x35	0.15	0.293
		1.97	1.97	2.02				2.10	2.10	2.18		
820		25x45	30x35	35x30	0.15	0.243			30x45	35x40	0.15	0.243
		2.20	2.10	2.16					2.30	2.39		
1000			30x45	35x35	0.15	0.199			30x50	35x45	0.15	0.199
			2.32	2.30					2.55	2.65		
1200			30x50	35x40	0.15	0.166				35x50	0.15	0.166
			2.75	2.75						2.90		
1500				35x45	0.15	0.133						
				2.90								

☆Size:D φ x L(mm). ☆tan δ :20℃,120Hz. ☆Ripple Current: 105℃,120Hz,(A/rms) ☆ESR:20℃,120Hz,(Ω).

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Series

■Dimensions,Max Dissipation Factor,Max Permissible Ripple Current,Max Equivalent Series Resistance

Capacitance (μF)	Rated (Surge) Voltage											
	315(365)						350(400)					
	φ DxL				tan δ	ESR	φ DxL				tan δ	ESR
	Ripple Current						Ripple Current					
82	22x25				0.15	2.426	22x25				0.15	2.426
	0.55						0.60					
100	22x30				0.15	1.989	22x30	25x25			0.15	1.989
	0.65						0.70	0.70				
120	22x30	25x25			0.15	1.658	22x35	25x30			0.15	1.658
	0.75	0.75					0.80	0.80				
150	22x35	25x30			0.15	1.326	22x40	25x35	30x25		0.15	1.326
	0.8	0.80					0.86	0.87	0.85			
180	22x40	25x35	30x25		0.15	1.105	22x45	25x40	30x30		0.15	1.105
	1.01	1.02	1.00				1.05	1.07	1.05			
220	22x45	25x40	30x30		0.15	0.905	22x50	25x45	30x35	35x25	0.15	0.905
	1.10	1.12	1.10				1.16	1.20	1.18	1.15		
270		25x45	30x35		0.15	0.737		25x50	30x40	35x30	0.15	0.737
		1.25	1.25					1.31	1.33	1.3		
330		25x50	30x40	35x30	0.15	0.603			30x45	35x35	0.15	0.603
		1.53	1.53	1.50					1.46	1.45		
390			30x45	35x30	0.15	0.510			30x50	35x40	0.15	0.510
			1.71	1.60					1.65	1.65		
470			30x50	35x35	0.15	0.423				35x45	0.15	0.423
			1.85	1.75						1.85		
560				35x40	0.15	0.355				35x50	0.15	0.355
				2.00						2.10		
680				35x45	0.15	0.293						
				2.20								

Capacitance (μF)	Rated (Surge) Voltage											
	400(450)						450(500)					
	φ DxL				tan δ	ESR	φ DxL				tan δ	ESR
	Ripple Current						Ripple Current					
56							22x25				0.25	5.921
							0.55					
68	22x25				0.15	2.926	22x30				0.25	4.876
	0.55						0.65					
82	22x30	25x25			0.15	2.426	22x35	25x25			0.25	4.044
	0.65	0.65					0.80	0.75				
100	22x35	25x25			0.15	1.989	22x40	25x30			0.25	3.316
	0.79	0.75					0.89	0.85				
120	22x40	25x30	30x25		0.15	1.658	22x45	25x35	30x25		0.25	2.763
	0.89	0.85	0.87				0.95	0.92	0.90			
150	22x45	25x35	30x30	35x25	0.15	1.326	22x50	25x40	30x30		0.25	2.210
	0.93	0.90	0.94	0.96			1.14	1.11	1.10			
180	22x50	25x40	30x30	35x25	0.15	1.105		25x45	30x35	35x25	0.25	1.842
	1.14	1.11	1.10	1.12				1.25	1.24	1.20		
220		25x45	30x35	35x30	0.15	0.905		25x50	30x40	35x30	0.25	1.507
		1.20	1.20	1.24				1.36	1.38	1.35		
270		25x50	30x40	35x30	0.15	0.737			30x45	35x35	0.25	1.228
		1.36	1.38	1.35					1.51	1.50		
330			30x45	35x35	0.15	0.603			30x50	35x40	0.25	1.005
			1.51	1.50					1.70	1.70		
390			30x50	35x40	0.15	0.510				35x45	0.25	0.850
			1.70	1.70						1.90		
470				35x45	0.15	0.423				35x50	0.25	0.705
				1.90						2.10		

☆Size:D φ x L(mm). ☆tan δ :20℃,120Hz. ☆Ripple Current: 105℃,120Hz,(A/rms) ☆ESR:20℃,120Hz,(Ω).