

ALUMINUM ELECTROLYTIC CAPACITORS

>LJ Series High temperature and long life

- Features : 105°C 3000 hours , Wide temperature range for LF , Longer life than LG, Snap-in terminal, High ripple current
- Recommended Applications: Smoothing circuit, TV/Monitor, Adapter, SMPS
- Corresponding product to RoHS



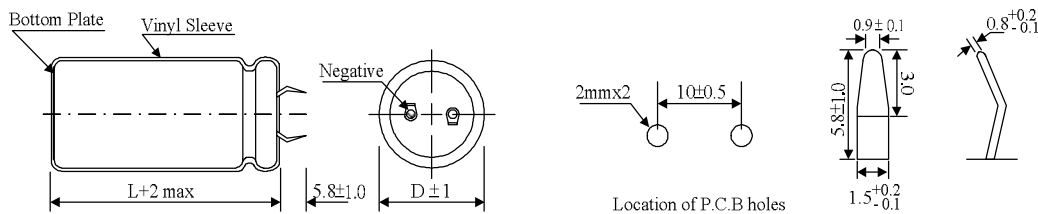
Long Life



Specifications

Item	Characteristics	
Operating Temperature Range	-40 ~ +105°C	-25 ~ +105°C
Rated Voltage Range	10 ~ 100VDC	160 ~ 450VDC
Capacitance Range	560 ~ 68000μF	56 ~ 2200μF
Capacitance Tolerance	± 20 % at 120Hz , 20°C	
Leakage Current (MAX) (20°C)	$I \leq 0.02CV$ 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°C)	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 3000hrs at 105°C , 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°C 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											
	10(13)					16(20)						
	φ DxL				tan δ	ESR	φ DxL				tan δ	ESR
Ripple Current				Ripple Current								
6800							22x25				0.55R	0.107
							1.80					
8200							22x30	25x25			0.55	0.089
							2.05	2.05				
10000	22x25				0.55	0.073	22x35	25x30			0.55	0.073
	1.80						2.45	2.45				
12000	22x30	25x25			0.55	0.061	22x40	25x30	30x25		0.55	0.061
	2.05	2.05					2.73	2.60	2.68			
15000	22x35	25x30	30x25		0.55	0.049	22x45	25x35	30x30		0.55	0.049
	2.45	2.45	2.55				2.99	2.90	3.02			
18000	22x40	25x30	30x30		0.55	0.041	22x50	25x40	30x30	35x25	0.55	0.041
	2.94	2.80	3.11				3.43	3.33	3.30	3.37		
22000	22x45	25x35	30x30	35x25	0.55	0.033		25x45	30x35	35x30	0.55	0.033
	3.24	3.15	3.28	3.37				3.70	3.70	3.81		
27000		25x40	30x35	35x30	0.55	0.027			30x40	35x35	0.55	0.027
		3.5	3.67	3.78				4.15	4.27			
33000		25x45	30x40	35x30	0.55	0.022			30x50	35x40	0.55	0.022
		4.00	4.20	4.08				4.65	4.65			
39000		25x50	30x45	35x35	0.55	0.019				35x45	0.55	0.019
		4.45	4.67	4.63					5.25			
47000				35x40	0.55	0.016				35x50	0.55	0.016
				4.90				5.80				
56000				35x45	0.55	0.013						
				5.50								
68000				35x50	0.55	0.011						
				6.05								

Capacitance (μF)	Rated (Surge) Voltage											
	25(32)					35(44)						
	φ DxL				tan δ	ESR	φ DxL				tan δ	ESR
Ripple Current				Ripple Current								
2700							22x25				0.40	0.196
							1.45					
3300							22x30				0.40	0.161
							1.60					
3900	22x25				0.45	0.153	22x30				0.40	0.136
	1.50						1.80					
4700	22x30				0.45	0.127	22x35	25x25			0.40	0.113
	1.80						2.23	2.10				
5600	22x30	25x25			0.45	0.107	22x40	25x30	30x25		0.40	0.095
	1.95	1.95					2.41	2.30	2.37			
6800	22x35	25x30			0.45	0.088	22x45	25x35	30x30		0.40	0.078
	2.20	2.20					2.68	2.60	2.70			
8200	22x40	25x35	30x25		0.45	0.073	22x50	25x40	30x30	35x25	0.40	0.065
	2.47	2.50	2.45				3.02	2.93	2.90	2.96		
10000	22x45	25x40	30x30		0.45	0.060		25x45	30x35	35x30	0.40	0.0531
	2.75	2.80	2.75					3.20	3.20	3.30		
12000	22x50	25x45	30x35	35x25	0.45	0.050		25x50	30x40	35x30	0.40	0.044
	3.13	3.22	3.19	3.10				3.64	3.67	3.6		
15000		25x50	30x40	35x30	0.45	0.040			30x45	35x35	0.40	0.035
		3.43	3.47	3.40				4.04	4.00			
18000			30x45	35x35	0.45	0.033				35x40	0.40	0.029
			3.94	3.90					4.60			
22000			30x50	35x40	0.45	0.027				35x50	0.40	0.024
			4.30	4.30					5.10			
27000				35x45	0.45	0.022						
				4.85								

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

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

Capacitance (μF)	Rated (Surge) Voltage												
	50(63)					63(79)							
	φ DxL				tan δ	ESR	φ DxL			tan δ	ESR		
	Ripple Current						Ripple Current						
1200							22x25					0.30	0.332
							1.25						
1500	22x25				0.35	0.309	22x30	25x25				0.30	0.265
	1.25						1.45	1.45					
1800	22x30				0.35	0.258	22x35	25x30				0.30	0.221
	1.45						1.6	1.6					
2200	22x30	25x25			0.35	0.211	22x40	25x30	30x25			0.30	0.181
	1.6	1.6					1.89	1.8	1.85				
2700	22x35	25x30			0.35	0.172	22x45	25x35	30x30			0.30	0.147
	1.8	1.8					2.06	2	2.08				
3300	22x40	25x30	30x25		0.35	0.141		25x40	30x30	35x25		0.30	0.121
	2.05	1.95	2.01					2.32	2.3	2.35			
3900	22x45	25x35	30x30		0.35	0.119		25x45	30x35	35x30		0.30	0.102
	2.27	2.2	2.29					2.55	2.55	2.63			
4700	22x50	25x40	30x30	35x25	0.35	0.099		25x50	30x40	35x30		0.30	0.085
	2.5	2.42	2.4	2.45				2.83	2.86	2.8			
5600		25x45	30x35	35x30	0.35	0.083			30x45	35x35		0.30	0.071
		2.7	2.7	2.78					3.18	3.15			
6800			30x40	35x30	0.35	0.068			30x50	35x40		0.30	0.059
			3.06	3					3.5	3.5			
8200			30x45	35x35	0.35	0.057				35x45		0.30	0.049
			3.38	3.35						3.9			
10000				35x40	0.35	0.046							
				3.7									
12000				35x50	0.35	0.039							
				4.20									

Capacitance (μF)	Rated (Surge) Voltage												
	80(100)					100(125)							
	φ DxL				tan δ	ESR	φ DxL			tan δ	ESR		
	Ripple Current						Ripple Current						
560							22x25					0.25	0.592
							1.20						
680							22x30					0.25	0.488
							1.35						
820	22x25				0.25	0.404	22x30	25x25				0.25	0.404
	1.20						1.50	1.50					
1000	22x30				0.25	0.332	22x35	25x30				0.25	0.332
	1.35						1.70	1.70					
1200	22x35	25x25			0.25	0.276	22x40	25x35	30x25			0.25	0.276
	1.59	1.50					1.97	1.99	1.95				
1500	22x40	25x30	30x25		0.25	0.221	22x45	25x40	30x30	35x25		0.25	0.221
	1.78	1.70	1.75				2.15	2.19	2.15	2.21			
1800	22x45	25x35	30x30		0.25	0.184		25x45	30x35	35x30		0.25	0.184
	2.01	1.95	2.03					2.45	2.45	2.52			
2200		25x40	30x30	35x25	0.25	0.151		25x50	30x40	35x35		0.25	0.151
		2.17	2.15	2.19				2.75	2.75	2.86			
2700		25x45	30x35	35x30	0.25	0.123			30x45	35x35		0.25	0.123
		2.45	2.45	2.52					3.08	3.05			
3300			30x40	35x35	0.25	0.100			30x50	35x40		0.25	0.100
			2.75	2.83					3.45	3.45			
3900			30x45	35x35	0.25	0.085				35x45		0.25	0.085
			3.13	3.10						3.90			
4700				35x40	0.25	0.071				35x50		0.25	0.071
				3.40						4.30			
5600				35x50	0.25	0.059							
				3.80									

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

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

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

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

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

Capacitance (μF)	Rated (Surge) Voltage											
	315(365)						350(400)					
	ϕ DxL				$\tan \delta$	ESR	ϕ DxL				$\tan \delta$	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				$\tan \delta$	ESR	ϕ DxL				$\tan \delta$	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). ☆ $\tan \delta$: 20°C, 120Hz. ☆Ripple Current: 105°C, 120Hz, (A/rms) ☆ESR: 20°C, 120Hz, (Ω)