

# ALUMINUM ELECTROLYTIC CAPACITORS

## LH General Purpose Series

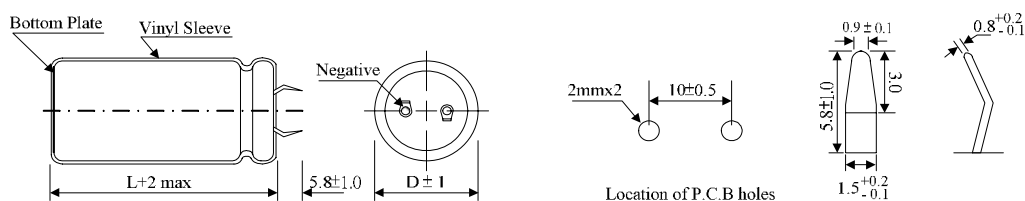
- Endurance : 85°C 2000 hours
- Ideally suitable for using in Switching Power Supplies and other industrial /commercial applications
- Corresponding product to RoHS



### Specifications

Item	Characteristics							
Operating Temperature Range	-40~+85°C	-25~+85°C						
Rated Voltage Range	6.3 ~ 100VDC	160 ~ 500VDC						
Capacitance Range	820 ~ 120000 μF	47 ~ 2200 μF						
Capacitance Tolerance	± 20 % at 120Hz , 20°C							
Leakage Current (MAX)	I=0.02CV or 3(mA) , whichever is smaller. (After 5 minutes application of rated voltage at 20 °C)							
Dissipation Factor (MAX) (tan δ) (120Hz ,20°C)	Rated voltage(V)	6.3    10    16    25    35    50    63~100    160~400    420~500						
	tan δ	0.60    0.55    0.55    0.45    0.35    0.30    0.25    0.15    0.20						
Low Temperature Stability Impedance Ratio (MAX)	Measurement frequency : 120Hz							
	Rated voltage(V)	6.3~16	25	35	50~63	80~100	160~400	420-500
	Z-25°C / Z+20°C	3	3	3	2	2	4	8
	Z-40°C / Z+20°C	12	10	8	6	5		
Endurance	After applying rated voltage with rated Ripple current for 2000hrs at 85 °C , the capacitor shall meet the following requirements.							
	Capacitance Change	Within ± 20 % of initial value						
	Dissipation Factor	Not more than 200% of the specified value						
	Leakage Current	initial specified value or less						
Shelf Life	After placed at 85°C without voltage applied for 1000 hours, the capacitor shall meet the same requirement as Endurance.							

### Diagram of Dimensions



### Multiplier for Ripple Current

Frequency coefficient

Frequency (Hz)	50	60	120	1K	10K
6.3~100V	0.88	0.90	1.00	1.15	1.16
160~250V	0.75	0.78	1.00	1.30	1.50
350~450V	0.74	0.76	1.00	1.35	1.45
500V	0.72	0.74	1.00	1.20	1.30

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# LH

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## ■ Dimensions, Rated Ripple Current

Capacitance ( $\mu$ F)	Rated (Surge) Voltage							
	6.3 (8)		10 (13)		16 (20)		25 (32)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
5600							22x25	2.20
6800							22x30	2.40
							25x25	2.45
8200					22x25	2.60	22x35	2.70
							25x25	2.75
10000					22x30	2.70	22x40	3.10
					25x25	2.75	25x30	3.15
							30x25	3.20
12000			22x25	2.40	22x30	2.90	22x45	3.50
					25x25	2.95	25x35	3.45
							30x30	3.50
							35x25	3.55
15000	22x25	2.44	22x30	2.75	22x35	3.30	22x50	4.00
			25x25	2.75	25x30	3.45	25x40	3.95
					30x25	3.50	30x35	4.00
							35x30	4.05
18000	22x30	2.60	22x35	3.15	22x40	3.70	25x45	4.45
	25x25	2.62	25x25	3.05	25x35	3.75	30x35	4.45
					30x30	3.80	35x30	4.60
22000	22x30	3.06	22x40	3.55	22x50	4.35	30x40	5.20
	25x25	3.07	25x30	3.50	25x40	4.30	35x35	5.15
			30x25	3.55	30x30	4.25	30x45	5.95
					35x25	4.20	35x40	5.90
27000	22x35	3.49	22x45	4.05	25x45	4.70		
	25x30	3.52	25x35	4.00	30x35	4.65	30x50	6.70
	30x25	3.57	30x30	4.05	35x30	4.65	35x45	6.75
33000	22x40	3.97	22x50	4.60	30x40	5.35		
	25x35	4.02	25x40	4.55	35x30	5.40		
	30x30	4.05	30x30	4.50			35x50	7.55
	35x25	4.10	35x25	4.50				
39000	22x50	4.56	25x45	5.10	30x45	6.00	35x45	7.56
	25x40	4.50	30x35	5.05	35x35	5.95		
	30x30	4.46	35x30	5.05				
	35x25	4.51						
47000	25x45	5.09	25x50	5.75	30x50	6.80	35x50	8.30
	30x35	5.06	30x40	5.70	35x40	6.75		
	35x30	5.03	35x30	5.65				
56000	25x50	5.71	30x45	6.45	35x45	7.60		
	30x40	5.70	35x35	6.40				
	35x30	5.75						
68000	30x45	6.48	30x50	7.05	35x50	8.00		
	35x35	6.42	35x40	7.10				
82000	30x50	7.32	35x50	7.50	35x60	8.50		
	35x40	7.29						
100000	35x45	8.31						
120000	35x50	8.60						

☆ Size: D  $\phi$  x L (mm)      ☆ Ripple Current : A/rms. 85°C, 120Hz

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**General Purpose Series**

## ■ Dimensions, Rated Ripple Current

Capacitance ( $\mu\text{F}$ )	Rated (Surge) Voltage							
	35 (44)		50 (63)		63 (79)		80 (100)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
1200							22x25	1.65
1500							22x30	1.90
							25x25	1.90
1800					22x25	1.85	22x35	2.20
							25x30	2.20
							30x25	2.20
2200			22x25	1.90	22x30	2.30	22x40	2.45
					25x25	2.30	25x30	2.45
							30x25	2.50
2700			22x30	2.10	22x35	2.45	22x45	2.80
			25x25	2.20	25x30	2.45	25x35	2.80
					30x25	2.50	30x30	2.85
3300							35x25	2.85
			22x30	2.35	22x40	2.60	22x50	3.15
			25x25	2.35	25x30	2.65	25x40	3.20
					30x25	2.70	30x30	3.20
3900							35x25	3.20
	22x25	2.20	22x35	2.65	22x45	2.95	25x45	3.60
			25x30	2.65	25x35	2.95	30x35	3.60
			30x25	2.65	30x30	3.00	35x30	3.60
4700	22x30	2.40	22x40	3.00	22x50	3.40	25x50	4.05
	25x25	2.40	25x35	3.00	25x40	3.35	30x40	4.05
			30x25	2.95	30x30	3.35	35x35	4.10
					35x25	3.40		
5600	22x35	2.75	22x45	3.35	25x45	3.70	30x45	4.55
	25x25	2.75	25x40	3.35	30x35	3.75	35x35	4.50
			30x30	3.35	35x30	3.75		
			35x25	3.40				
6800	22x40	2.85	22x50	3.80	30x40	4.25	30x50	5.15
	25x30	2.85	25x40	3.80	35x30	4.20	35x40	5.15
	30x25	2.90	30x30	3.80				
			30x35	3.85				
8200			35x30	3.85				
	22x45	3.15	25x50	4.35	30x45	4.80	35x45	5.85
	25x35	3.10	30x40	4.35	35x35	4.80		
	30x30	3.15	35x30	4.40				
10000	22x50	3.55	30x45	5.00	30x50	5.50	35x50	6.60
	25x40	3.50	35x35	4.95	35x40	5.45		
	30x30	3.45						
	35x25	3.40						
12000	25x45	3.95	30x50	5.60	35x45	6.20		
	30x35	4.00	35x40	5.55				
	35x30	4.05						
15000								
	25x50	4.95	35x45	6.45				
	30x40	4.95						
18000	35x35	5.00						
	30x45	5.50	35x50	6.70				
22000	35x40	5.55						
	30x50	6.00						
27000	35x45	6.05						
	35x50	6.90						

☆ Size:  $D \phi \times L$  (mm) ☆ Ripple Current : A/rms. 85°C, 120Hz

# ALUMINUM ELECTROLYTIC CAPACITORS



**General Purpose Series**

## ■ Dimensions, Rated Ripple Current

Capacitance (μF)	Rated (Surge) Voltage							
	100 (125)		160 (200)		180 (225)		200 (250)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
180					22x20	1.00	22x25	0.95
220					22x25	1.10	22x25	1.10
270			22x25	1.15	22x25	1.25	22x25	1.25
					25x20	1.25	22x30	1.25
330			22x25	1.40	22x25	1.40	22x25	1.45
			25x20	1.35	22x30	1.40	22x30	1.45
					25x25	1.40	25x25	1.45
390			22x30	1.55	22x30	1.60	22x30	1.60
			25x25	1.55	25x25	1.60	25x25	1.55
			30x25	1.50				
470			22x30	1.75	22x35	1.80	22x35	1.80
			25x25	1.75	25x30	1.80	25x30	1.80
			30x25	1.70	30x25	1.80	30x25	1.80
560			22x30	1.95	22x35	2.00	22x40	2.00
			25x30	1.95	22x40	2.00	25x35	2.00
			30x25	1.90	25x30	1.95	30x25	2.00
					30x25	2.00		
680			22x40	2.20	22x45	2.25	22x45	2.35
			25x30	2.20	25x35	2.20	25x35	2.30
			30x25	2.15	30x30	2.20	30x30	2.30
					35x25	2.20	35x25	2.30
820	22x25	1.85	22x45	2.50	22x50	2.55	25x40	2.60
			25x35	2.55	25x40	2.55	25x45	2.60
			30x30	2.50	30x30	2.60	30x30	2.60
			35x25	2.50	30x35	2.60	30x35	2.60
					35x25	2.60	35x30	2.60
1000	22x30	2.10	22x50	2.85	25x45	2.85	25x45	3.00
	25x25	2.10	25x40	2.80	30x35	2.85	25x50	3.00
			30x35	2.80	35x30	2.90	30x35	3.05
			35x25	2.80			30x40	3.05
							35x30	3.00
1200	22x35	2.40	25x45	3.15	30x40	3.25	25x50	3.30
	25x30	2.45	30x35	3.15	35x30	3.30	30x40	3.30
			35x30	3.20	35x35	3.30	30x45	3.30
							35x30	3.30
							35x35	3.30
1500	22x40	2.70	30x45	3.75	30x45	3.85	30x45	3.80
	25x30	2.75	35x30	3.70	35x35	3.80	30x50	3.80
	30x25	2.75	35x35	3.70	35x40	3.80	35x35	3.80
							35x40	3.80
1800	22x45	3.10	30x50	4.20	35x40	4.30	35x40	4.35
	25x35	3.15	35x40	4.20	35x45	4.30	35x45	4.35
	30x30	3.15						
	35x25	3.15						
2200	22x50	3.50	35x40	4.60	35x45	4.90	35x45	4.95
	25x40	3.55	35x45	4.80	35x50	4.90	35x50	4.95
	30x30	3.55						
	35x25	3.60						
2700	25x45	4.10	35x50	5.45				
	30x35	4.05						
	35x30	4.05						
3300	25x50	4.50						
	30x40	4.55						
	35x30	4.50						
3900	30x45	5.15						
	35x35	5.10						
4700	35x40	5.75						
5600	35x50	6.20						

☆ Size: D φ x L (mm) ☆ Ripple Current : A/rms. 85°C, 120Hz

# ALUMINUM ELECTROLYTIC CAPACITORS



**General Purpose Series**

## ■ Dimensions, Rated Ripple Cur

Capacitance ( $\mu$ F)	Rated (Surge) Voltage											
	250 (300)		350 (400)		400 (450)		420 (470)		450 (500)		500(550)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
47									22x25	0.50	25x20	0.50
56					22x20	0.55			22x25	0.65		
68			22x20	0.55	22x25	0.60			22x25	0.67		
					25x20	0.60			22x30	0.70		
82									25x25	0.70		
			22x25	0.65	22x25	0.80			22x30	0.80		
100			25x20	0.65	25x20	0.80			25x25	0.80		
			22x30	0.90	22x25	0.85			22x30	0.85	22x40	1.00
			25x20	0.90	22x30	0.90			22x35	0.95	30x25	0.90
120					25x25	0.90			25x30	0.95		
	22x20	0.78	22x30	1.00	22x30	0.95	22x30	0.95	30x25	0.95		
			25x25	1.00	22x35	1.05			22x40	1.05	30x30	1.00
					25x25	1.05			25x30	1.05	35x25	1.00
150									30x25	1.05		
	22x25	0.90	22x35	1.15	22x35	1.15	22x35	1.05	22x35	1.05	22x50	1.40
			25x30	1.15	25x30	1.15	25x30	1.05	22x45	1.20	30x35	1.20
			30x25	1.15	30x25	1.15	30x25	1.05	25x35	1.20		
180									30x30	1.20		
	22x25	1.05	22x40	1.30	22x40	1.20	22x40	1.35	25x40	1.35	30x40	1.40
	25x20	1.00	25x30	1.25	22x45	1.30			30x35	1.35	35x30	1.30
			30x25	1.25	25x35	1.30			35x25	1.35		
220					30x30	1.35						
	22x30	1.15	22x45	1.45	22x50	1.50	22x45	1.40	22x45	1.40		
	22x35	1.15	25x35	1.45	25x40	1.50	22x50	1.55	25x50	1.55	30x45	1.60
	25x25	1.15	30x30	1.45	30x30	1.50	25x40	1.50	30x40	1.55	35x35	1.50
270			35x25	1.45	35x25	1.50	25x45	1.60	35x30	1.55		
	22x30	1.30	25x40	1.65	22x50	1.60	25x40	1.50	25x50	1.55	30x50	1.80
	25x25	1.30	30x35	1.65	25x40	1.65	30x40	1.60	30x45	1.75	35x40	1.70
			35x25	1.65	30x35	1.65			35x35	1.70		
330					35x30	1.65						
	22x30	1.50	25x50	1.80	25x45	1.75	25x45	1.75	30x40	1.75		
	25x25	1.50	30x40	1.80	25x50	1.90	25x50	1.85	30x50	2.00	35x45	2.00
	30x25	1.50	35x30	1.80	30x40	1.90	30x40	1.75	35x40	2.00		
390					35x30	1.85	30x45	1.90				
	22x35	1.65	30x40	2.00	30x40	1.95	30x45	1.90	30x45	2.00	35x50	2.30
	25x35	1.65	35x30	2.00	30x45	2.15			35x45	2.25		
470	30x25	1.65			35x35	2.10						
	22x40	1.85	30x45	2.25	30x45	2.20	30x45	2.10	30x50	2.30		
	25x35	1.85	35x35	2.25	30x50	2.40	30x50	2.20	35x50	2.50		
	30x30	1.90			35x40	2.40						
560	35x25	1.90										
	22x45	2.10	35x40	2.50	30x50	2.45	30x50	2.30	35x50	2.70		
	25x40	2.10			35x45	2.70	35x45	2.30				
	30x30	2.10										
680	35x25	2.10										
	25x45	2.45	35x45	2.90	35x50	2.90			35x60	2.90		
	30x35	2.45										
820	35x25	2.45										
	30x45	2.75										
1000	35x30	2.75										
	30x45	3.30										
1200	35x35	3.30										
	35x40	3.55										
1500	35x45	4.05										

☆ Size: D  $\phi$  x L (mm) ☆ Ripple Current : A/rms. 85°C, 120Hz