Data Sheet

Customer:

Product: Aluminum Electrolytic Capacitors – ELP Series

Size : 22x25mm ~ 40x70mm

Issued Date: 5-May.-2016

Edition: Ver. 1

Record of change

Date	Ver.	Description	Page
5-May-2016	1		

HITANO ENTERPRISE CORP.

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Prepared by	Checked by	Approved by	Accepted by (customer)
5-May.-2016	5-May.-2016	5-May.-2016	
Andy Hsu	***Hwa Wu***	***Hwa Wu***	

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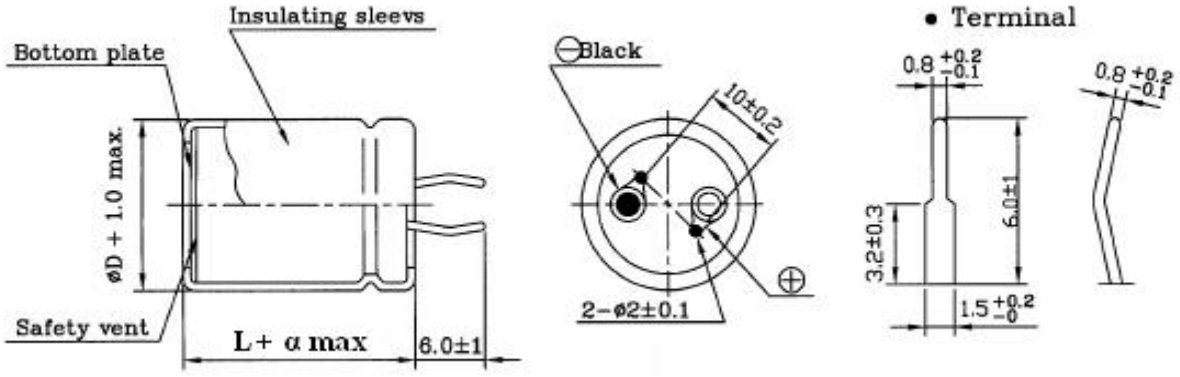
- Directly mountable on printed circuit board without holders.
- Smaller low profile sizes than ordinary capacitors.
- Terminal spacing fixed at 10mm for PC board plug in.
- Aluminum case designed explosion-proof vent.

Characteristics

Voltage Range	10 ~ 100V				160 ~ 450V		
Capacitance Range	470 ~ 68000uF				47 ~ 2700uF		
Temperature Range	-40 ~ +85℃				-25 ~ +85℃		
Capacitance Tolerance	±20% at 120Hz , 20℃(10% Tol. is available upon request)						
Leakage Current	I = $3\sqrt{CV}$ (uA) max C: Capacitance, V:W.V. (After 5 minutes)						
Dissipation Factor(tanδ) (at 20℃, 120Hz)	Less than the value under table (%)						
	uF \\ W.V.	10 ~ 16	25 ~ 35	50 ~ 63	80 ~ 100	160 ~ 250	350 ~ 450
	47 ~ 390	-	-	-	-	15	20
	470 ~ 3900	25	20	20	20	15	20
	4700 ~ 8200	35	30	30	25		
	10000 ~ 22000	40	35	30	30		
	27000 ~ 47000	45	40	35			
	56000 ~ 68000	50	45				
Low Temperature Characteristics (at 120Hz)	Impedance ratio at 120Hz between the -25℃ or -40℃ value and 20℃ value shall not exceed :						
	Rated Voltage	10 ~ 16	25	35 ~ 63	100	160 ~ 250	400 ~ 450
	Z-25℃/Z 20℃	5	4	4	4	4	8
	Z-40℃/Z 20℃	15	15	12	12	-	-
Load Life	Following specifications shall meet when the capacitors are restored to 20℃ after rated working voltage applied for 2,000 hours at max. operating temperature with the rated ripple current applied.						
	Capacitance change ≦±20% of the initial value. Dissipation factor ≦±200% of the initial specified value Leakage current ≦The initial specified value.						
Shelf Life	After storage for 1000 hours at 85℃ with no voltage applied, the capacitor shall meet the specified limit in load life. Pre-treatment for measurement shall be conducted after application of DC working voltage for 30 minutes.						

Diagram of dimensions



Multiplier for Ripple Current vs Frequency

Cap.(uF)\\ (Hz)	60	120	1K	10K	50K - 100K
10＜Cap.≦100	0.8	1	1.36	1.48	1.53
100＜Cap.≦1000	0.8	1	1.25	1.35	1.38
1000＜Cap.	0.8	1	1.17	1.25	1.28

(mm)

Dia	22 ~ 25	30 ~ 40
α	2	3

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Standard Products Table

W.V.	10								16							
Dimension	A		B		C		D		A		B		C		D	
Cap. (uF)	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC
4700									22x25	2.40						
6800	22x25	2.84							22x25	2.84						
8200	22x25	2.90							22x25	2.90						
10000	22x30	3.06	25x25	3.06					22x30	3.06	25x25	3.06				
12000	22x30	3.43	25x25	3.43					22x30	3.43	25x25	3.43				
15000	22x35	3.94	25x30	3.94					22x35	3.94	25x30	3.94				
18000	22x40	4.34	25x30	4.34					22x40	4.34	25x30	4.34				
22000	22x45	4.80	25x35	4.80	30x30	4.80			22x45	4.80	25x35	4.80	30x30	4.80		
27000	25x45	7.57	30x35	7.57					25x45	7.57	30x35	7.57				
33000	25x50	8.20	30x40	8.20	35x30	8.20			25x50	8.20	30x40	8.20	35x30	8.20		
39000	30x45	8.33	35x35	8.33					30x45	8.33	35x35	8.33				
47000	30x50	8.96	35x40	8.93					30x50	8.96	35x40	8.96				
56000	35x45	10.5							30x55	10.5	35x50	10.8				
68000	35x50	10.8														

W.V.	25								35							
Dimension	A		B		C		D		A		B		C		D	
Cap. (uF)	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC
2200									22x25	2.18						
3300									22x25	2.46						
3900									22x25	2.50						
4700	22x25	2.64							22x30	2.68	25x25	2.68				
5600	22x25	2.72	22x30	2.78					22x30	2.72	25x25	2.72				
6800	22x30	2.93	25x25	2.93					22x35	3.06	25x30	3.06				
8200	22x30	3.05	25x25	3.05					22x40	3.29	25x35	3.34				
10000	22x35	3.43	25x30	3.43	30x25				25x45	3.60	30x35	3.60	22x45	3.60	25x40	3.60
12000	22x40	3.84	25x35	3.84	30x30				22x50	3.80	25x45	3.80	30x35	3.80	35x30	3.80
15000	22x50	4.39	25x40	4.39	30x30				25x50	3.92	30x40	3.92	35x30	3.92		
18000	25x45	4.80	30x35	4.80					30x45	4.70	35x35	4.70				
22000	25x50	5.40	30x40	5.40					30x45	5.45	35x40	5.45				
27000	30x45	5.97	35x35	5.97					35x45	5.78						
33000	30x50	6.24	35x40	6.24					35x50	6.36						
39000	35x45	7.10														
47000	35x50	7.60														

W.V.	50								63							
Dimension	A		B		C		D		A		B		C		D	
Cap. (uF)	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC
1000									22x25	1.58						
2200	22x25	2.04							22x25	2.52	25x25	2.52				
2700	22x30	2.30							22x35	2.82	25x30	2.82				
3300	22x30	2.64	25x25	2.64					22x40	3.12	25x30	3.15	30x25	3.12		
3900	22x30	2.72	25x25	2.72					22x45	3.21	25x35	3.21	30x30	3.21		
4700	22x35	2.88	25x30	2.88	30x25	2.88			25x45	3.28	30x35	3.28	30x30	3.21	22x50	3.28
5600	22x40	3.06	25x35	3.06	30x30	3.06			25x45	3.86	30x35	3.86	35x30	3.86		
6800	22x50	3.24	25x40	3.24	30x30	3.24			25x50	4.32	30x40	4.32	35x30	4.32		
8200	25x45	3.48	30x35	3.48					30x45	4.44	35x35	4.44				
10000	25x50	3.96	35x40	3.96	30x40	3.96	35x30	3.96	35x50	4.77	35x45	4.77				
12000	30x45	4.10	35x35	4.10					35x55	4.80						
15000	30x50	4.70	35x40	4.70					35x60	5.04						
18000	35x45	5.31														
22000	35x50	5.85														

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Standard Products Table

W.V.	80								100							
Dimension	A		B		C		D		A		B		C		D	
Cap. (uF)	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC
680	22x25	1.34							22x25	1.53						
1000	22x25	1.62							22x30	1.62	22x25	1.62				
1200	22x30	1.65							22x30	1.65	22x35	1.74	25x30	1.74		
1500	22x30	1.76	25x25	1.76					22x35	1.72	22x40	1.85	25x35	1.85	30x30	1.85
1800	22x35	1.82	25x30	1.82					22x40	2.05	22x45	2.20	25x40	2.20	30x30	2.20
2200	22x40	2.52	25x30	2.52	30x25	2.52			22x50	2.64	25x40	2.64	30x30	2.64		
2700	22x45	2.76	25x35	2.76	30x30	2.76			22x50	3.08	25x45	3.16	30x35	3.16		
3300	22x50	3.24	25x40	3.24	30x30	3.24			25x50	3.42	30x40	3.42				
3900	25x45	3.40	30x35	3.40					30x45	3.58	35x35	3.58				
4700	25x50	3.60	30x40	3.60					30x50	3.72	35x40	3.72				
5600	30x45	3.78	35x35	3.78					35x45	3.78						
6800	30x50	4.60	35x40	4.60					35x50	4.10						
8200	35x50	4.92														
10000	35x55	5.04														

W.V.	160								200							
Dimension	A		B		C		D		A		B		C		D	
Cap. (uF)	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC
220	22x25	1.20							22x25	1.36						
270	22x25	1.35							22x30	1.46						
330	22x30	1.44							22x30	1.89	25x25	1.89				
390	22x30	1.66	25x25	1.66					22x30	1.92	25x30	1.92				
470	22x30	1.76	25x30	1.76					22x35	2.23	25x30	2.23	30x25	2.23	22x30	2.09
560	22x35	2.03	25x30	2.03	30x25	2.03			22x40	2.43	25x35	2.43	30x25	2.43		
680	22x40	2.36	25x35	2.36	30x30	2.36			22x45	2.80	25x35	2.80	30x30	2.80		
820	22x45	2.72	25x40	2.72	30x35	2.72	30x30	2.57	22x50	3.26	25x45	3.26	30x35	3.26	35x25	3.26
1000	25x45	3.13	30x35	3.13	35x30	3.13			25x50	3.92	30x40	3.92	35x30	3.92	25x45	3.74
1200	25x50	3.44	30x35	3.44	35x30	3.25	35x35	3.44	30x45	4.25	35x35	4.25				
1500	30x45	3.96	35x35	3.96					30x50	4.99	35x40	4.99				
1800	30x50	4.47	35x40	4.47					35x45	5.84						
2200	35x45	4.65	30x55	4.65					35x50	6.07						
2700	35x50	4.76														

W.V.	250								350							
Dimension	A		B		C		D		A		B		C		D	
Cap. (uF)	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC
100									22x30	0.90	22x25	0.76				
120									22x30	1.02	25x25	1.02				
150	22x25								22x35	1.08	25x30	1.08				
180	22x25	1.05	22x30	1.12					22x40	1.15	25x35	1.15	30x25	1.15		
220	22x30	1.36	25x25	1.36					22x45	1.40	25x40	1.40	30x30	1.40	35x25	1.40
270	22x30	1.60	25x30	1.72					25x45	1.63	30x35	1.63	35x25	1.75		
330	22x35	1.87	25x30	1.87	30x25	1.87			25x50	1.90	30x40	1.90	35x30	1.88		
390	22x40	2.04	25x35	2.04	30x30	2.04			30x45	2.12	35x35	2.12				
470	22x45	2.38	25x40	2.38	30x30	2.38			30x45	2.41	35x35	2.41				
560	22x50	2.74	25x45	2.81	30x35	2.81	35x25	2.81	35x45	2.90						
680	25x50	3.11	30x40	3.11	35x30	3.11			35x50	3.20						
820	30x45	3.55	35x35	3.55												
1000	30x50	4.00	35x40	4.00												
1200	35x45	4.55														
1500	35x50	5.34														
1800	35x60	4.60														
2200	35x70	4.72														

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Standard Products Table

W.V.	400								450							
Dimension	A		B		C		D		A		B		C		D	
Cap. (uF)	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC
47	22x25	0.42							22x25	0.36						
68	22x25	0.51							22x25	0.50						
82	22x25	0.83							22x30	0.89	25x25	0.89				
100	22x30	1.03	25x25	1.03					22x35	1.03	25x30	1.03				
120	22x30	1.07	25x25	1.07					22x40	1.19	25x35	1.19				
150	22x40	1.26	25x30	1.26	30x25	1.26	22x35	1.26	22x45	1.39	25x35	1.39	30x30	1.39		
180	22x40	1.46	25x35	1.46	30x25	1.46			22x50	1.52	25x45	1.52	30x35	1.52		
220	22x45	1.75	25x40	1.75	30x30	1.75			25x50	1.76	30x40	1.76	30x30	1.68	35x35	1.76
270	25x45	1.96	30x35	1.96	30x30	1.96			30x45	2.00	35x35	2.00				
330	30x40	2.26	35x35	2.26	25x50	2.26			30x45	2.29	35x40	2.29	35x35	2.29		
390	30x45	2.50	35x40	2.26					30x45	2.54	35x40	2.54	40x35	2.54		
470	30x50	2.66	35x40	2.67	35x45	2.80	40x35	2.80	35x45	2.89	40x40	2.89	35x40	2.76		
560	35x40	2.89	35x45	3.03					30x55	2.76	35x40	2.63				
680	40x50	3.69	35x50	3.41					35x50	2.91	40x40	2.98				
820	35x60	3.80	40x40	3.23					35x55	3.86	40x50	4.00				
1000	35x60	3.80	40x45	3.75					35x70	4.74	40x55	4.60				
1200	35x65	4.50	40x60	4.68					35x80	5.51	40x65	5.42				
1500	35x80	5.51	40x70	5.60												

Ripple Current (A, rms) at 85℃ 120Hz

Part Numbering Designation

ELP	101	M	2G	B	A
SERIES	CAPACITANCE	TOL.	W.V.	PACKAGE	SIZE
	IN 3DIGITS	M= ± 20%	10= 10V	B= Bulk	A= A Size
	101= 100uF	K= ± 10%	16= 16V		B= B Size
	102= 1000uF		25= 25V		C= C Size
	103= 10,000uF		35= 35V		D= D Size
			50= 50V		
			63= 63V		
			80= 80V		
			2A= 100V		
			2C= 160V		
			2D= 200V		
			2E= 250V		
			2V= 350V		
			2G= 400V		
			2W= 450V		