

# LS Series

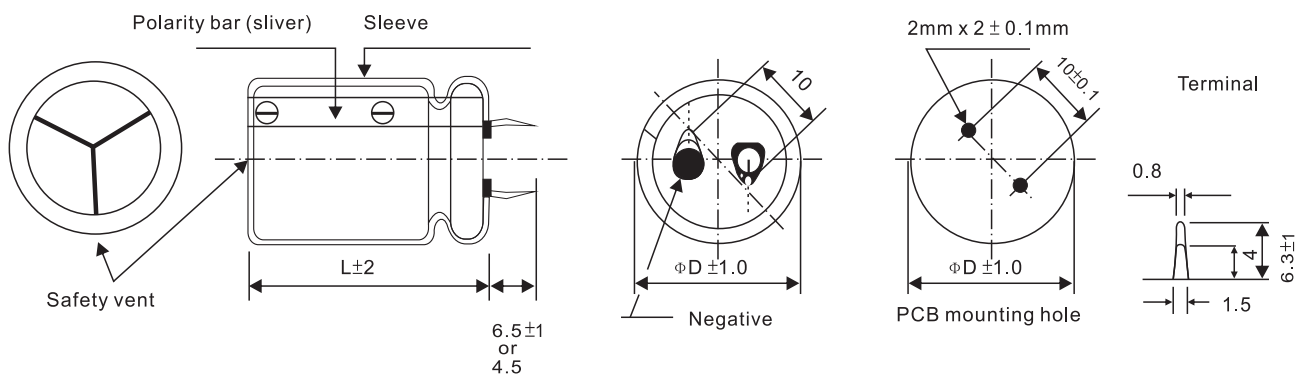
- Standard series General purples
- Endurance: 105°C 3000 hours ( 紋波疊加 )
- ROHS Compliance



• SPECIFICATIONS

Items	Characteristics	
Category	- 40 to +105°C	- 25 to +105°C
Temperature Range		
Rated Voltage Range	10 to 100 Vdc	160 to 450 Vdc
Capacitance Tolerance	± 20% (M) (at 20°C ,120Hz)	
Leakage Current	I=0.02CV, (3mA max) whichever is greater. (at 20°C, after 2 minutes) Where, I :Max. Leakage current (µA). C : Nominal capacitance (µF) .V :Rated voltage(V)	
Dissipation Factor (tan δ)	Rated voltage (Vdc)	16v 25v 35v 50v 63v 80v 100v 160v 200v 250v 400v 450v
	tan δ (Max.)	0.50 0.45 0.40 0.35 0.30 0.25 0.20 0.15 0.15 0.15 0.20 0.20
	(at 20°C ,120Hz)	
Low Temperature Characteristics	Impedance ration max at 120Hz	
	Working voltage	16 25 35 50 63 80 100 160 200 250 350 400~450
	Z-25°C/ Z+20°C	4 3 3 2 2 4 4 4 4 4 8 8
	Z-40°C/ Z+20°C	15 10 8 6 5 4 4 8 10 10 16 20
Load. Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the voltage is applied for 3000 hours at 105°C	
	Capacitance change	≤ ±20% of the initial value
	DF (tan δ)	≤ 200 % of the initial specified value
	Leakage current	≤ The initial specified value
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing for 1000 hours at 105°C without voltage applied.	
	Capacitance change	≤ ±20% of the initial value
	DF (tan δ)	≤ 200 % of the initial specified value
	Leakage current	≤ The initial specified value

• Diagram: (Unit: mm)



Chip Type SMD

Miniature Type

General Purpose

High Frequency Low Impedance

High Voltage High Reliability

Non-polar Type

Large Size Snap-in

Large Size Screw

X Metallized Polypropylene Film Capacitors

LARGE ALUMINUM ELECTROLYTIC CAPACITORS LS Snap-in 105°C

Vdc μF	16v								25v							
	22 φ		25 φ		30 φ		35 φ		22 φ		25 φ		30 φ		35 φ	
3300									22*25	1.25						
4700	22*25	1.30							22*30	1.61	25*25	1.61				
6800	22*30	1.80	25*30	1.80					22*35	1.91	25*30	1.91	30*25	1.91		
10000	22*35	2.34	25*35	2.25	30*25	2.19			22*45	2.51	25*40	2.42	30*30	2.42	35*25	2.42
15000			25*45	2.83	30*35	2.82	35*30	2.82			25*45	3.12	30*35	3.11	35*30	3.11
22000					30*45	2.54	35*35	2.54					30*45	3.85	35*40	3.85

Vdc μF	35v								50v							
	22 φ		25 φ		30 φ		35 φ		22 φ		25 φ		30 φ		35 φ	
1500									22*25	1.22						
2200	22*25	1.14	25*25	1.51					22*30	1.59	25*25	1.59				
3300	22*30	1.51	25*30	1.92					22*35	1.93	25*30	1.88	30*25	1.88		
4700	22*35	1.92	25*40	2.31	30*25	1.92			22*45	2.43	25*35	2.34	30*30	2.42	35*25	2.42
6800	22*45	2.31	25*45	2.87	30*30	2.33	35*25	2.33			25*45	3.10	30*35	3.10	35*30	3.10
10000					30*35	2.87	35*30	2.87					30*45	4.18	35*40	4.20
15000					30*45	3.66	35*40	3.66								
22000							35*45	4.53								

Vdc μF	63v								80v							
	22 φ		25 φ		30 φ		35 φ		22 φ		25 φ		30 φ		35 φ	
1000	22*25	1.09							22*30	1.17	22*25	1.17				
1500	22*30	1.44	25*25	1.44					22*35	1.54	25*30	1.54	30*25	1.54		
2200	22*35	1.70	25*30	1.71	30*25	1.78					25*35	1.94	30*30	1.91	35*25	1.91
3300	22*45	2.19	25*40	2.24	30*30	2.03	35*25	2.03					30*40	2.23	35*30	2.19
4700					30*35	2.66	35*30	2.66							35*40	3.08
6800					30*45	3.49	35*40	3.49								
8200							35*45	3.87								

Vdc μF	100v								160v							
	22 φ		25 φ		30 φ		35 φ		22 φ		25 φ		30 φ		35 φ	
330									22*25	0.98						
390									22*30	1.10	25*25	1.09				
470									22*30	1.21	25*25	1.19				
560									22*35	1.40	25*30	1.40	30*25	1.40		
680	22*25	1.09							22*40	1.62	25*35	1.61	30*25	1.54		
820	22*30	1.32	25*25	1.32					22*45	1.86	25*40	1.86	30*30	1.79	35*25	1.79
1000	22*30	1.36	25*25	1.36							25*45	2.15	30*35	2.09	35*25	1.98
1200	22*35	1.58	25*30	1.58									30*35	2.28	35*30	2.28
1500	22*40	1.82	25*35	1.82	30*25	1.80							30*35	2.29	35*35	2.72
1800	22*45	2.23	25*40	2.20	30*30	2.20							30*45	2.77	35*40	3.09
2200			25*45	2.53	30*35	2.55	35*30	2.50								
3300					30*45	3.30	35*35	3.25								
4700							35*45	3.80								

Max ripple current : Arms/120Hz 105°C Size: D φ x L (mm)



Vdc μF	200v								250v							
	22 φ		25 φ		30 φ		35 φ		22 φ		25 φ		30 φ		35 φ	
220	22*25	0.92							22*30	1.00	25*25	0.98				
270	22*25	1.03							22*35	1.16	25*25	1.08				
330	22*30	1.21	25*25	1.20					22*40	1.28	25*30	1.27	30*25	1.28		
390	22*35	1.39	25*25	1.31					22*45	1.48	25*35	1.46	30*25	1.39		
470	22*40	1.62	25*30	1.52	30*25	1.54					25*40	1.69	30*30	1.63	35*25	1.62
560	22*45	1.85	25*35	1.75	30*30	1.78					25*45	1.93	30*35	1.87	35*25	1.78
680	22*45	2.00	25*40	2.05	30*30	1.95	30*25	1.96					30*35	2.06	35*30	2.05
820			25*45	2.34	30*35	2.22	35*30	2.22					30*45	2.48	35*35	2.41
1000					30*40	2.63	35*30	2.51							35*40	2.76
1200					30*45	3.00	35*35	2.92							35*45	3.14
1500							35*45	3.38								

Vdc μF	350v								400v							
	22 φ		25 φ		30 φ		35 φ		22 φ		25 φ		30 φ		35 φ	
68	22*25	0.47							22*25	0.52						
82	22*30	0.56	25*25	0.55					22*30	0.60	25*25	0.60				
100	22*35	0.72	25*25	0.60					22*30	0.67	25*25	0.66				
120	22*40	0.83	25*30	0.72	30*25	0.72			22*35	0.78	25*30	0.77	30*25	0.78		
150			25*35	0.83	30*30	0.84			22*40	0.91	25*35	0.91	30*30	0.92		
180			25*40	0.96	30*35	1.09			22*45	1.04	25*40	1.04	30*30	1.01	35*25	1.01
220			25*45	1.12	30*40	1.26	35*25	0.93			25*45	1.21	30*35	1.18	35*30	1.18
270					30*45	1.43	35*30	1.09			25*50	1.40	30*40	1.37	35*30	1.31
330							35*30	1.20					30*45	1.57	35*35	1.52
390							35*35	1.38							35*40	1.73
470							35*40	1.58							35*45	1.97

Vdc μF	420v								450v							
	22 φ		25 φ		30 φ		35 φ		22 φ		25 φ		30 φ		35 φ	
47									22*25	0.42						
56									22*25	0.42						
68	22*30	0.50							22*30	0.55	25*25	0.54				
82	22*30	0.54	25*25	0.54					22*35	0.64	25*30	0.64				
100	22*35	0.63	25*30	0.63					22*40	0.74	25*35	0.74	30*25	0.71		
120	22*40	0.72	25*30	0.70	30*25	0.70			22*45	0.85	25*35	0.80	30*30	0.82	35*25	0.68
150	22*45	0.86	25*35	0.82	30*30	0.83					25*45	1.00	30*35	0.96	35*30	0.96
180			25*40	0.94	30*30	0.91	30*25	0.90			25*50	1.14	30*35	1.06	35*30	1.06
220					30*35	1.05	35*30	1.05					30*40	1.22	35*35	1.24
270					30*40	1.22	35*35	1.23							35*35	1.43
330							35*40	1.41							35*35	1.64
390							35*45	1.61								
560							35*50	2.10								

Max ripple current : Arms/120Hz 105°C Size: D φ x L (mm)

● Ripple Current / Frequency Multiplier

Frequency	60	120	300	1k	10k up
Multipliers	0.8	1.0	1.1	1.3	1.4

● Frequency coefficient

Temperature (°C)	~55	60	70	85	105
Factor	2.23	2.27	2.0	1.75	1.00

Chip Type SMD  
Miniature Type  
General Purpose  
High Frequency Low Impedance  
High Voltage High Reliability  
Non-polar Type  
Large Size Snap-In  
Large Size Screw  
X Metallized Polypropylene Film Capacitors