

LE Series

Low ESR, 105°C 3000Hrs



Features:

- ◆ Used in communication equipments、switching power supply、Industrial measuring instruments ,etc.
- ◆ Load life 3000 hours at 105°C.
- ◆ Safety vent construction design .

技术要求 Specifications

项目Item	特性Performance Characteristics													
使用温度范围 Operating Temperature Range	-40to+105°C							-25to+105°C						
额定电压范围 Rated Voltage Range	6.3to100VDC							160to400VDC						
电容量范围 Capacitance Range	0.47to4700 µ F							0.47to220 µ F						
电容量允差 Capacitance Tolerance	±20% (100Hz or 120 Hz, +20°C)													
漏电流Leakage Current (+20°C, 最大max)	I ≤ 0.01CV或5 (µ A) 额定工作电压充电2分钟后读数, 取大者 After 2 minutes, whichever is greater measured with rated working voltage applied							I ≤ 0.03CV+10 (µ A) 额定工作电压充电2分钟后读数, 取大者 After 2 minutes, whichever is greater measured with rated working voltage applied						
损耗角正切值 Dissipation Factor (tg δ)	工作电压Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400
	D.F.(%)最大	20	19	16	14	14	12	12	12	12	12	12	15	15
容量>1000 µ F时, 每增加1000 µ F D.F值增加2%(100Hz or 120Hz, +20°C) For capacitance >1000 µ F, Add 2% per another 1000 µ F (100Hz or 120Hz, +20°C)														
低温特性 Low Temperature Characteristics (120Hz)	阻抗比, 最大 Impedance ratio ,max													
	工作电压Working Voltage (VDC)	6.3	10	16	25	35	50	63	100	160	200	250	350	400
	Z - 25°C / Z+20 °C	4	3	3	3	3	3	2	2	2	2	3	5	5
容量>1000 µ F时, 每增加1000 µ F, Z - 25°C / Z+20 °C值增加0.5%, Z - 40°C / Z+20 °C值增加1% For capacitance >1000 µ F, and 0.5% per another 1000 µ F for Z-25°C/Z+20°C, add 1% per another 1000 µ F for Z-40°C /Z+20°C														
负荷寿命Load Life	试验条件 持续时间: 3000H							Test conditions Duration time: 3000H						
	环境温度: +105°C							Ambient temperature: +105°C						
	施加电压: 额定工作电压 (VDC)							Applied voltage: Rated Working Voltage (DVC)						
	试验后要求: 室温下恢复16小时, +20°C测试							After test requirements: Resume 16 hours at normal temperature						
	电容量变化: ≤ ±25%规定值							Capacitance change: ≤ ±25% of the initial measured value						
	损耗角正切值: ≤ 200%初始值							Dissipation Factor: ≤ 200% of the initial specified value						
储存寿命Shelt Life	试验条件							Test conditions						
	持续时间: 1000小时							Duration time: 1000hours						
	环境温度: +105°C							Ambient temperature: +105°C						
	施加电压: 无							Applied voltage: None						
	试验后要求: 室温下恢复16小时, +20°C测试							After test requirements: Resumed 16 hours at normal temperature						
	电容量变化: ≤ ±20%规定值							Capacitance change: ≤ ±20% of the initial measured value						
	损耗角正切值: ≤ 200%初始值							Dissipation Factor: ≤ 200% of the initial specified value						
漏电流: ≤ 200%规定值							Leakage Current: ≤ 200% of the initial specified value							

纹波电流频率调整系数

Multiplier for ripple current vs. frequency

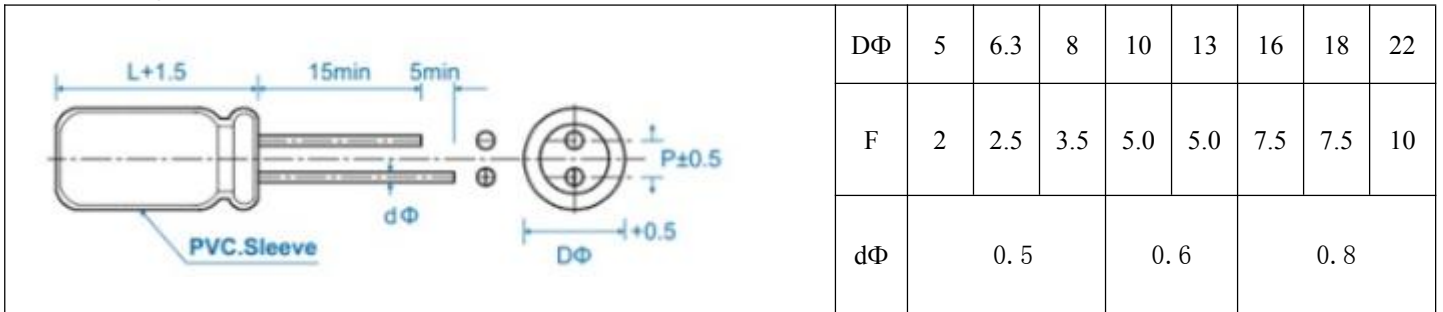
容量 (μF) / Hz		60(50)	120	400	1K	10K	50K~100K
系数	≤10	0.47	0.59	0.76	0.85	0.97	1
	10~100	0.52	0.62	0.80	0.89	0.97	1
	100~1000	0.58	0.72	0.84	0.90	0.98	1
	>1000	0.63	0.78	0.87	0.91	0.98	1

纹波电流温度调整系数

Multiplier for ripple current vs. temperature

温度℃	45	60	75	85	105
系数	2.10	1.90	1.40	1.25	1.00

尺寸图 Diagram of Dimension (≥DΦ8 以上设有防爆阀)



尺寸表 Case Size

D x L(mm)

WV (SV) μF	6.3 (8)			10 (13)			16 (20)			25 (32)		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
10										5x11	85	2.56
22				5x11	98	2.70	5x11	100	2.60	5x11	125	1.95
33	5x11	85	2.86	5x11	100	2.60	5x11	114	2.00	5x11	155	1.42
47	5x11	110	2.30	5x11	150	1.34	5x11	155	1.10	6.3x12	205	1.1
68	5x11	150	1.85	5x11	170	1.05	5x11	195	0.69	6.3x12	280	0.65
100	5x11	170	1.00	5x11	210	0.80	5x11	265	0.50	6.3x12	320	0.35
120	5x11	175	0.92	6.3x12	250	0.75	6.3x12	270	0.47	6.3x12	380	0.33
150	6.3x12	190	0.81	6.3x12	250	0.61	6.3x12	290	0.41	8x12	410	0.31
220	6.3x12	310	0.65	6.3x12	340	0.35	6.3x12	400	0.25	8x12	550	0.15
330	8x12	390	0.42	8x12	460	0.27	8x12	590	0.156	8x12	820	0.114
470	8x12	450	0.25	8x12	580	0.25	8x14	750	0.124	8x14	1200	0.076
680	8x12	520	0.21	8x12	765	0.11	8x16	1100	0.092	10x15	1320	0.065
1000	8x12	750	0.17	8x14	850	0.095	8x16	1150	0.065	10x20	1650	0.045
1500	10x16	1100	0.14	10x20	1400	0.062	10x30	1630	0.056	13x25	2210	0.038
2200	10x20	1300	0.090	13x20	1755	0.041	13x21	2000	0.038	10x20	2210	0.038
3300	13x20	1650	0.060	13x25	1900	0.031	13x25	2790	0.033	16x26	3240	0.026
4700	13x25	2100	0.036	16x25	2100	0.030	16x27	2880	0.026	16X36	3650	0.024
6800	16X25	2450	0.032	16X32	2650	0.026	18X36	3200	0.024	18X40	3850	0.024
10000	16X35	2700	0.024	18X36	2850	0.024	18X40	3550	0.024			

Ripple Current(mA,rms)at 105℃ 100KHZ

Max Impedance (Ω)at 25℃ 100KHZ



Aluminum Electrolytic Capacitors

尺寸表 Case Size

D x L(mm)

WV (SV) μ F	35 (44)			50 (63)			63 (79)			100 (125)		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
0.47				5x11	25	5.40	5x11	25	5.40	5x11	20	5.90
1				5x11	40	4.00	5x11	33	4.00	5x11	30	4.40
2.2				5x11	55	2.80	5x11	45	2.80	5x11	42	3.30
3.3				5x11	60	2.20	5x11	58	2.20	5x11	55	2.80
4.7				5x11	90	2.00	5x11	65	2.00	5x11	72	2.60
6.8				5x11	110	1.89	5x11	100	1.82	6.3x12	115	1.95
10	5x11	105	2.37	5x11	120	1.82	6.3x12	110	1.75	6.3x12	130	1.77
22	5x11	150	1.50	5x11	135	1.35	6.3x12	240	0.80	6.3x12	220	0.85
33	5x11	180	1.21	6.3x12	250	0.80	8x12	270	0.61	10x13	320	0.69
47	6.3x12	280	0.80	6.3x12	280	0.65	8x12	300	0.56	10x16	370	0.58
68	6.3x12	350	0.52	6.3x12	375	0.33	8x16	480	0.21	10x16	470	0.35
100	6.3x12	350	0.45	8x12	480	0.17	10x16	610	0.14	13x20	560	0.30
120	8x12	510	0.220	10x12	530	0.156	10x16	620	0.125	10x25	660	0.22
150	8x12	540	0.191	10x14	590	0.132	10x20	700	0.111	13x25	780	0.174
220	8x16	750	0.114	10x16	930	0.096	10x20	1100	0.080	16x25	880	0.13
330	8x16	1050	0.079	10x20	1150	0.085	13x20	1250	0.055	16x32	1440	0.10
470	10x20	1200	0.065	13x20	1590	0.065	13x25	1620	0.053	16x36	1650	0.09
680	13x20	1570	0.056	13x25	1930	0.054	16x25	1950	0.043	18x41	1790	0.080
1000	13x25	1900	0.042	16x25	2300	0.036	16x32	2350	0.034	18x41	1930	0.066
1500	16x25	2270	0.036	16x36	2750	0.034	18x36	2710	0.031			
2200	16x25	2850	0.034	18x36	3040	0.032	18x41	2850	0.030			
3300	18x36	3100	0.026	18x36	3100	0.025						
4700	18x41	3500	0.024									

WV (SV) μ F	160 (200)			200 (250)			250 (300)			400 (450)		
	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance	Size	Ripple	Impedance
1							6.3x12	50	26.54	8x12	36	26.5
2.2	6.3x12	55	15.21	6.3x12	55	15.18	8x12	72	24.12	8x14	65	19.58
3.3	8x12	70	14.31	8x12	71	14.25	8x12	75	23.85	10x16	86	15.01
4.7	8x12	72	14.16	10x13	85	14.12	10x13	100	22.95	10x20	120	14.82
6.8	10x16	100	13.12	10x16	115	12.71	10x16	140	21.86	10x25	160	13.55
10	10x16	100	12.69	10x16	132	12.02	10x20	160	21.4	10x17	220	9.32
15										10x17	225	8.18
	10x16	100	12.69	10x16	132	12.02	10x20	160	11.4	13x17	245	8.12
22	10x20	205	11.30	10x20	205	11.20	13x21	185	11.3	13x25	305	6.65
33	10x20	260	11.10	13x20	330	10.62	13x25	260	10.9	16x18	335	5.21
47	13x20	320	10.91	13x20	400	10.51	13x25	405	8.45	16x25	560	4.92
68	13x20	410	8.56	13x20	540	8.35	13x25	490	7.38	18x30	750	2.75
100	16x25	500	5.47	16x32	700	5.19	16x32	675	6.25	22x32	950	2.52
120	16x25	520	2.35	16x32	820	2.17	16x36	730	6.24			
150	13x36	660	2.26	16x36	840	2.16	18x36	750	5.23			
220	16x36	820	2.19	18x41	1080	2.14	18x41	910	4.20			

Ripple Current(mA,rms)at 105°C 100KHZ

Max Impedance(Ω)at 25°C 100KHZ