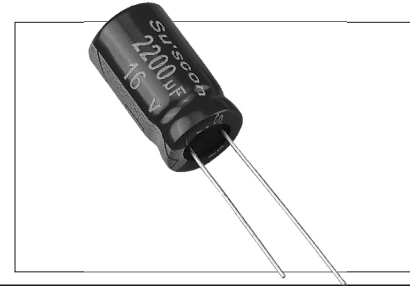


ML series

One rank smaller case sizes than SL series.

SL 小型化品。



SPECIFICATIONS

Items 項目	Characteristics 特性											
Capacitance Tolerance 靜電容量誤差	± 20% (120Hz, 20 C)											
Operating Temperature Range 適用溫度範圍	-40 ~ +85 C				-40 ~ +85 C				-25 ~ +85 C			
Rated Voltage Range 工作電壓範圍	6.3 ~ 100V				160 ~ 250V				350 ~ 450V			
Leakage Current 洩漏電流	I ≤ 0.03CV or 4 (A), (After 1 minutes application of working voltage)						I ≤ 0.03CV+20(A), (After 3 minutes application of working voltage)					
Dissipation Factor 散逸因素 (tan)	Measurement Frequency: 120Hz. Temperature: 20 C											
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160~250	350~450	
	tan (Max)	0.28	0.24	0.16	0.15	0.12	0.10	0.10	0.08	0.20	0.25	
When nominal capacitance exceeds 1000 F, add 0.02 to the value above for each 1000 F increase. (20 C、120Hz)												
Low Temperature Stability 低溫特性 Impedance Ratio (Max) 阻抗比率 (最大值)	Measurement Frequency: 120Hz.											
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160~250	350~400	450
	Z (-25 C) / Z (20 C)	5	4	3	2	2	2	2	2	3	6	15
Z (-40 C) / Z (20 C)	12	10	8	5	4	3	3	3	4	-	-	
Load Life 負荷壽命	2,000hours, with application of working voltage at 85 C											
	Capacitance Change	Within ± 20% of Initial Value										
	tan	200% or less of Initial Specified Value										
	Leakage Current	Initial Specified Value or less										
Shelf Life 放置壽命	1,000hours, no voltage applied, at 85 C。 After Test: U _R to be applied for 30 minutes, 24 to 48hours before measurement.											
	Capacitance Change	Within ± 20% of Initial Value										
	tan	200% or less of Initial Specified Value										
	Leakage Current	Initial Specified Value or less										
Standards 參照標準	JIS C 5141 and JIS C 5102											

PERMISSIBLE RIPPLE CURRENT

Temperature Coefficient

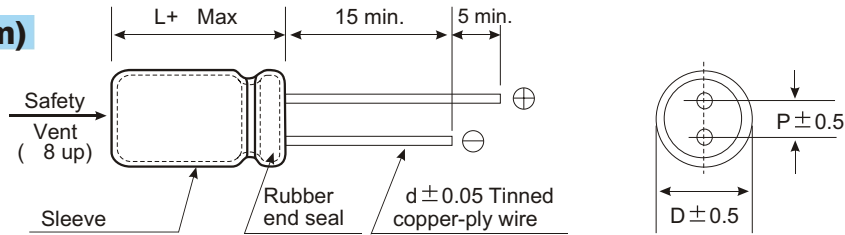
TEMP (C)	40	60	85
Coefficient	1.30	1.20	1.00

Frequency Coefficient

VV (V)	Capacitance (F)	Frequency (Hz)			
		50	120	1K	≥10K
6.3 ~ 100	< 100	0.75	1.00	1.57	2.00
	100 ~ 470	0.80	1.00	1.34	1.50
	> 470	0.85	1.00	1.13	1.15
160 ~ 450	1 ~ 220	0.80	1.00	1.40	1.60
	330 ~ 1000	0.90	1.00	1.13	1.15

ML series

DIMENSIONS (mm)



D	5	6.3	8	10	12	13	16	18	20	22	25
P	2.0	2.5	3.5	5.0	5.0	5.0	7.5	7.5	10.0	10.0	12.5
d	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8	0.8	1.0

α	(L < 16) 1.0
	(L ≥ 16) 2.0

STANDARD RATINGS

DxL (mm); R.C.: (mA rms) at 85 C, 120Hz.

Cap (F)	WV (V)	6.3		10		16		25		35		50		63	
		Item	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L
10												5 x 11	55	5 x 11	65
22												5 x 11	90	5 x 11	100
33												5 x 11	105	6.3 x 11	130
47										5 x 11	130	6.3 x 11	140	6.3 x 11	160
68										6.3 x 11	150	6.3 x 11	200	8 x 12	200
100						5 x 11	160	6.3 x 11	180	6.3 x 11	210	8 x 12	250	8 x 12	270
220		5 x 11	180	5 x 11	200	6.3 x 11	250	6.3 x 11	280	8 x 12	320	10 x 13	420	10 x 16	490
330		6.3 x 11	250	6.3 x 11	280	6.3 x 11	300	8 x 12	380	10 x 13	480	10 x 16	580	10 x 20	700
470		6.3 x 11	300	6.3 x 11	340	8 x 12	420	10 x 13	530	10 x 16	630	10 x 20	750	13 x 21	900
1000		8 x 12	510	10 x 13	650	10 x 13	680	10 x 16	820	13 x 21	1100	13 x 25	1250	16 x 26	1200
2200		10 x 16	790	10 x 16	980	10 x 20	980	12 x 25	1300	16 x 26	1700	16 x 32	1900	18 x 35	2300
						12 x 21	1100	13 x 25	1350						
3300		10 x 20	1150	13 x 21	1350	13 x 25	1500	16 x 26	1690	16 x 32	2000	18 x 35	2400	20 x 40	2600
4700		13 x 21	1450	13 x 25	1700	16 x 26	2050	16 x 32	2100	16 x 36	2400	20 x 40	2800	22 x 50	3300
6800		13 x 25	1820	16 x 26	2100	16 x 32	2250	16 x 36	2500	18 x 40	2700	22 x 50	3400	25 x 50	3800
10000		16 x 26	2350	16 x 32	2450	16 x 36	2600	18 x 40	2700	22 x 50	3500	25 x 50	3900		
15000		16 x 32	2500	16 x 36	2680	18 x 40	3050	22 x 50	3600	25 x 50	4100				
22000		18 x 35	3100	18 x 40	3200	22 x 40	3700	25 x 50	4400						
33000		18 x 40	3400	22 x 50	4200	25 x 50	4700								
47000		22 x 50	3800	25 x 50	4900										
68000		25 x 50	4200												

Cap (F)	WV (V)	100		160		200		250		350		400		450	
		Item	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L
0.1						6.3 x 11	2.1								
0.2						6.3 x 11	4.7								
0.3						6.3 x 11	7.0								
0.47						6.3 x 11	15					6.3 x 11	12		
1		5 x 11	18			6.3 x 11	22					6.3 x 11	18		
2.2		5 x 11	24			6.3 x 11	33			6.3 x 11	30	8 x 12	35	8 x 12	25
3.3		5 x 11	33			6.3 x 11	40	6.3 x 11	40	8 x 12	43	8 x 12	45	10 x 13	35
4.7		5 x 11	40	6.3 x 11	45	6.3 x 11	50	6.3 x 11	50	8 x 12	55	10 x 13	55	10 x 13	40
10		5 x 11	60	8 x 12	80	8 x 12	80	10 x 13	95	10 x 13	90	10 x 16	80	10 x 20	70
22		6.3 x 11	120	10 x 13	120	10 x 16	140	10 x 20	140	13 x 21	140	13 x 21	200	13 x 25	130
33		8 x 12	180	10 x 16	180	10 x 20	200	10 x 20	200	13 x 25	230	16 x 21	230	16 x 26	170
47		8 x 12	200	10 x 20	210	13 x 21	270	13 x 21	270	16 x 26	280	16 x 26	280	16 x 32	220
68		10 x 13	270	13 x 21	300	13 x 25	350	16 x 26	360	16 x 26	400	16 x 32	340	18 x 35	250
100		10 x 16	340	13 x 25	400	16 x 26	450	16 x 26	440	18 x 32	500	18 x 35	420	18 x 40	270
220		13 x 21	550	16 x 32	580	16 x 36	680	18 x 35	620	22 x 50	730	22 x 50	620	25 x 50	340
330		13 x 25	760	18 x 35	800	18 x 40	950	20 x 40	980	25 x 50	980				
470		16 x 26	900	18 x 40	1100	22 x 40	1200	22 x 50	1300						
1000		18 x 35	1350	25 x 50	1800										
2200		22 x 50	2300												
3300		25 x 50	2800												

※ 13mm may be replaced by 12.5mm upon customer's request.

ML