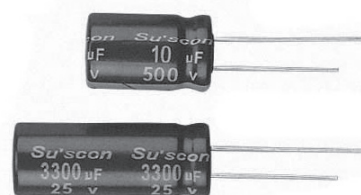


# SL series

- 85°C 2000 hours, standard product.
- RoHS Compliance
- 85°C 2000小時標準品



## 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 額定電壓範圍	6.3 ~ 100VDC					160 ~ 250VDC			350 ~ 500VDC		
Leakage Current 洩漏電流	I ≤ 0.01CV or 3 (µA) which is greater.( After 2 minutes application of DC rated voltage, at 20 °C)						I ≤ 0.03CV +20 (µA) ( After 3 minutes application of DC rated voltage, at 20 °C)				
Dissipation Factor 散逸因素( tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C										
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	160~250	350~500
	tan δ(Max)	0.24	0.20	0.16	0.15	0.12	0.10	0.09	0.08	0.20	0.25
	When nominal capacitance over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF.										
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	50~100	160~250	350~400	450~500	
	Z(-25°C)/Z(20°C)	5	4	3	2	2	2	3	6	8	
	Z(-40°C)/Z(20°C)	12	10	8	6	4	3	4	-	-	
Load Life 負荷壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 2,000 hours at 85°C.										
	Capacitance Change	Within ± 20% of Initial Value									
	tan δ	200% or less of Initial Specified Value									
	Leakage Current	Initial Specified Value or less									
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours 85°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.										
	Capacitance Change	Within ± 20% of Initial Value									
	tan δ	200% or less of Initial Specified Value									
	Leakage Current	Initial Specified Value or less									
Standards 參照標準	JIS C 5101-4 (IEC 60384)										

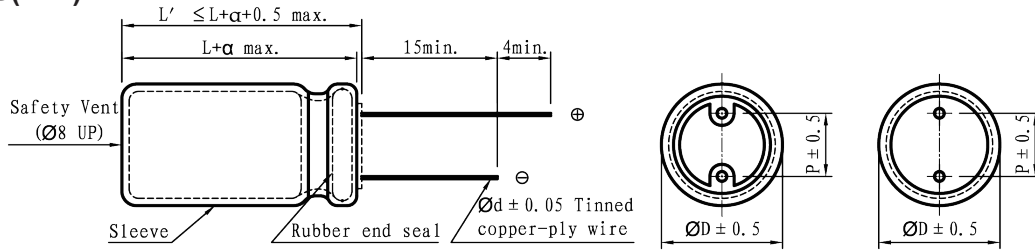
## Frequency Coefficient of Permissible Ripple Current

Rated Voltage (V)	Capacitance (µF)	Frequency (Hz)			
		50	120	1K	≤20K
≤ 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	1.10	1.15
≥ 160	0.1 ~ 220	0.80	1.00	1.40	1.60
	330 ~ 1000	0.90	1.00	1.13	1.15

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 10°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

# SL series

## DIMENSIONS(mm)



$\phi D$	5	6.3	8	10	13	16	18	22	25
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10	12.5
$\phi d$	0.5	0.5	0.5	0.6	0.6	0.8	0.8	0.8	1.0

$\alpha$	(L < 16) 1.0
	(L ≥ 16) 2.0

## STANDARD RATINGS

D×L(mm) ; R.C.(mA rms) at 85°C 120Hz.

Cap (μF)	V	6.3		10		16		25		35		50		63		100		
		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	R.C.	D x L	R.C.
22																	8x12	151
33																	8x9	180
																	10x13	204
47														8x9	193	10x16	266	
														8x12	218			
68										8x12	206	8x12	249	8x12	278	10x20	315	
100										8x12	278	8x9	275	8x14	363	10x20	459	
												8x12	303					
220								8x12	387	8x9	362	10x16	532	10x16	593	13x25	726	
											10x13							448
330						8x12	436	8x9	442	10x16	593	10x20	702	10x20	823	16x26	907	
							8x14	508										
470		8x12	460	8x12	484	8x9	508	10x16	653	10x16	774	13x13	808	13x21	1065	16x32	1113	
							8x12					569	13x21					920
1000		8x9	617	10x13	762	10x16	956	10x20	1150	13x21	1331	13x25	1634	16x26	1755	18x40	1573	
		10x13	702															
1500		10x16	788	10x20	823	10x20	1101	13x21	1367	13x25	1597	16x32	1925	18x32	2310	22x40	2145	
2200		10x16	1150	10x20	1331	13x21	1634	13x25	1876	16x26	2178	16x36	2541	18x35	2783	25x50	2432	
3300		10x20	1513	13x21	1694	13x25	2057	16x26	2118	16x32	2686	18x35	3037	22x40	3267			
		13x13	1392															
4700		13x21	1815	13x25	2178	16x26	2420	16x32	2614	18x35	3110	22x40	3630	22x50	4114			
6800		13x25	2299	16x26	2481	16x32	2783	18x35	3207	22x40	3884	22x50	4235	25x50	4719			
10000		16x26	2481	16x36	3025	18x35	3485	22x40	4380	22x50	4719	25x50	4840					
15000		16x36	3243	18x35	3775	22x40	4659	22x50	5082	25x50	5203							
22000		18x40	3896	22x40	4489	22x50	5336	25x50	5445									
33000		22x50	4719	22x50	5445	25x50	5808											

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

# SL series

## STANDARD RATINGS

D×L(mm) ; R.C.(mA rms)at 85°C 120Hz.

Cap ( $\mu$ F)	V Item	160		200		250		350	
		D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.
1.0								8x12	28
2.2						8x12	36	8x12	37
3.3		8x12	42	8x12	50	8x12	55	10x13	56
4.7		8x12	56	8x12	62	10x13	67	10x16	70
10		10x13	97	10x16	105	10x16	110	10x20	120
22		10x16	157	10x20	165	13x13	169	13x13	169
						13x21	195	13x21	210
33		10x20	230	13x13	212	13x21	245	16x26	280
				13x21	238				
47		13x13	254	13x21	310	13x21	320	16x36	380
		13x21	290						
100		16x26	520	16x26	550	16x32	570	18x40	600
220		16x36	860	22x30	980	22x30	1070	22x50	1210
330		18x40	1210	22x35	1280	22x35	1320		
470		22x40	1320	22x50	1360	25x50	1500		
1000		22x50	1720						

Cap ( $\mu$ F)	V Item	400		450		500	
		D x L	R.C.	D x L	R.C.	D x L	R.C.
1.0		8x12	23	8x12	25		
2.2		10x13	35	10x13	36	10x13	32
3.3		10x13	45	10x16	50	10x16	45
4.7		10x16	55	10x20	62	10x20	55
10		13x21	85	13x21	93	13x21	65
22		16x26	160	16x26	172	16x26	135
33		16x32	195	16x36	210	16x36	155
47		16x36	275	18x40	285	18x40	235
100		22x35	500	22x40	520	22x40	450
220		25x50	970				

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