

# CKL series

- 105°C 5000 hours Long Life.
- Applicable to SMT process.
- RoHS Compliance.
- 105°C 5000小時長壽命產品。
- 適用於SMT製程。



## 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 ~ +105°C						
Rated Voltage Range 額定電壓範圍	6.3 ~ 50VDC						
Capacitance Range 靜電容量範圍	1~ 1000μF						
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)						
Dissipation Factor 散逸因素( tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C						
	Rated Voltage(V)	6.3	10	16	25	35	50
	tan δ(Max)	0.32	0.28	0.22	0.16	0.13	0.12
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
	Z(-25°C)/Z(20°C)	4	3	2	2	2	2
	Z(-40°C)/Z(20°C)	10	7	5	3	3	3
Load Life 負荷壽命	5000hours,with application of rated voltage at 105°C						
	Capacitance Change	Within ± 30% of Initial Value					
	tan δ	300% 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 105°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 ± 30% of Initial Value					
	tan δ	300% or less of Initial Specified Value					
	Leakage Current	Initial Specified Value or less					
Resistance to Soldering Heat 焊錫耐熱性	The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature they meet the characteristics requirements listed at right.				Capacitance Change	Within ± 10% of Initial Value	
					tan δ	Initial Specified Value	
					Leakage Current	Initial Specified Value or less	
Standards 參照標準	IEC 60384-4 (JIS C 5101-4)						

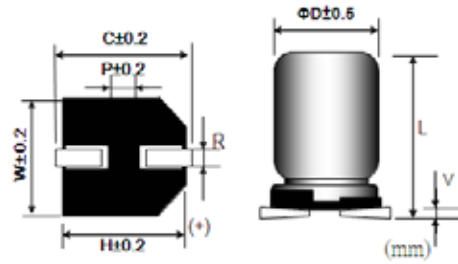
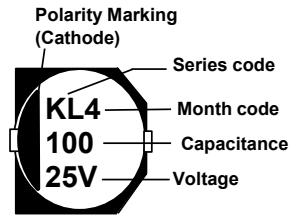
## Frequency Coefficient of Permissible Ripple Current

Frequency (Hz)	100 ≤ F < 1K	1K ≤ F < 10K	10K ≤ F < 100K	100K ≤ F
Capacitance (μF)				
4.7 ~ 33	1.00	1.20	1.30	1.45
>33	1.00	1.10	1.20	1.30

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**DIMENSIONS(mm)**

Chip Type



(mm)

Size	ΦD	L	W	H	C	R	P	Vmax
4x6	4.0	6±0.3	4.3	4.3	5.0	0.5~0.8	1.0	0.3
5x6	5.0	6±0.3	5.3	5.3	6.0	0.5~0.8	1.4	0.3
6.3x6	6.3	6±0.3	6.6	6.6	7.3	0.5~0.8	2.1	0.3
6.3x7.7	6.3	7.7±0.3	6.6	6.6	7.3	0.5~0.8	2.1	0.3
8x10	8.0	10±0.5	8.3	8.3	9.0	0.7~1.1	3.2	0.3
10x10	10.0	10±0.5	10.3	10.3	11.0	0.7~1.3	4.5	0.3

CKL

**STANDARD RATINGS**

D×L(mm) ; R.C.(mA rms) at 105°C 120Hz .

Cap (μF)	V	6.3		10		16		25		35		50	
		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
1.0												4x6	6.2
2.2												4x6	11
3.3										4x6	15	4x6	14
4.7						4x6	18	5x6	25	5x6	25	5x6	19
10				5x6	30	5x6	30	6.3x6	42	6.3x6	42	6.3x6	30
22				5x6	35	6.3x6	48	6.3x6	48	6.3x7.7	57	6.3x7.7	49
33	5x6	35	6.3x6	50	6.3x6	50	6.3x7.7	63	8x10	92	8x10	80	
47	5x6	36	6.3x7.7	81	6.3x7.7	81	8x10	116	10x10	150	8x10	95	
100	6.3x6	60	8x10	140	10x10	216	10x10	240	10x10	280	10x10	160	
220	6.3x7.7	101	10x10	240	10x10	300	10x10	375					
330	8x10	160	10x10	280	10x10	320							
470	10x10	260											
1000	10x10	260											