

# SER series

- 105°C 5000 hours high-temperature resistance, high reliability and long life. high ripple current.
- Suitable for office communicative or industrial equipments.
- RoHS Compliance
- 105°C 5000小時壽命，耐高溫、高信賴性、長壽命。
- 適用於辦公室通訊設備、工業設備。



## 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		-25 ~ +105°C	
Rated Voltage Range 額定電壓範圍	160 ~ 400VDC		450VDC	
Leakage Current 洩漏電流	$I \leq 0.03CV + 20 (\mu A)$ ( After 3 minutes application of DC rated voltage)			
Dissipation Factor 散逸因素( tan $\delta$ )	Measurement Frequency: 120Hz. Temperature: 20°C			
	Rated Voltage(V)	160 ~ 250	400 ~ 450	
	tan $\delta$ (Max)	0.15	0.20	
Low Temperature Stability 低溫特性 Impedance Ratio(Max) 阻抗比率(最大值)	Measurement Frequency: 120Hz.			
	Rated Voltage(V)	160 ~ 250	400	450
	Z(-25°C)/Z(20°C)	3	5	6
	Z(-40°C)/Z(20°C)	6	6	-
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 5,000 hours at 105°C.			
	Capacitance Change	Within ± 25% of Initial Value		
	tan $\delta$	200% of 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 ± 20% of Initial Value		
	tan $\delta$	200% of less of Initial Specified Value		
	Leakage Current	Initial Specified Value or less		
Standards 參照標準	IEC 60384-4 (JIS C 5101-4)			

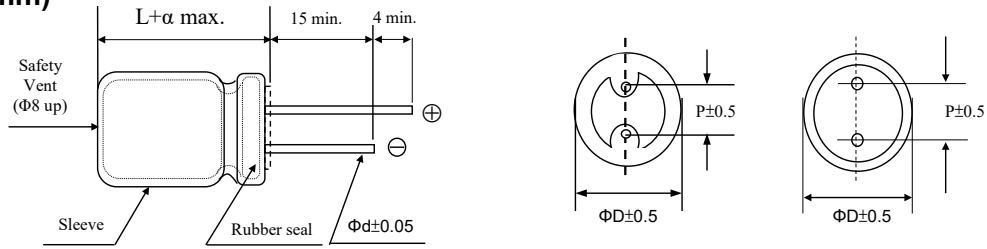
## Frequency Coefficient of Permissible Ripple Current

Capacitance ( $\mu F$ )	Frequency (Hz)			
	120	1K	10K	100K
22 ~ 82	1.00	1.25	1.50	1.75
100 ~ 470	1.00	1.15	1.30	1.40

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the rise when long life performance is required in actual use. The rms ripple current has to be reduced. lifetime with every 5°C

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## DIMENSIONS(mm)



$\Phi D$	10	12.5	14.5	16	18	20
P	5.0	5.0	7.5	7.5	7.5	10.0
$\Phi d$	0.6	0.6	0.8	0.8	0.8	0.8

$\alpha$	$(L < 20)$	1.5
	$(L \geq 20)$	2.0

## STANDARD RATINGS

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

Cap ( $\mu F$ )	V	160		200		250		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.
22			10x16	130					10x30	205	10x40	280
33			10x20	210					10x40	260	12.5x35	290
39			10x20	210					10x45	320	12.5x40	345
47			10x25	305				12.5x35	385	10x50	350	
										14.5x40	420	
56			10x25	305				12.5x40	420	14.5x40	420	
										16x30	477	
68			10x25	345	10x30	445	12.5x25	490	13x45	500	14.5x45	550
									14.5x30	500	18x31.5	550
82			10x30	445	10x35	485	12.5x30	550	14.5x40	545	16x40	650
											18x31.5	650
100			10x35	485	10x40	560	16x25	620	14.5x45	600	18x35.5	720
									18x31.5	600		
120			10x40	560	10x45	680	16x31.5	685	16x40	710	18x40	800
									18x35.5	710		
150			10x45	680	12.5x35	720	16x35.5	815	18x40	835	18x45	960
											20x40	1000
220			12.5x40	850	12.5x45	890	18x36	1020				
					14.5x35	890						
270			12.5x45	945	16x35	1030	18x40	1090				
330			16x35.5	1100	16x40	1200						
					18x31.5	1200						
470			18x40	1220	18x45	1305						

SER