

# SHG series

- 125°C,5000 hours long life product.(4000 hours:63V to 100V)
- Best-suited to smoothing circuits and control circuits for industrial equipment power supplies of which long life and high reliability are required.
- NC terminal added items are lineup for vibration resistance. (30G guaranteed: 20mm L or less)
- RoHS Compliance
- 125°C5000小时(4000 小时:63V to 100V)產品
- 適用於要求長壽命和高可靠性的工業設備電源的平滑電路和控制電路
- NC端子增加的項目為抗振系列。(保證30G : 20mm L 以下)



## 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 ~ +125°C									
Rated Voltage Range 額定電壓範圍	10~100VDC									
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)	10	16	25	35	50	63	80	100	
	tan δ (Max)	0.20	0.16	0.14	0.12	0.10	0.10	0.08	0.08	
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)	10	16	25	35	50	63	80	100	
	Z(-40°C) / Z(20°C)	4	3	3	3	3	3	3	3	
Load Life 負荷壽命	The following specifications shall be satisfied when the capacitors are restored to 20°Cafter subjected to DC voltage with the rated ripple current is applied for 5,000 hours(63~100V,4000 hours) at 125°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 1,000hours 125°C without voltage applied. Before the measurement. TheCapacitance 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								
Standards 參照標準	JIS C 5101-4-1 (IEC 60384)									

SHG

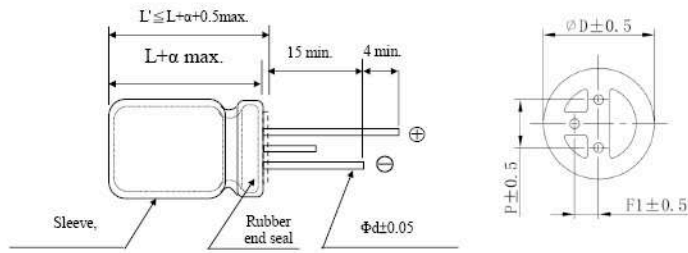
## Frequency Coefficient of Permissible Ripple Current

Capacitance (µF)	Frequency (Hz)			
	50~60	120	1K	10K~100K
220~330	0.55	0.65	0.85	1.00
390~1000	0.70	0.75	0.90	1.00
1200~8200	0.80	0.85	0.95	1.00

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

# SHG series

## DIMENSIONS(mm)



$\phi D$	12.5	16	18	20
P	5.0	7.5	7.5	10
F1	2.5	3.75	3.75	5
$\alpha$	2.0	2.0	2.0	2.0
$\phi d$	0.8	0.8	0.8	1.0

## STANDARD RATINGS

DxL(mm), R.C.(mA rms) at 125°C 100 KHz.IMP:( $\Omega$  max) at 20°C,100KHz.

Cap ( $\mu$ F)	V (Code) Item	10			16			25			35					
		D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP			
470	-	-	-	-	-	-	-	-	-	-	12.5x20	1830	0.055			
1000	12.5x15	1390	0.077	12.5x20	1830	0.052	12.5x20	1830	0.052	12.5x25	2410	0.042	12.5x25	3100	0.031	
				16x16	1940	0.057	16x16	1940	0.057	16x16	1940	0.057	16x16	2490	0.038	
				-	-	-	-	-	-	12.5x20	1830	0.052	12.5x30	2570	0.038	
1200	-	-	-	-	-	-	-	-	-	-	16x20	2290	0.042			
											12.5x35	2980	0.030			
1500	-	-	-	-	-	-	-	-	-	-	16x31.5	3160	0.026			
											18x25	3200	0.029			
1800	-	-	-	-	-	-	-	-	-	-	12.5x25	2410	0.042			
											16x20	2290	0.042			
2200	12.5x25	2410	0.042	12.5x25	2410	0.042	12.5x30	2570	0.038	16x31.5	3160	0.026				
				16x20	2280	0.042	16x25	3100	0.031	16x25	3100	0.031	16x35.5	3590	0.025	
				18x16	2170	0.053	18x20	2490	0.038	18x20	2490	0.038	18x25	3200	0.029	
2700	-	-	-	-	-	-	-	-	-	-	12.5x35	2980	0.030			
											16x25	3100	0.031	18x31.5	3410	0.023
											18x20	2490	0.038	20x25	3500	0.029
3300	16x25	3100	0.031	16x31.5	3160	0.026	12.5x40	3600	0.026	16x40	4300	0.022				
				18x20	2490	0.038	18x25	3200	0.029	16x31.5	3160	0.026	18x35.5	4000	0.022	
				-	-	-	-	-	-	20x30	4000	0.025	-	-	-	
3900	-	-	-	-	-	-	-	-	-	-	16x35.5	3590	0.025			
											18x25	3200	0.029			
4700	16x31.5	3160	0.026	16x35.5	3590	0.025	18x35.5	4200	0.022	18x40	4600	0.021				
				18x25	3200	0.029	18x31.5	3410	0.023	20x25	3500	0.029	20x35.5	4700	0.021	
5600	-	-	-	-	-	-	-	-	-	-	16x40	4300	0.022			
											18x35.5	4200	0.022	20x40	5100	0.020
											20x30	4000	0.025	-	-	-
6800	-	-	-	-	-	-	-	-	-	-	18x40	4600	0.021			
											20x35.5	4700	0.021	-	-	-
8200	-	-	-	-	-	-	-	-	-	-	-	-	-			

Cap ( $\mu$ F)	V (Code) Item	50			63			80			100		
		D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP	D x L	R.C.	IMP
220	-	-	-	-	-	-	-	-	-	-	16x20	1110	0.286
330	-	-	-	-	-	-	-	-	-	-	16x25	1460	0.165
470	12.5x20	1500	0.091	-	-	-	16x25	1500	0.151	16x35.5	2000	0.100	
560	-	-	-	-	-	-	18x25	1600	0.13	16x40	2200	0.090	
820	12.5x30	2150	0.049	16x31.5	1910	0.104	18x35.5	2180	0.081	18x40	2330	0.077	
1000	16x25	2620	0.04	16x35.5	2110	0.086	18x40	2470	0.066	-	-	-	
1800	18x31.5	3140	0.033	-	-	-	-	-	-	-	-	-	
2200	18x35.5	3510	0.029	-	-	-	-	-	-	-	-	-	

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