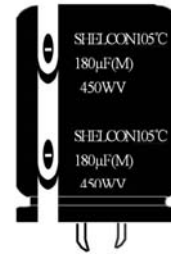


### SHS SERIES

### STH SERIES

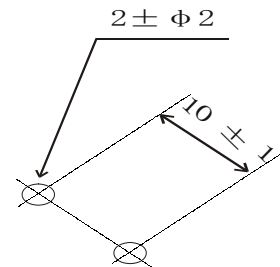
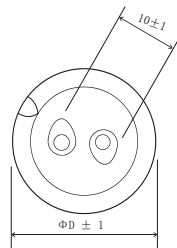
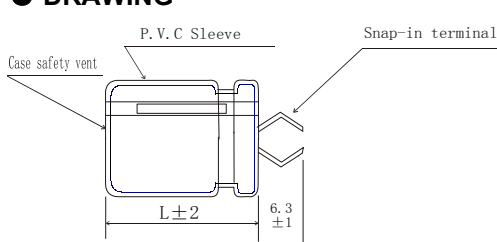
- EGS Series large size capacitors have "self-standing" terminals and can be directly soldered to printed circuit boards without any fixing clamps or adhesive agents. They are easily fixed to printed circuit boards due to the specially designed terminals.



#### ■ SPECIFICATIONS

Series	SHS	STH
Category	16V ~ 100V: -40 ~ +85°C	16V ~ 100V: -40 ~ +105°C
Temperature Range	160V ~ 450V: -25 ~ +85°C	160V ~ 450V: -25 ~ +105°C
Nominal Cap. Range	82 ~ 33,000µF	47 ~ 33,000µF
Capacitance Tolerance	-20% ~ +20% (-10 ~ +30%)	-20% ~ +20% (20°C, 120Hz)
Leakage Current	I=0.02 CV or 3(µA) whichever is smaller, after 5 min	
Dissipation Factor(tanδ) Low Temp. Impedance Stability at 120Hz	16 V ~ 100V : Dissipation factor at 20°C, 120Hz shall not exceed the values given in the table of Standard Ratings 160V ~ 450V : ≤ 0.15	
	W. V .	10 16 25 35 50 63 80 100 160 ~ 450
	Z(-25°C)/Z(+20°C)	4 3 3 2 2 4
Z(-40°C)/Z(+20°C)	15 10 8 6 5 -	
High Temp. Load Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated working voltage applied for 2,000 hours at 85°C (SHH, at 105°C) Capacitance Change ... ≤ ±15% of the initial value Dissipation Factor ... ≤ 200% of the initial specified value DC Leakage Current ... ≤ the initial specified value	
High Temp. Non-Load Test	The following specifications shall be satisfied when then capacitors are restored to 20°C after exposing them at the rated 85°C (SHH, at 105°C) for 1,000 hours without voltage applied to the capacitors for a minimum of 30 minutes, at least 24 hours but not more than 48 hours before the measurements. Capacitance Change ... ≤ ±20% of the initial value Dissipation factor ... ≤ 150% of the initial specified value DC Leakage Current ... ≤ the initial specified value	

#### ● DRAWING



PCB hole dimensions

### SHS SERIES

#### ● MULTIPLIER FOR RIPPLE CURRENT

(1) Frequency Coefficient

Cap.(µF)	Freq.(Hz)					
	(60) 50	120	500	1K	10K	
82~470	0.70	1.00	1.10	1.15	1.20	
560~1000	0.75	1.00	1.20	1.25	1.35	
1200~4700	0.80	1.00	1.25	1.35	1.40	
6800 up	0.85	1.00	1.30	1.40	1.45	

(2) Temperature Coefficient

Ambient Temperature (°C)	40	60	70	85
Coefficient	2.40	2.10	1.78	1.00



## STH series

Case Size Table

WV	16				25				35				50				63				80				100															
	SV				32				44				63				79				100				125															
ΦD	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35	22	25	30	35								
Cap.(μF)																																								
1000	Case Size L (mm)																25				30				25				30				25							
	Dissipation Factor																				0.25				0.20				0.20				0.20							
	Ripple Current (Arms) 120Hz at 105°C																				0.56				0.59				0.59				0.59							
1500																	25				30				25				35				(30)							
																	0.30				0.30				0.25				0.20				0.15							
																	0.68				0.73				0.72				0.77				0.77							
2200													25				30				25				35				30				25				50			
													0.35				0.30				0.30				0.25				0.25				0.25				0.20			
													0.71				0.76				0.75				0.81				0.81				0.93				0.85			
3300													25				30				25				35				30				25				50			
													0.40				0.35				0.30				0.25				0.25				0.25				0.20			
													0.87				0.93				0.92				0.99				0.99				1.09				1.05			
4700													30				25				35				(30)				25				45				30			
													0.50				0.40				0.40				0.35				0.35				0.30				0.30			
													0.93				1.00				0.98				1.05				1.05				1.16				1.11			
6800													35				30				25				(40)				(30)				25				50			
													0.50				0.50				0.40				0.40				0.35				0.35				0.30			
													1.27				1.26				1.27				1.27				1.46				1.34				1.53			
10000													45				(35)				25				45				(35)				30				50			
													0.50				0.50				0.40				0.40				0.35				0.35				0.35			
													1.43				1.30				1.43				1.38				1.57				1.46				1.59			
15000													45				(35)				30				45				(35)				30				50			
													0.50				0.50				0.40				0.40				0.35				0.35				2.03			
													1.84				1.78				1.84				1.78				2.03				1.96							
22000													45				35				40				40															
													0.50				0.50				2.36				2.38															
													2.36				2.27																							
33000																																								

Case size L in parentheses is not standard. On ordering, please ask us for detailed specifications.

Case Size Table

WV	160					180					200					250				
	SV					225					250					300				
ΦD	22	25	30	35	40	22	25	30	35	40	22	25	30	35	40	22	25	30	35	40
Cap.(μF)																				
150	Case Size L (mm)																			
	Ripple Current (Arms) 120Hz at 105°C																			
180																				
220											25					30				
											1.09					1.00				
											1.03					1.16				
270											25					35				
											0.86					1.03				
											1.16					1.08				
330											30					25				
											0.98					1.21				
											1.20					1.28				
390											30					25				
											1.10					1.09				
											1.39					1.31				
470											35					25				
											1.21					1.19				
											1.28					1.28				
560											40					30				
											1.40					1.40				
											1.47					1.48				
680											45					30				
											1.82					1.84				
											1.70					1.83				
820											50					40				
											1.86					1.79				
											1.94					1.79				
1000											45					30				
											2.15					1.96				
											2.15					2.09				
1200											50					30				
											2.46					2.29				
											2.46					2.29				
1500											45					36				
											2.80					2.72				
											2.91					2.72				
1800											40					40				
											3.09					3.09				

Case size L in parentheses is not standard. On ordering, please ask us for detailed specifications.

## STH series

Case Size Table

Cap (μF)	350					400					450				
	22	25	30	35	40	22	25	30	35	40	22	25	30	35	40
47	Case Size L (mm) →										25				
	Ripple Current (Arms) 120Hz at 105°C →										0.42				
68						25					30	25	25		
						0.52					0.55	0.54	0.71		
82	25					30	25				35	30	30	25	
	0.47					0.60	0.60				0.64	0.64	0.82	0.82	
100	30	25				30	25				40	35	35	30	
	0.56	0.55				0.67	0.66				0.74	0.74	0.96	0.96	
120	30	25				35	30	25			45	35	35	30	
	0.61	0.60				0.78	0.77	0.78			0.85	0.80	1.06	1.06	
150	35	(30)	25			40	35	30				45	40	36	
	0.72		0.72			0.91	0.91	0.92				1.00	1.22	1.24	
180	40	(35)	30			45	40	30	25			50	50	40	
	0.83		0.84			1.04	1.04	1.01	1.01			1.14	1.48	1.43	
220	50	(40)	(30)	25			45	35	30					45	
	1.01			0.93			1.21	1.18	1.18					1.64	
270		45	(35)	30			50	40	30						
		1.12		1.09			1.40	1.37	1.31						
330		50	(40)	30				45	36						
		1.29		1.20				1.57	1.52						
390			45	36					40						
			1.43	1.38					1.73						
470				40					45						
				1.58					1.97						
560				45											
				1.79											

Case size L in parentheses is not standard. On ordering, please ask us for detailed specifications.

## SHH SERIES

### ● MULTIPLIER FOR RIPPLE CURRENT

(1) Frequency Coefficient

Cap. (μF)	Freq. (Hz)				
	(60) 50	120	500	1K	10K
82~470	0.70	1.00	1.10	1.15	1.20
560~1000	0.75	1.00	1.20	1.25	1.35
1200~4700	0.80	1.00	1.25	1.35	1.40
6800 up	0.85	1.00	1.30	1.40	1.45

(2) Temperature Coefficient

Ambient Temperature (°C)	40	60	70	85	105
Coefficient	2.40	2.10	1.78	1.65	1.00