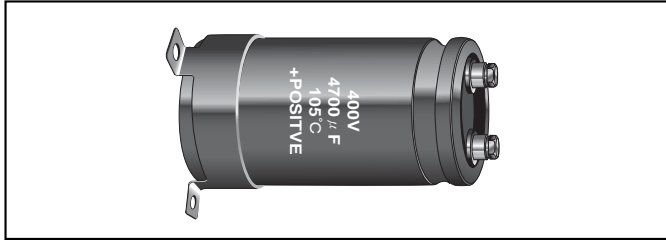




SWH Series



- Load life of 2000 hours at 105 °C
- Size may be selected
- High ripple current
- Used for computers, communication powers, high ripple circuit of electric vehicle, electric train, and general-purpose inverters

■ SPECIFICATIONS

Rated Voltage Range	10 ~ 100V	160 ~ 400V
Operating Temperature Range	-40 ~ +105°C	-25 ~ +105°C
Capacitance Tolerance	±20% (at 20 °C, 120Hz)	
Leakage Current	0.02CV or 5mA whichever is smaller (at 20°C, after 5 minutes) C: Nominal Capacitance(µF) V: Rated Voltage(V)	
Dissipation Factor (at 20°C,120Hz)	tan σ shall not exceed the values shown in the table of STANDARD RATINGS	
Temperature Stability (120Hz)	Capacitance Change 10-100VDC:Capacitance at-40°C shall not be less than 60% of the 20°C Value 160-400VDC:Capacitance at-25°C shall not be less than 70% of the 20°C Value	
Load Life (+105°C)	Time	2000 hours
	Capacitance Change	Within ±20% of the initial value
	Dissipation Factor	200% of the specified value or less
	Leakage Current	The specified value or less
Shelf Life (+105°C)	Time	500 hours
	Capacitance Change	Within ±20% of the initial value
	Dissipation Factor	200% of the specified value or less
	Leakage Current	The specified value or less

after test:U_R to be applied for 60 minutes, 24 to 48 hours before measurement.

■ DIMENSIONS

Unit: mm

øD	35	51	63.5	76	89
F	13	22	28	32	32

■ MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient

Frequency(Hz)	50, 60	120	300	1K	≥10K
Factor	0.8	1.0	1.10	1.20	1.50

■ Case Code (mm)

	A5	A6	A8	A10	A12	C8	C10	C12
øD:	35	35	35	35	35	50	50	50
L:	50	60	80	100	120	80	100	120

	D10	D12	E10	E12	E13	E14	F14
øD:	63.5	63.5	76	76	76	76	89
L:	100	120	100	120	130	140	140

STANDARD RATINGS

uF \ V	10			16			25			35			50			63			80				
2200																		A5	2.3	0.20	A5	2.4	0.15
2700																		A5	2.5	0.20	A5	2.7	0.15
3300																		A5	2.8	0.20	A6	3.0	0.15
3900													A5	2.8	0.20	A5	2.8	0.20	A6	3.4	0.15		
4700													A5	3.1	0.20	A5	3.1	0.20	A6	3.7	0.15		
5600													A5	3.3	0.20	A6	3.5	0.20	A8	4.5	0.15		
6800													A5	3.3	0.25	A6	3.9	0.20	A8	4.9	0.15		
8200											A5	3.3	0.30	A6	3.8	0.25	A8	4.7	0.25	A10	5.1	0.20	
10000											A5	3.6	0.30	A8	4.6	0.25	A8	4.7	0.25	A12	6.1	0.20	
12000							A5	3.7	0.35	A6	4.2	0.30	A8	5.1	0.25	A10	5.5	0.25	C8	6.7	0.20		
15000							A5	4.1	0.35	A6	4.7	0.30	A8	5.7	0.25	A12	6.6	0.25	C10	8.3	0.20		
18000				A5	4.2	0.40	A6	4.8	0.35	A8	5.7	0.30	A10	6.7	0.25	C8	7.4	0.25	C12	9.9	0.20		
22000				A5	4.7	0.40	A6	5.3	0.35	A8	6.3	0.30	A12	8.1	0.25	C10	9.0	0.25	C12	11.0	0.20		
27000	A5	4.9	0.45	A6	5.5	0.40	A8	6.4	0.35	A10	7.5	0.30	C8	9.1	0.25	C12	10.9	0.25	D10	11.4	0.25		
33000	A5	5.1	0.50	A6	5.7	0.45	A8	6.7	0.40	A12	9.0	0.30	C10	11.1	0.25	C12	12.0	0.25	E10	13.9	0.25		
39000	A6	5.9	0.50	A8	6.8	0.45	A10	7.8	0.40	C8	9.2	0.35	C12	13.1	0.25	D10	12.5	0.30	E10	13.9	0.30		
47000	A8	7.1	0.50	A8	7.1	0.50	A12	9.3	0.40	C10	11.2	0.35	C12	13.9	0.30	D12	14.9	0.30	E12	16.5	0.30		
56000	A8	7.1	0.60	A10	8.4	0.50	C8	9.7	0.45	C10	11.4	0.40	D10	13.9	0.35	E12	16.3	0.30	E12	18.1	0.30		
68000	A10	8.5	0.60	A10	8.8	0.55	C10	11.2	0.45	C12	13.6	0.40	D12	16.6	0.35	E12	18.4	0.35	E14	19.7	0.35		
82000	A10	8.9	0.65	C8	10.7	0.55	C10	11.2	0.50	D10	14.8	0.45	E12	18.9	0.40	E12	20.0	0.40	F14	22.1	0.40		
100000	A12	10.7	0.65	C8	10.8	0.65	C12	14.8	0.50	D12	17.6	0.45	E12	19.5	0.45	F14	20.0	0.50					
120000	C8	11.0	0.75	C10	13.1	0.65	D10	14.9	0.65	D12	17.6	0.55	E12	19.5	0.55	F14	21.8	0.60					
150000	C10	13.2	0.80	C12	15.3	0.70	D12	17.9	0.65	E12	19.8	0.65	F14	23.9	0.60								
180000	C12	15.7	0.80	D12	15.7	0.80	D12	17.9	0.80	E12	19.8	0.80	F14	23.9	0.75								
220000	C12	16.8	0.85	D12	19.2	0.85	E12	21.3	0.85	F14	23.4	0.80											
270000	D12	19.6	1.00	E12	19.6	1.00	E12	21.7	1.00	F14	25.5	1.00											
330000	D12	19.7	1.20	E12	21.1	1.30	E14	23.4	1.20														
390000	E12	21.3	1.50	E12	21.3	1.50	F14	24.9	1.50														
470000	E12	21.4	1.80	E14	24.2	1.60																	
560000	E14	23.6	2.00	F14	28.1	2.00																	
680000	F14	26.0	2.40	F14	28.5	2.40																	

tan σ (20°C, 120Hz)

Ripple Current(Arms) 105°C, 120Hz

Case Code

uF \ V	100			160			200			250			315			350			80		
180												A5	0.8	0.10	A5	0.8	0.10	A5	0.8	0.10	
220												A5	0.9	0.10	A5	0.9	0.10	A5	0.9	0.10	
270									A5	0.8	0.15	A5	1.0	0.10	A5	1.0	0.10	A5	1.0	0.10	
330							A5	0.9	0.15	A5	0.9	0.15	A5	1.1	0.10	A5	1.1	0.10	A6	1.2	0.10
390							A5	1.0	0.15	A5	1.0	0.15	A5	1.2	0.10	A6	1.3	0.10	A6	1.3	0.10
470							A5	1.1	0.15	A5	1.1	0.15	A6	1.4	0.10	A6	1.4	0.10	A8	1.4	0.10
560				A5	1.2	0.15	A5	1.2	0.15	A5	1.2	0.15	A6	1.5	0.10	A8	1.6	0.10	A8	1.4	0.15
680				A5	1.3	0.15	A5	1.3	0.15	A6	1.4	0.15	A8	1.7	0.10	A8	1.6	0.15	A10	1.7	0.15
820				A5	1.4	0.15	A5	1.4	0.15	A8	1.6	0.15	A8	1.7	0.15	A10	1.8	0.15	A12	2.0	0.15
1000				A5	1.6	0.15	A6	1.7	0.15	A8	1.6	0.15	A10	2.0	0.15	A12	2.2	0.15	C8	2.2	0.15
1200				A6	1.9	0.15	A6	1.9	0.15	A8	1.8	0.20	A12	2.4	0.15	C8	2.4	0.15	C10	2.7	0.15
1500				A6	2.1	0.15	A8	2.3	0.15	A10	2.1	0.20	C8	2.7	0.15	C10	3.0	0.15	C12	3.3	0.15
1800	A5	2.7	0.10	A8	2.5	0.15	A8	2.5	0.15	A12	2.5	0.20	C10	3.3	0.15	C12	3.6	0.15			0.15
2200	A5	3.0	0.10	A8	2.8	0.15	A10	3.0	0.15	C8	2.9	0.20	C12	4.0	0.15	C12	4.0	0.15	D10	4.2	0.15
2700	A6	3.5	0.10	A10	3.3	0.15	A12	3.6	0.15	C10	3.5	0.20	C12	4.4	0.15	D10	4.6	0.15			
3300	A8	4.2	0.10	A12	3.8	0.15	C8	4.1	0.15	C12	4.2	0.20	D10	5.1	0.15				D12	5.5	0.15
3900	A8	4.2	0.12	C8	3.8	0.20	C10	4.9	0.15	C12	4.6	0.20	D12	6.0	0.15	E12	6.7	0.15			
4700	A10	5.0	0.12	C10	4.6	0.20	D10	5.3	0.20	D12	5.7	0.20	E10	6.8	0.15				E13	7.6	0.15
5600	A10	5.4	0.12	C10	5.1	0.20	D10	5.8	0.20	D12	6.3	0.20	E12	8.0	0.15	E13	8.3	0.15	F14	9.4	0.15
6800	A12	5.8	0.15	C12	6.1	0.20	D12	6.9	0.20	E12	7.7	0.20	E13	9.2	0.15	E14	9.5	0.15	F14	10.4	0.15
8200	C8	6.4	0.15	D10	7.0	0.20	D12	7.6	0.20	E12	8.4	0.20	F14	11.4	0.15	F14	11.4	0.15			
10000	C10	7.8	0.15	D12	8.4	0.20	E12	9.3	0.20	F14	10.0	0.20	F14	12.6	0.15						
12000	C12	9.3	0.15	E10	9.4	0.20	E14	10.2	0.20	F14	11.9	0.20									
15000	C12	10.4	0.15	E12	11.4	0.20	F14	13.1	0.25												
18000	D12	10.4	0.20	E14	13.4	0.20	F14	13.1	0.25												
22000	D12	12.5	0.20	F14	14.5	0.25															
27000	E12	13.7	0.25	F14	16.0	0.25															
33000	E12	15.2	0.25																		
39000	E14	16.1	0.30																		
47000	F14	19.3	0.30																		
56000	F14	21.1	0.30																		

tan σ (20°C, 120Hz)

Ripple Current(Arms) 105°C, 120Hz

Case Code



SWH Series

TYPICAL CURVES

