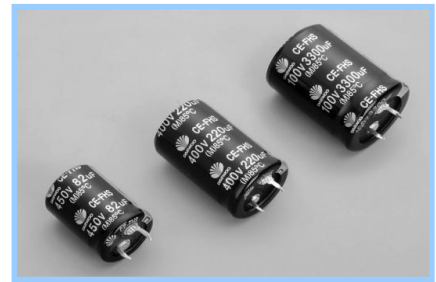


FHS SERIES

85°C, Standard, PCB terminal type

■ Features

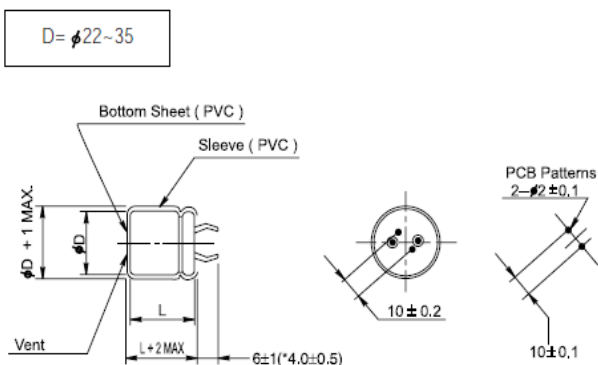
- 85°C, Standard, Snap-in terminal
- PCB Mounting
- High and stable quality
- Load life of 2,000 hours at 85°C



■ Specifications

Item	Performance Characteristics						
Operating temperature range	-40°C ~ +85°C			-25°C ~ +85°C			
Rated working voltage range	16V ~ 250V			315V ~ 500V			
Nominal capacitance range	47 μF ~ 47000 μF , ±20% (at 20°C, 120Hz)						
D.C Leakage current(at 20°C)	The following specifications shall be satisfied when the rated voltage is applied for the required time $I \leq 0.02CV$ or 2mA (3min), whichever is less. Where I = Leakage current(μA) C = Nominal capacitance(μF) V = Rated voltage (V)						
Tan δ (max., at 20°C, 120Hz)	W.V	16	25~35	50~80	100	160~400	450~500
	Tan δ	0.40	0.35	0.25	0.20	0.15	0.20
Characteristics at low temperature(max.) (impedance ratio at 120Hz)	W.V(V)	16	25~100	160~350	450~500		
	Z-25°C/Z+20°C	4	3	3	6		
	Z-40°C/Z+20°C	8	6	6	-		
Load life	After applying rated working voltage for 2,000 hours at +85°C and then listed being stabilized at +20°C, capacitors shall meet following limits.						
	Capacitance change	Within ± 20% of the initial measured value					
	Tan δ	≤ 200% of the initial specified value					
	Leakage current	≤ The initial specified value					
Shelf life	After storage for 1000hours at + 85°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet following limits.						
	Capacitance change	Within ± 20% of the initial measured value					
	Tan δ	≤ 200% of the initial specified value					
	Leakage current	≤ The initial specified value					

■ Dimensions



* Shorter terminal is available upon request

■ Ripple current coefficient

• Frequency

W.V(V) \ Freq(Hz)	50	120	1K	10K	100K
16~100	0.90	1.00	1.10	1.15	1.25
160~250	0.80	1.00	1.25	1.40	1.50
350~500	0.84	1.00	1.15	1.20	1.32

FHS SERIES

Dimensions & Maximum permissible ripple current

μF	V	16				25				35				50			
		Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35
2,200														22 x 25 1.85			
2,700														22 x 30 2.00	25 x 25 2.00		
3,300										22 x 25 2.10				22 x 30 2.13	25 x 25 2.14		
3,900										22 x 30 2.20	25 x 25 2.20			22 x 35 2.45	25 x 30 2.46	30 x 25 2.46	
4,700					22 x 25 2.10					22 x 30 2.35	25 x 25 2.35			22 x 40 2.81	25 x 35 2.85	30 x 25 2.75	
5,600					22 x 30 2.24	25 x 25 2.24				22 x 35 2.55	25 x 30 2.50	30 x 25 2.55		22 x 45 3.05	25 x 35 3.00	30 x 30 3.07	35 x 25 3.10
6,800					22 x 35 2.46	25 x 25 2.47				22 x 40 2.60	25 x 35 2.62	30 x 25 2.60		22 x 50 3.47	25 x 40 3.47	30 x 35 3.51	35 x 30 3.51
8,200	22 x 25 2.40				22 x 40 2.68	25 x 30 2.72	30 x 25 2.76			22 x 45 2.96	25 x 40 3.00	30 x 30 3.00			25 x 50 4.03	30 x 40 4.02	35 x 30 4.05
10,000	22 x 30 2.55				22 x 40 2.63	25 x 30 2.68	30 x 25 2.68			22 x 40 3.35	25 x 40 3.35	30 x 30 3.35	35 x 25 3.14			30 x 45 4.33	35 x 35 4.30
12,000	22 x 35 2.80	25 x 25 2.75			22 x 45 3.02	25 x 35 3.00	30 x 30 3.10	35 x 25 3.04			25 x 45 3.90	30 x 35 4.00	35 x 30 3.90			30 x 50 5.10	35 x 40 5.08
15,000	22 x 40 3.13	25 x 30 3.12	30 x 25 3.22		22 x 50 3.50	25 x 40 3.45	30 x 35 3.50	35 x 25 3.45				30 x 40 4.40	35 x 35 4.40				35 x 45 6.00
18,000	22 x 45 3.34	25 x 35 3.68	30 x 30 3.68			25 x 45 4.00	30 x 40 4.01	35 x 30 4.11				30 x 45 4.90	35 x 40 5.04				35 x 50 6.23
22,000	22 x 50 4.05	25 x 40 4.00	30 x 30 3.94			25 x 50 4.52	30 x 45 4.73	35 x 35 4.54								35 x 45 5.36	
27,000		25 x 45 4.42	30 x 35 4.52	35 x 30 4.52			30 x 50 5.28	35 x 40 5.30								35 x 50 6.23	
33,000			30 x 40 4.82	35 x 35 4.76				35 x 45 6.25									
39,000			30 x 45 5.38	35 x 35 5.32				35 x 50 7.00									
47,000			30 x 50 6.21	35 x 40 6.18													

μF	V	63				80				100							
		Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35				
820										22 x 25 1.58							
1,000						22 x 25 1.50				22 x 30 1.73	25 x 25 1.70						
1,200						22 x 30 1.65	25 x 25 1.65			22 x 35 1.89	25 x 25 1.90	30 x 25 1.89					
1,500	22 x 25 1.60					22 x 30 1.80	25 x 25 1.82			22 x 40 2.21	25 x 30 2.18	30 x 25 2.24					
1,800	22 x 30 1.70	25 x 25 1.70				22 x 35 2.20	25 x 30 2.22	30 x 25 2.20		22 x 45 2.43	25 x 35 2.40	30 x 25 2.42					
2,200	22 x 30 2.01	25 x 25 2.00				22 x 40 2.40	25 x 35 2.44	30 x 25 2.40		22 x 50 2.78	25 x 40 2.83	30 x 30 2.80	35 x 25 2.84				
2,700	22 x 35 2.23	25 x 30 2.23	30 x 25 2.23			22 x 45 2.54	25 x 40 2.56	30 x 30 2.54			25 x 45 3.17	30 x 35 3.19	35 x 30 3.31				
3,300	22 x 40 2.42	25 x 30 2.44	30 x 25 2.50			22 x 50 2.78	25 x 45 2.80	30 x 35 2.80	35 x 30 2.82		25 x 50 3.56	30 x 40 3.55	35 x 30 3.55				
3,900	22 x 45 2.63	25 x 35 2.65	30 x 30 2.70				25 x 50 3.00	30 x 40 3.00	35 x 30 3.04			30 x 45 4.22	35 x 35 4.17				
4,700	22 x 50 3.05	25 x 40 3.02	30 x 35 3.04	35 x 25 3.02				30 x 45 3.30	35 x 35 3.32			30 x 50 4.73	35 x 40 4.73				
5,600		25 x 45 3.43	30 x 35 3.41	35 x 25 3.44				30 x 50 3.50	35 x 40 3.53				35 x 45 5.25				
6,800		25 x 50 3.89	30 x 40 3.89	35 x 30 3.80					35 x 45 4.00								
8,200			30 x 45 4.33	35 x 35 4.30					35 x 50 4.50								
10,000			30 x 50 5.05	35 x 40 5.03													
12,000				35 x 45 5.77	Case size : ΦD x L(mm) Maximum permissible ripple current[A(rms) at 85°C, 120Hz]												

FHS SERIES

▣ Dimensions & Maximum permissible ripple current

μF \ V	160				180				200				250			
	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35
180													22 x 25 1.00			
220									22 x 25 1.05				22 x 30 1.20	25 x 25 1.20		
270					22 x 25 1.30				22 x 30 1.20	25 x 25 1.20			22 x 35 1.30	25 x 30 1.30	30 x 25 1.40	
330	22 x 25 1.37				22 x 30 1.45	25 x 25 1.45			22 x 30 1.30	25 x 25 1.32			22 x 40 1.40	25 x 30 1.37	30 x 25 1.43	
390	22 x 30 1.50	25 x 25 1.50			22 x 35 1.60	25 x 25 1.62			22 x 35 1.40	25 x 30 1.45	30 x 25 1.50		22 x 45 1.70	25 x 35 1.70	30 x 30 1.70	
470	22 x 30 1.79	25 x 25 1.79			22 x 35 1.98	25 x 30 2.00	30 x 25 1.98		22 x 40 1.75	25 x 35 1.75	30 x 25 1.78		22 x 50 1.95	25 x 40 1.95	30 x 30 1.95	
560	22 x 35 1.89	25 x 30 1.89	30 x 25 1.89		22 x 40 2.05	25 x 35 2.05	30 x 25 2.03		22 x 45 1.95	25 x 35 1.95	30 x 30 1.97			25 x 45 2.05	30 x 35 2.05	35 x 30 2.10
680	22 x 40 2.00	25 x 35 2.00	30 x 30 2.02		22 x 50 2.20	25 x 40 2.20	30 x 30 2.20			25 x 40 2.24	30 x 30 2.25			25 x 50 2.30	30 x 40 2.30	35 x 30 2.30
820	22 x 50 2.20	25 x 40 2.22	30 x 30 2.20			25 x 45 2.42	30 x 35 2.40	35 x 30 2.44		25 x 50 2.56	30 x 40 2.56	35 x 30 2.52			30 x 45 2.60	35 x 35 2.70
1,000		25 x 45 2.76	30 x 35 2.78	35 x 30 2.78		25 x 50 2.84	30 x 40 2.82	35 x 35 2.84					30 x 45 2.90	35 x 35 2.87		30 x 50 2.94
1,200		25 x 50 3.01	30 x 40 3.01	35 x 35 3.03			30 x 45 3.17	35 x 35 3.15					30 x 50 3.20	35 x 40 3.20		35 x 50 3.30
1,500			30 x 45 3.60	35 x 40 3.60			30 x 50 3.70	35 x 40 3.75						35 x 50 3.90		
1,800			30 x 50 4.03	35 x 40 4.03				35 x 50 4.12								
2,200				35 x 50 4.30												

μF \ V	350				400				450				500			
	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35	Φ22	Φ25	Φ30	Φ35
47									22 x 25 0.45							
56					22 x 25 0.50				22 x 25 0.50							
68					22 x 25 0.60				22 x 30 0.60	25 x 25 0.62			22 x 30 0.39			
82	22 x 25 0.60				22 x 30 0.62	25 x 25 0.62			22 x 30 0.63	25 x 25 0.65			22 x 35 0.53	25 x 30 0.58		
100	22 x 30 0.66	25 x 25 0.66			22 x 30 0.75	25 x 25 0.75			22 x 35 0.72	25 x 30 0.72	30 x 25 0.72		22 x 40 0.62	25 x 35 0.63		
120	22 x 30 0.80	25 x 25 0.80			22 x 35 0.90	25 x 30 0.90	30 x 25 0.92		22 x 40 0.88	25 x 35 0.90	30 x 25 0.90			25 x 40 0.83		
150	22 x 35 0.90	25 x 30 0.90	30 x 25 0.92		22 x 40 1.03	25 x 30 1.03	30 x 25 1.05		22 x 50 1.10	25 x 40 1.10	30 x 30 1.10			25 x 40 0.88	30 x 35 0.92	
180	22 x 40 1.00	25 x 35 1.00	30 x 25 1.02		22 x 45 1.14	25 x 35 1.14	30 x 30 1.15			25 x 45 1.20	30 x 35 1.20	35 x 30 1.20		25 x 50 0.94	30 x 35 1.00	
220	22 x 45 1.18	25 x 40 1.18	30 x 30 1.18		22 x 50 1.35	25 x 40 1.35	30 x 35 1.36	35 x 30 1.36		25 x 50 1.40	30 x 40 1.40	35 x 30 1.42			30 x 40 1.10	
270		25 x 45 1.29	30 x 35 1.30	35 x 30 1.30		25 x 45 1.50	30 x 40 1.50	35 x 30 1.50					30 x 45 1.60	35 x 35 1.60		30 x 50 1.38
330		25 x 50 1.50	30 x 40 1.50	35 x 30 1.50			30 x 45 1.65	35 x 35 1.65					30 x 50 1.80	35 x 40 1.82		35 x 40 1.45
390			30 x 45 1.75	35 x 35 1.75			30 x 50 1.92	35 x 40 1.92						35 x 45 2.00		35 x 45 1.70
470			30 x 50 2.00	35 x 40 2.00				35 x 45 2.24						35 x 50 2.40		35 x 50 2.10
560				35 x 45 2.25				35 x 50 2.35								35 x 60 2.25
680				35 x 50 2.50	Case size : ΦD x L(mm) Maximum permissible ripple current[A(rms) at 85°C, 120Hz]											35 x 60 2.50