

FUH SERIES

ALUMINUM ELECTROLYTIC CAPACITORS

105°C, Standard, PCB mounting

Features

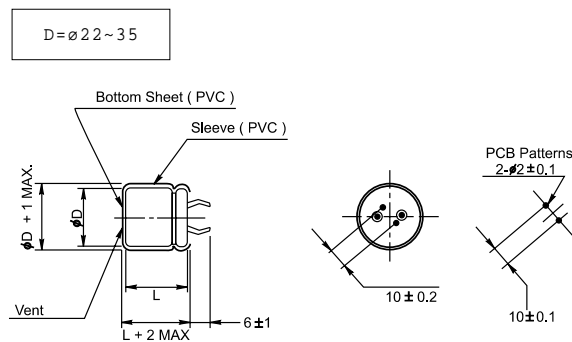
- 105°C Standard, snap-in terminal
- PCB Mounting
- High CV density
- Load life of 2000 hours at 105°C



Specifications

Item	Performance Characteristics					
Operating temperature range	10V ~ 250V: -40°C ~ +105°C		315 ~ 450V: -25°C ~ +105°C			
Rated working voltage range	10V ~ 450V					
Nominal capacitance range	47μF ~ 47000μF, ±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 ≤ 0.02CV or 2mA (5 min), 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 (V)	10~25	35~50	63~100	160~250	315~450
	47~2200μF	—	0.20	0.15	0.10	0.20
	2700~6800μF	0.30	0.25	0.20	—	—
	8200μF	0.35	0.30	0.25	—	—
	10000~33000μF 39000~47000μF	0.60	0.45	0.30	—	—
Characteristics at low temperature (max.) (impedance ratio at 120Hz)	W.V (V)	10~16	25~100	160~250	315~450	
	Z-25°C/Z20°C	4	3	3	8	
		12	6	6	—	
Load life	After applying rated working voltage for 2000 hours at +105°C and then being stabilized at +20°C, capacitors shall meet following limits.					
	Capacitance change	Within ± 20% of initial measured value				
	Tan δ	≤ 200% of initial specified value				
Shelf life	After storage for 1000 hours at +105°C with no voltage applied and then being stabilized at +20°C, capacitors shall meet following limits.					
	Capacitance change	Within ± 15% of initial measured value				
	Tan δ	≤ 150% of initial specified value				
	Leakage current	≤ Initial specified value				

Case sizes and Dimensions



Ripple current coefficient

Frequency

WV	Freq (Hz)	50	120	1K	10K	100K
10 ~ 100V		0.9	1.0	1.10	1.15	1.25
160 ~ 250V		0.8	1.0	1.25	1.40	1.50
315 ~ 450V		0.84	1.0	1.15	1.20	1.32

Temperature

Temperature	≤ 45 °C	60 °C	85 °C	105 °C
Factor	2.40	2.20	1.65	1.00

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STANDARD RATINGS OF FUH SERIES

Cap(μF)	W.V	10				16				25				35				
		22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	
3300														22x25				
														1.40				
3900														22x30	25x25			
														1.57	1.57			
4700										22x25				22x35	25x25			
										1.50				1.80	1.76			
5600										22x30	25x25			22x40	25x30	30x25		
										1.70	1.70			2.05	2.00	2.00		
6800						22x25				22x35	25x25			22x45	25x35	30x25		
						1.57				2.05	2.05			2.24	2.20	2.20		
8200						22x30	25x25			22x40	25x30	30x25		22x50	25x40	30x30		
						1.85	1.85			2.20	2.15	2.20		2.80	2.75	2.75		
10000		22x25				22x35	25x25			22x45	25x35	30x30			25x45	30x35	35x30	
		1.55				1.95	1.95			2.55	2.60	2.60			2.91	2.87	2.87	
12000		22x30	25x25			22x35	25x30	30x25		22x50	25x40	30x30			25x50	30x40	35x30	
		1.77	1.77			2.30	2.30	2.30		2.70	2.70	2.70			3.20	3.20	3.20	
15000		22x35	25x25			22x40	25x35	30x30			25x45	30x35	35x30			30x45	35x35	
		1.96	1.90			2.65	2.65	2.65			2.95	2.95	2.95			3.65	3.65	
18000		22x35	25x30	30x25		22x45	25x40	30x30			25x50	30x40	35x35			30x50	35x40	
		2.21	2.21	2.21		2.75	2.75	2.75			3.20	3.20	3.20			4.30	4.30	
22000		22x45	25x35	30x25			25x45	30x35	35x30			30x45	35x35				35x50	
		2.35	2.40	2.35			2.82	2.82	2.82			3.64	3.64				4.95	
27000			25x40	30x30			25x50	30x40	35x30				35x45					
			2.75	2.75			3.10	3.10	3.10				4.20					
33000			25x50	30x35	35x30			30x45	35x35				35x50					
			2.90	2.90	2.90			3.80	3.80				4.75					
39000				30x40	35x30			30x50	35x40									
				3.10	3.10			3.95	3.95									
47000				30x45	35x35				35x45									
				3.50	3.50				4.10									

Cap(μF)	W.V	50				63				80				100				
		22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	
560														22x25				
														1.05				
680														22x30	25x25			
														1.15	1.15			
820										22x25				22x30	25x25			
										1.05				1.35	1.35			
1000										22x30	25x25			22x35	25x30	30x25		
										1.15	1.15			1.50	1.50	1.50		
1200						22x25				22x30	25x25			22x40	25x35	30x25		
						1.10				1.32	1.32			1.70	1.70	1.70		
1500						22x30	25x25			22x35	25x30	30x25		22x45	25x40	30x30		
						1.20	1.20			1.55	1.55	1.55		2.05	2.05	2.05		
1800		22x25				22x30	25x25			22x40	25x30	30x25			25x45	30x35	35x30	
		1.20				1.45	1.45			1.80	1.80	1.80			2.50	2.50	2.50	
2200		22x30	25x25			22x35	25x30	30x25		22x45	25x35	30x30		25x50	30x40	35x30		
		1.35	1.35			1.65	1.65	1.65		2.03	2.03	2.03		2.70	2.70	2.70		
2700		22x30	25x25			22x40	25x35	30x25			25x45	30x35	35x30			30x45	35x35	
		1.60	1.60			1.83	1.83	1.83			2.25	2.25	2.25			2.85	2.85	
3300		22x35	25x30	30x25		22x45	25x40	30x30			25x50	30x40	35x30			30x50	35x40	
		1.85	1.85	1.85		2.07	2.10	2.10			2.40	2.40	2.40			3.00	3.00	
3900		22x40	25x35	30x25			25x45	30x35	35x30			30x45	35x35				35x45	
		1.95	1.95	1.95			2.50	2.50	2.50			2.70	2.70				3.20	
4700		22x45	25x40	30x30			25x50	30x40	35x30			30x50	35x40				35x50	
		2.25	2.30	2.30			2.79	2.79	2.79			3.10	3.10				3.40	
5600		22x50	25x45	30x35	35x30			30x45	35x35				35x45					
		2.65	2.65	2.65	2.65			3.15	3.15				3.50					
6800			25x50	30x40	35x30			30x50	35x40				35x50					
			2.80	2.80	2.80			3.50	3.50				3.80					
8200				30x45	35x35				35x45									
				3.50	3.50				3.90									
10000				30x50	35x40				35x50									
				3.80	3.80				4.40									
12000					35x45													
					4.05													

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Cap(μF)	W.V	160(2C)				180(2S)				200(2D)				250(2E)			
		22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø
150														22X25 0.90			
180														22X30 1.00	25X25 1.00		
220						22X25 0.80				22X25 0.80				22X35 1.10	25X25 1.10		
270		22X25 0.90				22X30 0.95	25X25 0.95			22X30 1.00	25X25 1.00			22X35 1.20	25X30 1.20	30X25 1.20	
330		22X30 1.05	25X25 1.05			22X30 1.07	25X25 1.07			22X35 1.20	25X30 1.20	30X25 1.20		22X45 1.25	25X35 1.25	30X25 1.25	
390		22X35 1.22	25X25 1.20			22X35 1.22	25X30 1.25	30X25 1.22		22X40 1.32	25X30 1.30	30X25 1.30		22X50 1.50	25X40 1.50	30X30 1.50	
470		22X40 1.30	25X30 1.35	30X25 1.30		22X40 1.35	25X35 1.35	30X25 1.35		22X45 1.45	25X35 1.45	30X30 1.45			25X45 1.75	30X35 1.75	35X30 1.75
560		22X45 1.45	25X35 1.45	30X25 1.45		22X45 1.45	25X35 1.45	30X30 1.45		22X50 1.55	25X40 1.55	30X30 1.55			25X50 2.00	30X40 2.00	35X30 2.00
680		22X50 1.65	25X40 1.65	30X30 1.65		22X50 1.60	25X40 1.62	30X30 1.62			25X50 1.75	30X35 1.75	35X30 1.75			30X45 2.10	35X35 2.10
820			25X45 1.95	30X35 1.95	35X30 2.00		25X50 1.80	30X35 1.80	35X30 1.85			30X40 2.10	35X35 2.10			30X50 2.25	35X40 2.25
1000			25X50 2.10	30X40 2.15	35X30 2.20			30X40 2.10	35X35 2.10			30X45 2.25	35X35 2.25				35X45 2.40
1200				30X45 2.35	35X35 2.30			30X45 2.35	35X40 2.35			30X50 2.65	35X40 2.65				
1500				30X50 2.70	35X40 2.65				35X45 2.70				35X50 3.10				
1800					35X45 3.10				35X50 3.15								

Cap(μF)	W.V	315(2F)				350(2V)				400(2G)				450(2W)			
		22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø	22ø	25ø	30ø	35ø
47														22X25 0.37			
56														22X30 0.40	25X25 0.40		
68										22X25 0.52				22X35 0.52	25X30 0.52		
82		22X25 0.53				22X25 0.54				22X30 0.58	25X25 0.58			22X40 0.60	25X35 0.60	30X25 0.60	
100		22X25 0.59				22X30 0.63	25X25 0.63			22X35 0.65	25X30 0.65			22X45 0.65	25X35 0.65	30X30 0.65	
120		22X30 0.68	25X25 0.68			22X35 0.72	25X25 0.72			22X40 0.74	25X35 0.75	30X25 0.74		22X50 0.74	25X40 0.74	30X30 0.74	
150		22X35 0.78	25X30 0.78	30X25 0.78		22X40 0.79	25X30 0.79	30X25 0.80		22X50 0.82	25X40 0.82	30X30 0.82			25X45 0.82	30X35 0.82	35X30 0.82
180		22X40 0.88	25X35 0.88	30X25 0.85		22X45 0.88	25X35 0.88	30X30 0.90			25X45 0.95	30X35 0.95	35X30 0.95		25X50 0.97	30X40 0.97	35X30 0.95
220		22X50 0.95	25X40 0.95	30X30 0.95		22X50 0.97	25X40 0.97	30X30 0.95			25X50 1.05	30X40 1.05	35X35 1.05			30X45 1.08	35X35 1.08
270			25X45 1.10	30X35 1.10	35X30 1.10		25X50 1.15	30X35 1.12	35X30 1.15			30X45 1.22	35X35 1.22			30X50 1.25	35X40 1.25
330			25X50 1.22	30X40 1.22	35X30 1.20			30X45 1.23	35X35 1.23			30X50 1.40	35X40 1.40				35X45 1.42
390				30X45 1.32	35X35 1.30			30X50 1.32	35X40 1.32				35X45 1.55				35X50 1.55
470				30X50 1.42	35X40 1.40				35X45 1.40				35X50 1.63				
560					35X50 1.52				35X50 1.52								

Max. permissible ripple current [A(rms) at 105°C, 120Hz]

FUH SERIES

PERFORMANCE CURVES

— FUH 16V 33000 μ F
 - - - FUH 100V 1200 μ F
 ····· FUH 200V 1500 μ F

