FAH series

Overview

The FAH series is constructed of metallized polypropylene film with polyester tape wrapping filled with resin and tinned copper wires.

Applications

- Suitable for small power AC output filter.
- UPS systems, solar inverter, motor drivers.

Features

- High ripple current
- Self-healing property
- Low losses
- High contact reliability
- High stability of capacitance under severe ambient condition, such as high temperature and high humidity

Specifications

Items	Characteristics
Application	AC Filtering
Reference Standard	IEC 61071
Climatic Category	40/85/56 IEC 60068-1
Operating Temperature Range	-40~ +105°C(+85°C observing voltage must be de-rating at 1.5% per °C)
Rated Voltage	160Vac ~ 450Vac
Capacitance Range	0.15μF ~ 40μF
Capacitance Tolerance	±5% or ±10% at +25°C
Dissipation Factor (DF)	≤0.002 (0.20%) at 1 KHz. C≤20μF at +25°C ≤0.003 (0.30%) at 1 KHz. C>20μF at +25°C
Test Voltage Between Terminals	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminal to Case	3.0KVac 50 Hz for 10s at +25°C
Insulation Resistance	IR x C≥30,000 Seconds at 100VDC 1 minute at +25°C
Life Expectancy	100,000 hours at Un @ Hot-Spot temperature T=+70°C
Protection	Polyester wrapping with epoxy resin fill
Installation	Any position
Packaging	Packed in cardboard boxes with protection for the terminals
RoHS Compliant	Compliant with the restricted substance requirements of Directive 2011/65/EU
Storage Conditions	Storage time: ≤ 24 months from the date marked on the label package Temperature and relative humidity should be -10°C ~ +40°C and not more than 75%RH RH ≤ 85% for 30 days randomly distributed throughout the year
Humidity Test	Test conditions & performance:
	Temperature: +40°C ±2°C Relative humidity(RH) :93% ±2%
	Test duration : 56 days
	Capacitance change :≤ ±5% DF change (△tgδ):≤50 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
Endurance Test	Test conditions & performance:
	Temperature: +85°C±2°C Voltage applied:1.25 X V_R (a.c.)
	Test duration : 1000 hours
	Capacitance change : ≤±5% DF change (△tgδ):≤40 X 10^{-4} at 1KHz
	Insulation resistance: ≥50% of initial limit
THB Test (Damp heat test with loading)	Test conditions & performance:
	Temperature: +85°C±2°C Relative humidity(RH) :85% ±2%
	Loading Voltage: Rated voltage (50Hz/60Hz)
	Test duration : 500 hours
	Capacitance change : ≤±10%

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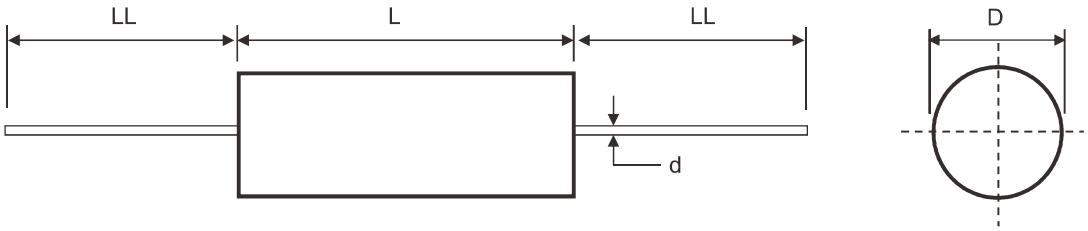
Outline Drawing



Dimensions - Lead wires

D	L	d	LL
(mm) max	(mm) max	(mm) ±0.1	(mm) min
11.0	22	0.8	35
9.5	28	0.8	35
10 ~ 13	34	0.8	35
13.5 ~ 20.5	34	1.0	35
18 ~ 22.5	44	1.0	35
23.5 ~ 33	44	1.2	35
15 ~ 27	48	1.0	35
28 ~ 35	58	1.2	35

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Technical data

Vac	Cap	Dimensions		Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead	Part Number
	Value	D	L	10KHz	Current	Typical		Res		wire	
	μF	mm max	mm max	70°C A	A	mΩ	nH	°C/W	V/us	mm	
160	1.0	10.0	34.0	6.0	60.0	8.7	12	47.9	60	0.8	FAH16K105034XLLN
160	2.2	11.5	34.0	6.0	66.0	14.2	20	29.3	30	0.8	FAH16K225034XLLN
160	2.5	12.0	34.0	7.0	75.0	12.7	20	24.1	30	0.8	FAH16K255034XLLN
160	3.0	13.5	34.0	8.0	90.0	10.7	20	21.9	30	1.0	FAH16K305034XLLN
160	3.3	14.0	34.0	9.0	99.0	9.8	20	18.9	30	1.0	FAH16K335034XLLN
160	4.0	15.5	34.0	9.0	120.0	8.3	20	22.3	30	1.0	FAH16K405034XLLN
160	5.0	17.0	34.0	9.0	150.0	7.0	20	26.5	30	1.0	FAH16K505034XLLN
160	6.8	19.5	34.0	9.0	204.0	5.7	20	32.5	30	1.0	FAH16K685034XLLN
160	8.0	18.0	48.0	9.0	160.0	6.9	25	26.8	20	1.0	FAH16K805048XLLN
160	10.0	20.0	48.0	9.0	200.0	12.4	25	14.9	20	1.0	FAH16K106048XLLN
160	15.0	24.0	48.0	12.0	300.0	5.1	25	20.4	20	1.2	FAH16K156048XLLN
160	18.0	26.0	48.0	12.0	360.0	4.4	25	23.7	20	1.2	FAH16K186048XLLN
160	20.0	28.0	48.0	12.0	400.0	10.7	25	9.7	20	1.2	FAH16K206048XLLN
160	25.0	31.0	48.0	12.0	500.0	4.0	25	26.0	20	1.2	FAH16K256048XLLN
160	30.0	29.0	58.0	12.0	450.0	5.2	30	20.0	15	1.2	FAH16K306048XLLN
160	35.0	33.5	58.0	12.0	525.0	4.6	30	22.6	15	1.2	FAH16K356048XLLN
160	40.0	36.0	58.0	12.0	600.0	8.8	30	11.8	15	1.2	FAH16K406048XLLN
250	0.47	9.5	34.0	6.0	28.2	14.4	15	28.9	60	0.8	FAH25K474034XLLN
250	0.68	10.0	34.0	6.0	30.6	15.2	20	27.4	45	0.8	FAH25K684034XLLN
250	0.82	11.0	34.0	6.5	36.9	13.8	20	26.5	45	0.8	FAH25K824034XLLN
250	1.0	12.0	34.0	7.0	45.0	10.8	20	28.3	45	0.8	FAH25K105034XLLN
250	1.5	14.5	34.0	9.0	67.5	75.0	20	24.7	45	1.0	FAH25K155034XLLN
250	2.0	16.5	34.0	9.0	90.0	6.1	20	30.4	45	1.0	FAH25K205034XLLN
250	2.2	17.5	34.0	9.0	99.0	5.7	20	32.5	45	1.0	FAH25K225034XLLN
250	2.5	18.5	34.0	9.0	112.5	5.2	20	35.6	45	1.0	FAH25K255034XLLN
250	3.0	20.0	34.0	9.0	135.0	4.7	20	39.4	45	1.0	FAH25K305034XLLN
250	3.3	18.0	48.0	9.0	99.0	6.8	25	27.2	30	1.0	FAH25K335048XLLN
250	4.0	19.5	48.0	9.0	120.0	6.0	25	30.9	30	1.0	FAH25K405048XLLN
250	4.7	21.0	48.0	9.0	141.0	5.3	25	34.9	30	1.0	FAH25K475048XLLN
250	5.0	21.5	48.0	9.0	150.0	5.2	25	35.6	30	1.0	FAH25K505048XLLN
250	6.8	25.0	48.0	12.0	204.0	4.2	25	24.8	30	1.2	FAH25K685048XLLN
250	10.0	30.0	48.0	12.0	300.0	3.5	25	29.8	30	1.2	FAH25K106048XLLN
250	15.0	31.5	58.0	12.0	300.0	6.2	30	16.8	20	1.2	FAH25K156058XLLN
250	20.0	35.0	58.0	12.0	400.0	5.2	30	20	20	1.2	FAH25K206058XLLN
330	0.47	11.0	34.0	6.0	28.2	17.0	20	24.5	60	0.8	FAH33K474034XLLN
330	0.68	13.0	34.0	7.0	40.8	12.2	20	25.1	60	0.8	FAH33K684034XLLN
330	1.0	15.5	34.0	9.0	60.0	8.6	20	21.5	60	1.0	FAH33K105034XLLN
330	2.0	18.5	48.0	9.0	80.0	8.2	25	22.6	40	1.0	FAH33K205048XLLN
330	2.2	19.5	48.0	9.0	88.0	6.8	25	27.2	40	1.0	FAH33K225048XLLN
330	3.0	22.5	48.0	9.0	120.0	6.2	25	29.9	40	1.0	FAH33K305048XLLN
330	3.3	23.5	48.0	12.0	132.0	5.6	25	18.6	40	1.2	FAH33K335048XLLN
330	4.0	25.5	48.0	12.0	160.0	4.9	25	21.3	40	1.2	FAH33K405048XLLN
330	4.7	27.5	48.0	12.0	188.0	4.6	25	22.6	40	1.2	FAH33K475048XLLN
330	5.0	28.5	48.0	12.0	200.0	4.4	25	23.7	40	1.2	FAH33K505048XLLN
330	6.8	28.5	58.0	12.0	204.0	8.8	30	11.8	30	1.2	FAH33K685058XLLN
330	10.0	34.5	58.0	12.0	300.0	6.9	30	15.1	30	1.2	FAH33K106058XLLN

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Technical data

Vac	Cap	Dimensions		Irms	Peak	ESR_{10K}	ESL	Thermal	dv/dt	Lead	Part Number
	Value	D	L	10KHz	Current	Typical		Res		wire	
	μF	mm max	mm max	70°C A	A	mΩ	nH	°C/W	V/us	mm	
400	0.47	14.5	34.0	8.0	37.6	12.4	20	18.9	80	1.0	FAH40K474034XLLN
400	0.68	17.0	34.0	9.0	54.4	9.1	20	20.4	80	1.0	FAH40K684034XLLN
400	1.00	20.5	34.0	9.0	80	6.8	20	27.2	80	1.0	FAH40K105034XLLN
400	1.50	20.5	48.0	9.0	90	8.3	25	22.3	60	1.0	FAH40K155048XLLN
400	2.00	23.5	48.0	12.0	120	6.5	25	16	60	1.2	FAH40K205048XLLN
400	2.20	24.5	48.0	12.0	132	6.1	25	17.1	60	1.2	FAH40K225048XLLN
400	3.00	28.5	48.0	12.0	180	5.1	25	20.4	60	1.2	FAH40K305048XLLN
400	3.30	30.0	48.0	12.0	198	4.8	25	21.7	60	1.2	FAH40K335048XLLN
400	4.00	33.0	48.0	12.0	240	4.6	25	22.6	60	1.2	FAH40K405048XLLN
400	4.70	29.5	58.0	12.0	188	10.3	30	10.1	40	1.2	FAH40K475058XLLN
400	5.00	30.5	58.0	12.0	200	9.8	30	10.6	40	1.2	FAH40K505058XLLN
400	6.80	35.0	58.0	12.0	272	7.9	30	13.2	40	1.2	FAH40K685058XLLN
450	0.15	10.0	34.0	5.0	31.5	18.9	20	31.7	210	0.8	FAH45K154034XLLN
450	0.22	12.0	34.0	7.0	46.2	13.4	20	22.8	210	0.8	FAH45K224034XLLN
450	0.33	14.5	34.0	9.0	69.3	9.2	20	20.1	210	1.0	FAH45K334034XLLN
450	0.47	17.0	34.0	9.0	98.7	7.0	20	26.5	210	1.0	FAH45K474034XLLN
450	0.68	20.5	34.0	9.0	142.8	5.5	20	33.7	210	1.0	FAH45K684034XLLN
450	1.00	20.5	48.0	9.0	140	6.1	25	30.4	140	1.0	FAH45K105048XLLN
450	1.50	24.5	48.0	12.0	210	4.6	25	22.6	140	1.2	FAH45K155048XLLN
450	2.00	28.5	48.0	12.0	280	4.0	25	26	140	1.2	FAH45K205048XLLN
450	2.20	29.5	48.0	12.0	308	3.9	25	26.7	140	1.2	FAH45K225048XLLN
450	2.50	31.5	48.0	12.0	350	3.8	25	27.4	140	1.2	FAH45K255048XLLN
450	3.00	28.0	58.0	12.0	270	4.7	30	22.2	90	1.2	FAH45K305058XLLN
450	3.30	29.5	58.0	12.0	297	4.6	30	22.6	90	1.2	FAH45K335058XLLN
450	4.00	32.5	58.0	12.0	360	4.2	30	24.8	90	1.2	FAH45K405058XLLN

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