

AC Feedthrough Filters - Class Y2

FFA Series



UL Pending
CSA Pending

FFA Series

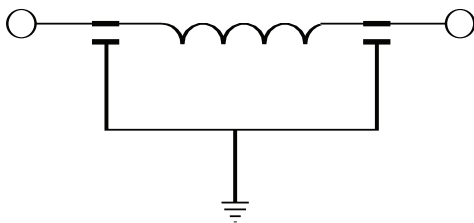
The new FFA series features a range of AC feedthrough filters in current ratings from 10 to 300 amps. The FFA series is designed to meet the very stringent safety requirements of EN133200 class Y2 including the 5000V pulse test.

Filter Options / Specifications

Filter ID	Value (nF)	Inductance (nH)	Max. Leakage Current (mA)	DC Resistance (MΩ) Max.
BA	2 x 4.7	70	0.9	6
CA	2 x 10	70	1.9	4
CE	2 x 10	140	1.9	7
DG	2 x 22	170	4.2	4
DH	2 x 22	180	4.2	4
GB	2 x 47	80	8.9	3
GJ	2 x 47	210	8.9	9
HC	2 x 100	90	19	2
HD	2 x 100	120	19	1
HF	2 x 100	160	19	<1
HN	2 x 100	250	19	6
JK	2 x 150	240	29	3
NP	2 x 470	*330	89	<2
PP	2 x 1000	330	188	<2

*240 for 100 Amp Version

Schematic



Specifications

Rated Voltage (max): 250 VAC 50/60 Hz
Rated Current: 10 to 300 amps
Test Voltage (two seconds): 5000 VDC
Capacitor Class (EN133200): Designed to meet Y2
Pulse Test (EN133200): 5000V Peak

Insulation Resistance (within 1 minute):
 For C < 0.33μF, R > 15000MΩ
 For C > 0.33μF, RC(MΩ*μF) > 5000s

Operating Ambient Temperature Range (@ rated current I_r):
 10 to 100 Amps: -40°C to +60°C
 200 Amps: -40°C to +50°C
 250 & 300 Amps: -40°C to +40°C

Category Temperature Range: -40°C to +85°C

Climatic Category: 40/85/21

MTBF: Typically >5 million hours

Insulating Materials Flammability Rating: UL 94V-0

Typical insertion loss in dB:
 Line-to-ground in 50 ohm circuit

Filter ID	Frequency - MHz							
	0.01	0.03	0.1	0.3	1	10	100	1000
BA	-	-	-	-	4	18	80	100
CA	-	-	2	4	10	22	65	100
CE	-	-	2	3	10	28	65	100
DG	-	-	3	7	15	40	72	100
DH	-	-	3	7	15	40	72	100
GB	-	-	6	11	21	50	85	100
GJ	-	-	5	12	21	60	90	100
HC	-	2	10	18	27	60	100	100
HD	-	2	10	18	27	60	100	100
HF	-	2	10	18	27	60	100	100
HN	2	4	10	17	24	75	90	100
JK	3	8	15	21	28	72	100	100
NP	7	15	24	31	44	80	100	100
PP	12	20	29	33	56	80	100	100

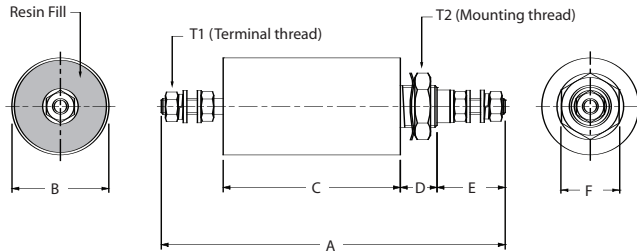
Current derating above ambient:

10-100 Amp: For temperature, $\theta I_{\theta} = I_R \frac{(85-\theta)}{25}$
 200 Amp: For temperature, $\theta I_{\theta} = I_R \frac{(85-\theta)}{35}$
 250 & 300 Amp: For temperature, $\theta I_{\theta} = I_R \frac{(85-\theta)}{45}$

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Case Style



T1 - Terminal Thread

Part Number(s)	Thread	Torque (in.-lb.)
10FFA6-BA/CE/GJ	M3	4
16FFA6-CA/DG-HN 32FFA6-CA/DH/HN	M4	11
63FFA6-GB/JK/NP	M6	22
100FFA6-HC/NP/PP	M8	44
200FFA6-HD/NP/PP	M10	70
250FFA6-HF/NP/PP	M12	97
300FFA6-HF/NP/PP	M16	177

T2 - Mounting Thread

Part Number(s)	Thread	Torque (in.-lb.)
10FFA6-BA/CE/GJ	M12 x 1	35
16FFA6-CA, 32FFA6-CA		
16FFA6-DG/HN 32FFA6-DH/HN	M16 x 1	62
63FFA6-GB		
63FFA6-JK, 100FFA6-HC	M20 x 1	89
100FFA6-NP, 200FFA6-HD	M24 x 1	124
63FFA6-NP	M27 x 1.5	142
100FFA6-PP		
200FFA6-NP/PP		
250FFA6-HF/NP/PP 300FFA6-HF/NP/PP	M32 x 1.5	212

Case Dimensions

Part No.	A ±.04	B ±.02	C ±.08	D ±.04	E ±.08	F
	1	0.5	2	1	2	
10FFA6-BA	3.86 98	0.79 20	2.24 57	0.47 12	0.63 16	0.67 17
16FFA6-CA	4.17	0.79	2.40	0.47	0.71	0.67
32FFA6-CA	106	20	61	12	18	17
63FFA6-GB	6.30 160	0.98 25	3.70 94	0.55 14	1.02 26	0.87 22
100FFA6-HC	7.24 184	1.26 32	4.09 104	0.63 16	1.26 32	1.06 27
200FFA6-HD	8.23 209	1.50 38	4.41 112	0.75 19	1.57 40	1.06 27
250FFA6-HF	7.87	2.13	3.66	0.75	1.81	1.57
300FFA6-HF	200	54	93	19	46	40
10FFA6-CE	4.21 107	0.79 20	2.60 66	0.47 12	0.63 16	0.67 17
16FFA6-DG	4.57	0.98	2.72	0.55	0.71	0.87
32FFA6-DH	116	25	69	14	18	22
63FFA6-JK	6.81 173	1.26 32	4.13 105	0.63 16	1.02 26	1.06 27
100FFA6-NP	8.98 228	1.50 38	5.71 145	0.75 19	1.26 32	1.06 27
200FFA6-NP	9.57 243	2.13 54	5.75 146	0.75 19	1.57 40	1.57 40
250FFA6-NP	10.51	2.13	6.30	0.75	1.81	1.57
300FFA6-NP	267	54	160	19	46	40
10FFA6-GJ	5.51 140	0.79 20	3.90 99	0.47 12	0.63 16	0.67 17
16FFA6-HN	5.83	0.98	3.98	0.55	0.71	0.87
32FFA6-HN	148	25	101	14	18	22
63FFA6-NP	7.44 189	2.13 54	4.65 118	0.75 19	1.02 26	1.57 40
100FFA6-PP	8.94 227	2.13 54	5.67 144	0.75 19	1.26 32	1.57 40
200FFA6-PP	9.57 243	2.13 54	5.75 146	0.75 19	1.57 40	1.57 40
250FFA6-PP	10.51	2.13	6.30	0.75	1.81	1.57
300FFA6-PP	267	54	160	19	46	40

Part Numbers

Standard Performance	High Performance	Extended Performance
10FFA6-BA	10FFA6-CE	10FFA6-GJ
16FFA6-CA	16FFA6-DG	16FFA6-HN
32FFA6-CA	32FFA6-DH	32FFA6-HN
63FFA6-GB	63FFA6-JK	63FFA6-NP
100FFA6-HC	100FFA6-NP	100FFA6-PP
200FFA6-HD	200FFA6-NP	200FFA6-PP
250FFA6-HF	250FFA6-NP	250FFA6-PP
300FFA6-HF	300FFA6-NP	300FFA6-PP