

AC Feedthrough Filters - Class Y2

FFA Series



Component Recognized by
UL to US and Canadian Requirements

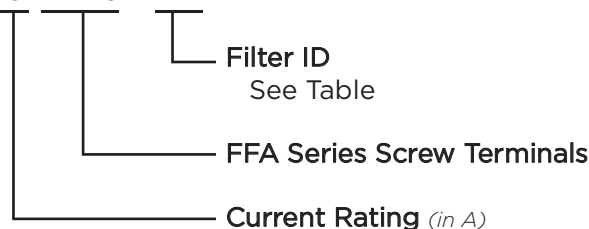


FFA Series

- AC feedthrough filters
- Current Ratings from 10 to 300A
- Designed to meet the very stringent safety requirements of EN133200 class Y2 including the 5000V pulse test
- Custom versions available

Ordering Information

10 FFA6 - BA



Filter Options / Specifications

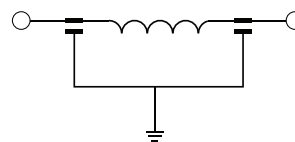
Filter ID	Value (nF)	Inductance (nH)	Max. Leakage Current (mA)*	DC Resistance (mΩ) Max.
BA	2 x 4.7	70	0.9	6
CA	2 x 10	70	1.9	4
CE	2 x 10	140	1.9	7
DG	2 x 22	170	4.2	4
DH	2 x 22	180	4.2	4
GB	2 x 47	80	8.9	3
GJ	2 x 47	210	8.9	9
HC	2 x 100	90	19	2
HD	2 x 100	120	19	1
HF	2 x 100	160	19	< 1
HN	2 x 100	250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

*@ 250 VAC 60 Hz
**240 for 100A Version

Specifications

- Rated Voltage (max):** 250 VAC
- Operating Frequency:** 50/60 Hz
- Rated Current:** 10 to 300A
- 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 (at rated current I_r):**
10 to 100A: -40°C to +60°C
200A: -40°C to +50°C
250 & 300A: -40°C to +40°C
- Category Temperature Range:** -40°C to +85°C
- Current Derating Above Ambient:**
10-100A: For temperature, θ I_θ = IR √(85-θ)/25
200A: For temperature, θ I_θ = IR √(85-θ)/35
250 & 300A: For temp., θ I_θ = IR √(85-θ)/45
- Climatic Category:** 40/85/21
- MTBF:** > 5 million hours typical
- Insulating Materials Flammability Rating:** UL94V-0
- Case & Terminal Material:** Nickel Plated Brass

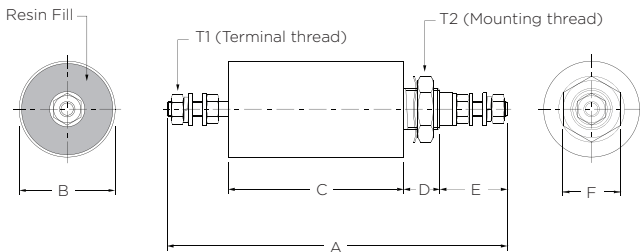
Electrical Schematic



AC Feedthrough Filters - Class Y2 *(continued)*

FFA Series

Case Style



T1 - Terminal Thread

Part No.	Thread	Torque max. in.lb.
10FFA6-BA/CE/CJ	M3	4
16FFA6-CA/DG/HN	M4	11
32FFA6-CA/DH/HN		
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 No.	Thread	Torque max. in.lb.
10FFA6-BA/CE/CJ		
16FFA6-CA	M12 x 1	35
32FFA6-CA		
16FFA6-DG/HN		
32FFA6-DH/HN	M16 x 1	62
63FFA6-GB		
63FFA6-JK	M20 x 1	89
100FFA6-HC		
100FFA6-NP	M24 x 1	124
200FFA6-HD		
63FFA6-NP		
100FFA6-PP	M27 x 1.5	142
200FFA6-NP/PP		
250FFA6-HF/NP/PP	M32 x 1.5	212
300FFA6-HF/NP/PP		

Case Dimensions

Part No.	A	B	C	D	E	F
	$\frac{\pm .04}{1}$	$\frac{\pm .02}{0.5}$	$\frac{\pm .08}{2}$	$\frac{\pm .04}{1}$	$\frac{\pm .08}{2}$	(max)
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
300FFA6-HF	7.87 200	2.13 54	3.66 93	0.75 19	1.81 46	1.57 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-HN	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	6.3	0.75	1.81	1.57
300FFA6-PP	267	54	160	19	46	40

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Available 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

Performance Data

Typical Insertion Loss – 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	