FFA Series

c UL us

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

- BA: Filter ID (See Table)
- FFA6: FFA Series Screw Terminals
- 10: Current Rating *(in amperes)*

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 100 amp Version

Specifications

Rated Voltage (max): 250 VAC

Rated 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:
10-100 amp: For temperature, θ $I_\theta = IR\sqrt{(85-\theta)/25}$
200 amp: For temperature, θ $I_\theta = IR\sqrt{(85-\theta)/35}$
250 & 300 amp: For temp., θ $I_\theta = IR\sqrt{(85-\theta)/45}$

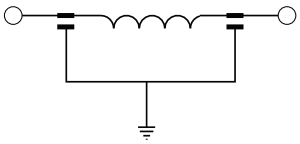
Climatic Category: 40/85/21

MTBF: > 5 million hours typical

Insulating Materials Flammability Rating: UL94V-0

Case & Terminal Material: Nickel Plated Brass

Electrical Schematic

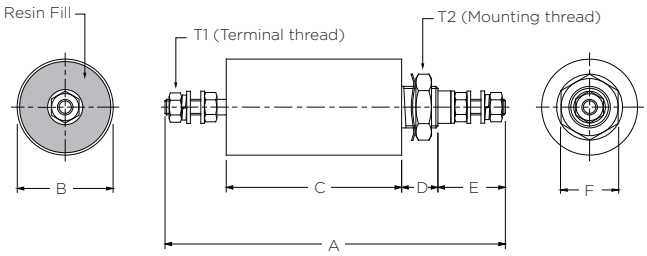


Dimensions are in inches and millimeters unless otherwise specified. Values in italics are metric equivalents. Dimensions are shown for reference purposes only. Specifications subject to change.

USA Cust. Svc.: 1-800-468-2023
Corcom Prods: 1-847-680-7400
Germany: 49-89-6089-0
www.tycoelectronics.com
www.corcom.com

FFA Series

Case Style



T1 – Terminal Thread

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

Case Dimensions

Part Number	A ± .04 *1*	B ± .02 *0.5*	C ± .08 *2*	D ± .04 *1*	E ± .08 *2*	F (max)
10FFA6-BA	**3.86** *98*	**0.79** *20*	**2.24** *57*	**0.47** *12*	**0.63** *16*	**0.67** *17*
16FFA6-CA 32FFA6-CA	**4.17** *106*	**0.79** *20*	**2.40** *61*	**0.47** *12*	**0.71** *18*	**0.67** *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 32FFA6-DH	**4.57** *116*	**0.98** *25*	**2.72** *69*	**0.55** *14*	**0.71** *18*	**0.87** *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 300FFA6-HN	**10.51** *267*	**2.13** *54*	**6.30** *160*	**0.75** *19*	**1.81** *46*	**1.57** *40*
10FFA6-GJ	**5.51** *140*	**0.79** *20*	**3.90** *99*	**0.47** *12*	**0.63** *16*	**0.67** *17*
16FFA6-HN 32FFA6-HN	**5.83** *148*	**0.98** *25*	**3.98** *101*	**0.55** *14*	**0.71** *18*	**0.87** *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 300FFA6-PP	**10.51** *267*	**2.13** *54*	**6.3** *160*	**0.75** *19*	**1.81** *46*	**1.57** *40*

AC Feedthrough Filters – Class Y2 *(continued)*

FFA Series

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

USA Cust. Svc.: 1-800-468-2023
Corcom Prods: 1-847-680-7400
Germany: 49-89-6089-0
www.tycoelectronics.com
www.corcom.com