# 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 A)*

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

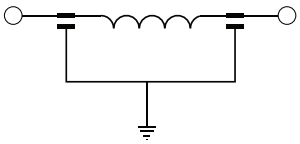
**Climatic Category:** 40/85/21

**MTBF:** > 5 million hours typical

**Insulating Materials Flammability Rating:** UL94V-0

**Case & Terminal Material:** Nickel Plated Brass

## Electrical Schematic



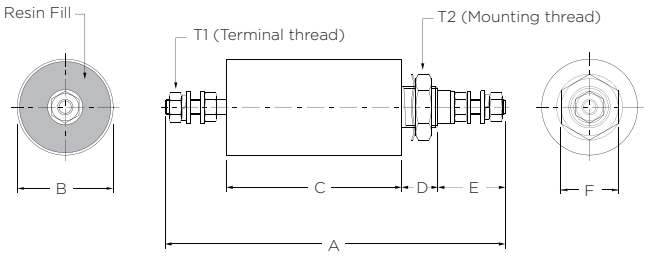


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## Case Style




## T1 – Terminal Thread

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

## Case Dimensions

| Part No. | A<br>± .04<br>*1* | B<br>± .02<br>*0.5* | C<br>± .08<br>*2* | D<br>± .04<br>*1* | E<br>± .08<br>*2* | F<br>(max) |
|---|---|---|---|---|---|---|
| 10FFA6-BA | **3.86**<br>*98* | **0.79**<br>*20* | **2.24**<br>*57* | **0.47**<br>*12* | **0.63**<br>*16* | **0.67**<br>*17* |
| 16FFA6-CA<br>32FFA6-CA | **4.17**<br>*106* | **0.79**<br>*20* | **2.40**<br>*61* | **0.47**<br>*12* | **0.71**<br>*18* | **0.67**<br>*17* |
| 63FFA6-GB | **6.30**<br>*160* | **0.98**<br>*25* | **3.70**<br>*94* | **0.55**<br>*14* | **1.02**<br>*26* | **0.87**<br>*22* |
| 100FFA6-HC | **7.24**<br>*184* | **1.26**<br>*32* | **4.09**<br>*104* | **0.63**<br>*16* | **1.26**<br>*32* | **1.06**<br>*27* |
| 200FFA6-HD | **8.23**<br>*209* | **1.50**<br>*38* | **4.41**<br>*112* | **0.75**<br>*19* | **1.57**<br>*40* | **1.06**<br>*27* |
| 300FFA6-HF | **7.87**<br>*200* | **2.13**<br>*54* | **3.66**<br>*93* | **0.75**<br>*19* | **1.81**<br>*46* | **1.57**<br>*40* |
| 10FFA6-CE | **4.21**<br>*107* | **0.79**<br>*20* | **2.60**<br>*66* | **0.47**<br>*12* | **0.63**<br>*16* | **0.67**<br>*17* |
| 16FFA6-DG<br>32FFA6-DH | **4.57**<br>*116* | **0.98**<br>*25* | **2.72**<br>*69* | **0.55**<br>*14* | **0.71**<br>*18* | **0.87**<br>*22* |
| 63FFA6-JK | **6.81**<br>*173* | **1.26**<br>*32* | **4.13**<br>*105* | **0.63**<br>*16* | **1.02**<br>*26* | **1.06**<br>*27* |
| 100FFA6-NP | **8.98**<br>*228* | **1.50**<br>*38* | **5.71**<br>*145* | **0.75**<br>*19* | **1.26**<br>*32* | **1.06**<br>*27* |
| 200FFA6-NP | **9.57**<br>*243* | **2.13**<br>*54* | **5.75**<br>*146* | **0.75**<br>*19* | **1.57**<br>*40* | **1.57**<br>*40* |
| 250FFA6-NP<br>300FFA6-HN | **10.51**<br>*267* | **2.13**<br>*54* | **6.30**<br>*160* | **0.75**<br>*19* | **1.81**<br>*46* | **1.57**<br>*40* |
| 10FFA6-GJ | **5.51**<br>*140* | **0.79**<br>*20* | **3.90**<br>*99* | **0.47**<br>*12* | **0.63**<br>*16* | **0.67**<br>*17* |
| 16FFA6-HN<br>32FFA6-HN | **5.83**<br>*148* | **0.98**<br>*25* | **3.98**<br>*101* | **0.55**<br>*14* | **0.71**<br>*18* | **0.87**<br>*22* |
| 63FFA6-NP | **7.44**<br>*189* | **2.13**<br>*54* | **4.65**<br>*118* | **0.75**<br>*19* | **1.02**<br>*26* | **1.57**<br>*40* |
| 100FFA6-PP | **8.94**<br>*227* | **2.13**<br>*54* | **5.67**<br>*144* | **0.75**<br>*19* | **1.26**<br>*32* | **1.57**<br>*40* |
| 200FFA6-PP | **9.57**<br>*243* | **2.13**<br>*54* | **5.75**<br>*146* | **0.75**<br>*19* | **1.57**<br>*40* | **1.57**<br>*40* |
| 250FFA6-PP<br>300FFA6-PP | **10.51**<br>*267* | **2.13**<br>*54* | **6.3**<br>*160* | **0.75**<br>*19* | **1.81**<br>*46* | **1.57**<br>*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 |



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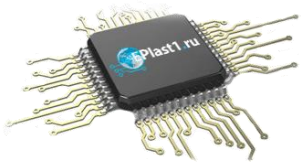
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.




**Как с нами связаться**

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