

tyco

Electronics

Introducing...



RoHS
Ready 

CORCOM Feedthrough Filters and Capacitors

AFC, DFC, FFA and FFD Series

CORCOM Feedthrough Filters and Capacitors

FILTERS



FFA Series4-5
AC Feedthrough Filters - Class Y2
10 to 300 amps

FFD Series6-7
DC Feedthrough Filters - Class Y4
10 to 200 amps



CAPACITORS



AFC Series8-9
AC Feedthrough Capacitors - Class Y2
10 to 300 amps

DFC Series10-11
DC Feedthrough Capacitors - Class Y4
10 to 300 amps



CORCOM Feedthrough Filters and Capacitors

APPLICATIONS

- Offers reliability and performance in high frequency applications such as:
 - Servers
 - Base Stations
 - Routers
 - Main Power Supplies
 - Telecom Systems / Racks
 - MRI Rooms
 - High Power Microwave Lines
 - Military Vehicles and Equipment
 - High Current Switch Mode Power Supplies
 - Power Amplifier and Generators
 - Industrial Controls
 - Screened Rooms
 - High Frequency Welding Equipment
 - Secure Communications
 - Computer Facilities

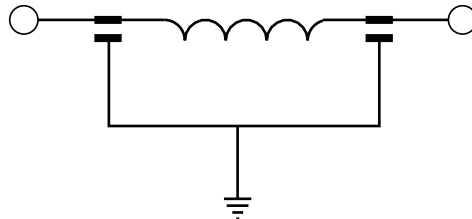
KEY FEATURES

- Designed to meet EN132400 safety requirements
- Custom designs available where special packaging, mounting, terminations, or multiple lines are required
- RoHS compliant

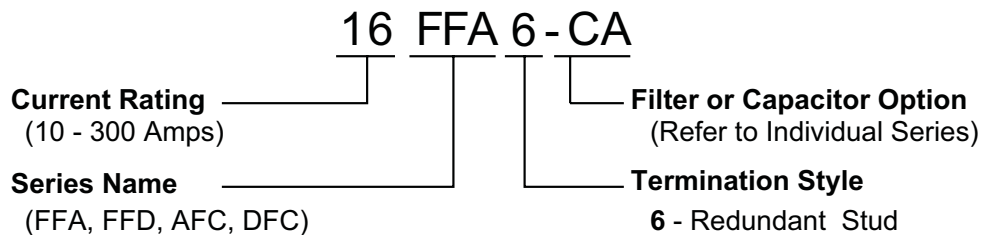
STANDARDS & SPECS

- UL Pending
- CSA Pending

SCHEMATIC (Filtered version only)



PART NUMBER SCHEMATIC (Example shown below)



FFA Series AC Feedthrough Filters - Class Y2

UL
UL Pending
CSA Pending

DESCRIPTION

- 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 EN132400 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



SPECIFICATIONS

| | |
|---|--|
| Rated Voltage (max): | 250 VAC 50/60 Hz |
| Rated Current: | 10 to 300 amps |
| Test Voltage (two seconds): | 5000 VDC |
| Capacitor Class (EN132400): | Designed to meet Y2 |
| Pulse Test (EN132400): | 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:

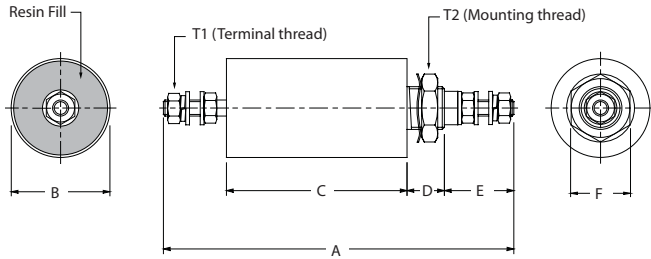
$$10-100 \text{ Amp: For temperature, } \theta I_{\theta} = I_R \sqrt{(85-\theta)/25}$$

$$200 \text{ Amp: For temperature, } \theta I_{\theta} = I_R \sqrt{(85-\theta)/35}$$

$$250 \text{ \& 300 Amp: For temperature, } \theta I_{\theta} = I_R \sqrt{(85-\theta)/45}$$

FFA Series AC Feedthrough Filters - Class Y2

CASE STYLE



T1 - Terminal Thread

| Part Number(s) | Thread | Torque (in-lb.) |
|------------------|--------|-----------------|
| 10FFA6-BA/CE/GJ | 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 Number(s) | Thread | Torque (in-lb.) |
|------------------------|-----------|-----------------|
| 10FFA6-BA/CE/GJ | M12 x 1 | 35 |
| 16FFA6-CA, 32FFA6-CA | | |
| 16FFA6-DG/HN | M16 x 1 | 62 |
| 32FFA6-DH/HN | | |
| 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 | M32 x 1.5 | 212 |
| 300FFA6-HF/NP/PP | | |

CASE DIMENSIONS

| Part No. | A | B | C | D | E | F |
|------------|-----------------|-------------------|-----------------|-----------------|-----------------|------|
| | ± 0.04 1 | ± 0.02 0.5 | ± 0.08 2 | ± 0.04 1 | ± 0.08 2 | |
| 10FFA6-BA | 3.86 | 0.79 | 2.24 | 0.47 | 0.63 | 0.67 |
| | 98 | 20 | 57 | 12 | 16 | 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 | 0.98 | 3.70 | 0.55 | 1.02 | 0.87 |
| | 160 | 25 | 94 | 14 | 26 | 22 |
| 100FFA6-HC | 7.24 | 1.26 | 4.09 | 0.63 | 1.26 | 1.06 |
| | 184 | 32 | 104 | 16 | 32 | 27 |
| 200FFA6-HD | 8.23 | 1.50 | 4.41 | 0.75 | 1.57 | 1.06 |
| | 209 | 38 | 112 | 19 | 40 | 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 | 0.79 | 2.60 | 0.47 | 0.63 | 0.67 |
| | 107 | 20 | 66 | 12 | 16 | 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 | 1.26 | 4.13 | 0.63 | 1.02 | 1.06 |
| | 173 | 32 | 105 | 16 | 26 | 27 |
| 100FFA6-NP | 8.98 | 1.50 | 5.71 | 0.75 | 1.26 | 1.06 |
| | 228 | 38 | 145 | 19 | 32 | 27 |
| 200FFA6-NP | 9.57 | 2.13 | 5.75 | 0.75 | 1.57 | 1.57 |
| | 243 | 54 | 146 | 19 | 40 | 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 | 0.79 | 3.90 | 0.47 | 0.63 | 0.67 |
| | 140 | 20 | 99 | 12 | 16 | 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 | 2.13 | 4.65 | 0.75 | 1.02 | 1.57 |
| | 189 | 54 | 118 | 19 | 26 | 40 |
| 100FFA6-PP | 8.94 | 2.13 | 5.67 | 0.75 | 1.26 | 1.57 |
| | 227 | 54 | 144 | 19 | 32 | 40 |
| 200FFA6-PP | 9.57 | 2.13 | 5.75 | 0.75 | 1.57 | 1.57 |
| | 243 | 54 | 146 | 19 | 40 | 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 |

FFD Series DC Feedthrough Filters - Class Y4

UL
UL Pending
CSA Pending

DESCRIPTION

- The new FFD series features a range of DC feedthrough filters in current ratings from 10 to 200 amps. The FFD series is designed to meet the very stringent safety requirements of EN132400 class Y4 including the 2500V pulse test.

FILTER OPTIONS / SPECIFICATIONS

| Filter ID | Value (nF) | Inductance (nH) | DC Resistance (MΩ) Max. |
|-----------|------------|-----------------|-------------------------|
| CA | 2 x 10 | 70 | 6 |
| HB | 2 x 100 | 80 | 3 |
| HE | 2 x 100 | 140 | 5 |
| NC | 2 x 40 | 90 | 2 |
| ND | 2 x 470 | 120 | 1 |
| NH | 2 x 470 | 180 | 3 |
| PK | 2 x 1000 | 240 | 2 |
| RP | 2 x 4700 | 330 | 2 |



SPECIFICATIONS

| | |
|---|---|
| Rated Voltage (max): | 130 VDC |
| Rated Current: | 10 to 200 amps |
| Test Voltage (two seconds): | 2500 VDC |
| Capacitor Class (EN132400): | Designed to meet Y4 |
| Pulse Test (EN132400): | 2500V 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 |
| 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 |
| CA | - | - | 2 | 4 | 10 | 23 | 65 | 100 |
| HB | 2 | 4 | 10 | 18 | 27 | 62 | 95 | 100 |
| HE | 2 | 4 | 10 | 18 | 27 | 67 | 95 | 100 |
| NC | 7 | 14 | 23 | 30 | 32 | 70 | 100 | 100 |
| ND | 7 | 14 | 23 | 30 | 32 | 70 | 100 | 100 |
| NH | 7 | 14 | 23 | 31 | 35 | 75 | 100 | 100 |
| PK | 14 | 21 | 30 | 34 | 53 | 75 | 100 | 100 |
| RP | 20 | 32 | 40 | 52 | 85 | 100 | 100 | 100 |

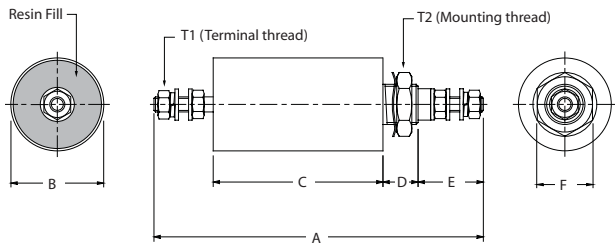
Current derating above ambient:

$$10\text{-}100 \text{ Amp: For temperature, } \theta I_{\theta} = I_R \sqrt{(85-\theta)/25}$$

$$200 \text{ Amp: For temperature, } \theta I_{\theta} = I_R \sqrt{(85-\theta)/35}$$

FFD Series DC Feedthrough Filters - Class Y4

CASE STYLE



T1 - Terminal Thread

| Part Number(s) | Thread | Torque (in-lb.) |
|----------------|--------|-----------------|
| 10FFD6-CA | M3 | 4 |
| 16FFD6-CA/HE | M4 | 11 |
| 32FFD6-CA/HE | | |
| 63FFD6-HB/NH | M6 | 22 |
| 100FFD6-NC/PK | M8 | 44 |
| 200FFD6-ND/RP | M10 | 70 |

T2 - Mounting Thread

| Part Number(s) | Thread | Torque (in-lb.) |
|----------------|-----------|-----------------|
| 10FFD6-CA/HE | M12 x 1 | 35 |
| 16FFD6-CA/HE | | |
| 32FFD6-CA/HE | | |
| 63FFD6-HB/NH | M20 x 1 | 89 |
| 100FFD6-NC/PK | M24 x 1 | 124 |
| 200FFD6-ND/RP | M27 x 1.5 | 142 |

CASE DIMENSIONS

| Part No. | A | B | C | D | E | F |
|------------|-----------------|-------------------|-----------------|-----------------|-----------------|------------|
| | ± 0.04 1 | ± 0.02 0.5 | ± 0.08 2 | ± 0.04 1 | ± 0.08 2 | |
| 10FFD6-CA | 3.54 90 | 0.79 20 | 1.93 49 | 0.47 12 | 0.63 16 | 0.67 17 |
| 16FFD6-CA | 3.86 | 0.79 | 2.09 | 0.47 | 0.71 | 0.67 |
| 32FFD6-CA | 98 | 20 | 53 | 12 | 18 | 17 |
| 63FFD6-HB | 6.30 160 | 0.98 25 | 3.70 94 | 0.55 14 | 1.02 26 | 0.87 22 |
| 100FFD6-NC | 7.24 184 | 1.26 32 | 4.09 104 | 0.63 16 | 1.26 32 | 1.06 27 |
| 200FFD6-ND | 8.23 209 | 1.50 38 | 4.41 112 | 0.75 19 | 1.57 40 | 1.06 27 |
| 10FFD6-HE | 5.12 130 | 0.79 20 | 3.50 89 | 0.47 12 | 0.63 16 | 0.67 17 |
| 16FFD6-HE | 5.47 | 0.79 | 3.70 | 0.47 | 0.71 | 0.67 |
| 32FFD6-HE | 139 | 20 | 94 | 12 | 18 | 17 |
| 63FFD6-NH | 6.81 173 | 1.26 32 | 4.13 105 | 0.63 16 | 1.02 26 | 1.06 27 |
| 100FFD6-PK | 8.98 228 | 1.50 38 | 5.71 145 | 0.75 19 | 1.26 32 | 1.06 27 |
| 200FFD6-RP | 10.98 279 | 2.13 54 | 7.17 182 | 0.75 19 | 1.57 40 | 1.57 40 |

PART NUMBERS

| Standard Performance | High Performance |
|----------------------|------------------|
| 10FFD6-CA | 10FFD6-HE |
| 16FFD6-CA | 16FFD6-HE |
| 32FFD6-CA | 32FFD6-HE |
| 63FFD6-HB | 63FFD6-NH |
| 100FFD6-NC | 100FFD6-PK |
| 200FFD6-ND | 200FFD6-RP |

AFC Series AC Feedthrough Capacitors - Class Y2

UL
UL Pending
CSA Pending

DESCRIPTION

- The new AFC series features a range of AC feedthrough capacitors in current ratings from 10 to 300 amps. The AFC series is designed to meet the very stringent safety requirements of EN132400 class Y2 including the 5000V pulse test.

CAPACITOR OPTIONS / SPECIFICATIONS

| Capacitor ID | Value (nF±20%) | Maximum Leakage Current (mA) |
|--------------|----------------|------------------------------|
| A | 2.2 | 0.21 |
| B | 4.7 | 0.44 |
| C | 10 | 0.94 |
| F | 33 | 3.1 |
| G | 47 | 4.4 |
| H | 100 | 9.4 |
| K | 220 | 21 |
| N | 470 | 44 |
| P | 1000 | 94 |



SPECIFICATIONS

| | |
|---|---|
| Rated Voltage (max): | 250 VAC 50/60 Hz |
| Rated Current: | 10 to 300 amps |
| Test Voltage (two seconds): | 5000 VDC |
| Capacitor Class (EN132400): | Designed to meet Y2 |
| Pulse Test (EN132400): | 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 200 Amps: -40°C to +60°C 250 & 300 Amps: -40°C to +40°C |
| Category Temperature Range: | -40°C to +85°C |
| Climatic Category: | 40/85/21 |
| MTBF: | Typically >10 million hours |
| Insulating Materials Flammability Rating: | UL 94V-0 |

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

| Cap ID | Frequency - MHz | | | | | | | |
|--------|-----------------|------|-----|-----|----|----|-----|------|
| | 0.01 | 0.03 | 0.1 | 0.3 | 1 | 10 | 100 | 1000 |
| A | - | - | - | - | - | 8 | 38 | 45 |
| B | - | - | - | - | - | 14 | 43 | 60 |
| C | - | - | - | - | 3 | 21 | 45 | 70 |
| F | - | - | - | 4 | 12 | 30 | 48 | 90 |
| G | - | - | 2 | 6 | 15 | 34 | 50 | 90 |
| H | - | 2 | 5 | 11 | 20 | 40 | 65 | 90 |
| K | - | 4 | 11 | 18 | 27 | 45 | 85 | 90 |
| N | 6 | 9 | 16 | 22 | 33 | 33 | 90 | 90 |
| P | 10 | 15 | 22 | 30 | 40 | 42 | 90 | 90 |

Current derating above ambient:

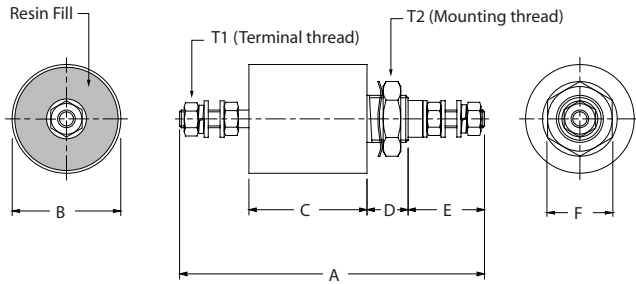
$$10\text{-}100 \text{ Amp: For temperature, } \theta I_{\theta} = I_R \sqrt{(85-\theta)/25}$$

$$250 \text{ \& } 300 \text{ Amp: For temperature, } \theta I_{\theta} = I_R \sqrt{(85-\theta)/45}$$

AFC Series

AC Feedthrough Capacitors - Class Y2

CASE STYLE



T1 - Terminal Thread

| Part Number(s) | Thread | Torque (in-lb.) |
|----------------------|--------|-----------------|
| 10AFC6-A, 10AFC6-B | M3 | 4 |
| 16AFC6-B, 16AFC6-C | M4 | 11 |
| 16AFC6-G, 16AFC6-H | | |
| 20AFC6-B, 32AFC6-B | | |
| 32AFC6-C, 32AFC6-F | | |
| 32AFC6-G, 32AFC6-H | | |
| 63AFC6-C, 63AFC6-G | M6 | 22 |
| 63AFC6-H | | |
| 100AFC6-G, 100AFC6-H | M8 | 44 |
| 100AFC6-K, 100AFC6-N | | |
| 200AFC6-H, 200AFC6-K | M10 | 71 |
| 200AFC6-N, 200AFC6-P | | |
| 250AFC6-H, 250AFC6-K | M12 | 97 |
| 250AFC6-N, 250AFC6-P | | |
| 300AFC6-H, 300AFC6-K | M16 | 177 |
| 300AFC6-N, 300AFC6-P | | |

T2 - Mounting Thread

| Part Number(s) | Thread | Torque (in-lb.) |
|----------------------|-----------|-----------------|
| 10AFC6-A, 10AFC6-B | M10 x 1 | 27 |
| 16AFC6-B, 16AFC6-C | M12 x 1 | 35 |
| 16AFC6-G, 20AFC6-B | | |
| 32AFC6-B, 32AFC6-C | | |
| 32AFC6-G, 32AFC6-F | | |
| 16AFC6-H, 32AFC6-H | M16 x 1 | 62 |
| 63AFC6-C, 63AFC6-G | | |
| 63AFC6-H | | |
| 100AFC6-G, 100AFC6-H | M20 x 1 | 89 |
| 100AFC6-K, 100AFC6-N | M24 x 1 | 124 |
| 200AFC6-H, 200AFC6-K | | |
| 200AFC6-N, 200AFC6-P | M27 x 1.5 | 142 |
| 250AFC6-H, 250AFC6-K | M32 x 1.5 | 212 |
| 250AFC6-N, 250AFC6-P | | |
| 300AFC6-H, 300AFC6-K | | |
| 300AFC6-N, 300AFC6-P | | |

CASE DIMENSIONS

| Part No. | A ± 0.04 1 | B ± 0.02 0.5 | C ± 0.04 1 | D ± 0.04 1 | E ± 0.08 2 | F |
|-----------|----------------------|------------------------|----------------------|----------------------|----------------------|------|
| 10AFC6-A | 2.24 | 0.59 | 0.71 | 0.39 | 0.63 | 0.51 |
| 10AFC6-B | 57 | 15 | 18 | 10 | 16 | 13 |
| 16AFC6-B | 2.48 | .79 | 0.71 | 0.47 | 0.71 | 0.67 |
| 16AFC6-C | 63 | 20 | 18 | 12 | 18 | 17 |
| 16AFC6-G | 2.95 | 0.79 | 1.18 | 0.47 | 0.71 | 0.67 |
| | 75 | 20 | 30 | 12 | 18 | 17 |
| 16AFC6-H | 3.03 | 0.98 | 1.18 | 0.55 | 0.71 | 0.87 |
| | 77 | 25 | 30 | 14 | 18 | 22 |
| 20AFC6-B | 2.48 | 0.79 | 0.71 | 0.47 | 0.71 | 0.67 |
| | 63 | 20 | 18 | 12 | 18 | 17 |
| 32AFC6-B | 2.48 | 0.79 | 0.71 | 0.47 | 0.71 | 0.67 |
| 32AFC6-C | 63 | 20 | 18 | 12 | 18 | 17 |
| 32AFC6-F | 2.95 | 0.79 | 1.18 | 0.47 | 0.71 | 0.67 |
| 32AFC6-G | 75 | 20 | 30 | 12 | 18 | 17 |
| 32AFC6-H | 3.03 | 0.98 | 1.18 | 0.55 | 0.71 | 0.87 |
| | 77 | 25 | 30 | 14 | 18 | 22 |
| 63AFC6-C | 3.78 | 0.98 | 1.18 | 0.55 | 1.02 | 0.87 |
| 63AFC6-G | 96 | 25 | 30 | 14 | 26 | 22 |
| 63AFC6-H | 3.78 | 0.98 | 1.18 | 0.55 | 1.02 | 0.87 |
| | 96 | 25 | 30 | 14 | 26 | 22 |
| 100AFC6-G | 4.45 | 1.26 | 1.30 | 0.63 | 1.26 | 1.06 |
| 100AFC6-H | 113 | 32 | 33 | 16 | 32 | 27 |
| 100AFC6-K | 4.57 | 1.50 | 1.30 | 0.75 | 1.26 | 1.06 |
| | 116 | 38 | 33 | 19 | 32 | 27 |
| 100AFC6-N | 5.24 | 1.50 | 1.97 | 0.75 | 1.26 | 1.06 |
| | 133 | 38 | 50 | 19 | 32 | 27 |
| 200AFC6-H | 5.12 | 1.50 | 1.30 | 0.75 | 1.57 | 1.06 |
| 200AFC6-K | 130 | 38 | 33 | 19 | 40 | 27 |
| 200AFC6-N | 5.79 | 2.13 | 1.97 | 0.75 | 1.57 | 1.57 |
| 200AFC6-P | 147 | 54 | 50 | 19 | 40 | 40 |
| 250AFC6-H | 5.83 | 2.13 | 1.65 | 0.75 | 1.81 | 1.57 |
| 250AFC6-K | 148 | 54 | 42 | 19 | 46 | 40 |
| 250AFC6-N | 6.30 | 2.13 | 2.13 | 0.75 | 1.81 | 1.57 |
| 250AFC6-P | 160 | 54 | 54 | 19 | 46 | 40 |
| 300AFC6-H | 5.83 | 2.13 | 1.65 | 0.75 | 1.81 | 1.57 |
| 300AFC6-K | 148 | 54 | 42 | 19 | 46 | 40 |
| 300AFC6-N | 6.30 | 2.13 | 2.13 | 0.75 | 1.81 | 1.57 |
| 300AFC6-P | 160 | 54 | 54 | 19 | 46 | 40 |

PART NUMBERS

| | | |
|----------|-----------|-----------|
| 10AFC6-A | 32AFC6-H | 200AFC6-P |
| 10AFC6-B | 63AFC6-C | 250AFC6-H |
| 16AFC6-B | 63AFC6-G | 250AFC6-K |
| 16AFC6-C | 63AFC6-H | 250AFC6-N |
| 16AFC6-G | 100AFC6-G | 250AFC6-P |
| 16AFC6-H | 100AFC6-H | 300AFC6-H |
| 20AFC6-B | 100AFC6-K | 300AFC6-K |
| 32AFC6-B | 100AFC6-N | 300AFC6-N |
| 32AFC6-C | 200AFC6-H | 300AFC6-P |
| 32AFC6-F | 200AFC6-K | |
| 32AFC6-G | 200AFC6-N | |

DFC Series DC Feedthrough Capacitors - Class Y4

UL
UL Pending
CSA Pending

DESCRIPTION

- The new DFC series features a range of DC feedthrough capacitors in current ratings from 10 to 300 amps. The AFC series is designed to meet the very stringent safety requirements of EN132400 class Y4 including the 2500V pulse test.

CAPACITOR OPTIONS / SPECIFICATIONS

| Capacitor ID | Value (nF±20%) |
|--------------|----------------|
| C | 10 |
| G | 47 |
| H | 100 |
| N | 470 |
| P | 1000 |
| Q | 3300 |
| R | 4700 |
| T | 8000 |



SPECIFICATIONS

| | |
|---|--|
| Rated Voltage (max): | 130 VDC |
| Rated Current: | 10 to 300 amps |
| Test Voltage (two seconds): | 2500 VDC |
| Capacitor Class (EN132400): | Designed to meet Y4 |
| Pulse Test (EN132400): | 2500V 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 200 Amps: -40°C to +60°C 250 & 300 Amps: -40°C to +40°C |
| Category Temperature Range: | -40°C to +85°C |
| Climatic Category: | 40/85/21 |
| MTBF: | Typically >10 million hours |
| Insulating Materials Flammability Rating: | UL 94V-0 |

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

| Cap ID | Frequency - MHz | | | | | | | |
|--------|-----------------|------|-----|-----|----|----|-----|------|
| | 0.01 | 0.03 | 0.1 | 0.3 | 1 | 10 | 100 | 1000 |
| C | - | - | - | - | 3 | 21 | 45 | 70 |
| G | - | - | 2 | 6 | 15 | 34 | 50 | 90 |
| H | - | 2 | 5 | 11 | 20 | 40 | 65 | 90 |
| N | 6 | 9 | 15 | 22 | 33 | 33 | 90 | 90 |
| P | 10 | 15 | 24 | 32 | 42 | 50 | 90 | 90 |
| Q | 13 | 21 | 31 | 42 | 50 | 58 | 90 | 90 |
| R | 18 | 26 | 36 | 45 | 52 | 70 | 90 | 90 |
| T | 22 | 31 | 41 | 52 | 62 | 82 | 90 | 90 |

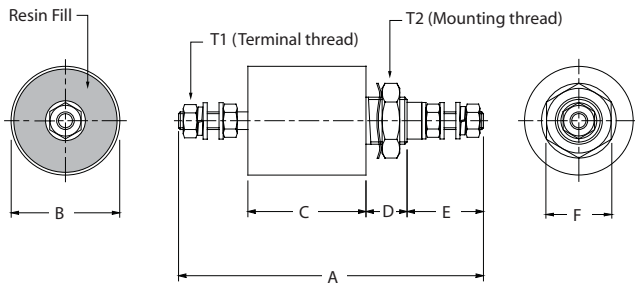
Current derating above ambient:

$$10\text{-}100 \text{ Amp: For temperature, } \theta I_{\theta} = I_R \sqrt{(85-\theta)/25}$$

$$250 \text{ \& } 300 \text{ Amp: For temperature, } \theta I_{\theta} = I_R \sqrt{(85-\theta)/45}$$

DFC Series DC Feedthrough Capacitors - Class Y4

CASE STYLE



T1 - Terminal Thread

| Part Number(s) | Thread | Torque (in-lb.) |
|----------------------|--------|-----------------|
| 10DFC6-C | M3 | 4 |
| 16DFC6-C, 16DFC6-G | M4 | 11 |
| 16DFC6-H, 16DFC6-N | | |
| 32DFC6-C, 32DFC6-G | | |
| 32DFC6-H, 32DFC6-N | | |
| 63DFC6-C, 63DFC6-G | M6 | 22 |
| 63DFC6-H, 63DFC6-N | | |
| 100DFC6-G, 100DFC6-H | M8 | 44 |
| 100DFC6-N, 100DFC6-P | | |
| 200DFC6-H, 200DFC6-N | M10 | 71 |
| 200DFC6-P, 200DFC6-R | | |
| 250DFC6-P, 250DFC6-Q | M12 | 97 |
| 250DFC6-T | | |
| 300DFC6-P, 300DFC6-Q | M16 | 177 |
| 300DFC6-T | | |

T2 - Mounting Thread

| Part Number(s) | Thread | Torque (in-lb.) |
|----------------------|-----------|-----------------|
| 10DFC6-C | M10 x 1 | 27 |
| 16DFC6-C, 16DFC6-G | M12 x 1 | 35 |
| 16DFC6-H, 32DFC6-C | | |
| 32DFC6-G, 32DFC6-H | | |
| 63DFC6-C, 63DFC6-G | M16 x 1 | 62 |
| 63DFC6-H | | |
| 16DFC6-N, 32DFC6-N | M20 x 1 | 89 |
| 63DFC6-N, 100DFC6-G | | |
| 100DFC6-H, 100DFC6-N | | |
| 100DFC6-P, 200DFC6-H | M24 x 1 | 124 |
| 200DFC6-N, 200DFC6-P | | |
| 200DFC6-R | M27 x 1.5 | 142 |
| 250DFC6-P, 250DFC6-Q | M32 x 1.5 | 212 |
| 250DFC6-T, 300DFC6-P | | |
| 300DFC6-Q, 300DFC6-T | | |

CASE DIMENSIONS

| Part No. | A ± 0.04 1 | B ± 0.2 0.5 | C ± 0.4 1 | D ± 0.04 1 | E ± 0.08 2 | F |
|-----------|----------------------|-----------------------|---------------------|----------------------|----------------------|------------|
| 10DFC6-C | 2.24 57 | 0.59 15 | 0.71 18 | 0.39 10 | 0.63 16 | 0.51 13 |
| 16DFC6-C | 2.48 63 | 0.79 20 | 0.71 18 | 0.47 12 | 0.71 18 | 0.67 17 |
| 16DFC6-G | 2.95 | .79 | 1.18 | 0.47 | 0.71 | 0.67 |
| 16DFC6-H | 75 | 20 | 30 | 12 | 18 | 17 |
| 16DFC6-N | 3.23 82 | 12.6 32 | 1.30 33 | 0.63 16 | 0.71 18 | 1.06 27 |
| 32DFC6-C | 2.48 63 | 0.79 20 | 0.71 18 | 0.47 12 | 0.71 18 | 0.67 17 |
| 32DFC6-G | 2.95 | 0.79 | 1.18 | 0.47 | 0.71 | 0.67 |
| 32DFC6-H | 75 | 20 | 30 | 12 | 18 | 17 |
| 32DFC6-N | 3.23 82 | 1.26 32 | 1.30 33 | 0.63 16 | 0.71 18 | 1.06 27 |
| 63DFC6-C | 3.78 | 0.98 | 1.18 | 0.55 | 1.02 | 0.87 |
| 63DFC6-G | 96 | 25 | 30 | 14 | 26 | 22 |
| 63DFC6-H | | | | | | |
| 63DFC6-N | 3.98 101 | 1.26 32 | 1.30 33 | 0.63 16 | 1.02 26 | 1.06 27 |
| 100DFC6-G | 4.45 | 1.26 | 1.30 | 0.63 | 1.26 | 1.06 |
| 100DFC6-H | 113 | 32 | 33 | 16 | 32 | 27 |
| 100DFC6-N | | | | | | |
| 100DFC6-P | 5.24 133 | 1.50 38 | 1.97 50 | 0.75 19 | 1.26 32 | 1.06 27 |
| 200DFC6-H | 5.12 | 1.26 | 1.30 | 0.75 | 1.57 | 1.06 |
| 200DFC6-N | 130 | 32 | 33 | 19 | 40 | 27 |
| 200DFC6-P | 5.79 147 | 1.50 38 | 1.97 50 | 0.75 19 | 1.57 40 | 1.06 27 |
| 200DFC6-R | 6.50 165 | 2.13 54 | 2.68 68 | 0.75 19 | 1.57 40 | 1.57 40 |
| 250DFC6-P | 5.83 148 | 2.13 54 | 1.65 42 | 0.75 19 | 1.81 46 | 1.57 40 |
| 250DFC6-Q | 6.30 160 | 2.13 54 | 2.13 54 | 0.75 19 | 1.81 46 | 1.57 40 |
| 250DFC6-T | 7.01 178 | 2.13 54 | 2.83 72 | 0.75 19 | 1.81 46 | 1.57 40 |
| 300DFC6-P | 5.83 148 | 2.13 54 | 1.65 42 | 0.75 19 | 1.81 46 | 1.57 40 |
| 300DFC6-Q | 6.30 160 | 2.13 54 | 2.13 54 | 0.75 19 | 1.81 46 | 1.57 40 |
| 300DFC6-T | 7.01 178 | 2.13 54 | 2.83 72 | 0.75 19 | 1.81 46 | 1.57 40 |

PART NUMBERS

| | | | |
|----------|-----------|-----------|-----------|
| 10DFC6-D | 32DFC6-H | 100DFC6-H | 250DFC6-P |
| 16DFC6-C | 32DFC6-N | 100DFC6-N | 250DFC6-Q |
| 16DFC6-G | 63DFC6-C | 100DFC6-P | 250DFC6-T |
| 16DFC6-H | 63DFC6-G | 200DFC6-H | 300DFC6-P |
| 16AFC6-N | 63DFC6-H | 200DFC6-K | 300DFC6-Q |
| 32DFC6-C | 63DFC6-N | 200DFC6-P | 300DFC6-T |
| 32DFC6-G | 100DFC6-G | 200DFC6-R | |

CORCOM Feedthrough Filters and Capacitors

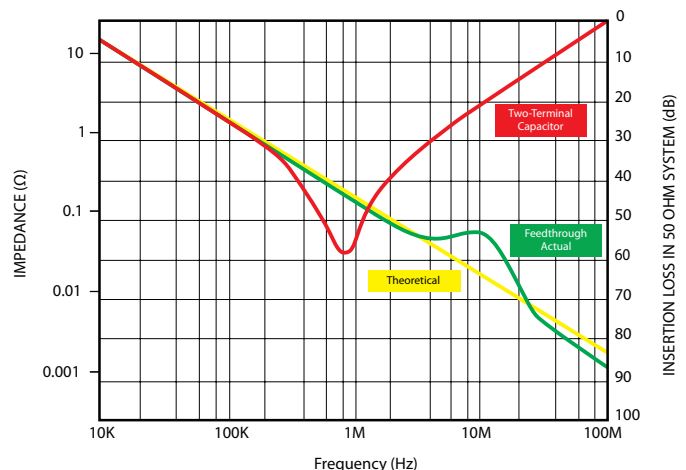
INSTALLATION, BACKGROUND, AND SAFETY

- Feedthrough capacitors and filters are designed for through-bulkhead mounting for offering high frequency filtering in line-to-ground applications. They should be mounted through a metal bulkhead or chassis. The bulkhead mounting surface should be clean and unpainted to offer a low impedance patch from the capacitor or filter to the equipment chassis. Poor earth bonding will limit the available performance of the product and could compromise safety.
- Conductive paint finishes should be avoided as they do not usually provide adequate conductivity. 2 spanners should be used when making electrical connections to the terminals, and maximum tightening torque figures quoted should be observed.

FEEDTHROUGH CAPACITOR PERFORMANCE

- Normal two-terminal capacitors resonate with their lead inductance in the region 1-10 MHz
- This limits their use as suppression components above a few MHz
- Feedthrough capacitors have no major resonance as they have no lead inductance
- Performance continues to increase with frequency
- Feedthrough capacitors are essential for good high frequency performance
- Feedthrough filters incorporate feedthrough capacitors for the same benefits
- As an example, this graph compares the performance of a $1\mu\text{F}$ feedthrough capacitor with a $1\mu\text{F}$ two-terminal capacitor

FEEDTHROUGH CAPACITOR PERFORMANCE



SAFETY

- Relevant safety standards have been adhered to in the design and manufacture of these products. However, all capacitors will store charge after power has been removed and must be treated with respect as this can be lethal when the voltage and charge are high enough. The filters and capacitors contained within this catalog do not contain internal discharge resistors. It is therefore recommended that they are fitted with external discharge resistors to discharge the capacitors after the power has been removed. Where necessary, terminals should be enclosed by the user to prevent any danger of electric shock or accidental shorting. In all cases, capacitors and filters should always be shorted to earth prior to touching to ensure they are fully discharged.
- The user should ensure he/she is familiar with restrictions on capacitance value, earth leakage current, test voltage, and safety labeling requirements, which may be applicable to his/her particular installation. In particular, safety standards IEC950 and EN60950, which most electrical equipment needs to comply with, contain a number of specific requirements for capacitors, which may be applicable.

FOR MORE INFORMATION

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