

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 bulk-head mounting surface should be clean and unpainted to offer a low impedance path from the capacitor or filter to the equipment chassis. Poor earth bonding will limit the available performance of the product and could compromise safety.

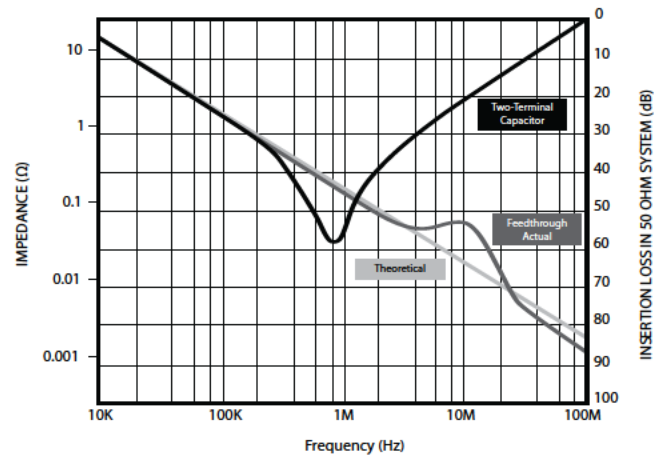
Conductive paint finishes should be avoided as they do not usually provide adequate conductivity. 2 spanners should be used when making electrical connections to the terminals, and maximum tightening torque figures quoted should be observed.

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.

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 1µF feedthrough capacitor with a 1µF two-terminal capacitor



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

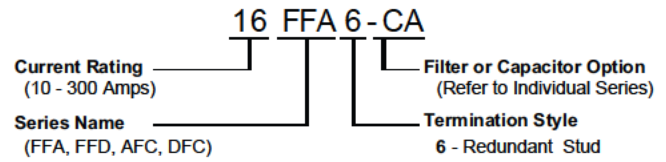
Key Features

- Designed to meet EN133200 and EN132400 safety requirements
- Custom designs available where special packaging, mounting, terminations, or multiple lines are required
- RoHS compliant

Standards & Specs

- UL Pending
- CSA Pending

Part Number Schematic (Example shown below)



For More Information

Internet:
www.tycoelectronics.com
www.corcom.com

E-mail:
newproducts@tycoelectronics.com

Technical Support:
 USA: 1-800-468-2023
 CORCOM Prods: 1-847-680-7400
 Germany: 49-89-6089-0