

Electro-Magnetic Environment



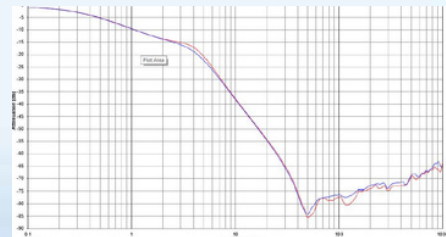
Military standard for EMI/RFI management

- MIL-STD-461 - EMC
- RTCA-DO/160D – EMC, Power Management (Civil Aviation)
- MIL-STD-1275 – Power management of Heavy Ground Vehicles
- MIL-STD-704 – Power management of Avionic Applications
- MIL-STD-1399 – Power management of Naval Applications

What is filtering?



Attenuation Graph and Table



D38999/24FB35SN
attenuation curve for Pi
filter 20nF

A real
measurement
results

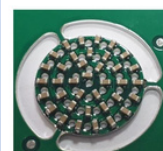
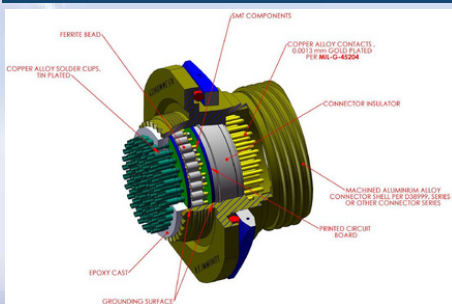
Filter Code	Typical Cap. (pF)	L_s (mH) Typical (mH)	Min. Attenuation (dB) vs. Frequency (MHz)
			1 5 10 30 50 100 300 500 1000
PP01	20	0.3	7 18 25 65 69 65 63 62 63

Declaration
from our catalog

Contact No.	Cap.	Filter Type	f_{co} (Typical) (kHz)	Minimum Attenuation (dB) vs. Frequency (MHz)
4, 5, 11, 12, 20-23, 31, 34-36, 5-10, 15, 23-25, 32, 33	240pF	PI	28.1	0 0 0 0 3 10 45 63 50
1-3, 8, 7, 13-14, 29, 32, 29, 30, 37	20nF	PI	0.325	6 16 32 62 66 60 58 57 49

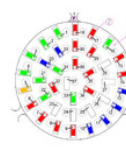
Declaration
from CD drawing

Filter Connector Construction



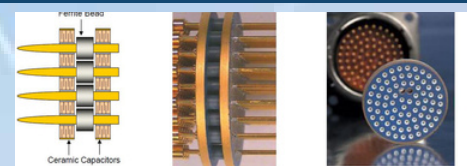
Advantages:

- Cheap and available – short time to market
- Flexibility of design (combination of any capacitance, working voltage, dielectric material)
- No MOQ required
- Not fragile



Disadvantages:

- Performance degradation after 500MHz



Advantages:

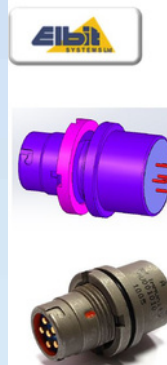
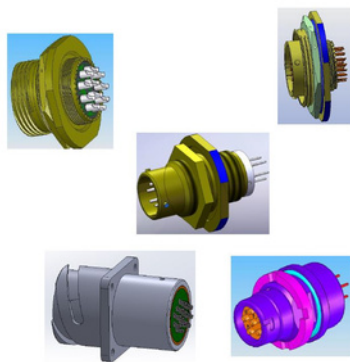
- Stronger attenuation
- Good performance also after 1GHz

Disadvantages:

- Limited minimum to maximum capacitance ratio (up to 1:10)
- Only single dielectric material per planar array (X7R or NPO or COV)
- Up to 4 capacitance values and voltages on each planar
- Very fragile – need special soldering concerns, lower production yield, therefore, higher cost
- MOQ for purchasing, therefore higher cost for low qty.

Filter Connectors - Circular

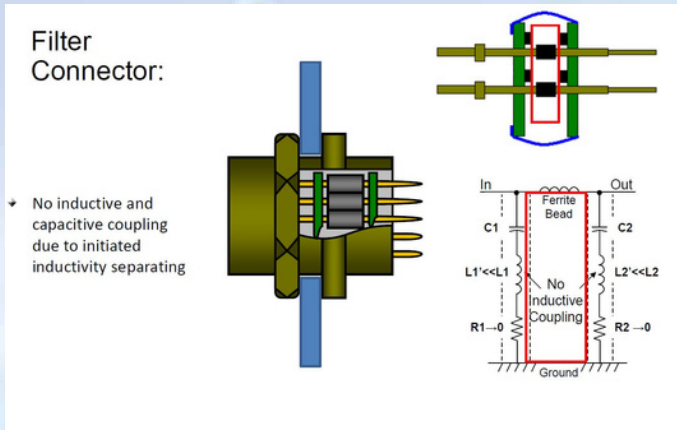
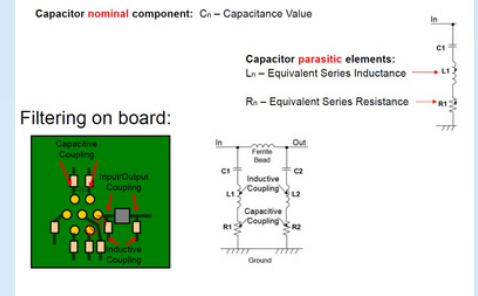
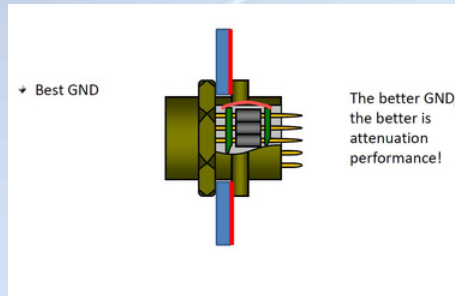
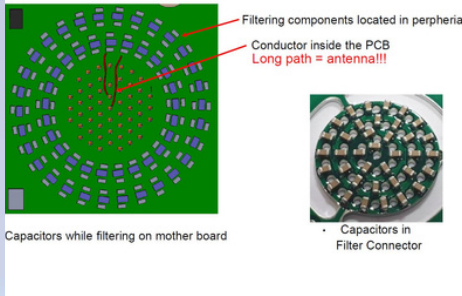
- MIL-DTL-38999 Series I, II, III
- MIL-DTL-26482 Series II
- MIL-C- 83723 Series I, II, III
- MIL-C-5015
- MIL-C-55116, VG95351 (Audio)
- VG95234
- Any metal shell connector



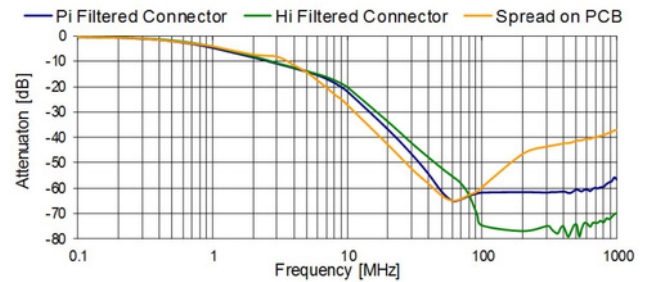
Audio Connectors per MIL-C-55116
for Tactical Communication Radio



Why To Use Filter Connectors



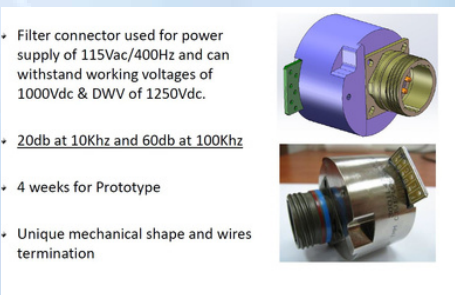
Filters Comparison:



HF Contacts Filtering



AC Filter Connector – Avionic application



WHY TO WORK WITH US?

Excellence in customer support beginning from the concept design through specifications and drawings to the final product

Quick delivery and competitive prices

Problem solving for our customers

One Stop Shop