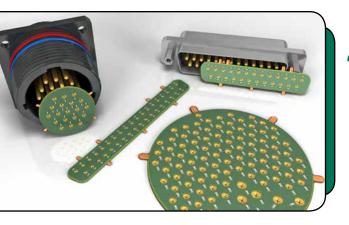
## **SPACECRAFT** COMPONENTS CORP.





## **"Flex" Filter Inserts**

- "Drop-in" filter solution for military circular and D-Subminiature connectors
- Chip capacitor filtering with a wide array of capacitances and voltage ratings available
- Simple installation in your existing connector
- Cost effective, providing simple and immediate solutions

## Filtered Military Circular Connectors

- AS50151, MIL-DTL-38999, MIL-DTL-26482, MIL-DTL-83723
- Available with chip capacitor up through Pi filtering
- Available with solder cup, PC tail and wired terminations
- Maximize your EMI filtering by customizing the filter on a pin by pin basis.



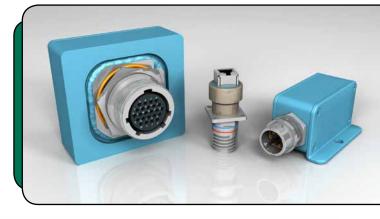


## Filtered D-Subminiature and Micro-D Connectors

- Available with chip capacitor up through Pi filtering
- Many termination and hardware options available
- Custom configurations available

## **Custom Filtering Solutions**

- Custom EMI filtering and transient suppression modules
- Wide variety of filtering and transient protection available
- Special configurations with RJ-45 or USB terminations
- Consult factory for details



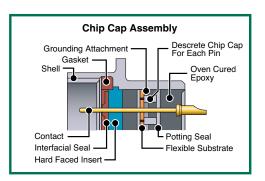
## Why Filtered Connectors?

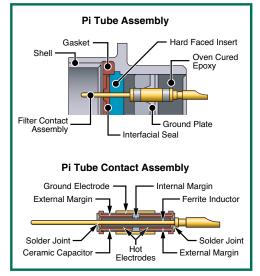
- ~ Simple cost effective solution to help meet EMI/RFI compatibility requirements
- ~ Best location for filtering is at the interface, which means inside the connector
- $\sim$  Easy add on or replacement to help meet your EMI performance Needs
- $\sim$  Helps reduce volume inside the unit as well as circuit board space
- $\sim$  Meets military standard and aerospace environmental requirements (MIL-STD-810 and DO-160)
- ~ Improves overall reliability due to fewer solder joints and few interconnections
- $\sim$  Insures that the fragile filtering components are well protected inside the connector
- ~ Parts are shipped 100% tested from the factory to insure proper performance and quality

## **Types of Filtered Connectors** and Their Performance

	Capacitance Options	Filter Performance
Chip Capacitor	3 pF – 47,000 pF+	>40 dB
Discoidal Capacitor (C)	470 pF – 40,000 pF+	50 – 60 dB
Planar Array (CL & LC)	100 pF – 1 uF+	50 – 60 dB
Pi with Planar Arrays	100 pF – 1 uF+	70+ dB
Pi Tubes	47 pF – 12,000 pF	70+ dB

С	CL	LC





#### **Chip Capacitor Filtering**

- $\sim$  40+ dB Insertion Loss
- ~ Quick Turn
- ~ Lowest Cost Option ~ Limited High Frequency
- Performance

#### **Termination Options:**

- ~ Solder Cup
- ~ PC Tail
- ~ Wired terminations

#### C, C-L or L-C Filtering

Shell

Contact

~ Built with Chip Caps, Discoidals, Planars or C Tubes

Interfacial Seal

Solder

Pi

- $\sim$  45 60 dB Insertion Loss
- ~ Good Broad Spectrum Filter Performance

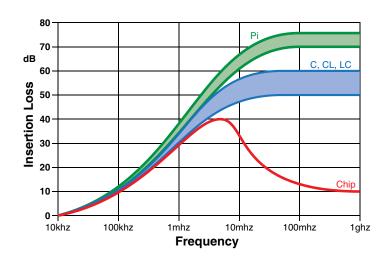
#### Other Options:

~ Custom versions available including the ability to define the Filtering on a Pin by Pin basis to help eliminate as much noise as possible from your system

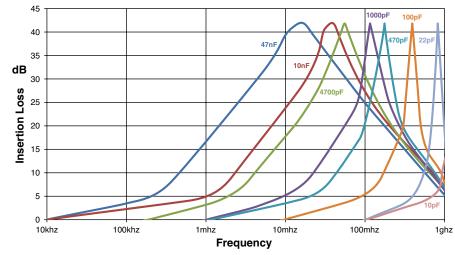
Pi Filtering

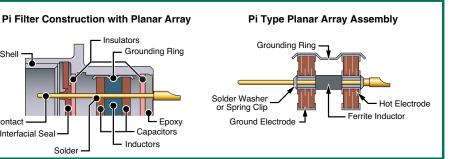
- ~ Combination of filtering and transient suppression components available
- ~ Custom applications and Filter Modules available to meet your special
- requirements

Insulators



## **Chip Capacitor Filter Performance**





~ Built with Pi Tubes, Discoidal or Planar Arrays

~ Provides C-L-C Component Configuration

~ Very Good High Frequency Performance

~ Highest Performance – 70+ dB Insertion Loss

### Filtered Circular Part Numbers

**Circular Connector Part Numbers** <u>1A / 24 W / 15-35 S P - S 2 - 102</u> S С Ρ **CAPACITANCE (3 DIGIT)** CONNECTOR -C MIL Circular Examples: 331 330 pF FILTER TYPE -582 5800 pF C Chip Capacitor 473 47,000 pF **D** Discoidal T Tubular Capacitor VOLTAGE RATING (STEADY STATE) P Pi Filter 0 50 VDC 100VDC 1 CONNECTOR TYPE -2 200 VDC 1A MIL-DTL-38999 Series I 300 VDC 3 1B MIL-DTL-38999 Series II 400 VDC 4 1C MIL-DTL-38999 Series III 5 500 VDC 2A MIL-DTL-26482 Series 1 Solder For values over 500, consult factory 2B MIL-DTL-26482 Series 1 Crimp 2C MIL-DTL-26482 Series 2 Crimp FILTER LOCATION 3A MIL-DTL-83723 Series III Bayonet S Shell Extension (As required) **B** Backshell Compatible 3B MIL-DTL-83723 Series III Threaded 4A MIL-DTL-26500 Bayonet CONTACT TERMINATION 4B MIL-DTL-26500 Threaded С Crimp 5A AS50151 Solder Ρ PC Tail 5B AS50151 Crimp Front S Solder Cup 5C AS50151 Crimp Rear w Wire Termination CONNECTOR STYLE -**CONTACT GENDER** 0 Wall Mount Receptacle Male Pins 1 Inline Receptacle Female Sockets S Box Mount Receptacle 2 3 Box Mount Rear Panel Receptacle SHELL/INSERT ARRANGEMENT Wall Mount Rear Panel Receptacle 4 Examples: 5 Plug 15-35 6 Plug, EMI 17-26 7 Jam Nut Receptacle 23-21 SHELL FINISH -Examples: F. Electroless Nickel W Olive Drab CAD Other finishes available, consult factory Circular Filter Insert Part Numbers S <u>38999</u> / <u>13-35</u> R-G2-331 **CONNECTOR TYPE -CAPACITANCE (3 DIGIT)** 26482 MIL-DTL-26482 Examples: 38999 MIL-DTL-38999 331 330 pF 50151 A\$50151 582 5800 pF 83723 MIL-DTL-83723 473 47,000 pF Other connector types available, **VOLTAGE RATING** consult factory 0 50 VDC **INSERT ARRANGEMENT -**100VDC 1 Shell size-insert arrangement 2 200 VDC 3 300 VDC CONNECTOR STYLE -4 400 VDC Plug Ρ 5 500 VDC R Receptacle

For values over 500, consult factory

FILTER TYPE -

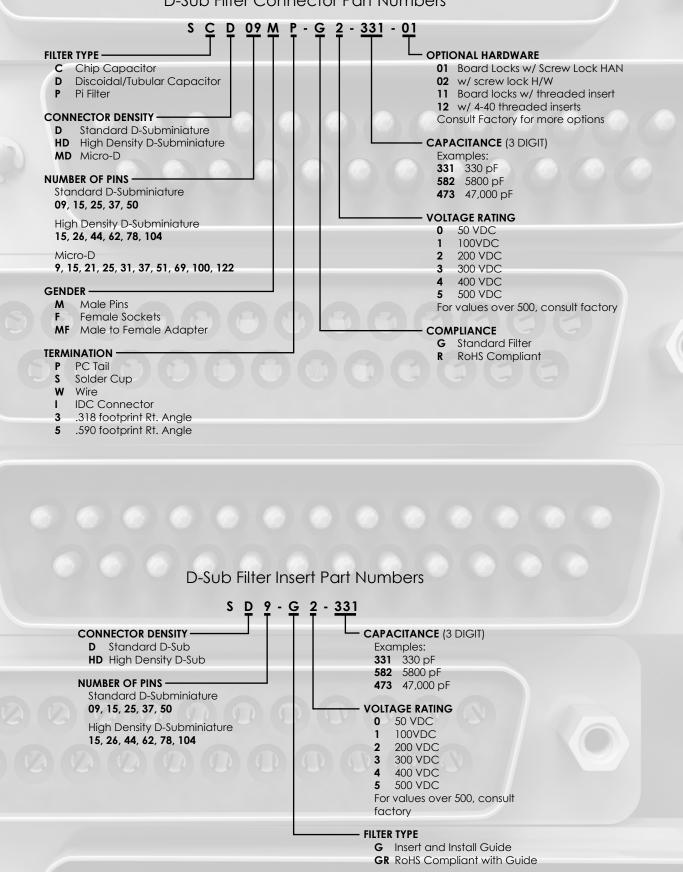
G Filter with Install Guide

**GR** RoHS Compliant with Guide

Please Consult the Factory for your Specific Part Number

## Filtered D-Sub and Micro-D Part Numbers

D-Sub Filter Connector Part Numbers



Please Consult the Factory for your Specific Part Number

## SPACECRAFT COMPONENTS CORP.

Your Connector Consultant Since 1962



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MAR.2015 3P-130

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