

APPLICATION NOTE

www.ittcannon.com**Surge Suppression CoF Filter Connector**

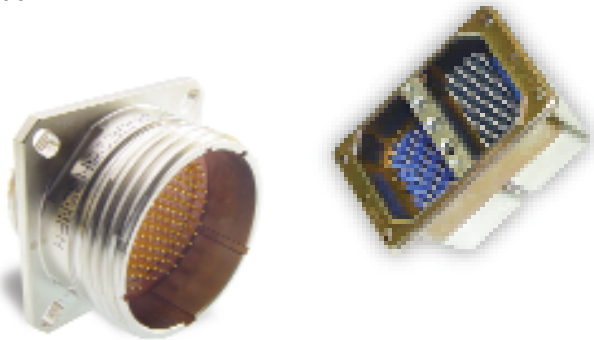
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The Challenge

Protecting critical systems from the effects lightning, EMP, and ESD is very important and is best accomplished at the connector interface using TVS or transient voltage suppression devices that shorts the voltage spike to ground through the connector shell.

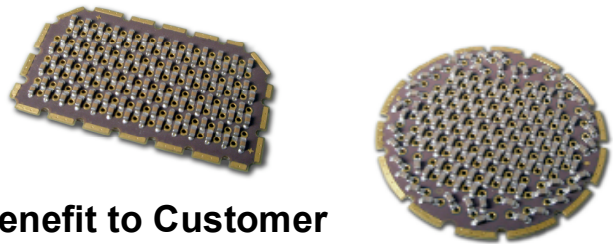
Historically, the connector manufacturers have been providing interconnect solutions that have been effective but are costly to produce and bulky in size.

The challenge was to design a light weight and cost effective surge suppression filter connector with improved survivability in hostile aircraft environments of altitude, temperature and vibration.



Product Features

- Lightweight Chip-on-Flex filter element. One standard flex per layout
- Individual circuit values can be customized
- Wide range of Capacitance and TVS values
- Surge protection and filtering can be provided in same small package
- Tested to Mil-DTL-38999 Series III mechanical shock, vibration, and high altitude DWV
- Exceeds 1000 cycles of thermal shock per Mil-Std-1344
- Configurations include Rack & Panel, Circular, and D-Sub
- Contact counts from 1 to 600 available



Benefit to Customer

- Lowest Cost
- Robust design with improved performance and reliability
- Compact, lightweight CoF package provides up to 15% savings for Mil-DTL-38999 configurations
- Complete design and design change capability
- Reduced lead times from 16 weeks to 12 weeks

The ITT Solution ...

ITT Cannon's new CoF (Chip-on-Flex) filter provides the platform for a new state of the art TVS Surge suppression connector. The CoF design utilizes a flexible circuit internal to the connector where off the shelf chip capacitors are surface mounted adjacent to the feed-thru contact. We are now adding surface mounted TVS devices to the flex circuit to protect individual circuits against EMI for lightning strike surges.

The result is a very cost effective lightweight connector design but with the robustness associated with Cannons high performance Chip-on-Flex Filter products.

For application assistance, please contact:

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