

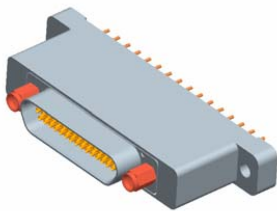
# APPLICATION NOTE

[www.ittcannon.com](http://www.ittcannon.com)

## Micro-D Pi Filter

### The Challenge

Historically, customers requiring filtered Micro-D's or 83513-Style connectors were limited to the attenuation performance of "C" type filters. The "C" type filter construction consists of capacitance without inductance. In contrast, the "Pi" filter design, including two capacitors sandwiched around a ferrite inductor, demonstrated a significantly better attenuation curve and represented a preferred solution. The Pi is designed to be comparable to Mil-DTL-38999, Mil-DTL-24308, Mil-C-26482 and ARINC404/600 filter connectors. The challenge represented designing a Pi filter Micro D incorporating sufficient density to accommodate the required ferrite inductors.



### The ITT Cannon Solution

Using a unique internal filter design, ITT Cannon solved the spacing problems permitting the installation of ferrite tubes. Consequently, Cannon developed the first Micro-D Pi filters. The TMDM Pi filter represents a very robust construction with improved attenuation, accomplished via a patent pending design. Soldering to the printed wiring board is facilitated by an expanded contact terminal spacing.

### Product Features

- 5 sizes; 9,15,21,25, and 37 position
- Contacts styles for both sockets (receptacle) and pins (plugs)
- Rugged aluminum shells
- Printed wiring board termination
- Capacitance values of L, M, T and H

### Benefit to the Customer

- Improved attenuation performance
- Lightweight and reduced package size
- Ease of board termination
- Grid pattern facilitates board and trace design
- Filters both plug and receptacle
- Designed to be intermateable with 83513-Style

### Applications

- Integrated Avionics and Electronic Warfare
- Displays, Instrumentation, Data Processing
- Radar and Sensors
- Weapon Controls and Targeting Systems
- Satellites and Space Systems
- Radio, Navigation and Telecommunications

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