

APPLICATION NOTE

www.ittcannon.com

38999-Style Space Grade Solutions

The Challenge

Most MIL-DTL-38999 Class G connectors are designed to meet the Thermal Vacuum Outgassing requirements of Mil-DTL-38999. The requirements are “all non-metallic materials shall not release greater than 1.0 % total mass loss (TML) and .1% collected volatile condensable mass (CVCM)” class G requirements. ITT Cannon historically manufactured highly capable space grade connectors, but specific materials used in the manufacture of Cannon 38999-Style connectors disqualified the products from the Class G requirements.



The ITT Cannon Solution

ITT Cannon implemented a special potting and lubricant material designed to be comparable to the TML and CVCM requirements of Mil-DTL 38999. Cannon achieved outgassing of the connectors by baking at 350° for 48 hours. These changes, coupled with ITT Cannon's innovative and proven 38999-Style design, resulted in a low cost, Space Grade connector.

Product Features

- Lightweight aluminum shells and copper alloy contacts
- Variety of layouts as described in Mil Standard 1560
- Offering the shell styles currently provided with the standard product line
- Operating temperature of -65°C to 200°C
- Durability of 500 mating cycles
- Available in Series I, II, and III

Benefits to Customer

- Low cost space grade connector system
- Proven track record for reliability, high quality product
- Designed to be comparable to Mil-DTL-38999
- High density requirements
- Distribution inventory position
- Standard M39029 contacts utilized



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Our facility is not currently certified by the DLA and this product is not covered by the QPL/QML.