DESIGN OBJECTIVES

The product described in this document has not been fully tested to insure conformance to the requirements outlined below. Therefore AMP Incorporated makes or representation or warranty, expressed or implied, that the product will comply with these requirements.

Further, AMP Incorporated may change these requirements based on the results of additional testing and evaluation. Contact AMP Engineering for further details.

Il prodotto descritto in questa specifica non è stato ancora completamente provato per garantirne la conformità ai requisiti indicati nel documento. quindi l'AMP non può al momento fornire assicurazione sulla conformità del prodotto a questi requisiti.

L'AMP si riserva inoltre la facoltà di modificare i requisiti della specifica sulla base dei risultati di addizionali prove e valutazioni. Per ulteriori informazioni si prega di contattare l'Ufficio Tecnico.

1. SCOPE

This specification covers Performance and Technical Characteristics of Coax "F" Connectors and related accessories.

2 APPLICABLE DOCUMENTS

The documents mentioned as references in this specification form a part of it to the extent specified herein.
In the event of conflict between requirements of this specification and product drawing, product drawing shall take precedence.
In the event of conflict between requirements of this specification and requirements of referenced documents, this specification shall take precedence.

3 REQUIREMENTS

3.1 Environmental and Mechanical Characteristics

Test	Limits	References
Interface mechanic strength	177N	GR-1503-CORE 3.2.3. R3-16
Torsion	1.5mm	GR-1503-CORE 3.2.3. R3-17
Vibration	Release Torque ≥ 80% of the blocking torque, Rl,shield, DRc ≤0.5mΩ (inner conductor) DRc ≤ 0.1mΩ (External conductor)	GR-1503-CORE 4.6
Mechanical Life (100 cycles of mating/unmating)	DRc ≤ 0.5mΩ (inner conductor) DRc ≤0.1mΩ (External conductor) Test Voltage Mating Torque Unmating Torque	CECC22000 4.7.1.
Thermal cycles with Humidity	Ri, DRc ≤ 0.5mΩ (inner conductor) DRc ≤ 0.1mΩ (External conductor) Vsc, Rmi	GR-1503-CORE 4.1
Unmating Torque	After the Thermal cycles: ≥ 3.3N*m	GR-1503-CORE 4.2
Tightness	Ri ≥200MΩ	GR-1503-CORE 4.3
Salt Spray	DRc ≤ 0.5mΩ (inner conductor) DRc ≤0.1mΩ (External conductor) DRl=0 No surface degradation	GR-1503-CORE 4.4
Environmental Pollution	DRc ≤ 0.5mΩ (inner conductor) DRc ≤ 0.1mΩ (External conductor) DRl=0 No surface degradation	GR-1503-CORE 4.5

Chemical Agents Resistance	Identification of break traces, swellings,embrittlements	GR-1503-CORE 4.7
U.V. Resistance		GR-1503-CORE 4.9
Ozone Resistance	Identification of break traces, swellings,embrittlements	GR-1503-CORE 4.10
Protective covering retention	After the therml cycles ther shall be no retentions	---
Tightening Torque	No deformations at: 6.7 N*m	GR-1503-CORE 3.2.3 R3-24

SYMBOLS:

Rc= Contact Resistance
ΔRc= Variation of the Contact Resistance
Ri= Insulation Resistance
Rl= Loss due to Reflection
ΔRl= Variation of the Loss due to the Reflection
Vsc= Arch Voltage
Rmi= Mechanical Strength of the Interface

3.2 Electrical Characteristics

Test	Limits	References
Insulation Resistance	5GΩ	GR-1503-CORE 3.5.1
Dielectric Strength at 1000Vac rms or 1500Vcc, for 60s	No archs	GR-1503-CORE 3.5.2
Attenuation	f ≤ 350 MHz 0.1dB 350 MHz ≤ f ≤700MHz 0.2dB 700 MHz ≤ f ≤ 1000MHz 0.2dB	GR-1503-CORE 3.5.3
Return Loss up to 1 GHz	VSWR Ret. Loss ≥21dB	GR-1503-CORE 3.5.4
Contact Resistance	≤ 1.0mΩInner Contact ≤0.5mΩOuter Contact	CECC 22000 4.4.2
Shielding	f ≤350 MHz 90dB 350 MHz ≤ f ≤ 1000MHz 70dB	GR-1503-CORE 3.5.5

4. "F" Connector Description

Both the "F" male connectors suitable for the RG6 (or equivalent) and RG59 (or equivalent) refer to the norm CEI IEC 169-24. The mating between the male and female shall be of screw type, with mechanical compatibility of 3/8" 32UNEF. The resulting electric impedance of the connector shall be of 75Ω.

The inner contact of the male connector shall be made using the inner conductor of the coaxial cable RG6 and RG59.

The connector shall be hermetically sealed and shall guarantee protection for the electromagnetic compatibility according to the local applicable laws.

All the test set-up refer to the CECC 22000 and the Bellcore GR 1503-CORE.

For the electrical, mechanical and environmental performances see the table in paragraph 3.1 and 3.2 .

4.1 Packaging

The components shall be packaged in a bag in group of 100, on each bag shall be posted up an AMP standard label.

5. High Performance Female to Female "F" Splice

The mating between the male and female shall be of screw type, with mechanical compatibility fo 3/8" 32UNEF. The resulting electric impedance of the connector shall be of 75Ω.

For the electrical, mechanical and environmental performances see the table in paragraph 3.1 and 3.2 .

The electrical performances specific to this product are listed below:

Return Loss:	**50MHz**	**500MHz**	**1GHz**
	≥35dB	**≥27dB**	**≥21dB**
Insertion Loss:	**≤0.15dB**	**≤0.3dB**	**≤0.3dB**

5.1 Packaging

The components shall be packaged in a bag in group of 100, on each bag shall be posted up an AMP standard label.

6. Male to Male "F" Splice

The mating between the male and female shall be of screw type, with mechanical compatibility fo 3/8" 32UNEF. The resulting electric impedance of the connector shall be of 75Ω.

For the electrical, mechanical and environmental performances see the table in paragraph 3.1 and 3.2 .

The electrical performances specific to this product are listed below:

Return Loss:	**50MHz**	**500MHz**	**1GHz**
	≥30dB	**≥28dB**	**≥21dB**
Insertion Loss:	**≤0.15dB**	**≤0.3dB**	**≤0.3dB**

6.1 Packaging

The components shall be packaged in a bag in group of 100, on each bag shall be posted up an AMP standard label.

7. 75 Ω Terminator

The mating between the male and female shall be of screw type, with mechanical compatibility fo 3/8" 32UNEF. The resulting nominal electric impedance of 75Ω.

For the electrical, mechanical and environmental performances see the table in paragraph 3.1 and 3.2 .

The electrical performances specific to this product are listed below:

Return Loss:	**50MHz**	**500MHz**	**1GHz**
	≥30dB	**≥21dB**	**≥16dB**

7.1 Packaging

The components shall be packaged in a bag in group of 100, on each bag shall be posted up an AMP standard label.

8. Female to Female "F" Splice

The mating between the male and female shall be of screw type, with mechanical compatibility fo 3/8" 32UNEF. The resulting electric impedance of the connector shall be of 75Ω.

For the electrical, mechanical and environmental performances see the table in paragraph 3.1 and 3.2 .

The electrical performances specific to this product are listed below:

Return Loss:	**50MHz**	**500MHz**	**1GHz**
	≥30dB	**≥18dB**	**≥12dB**
Insertion Loss:	**≤0.15dB**	**≤0.3dB**	**≤0.3dB**

8.1 Packaging

The components shall be packaged in a bag in group of 100, on each bag shall be posted up an AMP standard label.