

CERTI-SEAL* Coax Coupling Closure**1. SCOPE**

1.1. Content

This specification covers performance, tests and quality requirements for CERTI-SEAL* coax coupling closure. This closure is used to environmentally seal a coaxial cable spliced with "F" connectors.

1.2. Qualification

When tests are performed on subject product line, procedures specified in AMP 109 series specifications shall be used. All inspections shall be performed using applicable inspection plan and product drawing.

2. APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, latest edition of the document applies. 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 referenced documents, this specification shall take precedence.

2.1. AMP Documents

- A. 109-1: General Requirements for Test Specifications
- B. 109 Series: Test Specifications as indicated in Figure 1. (Comply with MIL-STD-202, MIL-STD-1344 and EIA RS-364)
- C. Corporate Bulletin 401-76: Cross-reference between AMP Test Specifications and Military or Commercial Documents
- D. 408-3330: Instruction Sheet
- E. 501-263: Test Report

3. REQUIREMENTS

3.1. Design and Construction

Product shall be of design, construction and physical dimensions specified on applicable product drawing.

3.2. Material

- A. Housing: Thermoplastic, polyester, black
- B. Sealant: AMP formulated, PN 990705-1 or 998665-1

3.3. Rating

Temperature: -40°C to 60°C

3.4. Performance and Test Description

Product is designed to meet electrical, mechanical and environmental performance requirements specified in Figure 1. All tests are performed at ambient environmental conditions per AMP Specification 109-1 unless otherwise specified.

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3.5. Test Requirements and Procedures Summary

Test Description	Requirement	Procedure
Examination of product.	Meets requirements of product drawing.	Visual, dimensional and functional per applicable quality inspection plan.
ELECTRICAL		
Dielectric withstanding voltage.	1000 vac. 1 milliampere leakage.	AMP Spec 109-29-1. Test between cable shield and foil wrapped outside splice case.
Insulation resistance.	> 100 megohms.	AMP Spec 109-28-4. Apply 500 vdc between cable shield and foil wrapped outside splice case.
MECHANICAL		
Impact.	See Note.	AMP Spec 109-86. Subject complete closure assemblies to impacts of 5 pounds from 12 inches at -18 and 38°C.
Crush.	See Note.	AMP Spec 109-19. Subject complete closure assemblies wrapped in rubber with durometer of 65 to 75A to uniformly distributed weight of 200 pounds per square inch for 15 minutes.
Immersion.	Insulation resistance of 100 megohms measured between cable shield and salt solution shall be measured upon immersion and immediately prior to removal. See Note.	AMP Spec 109-74-5. Immerse complete closure assemblies to depth of 1 foot in 5% salt solution for 14 days at ambient temperature.
ENVIRONMENTAL		
Temperature cycling.	See Note.	AMP Spec 109-75-2. Subject complete closure assemblies to 128, 2 hour temperature cycles between -40 and 60°C.
Humidity-temperature cycling.	See Note.	AMP Spec 109-23-3, Condition B. Subject complete closure assemblies to 10, 24 hour humidity-temperature cycles between 25 and 65°C at 95% RH.

NOTE

Shall meet visual requirements, show no physical damage and shall meet requirements of additional tests specified in Test Sequence in Figure 2.

Figure 1

3.6. Product Qualification and Requalification Test Sequence

Test or Examination	Test Group (a)				
	1	2	3	4	5
	Test Sequence (b)				
Examination of product	1,7	1,7	1,7	1,7	1,7
Dielectric withstanding voltage	3,6	3,6	3,6	3,6	3,6
Insulation resistance	2,5	2,5	2,5	2,5	2,5
Impact		4			
Crush	4				
Immersion			4		
Temperature cycling					4
Humidity-temperature cycling				4	

NOTE

- (a) See Para 4.1.A.
- (b) Numbers indicate sequence in which tests are performed.

Figure 2

4. QUALITY ASSURANCE PROVISIONS

4.1. Qualification Testing

A. Sample Selection

Splice cases shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production. All test groups shall each consist of 5 splices of the minimum and 5 splices of the maximum diameter cables approved on the product instruction sheet. Coaxial cables shall be spliced using standard crimp on "F" connectors and F-81 splice connector with splice case applied around splice.

B. Test Sequence

Qualification inspection shall be verified by testing samples as specified in Figure 2.

4.2. Requalification Testing

If changes significantly affecting form, fit or function are made to product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of original testing sequence as determined by development/product, quality and reliability engineering.

4.3. Acceptance

Acceptance is based on verification that product meets requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify product. When product failure occurs, corrective action shall be taken and samples resubmitted for qualification. Testing to confirm corrective action is required before resubmittal.

4.4. Quality Conformance Inspection

Applicable AMP quality inspection plan will specify sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with applicable product drawing and this specification.