

**Connector, Economy F Series, RF Coaxial, PCB****1. SCOPE**

## 1.1. Content

I This specification covers performance, tests and quality requirements for Tyco Electronics Economy F Series RF Coaxial Printed Circuit Board Connectors.

## 1.2. Qualification

When tests are performed on the subject product line, procedures specified in Figure 1 shall be used. All inspections shall be performed using the 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, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

## I 2.1. Tyco Electronics Documents

- 109-1: General Requirements for Test Specifications
- I ● 109 Series: Test Specifications as indicated in Figure 1
- 501-391: Qualification Test Report

## 2.2. Government Document

MIL-C-17: Cable, Coaxial, Radio Frequency

**3. REQUIREMENTS**

## 3.1. Design and Construction

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

## 3.2. Materials

- Body: Brass or zinc die casting with nickel, tin, or tin-lead plating
- Contact: Beryllium copper, phosphor bronze, or brass with gold, silver, tin, or tin-lead plating
- Dielectric: Thermoplastic

## 3.3. Ratings

- Voltage: 500 volts (rms) at sea level
- Temperature: -65 to 85 C
- Nominal Impedance: 75 ohms
- Frequency Range: 0 to 1 GHz

3.4. Performance and Test Description

Product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1. Unless otherwise specified, all tests shall be performed at ambient environmental conditions per Test Specification 109-1.

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		
Termination resistance.	Continuity through outer contact.	AMP Spec 109-6-7. Subject samples to 100 ma maximum. See Figure 3.
MECHANICAL		
Vibration, random.	No discontinuities of 1 microsecond or longer duration. See Note.	AMP Spec 109-21-1. Subject mated samples to 10-55-10 Hz traversed in 1 minute with .06 inch maximum excursion. 2 hours in each of 3 mutually perpendicular planes.
Mechanical shock, specified pulse.	No discontinuities of 1 microsecond or longer duration. See Note.	AMP Spec 109-26-1. Subject mated samples to 50 G's half-sine shock pulses of 11 milliseconds duration. 3 shocks in each direction applied along 3 mutually perpendicular planes, 18 total shocks.
Durability.	See Note.	AMP Spec 109-27. Mate and unmate samples for 10 cycles at a maximum rate of 600 cycles per hour.

**NOTE** *Shall meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification and Requalification Test Sequence shown in Figure 2.*

Figure 1 (end)

3.6. Product Qualification and Requalification Test Sequence

Test or Examination	Test Group (a)
	1
	Test Sequence (b)
Examination of product	1,7
Termination resistance	2,6
I Vibration	4
Mechanical shock	5
Durability	3

**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

Samples shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production. Test group shall consist of 5 jacks and 5 plugs. Jacks shall be mounted on .062 inch thick printed circuit boards. Plugs shall be crimped to a 12 inch length of RG59B/U cable conforming to MIL-C-17.

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 the product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by development/product, quality and reliability engineering.

4.3. Acceptance

Acceptance is based on verification that the product meets the requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the 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

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

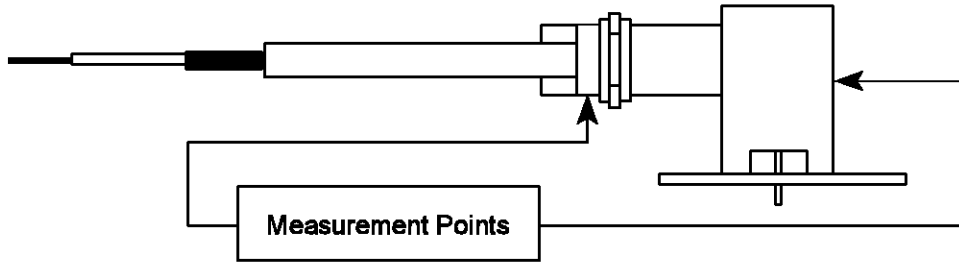


Figure 3  
Termination Resistance Measurement Points