

PRODUCT SPECIFICATION

1. SCOPE

1.1. Content

This specification covers performance, tests and quality requirements for subminiature COAXICON* printed circuit board contacts.

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.

1.3. Definitions

For the purpose of this specification, the following definitions shall apply:

- A. Test board: Printed circuit wiring board constructed per Figure 4.
- B. Printed circuit board contacts: Board mounted receptacle soldered in position on test board. Each contact contains a male pin inner contact contained within the outer shell which is designed to mate with short subminiature COAXICON pin contact.
- C. Pin contact: Subminiature COAXICON short pin contact containing female inner contact housed within outer shell. Contact is terminated to coaxial cable.
- D. Test board assembly: Consists of test board containing printed circuit board contacts installed and mated with appropriate pin contacts.

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)

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CONTROLLED DOCUMENT This specification is a controlled document per AMP Specification 102-21. It is subject to change and Corporate Standards should be contacted for latest revision.				DR R. Prescott 30 Apr 72		AMP AMP Incorporated Harrisburg, PA 17105-3608			
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B	All Para revised per EC 0220-0214-94 <i>BLB</i> <i>6/1/74</i>	APP	DATE	APP D. Smith 01 Jun 72		NO	108-12008	REV	LOC
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LTR	REVISION RECORD	APP	DATE	PAGE	TITLE				
				1 OF 6	SUBMINIATURE COAXICON PRINTED CIRCUIT BOARD CONTACT				

- C. Corporate Bulletin 401-76: Cross-reference between AMP Test Specifications and Military or Commercial Documents
- D. 108-12011: Product Specification

2.2. Military Standard

Mil-C-17: Coaxial Cable, Radio Frequency

3. REQUIREMENTS

3.1. Design and Construction

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

3.2. Materials

Materials shall be as specified on applicable product drawing.

3.3. Ratings

- A. Voltage: 200 vrms at sea level
 B. Current: 1 ampere maximum
 C. Temperature: -55 to 85°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.

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.	10 milliohms maximum for inner contact. 4 milliohms maximum for outer shell contact.	Subject contacts to 50 mv open circuit at 100 ma. See Figure 3. AMP Spec 109-6-1.
Dielectric withstanding voltage.	600 volts rms dielectric withstanding voltage. 1 minute hold. No breakdown or flashover.	Test between points A and B on test board. See Figure 5. AMP Spec 109-29-1.

Figure 1 (cont)

Test Description	Requirement	Procedure
Insulation resistance.	5000 megohms minimum.	Test between points A and B on test board. See Figure 5. AMP Spec 109-28-4.
MECHANICAL		
Vibration.	No discontinuities greater than 1 microsecond. See Note (a).	Subject samples to 10-55-10 Hz traversed in 1 minute at 0.06 inches total excursion. 2 hours in each of 3 mutually perpendicular planes. See Figure 5. AMP Spec 109-21-1.
Physical shock.	No discontinuities greater than 1 microsecond. See Note (a).	Subject samples to 100 G's sawtooth shock pulses of 6 milliseconds duration. 3 shocks in each direction applied along 3 mutually perpendicular planes, 18 total shocks. See Figure 5. AMP Spec 109-26-9.
Contact engaging force.	3.5 pounds maximum.	Measure force necessary to engage contact and printed circuit board contact. AMP Spec 109-35.
ENVIRONMENTAL		
Thermal shock.	See Note (a).	Subject samples to 5 cycles between -55 and 85°C. See Figure 5. AMP Spec 109-22.

- (a) Shall meet visual requirements, show no physical damage and shall meet requirements of additional tests as specified in Test Sequence 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	1,9
Termination resistance, dry circuit	6
Dielectric withstanding voltage	8
Insulation resistance	7
Vibration	3
Physical shock	5
Contact engaging force	2
Thermal shock	4

(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

Contacts shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production. Test group 1 shall consist of 8 samples mounted on test board per Figure 4. Cable used for terminating pin contacts shall be RG-174/U per 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 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.

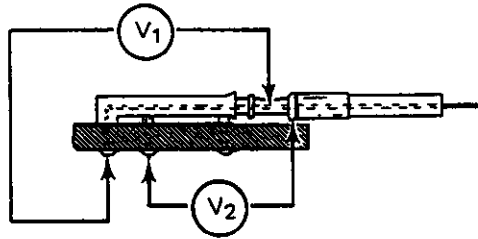


Figure 3
Termination Resistance

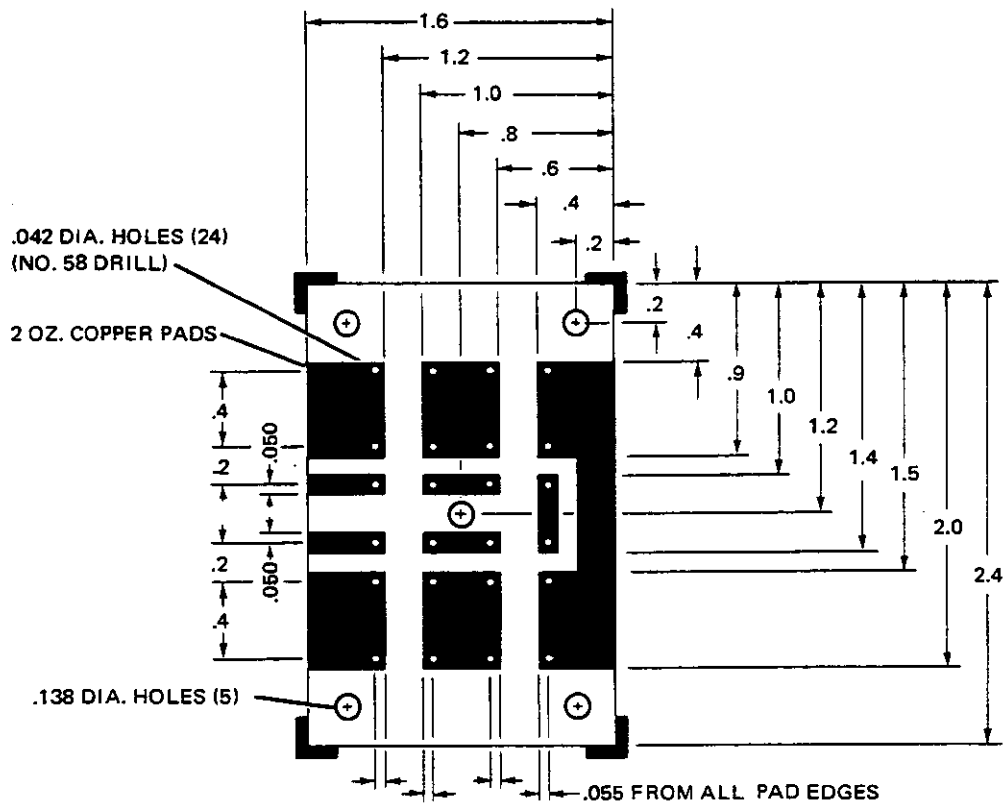


Figure 4
Test Board Dimensions

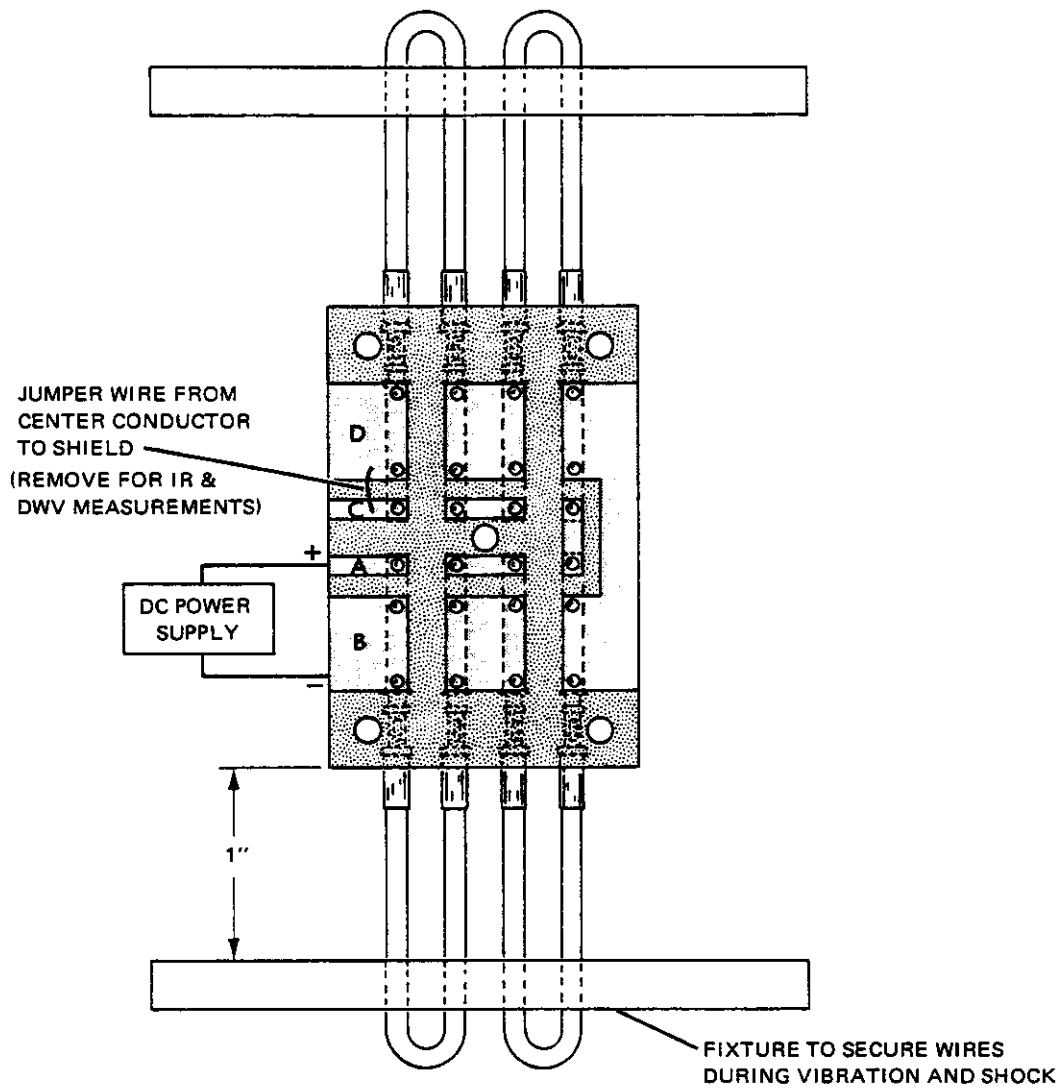


Figure 5
Vibration & Physical Shock Assembly