

PRODUCT SPECIFICATION

1. SCOPE

1.1. Content

This specification covers performance, tests and quality requirements for AMPMODU* surface mount header connector family. Components are comprised of .025 inch square posts pressed into flame retardant housings providing a .100 inch centerline grid interface. Components of this type are intended to be soldered to the surface of printed wiring boards having pads with preapplied solder paste, thus eliminating the need for through hole mounting. Conventional processes shall be used in placing and reflowing solder paste as defined in applicable documents. This specification applies when headers are mounted to G-10 or FR-4 epoxy printed wiring boards.

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 constitute a part of this specification 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 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. 201-21: Workmanship Standard
- E. 501-201: Test Report

3. REQUIREMENTS

3.1. Design and Construction

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

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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 <i>Brenda Beckley</i> 3/26/93 CW <i>David H. Polyzos</i> 3/24/93 APP <i>Brenda Beckley</i> 3/24/93		AMP AMP Incorporated Harrisburg, PA 17105-3608	
				NO 108-25035		REV 0	LOC B
O	Release per EC 0010-0385-93	<i>BJP</i>	<i>4/5/93</i>	PAGE 1 OF 4	TITLE CONNECTOR, AMPMODU, SURFACE MOUNT, HEADER		
LTR	REVISION RECORD	APP	DATE				

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3.2. Materials

- A. Contact: Copper alloy, tin-lead with selective gold plating
- B. Housing: Glass filled thermoplastic, UL 94V-0

3.3. Ratings

- A. Current: Signal application only
- B. Temperature: -55 to 105°C

3.4. Performance and Test Description

Product is designed to meet electrical, mechanical and environmental performance requirements specified in Figure 1. All tests 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. All solder joints shall meet AMP Standard 201-21.	Visual, dimensional and functional per applicable quality inspection plan.
ELECTRICAL		
Termination resistance, dry circuit.	20 milliohms maximum.	Measure potential drop of contacts. 50 mv open circuit at 100 ma maximum. See Figure 3. AMP Spec 109-6-1.
Dielectric withstanding voltage.	750 vac, 60 Hz. 1 minute hold. No breakdown or flashover. 1 ma leakage current.	Test between adjacent contacts of header. AMP Spec 109-29-1.
Insulation resistance.	5000 megohms initial.	Test between adjacent contacts of header. AMP Spec 109-28-4.
MECHANICAL		
Contact retention.	3 pounds minimum. Post shall not dislodge from housing.	With sample mounted, apply axial load of 3 pounds in direction opposite of insertion. AMP Spec 109-30.
Durability.	See Note (a).	Mate and unmate mounted sample for 50 cycles. AMP Spec 109-27.

Figure 1 (cont)

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Test Description	Requirement	Procedure
Solderability.	PCB pads and connector solder tails shall have minimum of 95% solder coverage.	Subject to solderability. AMP Spec 109-11-1.
ENVIRONMENTAL		
Humidity-temperature cycling.	See Note (a).	Subject mated connectors to 10 humidity-temperature cycles between 25 and 65°C at 95% RH. AMP Spec 109-23-4.
Mixed flowing gas.	See Note (a).	Subject mated connectors to environmental class III for 20 days. AMP Spec 109-85-3.

(a) Shall meet visual requirements, show no physical damage and shall meet requirements of additional tests 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	2	3
	Test Sequence (b)		
Examination of product	1,6	1,7	1,3
Termination resistance, dry circuit	2,5		
Dielectric withstanding voltage		3,6	
Insulation resistance		2,5	
Contact retention			2
Durability	3		
Humidity-temperature cycling		4	
Mixed flowing gas	4		

(a) See Para 4.1.A.

(b) Numbers indicate sequence in which tests are performed.

Figure 3

4. QUALITY ASSURANCE PROVISIONS

4.1. Qualification Testing

A. Sample selection.

Header assemblies shall be selected at random from current production. All test groups shall consist of 6 header assemblies. In addition, 6 receptacle assemblies shall be included in test group 1.

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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 upon 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 prior to resubmittal.

4.4. Quality Conformance Inspection

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

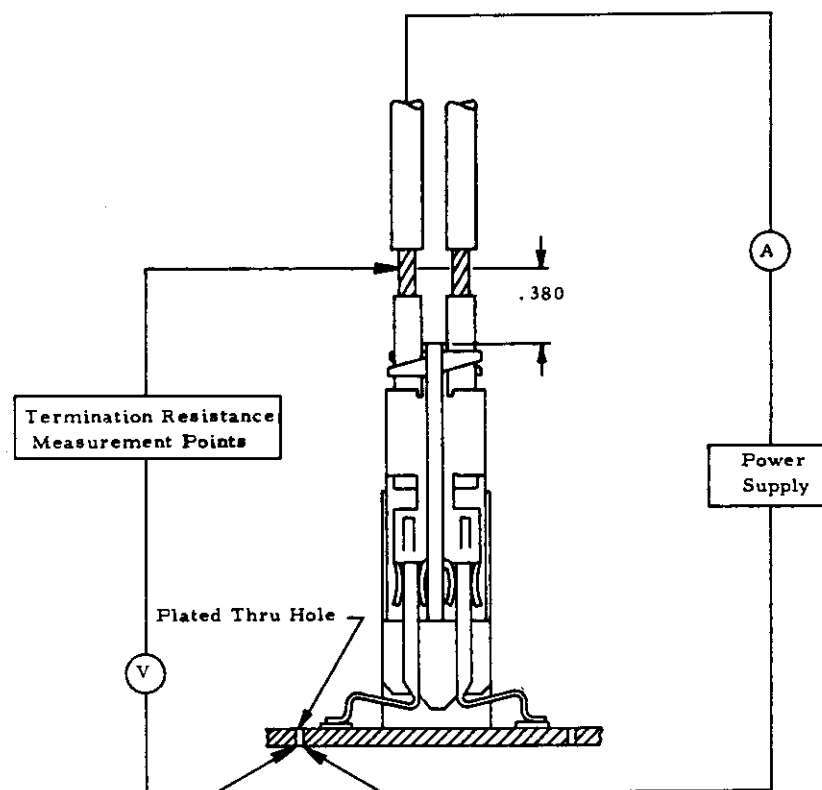


Figure 3
Termination resistance Measurement Points

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