

AMPMODU* MTE Right Angle Surface Mount Connector

1. SCOPE

1.1. Content

This specification covers performance, tests and quality requirements for the AMPMODU* MTE right angle surface mount header connector.

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.

1.3. Qualification Test Results

Successful qualification testing on the subject product line was completed on 03Jan00. The Qualification Test Report number for this testing is 501-316-2. This documentation is on file at and available from Engineering Practices and Standards (EPS).

2. APPLICABLE DOCUMENTS

The following AMP 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.

- A. 109-1: General Requirements for Test Specifications
- B. 109 Series: Test Specifications as indicated in Figure 1
- C. Corporate Bulletin 401-76: Cross-reference between AMP Test Specifications and Government or Commercial Documents
- D. 108-25034: Product Specification
- E. 114-25026: Application Specification
- F. 501-316-2: Qualification Test Report

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

Materials used in the construction of this product shall be as specified on the applicable product drawing.

3.3. Ratings

- A. Current: Signal application only
- B. Temperature: -65 to 105°C

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 AMP Specification 109-1.

3.5. Test Requirements and Procedures Summary

Test Description	Requirement	Procedure
Initial examination of product.	Meets requirements of product drawing.	AMP Spec 109-1. Visual and dimensional inspection per product drawing.
Final examination of product.	Meets visual requirements.	AMP Spec 109-1. Visual inspection.
ELECTRICAL		
Dry circuit resistance.	15 milliohms maximum. ΔR 5 milliohms max/min.	AMP Spec 109-6-1 Subject specimens to 100 milliamperes maximum and 50 millivolts maximum open circuit voltage. See Figure 3.
MECHANICAL		
Vibration, sinusoidal.	No discontinuities of 1 microsecond or longer duration. See Note.	AMP Spec 109-21-3. Subject mated gold plated specimens to 15 G's 10-2000-10 Hz traversed in 20 minutes. 4 hours in each of 3 mutually perpendicular planes.
		AMP Spec 109-21-2. Subject mated tin-lead plated specimens to 10 G's 10-500-10 Hz traversed in 15 minutes. 3 hours in each of 3 mutually perpendicular planes.
Mechanical shock, specified pulse.	No discontinuities of 1 microsecond or longer duration. See Note.	AMP Spec 109-26-7. Subject mated specimens to 50 G's sawtooth 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 specimens for 30 cycles for 100 μin tin-lead plating, 75 cycles for 15 μin gold plating, and 200 cycles for 30 μin gold plating at maximum rate of 10 cycles per minute.

Figure 1 (cont)

Test Description	Requirement	Procedure
Mating force.	0.26 kg [9 oz] maximum for gold plating. 0.40 kg [14 oz] maximum for tin-lead plating.	AMP Spec 109-42, Condition A. Measure force necessary to mate specimens with locking latches removed at a maximum rate of 12.7 mm [0.5 in] per minute.
Unmating force.	0.03 kg [1 oz] minimum.	AMP Spec 109-42, Condition A. Measure force necessary to unmate samples with locking latches removed at maximum rate of 12.7 mm [0.5 in] per minute.

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)
Initial examination of product	1
Dry circuit resistance	3,7
Vibration	5
Mechanical shock	6
Durability	4
Mating force	2
Unmating force	8
Final examination of product	9

NOTE (a) *See paragraph 4.1.A.*
(b) *Numbers indicate sequence in which tests are performed.*

Figure 2

4. QUALITY ASSURANCE PROVISIONS

4.1. Qualification Testing

A. Specimen Selection

Specimens shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production. Test group shall consist of 10, 3 position right angle surface mount MTE latching headers; 10, 3 position polarized/latching receptacles; 6, 5 position right angle surface mount MTE latching headers; and 6, 5 position polarized/latching receptacles.

B. Test Sequence

Qualification inspection shall be verified by testing specimens 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. If product failure occurs, corrective action shall be taken and specimens resubmitted for qualification. Testing to confirm corrective action is required before resubmittal.

4.4. Quality Conformance Inspection

The applicable AMP 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.

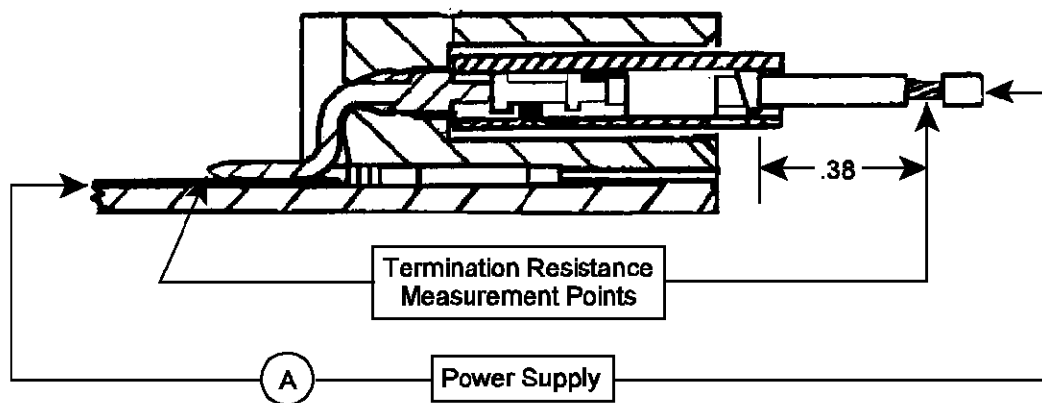


Figure 3
Dry Circuit Resistance Measurement Points