

Eight Position Multiple Port Right Angle Modular Jacks**1. SCOPE**

1.1. Content

This specification covers the performance, tests and quality requirements for Tyco Electronics 8 position multiple port right angle modular jacks. Each multiple port assembly consists of a 1 piece molded plastic housing containing 2, 3, 4, 5, 6, 7 or 8 modular jack ports positioned side by side in a single row. These assemblies are designed for printed circuit board mounting and are available in both shielded and unshielded styles.

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 06Apr95. The Qualification Test Report number for this testing is 501-91-1. This documentation is on file at and available from Engineering Practices and Standards (EPS).

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.

2.1. Tyco Electronics Documents

- 109-1: General Requirements for Test Specifications
- 109 Series: Test Specifications as indicated in Figure 1
- 108-1163: Product Specification
- 501-91-1: 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

- Voltage: 150 volts AC
- Current: Signal application only
- Temperature: -40 to 70°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 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.	ΔR 10 milliohms maximum.	AMP 109-6-1. Subject mated jack and plug assembly to 50 mv maximum open circuit at 100 ma maximum. See Figure 3.
MECHANICAL		
Vibration, sinusoidal.	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. 15 minutes in each of 3 mutually perpendicular planes.
Physical shock.	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 750 cycles at maximum rate of 500 cycles per hour with latch inoperative.
Mating force.	5 pounds maximum.	AMP Spec 109-42, Condition A. Measure force necessary to mate samples at maximum rate of .5 inch per minute with plug latch depressed.

Figure 1 (cont)

Test Description	Requirement	Procedure
Unmating force.	5 pounds maximum.	AMP Spec 109-42, Condition A. Measure force necessary to unmate samples at maximum rate of .5 inch per minute with plug latch depressed.

NOTE *Shall meet visual requirements, show no physical damage and shall meet the requirements of additional tests as specified in the 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	3,7
Vibration	5
Physical shock	6
Durability	4
Mating force	2
Unmating force	8

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. 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 4 housings containing 8 ports each and 32 terminated plugs.

B. Test Sequence

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

4.2. Requalification Testing

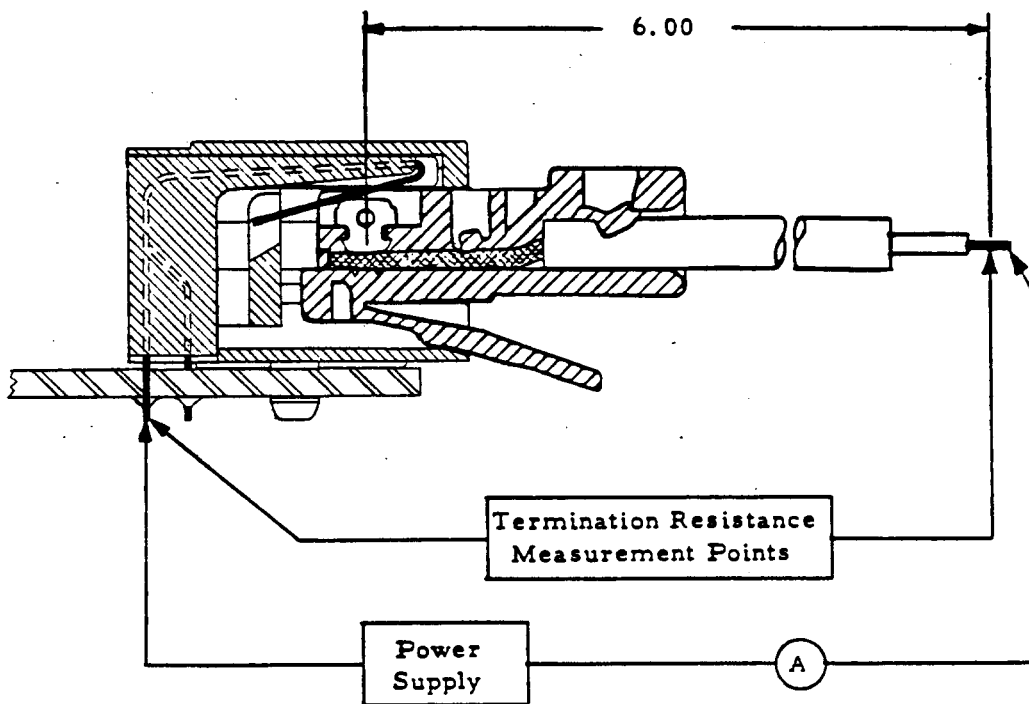
If changes significantly affecting form, fit or function are made to the product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by development/product, quality and reliability engineering.

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 will 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.



NOTE Millivolt drop (resistance) due to 6 inch wire length shall be subtracted from all readings.

Figure 3
Termination Resistance Measurement Points