



QUALIFICATION TEST REPORT

JACK, MODULAR, MULTIPLE PORT,
RIGHT ANGLE, 8 POSITION

501-091-1

Rev. 0

Product Specification: 108-1163-1
CTL No.: CTL0965-007-003
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Prepared By: Terrance M. Shingara

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Corporate Test Laboratory Harrisburg, Pennsylvania

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(R0965TS)



AMP INCORPORATED

HARRISBURG, PENNSYLVANIA 17105 PHONE: 717-231-3222 FAX: 717-231-3283
CORPORATE TEST LABORATORY

Qualification Test Report

1. Introduction

1.1 Purpose

Testing was performed on AMP* 8 position multiple port assembly to determine its conformance to the requirements of AMP Product Specification 108-1163-1 Rev. O.

1.2 Scope

This report covers the electrical, mechanical, and environmental performance of the 8 position multiple port assembly manufactured by the Communication Products Division of the Utility, Network & Communication Products Group. The testing was performed between January 16, 1995 and April 6, 1995.

1.3 Conclusion

The 8 position multiple port assembly meets the electrical, mechanical, and environmental performance requirements of AMP Product Specification 108-1163-1 Rev. O.

* Trademark

1.4 Product Description

The 8 position multiple port right angle modular jack 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.

1.5 Test Samples

The test samples were randomly selected from normal current production lots, and the following part numbers were used for test:

<u>Test Group</u>	<u>Quantity</u>	<u>Part Nbr</u>	<u>Description</u>
1	5	557566-1	8 cavity Multi-port Mod Jack
1	40	554739	8 pos Mod Plug

1.6 Qualification Test Sequence

	Test Groups
Test or Examination	1
Examination of Product	1,9
Termination Resistance, Dry Circuit	3,7
Vibration	5
Physical Shock	6
Mating Force	2
Unmating Force	8
Durability	4

The numbers indicate sequence in which tests were performed.

2. Summary of Testing

2.1 Examination of Product

All samples submitted for testing were selected from normal current production lots. They were inspected and accepted by the Product Assurance Department of the Communication Products Division.

2.2 Termination Resistance, Dry Circuit

All termination resistance measurements, taken at 100 milliamperes DC and 50 millivolts open circuit voltage had a change in resistance (ΔR) of less than 10 milliohms after testing.

<u>Test Group</u>	<u>Nbr of Data points</u>	<u>Condition</u>	<u>Min</u>	<u>Max</u>	<u>Mean</u>
1	64	After Mechanical(ΔR)	-0.18	+5.23	+1.334

2.3 Vibration

No discontinuities of the contacts were detected during vibration. Following vibration, no cracks, breaks, or loose parts on the connector assemblies were visible.

2.4 Physical Shock

No discontinuities of the contacts were detected during physical shock. Following physical shock testing, no cracks, breaks, or loose parts on the connector assemblies were visible.

2.5 Mating Force

All mating force measurements were less than 5 pounds per plug.

2.6 Unmating Force

All unmating force measurements were less than 5 pounds per plug.

2.7 Durability

No physical damage occurred to the samples as a result of mating and unmating the connector 750 times.

3. Test Methods

3.1 Examination of Product

Product drawings and inspection plans were used to examine the samples. They were examined visually and functionally.

3.2 Termination Resistance, Low Level

Termination resistance measurements at low level current were made using a four terminal measuring technique (Figure 1). The test current was maintained at 100 milliamperes DC with an open circuit voltage of 50 millivolts DC.

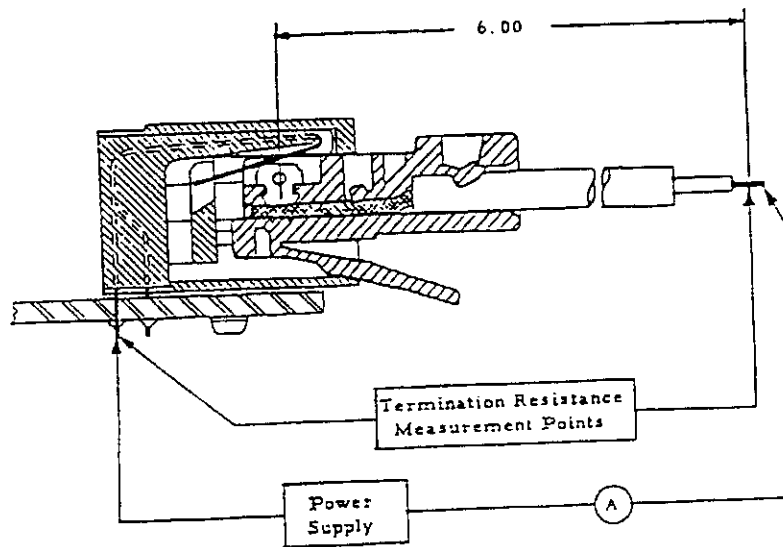


Figure 1
Typical Termination Resistance Measurement Points

3.3 Vibration, Sine

Mated plug and jacks were subjected to sinusoidal vibration, having a simple harmonic motion with an amplitude of 0.06 inch, double amplitude. The vibration frequency was varied uniformly between the limits of 10 and 55 Hz and returned to 10 Hz in one minute. This cycle was performed 15 times in each of three mutually perpendicular planes, for a total vibration time of 45 minutes. Connectors were monitored for discontinuities greater than one microsecond, using a current of 100 milliamperes in the monitoring circuit.

3.4 Physical Shock

Mated plug and jacks were subjected to a physical shock test, having a half-sine waveform of 50 gravity units (g peak) and a duration of 11 milliseconds. Three shocks in each direction were applied along the three mutually perpendicular planes, for a total of 18 shocks. The connectors were monitored for discontinuities greater than one microsecond, using a current of 100 milliamperes in the monitoring circuit.

3.5 Mating Force

The force required to mate individual plugs with its corresponding jack to was measured, using a free floating fixture. The crosshead rate of travel was 0.5 inch/minute.

3.6 Unmating Force

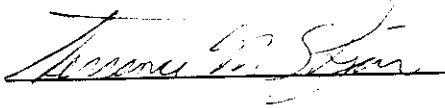
The force required to unmate individual plugs with its corresponding jack was measured using a free floating fixture. The crosshead rate of travel was 0.5 inch/minute.

3.7 Durability

Plug and jacks were mated and unmated 750 times at a rate not exceeding 500 per hour.

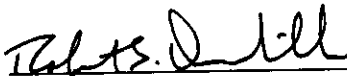
4. Validation

Prepared by:

 4/16/95

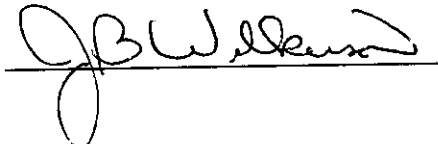
Terrance M. Shingara
Test Engineer
Product Qualification Team
Corporate Test Laboratory

Reviewed by:

 4/18/95

Robert S. Druckenmiller
Supervisor
Product Testing
Corporate Test Laboratory

Approved by:

 5/19/95

Jeff Wilkerson
Manager, Product Quality Assurance
Communication Products Division
Utility, Networking and Communications Group