AMP

QUALIFICATION TEST REPORT
(Retention)

Connector Block Assembly
for Taper Pin Contacts

501-18 Rev. 0

Product Specification:	108-7053, Rev. 0
CTL Number:	CTL5307-500-001
Date:	June 3, 1985
Distribution:	07

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RAG/kd
CTL5307-500-001/LABREP(6)

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CORPORATE TEST LABORATORY

Retention of Qualification Connector Block Assembly for Taper Pin Contact

1. Introduction

1.1 Purpose

Testing was conducted to determine product compliance to AMP Specification 108-7053, Rev. 0, retention of qualification sequence.

1.2 Scope

This report covers the mechanical and electrical performance of the connector block assembly for Taper Pin Contacts. The product is produced by the Electron Devices Division of the Connector and Electronics Products Group. Testing was performed between April 15, 1985 and May 15, 1985.

1.3 Conclusion

The connector block assembly for Taper Pin Contacts conforms to the retention of qualification requirements of AMP 108-7053, Rev. 0.

1.4 Sample Description

Horizontal in-line connector block assemblies, made of nylon, were tested. They were gold plated "53" series. The receptacles are self-wedging and self-cleaning.

1.5 Test Samples

Part Number	Description	Quantity
480064-3	10 Position Taper Block	3
480065-3	20 Position Taper Block	2
480107-9	30 Position Taper Block	2
581173-3	60 Position Taper Block	2
66173-3	Gold Plated Long Solid Taper Pins	120

1.6 Test Sequence

Test	Group 1	Sequence
Examination of Product		1
Termination Resistance		2
Vibration		3
Termination Resistance		4
Physical Shock		5
Termination Resistance		6
Thermal Shock		7
Dielectric Withstanding Voltage		8

Test	Group 2	Sequence
Examination of Product		1
Contact Retention		2

2. Summary of Testing

2.1 Examination of Product

All samples provided were drawn from current inventory produced under manufacturing control and had passed all inspection requirements.

2.2 Vibration

Mated connector assemblies were subjected to a simple harmonic motion having an amplitude of 0.03 inch (0.06-inch double amplitude). The frequency was varied uniformly between 10 and 55 Hz. and return to 10 Hz. This frequency was traversed in approximately 1 minute. The connector assemblies were subjected to this vibration for two hours in each of three mutually perpendicular planes (six hours total vibration). Assemblies were monitored for discontinuities greater than one microsecond.

Test Results

There was no evidence of physical damage to any of the connector assemblies and no discontinuities greater than one microsecond. All assemblies measured less than two milliohms termination resistance after test.

2.3 Physical Shock

The test assemblies were subjected to a physical shock test with a sawtooth waveform of 100 g's and a duration of six milliseconds. Three shocks in each direction were applied along the three mutually perpendicular axes of the assemblies, for a total of eighteen shocks.

The assemblies were monitored for discontinuities greater than one microsecond.

Test Results

There was no evidence of physical damage to any of the connector assemblies and no discontinuities greater than one microsecond. All assemblies measured less than two milliohms termination resistance after test.

2.4 Thermal Shock

Mated connector assemblies were subjected to temperature extremes of -55°C and +105°C. The assemblies were at each extreme for one-half hour. The transition time between each extreme was less than 3 minutes. A total of 5 cycles were performed on the samples.

Test Results

There was no evidence of physical damage to any of the connector assemblies after test. All samples passed the dielectric withstanding voltage requirement following this test.

2.5 Dielectric Withstanding Voltage

Following thermal shock, a voltage was applied between adjacent contacts, between pins closest to the outside body, and between pins closest to the mounting hardware. The applied voltage was 1500 v. ac and was held for one minute.

Test Results

There were no breakdowns or flashovers at any point.

2.6 Contact Retention

An axial load of 12 pounds was applied to the taper pins in a direction which tends to disengage them from the taper block.

Test Results

All samples successfully met the requirements of twelve pounds minimum with no disengagements from the taper blocks.

2.7 Termination Resistance

Mated assemblies were measured for potential drop using a current of 22 amperes d.c. Points of measurement were as indicated in Figure 1. Resistance was calculated from this value.

Test Results

All samples measured initially, after vibration, and after physical shock met the specification requirement of less than 2 milliohms.

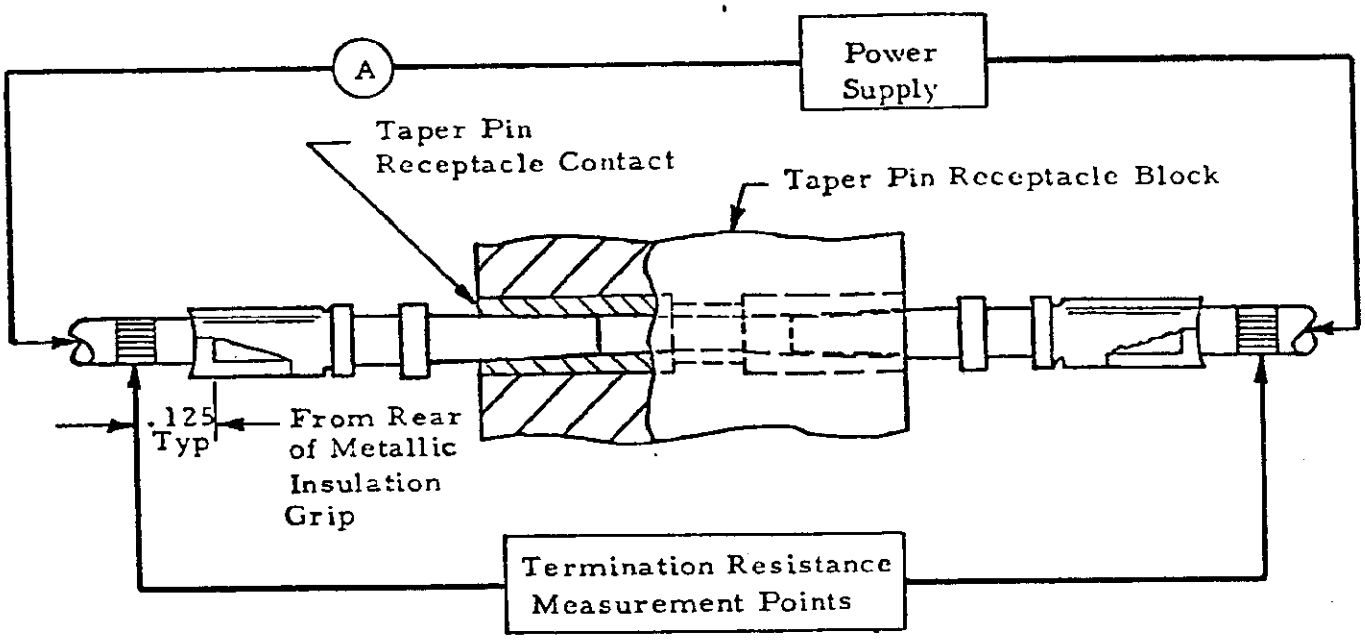

Figure 1

3. Validation

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