



AMPMODU* MOD I Housing Material Evaluation

1. INTRODUCTION

1.1 Purpose

Testing was performed on the TE Connectivity AMPMODU MOD I Connector System to evaluate a new housing material due to discontinuation by the supplier. Testing was evaluated to the requirements of TE Product Specification 108-25016 Rev. B.

1.2 Scope

This report covers electrical and environmental performance of the AMPMODU MOD I Connector System specimens listed in Table 1 of paragraph 1.4. Testing was performed at the Harrisburg Electrical Components Test Laboratory between June 16, 2021 and June 28, 2021. Documentation is on file and maintained at HECTL under EA20210234T.

1.3 Conclusion

The AMPMODU MOD I specimens listed in Table 1 of paragraph 1.4 conformed to the requirements of 108-25016 Rev. B when subjected to the test sequence listed in Table 2 of paragraph 1.5. Refer to section 2 for detailed results.

1.4 Test Specimens

Specimens identified with the following part numbers were used for this test. Refer to Table 1 for test specimen identification information.

Table 1 – Specimen Identification

Test Set	Quantity	Part Number	Description
1	10	2-87984-0	AMPMODU MOD I PCB Mount Receptacle, 20 Position, .156
	10	2-85829-0	AMPMODU MOD I Header Assembly, 20 Position, Vertical, Single Row, .156

1.5 Test Sequence

Specimens identified in Table 1 were subjected to the test sequence outlined in Table 2.

Table 2 – Test Sequence

Test or Examination	Test Set
	1
	Test Sequence (a)
Examination of Product	1,7
Insulation Resistance	2,5
Dielectric Withstanding Voltage	6
Thermal Shock	3
Temperature/Humidity Cycling	4

NOTE a) *The numbers indicate sequence in which tests were performed.*

1.6 Environmental Conditions

Unless otherwise stated, the following environmental conditions prevailed during testing:

Temperature:	15°C to 35°C
Relative Humidity:	20% to 80%

2. SUMMARY OF TESTING

2.1 Examination of Product

Specimens were visually examined and no evidence of physical damage detrimental to product performance was observed. Refer to Figure 1 for an image of typical specimens as received.

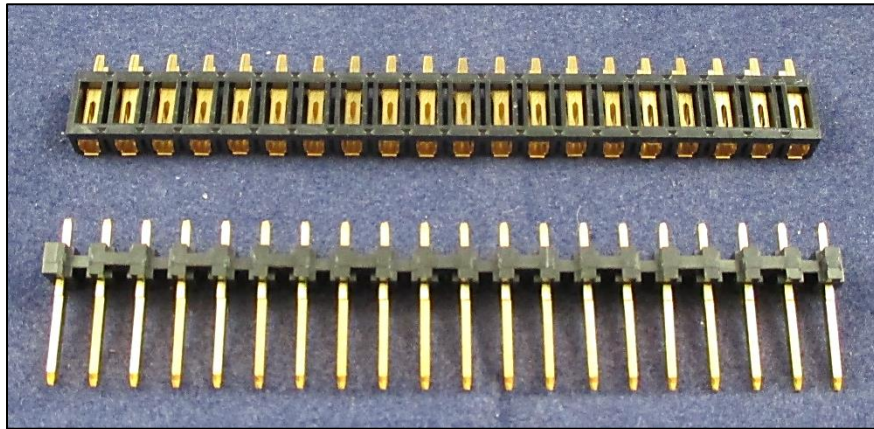


Figure 1 – Typical Specimens as Received

2.2 Insulation Resistance

All insulation resistance measurements were greater than the minimum requirement of 5000 megohms initially and greater than the minimum requirement of 1000 megohms after thermal shock and temperature/humidity cycling exposure.

2.3 Dielectric Withstanding Voltage

No dielectric breakdown or flashover occurred.

2.4 Thermal Shock

No evidence of physical damage was visible as a result of exposure to thermal shock.

2.5 Temperature/Humidity Cycling

No evidence of physical damage was visible as a result of exposure to temperature/humidity cycling.

3. TEST METHODS

3.1 Examination of Product

Specimens were visually examined with an unaided eye. Testing was performed in accordance with EIA-364-18B.

3.2 Insulation Resistance

Insulation resistance was measured between adjacent contacts of mated specimens. A test voltage of 500 volts DC was applied for two minutes before the resistance was measured. Wires (30 AWG) were soldered to the tails of the header to facilitate measurements. Refer to Figure 2 for images of the typical test setup. Testing was performed in accordance with EIA-364-21F.

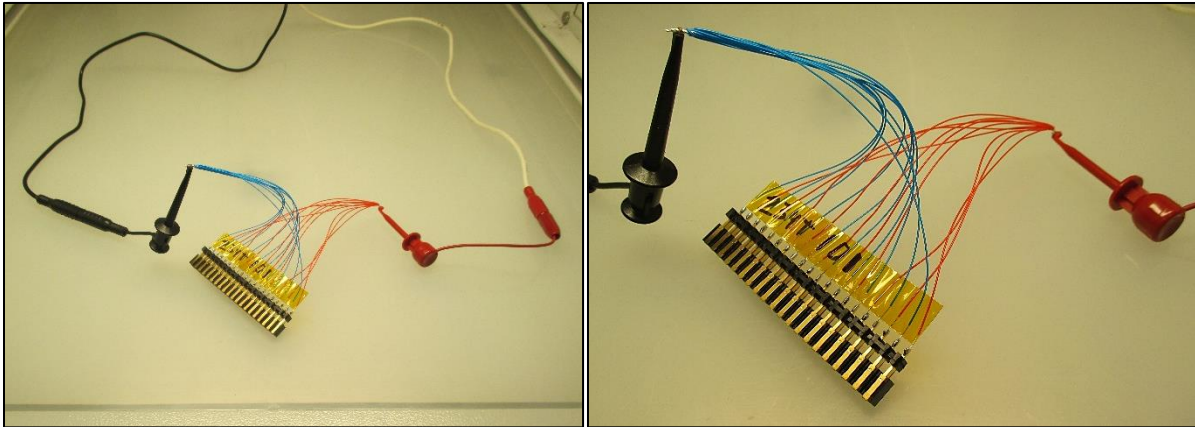


Figure 2 – Typical IR/DWV Test Setup

3.3 Dielectric Withstanding Voltage

A test potential of 1200 volts AC was applied between the adjacent contacts of mated specimens. This potential was applied for one minute and then returned to zero. Wires (30 AWG) were soldered to the tails of the header to facilitate measurements. Refer to Figure 2 (above) for images of the typical test setup. Testing was performed in accordance with EIA-364-20F.

3.4 Thermal Shock

Mated specimens were subjected to 5 cycles of thermal shock with each cycle consisting of 30 minute dwells at -65°C and 105°C . The transition between temperatures was less than one minute. Testing was performed in accordance with EIA-364-32G.

3.5 Temperature/Humidity Cycling

Mated specimens were exposed to 10 cycles of temperature/humidity cycling. Each cycle lasted 24 hours and consisted of cycling the temperature between 25°C and 65°C twice while maintaining high humidity. During the first five cycles, the specimens were exposed to a cold shock at -10°C . Testing was performed in accordance with EIA-364-31F.