



Product Change Notification

TE Connectivity

Product Change Notification: PCN-25-264003

PCN Date: 11-DEC-25

TE would like to inform you of the following change(s) to the listed TE Connectivity Product. In case of any further questions about this change(s), please contact your TE Connectivity Sales Engineer. Affected part, drawing and/or specification numbers are listed on the attached sheet(s).

Product Description: (Text limited to 120 characters)

MOD II Header

General Description of Changes

Before: (1) Current localized Gold Plating: 0.76 Micrometers(30microinches)Au plating on contact area. (2) Current localized Gold Plating: 0.38 Micrometers(15microinches)Au plating on contact area. After: (1) New localized Gold Plating: 0.66 Micrometers(26microinches)PdNi+ 0.1 Micrometers(4microinches)Au flash on contact area. (2) New localized Gold Plating : 0.28 Micrometers(11microinches)PdNi+ 0.1 Micrometers(4microinches)Au flash on contact area.

Plating Note

Plating Note Before

.00076[.000030] GOLD IN THE CONTACT AREA,
.00254[.000100] MATTE TIN ON REMAINDER OF CONTACT,
ALL OVER .00127[.000050] NICKEL.

0.000381 [.000015] GOLD IN THE CONTACT AREA,
0.00254-0.00508 [.000100-.000200] MATTE MATTE TIN ON
THE SOLDER TAIL, ALL OVER ALL OVER 0.00127 [.000050]
NICKEL.

Plating Note

Plating Note After

0.66µm(26µin) PdNi+ 0.1µm(4µin) Au flash ON CONTACT AREA
.00254[.000100] MATTE TIN ON REMAINDER OF CONTACT,
ALL OVER .00127[.000050] NICKEL.

PLATING: 0.28µm(11µin) PdNi+ 0.1µm(4µin) Au flash ON CONTACT AREA
0.00254-0.00508 [.000100-.000200] MATTE MATTE TIN ON
THE SOLDER TAIL, ALL OVER ALL OVER 0.00127 [.000050]
NICKEL.

Other attachments:

[502-134418 A - Engineering Test Report -\(Header - PdNi plated and Receptacle AU plated\)](#)

[502-153788 Rev A - Engineering Test Report -\(Header - PdNi plated and Receptacle PdNi plated\)](#)

Reason for Changes:

Product Improvement - Optimization of Plating and reduction of CO2 emissions for Breakaway Header, Unshrouded Header and Shrouded Header (Au plating to PdNi+Au flash plating)

PCN Attributes:

Product Category:

Connectors

Kind of Change:

Material

Change Feature:

Material Change

Potential Customer Impact:

Remarks:

Estimated Dates:

Last Order Date (Obsolete Parts Only):

First Ship Date of Changed Items (Changed Parts Only):

30-NOV-2026

Last Ship Date of Changed Items (Obsolete Parts Only):

Last Date for Mixed Shipments: (Changed Parts Only):

No Mixed Shipments

Effectivity Date:

Date of First Samples:

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-102202-1	NO						
5-102202-5	NO						
5-102203-1	NO						
5-102203-3	NO						
5-102203-4	NO						
5-102570-1	NO						
5-102570-8	NO						
5-102617-3	NO						
5-102617-4	NO						
5-102617-6	NO						

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-102617-8	NO						
5-102618-1	NO						
5-102618-2	NO						
5-102618-3	NO						
5-102618-4	NO						
5-102618-5	NO						
5-102618-6	NO						
5-102618-8	NO						
5-103166-1	NO						
5-103166-2	NO						
5-103166-3	NO						
5-103166-5	NO						
5-103166-6	NO						
5-103168-1	NO						
5-103168-2	NO						
5-103168-3	NO						
5-103168-4	NO						
5-103168-5	NO						
5-103168-6	NO						
5-103168-7	NO						
5-103168-8	NO						
5-103169-4	NO						
5-103169-5	NO						
5-103169-6	NO						
5-146131-2	NO						
5-146131-9	NO						
5-146261-1	NO						
5-146285-2	NO						
5-146285-4	NO						
5-146285-6	NO						
6-102202-1	NO						
6-102202-7	NO						
6-102203-0	NO						
6-102203-2	NO						
6-102617-3	NO						
6-102617-5	NO						
6-102618-3	NO						
6-102618-5	NO						
6-102618-8	NO						
6-102619-0	NO						
6-102619-1	NO						
6-102619-5	NO						
6-103166-5	NO						
6-103166-8	NO						
6-103168-4	NO						
6-103168-5	NO						
7-102619-3	NO						
7-103168-0	NO						
7-103168-3	NO						
7-146261-0	NO						
8-102202-4	NO						
8-102203-4	NO						
9-146285-0	NO						
9-146308-0	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Affected Revision
102202	102202-9, 5-102202-1		P3
102203	102203-9, 3-102203-4, 102203-2		W1
102570	5-102570-1		H5
102618	6-102618-8, 5-102618-1, 5-102618-8		L3
102619	6-102619-5, 6-102619-0		K3

Drawing Number	Related Part Number	Customer Part Number	Affected Revision
103166	103166-3, 5-103166-1, 5-103166-5		K3
103167	103167-3, 103167-1		N5
103168	103168-2, 103168-1		J4
146131	5-146131-2, 5-146131-9		H4
146261	7-146261-0, 5-146261-1		H3
146285	5-146285-2, 5-146285-6		J1

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-102618-8	NO						
5-103166-3	NO						
5-103166-5	NO						
5-103166-6	NO						
5-103168-3	NO						
5-146131-2	NO						
5-146131-9	NO						
6-102203-0	NO						
6-102618-8	NO						
6-103166-8	NO						
7-103168-0	NO						
7-146261-0	NO						

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Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Affected Revision
102203	102203-2		W1
102618	5-102618-8		L3
103166	103166-3		K3
103167	103167-3		N5
103168	103168-2		J4
146131	5-146131-2		H4
146261	7-146261-0		H3

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-102618-8	NO						
5-103166-3	NO						
5-103166-5	NO						
5-103166-6	NO						
5-103168-3	NO						
5-146131-9	NO						
6-102618-8	NO						
6-103166-8	NO						
7-103168-0	NO						
7-146261-0	NO						
9-146308-0	NO						

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Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Affected Revision
102618	6-102618-8		L3

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-102618-8	NO						
5-103166-3	NO						
5-103166-5	NO						
5-103166-6	NO						
5-146131-2	NO						
5-146131-9	NO						
6-102203-0	NO						
6-102618-8	NO						
6-103166-8	NO						
7-103168-0	NO						
7-146261-0	NO						

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-102617-6	NO						
5-103168-4	NO						
5-103169-5	NO						
5-146285-6	NO						
6-102202-7	NO						
6-102619-5	NO						

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Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Affected Revision
102202	102202-9		P3
102203	102203-9		W1
102619	6-102619-5		K3
103167	103167-1		N5
103168	103168-2		J4
146285	5-146285-6		J1

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-102202-1	NO						
5-102203-1	NO						
5-102203-3	NO						
5-102203-4	NO						
5-102570-1	NO						
5-102570-8	NO						
5-102617-3	NO						
5-102617-4	NO						
5-102617-8	NO						
5-102618-1	NO						
5-102618-3	NO						
5-102618-4	NO						
5-102618-5	NO						
5-102618-6	NO						
5-103166-1	NO						
5-103166-2	NO						
5-103168-1	NO						

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-103168-2	NO						
5-103168-4	NO						
5-103168-5	NO						
5-103168-6	NO						
5-103168-7	NO						
5-103168-8	NO						
5-103169-4	NO						
5-103169-5	NO						
5-103169-6	NO						
5-146261-1	NO						
5-146285-2	NO						
6-102202-1	NO						
6-102617-3	NO						
6-102617-5	NO						
6-102618-3	NO						
6-102618-5	NO						
6-102619-0	NO						
6-102619-1	NO						
6-103166-5	NO						
6-103168-4	NO						
6-103168-5	NO						
7-102619-3	NO						
7-103168-3	NO						
8-102202-4	NO						
8-102203-4	NO						
9-146285-0	NO						

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Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Affected Revision
102202	5-102202-1		P3
102203	3-102203-4		W1
102570	5-102570-1		H5
102618	5-102618-1		L3
102619	6-102619-0		K3
103166	5-103166-1		K3
103168	103168-1		J4
146261	5-146261-1		H3
146285	5-146285-2		J1

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-102202-1	NO						
5-102202-5	NO						
5-102203-1	NO						
5-102203-3	NO						
5-102203-4	NO						
5-102570-1	NO						
5-102570-8	NO						
5-102617-3	NO						
5-102617-4	NO						
5-102617-8	NO						
5-102618-1	NO						
5-102618-2	NO						
5-102618-3	NO						
5-102618-4	NO						
5-102618-5	NO						
5-102618-6	NO						
5-102618-8	NO						

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-103166-1	NO						
5-103166-2	NO						
5-103166-5	NO						
5-103166-6	NO						
5-103168-1	NO						
5-103168-2	NO						
5-103168-4	NO						
5-103168-5	NO						
5-103168-6	NO						
5-103168-7	NO						
5-103168-8	NO						
5-103169-4	NO						
5-103169-5	NO						
5-103169-6	NO						
5-146131-2	NO						
5-146131-9	NO						
5-146261-1	NO						
5-146285-2	NO						
5-146285-4	NO						
6-102202-1	NO						
6-102203-2	NO						
6-102617-3	NO						
6-102617-5	NO						
6-102618-3	NO						
6-102618-5	NO						
6-102619-0	NO						
6-102619-1	NO						
6-103166-5	NO						
6-103168-4	NO						
6-103168-5	NO						
7-102619-3	NO						
7-103168-3	NO						
8-102202-4	NO						
8-102203-4	NO						
9-146285-0	NO						

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Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Affected Revision
102618	5-102618-8		L3
103166	5-103166-5		K3
146131	5-146131-9		H4

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
5-103166-5	NO						
5-103166-6	NO						
5-103168-3	NO						
5-146131-9	NO						
6-102618-8	NO						
7-103168-0	NO						
7-146261-0	NO						
9-146308-0	NO						

The documents listed below are being modified. Related parts that are not explicitly listed on this PCN are not being modified or discontinued as per the PCN. The Last Order Date, Last Ship Date, First Date to Ship Changed Parts and last date for Mixed Shipments apply only to parts explicitly listed on this PCN.

Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Affected Revision
102618	6-102618-8		L3
103166	5-103166-5		K3
103168	103168-2		J4
146131	5-146131-9		H4
146261	7-146261-0		H3



Testing Of AMPMODU* Breakaway Headers With Palladium Plating

1. INTRODUCTION

1.1 Purpose

Testing was performed on the 20 Position AMPMODU* Breakaway Headers, in through-hole and surface mount configurations, to determine the interchangeability of gold and palladium platings to requirements of Product Specification 108-25026, Rev. E1. The header specimens were evaluated in 15 u" and 30 u" plating thickness configurations and tested to Test Groups 1 and 3 of the Product Specification per the test request.

1.2 Scope

This report covers the electrical, mechanical, and environmental performance of the 20 Position AMPMODU* Breakaway Headers. Testing was performed at the Harrisburg Electrical Components Test Laboratory (HECTL) between March 20, 2025, and May 6, 2025. Detailed test results are on file and maintained at HECTL under test number EA20240391T.

1.3 Conclusion

All specimens met all of the requirements. See Section 2 for detailed testing results.

1.4 Test Specimens

The test specimens were representative of normal production lots. Specimens identified with the following part numbers were used for this test. Refer to Table 1 for specimen identification information.

Table 1 – Specimen Identification

Test Set	Quantity	Part Number	Description
1	2	5-146131-9	20 MOD II Hdr, 30 u" Au, DR, Vert, SMT,.100 X .100 CL, .025 Sq. Post
	2	6-534206-0	20 MOD II Recpt Assy, 30 u" Au, DR, Vert, .100 X .100 CL
	2	60-1988996-1	Mounting PCB For P/N 5-146131-9
	2	60-1988998-1	Mounting PCB For P/N 6-534206-0
2	2	5-146131-9	20 MOD II Hdr, 30 u" Au, DR, Vert, SMT,.100 X .100 CL, .025 Sq. Post
	2	6-534206-0	20 MOD II Recpt Assy, 30 u" Au, DR, Vert, .100 X .100 CL
	2	60-1988996-1	Mounting PCB For P/N 5-146131-9
	2	60-1988998-1	Mounting PCB For P/N 6-534206-0
3	2	5-146131-9	20 MOD II Hdr, 30 u" Pd Ni, DR, Vert, SMT,.100 X .100 CL, .025 Sq. Post
	2	6-534206-0	20 MOD II Recpt Assy, 30 u" Au, DR, Vert, .100 X .100 CL
	2	60-1988996-1	Mounting PCB For P/N 5-146131-9
	2	60-1988998-1	Mounting PCB For P/N 6-534206-0
4	2	5-146131-9	20 MOD II Hdr, 30 u" Pd Ni, DR, Vert, SMT,.100 X .100 CL, .025 Sq. Post
	2	6-534206-0	20 MOD II Recpt Assy, 30 u" Au, DR, Vert, .100 X .100 CL
	2	60-1988996-1	Mounting PCB For P/N 5-146131-9
	2	60-1988998-1	Mounting PCB For P/N 6-534206-0
5	2	6-146256-0	20 MOD II Hdr, 15 u" Au, DR, Vert, Thru-Hole .100 X .100 CL, .025
	2	6-147424-0	20 MOD II Recpt Assy,10 u" Au, DR, Vert, .100 X .100 CL
	2	60-1988997-1	Mounting PCB For P/N 6-146256-0
	2	60-1988998-1	Mounting PCB For P/N 6-147424-0
6	2	6-146256-0	20 MOD II Hdr, 15 u" Au, DR, Vert, Thru-Hole .100 X .100 CL, .025
	2	6-147424-0	20 MOD II Recpt Assy,10 u" Au, DR, Vert, .100 X .100 CL
	2	60-1988997-1	Mounting PCB For P/N 6-146256-0
	2	60-1988998-1	Mounting PCB For P/N 6-147424-0
7	2	6-146256-0	20 MOD II Hdr, 15 u" Pd Ni, DR, Vert, Thru-Hole .100 X .100 CL, .025
	2	6-147424-0	20 MOD II Recpt Assy,10 u" Au, DR, Vert, .100 X .100 CL
	2	60-1988997-1	Mounting PCB For P/N 6-146256-0
	2	60-1988998-1	Mounting PCB For P/N 6-147424-0
8	2	6-146256-0	20 MOD II Hdr, 15 u" Pd Ni, DR, Vert, Thru-Hole .100 X .100 CL, .025
	2	6-147424-0	20 MOD II Recpt Assy,10 u" Au, DR, Vert, .100 X .100 CL
	2	60-1988997-1	Mounting PCB For P/N 6-146256-0
	2	60-1988998-1	Mounting PCB For P/N 6-147424-0

1.5 Test Sequence

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

Table 2 - Test Sequence

Test Or Examination	Test Group 1	Test Group 3
	Test Sets 1,3,5,7	Test Sets 2,4,6,8
	Test Sequence (a)	
Examination Of Product	1,9	1,5
Dry Circuit Resistance	3,7	2,4
Vibration	5	
Mechanical Shock	6	
Durability	4	
Mating Force	2	
Unmating Force	8	
Mixed Flowing Gas		3 (b)

Notes:

- (a) Numbers indicate sequence in which tests were performed.
(b) Precondition samples with 10 durability cycles.

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 showed no signs of damage detrimental to product performance prior to and at the conclusion of testing.

2.2 Dry Circuit Resistance

All specimens met the 12 mΩ maximum requirement for both initial and final Dry Circuit Resistance.

2.3 Vibration

No apparent physical damage or discontinuities of one microsecond or greater occurred during testing.

2.4 Mechanical Shock

No apparent physical damage or discontinuities of one microsecond or greater occurred during testing.
Pulse Velocity Change: 9.8 ft/s.

2.5 Durability

Specimens showed no signs of damage resulting from Durability testing.

2.6 Mating Force

All specimens met the 6 ounces maximum average per contact requirement (120 ounces total) for Mating Force.

2.7 Unmating Force

All specimens met the 0.75 ounces minimum average per contact requirement (15 ounces total) for Unmating Force.

2.8 Mixed Flowing Gas

Copper corrosion rate average*: **19.8 μ g/cm²/day** [IEC Guide: 12-24]

. *Avg. of two 5-day exposure periods [days 2-7 & 13-18]

3. TEST METHODS

3.1. Initial Examination of Product

A C of C was issued stating that all specimens in this test package were produced, inspected, and accepted as conforming to product drawing requirements, and were manufactured using the same core manufacturing processes and technologies as production parts.

Specimens were visually inspected prior to the start and at the conclusion of testing with the unaided eye in accordance with specification EIA-364-18B.

3.2 Dry Circuit Resistance

Dry Circuit Resistance measurements were taken at 20 mV maximum open circuit at 100 mA maximum settings. Measurements were taken initially and at the conclusion of testing. See Figure 1 for test setup photos. Testing was conducted in accordance with specification EIA-364-23D.

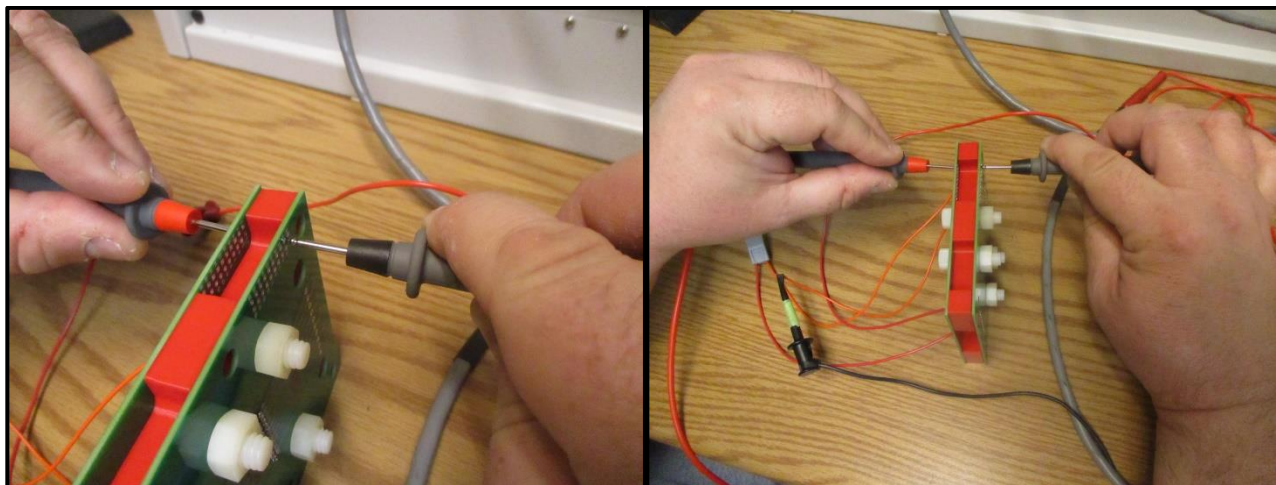


Figure 1 – Dry Circuit Resistance Test Setup

3.3 Vibration

The specimens were tested in accordance with specification EIA-364-28F, Test Condition IV. The parameters of this test condition are a simple harmonic motion having an amplitude of either 0.06 inch double amplitude (maximum total excursion) or 20 gravity unit (G's peak), whichever is less. The vibration frequency was varied logarithmically between the approximate limits of 10 to 2000 Hertz (Hz). The entire frequency range of 10 to 2000 Hz and return to 10 Hz was traversed in approximately 20 minutes. This cycle was performed 12 times in all three mutually perpendicular axes (total of 36 times), so that the motion was applied for a total period of approximately twelve hours. The test specimens were monitored for discontinuities of 1 microsecond or greater using an energizing current of 100 milliamperes. See Figure 2 for a representative vibration profile plot and Figures 3 through 5 for test setup photos.

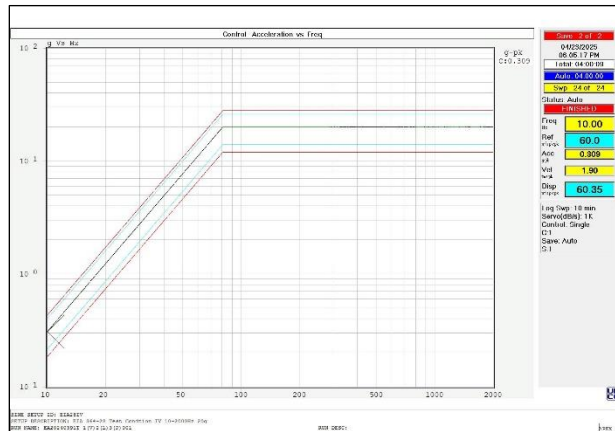


Figure 2 – Representative Vibration Profile

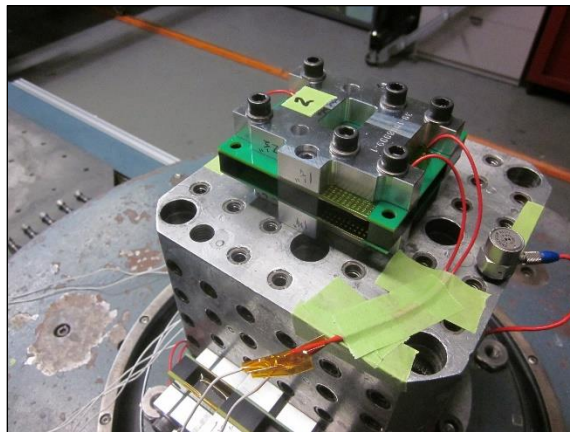


Figure 3 – Vibration, Vertical, Test Setup

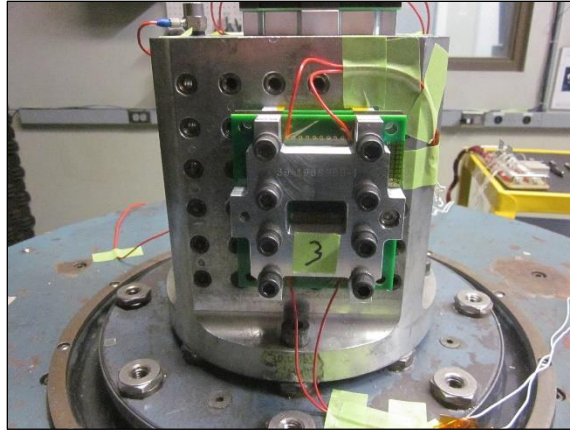


Figure 4 – Vibration, Longitudinal, Test Setup

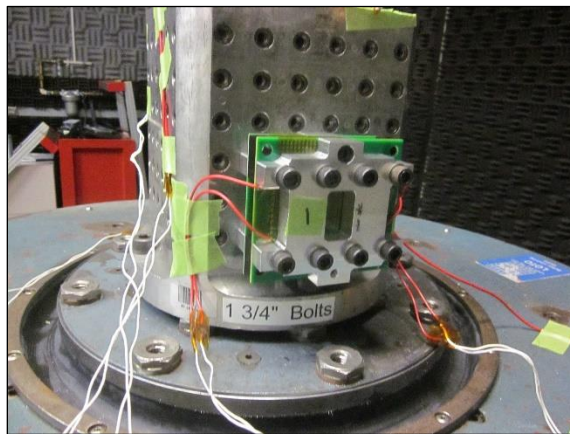
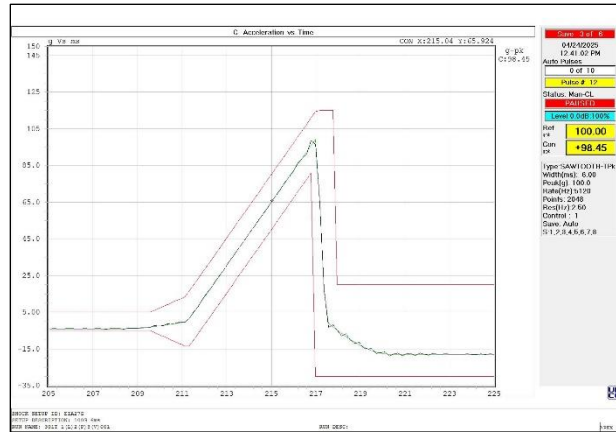


Figure 5 – Vibration, Lateral, Test Setup

3.4 Mechanical Shock

The specimens were tested in accordance with specification EIA-364-27D, Test Condition G. The parameters of this test condition are a sawtooth waveform with an acceleration amplitude of 100 gravity units (G's peak) and a duration of 6 milliseconds. Three shocks in each direction were applied along the three mutually perpendicular axes of the test specimens, for a total of eighteen shocks. The test specimens were monitored for discontinuities of 1 microsecond or greater using an energizing current of 100 milliamperes. See Figure 6 for a representative mechanical shock profile and Figures 7 through 9 for test setup photos.



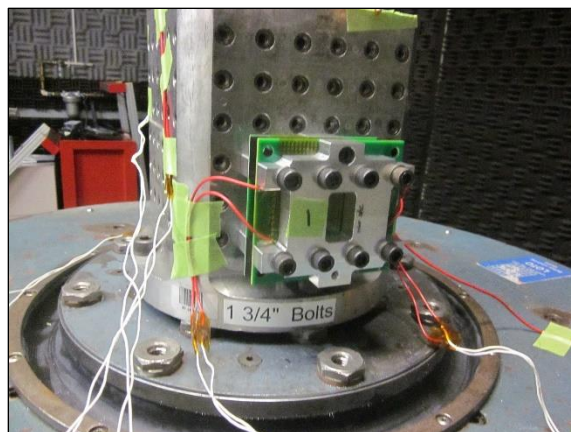


Figure 9 – Mechanical Shock, Lateral, Test Setup

3.5 Durability

Specimens were mated and unmated by hand at a rate no more than 600 cycles per hour. Test Sets 1 and 3 were subjected to 200 cycles of Durability and Test Sets 5 and 7 were subjected to 75 cycles of Durability. Testing was completed in accordance with specification EIA-364-09D.

3.6 Mating Force

Specimens were cycled one time prior to Mating Force testing as per Product Specification 108-25026, Rev E1. The receptacle board was mounted to an X-Y table which was mounted to the base of the tensile / compression machine. The header board was lined up and placed on top of the receptacle. A flat disc was mounted to the crosshead of the tensile / compression machine. The specimens were then flat rocked together at a rate of 0.5 inch per minute until the specimens were fully mated. The maximum force of the mate was recorded. Testing was completed in accordance with specification EIA-364-13E. See Figure 10 for test setup photos.

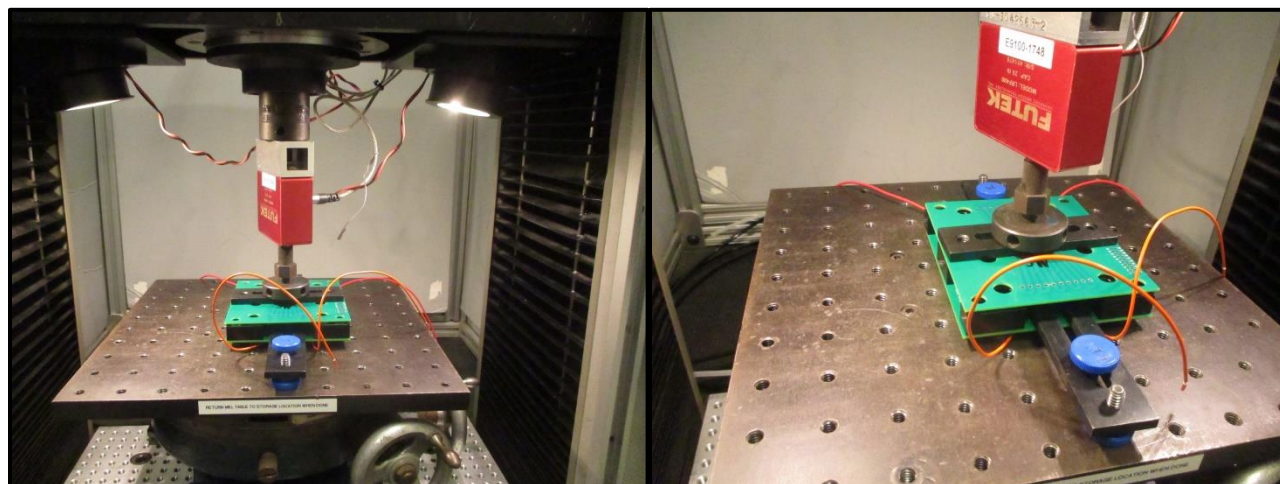


Figure 10 – Mating Force Test Setup

3.7 Unmating Force

A goalpost type fixture, which was used to grip one of the specimen's printed circuit boards, was mounted to the crosshead of the tensile / compression machine. The other printed circuit board was mounted on an X-Y table, which was on the base of the tensile / compression machine. The specimens were unmated at a rate of 0.5 inches per minute until they were fully unmated. The peak force was recorded. Testing was completed in accordance with specification EIA-364-13E. See Figure 11 for test setup photos.

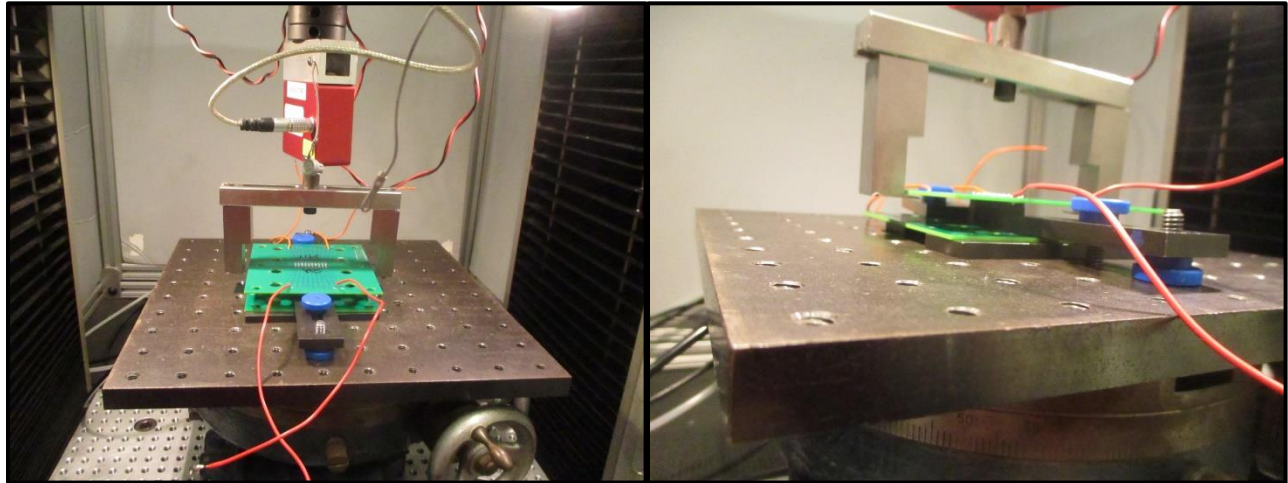


Figure 11 – Unmating Force Test Setup

3.8 Mixed Flowing Gas

Prior to Mixed Flowing Gas testing, the specimens were subjected to ten durability cycles.

The test specimens were subjected to a 4-gas environment in accordance with specification IEC 680060-2-60, Test Ke, Method 4, for 21 days. All test samples were exposed in the mated condition for the test duration. No measurements were required during the exposure period. See Table 3 for test parameters.

Table 3 - MFG Test Parameters

Environment	Method 4
Temperature (°C)	25+2
Relative Humidity (%)	75+3
Chlorine (Cl ₂) Concentration (ppb)	10+5
Hydrogen Sulfide (H ₂ S) Concentration (ppb)	10+5
Nitrogen Dioxide (NO ₂) Concentration (ppb)	200+20
Sulfur Dioxide (SO ₂) Concentration (ppb)	200+20
Exposure Period	21 days
Chamber Volume Exchange Rate [minimum of 6/hr.]	8.8/hr.**

**Volume exchange rate for 105-liter test chamber [Total flow rate of 15.4 L/Min]

Test Report



's-Hertogenbosch Environmental Testing Laboratory (IND)

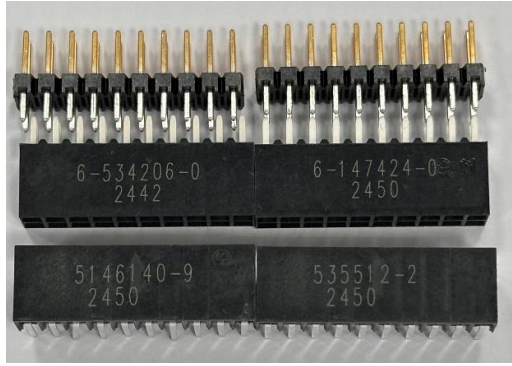
TE Connectivity Nederland BV, Brabantlaan 2A, 5216 TV, 's-Hertogenbosch, The Netherlands

Report Title: AMP Modu IV Receptacle combined with the AMP MODU II Header - PdNi Plating

Report ID: 502-153788 rev. A

Date Issued: 13-May-2025

TE Data Classification (TEC-02-04) class I

Requestor: G, Vishnu Pranav	
TE Project Number: PRJ-22-000902015	
Sample Name: AMP MODU IV - Receptacle assembled with the AMP MODU II Header	
TE Part number: PN 6-147424-0, PN 6-534206-0, PN 535512-2, PN 5146140-9, PN 6-146257-0, PN 6-146256-0	
Remarks: Samples are returned to the requester	

Test Scope: To determine the electrical and mechanical performance of plating change (from Au to PdNi with Au flash) on AMP Modu IV receptacle combined with AMP Modu II header in accordance with Product specifications for AMP Modu IV receptacle 108-25022_rev_D and AMP Modu II header 108-25026_rev_E based on test groups 1,2, and 3.	
Performed Test or Analysis: 1 Visual Examination 2 Electrical Test 3 Mechanical Test 4 Environmental Test	
Requirement: TE Connectivity product specification of the AMP Modu IV Receptacle 108-25022-D and the AMP Modu II Header 108-25026_E	
Conclusion: All the samples met the requirement according to the specification of the AMP Modu IV Receptacle 108-25022-D and the AMP Modu II Header 108-25026_E	Result: OK

Lab Project ID (lab internal): E25.02.3803	Responsible Test Engineer: R. Suganya / V.B. Gerard	Approver: K. Schepers
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Test Report



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SAMPLE DESCRIPTION

For the test groups 1, 2, and 3 were the following AMP MODU IV receptacles combined with the AMP MODU II header connectors were available to perform the test.

Per test group for each combination, 5 samples were tested.

- 3x5 - 6-534206-0 AMP MODU IV receptacle mated with the AMP MODU II header
PN 6-146257-0
- 3x5 - 535512-2 AMP MODU IV receptacle mated with the AMP MODU II header
PN 6-146257-0
- 3x5 - 6-147424-0 AMP MODU IV receptacle mated with the AMP MODU II header
PN 6-146256-0
- 3x5 - 5146140-9 AMP MODU IV receptacle mated with the AMP MODU II header
PN 6-146256-0

TEST PROCEDURES

IEC 60512-1-1:

Test 1a

VISUAL EXAMINATION:

The test samples were visually inspected under a stereomicroscope, at a 10x magnification, with suitable illumination.

EIA-364-23.:

LOW LEVEL CONTACT RESISTANCE (LLCR):

The contact resistance was measured with an open circuit voltage of 20 mV from the wires to the contacts on the counterpart and a maximum current of 100 mA.

EIA-364-28:

Test Condition IV

SINUSOIDAL VIBRATION.:

The samples were mounted on a vibration table. The frequency from 10-2000-10 Hz was traversed with one octave per minute with 0.06-inch maximum total excursion. Four hours in each of 3 mutually perpendicular axes and were provided with a circuit to detect interruptions of continuity longer than 1 microsecond.

EIA-364-27:

Condition G.

MECHANICAL SHOCK:

Acceleration 100g, sawtooth pulses of 6 msec 18 shocks in each of three mutually perpendicular directions were executed. The samples were provided with a circuit to detect interruptions of continuity longer than 1 microsecond.

EIA-364-9:

DURABILITY:

The samples were mated and unmated 200 times for 30 µin palladium plated and 100 times for 15 µin palladium plated at a rate of 10 mm/min with a dwell time of 1s.

Test Report



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EIA-364-13:

MATING / UNMATING FORCE:

The test samples were mounted on a push-pull tester. During a mechanical operation, at a rate of 15 mm per minute, the insertion and extraction forces were measured.

EIA-364-37:

CONTACT ENGAGING / SEPARATING FORCE:

Each contact to be tested shall have the maximum size gauge specified inserted and withdrawn one time. After which, the minimum size retention force gauge specified shall be inserted.

EIA-364-65:

Class IIA (4 gas)

MIXED FLOWING GAS TEST:

The test samples were placed in a climatic chamber under the following conditions:

Temperature	: 25°C.
Relative humidity	: 75%.
H ₂ S concentration	: 100 ppb.
NO ₂ concentration	: 200 ppb.
SO ₂ concentration	: 200 ppb.
CL ₂ concentration	: 10 ppb.
Condition	: mated
Duration	: 21days.

IEC 60512-11:

Method A Condition 5

TEMPERATURE LIFE:

The samples were subjected to a high-temperature test under the following conditions:

Temperature	: 125°C.
Condition	: mated.
Duration	: 500 Hours.

EIA-364-31:

Method IV.

HUMIDITY/TEMPERATURE CYCLING:

The samples were subjected to a damp heat cyclic with the following parameters:

One cycle consists of:

Temperature	: 25 / 65 °C /-10°C cold
Condition	: mated
Number of cycles	: 10 cycles

Test Report



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TEST SEQUENCE

Test Group 1

1. Initial visual examination
2. Contact engaging force
3. Contact separation force
4. LLCR
5. Mating force
6. LLCR
7. Durability
8. Contact separation force
9. Vibration
10. Mechanical shock
11. LLCR
12. Unmating force
13. LLCR
14. Final visual examination

Test Group 2

1. Initial visual examination
2. LLCR
3. Durability
4. Temperature life
5. Humidity/temperature cycling
6. LLCR
7. Final visual examination

Test Group 3

1. Initial visual examination
2. LLCR
3. Durability
4. Humidity/temperature cycling
5. Mixed flowing gas
6. LLCR
7. Final visual examination

Test Report



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EQUIPMENT USED

<u>Equipment</u>	<u>Manufacturer</u>	<u>Type</u>	<u>Series Nb</u>	<u>Cal. Due</u>
Micro-ohm meter 1	HIOKI	3560	90922733	Feb-27
Vibration System VP4	Ling+B&K	PA2000	S1165-002	Feb-27
VibPilot VP4	M+P International	VibPilot VP4	A130040	Feb-27
Acc. meter	MMF	KS-70	8001	Feb-27
Discontinuity tester 1	Mertronics	DM600-10A	614-1	Feb-27
Climatic chamber	C.T.S.	C-20/200	67045	Feb-27
Climatic chamber	C.T.S.	C-40/100	87131	Feb-27
Corrosion chamber	Votsch	VCC 0060	6740010	Feb-27
Current source	SM 7020-1	Delta	SM 7020 01423	Feb-27
DMM	Keithley	2700	1315592	Feb-27
Load cell	MTS	50N	1979	Feb-27
Microscope Keyence	keyence	VHX 5000	0	-
Oven	Binder	ED 53 - E2	12-05765	Feb-27
Microscope Keyence	keyence	VHX S500E	9B410204	
Electro meter 6517A1	Keithley	6517A	1326371	Feb-27
High Voltage Tester 1	Sefelec	DXS506	1109582	Feb-27

SUMMARY OF TEST RESULTS

Test Group 1

The header PN 6-146257-0 was mated with the receptacles PN 6-534206-0, PN 535512-2

Test-Group 1		
Test	Requirement	Results
Initial visual examination	No physical or functional damage was observed	Pass
Contact engaging force	2.22 N max	Pass
Contact separation force	0.278 N min	Pass
LLCR	12 mΩ max.	Pass
Mating force	2.5 N maximum per contact	Pass
LLCR	12 mΩ max.	Pass
Durability	200 cycles	Pass
Contact separation force	0.278 N min	Pass
Vibration	No discontinuities of 1 microsecond or longer duration	Pass
Mechanical shock	No discontinuities of 1 microsecond or longer duration	Pass
LLCR	12 mΩ max.	Pass
Unmating force	0.208 N minimum per contact	Pass
LLCR	12 mΩ max.	Pass
Final visual examination	No physical or functional damage was observed	Pass

Test Report



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Test Group 2

The header PN 6-146257-0 was mated with the receptacles PN 6-534206-0, PN 535512-2

Test-Group 2		
Test	Requirement	Results
Initial visual examination	No physical or functional damage was observed	Pass
LLCR	12 mΩ max.	Pass
Durability	10 cycles	Pass
Temperature life	500 hours at 125 degrees	Pass
Humidity/temperature cycling	25 / 65 °C /-10°C cold	Pass
LLCR	12 mΩ max.	Pass
Final visual examination	No physical or functional damage was observed	Pass

Test Group 3

The header PN 6-146257-0 was mated with the receptacles PN 6-534206-0, PN 535512-2

Test-Group 3		
Test	Requirement	Results
Initial visual examination	No physical or functional damage was observed	Pass
LLCR	12 mΩ max.	Pass
Durability	200 cycles	Pass
Humidity/temperature cycling	25 / 65 °C /-10°C cold	Pass
Mixed flow gas	4 gas tests	Pass
LLCR	12 mΩ max.	Pass
Final visual examination	No physical or functional damage was observed	Pass

Test Report



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Test Group 1

The header PN 6-146256-0 was mated with the receptacles PN 6-147424-0, PN 5146140-9

Test-Group 1		
Test	Requirement	Results
Initial visual examination	No physical or functional damage was observed	Pass
Contact engaging force	2.22 N max	Pass
Contact separation force	0.278 N min	Pass
LLCR	12 mΩ max.	Pass
Mating force	2.5 N maximum per contact	Pass
LLCR	12 mΩ max.	Pass
Durability	100 cycles	Pass
Contact separation force	0.278 N max	Pass
Vibration	No discontinuities of 1 microsecond or longer duration	Pass
Mechanical shock	No discontinuities of 1 microsecond or longer duration	Pass
LLCR	12 mΩ max.	Pass
Unmating force	0.208 N minimum per contact	Pass
LLCR	12 mΩ max.	Pass
Final visual examination	No physical or functional damage was observed	Pass

Test Group 2

The header PN 6-146256-0 was mated with the receptacles PN 6-147424-0, PN 5146140-9

Test-Group 2		
Test	Requirement	Results
Initial visual examination	No physical or functional damage was observed	Pass
LLCR	12 mΩ max.	Pass
Durability	10 cycles	Pass
Temperature life	500 hours at 125 degrees	Pass
Humidity/temperature cycling	25 / 65 °C / -10°C cold	Pass
LLCR	12 mΩ max.	Pass
Final visual examination	No physical or functional damage was observed	Pass

Test Report



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Test Group 3

The header PN 6-146256-0 was mated with the receptacles PN 6-147424-0, PN 5146140-9

Test-Group 3		
Test	Requirement	Results
Initial visual examination	No physical or functional damage was observed	Pass
LLCR	12 mΩ max.	Pass
Durability	100 cycles	Pass
Humidity/temperature cycling	25 / 65 °C /-10°C cold	Pass
Mixed flow gas	4 gas tests	Pass
LLCR	12 mΩ max.	Pass
Final visual examination	No physical or functional damage was observed	Pass

DOCUMENT HISTORY

Rev.	Date (dd-mm-yyyy)	Author (s)	Change Description
A	13.05.2025	Suganya	Initial