



Product Change Notification

TE Connectivity

Product Change Notification: PCN-23-187520

PCN Date: 08-OCT-23

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).

General Product Description:

SGI2.0 Vertical SMT Header assembly

Description of Changes

Please be aware of an upcoming material change to the listed part numbers. Before: PA66/6T After: PA10T Reference performance test data: New added material has been fully qualified which follows a strict procedure, which guarantees quality, ability to supply, and no changes to product performance. Product color could have slight difference between current and new added material, there is no impact on product performance.

Other attachments:

[Comparison](#)

[GWT test report](#)

[Validation Test Report](#)

Reason for Changes:

Material change to improve the floor life performance.

PCN Attributes:

Product Category:

Connectors

Kind of Change:

Material

Change Feature:

Material Change

Potential Customer Impact:

Packaging Handling Impact

Remarks:

Estimated Dates:	
Last Order Date (Obsolete Parts Only):	First Ship Date of Changed Items (Changed Parts Only):
	30-NOV-2023
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
1-2232829-2	NO						
1-2232829-3	NO						
1-2232829-4	NO						
1-2232829-5	NO						
1-2232829-6	NO						
1-2232829-7	NO						
1-2232829-8	NO						
1-2232829-9	NO						
2-2232829-0	NO						
4-2232829-2	NO						
4-2232829-3	NO						
4-2232829-4	NO						
4-2232829-5	NO						
4-2232829-6	NO						
4-2232829-7	NO						
4-2232829-8	NO						
4-2232829-9	NO						
5-2232829-0	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	Current Revision	New Revision
2232829	4-2232829-2, 1-2232829-2		A2	

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
1-2232829-2	NO						
1-2232829-3	NO						
1-2232829-4	NO						
1-2232829-5	NO						
1-2232829-6	NO						
1-2232829-7	NO						
1-2232829-8	NO						
1-2232829-9	NO						
2-2232829-0	NO						
4-2232829-2	NO						
4-2232829-3	NO						
4-2232829-4	NO						
4-2232829-5	NO						
4-2232829-6	NO						
4-2232829-7	NO						
4-2232829-8	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
4-2232829-9	NO						
5-2232829-0	NO						

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Customer Drawing(s) Being Modified:

Drawing Number	Related Part Number	Customer Part Number	Current Revision	New Revision
2232829	4-2232829-2		A2	

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
1-2232829-2	NO						
1-2232829-6	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	Current Revision	New Revision
2232829	1-2232829-2		A2	

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
1-2232829-2	NO						
1-2232829-5	NO						
1-2232829-6	NO						
1-2232829-7	NO						
1-2232829-8	NO						
1-2232829-9	NO						
2-2232829-0	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	Current Revision	New Revision
2232829	1-2232829-2		A2	

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
1-2232829-2	NO						
1-2232829-3	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	Current Revision	New Revision
2232829	1-2232829-2		A2	

Part Number(s) being Modified:

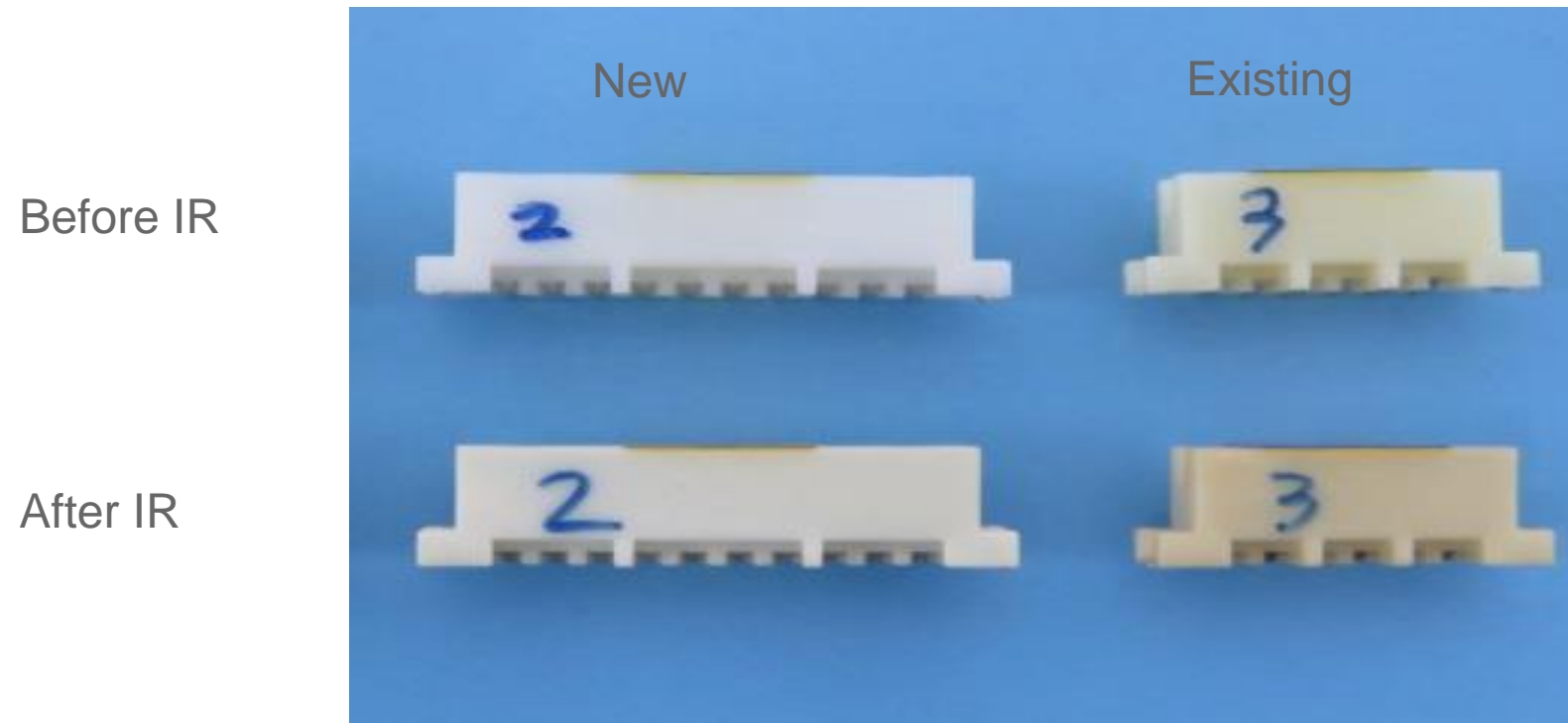
Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
1-2232829-2	NO						
1-2232829-3	NO						
1-2232829-4	NO						
1-2232829-5	NO						
1-2232829-6	NO						
1-2232829-7	NO						
1-2232829-8	NO						
1-2232829-9	NO						
2-2232829-0	NO						
4-2232829-2	NO						
4-2232829-3	NO						
4-2232829-6	NO						
4-2232829-8	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	Current Revision	New Revision
2232829	1-2232829-2		A2	

Discoloration comparison between new and existing resins.



Label update.

Existing



Caution
This bag contains
MOISTURE-SENSITIVE DEVICES

LEVEL
2

If blank, see adjacent bar code label

- Calculated shelf life in sealed bag: 12 months at <40°C and <90% relative humidity (RH)
- Peak package body temperature: 30 °C
If blank, see adjacent bar code label
- After bag is opened, devices that will be subjected to reflow solder or other high temperature process must be
 - Mounted within: Indefinite hours of factory conditions
If blank, see adjacent bar code label
≤30°C/60% RH, or
 - Stored per J-STD-033
- Devices require bake, before mounting, if:
 - Humidity Indicator Card reads >10% for level 2a - 5a devices or >60% for level 2 devices when read at 23 ± 5°C
 - 3a or 3b are not met
- If baking is required, refer to IPC/JEDEC J-STD-033 for bake procedure

Bag Seal Date: 2023-9-25 (example)
If blank, see adjacent bar code label

Note: Level and body temperature defined by IPC/JEDEC J-STD-020

IPC-033c-3-4

New

WARNING

Unless otherwise specified, TE recommends that the allowable time period (floor life) after removal parts from moisture-barrier bag should be less than 1 year in condition of ≤ 30°C, ≤ 60% RH. It is recommended to seal unused parts in the original bag.

The floor life only relates to moisture/reflow related failures and does not take into consideration other failure mechanisms or "shelf life" issues due to long term storage.

If slight discoloration happens after reflow soldering, It does not affect the performance of connector.

Note: Label information provided by PDE

FMT 2474868-1

Glow Wire Test Report for SGI2.0 Header

1. INTRODUCTION

1.1. Purpose

Testing was performed on the TE Connectivity (TE) SGI2.0 Vertical SMT header 2232829 series to determine its conformance to the requirements of glow wire 750°C and 850 °C test.

1.2. Scope

This report covers the glow wire performance of the header assembly housings. Testing was performed at TE Shanghai Electrical Components Test Laboratory between May 10, 2023 and May 12, 2023. Original test record is TP-23-01089-RECORD.

1.3. Conclusion

All specimens in test group1 conformed to IEC 60335-1-2020 when tested at 750°C with no flame occurred. All specimens in test group 2 conformed to IEC 60695-2-11-2021 when tested at 850°C with no flame occurred.

1.4. Product Description

SGI2.0 vertical SMT header

1.5. Test Specimens

Test Group	Quantity	Part Number	Description
1	3	2-2232829-0	SGI2.0 header assembly,10P_Rev.B (Resin PN: 2136867-3)
2	3	2-2232829-0	SGI2.0 header assembly,10P_Rev.B (Resin PN: 2136867-3)

1.6. Test Sequence

Test or Examination	Test Groups (a)	
	1	2
	Test Sequence (b)	
Glow Wire at 750°C	1	
Glow Wire at 850°C		1



NOTE

- a) See Paragraph 1.5.
b) Numbers indicate sequence in which tests shall be performed.

1.7. Environmental Conditions

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

- Temperature: 15°C to 35°C
- Relative Humidity: 25% to 75%

2. SUMMARY OF TESTING

- 2.1. The specimens in test group 1 conformed to IEC 60335-1-2020 when tested at 750°C with no flame occurred. Test results are shown below and Figures 1 show the specimens after testing.

Specimen Information	Qty	Temperature of glow tip application (°C)	t _i (s)	t _E (s)	Flame Height (cm)	Drops (Yes/No)	Light tissue paper burns (Yes/No)	Judgment
2-2232829-0	3	750 (positive surface)	0	0	0	No	No	Meet Spec.
		750 (back surface)	0	0	0	No	No	Meet Spec.
		750 (side surface)	0	0	0	No	No	Meet Spec.



Figure 1 – Test group 1 Specimens Following Testing

- 2.2. The specimens in test group 2 conformed to IEC 60695-2-11-2021 when tested at 850°C with a maximum allowable flame duration of 30 seconds. Test results are shown as below and Figures 2 show the specimens after testing.

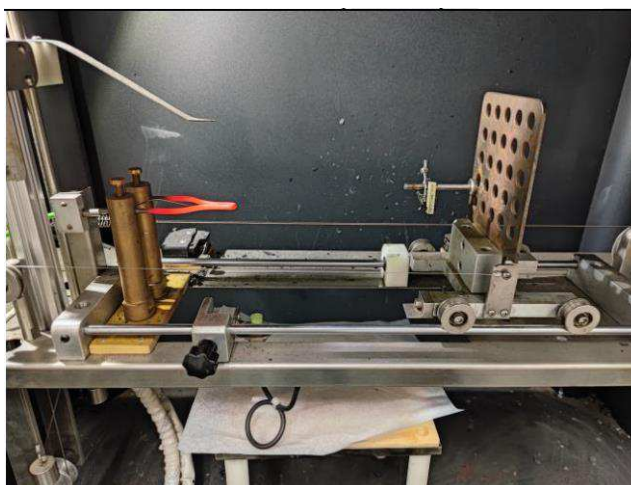
Specimen Information	Qty	Temperature of glow tip application (°C)	t _i (s)	t _E (s)	Flame Height (cm)	Drops (Yes/No)	Light tissue paper burns (Yes/No)	Judgment
2-2232829-0	3	850 (positive surface)	0	0	0	No	No	Meet Spec.
		850 (back surface)	0	0	0	No	No	Meet Spec.
		850 (side surface)	0	0	0	No	No	Meet Spec.



Figure 2 – Test group 2 Specimens Following Testing

3. TEST METHODS

The parts were conditioned for a minimum of 24 hours at 25 °C and 50 %R.H. Test Group 1 and Test Group 2 consisting of three specimens each were subjected to the Glow Wire test per IEC 60335-1-2020 and IEC 60695-2-11-2021 for a duration of 30 seconds at $750^{\circ}\text{C} \pm 10^{\circ}\text{C}$ and $850^{\circ}\text{C} \pm 10^{\circ}\text{C}$ with a glow wire penetration depth of 7 mm. Test specimens were tested in three orientations as shown in Figure 3. Test specimens were orientated whereas not to impede the material from burning up the test specimen or dripping down to the specified layer (wrapping tissue paper). Flame height, flame duration, and burning of the specified layer beneath the specimen of each specimen during the test were observed and recorded.



Test setup

Figure 3

4. EQUIPMENT

4.1 Calibration Statement

All test and measurement equipment requiring calibration is calibrated and traceable to the International System of Units (SI).

4.2 Equipment List

Equipment Name	Equipment No.	Calibration Number
Glow Wire Tester (HY-GLT-1)	E-00586	J22124S00487

5. VALIDATION

Prepared by:

Candy Xu

2023-07-18

Approved by:

Daniel Zhang

2023-07-24

----- **END OF REPORT** -----

Test Report for Performance Improvement of SGI2.0 Vertical SMT Header

1. Introduction

1.1 Purpose

The purpose of this test is to evaluate the performance of SGI2.0 vertical SMT header. Testing was performed on below products to determine its compliance with the requirements of 108-143160 Rev.A1(housing locking strength and connector mating & unmatig force) and 108-106266 Rev.A (others).

1.2 Scope

This report covers the electrical, mechanical, environmental, and material performance for SGI2.0 Vertical SMT header. Testing was performed at TE Connectivity Shanghai Electrical Test Laboratory (Building ID 554) between 2023-05-05 and 2023-08-30. The associated test numbers are TP-23-01089-RECORD and TP-23-03436-RECORD.

1.3 Conclusion

The items listed in Clause 1.5 conformed to performance requirements of criteria described in Clause 3, with exceptions as noted in table in Clause 2.

The testing results are only responsible for the specimens tested.

1.4 Test Specimens

SGI2.0 Vertical SMT header

Specimens received on 2023-04-26 with the following part numbers were used for test:

Test Group	Part No.	Part Rev.	Description	Qty. (pcs)
1	2-2232829-0	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_PA10T	20
	2-2232829-0	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_Existing	20
2	2-2232829-0	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_PA10T	3
	2-2232829-0	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_Existing	3
3	2-2232829-0	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_PA10T	3
	2-2232829-0	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_Existing	3
	2-2232979-0	B1	SGI2.0 PLUG ASSEMBLY 10P, KEY A, NTL	6
4	2-2232829-0	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_PA10T	3
	2-2232829-0	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_Existing	3
	2-2350224-0	A	SGI 2.0 Plug Housing, 10 Position, Key A	6
5	1-2232829-6	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY B, NTL_PA10T	3
	1-2232829-6	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_Existing	3
	1-2350224-6	C	SGI2.0 PLUG ASSEMBLY 10P, KEY B, BLACK	6
	2350223-1	C1	SGI 2.0 RECPT TERMINAL 22-28 AWG	36
	2357686-6	C	SGI 2.0 Crimp TPA	6
6	1-2232829-6	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY B, NTL_PA10T	3
	1-2232829-6	A1	SGI2.0 HEADER ASSEMBLY SMT 10P, KEY A, NTL_Existing	3
	1-2350224-6	C	SGI2.0 PLUG ASSEMBLY 10P, KEY B, BLACK	6
	2350223-1	C1	SGI 2.0 RECPT TERMINAL 22-28 AWG	36
	2357686-6	C	SGI 2.0 Crimp TPA	6

1.5 Test Sequence

Test Item	Test Group ^a					
	1	2	3	4	5	6
	Test Sequence ^b					
Dielectric Withstanding Voltage			2,6			
Examination of Product	3,1					
Housing Locking Mechanism Strength Test				1		
Humidity and Temperature Cycling			4			
Insulation Resistance			1,5			
Post Retention Force		1				
Resistance to Soldering Heat	2					1
Thermal Shock			3			
Connector Mating Force					1	2
Connector Unmating Force					2	3

Note: a). Test group defined per customer requirement.

b). Numbers indicate sequence in which tests are performed.

1.6 Environmental Conditions

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

Temperature: 15 °C to 35 °C
Relative Humidity: 25 %RH to 75 %RH

2. Summary of Test

Group	SN	Description	Test Item	Qty(pcs)	Test Result				Requirement	Conclusion
					Max	Min	Avg	Unit		
1	1	2-2232829-0 (PA10T, Existing)	Examination of Product	40	No physical damage			/	No physical damage	Meet Spec.
	2	2-2232829-0 PA10T	Resistance to Soldering Heat	20	No physical damage.			/	No physical damage.	Meet Spec.
	2	2-2232829-0 Existing	Resistance to Soldering Heat	20	No physical damage.			/	No physical damage.	Meet Spec.
	3	2-2232829-0 (PA10T, Existing)	Examination of Product	40	No physical damage			/	No physical damage	Not meet spec.
2	1	2-2232829-0 PA10T	Post Retention Force	3	27.0	22.6	25.0	N	20 N Min.	Meet Spec.
	1	2-2232829-0 Existing	Post Retention Force	3	25.9	20.9	23.7	N	20 N Min.	Meet Spec.
3	1	2-2232829-0 PA10T	Insulation Resistance	3	931000	222000	374000	MΩ	1000 MΩ Min.	Meet Spec.
	1	2-2232829-0 Existing	Insulation Resistance	3	565000	243000	365000	MΩ	1000 MΩ Min.	Meet Spec.
	2	2-2232829-0 PA10T	Dielectric Withstanding Voltage	3	No breakdown or flashover.			/	No breakdown or flashover.	Meet Spec.
	2	2-2232829-0 Existing	Dielectric Withstanding Voltage	3	No breakdown or flashover.			/	No breakdown or flashover.	Meet Spec.
	3	2-2232829-0 (PA10T, Existing)	Thermal Shock	6	No physical damage			/	No physical damage	Meet Spec.

Group	SN	Description	Test Item	Qty(pcs)	Test Result				Requirement	Conclusion
					Max	Min	Avg	Unit		
3	4	2-2232829-0 (PA10T, Existing)	Humidity and Temperature Cycling	6	No physical damage			/	No physical damage	Meet Spec.
	5	2-2232829-0 PA10T	Insulation Resistance	3	934	591	768	MΩ	5MΩ Min.	Meet Spec.
	5	2-2232829-0 Existing	Insulation Resistance	3	938	595	777	MΩ	5MΩ Min.	Meet Spec.
	6	2-2232829-0 PA10T	Dielectric Withstanding Voltage	3	No breakdown or flashover.			/	No breakdown or flashover.	Meet Spec.
	6	2-2232829-0 Existing	Dielectric Withstanding Voltage	3	No breakdown or flashover.			/	No breakdown or flashover.	Meet Spec.
4	1	2-2232829-0 PA10T	Housing Locking Mechanism Strength Test	3	71.2	61.9	65.3	N	29.4 N Min.	Meet Spec.
	1	2-2232829-0 Existing	Housing Locking Mechanism Strength Test	3	64.7	61.4	63.0	N	29.4 N Min.	Meet Spec.
5	1	1-2232829-6 PA10T	Mating Force	3	6.81	5.49	6.07	N	27N Max.	Meet Spec
	1	1-2232829-6 Existing	Mating Force	3	7.53	6.32	6.77	N	27N Max.	Meet Spec
	2	1-2232829-6 PA10T	Unmuting Force	3	9.65	5.98	8.24	N	0.72N Min.	Meet Spec
	2	1-2232829-6 Existing	Unmuting Force	3	4.76	3.94	4.36	N	0.72N Min.	Meet Spec
6	1	1-2232829-6 PA10T	Resistance to Soldering Heat	3	No physical damage.			/	No physical damage.	Meet Spec.
	1	1-2232829-6 Existing	Resistance to Soldering Heat	3	No physical damage.			/	No physical damage.	Meet Spec.
	2	1-2232829-6 PA10T	Mating Force	3	5.88	5.45	5.60	N	27N Max.	Meet Spec
	2	1-2232829-6 Existing	Mating Force	3	6.15	5.82	5.96	N	27N Max.	Meet Spec
	3	1-2232829-6 PA10T	Unmuting Force	3	5.47	4.35	5.07	N	0.72N Min.	Meet Spec
	3	1-2232829-6 Existing	Unmuting Force	3	5.54	4.68	4.97	N	0.72N Min.	Meet Spec

3. Test Procedures and Requirements

3.1 Dielectric Withstanding Voltage

A test potential of 1100 volts AC was applied between the adjacent contacts of specimens. This potential was applied for one minute and then returned to zero.

Requirement: No breakdown or flashover.

Test Method: 209-13 B

3.2 Examination of Product

Visual inspection: Appearance and function examination according to the applicable inspection spec.

Requirement: No evidence of physical damage was visible.

Test Method: EIA-364-18B-2007

3.3 Housing Locking Mechanism Strength Test

Measure connector locking strength. Operation Speed: 13 mm/min.

Requirement: 29.4 N Min.

Test Method: Customized Requirement

3.4 Humidity and Temperature Cycling

Subject mated specimens to 10 cycles of humidity-temperature cycling. Each cycle consists of temperature between 25 °C and 65 °C and humidity between 80 %RH ~ 98 %RH with -10 °C cold shock executed, 24 hours for each cycle.

Requirement: No evidence of physical damage.

Test Method: EIA-364-31F-2019

3.5 Insulation Resistance

The insulation resistance shall be measured with a test voltage of 500 V dc for 2 minute(s) between adjacent contacts.

Requirement: Initial: 1000 MΩ (minimum), Final: 5 MΩ (minimum).

Test Method: EIA-364-21F-2020

3.6 Post Retention Force

Measure the post retention force from the mating side. Operation speed: 25.4 mm/minute.

Requirement: 20 N Min.

Test Method: Customized Requirement

3.7 Resistance to Soldering Heat

Peak Temperature: 260 +0/-5°C. Reflow 1 cycle.

Requirement: No physical damage.

Test Method: TE Spec. 109-201, condition B.

3.8 Thermal Shock

Subject mated specimens to 10 cycles of thermal shock with each cycle consisting of 30 minutes dwells at -40 °C and 105 °C. The transition time between extreme temperatures is less than 5 minutes.

Requirement: No evidence of physical damage is visible.

Test Method: EIA-364-32G-2014

3.9 Connector Mating / Unmating Force

Testing was performed in accordance with EIA-364-13E. Latch of specimens were removed.

Operation speed: 25.4 mm/minute.