

Qualification Test Report of SGI 2mm Crimp

1. INTRODUCTION

1.1 Purpose

This is a product qualification test. The purpose of this test is to evaluate the performance of SGI 2mm Crimp. Testing was performed on below products to determine if compliance with the requirements of 108-143160. Rev.A.

1.2 Scope

This report covers the electrical, mechanical, and environmental performance of the SGI 2mm Crimp. Testing was performed at TE Connectivity Shanghai Electrical Test Laboratory (Building ID 554) between 2021-01-26 and 2021-03-30. The associated test number is TP-20-03008 and TP-21-00691.

The associated test number is TP-23-03804 which was performed at TE Connectivity Shanghai Electrical Test Laboratory (Building ID 554) between 2023-11-01 and 2023-12-20.

1.3 Conclusion

Based on the test results, all samples meet the requirement according to customer requirement. The results in this report only effect on the sampling specimens.

1.4 Test Specimens

Specimens with the following part numbers were used for test:

Test Group	Part No.	Description	Qty. (pcs)	Part No.	Description	Qty. (pcs)	Comments
1	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	10	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	20	/
	1-2232826-2	SGI2.0 header assembly TH 2P,key A,NTL	10	/	/	/	/
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	/
	2-2232826-0	SGI2.0 HEADER ASSEMBLY TH 10P,KEY A,NTL	3	/	/	/	/
2	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	15	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 22 AWG
	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	15	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 24 AWG
	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	15	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 26 AWG
	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	15	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 28 AWG
	1-2232826-2	SGI2.0 header assembly TH 2P,key A,NTL	60	/	/	/	Mate with assembled 2P plugs
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 22 AWG
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 24 AWG
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 26 AWG
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 28 AWG
	2-2232826-0	SGI2.0 HEADER ASSEMBLY TH 10P,KEY	12	/	/	/	Mate with assembled

Test Group	Part No.	Description	Qty. (pcs)	Part No.	Description	Qty. (pcs)	Comments
		A,NTL					10P plugs
3	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	10	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	20	
	1-2232826-2	SGI2.0 header assembly TH 2P,key A,NTL	10	/	/	/	/
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	/
	2-2232826-0	SGI2.0 HEADER ASSEMBLY TH 10P,KEY A,NTL	3	/	/	/	/
4	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	10	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	20	/
	1-2232826-2	SGI2.0 header assembly TH 2P,key A,NTL	10	/	/	/	/
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	/
	2-2232826-0	SGI2.0 HEADER ASSEMBLY TH 10P,KEY A,NTL	3	/	/	/	/
5	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	10	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	20	/
	1-2232826-2	SGI2.0 header assembly TH 2P,key A,NTL	10	/	/	/	/
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	/
	2-2232826-0	SGI2.0 HEADER ASSEMBLY TH 10P,KEY A,NTL	3	/	/	/	/
6	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	/
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	/
	1-2357686-0	SGI 2.0 Crimp TPA	3	/	/	/	Mate onto one set of assembled 10P plugs for retention
7	/	/	/	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 22 AWG
	/	/	/	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 24 AWG
	/	/	/	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 26 AWG
	/	/	/	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	On 28 AWG
8	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	30	/	/	/	Mate with 2P header
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	30	/	/	/	Mate with 10P header
	1-2232826-2	SGI2.0 header assembly TH 2P,key A,NTL	30	/	/	/	/
	2-2232826-0	SGI2.0 HEADER ASSEMBLY TH 10P,KEY A,NTL	30	/	/	/	/
9	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	6	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	12	/
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	0	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	60	/
10	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	10	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	20	/



Test Group	Part No.	Description	Qty. (pcs)	Part No.	Description	Qty. (pcs)	Comments
	1-2232826-2	SGI2.0 header assembly TH 2P,key A,NTL	10	/	/		/
	2357686-2	SGI 2.0 Crimp TPA, 2 Position	10	/	/		/
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	/
	2-2232826-0	SGI2.0 HEADER ASSEMBLY TH 10P,KEY A,NTL	3	/	/		/
	1-2357686-0	SGI 2.0 Crimp TPA	3	/	/		/
11	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	10	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	20	/
	1-2232826-2	SGI2.0 header assembly TH 2P,key A,NTL	10	/	/		/
	2357686-2	SGI 2.0 Crimp TPA, 2 Position	10	/	/		/
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	/
	2-2232826-0	SGI2.0 HEADER ASSEMBLY TH 10P,KEY A,NTL	3	/	/		/
	1-2357686-0	SGI 2.0 Crimp TPA	3	/	/		/
12	1-2350224-2	SGI 2.0 Plug Housing, 2 Position, Key A	10	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	20	/
	1-2232826-2	SGI2.0 header assembly TH 2P,key A,NTL	10	/	/		/
	2357686-2	SGI 2.0 Crimp TPA, 2 Position	10	/	/		/
	2-2350224-0	SGI 2.0 Plug Housing, 10 Position, Key A	3	2350223-1	SGI 2.0 RECPT TERMINAL 22-28 AWG	30	/
	2-2232826-0	SGI2.0 HEADER ASSEMBLY TH 10P,KEY A,NTL	3	/	/		/
	1-2357686-0	SGI 2.0 Crimp TPA	3	/	/		/

1.5 Test Sequence

Test Item	Test Group											
	1	2	3	4	5	6	7	8	9	10	11	12
	Test Sequence											
Contact Insertion Force						2						
Dielectric Withstanding Voltage					3,7							
Durability Test	4											
Examination of Product	1,9	1,5	1,5	1,5	1,8	1,4	1,3	1,3	1,3	1	1	1
Glow Wire Test									2			
Housing locking mechanism strength test								2				
Humidity and Temperature Cycling				3	5							
Insulation Resistance					2,6							
Low Level Contact Resistance	3,7	2,4	2,4	2,4						2,4	2,4	2,4
Mating Force	2											
Mechanical Shock Test	6											
Contact Retention Force						3						
Temperature Life			3									
Temperature Rise		3										
Crimp Tensile Strength							2					
Thermal Shock					4							
Unmating Force	8											
Vibration Test	5											
Salt Spray										3		
Mixed Flowing Gas											3	
Ammonia												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% to 75%

2. TEST PROCEDUES

2.1 Contact Insertion Force

Measure the force required to insert a contact into the housing.
 Requirement: 4.9N max per contact
 Test Method: ECIA EIA-364-05C-2020

2.2 Dielectric Withstanding Voltage

Apply 1.1 kV AC to adjacent contacts and hold at specified voltage for 1 minute. Test between adjacent circuits and between the surface of housing and contact of mated connectors.
 Requirement: No breakdown or flashover.
 Leakage current: 5.0 mA (maximum)
 Test Method: ECIA EIA-364-20F-2019

2.3 Durability Test

Manually mate and unmate connectors for 6 cycles.
 Requirement: No physical damage that would impair product performance.
 Test Method: ECIA EIA-364-09D-2018

2.4 Examination of Product

Visual check the specimens.

Requirement: No physical damage that would impair product performance.

Test Method: ECIA EIA-364-18B-2017

2.5 Glow Wire Test

The extremity of the wire was positioned horizontally and brought into contact with the specimen with a force between 0.8 N and 1.05 N for a period of 30 s. Penetration depth was less than 7 mm, and wrapping tissue was positioned at (200±5) mm below the place where the glow-wire was applied to the specimen.

Test Temperature: 750 °C. Duration of glow tip application Ta: 30 s.

Requirement: No flame or Te-Ti<2s

Test Method: IEC 60695-2-11-2014 and IEC 60335-1-2013

2.6 Housing locking mechanism strength test

Measure connector locking strength. Operation Speed: 13 mm/min. Requirements: 29.4 N Min.

Test Method: ECIA EIA-364-98-1997(R2009)

2.7 Humidity and Temperature Cycling

Subject mated specimen to 10 cycles between 25°C and 65°C at (80-100) % RH. Measurements to be recorded after specimens are held for 3 hours at ambient temperature and humidity. 1 cycle is 24 hours.

Requirement: No physical damage that would impair product performance.

Test Method: ECIA EIA-364-31F-2019 Method IV

2.8 Insulation Resistance

Apply 500 VDC for 2 minutes between adjacent circuits and between the surface of housing and contact of mated connectors.

Requirement: Initial: 1000 M Ω (minimum) Final: 5 M Ω (minimum)

Test Method: ECIA EIA-364-21 E-2014

2.9 Low Level Contact Resistance

Measure and record the contact resistance with a test current of 100 milliamperes maximum and 20 millivolts open circuit (source) voltage maximum.

Requirement: Initial: 10m Ω max. Final: 30m Ω max.

Test Method: ECIA EIA-364-23C-2006

2.10 Mating Force

Measure force necessary to mate samples at maximum rate of 25.4 mm a minute.

Requirement: (4.5 x # of Positions) N max.

Test Method: ECIA EIA-364-13E-2011

2.11 Mechanical Shock Test

Subject mated connector to 30G' s half-sine shock pulse of 11 ms duration. 3 drops each to normal and reversed directions of X, Y and Z axis. Total of 18 drops.

Requirement: No electrical discontinuity greater than 1 μ s.

Test Method: ECIA EIA-364-27C-2011 Condition H

2.12 Contact Retention Force

Measure the axial force required to remove contact from the housing with and without a TPA accessory. Operation Speed: 25.4 mm/min.

Requirement: 14.7 N (minimum) per contact

Test Method: ECIA EIA-364-29D-2019 Method A

2.13 Temperature Life

Subject mated connector to 105° C for a duration of 96 hours. Measurements to be recorded after specimens are held for 3 hours at ambient temperature and humidity.

Requirement: No physical damage that would impair product performance.

Test Method: ECIA EIA-364-17C-2011

2.14 Temperature Rise

The specimens shall be series conducted with its rated current__(See followed fig.1)_ A under ambient temperature 25±5°C. The current shall be maintained for a period of 1h after stability is reached.

Requirement: The temperature rise shall not exceed 30°C.

Test Method: ECIA EIA-364-70C-2014

Position	Wire Size			
	22 AWG	24 AWG	26 AWG	28 AWG
2-10P	2.5 A	2.2 A	2 A	1.5 A

Fig. 1 Temperature Rise Test Current

2.15 Crimp Tensile Strength

Apply an axial pull-off load to crimped wire of contact secured on the tester, Operation Speed: 25.4 mm/min.
 Requirements: 22 AWG 40N Min., 24 AWG 28N Min., 26 AWG 15N Min., 28 AWG 11N Min.
 Test Method: ECIA EIA-364-08C-2015

2.16 Thermal Shock

Subject mated specimens to 10 cycles between - 40° C and 105° C with 30 minutes dwell time at temperature extremes and 5 minutes transition(maximum) between temperatures.
 Requirement: No physical damage that would impair product performance.
 Test Method: ECIA EIA-364-32G-2014 Method A Test Condition VIII

2.17 Unmating Force

Measure the force required to unmate connectors without locking latches. Operation Speed: 25.4 mm/min.
 Requirement: (.12 x # of positions) N minimum requirement
 Test Method: ECIA EIA-364-13E-2011

2.18 Vibration Test

Subject mated connector to 20-500 Hz for 15 minutes in each of 3 mutually perpendicular planes. 100 mA applied.
 Requirement: No electrical discontinuity greater than 1 μs.
 Test Method: ECIA EIA-364-28F-2011 Condition VII, Level D

2.19 Salt Spray

Subject mated specimens to 5% salt mist environment for 48 hours.
 Requirement: No physical damage.
 Test Method: Customize

2.20 Mixed Flowing Gas

Subject specimens to 40 °C and 75 %RH., Gas Concentration: H₂S 3 ppm.
 Requirement: No physical damage.
 Test Method: Customize

2.21 Ammonia

Subject mated specimens in atmosphere that rated 25 mL/L of 3 % ammonia solution for 7 hours.
 Requirement: No physical damage.
 Test Method: Customize

3. SUMMARY OF TEST

Group	S N	Description	Test Item	Qty (pc)	Test Result				Requirement	Conclusion	
					Max	Min	Avg	Unit			
1	1	All samples	Examination of Product	13	No physical damage.				/	No physical damage.	Meet Spec
	2	10P	Mating Force	3	11.7	11.4	11.5	N	45 N Max.	Meet Spec	
	2	2P	Mating Force	10	8.1	4.8	6.1	N	9 N Max.	Meet Spec	
	3	10P	Low Level Contact Resistance	3	4.07	2.88	3.59	mΩ	10 mΩ Max.	Meet Spec	
	3	2P	Low Level Contact Resistance s	10	4.36	2.99	3.80	mΩ	10 mΩ Max.	Meet Spec	
	4	All samples	Durability Test	13	No physical damage.				/	No physical damage.	Meet Spec
	5	All	Vibration Test	13	No physical damage or				/	No physical	Meet Spec

Group	S N	Description	Test Item	Qty (pc)	Test Result				Requirement	Conclusion
					Max	Min	Avg	Unit		
1		samples			no electrical discontinuity greater than 1 μ s were found during and after test.				damage or no electrical discontinuity greater than 1 μ s	
	6	All samples	Mechanical Shock Test	13	No physical damage or no electrical discontinuity greater than 1 μ s were found during and after test.			/	No physical damage or no electrical discontinuity greater than 1 μ s	Meet Spec
	7	10P	Low Level Contact Resistance	3	8.39	3.11	4.68	m Ω	30 m Ω Max.	Meet Spec
	7	2P	Low Level Contact Resistance	10	6.75	3.28	4.72	m Ω	30 m Ω Max.	Meet Spec
	8	10P	Unmating Force	3	12.5	10.3	11.3	N	1.2 N Min.	Meet Spec
	8	2P	Unmating Force	10	2.7	1.3	2.0	N	0.24 N Min.	Meet Spec
	9	All samples	Examination of Product	13	No physical damage.			/	No physical damage.	Meet Spec
	2	All samples	Examination of Product	120	No physical damage.			/	No physical damage.	Meet Spec
	2	2	2P (22AWG)	Low Level Contact Resistance	15	5.54	2.25	3.28	m Ω	10 m Ω Max.
2		2P (24AWG)	Low Level Contact Resistance	15	3.15	2.24	2.64	m Ω	10 m Ω Max.	Meet Spec
2		2P (26AWG)	Low Level Contact Resistance	15	3.54	1.74	2.74	m Ω	10 m Ω Max.	Meet Spec
2		2P (28AWG)	Low Level Contact Resistance	15	3.33	1.87	2.60	m Ω	10 m Ω Max.	Meet Spec
2		10P (22AWG)	Low Level Contact Resistance	15	5.26	2.52	3.54	m Ω	10 m Ω Max.	Meet Spec
2		10P (24AWG)	Low Level Contact Resistance	15	3.15	2.13	2.66	m Ω	10 m Ω Max.	Meet Spec
2		10P (26AWG)	Low Level Contact Resistance	15	3.44	1.64	2.65	m Ω	10 m Ω Max.	Meet Spec
2		10P (28AWG)	Low Level Contact Resistance	15	4.87	2.55	3.77	m Ω	10 m Ω Max.	Meet Spec
3		2P (22AWG)	Temperature Rise	15	16.6	6.4	9.6	$^{\circ}$ C	30 $^{\circ}$ C Max.	Meet Spec
3		2P (24AWG)	Temperature Rise	15	16.8	6.3	8.3	$^{\circ}$ C	30 $^{\circ}$ C Max.	Meet Spec
3		2P (26AWG)	Temperature Rise	15	9.6	6.1	8.0	$^{\circ}$ C	30 $^{\circ}$ C Max.	Meet Spec
3		2P (28AWG)	Temperature Rise	15	9.9	7.1	8.1	$^{\circ}$ C	30 $^{\circ}$ C Max.	Meet Spec
3		10P (22AWG)	Temperature Rise	15	17.2	10.5	12.8	$^{\circ}$ C	30 $^{\circ}$ C Max.	Meet Spec
3		10P (24AWG)	Temperature Rise	15	14.0	10.0	11.7	$^{\circ}$ C	30 $^{\circ}$ C Max.	Meet Spec
3		10P (26AWG)	Temperature Rise	15	18.2	10.4	12.9	$^{\circ}$ C	30 $^{\circ}$ C Max.	Meet Spec

Group	S N	Description	Test Item	Qty (pc)	Test Result				Requirement	Conclusion
					Max	Min	Avg	Unit		
	3	10P (28AWG)	Temperature Rise	15	10.1	6.8	8.5	°C	30 °C Max.	Meet Spec
	4	2P (22AWG)	Low Level Contact Resistance	15	3.94	3.10	3.53	mΩ	30 mΩ Max.	Meet Spec
	4	2P (24AWG)	Low Level Contact Resistance	15	3.68	2.28	2.91	mΩ	30 mΩ Max.	Meet Spec
	4	2P (26AWG)	Low Level Contact Resistance	15	4.42	2.53	3.28	mΩ	30 mΩ Max.	Meet Spec
	4	2P (28AWG)	Low Level Contact Resistance	15	9.24	2.76	4.79	mΩ	30 mΩ Max.	Meet Spec
	4	10P (22AWG)	Low Level Contact Resistance	15	5.01	2.52	3.39	mΩ	30 mΩ Max.	Meet Spec
	4	10P (24AWG)	Low Level Contact Resistance	15	4.35	2.48	3.11	mΩ	30 mΩ Max.	Meet Spec
	4	10P (26AWG)	Low Level Contact Resistance	15	4.00	2.33	3.15	mΩ	30 mΩ Max.	Meet Spec
	4	10P (28AWG)	Low Level Contact Resistance	15	9.15	2.85	4.91	mΩ	30 mΩ Max.	Meet Spec
	5	All samples	Examination of Product	120	No physical damage.			/	No physical damage.	Meet Spec
3	1	All samples	Examination of Product	13	No physical damage.			/	No physical damage.	Meet Spec
	2	2P	Low Level Contact Resistance	10	4.31	3.31	3.60	mΩ	10mΩMax.	Meet Spec
	2	10P	Low Level Contact Resistance	3	4.18	3.44	3.68	mΩ	10mΩMax.	Meet Spec
	3	All samples	Temperature Life	13	No physical damage.			/	No physical damage.	Meet Spec
	4	2P	Low Level Contact Resistance	10	5.34	4.34	4.68	mΩ	30 mΩ Max.	Meet Spec
	4	10P	Low Level Contact Resistance	3	5.21	3.68	4.32	mΩ	30 mΩ Max.	Meet Spec
	5	All samples	Examination of Product	13	No physical damage.			/	No physical damage.	Meet Spec
4	1	All samples	Examination of Product	20	No physical damage.			/	No physical damage.	Meet Spec
	2	2P	Low Level Contact Resistance	10	4.07	3.20	3.59	mΩ	10 mΩ Max.	Meet Spec
	2	10P	Low Level Contact Resistance	3	4.47	3.17	3.70	mΩ	10 mΩ Max.	Meet Spec
	3	All samples	Humidity and Temperature Cycling	13	No physical damage			/	No physical damage	Meet spec
	4	2P	Low Level Contact Resistance	10	6.30	4.03	5.35	mΩ	30 mΩ Max.	Meet Spec
	4	10P	Low Level	3	9.23	3.50	5.24	mΩ	30 mΩ Max.	Meet Spec

Group	S N	Description	Test Item	Qty (pc)	Test Result				Requirement	Conclusion
					Max	Min	Avg	Unit		
			Contact Resistance							
	5	All samples	Examination of Product	13	No physical damage.			/	No physical damage.	Meet Spec
5	1	All samples	Examination of Product	13	No physical damage.			/	No physical damage.	Meet Spec
	2	2P	Insulation Resistance	10	10.41	2.34	6.19	10 ¹¹ Ω	1000 MΩ Min.	Meet Spec
	2	10P	Insulation Resistance	3	27.45	4.06	9.93	10 ¹¹ Ω	100 0MΩ Min.	Meet Spec
	3	2P	Dielectric Withstanding Voltage	10	No breakdown or flashover.			/	No breakdown or flashover.	Meet Spec
	3	10P	Dielectric Withstanding Voltage	3	No breakdown or flashover.			/	No breakdown or flashover.	Meet Spec
	4	All samples	Thermal Shock	13	No physical damage			/	No physical damage	Meet Spec
	5	All samples	Humidity and Temperature Cycling	13	No physical damage			/	No physical damage	Meet spec
	6	2P	Insulation Resistance	10	54.20	0.38	6.22	10 ⁸ Ω	5 MΩ Min.	Meet Spec
	6	10P	Insulation Resistance	3	141.1	54.34	78.28	10 ⁸ Ω	5 MΩ Min.	Meet Spec
	7	2P	Dielectric Withstanding Voltage	10	No breakdown or flashover.			/	No breakdown or flashover.	Meet Spec
	7	10P	Dielectric Withstanding Voltage	3	No breakdown or flashover.			/	No breakdown or flashover.	Meet Spec
	6	1	All samples	Examination of Product	40	No physical damage.			/	No physical damage.
2		All samples	Contact Insertion Force	30	2.5	1.3	1.8	N	4.9 N Max.	Meet Spec
3		Without TPA	Contact Retention Force	30	30.7	24.5	27.5	N	14.7 N Min.	Meet Spec
3		With TPA	Contact Retention Force	10	32.7	25.3	29.6	N	14.7 N Min.	Meet Spec
4		All samples	Examination of Product	40	No physical damage.			/	No physical damage.	Meet Spec
7	1	All samples	Examination of Product	3	No physical damage.			/	No physical damage.	Meet Spec
	2	22 AWG	Crimp Tensile Strength	30	47.0	40.1	44.9	N	40 N Min.	Meet Spec
	2	24 AWG	Crimp Tensile Strength	30	44.0	39.0	41.6	N	28 N Min.	Meet Spec
	2	26 AWG	Crimp Tensile Strength	30	41.4	34.9	38.9	N	15 N Min.	Meet Spec
	2	28 AWG	Crimp Tensile Strength	30	28.6	21.5	24.7	N	11 N Min.	Meet Spec
	3	All samples	Examination of Product	3	No physical damage.			/	No physical damage.	Meet Spec
8	1	All samples	Examination of Product	3	No physical damage.			/	No physical damage.	Meet Spec
	2	10P	Housing locking mechanism strength test	30	69.7	56.9	66.9	N	29.4 N Min.	Meet Spec
	2	2P	Housing locking	30	62.5	57.1	59.7	N	29.4 N Min.	Meet Spec

Group	S N	Description	Test Item	Qty (pc)	Test Result				Requirement	Conclusion
					Max	Min	Avg	Unit		
			mechanism strength test							
	3	All samples	Examination of Product	3	No physical damage.			/	No physical damage.	Meet Spec
9	1	All samples	Examination of Product	4	No physical damage.			/	No physical damage.	Meet Spec
	2	2P	Glow Wire Test	2	No flame			/	No flame or Te-Ti<2s.	Meet Spec
	2	10P	Glow Wire Test	2	No flame			/	No flame or Te-Ti<2s.	Meet Spec
	3	All samples	Examination of Product	4	Carbonized			/	No physical damage.	Meet Spec
10	2	All samples	Examination of Product		No physical damage.			/	No physical damage.	Meet Spec
	3	2P	Low Level Contact Resistance		4.31	3.33	3.6	mΩ	10 mΩ Max	Meet Spec
	3	10P	Low Level Contact Resistance		3.66	3.04	3.31	mΩ	10 mΩ Max	Meet Spec
	4	All samples	Salt Spray		No physical damage			/	No physical damage	Judged by Customer
	5	2P	Low Level Contact Resistance		5.66	3.25	3.97	mΩ	20 mΩ Max	Meet Spec
	5	10P	Low Level Contact Resistance		4.18	3.20	3.67	mΩ	20 mΩ Max	Meet Spec
11	2	All samples	Examination of Product		No physical damage			/	No physical damage	Meet Spec
	3	2P	Low Level Contact Resistance		3.49	3.03	3.22	mΩ	10 mΩ Max	Meet Spec
	3	10P	Low Level Contact Resistance		3.46	2.93	3.20	mΩ	10 mΩ Max	Meet Spec
	4	All samples	Mixed Flowing Gas		No physical damage			/	No physical damage	Meet Spec
	5	2P	Low Level Contact Resistance		3.82	3.13	3.42	mΩ	20 mΩ Max	Meet Spec
	5	10P	Low Level Contact Resistance		3.89	3.02	3.39	mΩ	20 mΩ Max	Meet Spec
12	2	All samples	Examination of Product		No physical damage.			/	No physical damage	Meet Spec
	3	2P	Low Level Contact Resistance		3.61	3.02	3.28	mΩ	10 mΩ Max	Meet Spec
	3	10P	Low Level Contact Resistance		3.50	2.52	3.20	mΩ	10 mΩ Max	Meet Spec
	4	All samples	Ammonia		No physical damage.			/	No physical damage.	Meet Spec
	5	2P	Low Level Contact Resistance		3.65	3.12	3.37	mΩ	20 mΩ Max	Meet Spec
	5	10P	Low Level Contact Resistance		3.80	2.96	3.38	mΩ	20 mΩ Max	Meet Spec

4. VALIDATION

Requested by:

Candy Xu

2023-12-10

TE Connectivity Product Engineering

Prepared by:

Luke.

2024-03-28

TE Connectivity Shanghai Electrical Components Test Lab.

Approved by:

Colin

2024-04-09

Test Manager

TE Connectivity Shanghai Electrical Components Test Lab.

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