

FASTON Rec. Terminals

1. INTRODUCTION

1.1 Purpose

This is product verification test. The purpose of this test is to evaluate the performance of FASTON Rec. Terminals. Testing was performed on below products to determine its compliance with the requirements of the customer's requirements.

1.2 Scope

This report covers the electrical, environment performance of the FASTON Rec. Terminals. Testing was performed at TE Connectivity Shanghai Electrical Test Laboratory (Building ID 554) between 2024-04-11 and 2024-04-24.

The associated test number is TP-24-03570.

1.3 Conclusion

The items listed in Clause 1.5 conformed to performance requirements of criteria described in Clause 2 with exceptions as noted in the test files.

The testing results are only responsible for the specimens tested.

1.4 Test Specimens

Specimens with the following part numbers were used for test:

Test Group	Set Group Name	Category	Part No.	Part Rev.	Description	Qty. (pcs)
TG1	SG1_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with copper tab of 63274-1	Terminal	41802	AP	250 FASTON FLAG REC 18-12 AWG TPBR	5
	SG1_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with copper tab of 63274-1	Header	63274-1	N	250 FASTON TAB BR	5
	SG2_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with tin plated tab of 63849-1	Terminal	41802	AP	250 FASTON FLAG REC 18-12 AWG TPBR	5
	SG2_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with tin plated tab of 63849-1	Header	63849-1	K	250 FASTON TAB TPBR	5
TG2	SG1_175022-1_1P_ conducting salt spray for crimped terminal of 175022-1 mating with copper tab of 63274-1	Terminal	175022-1	M	250 PL EX REC. 18-14AWG PTBR	5
	SG1_175022-1_1P_ conducting salt spray for crimped terminal of 175022-1 mating with copper tab of 63274-1	Header	63274-1	N	250 FASTON TAB BR	5

Test Group	Set Group Name	Category	Part No.	Part Rev.	Description	Qty. (pcs)
TG2	SG2_175022-1_1P_conducting salt spray for crimped terminal of 175022-1 mating with tin plated tab of 63849-1	Terminal	175022-1	M	250 PL EX REC. 18-14AWG PTBR	5
	SG2_175022-1_1P_conducting salt spray for crimped terminal of 175022-1 mating with tin plated tab of 63849-1	Header	63849-1	K	250 FASTON TAB TPBR	5
TG3	SG1_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with copper tab of 63274-1	Terminal	2232112-1	A1	250 FASTON, REC.,18-14 AWG, TPBR	5
	SG1_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with copper tab of 63274-1	Header	63274-1	N	250 FASTON TAB BR	5
	SG2_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with tin plated tab of 63849-1	Terminal	2232112-1	A1	250 FASTON, REC.,18-14 AWG, TPBR	5
	SG2_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with tin plated tab of 63849-1	Header	63849-1	K	250 FASTON TAB TPBR	5
TG4	SG1_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with copper tab of 63274-1	Terminal	170328-3	B	250 PL MKII REC. 18-14AWG PTBR	5
	SG1_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with copper tab of 63274-1	Header	63274-1	N	250 FASTON TAB BR	5
	SG2_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with tin plated tab of 63849-1	Terminal	170328-3	B	250 PL MKII REC. 18-14AWG PTBR	5
	SG2_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with tin plated tab of 63849-1	Header	63849-1	K	250 FASTON TAB TPBR	5
TG5	SG1_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with copper tab of 60443-1	Terminal	2331225-1	A	187 PL EX REC. 20-14AWG PTBR	5

Test Group	Set Group Name	Category	Part No.	Part Rev.	Description	Qty. (pcs)
TG5	SG1_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with copper tab of 60443-1	Header	60443-1	AB	187 FASTON TAB BR	5
	SG2_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with tin plated tab of 63860-2	Terminal	2331225-1	A	187 PL EX REC. 20-14AWG PTBR	5
	SG2_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with tin plated tab of 63860-2	Header	63860-2	R	187 FASTON TAB TPBR	5

1.5 Test Sequence

Test or Examination	Test Group (a)				
	1	2	3	4	5
Low Level Contact Resistance					2,4
Low Level Contact Resistance				2,4	
Voltage Drop	2,4				
Salt Spray	3	3	3	3	3
Examination of Product	1,5	1,5	1,5	1,5	1,5
Contact Resistance			2,4		
Low Level Contact Resistance		2,4			

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. SUMMARY OF TESTING

Test Group	SN (c)	Set Group Name	Test Item	Qty. (pcs)	Test Result				Requirement	Conclusion
					Max.	Min.	Avg.	Unit		
1	1	SG1_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with copper tab of 63274-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	1	SG2_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with tin plated tab of 63849-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	2	SG1_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with copper tab of 63274-1	Voltage Drop	5	10.02	5.93	8.28	mV	28 mV Max.	Meet Spec.
	2	SG2_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with tin plated tab of 63849-1	Voltage Drop	5	18.89	10.07	15.46	mV	28 mV Max.	Meet Spec.
	3	SG1_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with copper tab of 63274-1	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.
	3	SG2_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with tin plated tab of 63849-1	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.

Test Group	SN (c)	Set Group Name	Test Item	Qty. (pcs)	Test Result				Requirement	Conclusion
					Max.	Min.	Avg.	Unit		
1	4	SG1_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with copper tab of 63274-1	Voltage Drop	5	3.18	3.03	3.12	mV	28 mV Max.	Meet Spec.
	4	SG2_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with tin plated tab of 63849-1	Voltage Drop	5	3.61	3.43	3.50	mV	28 mV Max.	Meet Spec.
	5	SG1_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with copper tab of 63274-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	5	SG2_41802_1P_ conducting salt spray for crimped terminal of 41802 mating with tin plated tab of 63849-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
2	1	SG1_175022-1_1P_ conducting salt spray for crimped terminal of 175022-1 mating with copper tab of 63274-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	1	SG2_175022-1_1P_ conducting salt spray for crimped terminal of 175022-1 mating with tin plated tab of 63849-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	2	SG1_175022-1_1P_ conducting salt spray for crimped terminal of 175022-1 mating with copper tab of 63274-1	Low Level Contact Resistance	5	1.35	0.80	1.03	mΩ	3 mΩ Max.	Meet Spec.
	2	SG2_175022-1_1P_ conducting salt spray for crimped terminal of 175022-1 mating with tin plated tab of 63849-1	Low Level Contact Resistance	5	1.35	0.83	1.20	mΩ	3 mΩ Max.	Meet Spec.
	3	SG1_175022-1_1P_ conducting salt spray for crimped terminal of 175022-1 mating with copper tab of 63274-1	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.
	3	SG2_175022-1_1P_ conducting salt spray for crimped terminal of 175022-1 mating with tin plated tab of 63849-1	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.
	4	SG1_175022-1_1P_ conducting salt spray for crimped terminal of 175022-1 mating with copper tab of 63274-1	Low Level Contact Resistance	5	0.35	0.24	0.31	mΩ	6 mΩ Max.	Meet Spec.

Test Group	SN (c)	Set Group Name	Test Item	Qty. (pcs)	Test Result				Requirement	Conclusion
					Max.	Min.	Avg.	Unit		
2	4	SG2_175022-1_1P_conducting salt spray for crimped terminal of 175022-1 mating with tin plated tab of 63849-1	Low Level Contact Resistance	5	0.45	0.37	0.42	mΩ	6 mΩ Max.	Meet Spec.
	5	SG1_175022-1_1P_conducting salt spray for crimped terminal of 175022-1 mating with copper tab of 63274-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	5	SG2_175022-1_1P_conducting salt spray for crimped terminal of 175022-1 mating with tin plated tab of 63849-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
3	1	SG1_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with copper tab of 63274-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	1	SG2_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with tin plated tab of 63849-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	2	SG1_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with copper tab of 63274-1	Contact Resistance	5	0.54	0.46	0.49	mΩ	3 mΩ Max.	Meet Spec.
	2	SG2_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with tin plated tab of 63849-1	Contact Resistance	5	0.56	0.49	0.52	mΩ	3 mΩ Max.	Meet Spec.
	3	SG1_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with copper tab of 63274-1	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.
	3	SG2_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with tin plated tab of 63849-1	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.
	4	SG1_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with copper tab of 63274-1	Contact Resistance	5	0.62	0.49	0.55	mΩ	6 mΩ Max.	Meet Spec.
	4	SG2_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with tin plated tab of 63849-1	Contact Resistance	5	0.66	0.43	0.57	mΩ	6 mΩ Max.	Meet Spec.

Test Group	SN (c)	Set Group Name	Test Item	Qty. (pcs)	Test Result				Requirement	Conclusion
					Max.	Min.	Avg.	Unit		
3	5	SG1_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with copper tab of 63274-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	5	SG2_2232112-1_1P_conducting salt spray for crimped terminal of 2232112-1 mating with tin plated tab of 63849-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
4	1	SG1_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with copper tab of 63274-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	1	SG2_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with tin plated tab of 63849-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	2	SG1_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with copper tab of 63274-1	Low Level Contact Resistance	5	0.80	0.46	0.64	mΩ	3 mΩ Max.	Meet Spec.
	2	SG2_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with tin plated tab of 63849-1	Low Level Contact Resistance	5	0.80	0.72	0.76	mΩ	3 mΩ Max.	Meet Spec.
	3	SG1_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with copper tab of 63274-1	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.
	3	SG2_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with tin plated tab of 63849-1	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.
	4	SG1_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with copper tab of 63274-1	Low Level Contact Resistance	5	0.88	0.61	0.81	mΩ	6.1 mΩ Max.	Meet Spec.
	4	SG2_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with tin plated tab of 63849-1	Low Level Contact Resistance	5	1.00	0.82	0.91	mΩ	6.1 mΩ Max.	Meet Spec.
	5	SG1_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with copper tab of 63274-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.

Test Group	SN (c)	Set Group Name	Test Item	Qty. (pcs)	Test Result				Requirement	Conclusion
					Max.	Min.	Avg.	Unit		
4	5	SG2_170328-3_1P_conducting salt spray for crimped terminal of 170328-3 mating with tin plated tab of 63849-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
5	1	SG1_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with copper tab of 60443-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	1	SG2_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with tin plated tab of 63860-2	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	2	SG1_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with copper tab of 60443-1	Low Level Contact Resistance	5	0.50	0.16	0.34	mΩ	3 mΩ Max.	Meet Spec.
	2	SG2_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with tin plated tab of 63860-2	Low Level Contact Resistance	5	0.50	0.42	0.46	mΩ	3 mΩ Max.	Meet Spec.
	3	SG1_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with copper tab of 60443-1	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.
	3	SG2_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with tin plated tab of 63860-2	Salt Spray	5	Corrosion was found after test.			/	No corrosion was found after test.	Judged by client.
	4	SG1_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with copper tab of 60443-1	Low Level Contact Resistance	5	0.99	0.91	0.95	mΩ	6 mΩ Max.	Meet Spec.
	4	SG2_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with tin plated tab of 63860-2	Low Level Contact Resistance	5	0.84	0.71	0.80	mΩ	6 mΩ Max.	Meet Spec.
	5	SG1_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with copper tab of 60443-1	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.
	5	SG2_2331225-1_1P_conducting salt spray for crimped terminal of 2331225-1 mating with tin plated tab of 63860-2	Examination of Product	5	No physical damage			/	No physical damage	Meet Spec.

Note: c). SN indicates Sequence Number.

3. TEST METHODS


No.	Test Item	Test Procedure	Test Standard
3.1	Low Level Contact Resistance	Measure and record the contact resistance with a test current of 100 mA maximum and 20 mV open circuit (source) voltage maximum.	EIA-364-23 D-2022
3.2	Voltage Drop	Measure and record the contact resistance of the specimens under test with a test current of 7 A and 2 V open circuit (source) voltage maximum.	EIA-364-06C -2006 (R2017)
3.3	Salt Spray	Subject mated specimens to 5% salt mist environment for 96 hours.	EIA-364-26 C-2014 (R2019) Condition A
3.4	Examination of Product	Visual inspection: Appearance and function examination according to the applicable inspection spec.	EIA-364-18B -2007(R2019)
3.5	Contact Resistance	Measure and record the contact resistance of the specimens under test with a test current of 1 A and 2 V open circuit (source) voltage maximum.	Customer Requirement

4. VALIDATION

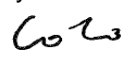
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