

IX-UC2001/2002/2003

Part No. Receptacle: 30113/30114/30115

Test Report

Product Specification no. PRS-2507

0	T18095	August 21, 2018	S.Suzuki		T.Hirakawa
Rev.	ECN	Date	Prepared by	Checked by	Approved by

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1. Purpose

To evaluate the performance of IX-UC series Connector in accordance with PRS-2507.

2. Specimen

- (1) IX-UC2001 RECEPTACLE MID MOUNT TYPE (Part No. 30113-024E-01)
- (2) IX-UC2002 RECEPTACLE MID MOUNT TYPE (Part No. 30114-024E-01)
- (3) IX-UC2003 RECEPTACLE MID MOUNT TYPE (Part No. 30115-024E-01)

3. Test Sequence

All the evaluations were performed in accordance with Table 1. Test Sequence.

4. Result

See the data, Graph 1 to 27. For the details of the testing conditions and requirements, see PRS-2507. The "n" in the tables show the number of measurement points.

5. Conclusion

All the specimens met the requirements of PRS-2507.

Table 1 Test Sequence and Sample Quantity

Test Item	Group									
	A	B	C	D	E	F	G	H	J	K
Contact resistance		2,8	1,3	1,5	1,3	1,5	1,3	1,3		
Insulation resistance		3,9		2,6		2,6				
Dielectric withstanding voltage		4,10		3,7		3,7				
Temperature rising	1									
Mating force		1,7								
Unmating force		5,11								
Durability		6								
Vibration			2							
Thermal shock				4						
High temperature life					2					
Cyclic temperature and humidity						4				
Salt water spray							2			
Mixed flowing gas								2		
Solder ability									1	
Soldering heat resistance										1
Specimen quantity.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.

※Numbers indicate sequence in which tests are performed.

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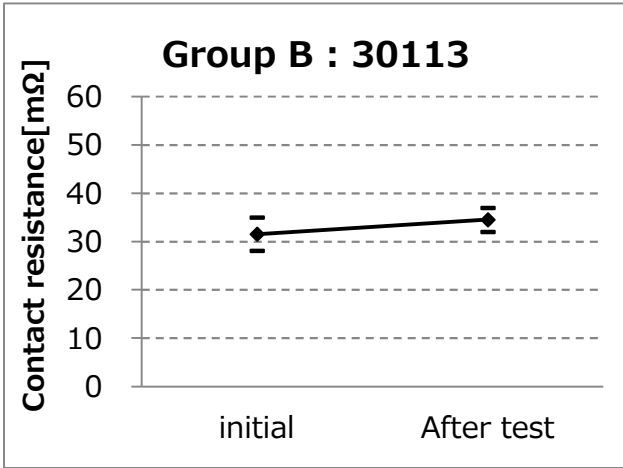
Group	Contents of measurement		Spec.	Unit	Q'ty	n	Data					Judge.	
							AVE.	MAX.	MIN.	S	X±3s		
A	Temperature rising												
	30113	After test	ΔT 30 MAX.	℃	5	-			13.8	Max.		PASS	
	30114	After test	ΔT 30 MAX.			-			12.9	Max.		PASS	
	30115	After test	ΔT 30 MAX.			-			12.1	Max.		PASS	
B	Durability												
	Contact resistance												
	30113	Initial	40 MAX.	mΩ	5	120	-	31.53	35.0	28.1	1.99	37.50	PASS
		After 10000 cycles	50 MAX.				-	34.57	37.0	32.0	1.49	39.04	PASS
	30114	Initial	40 MAX.			120	-	30.88	34.0	28.0	1.73	36.07	PASS
		After 10000 cycles	50 MAX.				-	36.51	38.9	34.2	1.34	40.53	PASS
	30115	Initial	40 MAX.			120	-	32.10	33.1	30.7	0.98	35.04	PASS
		After 10000 cycles	50 MAX.				-	35.12	36.9	34.2	1.17	38.63	PASS
	Mating force												
	30113	Initial	20 MAX. 5 MIN.	N	5	-	12.64	11.1	11.9	-	-	PASS	
		After 10000 cycles					9.41	8.5	9.1	-	-	PASS	
	30114	Initial	20 MAX. 5 MIN.			-	13.01	13.6	12.3	-	-	PASS	
		After 10000 cycles					8.78	8.9	8.5	-	-	PASS	
	30115	Initial	20 MAX. 5 MIN.			-	12.70	13.0	12.4	-	-	PASS	
		After 10000 cycles					9.33	9.9	8.9	-	-	PASS	
	Unmating force												
	30113	Initial	20 MAX. 8 MIN.	N	5	-	13.82	12.6	13.2	-	-	PASS	
		After 10000 cycles	20 MAX. 6 MIN.				-	9.11	8.4	8.8	-	-	PASS
	30114	Initial	20 MAX. 8 MIN.			-	13.41	14.8	12.6	-	-	PASS	
		After 10000 cycles	20 MAX. 6 MIN.				-	8.62	9.0	8.3	-	-	PASS
	30115	Initial	20 MAX. 8 MIN.			-	13.13	13.4	12.8	-	-	PASS	
		After 10000 cycles	20 MAX. 6 MIN.				-	9.04	9.5	8.3	-	-	PASS
	Insulation resistance												
	30113	Initial	100 MIN.	MΩ	5	-			100	Min.		PASS	
		After test	100 MIN.				-			100	Min.		PASS
	30114	Initial	100 MIN.			-			100	Min.		PASS	
		After test	100 MIN.				-			100	Min.		PASS
30115	Initial	100 MIN.	-					100	Min.		PASS		
	After test	100 MIN.				-			100	Min.		PASS	
Dielectric withstanding voltage													
30113	Initial	No abnormality	-	5	-			No abnormality			PASS		
	After test	No abnormality				-			No abnormality		PASS		
30114	Initial	No abnormality			-			No abnormality		PASS			
	After test	No abnormality				-			No abnormality		PASS		
30115	Initial	No abnormality			-			No abnormality		PASS			
	After test	No abnormality				-			No abnormality		PASS		
Appearance													
30113/30114/30115	After test	No abnormality	-	5	-			No abnormality			PASS		
C	Vibration												
	Contact resistance												
	30113	Initial	40 MAX.	mΩ	5	120	-	31.18	33.8	27.3	1.52	35.74	PASS
		After test	50 MAX.				-	33.85	38.7	30.1	1.91	39.57	PASS
	30114	Initial	40 MAX.			120	-	31.81	36.9	27.2	1.88	37.46	PASS
		After test	50 MAX.				-	34.38	38.8	31.9	1.75	39.64	PASS
	30115	Initial	40 MAX.			120	-	31.96	33.4	30.6	0.62	33.82	PASS
		After test	50 MAX.				-	32.91	34.3	31.3	0.66	34.89	PASS
	Electrical discontinuity												
	30113/30114/30115	During test	1 MAX.	μs	5	-			No discontinuity			PASS	
	Appearance												
	30113/30114/30115	After test	No abnormality	-	5	-			No abnormality			PASS	

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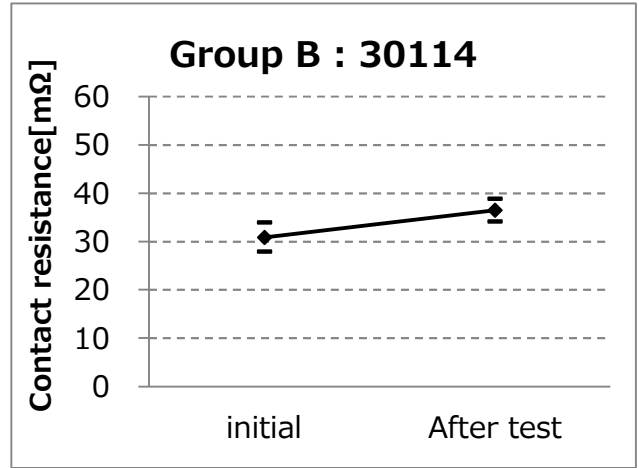
D Thermal shock																		
Contact resistance																		
30113	Initial	40	MAX.	mΩ	5	120	31.44	34.0	29.0	1.51	35.97	PASS						
	After test	50	MAX.				35.31	37.9	33.0	1.40	39.51	PASS						
30114	Initial	40	MAX.				120	32.62	34.9	30.1	1.36	36.70	PASS					
	After test	50	MAX.					34.53	37.0	32.0	1.49	39.00	PASS					
30115	Initial	40	MAX.					120	32.47	33.9	31.5	0.80	34.87	PASS				
	After test	50	MAX.						36.15	37.7	35.2	0.75	38.40	PASS				
Insulation resistance																		
30113	Initial	100	MIN.			MΩ			5	-	100 Min.				PASS			
	After test	100	MIN.				100 Min.				PASS							
30114	Initial	100	MIN.				-				100 Min.				PASS			
	After test	100	MIN.					100 Min.				PASS						
30115	Initial	100	MIN.					-			100 Min.				PASS			
	After test	100	MIN.	100 Min.							PASS							
Dielectric withstanding voltage																		
30113	Initial	No abnormality		-	5					-	No abnormality				PASS			
	After test	No abnormality					No abnormality				PASS							
30114	Initial	No abnormality					-				-	No abnormality				PASS		
	After test	No abnormality						No abnormality				PASS						
30115	Initial	No abnormality						-				-	No abnormality				PASS	
	After test	No abnormality				No abnormality							PASS					
Appearance																		
30113/30114/30115	After test	No abnormality				-			5	-			No abnormality				PASS	
E High temperature life																		
Contact resistance																		
30113	Initial	40	MAX.			mΩ	5	120	33.46	35.5	31.6	1.11	36.79	PASS				
	After test	50	MAX.						36.59	38.5	34.8	1.07	39.80	PASS				
30114	Initial	40	MAX.	120	32.79				36.0	30.2	1.69	37.86	PASS					
	After test	50	MAX.		36.49				39.9	33.1	2.02	42.55	PASS					
30115	Initial	40	MAX.		120				32.10	33.6	30.8	0.86	34.68	PASS				
	After test	50	MAX.						35.63	36.7	34.1	0.86	38.21	PASS				
Appearance																		
30113/30114/30115	After test	No abnormality						-	5	-	No abnormality				PASS			
F Cyclic temperature and humidity																		
Contact resistance																		
30113	Initial	40	MAX.	mΩ	5			120	31.80	33.8	29.0	1.18	35.33	PASS				
	After test	50	MAX.						32.93	35.3	30.0	1.23	36.61	PASS				
30114	Initial	40	MAX.			120	31.65		33.9	28.1	1.43	35.93	PASS					
	After test	50	MAX.				34.24		38.0	31.7	1.48	38.68	PASS					
30115	Initial	40	MAX.				120		32.25	33.7	30.7	0.67	34.26	PASS				
	After test	50	MAX.						33.39	35.3	31.1	0.80	35.79	PASS				
Insulation resistance																		
30113	Initial	100	MIN.					MΩ	5	-	100 Min.				PASS			
	After test	100	MIN.			100 Min.					PASS							
30114	Initial	100	MIN.			-					100 Min.				PASS			
	After test	100	MIN.				100 Min.				PASS							
30115	Initial	100	MIN.				-				100 Min.				PASS			
	After test	100	MIN.	100 Min.							PASS							
Dielectric withstanding voltage																		
30113	Initial	No abnormality		-	5					-	No abnormality				PASS			
	After test	No abnormality				No abnormality					PASS							
30114	Initial	No abnormality				-					-	No abnormality				PASS		
	After test	No abnormality					No abnormality					PASS						
30115	Initial	No abnormality					-					-	No abnormality				PASS	
	After test	No abnormality						No abnormality					PASS					
Appearance																		
30113/30114/30115	After test	No abnormality						-	5	-			No abnormality				PASS	

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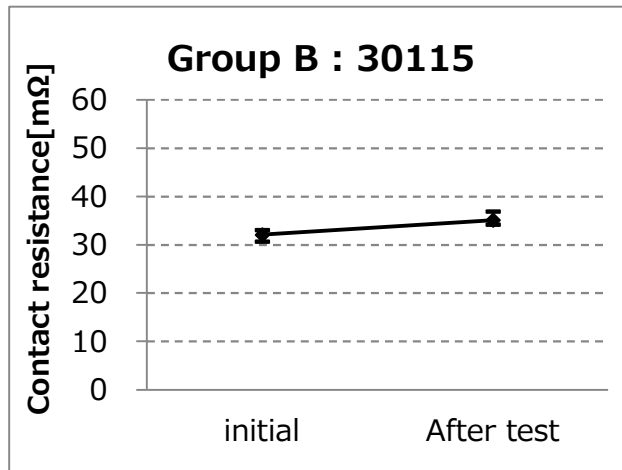
G	Salt water spray												
	Contact resistance												
	30113	Initial	40	MAX.	mΩ	5	120	31.15	33.6	28.0	1.24	34.86	PASS
		After test	50	MAX.				34.97	38.0	32.6	1.24	38.68	PASS
	30114	Initial	40	MAX.			120	31.77	35.9	28.2	1.58	36.51	PASS
		After test	50	MAX.				34.93	38.8	31.5	1.56	39.60	PASS
	30115	Initial	40	MAX.			120	31.60	33.9	30.1	0.71	33.73	PASS
		After test	50	MAX.				34.25	36.5	31.5	0.94	37.07	PASS
	Appearance												
	30113/30114/30115	After test	No abnormality	-	5	-	No abnormality					PASS	
H	Mixed flowing gas												
	Contact resistance												
	30113	Initial	40	MAX.	mΩ	5	120	30.44	32.7	27.0	1.29	34.30	PASS
		After test	50	MAX.				34.07	38.9	31.9	1.78	39.42	PASS
	30114	Initial	40	MAX.			120	31.20	36.6	27.0	2.03	37.30	PASS
		After test	50	MAX.				33.75	36.8	31.9	1.19	37.33	PASS
	30115	Initial	40	MAX.			120	31.05	32.7	30.1	0.63	32.94	PASS
		After test	50	MAX.				33.26	35.3	31.8	0.78	35.60	PASS
	Appearance												
	30113/30114/30115	After test	No abnormality	-	5	-	No abnormality					PASS	
J	Solder ability												
	Solder wetting area												
	30113/30114/30115	After test	95	MIN.	%	10	-	95 MIN.					PASS
K	Resistance to reflow soldering heat												
	Appearance												
	30113/30114/30115	After test	No abnormality	-	10	-	No abnormality					PASS	



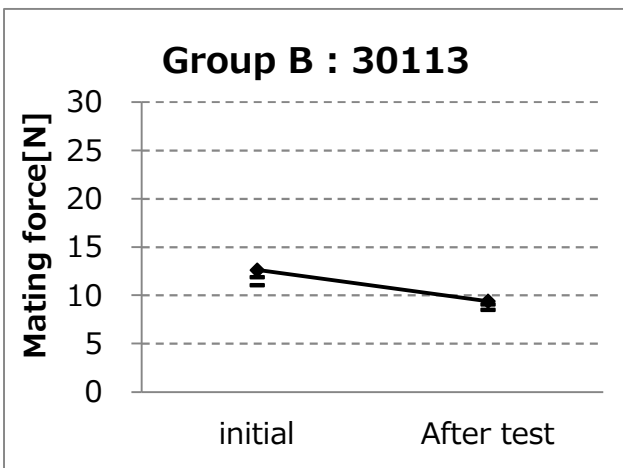
Graph1. Part No.30113 contact resistance



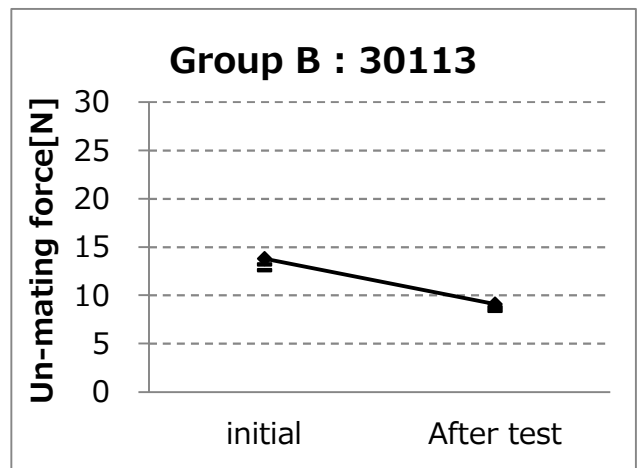
Graph2. Part No.30114 contact resistance



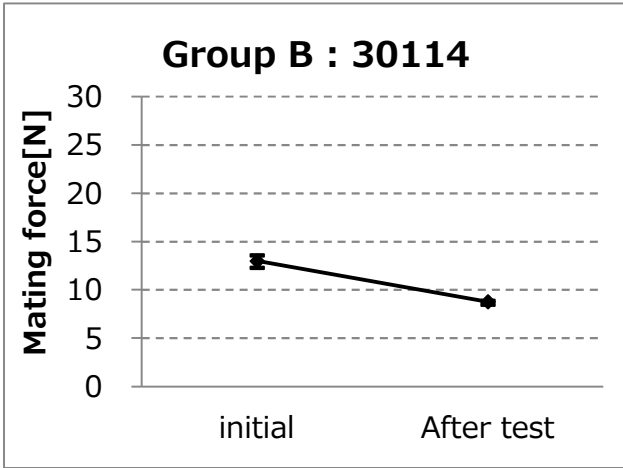
Graph3. Part No.30115 contact resistance



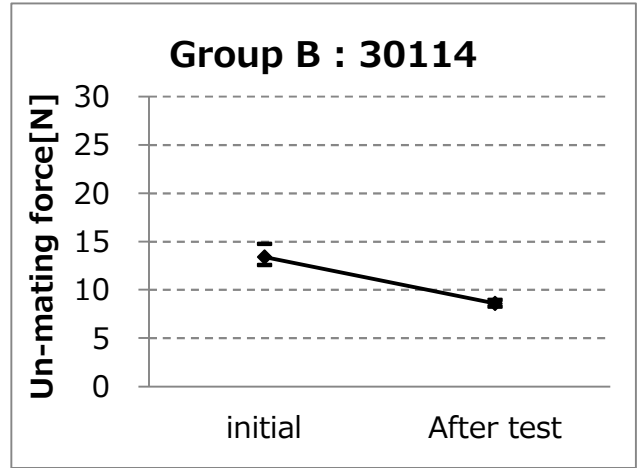
Graph4. Part No.30113 mating force



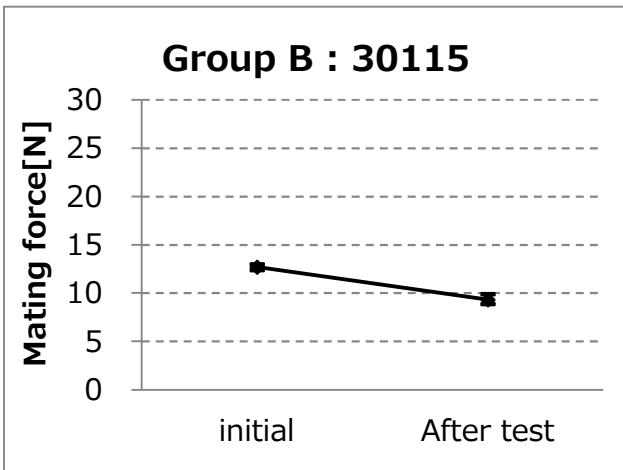
Graph5. Part No.30113 un-mating force



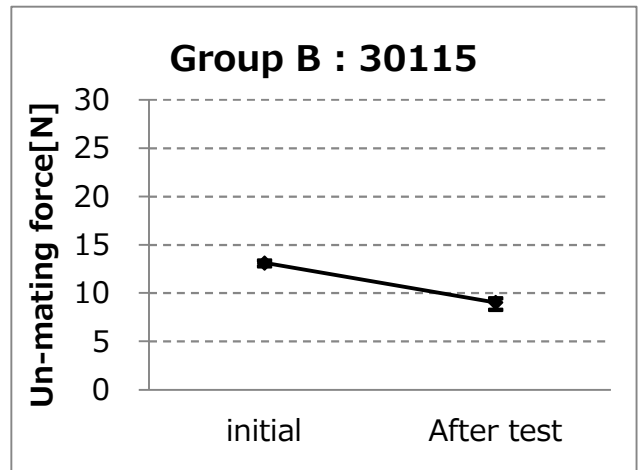
Graph6. Part No.30114 mating force



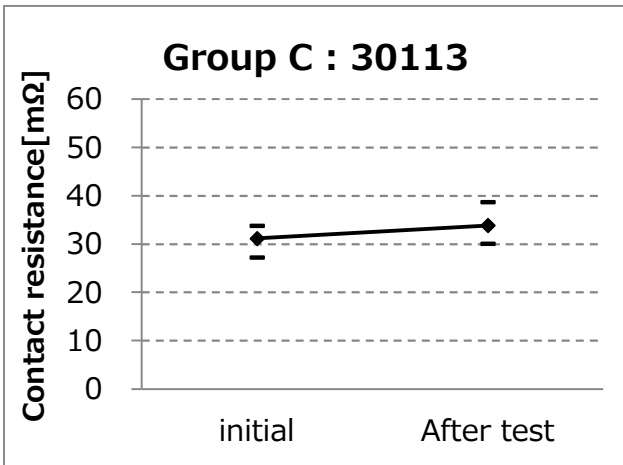
Graph7. Part No.30114 un-mating force



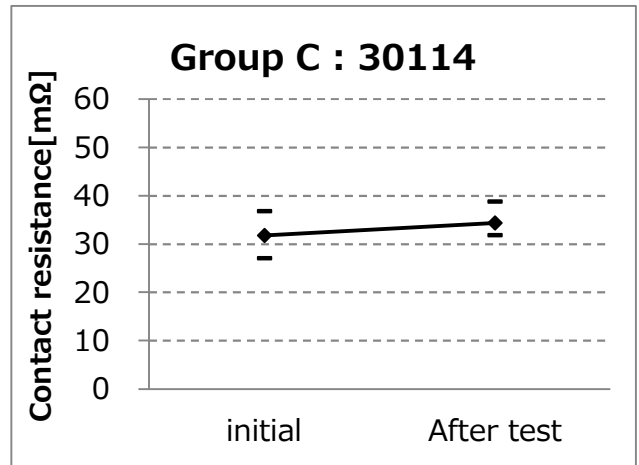
Graph8. Part No.30115 mating force



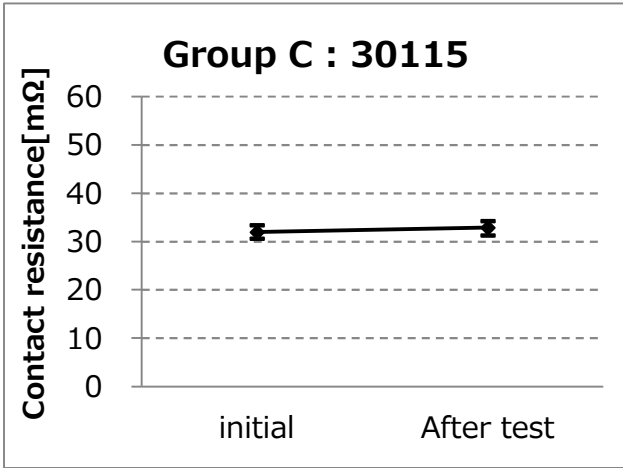
Graph9. Part No.30115 un-mating force



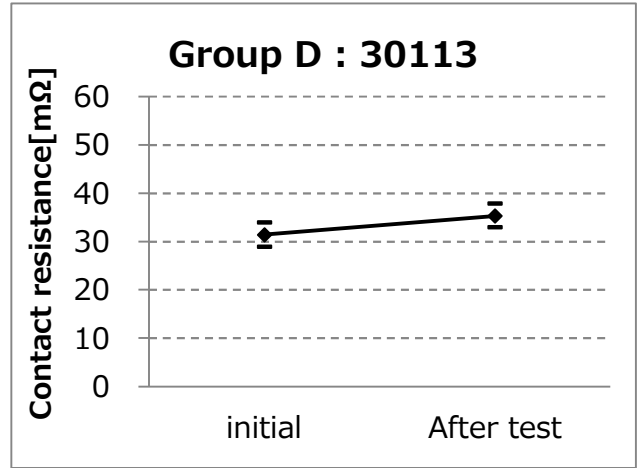
Graph10. Part No.30113 contact resistance



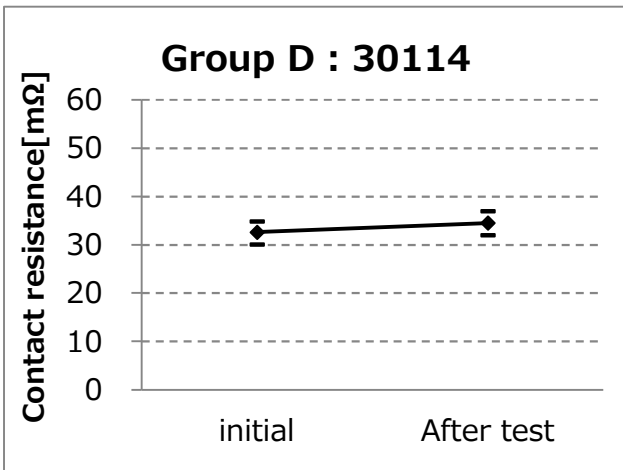
Graph11. Part No.30114 contact resistance



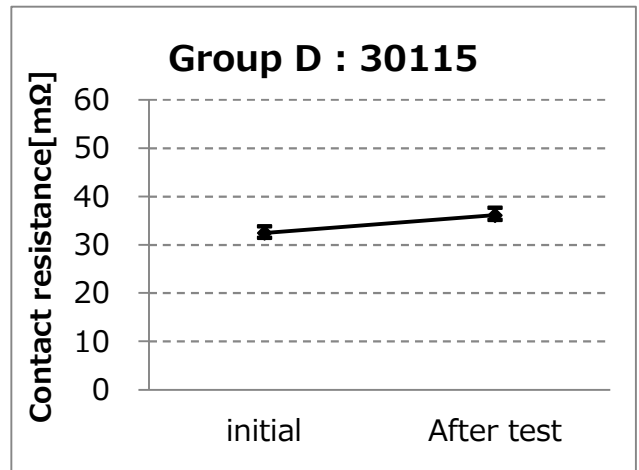
Graph12. Part No.30115 contact resistance



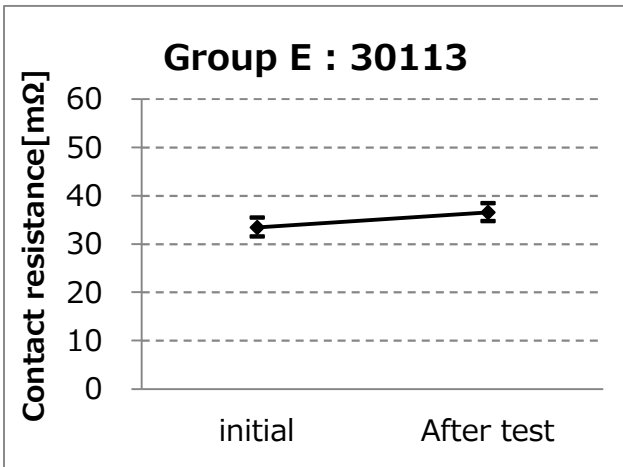
Graph13. Part No.30113 contact resistance



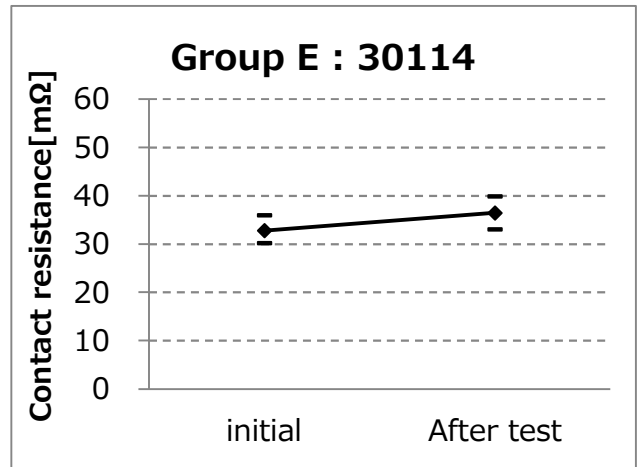
Graph14. Part No.30114 contact resistance



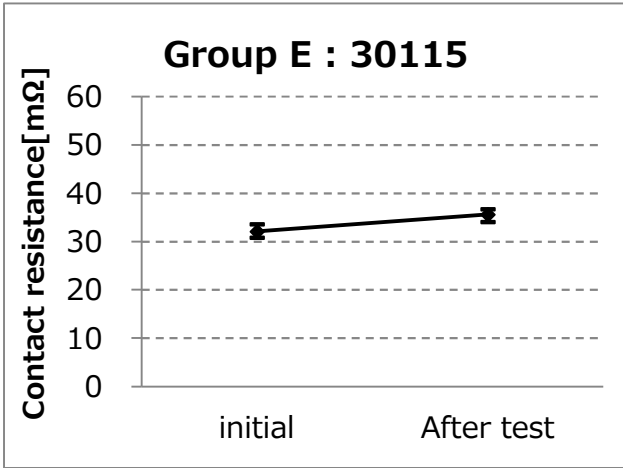
Graph15. Part No.30115 contact resistance



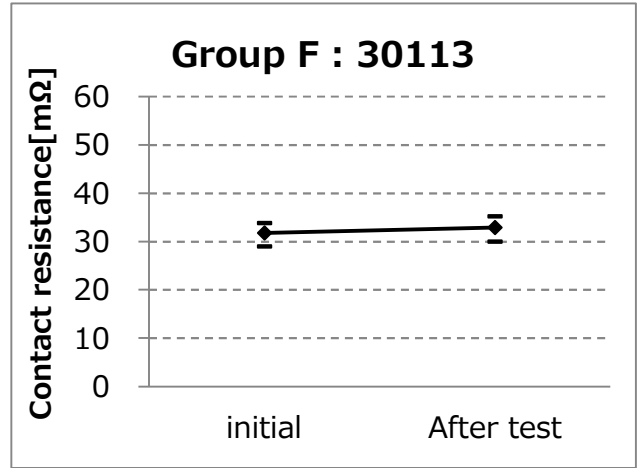
Graph16. Part No.30113 contact resistance



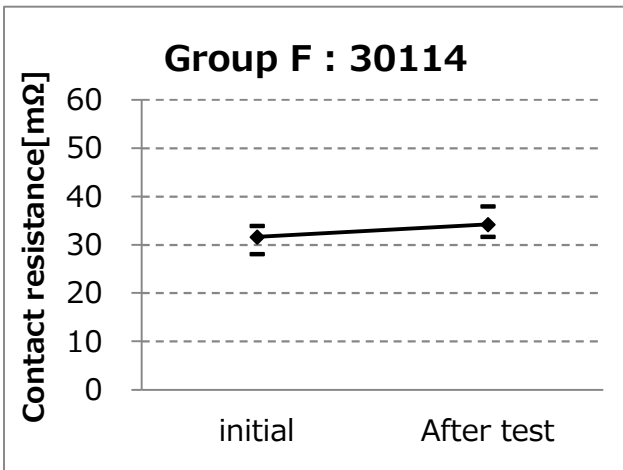
Graph17. Part No.30114 contact resistance



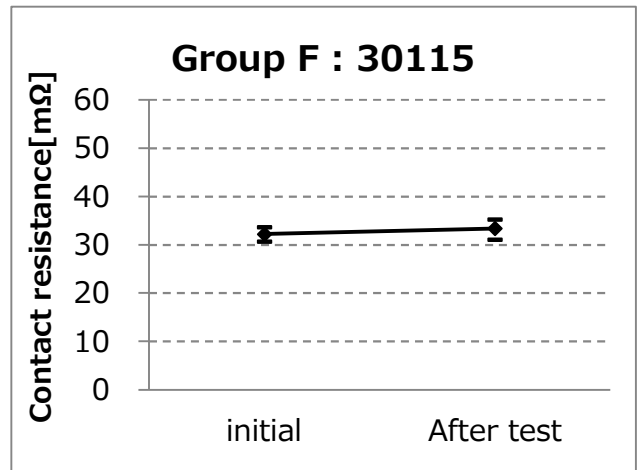
Graph18. Part No.30115 contact resistance



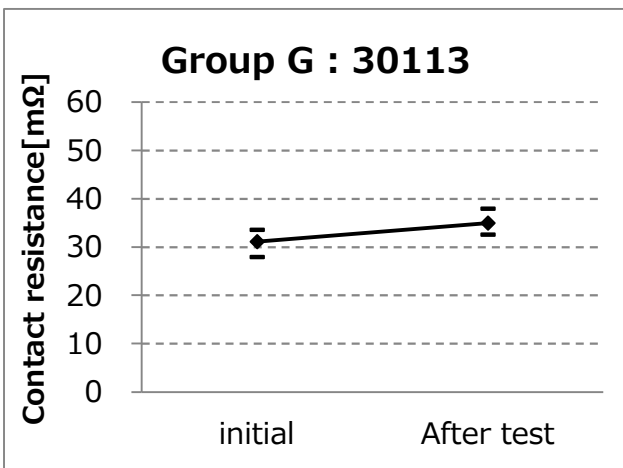
Graph19. Part No.30113 contact resistance



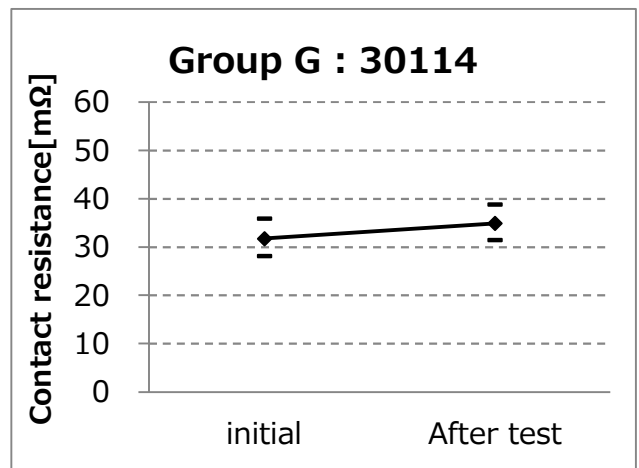
Graph20. Part No.30114 contact resistance



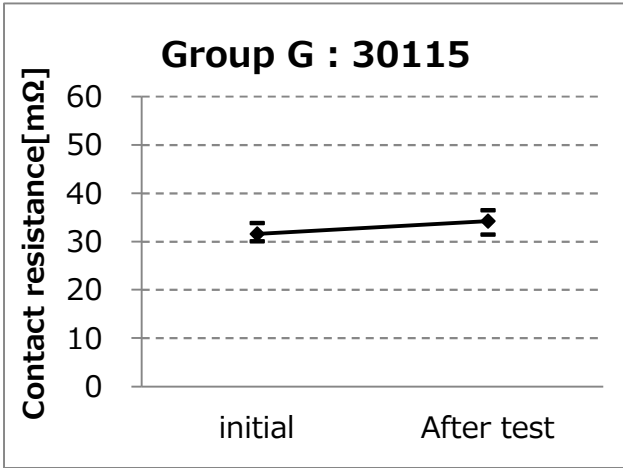
Graph21. Part No.30115 contact resistance



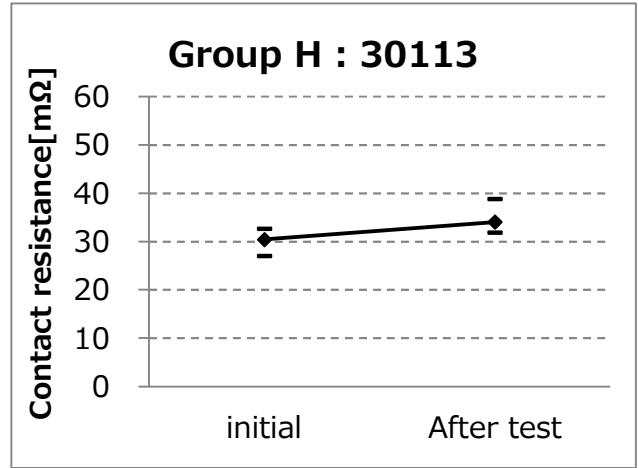
Graph22. Part No.30113 contact resistance



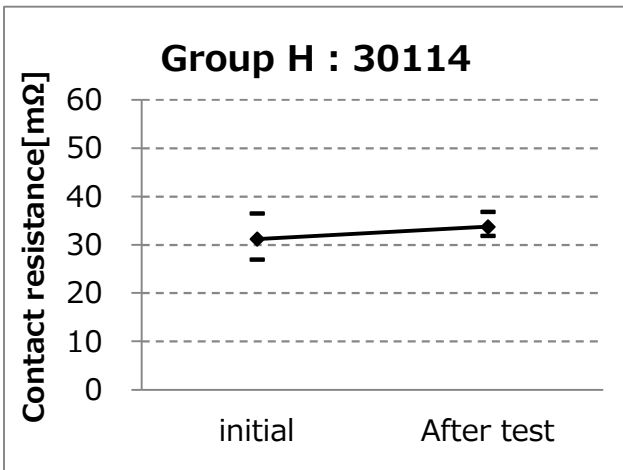
Graph23. Part No.30114 contact resistance



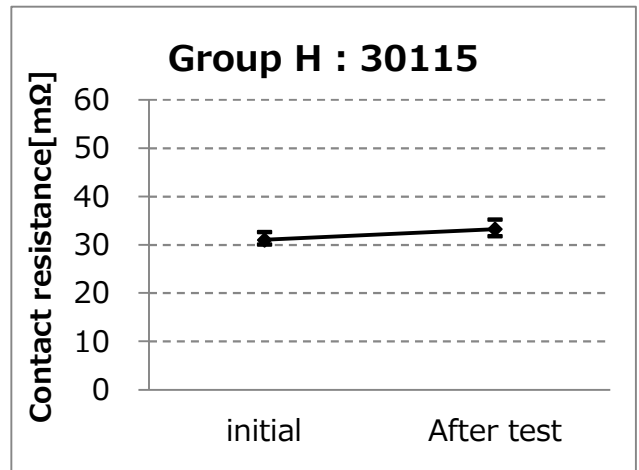
Graph24. Part No.30115 contact resistance



Graph25. Part No.30113 contact resistance



Graph26. Part No.30114 contact resistance



Graph27. Part No.30115 contact resistance