

IX-UC2005/2006/2007

Part No. Receptacle: 30117/30118/30119

Test Report

Product Specification no. PRS-2511

0	T18100	September 7, 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-2511.

2. Specimen

- (1) IX-UC2005 RECEPTACLE VERTICAL TYPE (Part No. 30117-024E-01)
- (2) IX-UC2006 RECEPTACLE STAND OFF TYPE (Part No. 30118-024E-01)
- (3) IX-UC2007 RECEPTACLE TOP MOUNT TYPE (Part No. 30119-024E-01)

3. Test Sequence

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

4. Result

See the data, Graph 1 to 24. For the details of the testing conditions and requirements, see PRS-2511. The "n" in the tables show the number of measurement points.

5. Conclusion

All the specimens met the requirements of PRS-2511.

Table 1 Test Sequence and Sample Quantity

Test Item	Group								
	A	B	C	D	E	F	G	H	J
Contact resistance		2,8	1,3	1,3,5	1,3,5	1,3,5	1,3		
Insulation resistance		3,9							
Dielectric withstanding voltage		4,10							
Temperature rising	1								
Mating force		1,7							
Unmating force		5,11							
Durability		6							
Vibration				4					
High temperature life (Preconditioning)				2					
High temperature life			2						
Thermal shock					2				
Thermal disturbance						4			
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.

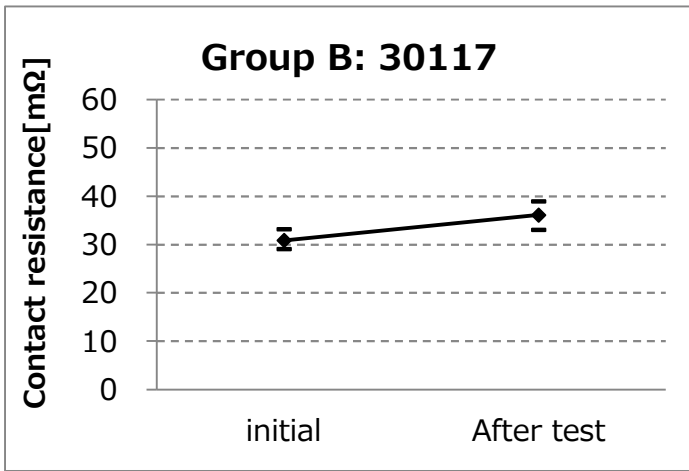
※Numbers indicate sequence in which tests are performed.

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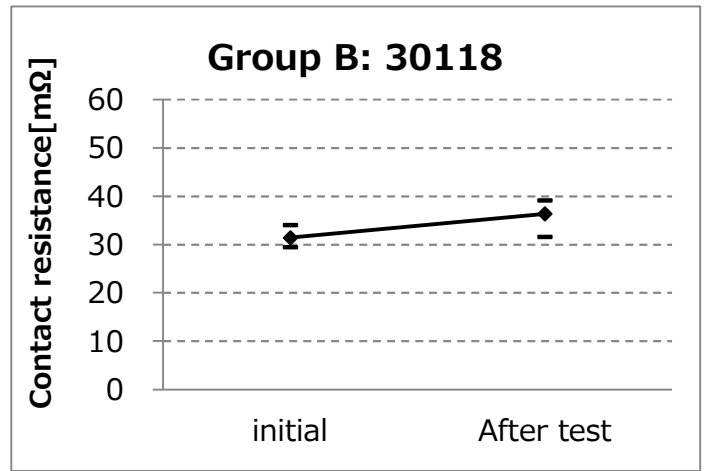
Group	Contents of measurement		Spec.	Unit	Q'ty	n	Data					Judge.	
							AVE.	MAX.	MIN.	S	X±3s		
A	Temperature rising												
	30117	After test	ΔT 30 MAX.	℃	5	-		28.3	Max.			PASS	
	30118	After test	ΔT 30 MAX.			-		28.1	Max.			PASS	
	30119	After test	ΔT 30 MAX.			-		23.5	Max.			PASS	
B	Durability												
	Contact resistance												
	30117	Initial	40 MAX.	mΩ	5	120	-	30.89	33.2	29.1	0.86	33.47	PASS
		After 10000 cycles	50 MAX.				-	36.16	39.0	33.1	1.16	39.64	PASS
	30118	Initial	40 MAX.			120	-	31.44	34.1	29.5	0.95	34.29	PASS
		After 10000 cycles	50 MAX.				-	36.38	39.2	31.6	1.22	40.04	PASS
	30119	Initial	40 MAX.			120	-	31.85	34.4	29.7	0.98	34.79	PASS
		After 10000 cycles	50 MAX.				-	36.71	40.0	33.0	1.25	40.46	PASS
	Mating force												
	30117	Initial	20 MAX. 5 MIN.	N	5	-	15.64	16.3	14.6	-	-	PASS	
		After 10000 cycles					13.33	14.0	12.6	-	-	PASS	
	30118	Initial	20 MAX. 5 MIN.			-	16.27	16.8	15.6	-	-	PASS	
		After 10000 cycles					14.13	14.9	13.3	-	-	PASS	
	30119	Initial	20 MAX. 5 MIN.			-	11.18	12.6	10.5	-	-	PASS	
		After 10000 cycles					7.70	8.6	7.3	-	-	PASS	
	Unmating force												
	30117	Initial	20 MAX. 8 MIN.	N	5	-	15.48	16.1	14.3	-	-	PASS	
		After 10000 cycles	20 MAX. 6 MIN.				-	13.11	13.8	12.6	-	-	PASS
	30118	Initial	20 MAX. 8 MIN.			-	16.25	17.2	15.2	-	-	PASS	
		After 10000 cycles	20 MAX. 6 MIN.				-	13.95	14.5	13.3	-	-	PASS
	30119	Initial	20 MAX. 8 MIN.			-	12.72	13.3	12.2	-	-	PASS	
		After 10000 cycles	20 MAX. 6 MIN.				-	9.68	10.8	8.2	-	-	PASS
	Insulation resistance												
	30117	Initial	100 MIN.	MΩ	5	-			100	Min.		PASS	
		After test	100 MIN.						100	Min.		PASS	
	30118	Initial	100 MIN.			-			100	Min.		PASS	
		After test	100 MIN.						100	Min.		PASS	
	30119	Initial	100 MIN.			-			100	Min.		PASS	
After test		100 MIN.						100	Min.		PASS		
Dielectric withstanding voltage													
30117	Initial	No abnormality	-	5	-			No abnormality			PASS		
	After test	No abnormality						No abnormality			PASS		
30118	Initial	No abnormality			-			No abnormality			PASS		
	After test	No abnormality						No abnormality			PASS		
30119	Initial	No abnormality			-			No abnormality			PASS		
	After test	No abnormality						No abnormality			PASS		
Appearance													
30117/30118/30119	After test	No abnormality	-	5	-			No abnormality			PASS		
C	High temperature life												
	Contact resistance												
	30117	Initial	40 MAX.	mΩ	5	120	-	31.52	34.1	29.5	0.97	34.43	PASS
		After test	50 MAX.				-	36.48	39.2	33.4	1.16	39.96	PASS
	30118	Initial	40 MAX.			120	-	30.87	33.4	28.2	1.14	34.29	PASS
		After test	50 MAX.				-	36.49	39.3	31.8	1.18	40.03	PASS
	30119	Initial	40 MAX.			120	-	31.25	33.3	28.6	1.05	34.40	PASS
		After test	50 MAX.				-	36.06	38.4	33.8	0.88	38.70	PASS
	Appearance												
	30117/30118/30119	After test	No abnormality	-	5	-			No abnormality			PASS	

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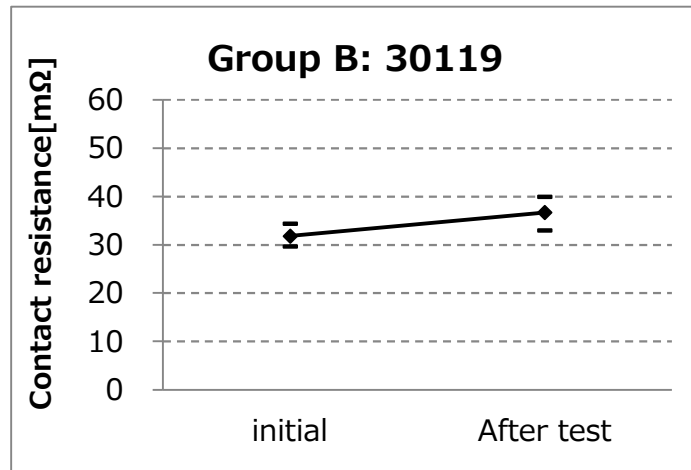
D	High temperature life(preconditioning) → Vibration													
	Contact resistance													
	30117	Initial	40	MAX.	mΩ	5	120	31.84	34.4	29.3	1.07	35.05	PASS	
		After high temp.	50	MAX.				36.71	40.1	32.1	1.43	41.00	PASS	
		After test	50	MAX.				37.40	40.3	32.9	1.66	42.38	PASS	
	30118	Initial	40	MAX.				120	31.29	33.5	29.4	0.95	34.14	PASS
		After high temp.	50	MAX.					36.42	39.3	33.4	0.99	39.39	PASS
		After test	50	MAX.					37.57	39.5	34.9	1.18	41.11	PASS
	30119	Initial	40	MAX.				120	31.64	34.0	29.2	0.90	34.34	PASS
		After high temp.	50	MAX.					36.51	40.1	30.9	2.04	42.63	PASS
After test		50	MAX.	38.22					41.1	35.8	1.12	41.58	PASS	
Electrical discontinuity														
30117/30118/30119	During test	1	MAX.	μs	5	-	No discontinuity					PASS		
Appearance														
30117/30118/30119	After test	No abnormality			-	5	-	No abnormality					PASS	
E	Thermal shock → Cyclic temperature and humidity													
	Contact resistance													
	30117	Initial	40	MAX.	mΩ	5	120	30.84	33.2	28.2	1.08	34.08	PASS	
		After thermal shock	50	MAX.				35.19	39.5	29.6	1.89	40.86	PASS	
		After humidity	50	MAX.				36.61	39.6	32.5	1.49	41.08	PASS	
	30118	Initial	40	MAX.			120	31.35	33.5	29.3	0.79	33.72	PASS	
		After thermal shock	50	MAX.				36.68	39.3	33.4	1.07	39.89	PASS	
		After humidity	50	MAX.				37.70	39.5	34.9	1.25	41.45	PASS	
	30119	Initial	40	MAX.			120	31.99	34.4	30.3	0.80	34.39	PASS	
		After thermal shock	50	MAX.				34.41	39.9	30.9	2.12	40.77	PASS	
After humidity		50	MAX.	35.08				40.0	29.9	2.15	41.53	PASS		
Appearance														
30117/30118/30119	After test	No abnormality			-	5	-	No abnormality					PASS	
F	Mixed flow gas → Thermal disturbance													
	Contact resistance													
	30117	Initial	40	MAX.	mΩ	5	120	30.88	34.1	28.0	1.06	34.06	PASS	
		After gas	50	MAX.				37.01	40.0	31.4	1.84	42.53	PASS	
		After thermal disturbance	50	MAX.				36.73	39.8	33.5	1.37	40.84	PASS	
	30118	Initial	40	MAX.			120	31.34	34.1	28.6	0.97	34.25	PASS	
		After gas	50	MAX.				37.21	39.6	31.8	1.85	42.76	PASS	
		After thermal disturbance	50	MAX.				37.06	39.8	33.4	1.41	41.29	PASS	
	30119	Initial	40	MAX.			120	32.43	36.0	29.3	1.16	35.91	PASS	
		After gas	50	MAX.				37.23	40.6	32.7	1.89	42.90	PASS	
After thermal disturbance		50	MAX.	37.69				40.6	34.0	1.32	41.65	PASS		
Appearance														
30117/30118/30119	After test	No abnormality			-	5	-	No abnormality					PASS	
G	Salt water spray													
	Contact resistance													
	30117	Initial	40	MAX.	mΩ	5	120	30.98	33.6	28.5	1.00	33.98	PASS	
		After test	50	MAX.				36.01	39.0	32.0	1.54	40.63	PASS	
	30118	Initial	40	MAX.			120	31.42	34.1	28.9	1.05	34.57	PASS	
		After test	50	MAX.				35.96	39.2	32.7	1.25	39.71	PASS	
	30119	Initial	40	MAX.			120	31.76	34.0	28.6	1.08	35.00	PASS	
		After test	50	MAX.				36.61	39.4	34.5	0.94	39.43	PASS	
	Appearance													
	30117/30118/30119	After test	No abnormality			-	5	-	No abnormality					PASS
H	Solder ability													
	Solder wetting area													
	30117/30118/30119	After test	95	MIN.	%	5	-	95 MIN.					PASS	
J	Resistance to reflow soldering heat													
	Appearance													
	30117/30118/30119	After test	No abnormality			-	5	-	No abnormality					PASS



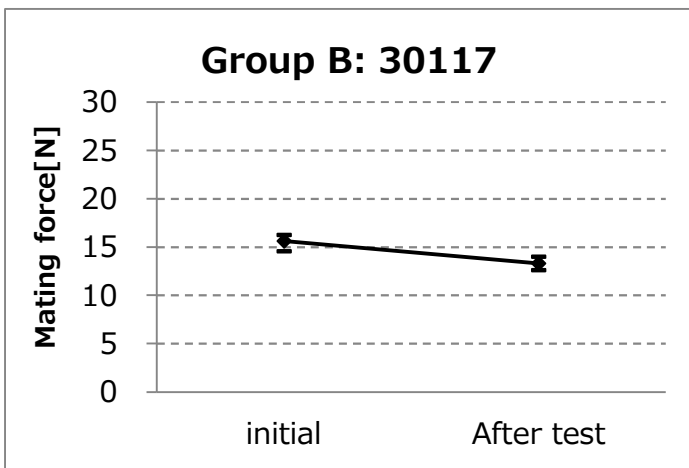
Graph1. Part No.30117 contact resistance



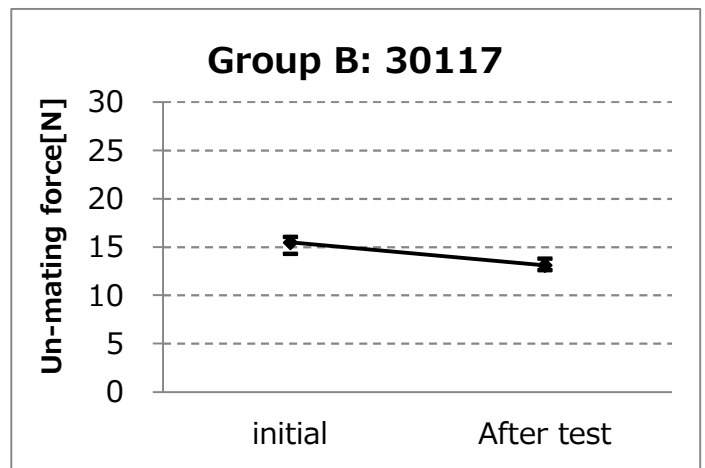
Graph2. Part No.30118 contact resistance



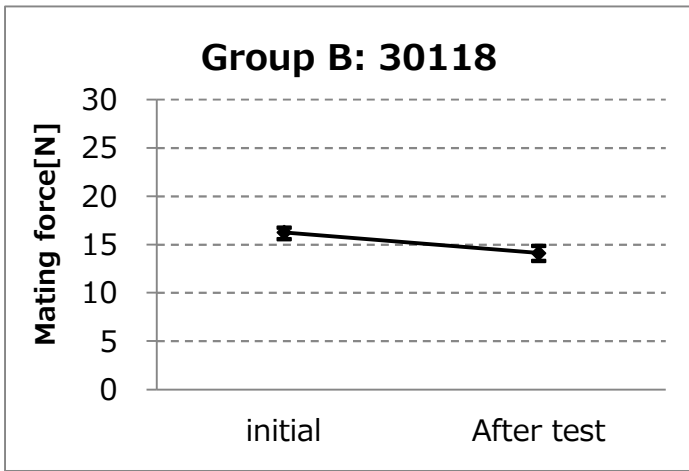
Graph3. Part No.30119 contact resistance



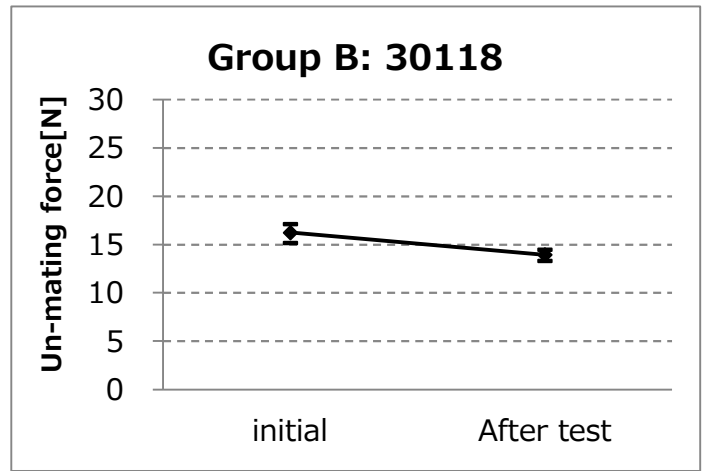
Graph4. Part No.30117 Mating force



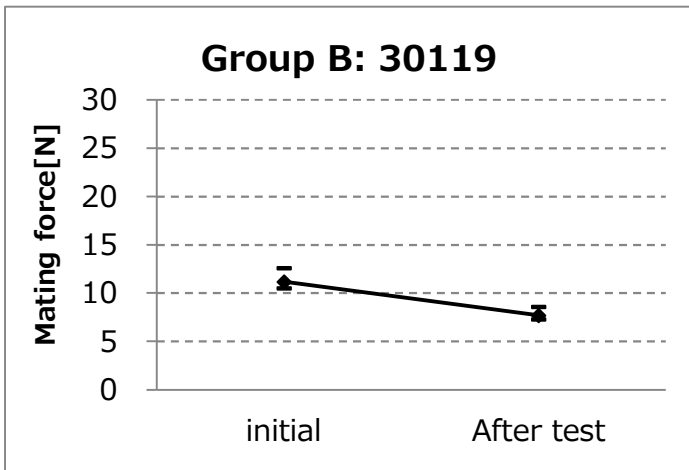
Graph5. Part No.30117 Unmating force



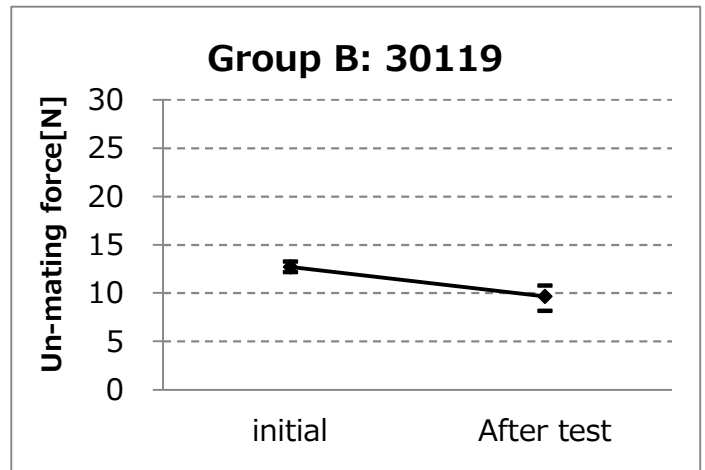
Graph6. Part No.30118 Mating force



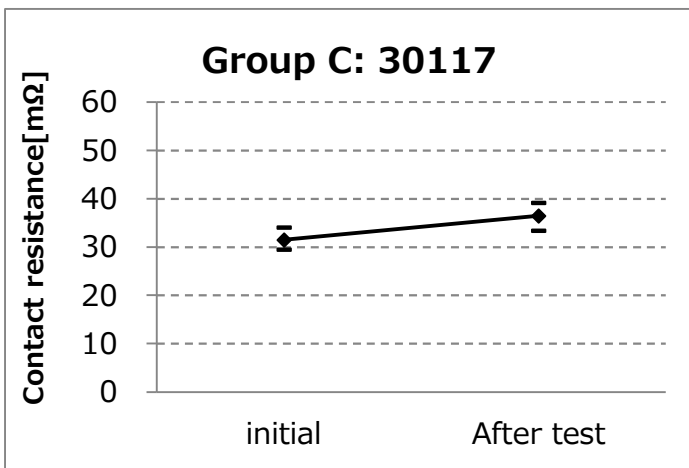
Graph7. Part No.30118 Unmating force



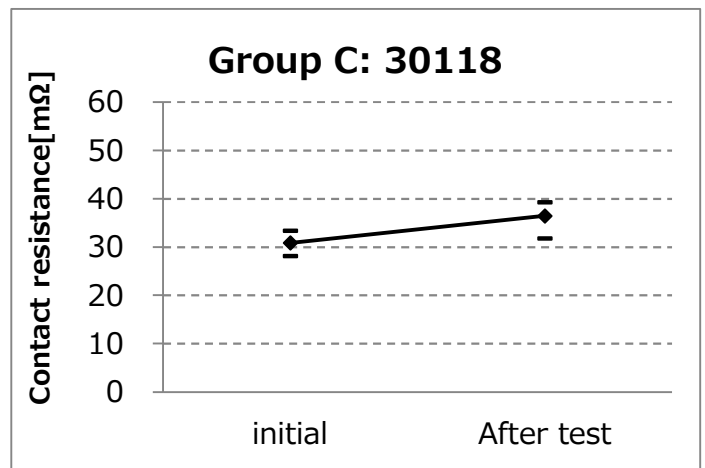
Graph8. Part No.30119 Mating force



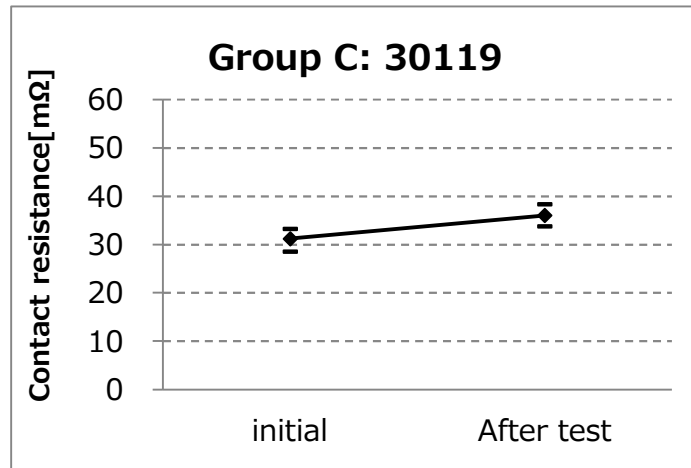
Graph9. Part No.30119 Unmating force



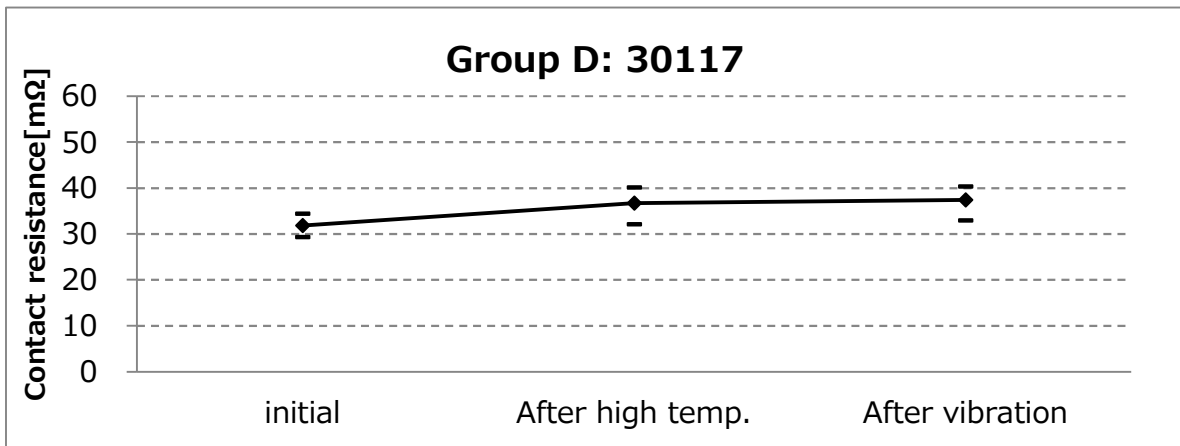
Graph10. Part No.30117 contact resistance



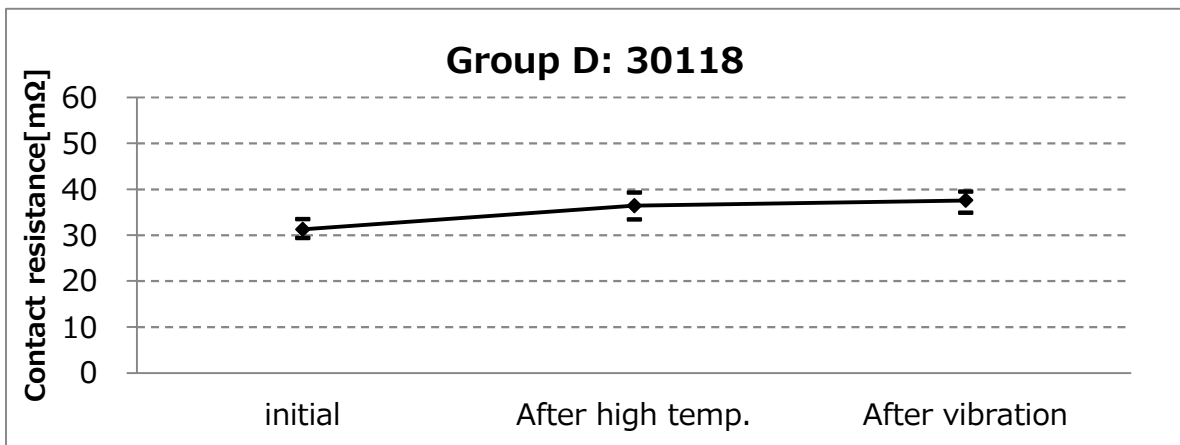
Graph11. Part No.30118 contact resistance



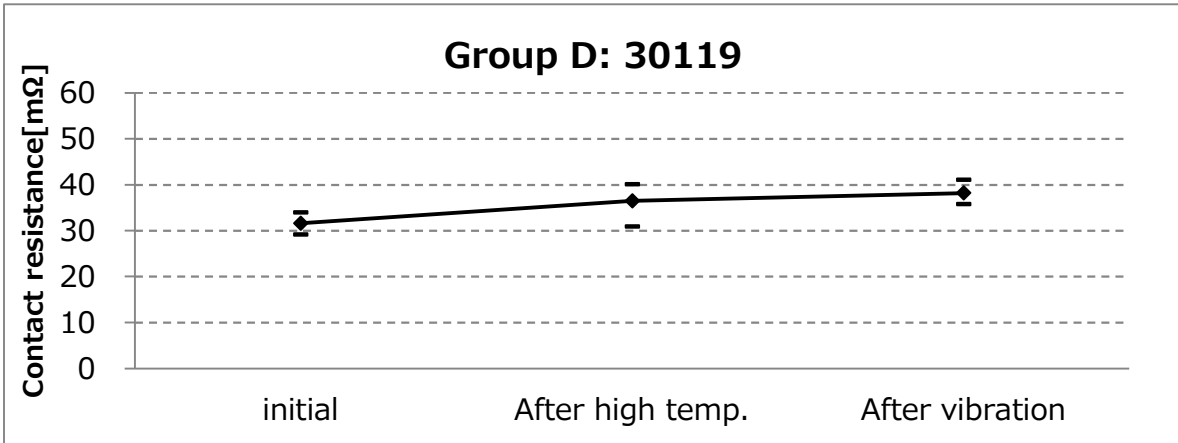
Graph12. Part No.30119 contact resistance



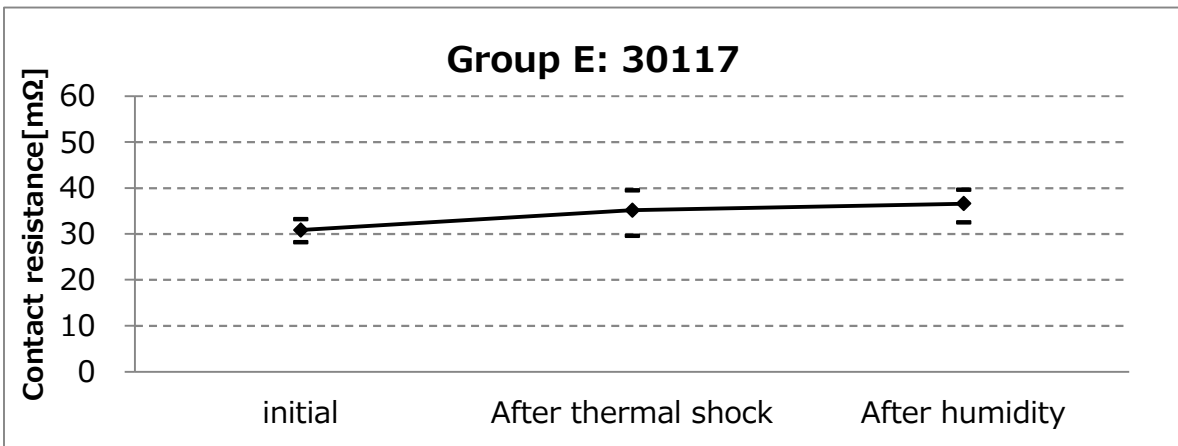
Graph13. Part No.30117 contact resistance



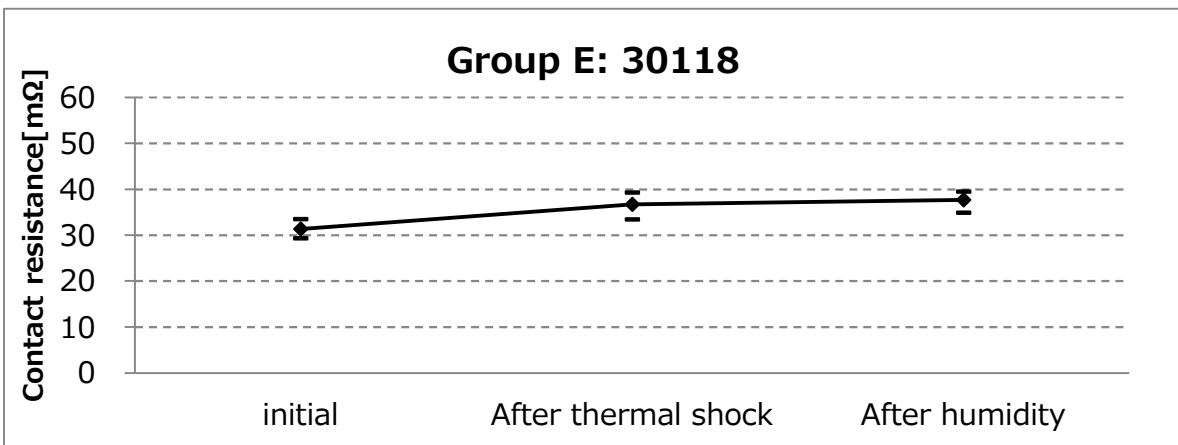
Graph14. Part No.30118 contact resistance



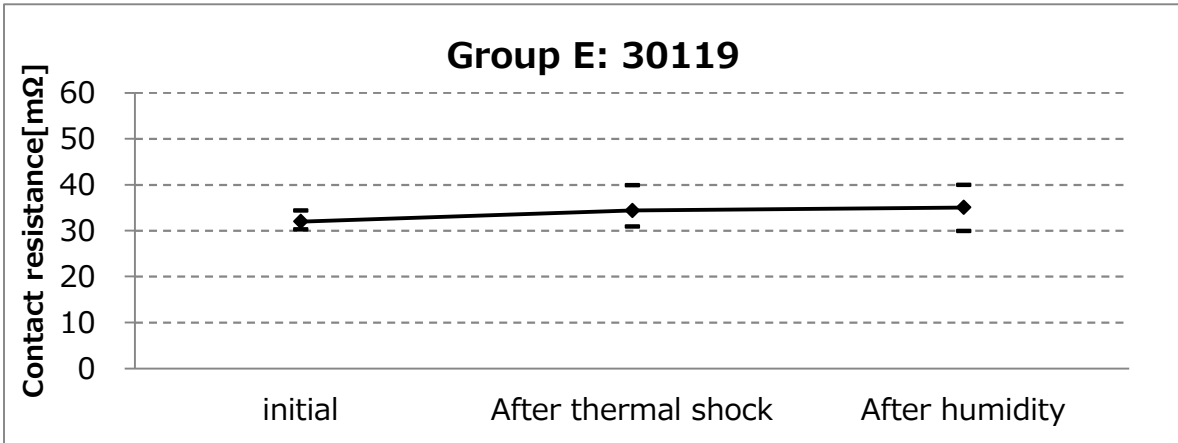
Graph15. Part No.30119 contact resistance



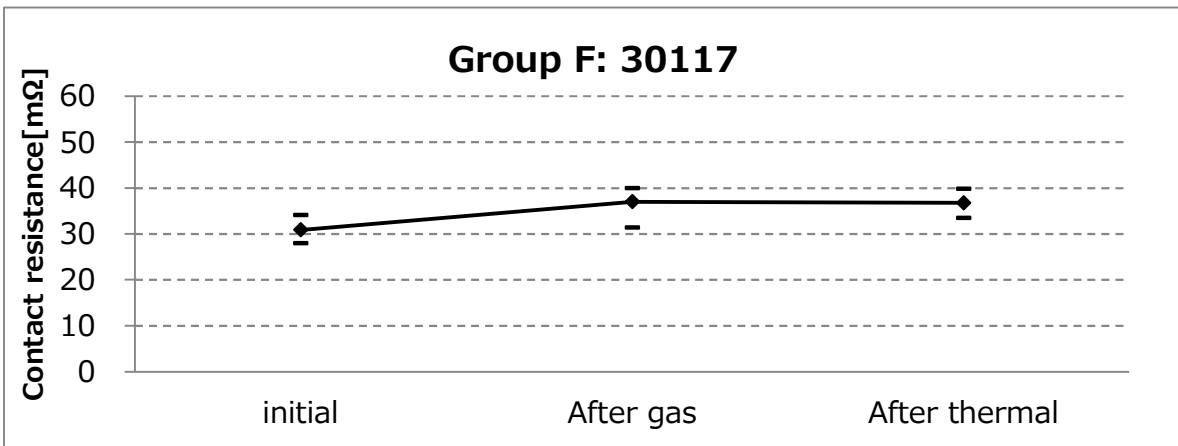
Graph16. Part No.30117 contact resistance



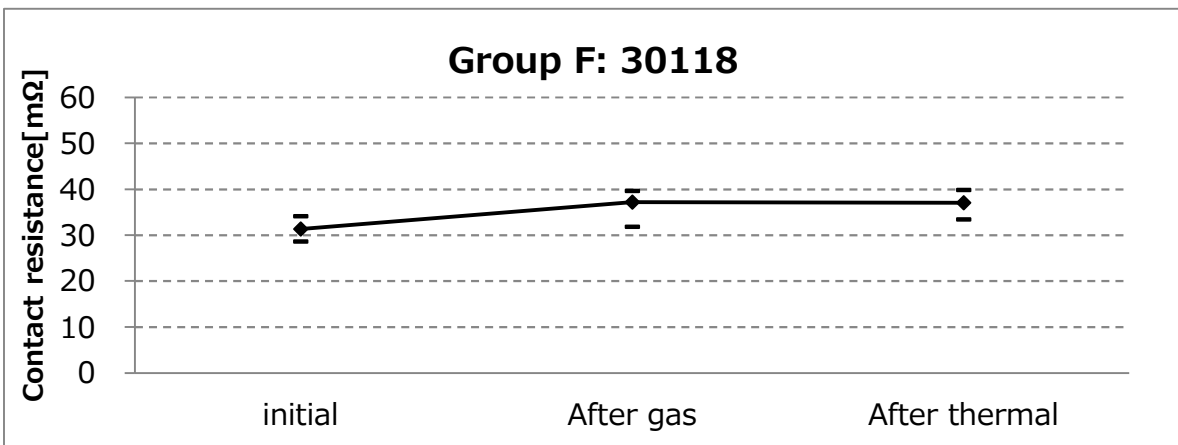
Graph17. Part No.30118 contact resistance



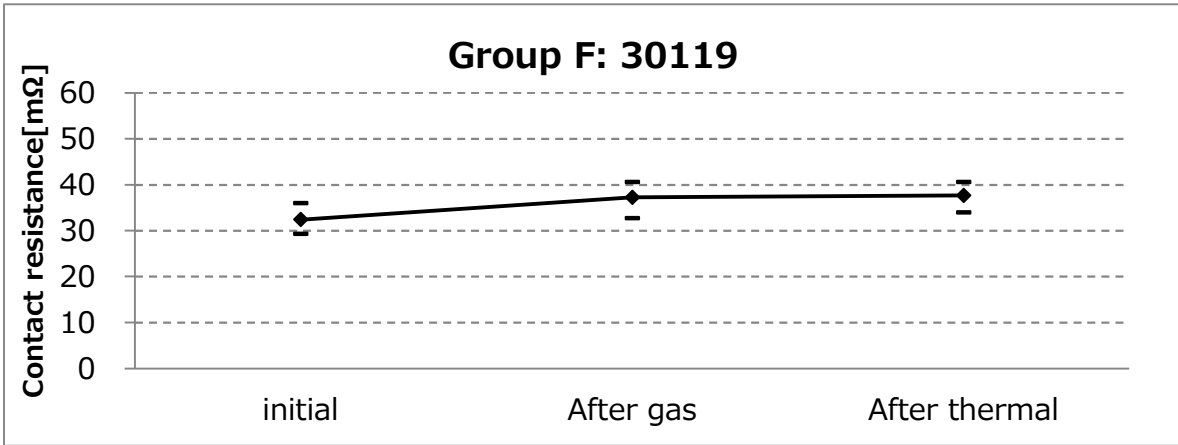
Graph18. Part No.30119 contact resistance



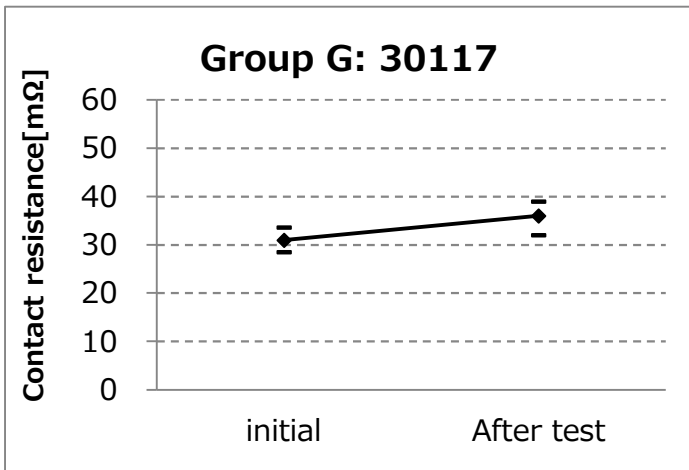
Graph19. Part No.30117 contact resistance



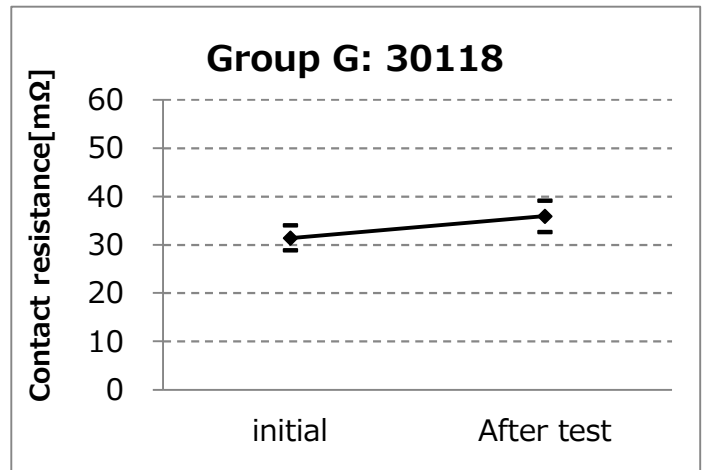
Graph20. Part No.30118 contact resistance



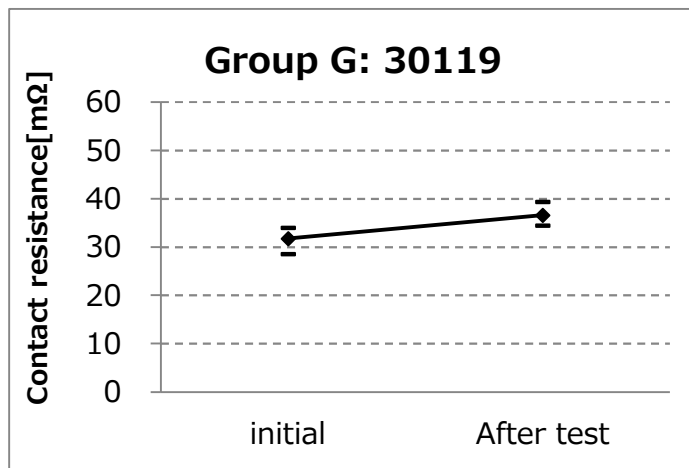
Graph21. Part No.30119 contact resistance



Graph22. Part No.30117 contact resistance



Graph23. Part No.30118 contact resistance



Graph24. Part No.30119 contact resistance