

CABLINE®-UY

Part No. Plug: 20857-0**T-01-# Receptacle: 20854-0**E-02-#

Test Report

Product Specification no. PRS-2634

5	T26052	June 29, 2026	R. Minohara	-	T. Masunaga
4	T26023	April 20, 2026	R. Minohara	T. Tanigawa	T. Masunaga
3	T23052	October 23, 2023	W. Lau	Y. Shimizu	M. Takemoto
2	T22026	January 28, 2022	S. Yamaguchi	T. Tanigawa	H. Ikari
Rev.	ECN	Date	Prepared by	Checked by	Approved by

1. Purpose

To evaluate the performance of CABLINE-UY Connector in accordance with PRS-2634.

2. Specimen

Plug: 20857-0**T-01-#

Plug Housing Ass'y: 20907-0**E-01-#

Plug Ground Contact: 3568-0**1-#

Receptacle: 20854-0**E-02-#

3. Test Sequence

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

4. Result

See Table 2-1 to 2-7, Graph 1 to 18. For the details of the testing conditions and requirements, see PRS-2634.

The "n" in the tables show the number of measurement points.

5. Conclusion

All the specimens met the requirements of PRS-2634.

Table.1 Test Sequence and Sample Quantity

Test Item	Group										
	A	B	C	D	E	F	G	H	J	K	L
Contact Resistance	2,6	1,3,5	1,5	1,3	1,3	1,5	1,3	1,3			
Insulation Resistance			2,6		2,6	2,6					
D. W. Voltage			3,7		3,7	3,7					
Temperature rising											1
Mating Force	1,5										
Unmating Force	3,7										
Durability	4										
Cable Retention Force	8										
Vibration		2									
Shock		4									
Thermal Shock			4								
High Temperature Life				2							
Humidity (Steady State)					4						
Humidity (Cycling)						4					
Salt Water Spray							2				
H2S 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.	10 pcs.	10 pcs.	5 pcs.

※Numbers indicate sequence in which tests are performed.

Table.2-1 Test result

Test Item	Measurements		Spec.	Set	n	Data					Judge	
						AVG (X)	MAX.	MIN	s	X±3s		
A Group Durability	Contact Resistance (mΩ)	Initial	AWG#42 700mΩ MAX.	5	50	669.042	674.40	664.10	2.687	677.103	Pass	
		After 30cycles	AWG#42 ΔR=40mΩMAX.	5	50	0.032	4.70	-3.80	2.027	6.113	Pass	
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	5	28.920	29.64	28.52	0.434	30.222	Pass
			After 30cycles	ΔR=40mΩMAX.	5	5	2.610	4.03	1.35	1.111	5.943	Pass
		10P	Initial	60mΩ MAX.	5	5	17.244	17.77	16.74	0.398	18.438	Pass
			After 30cycles	ΔR=40mΩMAX.	5	5	0.636	0.94	0.21	0.290	1.506	Pass
		12P	Initial	60mΩ MAX.	5	5	14.159	14.45	14.01	0.167	14.660	Pass
			After 30cycles	ΔR=40mΩMAX.	5	5	0.356	0.69	-0.03	0.282	1.202	Pass
	Mating Force (N)	5P	Initial	30.0N MAX.	5	-	14.656	16.77	12.35	1.922	20.422	Pass
			After 30cycles		5	-	6.546	7.45	5.83	0.771	8.859	Pass
		10P	Initial		5	-	15.598	16.61	14.86	0.738	17.812	Pass
			After 30cycles		5	-	5.766	6.10	5.54	0.252	6.522	Pass
		12P	Initial		5	-	18.660	20.17	17.70	1.044	21.792	Pass
			After 30cycles		5	-	6.902	7.52	6.33	0.568	8.606	Pass
	Unmating Force (N)	5P	Initial	5.0N MIN.	5	-	9.450	11.07	8.40	1.176	5.922	Pass
			After 30cycles	3.0N MIN.	5	-	4.736	5.30	4.27	0.442	3.410	Pass
		10P	Initial	5.0N MIN.	5	-	11.266	12.93	9.89	1.248	7.522	Pass
			After 30cycles	3.0N MIN.	5	-	5.662	5.89	5.51	0.157	5.191	Pass
		12P	Initial	5.0N MIN.	5	-	12.368	13.90	10.59	1.353	8.309	Pass
			After 30cycles	3.0N MIN.	5	-	6.106	6.46	5.80	0.274	5.284	Pass
Cable Retention Force (N)	5P	Initial	2.45N MIN.	5	5	41.384	46.71	36.91	4.063	20.364	Pass	
	10P		4.90N MIN.	5	5	62.934	68.28	57.81	4.771	38.400	Pass	
	12P		5.88N MIN.	5	5	71.964	77.74	67.51	3.965	46.437	Pass	

Table.2-2 Test result

Test Item	Measurements		Spec.	Set	n	Data					Judge	
						AVG (X)	MAX.	MIN	s	X±3s		
B Group Vibration ↓ Shock	Contact Resistance (mΩ)	Initial	AWG#42 700mΩ MAX.	5	50	662.368	672.10	657.00	3.908	674.092	Pass	
		After Vibration	AWG#42 ΔR=40mΩMAX.	5	50	-0.350	4.60	-7.30	2.482	7.096	Pass	
		After Shock		5	50	0.024	4.70	-5.30	2.120	6.384	Pass	
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	5	32.256	32.92	31.71	0.445	33.591	Pass
			After Vibration	ΔR=40mΩMAX.	5	5	-0.978	0.63	-2.78	1.343	3.051	Pass
			After Shock		5	5	-1.730	-0.740	-2.630	0.814	0.712	Pass
		10P	Initial	60mΩ MAX.	5	5	17.208	17.72	16.63	0.486	18.666	Pass
			After Vibration	ΔR=40mΩMAX.	5	5	-0.522	-0.06	-0.99	0.439	0.795	Pass
			After Shock		5	5	-1.142	0.02	-4.27	1.774	4.180	Pass
		12P	Initial	60mΩ MAX.	5	5	14.144	14.47	13.55	0.400	15.344	Pass
			After Vibration	ΔR=40mΩMAX.	5	5	-0.474	-0.17	-0.84	0.261	0.309	Pass
			After Shock		5	5	-1.226	-0.88	-1.57	0.292	-0.350	Pass
	Discontinuity	During Vibration	1μs MAX.	5	-	No discontinuity					Pass	
		During Shock		5	-	No discontinuity					Pass	
	Appearance	After Vibration	No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass	
After Shock		No abnormality					Pass					

Table.2-3 Test result

Test Item	Measurements		Spec.	Set	n	Data					Judge	
						AVG (X)	MAX.	MIN	s	X±3s		
C Group Thermal Shock	Contact Resistance (mΩ)	Initial	AWG#42 700mΩ MAX.	5	50	668.258	674.70	661.10	3.609	679.085	Pass	
		After Testing	AWG#42 ΔR=40mΩMAX.	5	50	5.478	13.20	-1.70	3.617	16.329	Pass	
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	5	31.438	31.90	30.77	0.440	32.758	Pass
			After Testing	ΔR=40mΩMAX.	5	5	7.074	7.82	6.10	0.635	8.979	Pass
		10P	Initial	60mΩ MAX.	5	5	16.990	18.32	15.98	0.849	19.537	Pass
			After Testing	ΔR=40mΩMAX.	5	5	6.448	8.14	5.28	1.078	9.682	Pass
		12P	Initial	60mΩ MAX.	5	5	13.546	14.86	12.20	1.058	16.720	Pass
			After Testing	ΔR=40mΩMAX.	5	5	6.702	6.72	6.69	0.016	6.750	Pass
	Appearance		No abnormality adversely affecting the performance shall occur.		5	-	No abnormality					Pass
	D Group High Temperature Life	Contact Resistance (mΩ)	Initial	AWG#42 700mΩ MAX.	5	50	659.882	668.60	648.40	6.724	680.054	Pass
After Testing			AWG#42 ΔR=40mΩMAX.	5	50	5.316	19.50	-13.70	6.698	25.410	Pass	
Ground Resistance (mΩ)		5P	Initial	60mΩ MAX.	5	5	31.278	32.81	30.12	1.263	35.067	Pass
			After Testing	ΔR=40mΩMAX.	5	5	5.104	6.96	2.95	1.681	10.147	Pass
		10P	Initial	60mΩ MAX.	5	5	17.640	19.15	16.21	1.236	21.348	Pass
			After Testing	ΔR=40mΩMAX.	5	5	5.418	6.25	4.29	0.785	7.773	Pass
		12P	Initial	60mΩ MAX.	5	5	14.374	15.14	13.49	0.767	16.675	Pass
			After Testing	ΔR=40mΩMAX.	5	5	5.138	5.44	4.92	0.235	5.843	Pass
Appearance		No abnormality adversely affecting the performance shall occur.		5	-	No abnormality					Pass	

Table.2-4 Test result

Test Item	Measurements		Spec.	Set	n	Data					Judge	
						AVG (X)	MAX.	MIN	s	X±3s		
E Group Humidity (Steady State)	Contact Resistance (mΩ)	Initial	AWG#42 700mΩ MAX.	5	50	656.742	672.90	643.50	7.437	679.053	Pass	
		After Testing	AWG#42 ΔR=40mΩMAX.	5	50	3.128	13.60	-7.80	5.545	19.763	Pass	
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	50	30.878	31.55	30.55	0.393	32.057	Pass
			After Testing	ΔR=40mΩMAX.	5	50	4.396	5.61	2.78	1.198	7.990	Pass
		10P	Initial	60mΩ MAX.	5	50	17.132	17.82	16.91	0.388	18.296	Pass
			After Testing	ΔR=40mΩMAX.	5	50	3.320	4.85	2.14	0.986	6.278	Pass
		12P	Initial	60mΩ MAX.	5	5	14.022	14.64	12.84	0.732	16.218	Pass
			After Testing	ΔR=40mΩMAX.	5	5	3.376	3.88	3.00	0.389	4.543	Pass
	Insulation Resistance	Initial	500MΩ MIN.	5	5	5.05×10 ³ MΩ MIN.					Pass	
		After Testing	100MΩ MIN.	5	5	4.60×10 ³ MΩ MIN.					Pass	
	Dielectric Strength	Initial	No creeping discharge, flashover, or insulator breakdown shall occur.	5	5	No abnormality					Pass	
		After Testing				No abnormality					Pass	
	Appearance			No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass

Table.2-5 Test result

Test Item	Measurements		Spec.	Set	n	Data					Judge	
						AVG (X)	MAX.	MIN	s	X±3s		
F Group Humidity (Cycling)	Contact Resistance (mΩ)	Initial	AWG#42 700mΩ MAX.	5	50	667.652	672.60	661.80	3.118	677.006	Pass	
		After Testing	AWG#42 ΔR=40mΩMAX.	5	50	2.040	11.20	-6.40	3.628	12.924	Pass	
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	50	33.470	34.63	32.26	0.952	36.326	Pass
			After Testing	ΔR=40mΩMAX.	5	50	-1.068	0.30	-1.56	0.779	1.269	Pass
		10P	Initial	60mΩ MAX.	5	50	17.734	18.34	16.15	0.924	20.506	Pass
			After Testing	ΔR=40mΩMAX.	5	50	-0.832	0.93	-2.05	1.233	2.867	Pass
		12P	Initial	60mΩ MAX.	5	5	14.526	15.35	12.17	1.332	18.522	Pass
			After Testing	ΔR=40mΩMAX.	5	5	-1.118	-0.63	-1.43	0.328	-0.134	Pass
	Insulation Resistance	Initial	500MΩ MIN.	5	5	1.7×10 ⁴ MΩ MIN.					Pass	
		After Testing	100MΩ MIN.	5	5	1.2×10 ⁴ MΩ MIN.					Pass	
	Dielectric Strength	Initial	No creeping discharge, flashover, or insulator breakdown shall occur.	5	5	No abnormality					Pass	
		After Testing				No abnormality					Pass	
	Appearance		No abnormality adversely affecting the performance shall occur.	5	-	No abnormality					Pass	

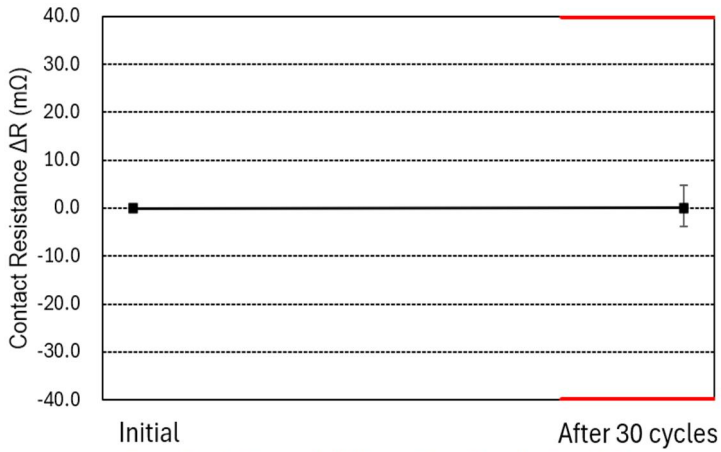
Table.2-6 Test result

Test Item	Measurements		Spec.	Set	n	Data					Judge	
						AVG (X)	MAX.	MIN	s	X±3s		
G Group Salt Water Spray	Contact Resistance (mΩ)	Initial	AWG#42 700mΩ MAX.	5	50	662.064	669.10	657.10	3.145	671.499	Pass	
		After Testing	AWG#42 ΔR=40mΩMAX.	5	50	6.070	13.00	-2.70	4.513	19.609	Pass	
	Ground Resistance (mΩ)	5P	Initial	60mΩ MAX.	5	50	31.628	32.02	30.92	0.433	32.927	Pass
			After Testing	ΔR=40mΩMAX.	5	50	-0.514	0.04	-0.91	0.451	0.839	Pass
		10P	Initial	60mΩ MAX.	5	50	17.652	18.40	17.17	0.511	19.185	Pass
			After Testing	ΔR=40mΩMAX.	5	50	-0.120	0.39	-0.46	0.357	0.951	Pass
		12P	Initial	60mΩ MAX.	5	5	14.288	15.25	13.45	0.658	16.262	Pass
			After Testing	ΔR=40mΩMAX.	5	5	-0.106	0.10	-0.51	0.243	0.623	Pass
	Appearance		No abnormality adversely affecting the performance shall occur.		5	-	No abnormality					Pass
	H Group H ₂ S Gas	Contact Resistance (mΩ)	Initial	AWG#42 700mΩ MAX.	5	50	668.716	674.30	664.00	2.540	676.336	Pass
After Testing			AWG#42 ΔR=40mΩMAX.	5	50	4.504	15.20	-3.60	4.871	19.117	Pass	
Ground Resistance (mΩ)		5P	Initial	60mΩ MAX.	5	50	29.400	30.15	27.92	0.973	32.319	Pass
			After Testing	ΔR=40mΩMAX.	5	50	2.596	4.24	1.20	1.219	6.253	Pass
		10P	Initial	60mΩ MAX.	5	50	17.138	17.48	16.57	0.364	18.230	Pass
			After Testing	ΔR=40mΩMAX.	5	50	3.504	4.03	2.95	0.452	4.860	Pass
		12P	Initial	60mΩ MAX.	5	5	14.448	15.28	12.99	0.882	17.094	Pass
			After Testing	ΔR=40mΩMAX.	5	5	3.554	3.87	3.05	0.309	4.481	Pass
Appearance		No abnormality adversely affecting the performance shall occur.		5	-	No abnormality					Pass	

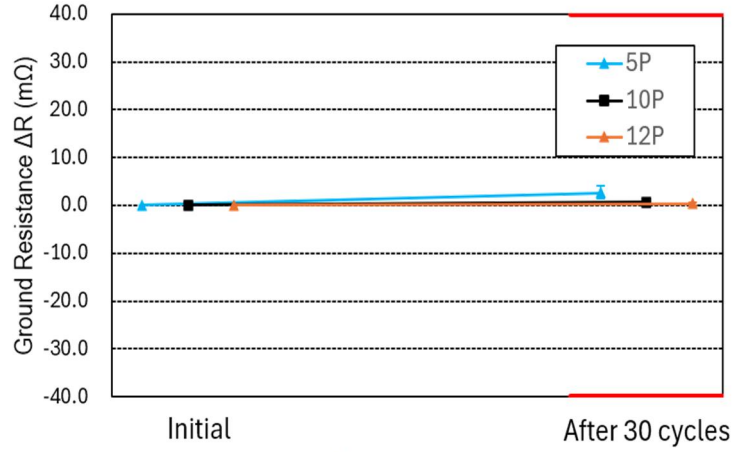
Table.2-7 Test Result

Test Item	Measurements	Spec.	Set	n	Data					Judge
					AVG (X)	MAX.	MIN	s	X±3s	
J Group Solderability	Appearance	More than 95% soldered	10	-	100%					Pass
K Group Soldering Heat Resistance	Appearance	No deformation nor defect adversely affecting the performance occur.	10	-	No abnormality					Pass
L Group Temperature Rising	AWG#42 0.35A/Contact	$\Delta T=30^{\circ}\text{C}$ MAX.	5	5	$\Delta T=27.8^{\circ}\text{C}$ MAX.					Pass

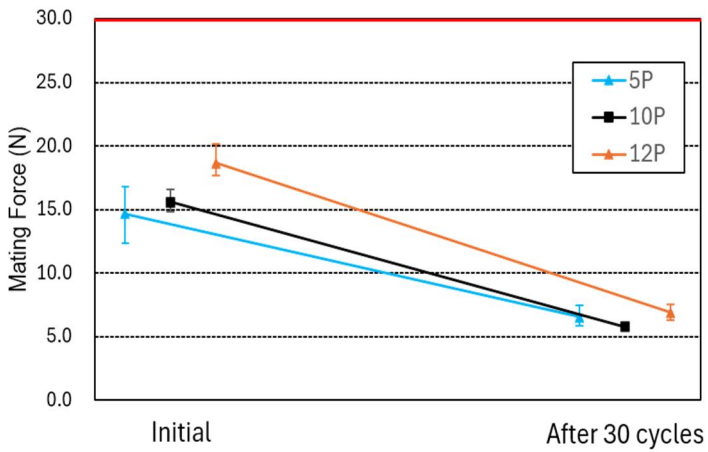
*The Temperature Rising Test is a result when applied ratings current (0.35A/contact) between the neighboring contacts for 10pos. (With the whole connector 3.5A.)



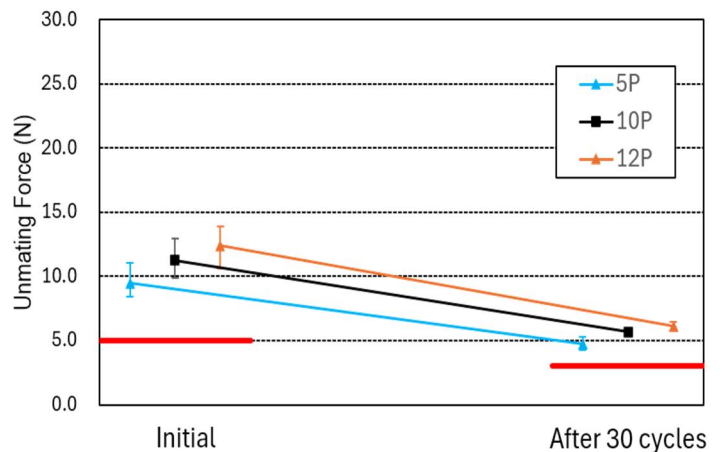
Graph.1 Durability : Contact Resistance



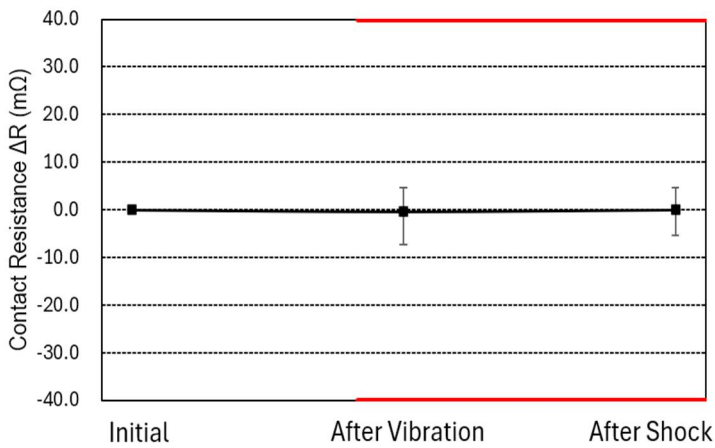
Graph.2 Durability : Ground Resistance



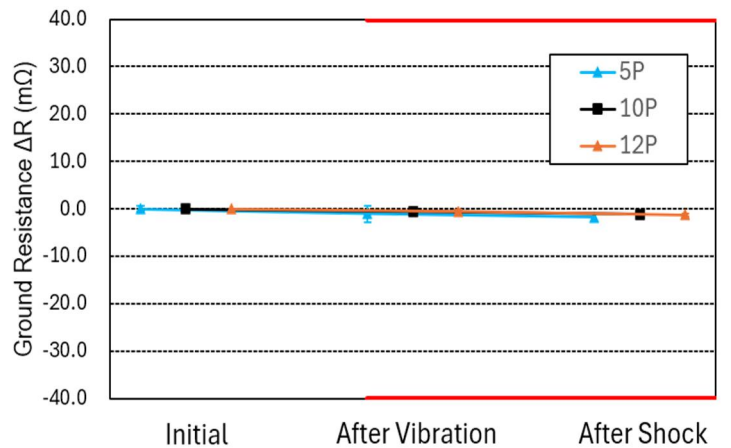
Graph.3 Durability : Mating force



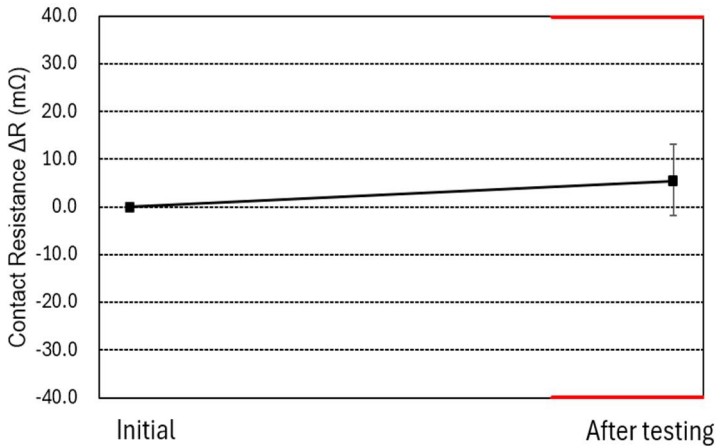
Graph.4 Durability : Unmating force



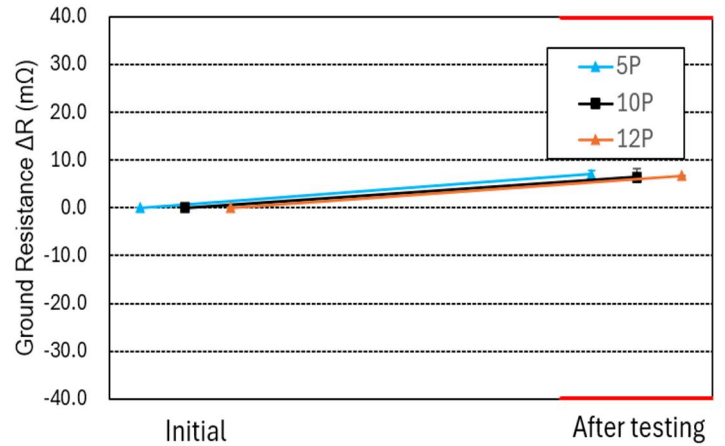
Graph.5 Vibration & Shock : Contact Resistance



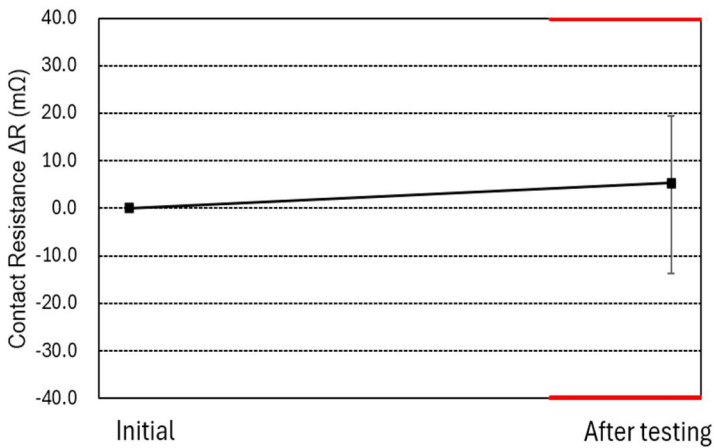
Graph.6 Vibration & Shock : Ground Resistance



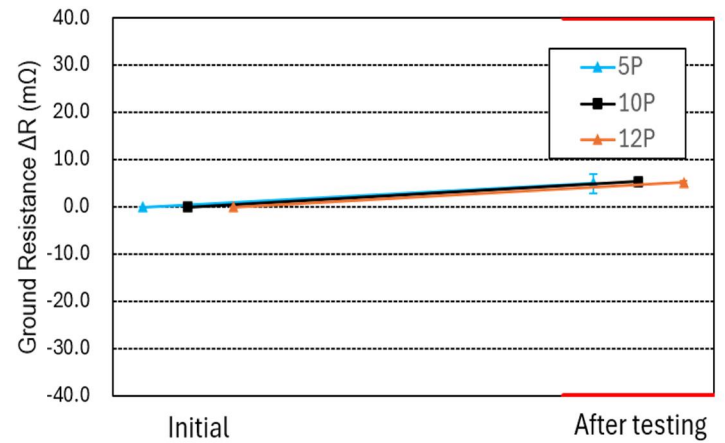
Graph.7 Thermal Shock : Contact Resistance



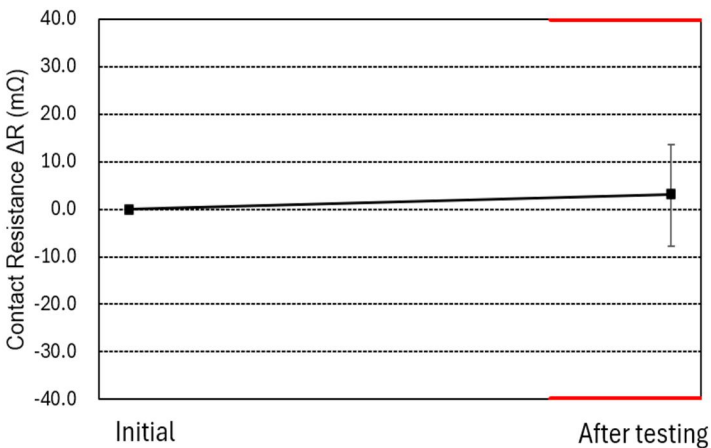
Graph.8 Thermal Shock : Ground Resistance



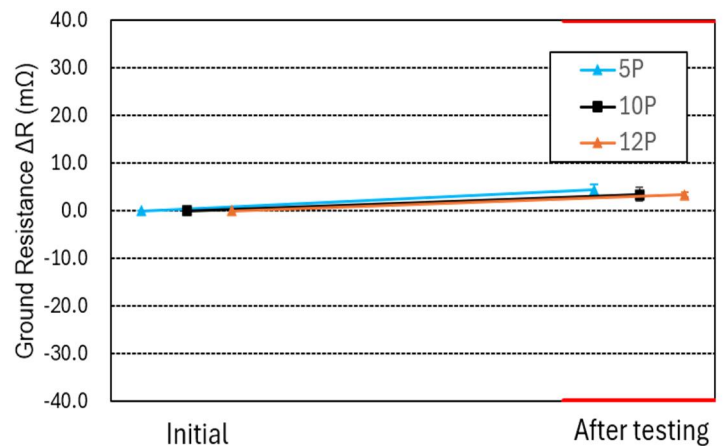
**Graph.9 High Temperature Life :
Contact Resistance**



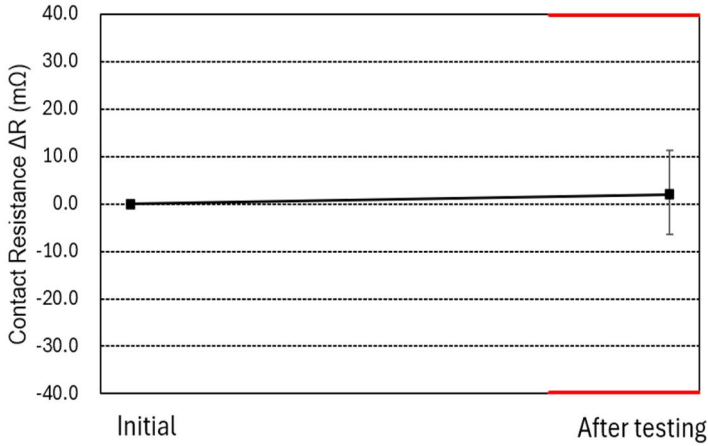
**Graph.10 High temperature Life :
Ground Resistance**



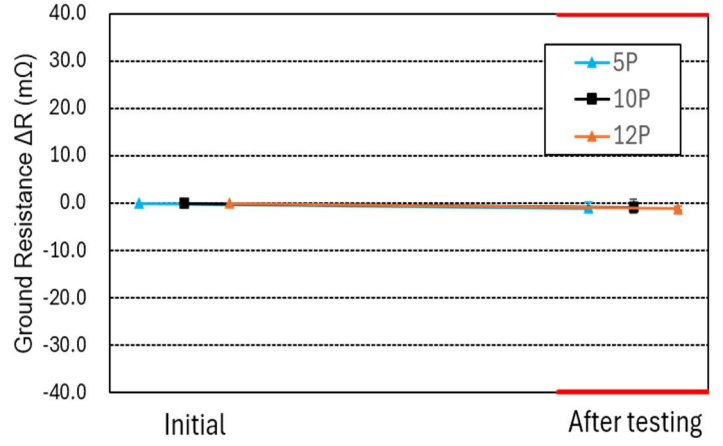
**Graph.11 Humidity(Steady State) :
Contact Resistance**



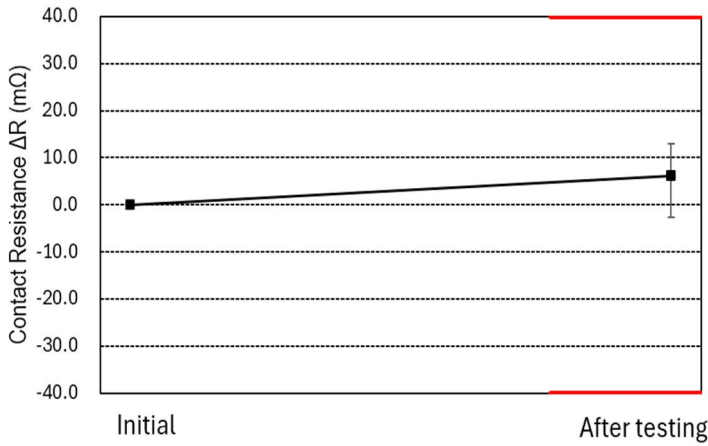
**Graph.12 Humidity(Steady State) :
Ground Resistance**



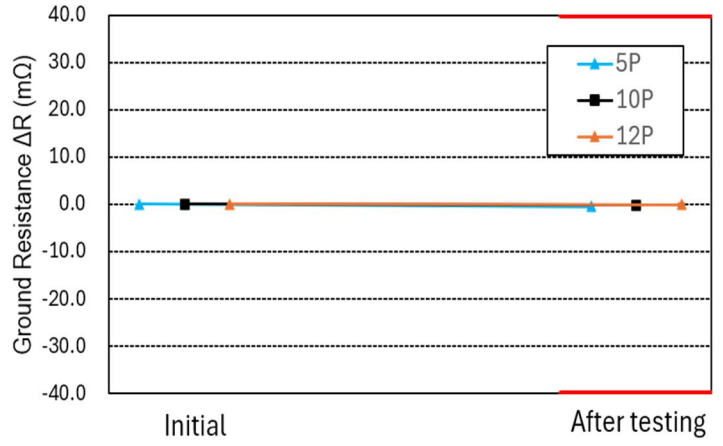
Graph.13 Humidity(Cycling) : Contact Resistance



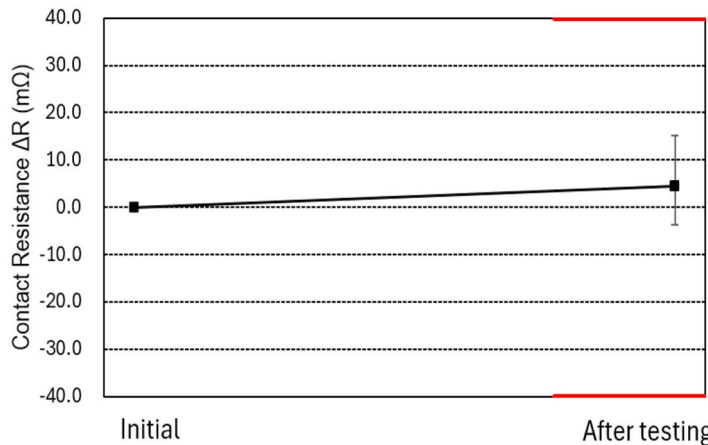
Graph.14 Humidity(Cycling) : Ground Resistance



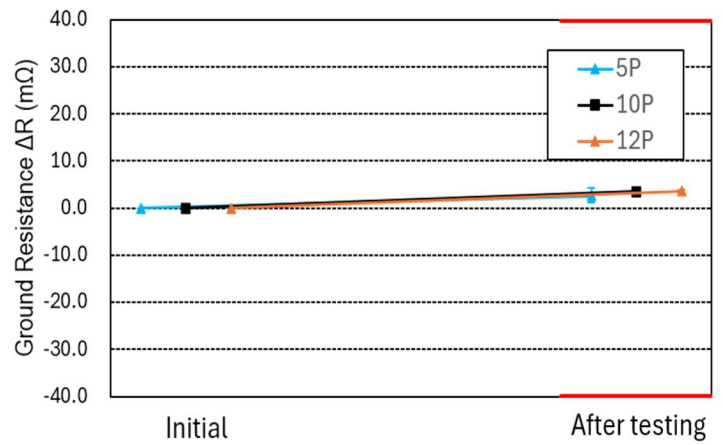
Graph.15 Salt Water Spray : Contact Resistance



Graph.16 Salt Water Spray : Ground Resistance



Graph.17 H₂S Gas : Contact Resistance



Graph.18 H₂S Gas: Ground Resistance