

# SX-M2

Part No. 21065-067E-01

## Test Report

Product Specification no. PRS-2951

Rev.	ECN	Date	Prepared by	Checked by	Approved by
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0	T25074	2025/10/01	M. Muro	-	T. Masunaga

## 1. Purpose

To evaluate the performance of SX-M2 Connector in accordance with PRS-2951.

## 2. Specimen

- (1) SX-M2
- (2) Test card:  $t=0.80\pm 0.08$  (Actual measurement:  $t=0.792\sim 0.796$  mm)

## 3. Test Sequence

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

## 4. Result

See Table 2-1 to 2-2, Graph 1 to 6. For the details of the testing conditions and requirements, see PRS-2951.  
The "n" in the tables show the number of measurement points.

## 5. Conclusion

All the specimens met the requirements of PRS-2951.

Table.1 Test Sequence and Sample Quantity

No.	Test Item	Testing Groups								
		A	B	C	D	E	F	G	H	
4.1 Electrical Performance	1	Contact resistance (LLCR)	1,4,6	1,4,6,8	1,4,6,8	2,6,10 (※1)				
	2	Dielectric withstanding voltage					1			
	3	Insulation resistance					2			
	4	Temperature rise versus current						1		
4.2 Mechanical Performance	1	Mating force				1,5,9 (※1)				
		Unmating force				3,7,11 (※1)				
	2	Durability (preconditioning)	2	2	2					
	3	Durability				4,8				
	4	Reseating	5	7						
	5	Vibration			5					
	6	Shock			7					
4.3 Environmental Performance	1	Thermal shock		3						
	2	Temperature life	3							
	3	Temperature life (preconditioning)			3					
	4	Humidity (Cycling)		5						
4.4 Others	1	Solder ability							1	
	2	Soldering heat resistance								1
Specimen quantity			5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.

※ Numbers indicate test sequences.

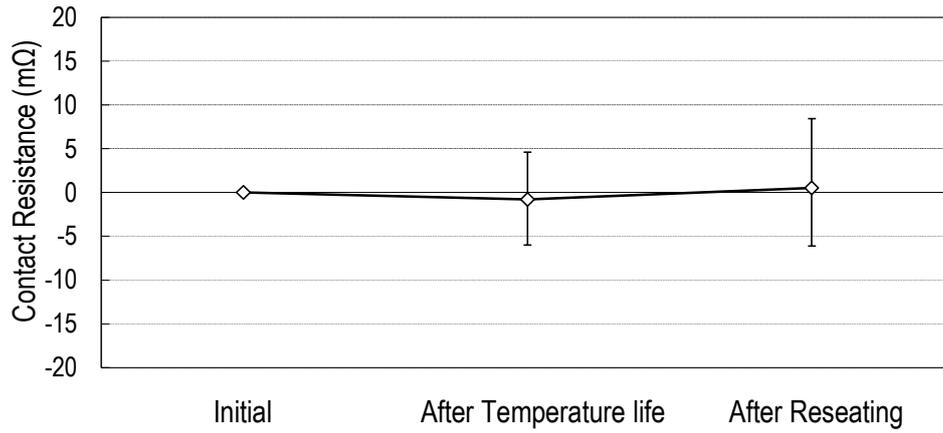
※1 Measure Mating/Unmating force and Contact resistance (Group D) at initial, 30th cycle, 60th cycle.

Table 2-1 Test result

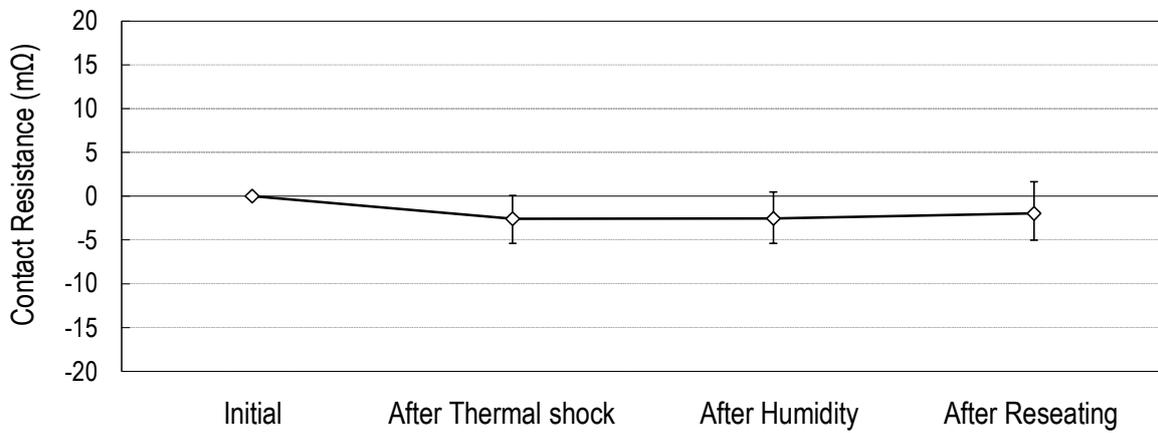
Test Group	Test Item	Spec. (Unit)	Set	n	DATA					Judge	
					AVE.	MAX.	MIN.	s	X±3s		
Group A	1	Contact Resistance (LLCR)	55 mΩ MAX.	5	335	31.598	37.37	25.14	3.475	42.023	Pass
	2	Durability (preconditioning)	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	3	Temperature life	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	4	Contact Resistance (LLCR)	ΔR = 20 mΩ MAX.	5	335	-0.788	4.60	-6.01	2.043	5.341	Pass
	5	Reseating	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	6	Contact Resistance (LLCR)	ΔR = 20 mΩ MAX.	5	335	0.508	8.44	-6.10	2.816	8.956	Pass
Group B	1	Contact Resistance (LLCR)	55 mΩ MAX.	5	335	31.888	38.82	25.32	3.602	42.694	Pass
	2	Durability (preconditioning)	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	3	Thermal shock	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	4	Contact Resistance (LLCR)	ΔR = 20 mΩ MAX.	5	335	-2.592	0.10	-5.39	0.994	0.390	Pass
	5	Humidity (Cycling)	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	6	Contact Resistance (LLCR)	ΔR = 20 mΩ MAX.	5	335	-2.538	0.48	-5.40	1.023	0.531	Pass
	7	Reseating	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	8	Contact Resistance (LLCR)	ΔR = 20 mΩ MAX.	5	335	-1.977	1.65	-5.03	1.260	1.803	Pass
Group C	1	Contact Resistance (LLCR)	55 mΩ MAX.	5	335	31.402	38.33	24.61	3.717	42.553	Pass
	2	Durability (preconditioning)	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	3	Temperature life (preconditioning)	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	4	Contact Resistance (LLCR)	ΔR = 20 mΩ MAX.	5	335	-2.497	-0.38	-4.62	0.800	-0.097	Pass
	5	Vibration	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
			No electrical discontinuity greater than 1μs shall occur.	5	5	No discontinuity					Pass
	6	Contact Resistance (LLCR)	ΔR = 20 mΩ MAX.	5	335	-2.631	-0.13	-5.23	0.892	0.045	Pass
	7	Shock	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
			No electrical discontinuity greater than 1μs shall occur.	5	5	No discontinuity					Pass
8	Contact Resistance (LLCR)	ΔR = 20 mΩ MAX.	5	335	-2.828	-0.55	-5.25	0.825	-0.353	Pass	

Table 2-2 Test result

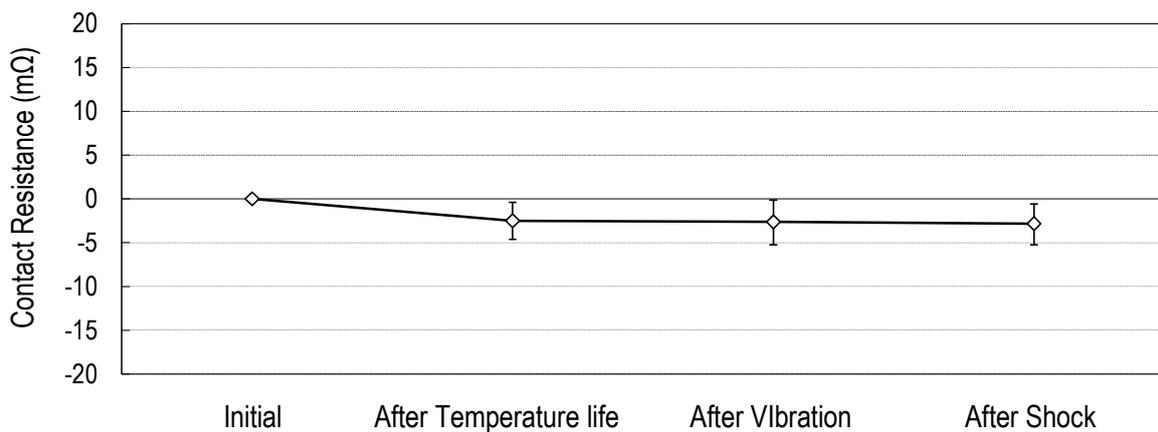
Test Group	Test Item / Measurements	Spec. (Unit)	Set	n	DATA					Judge	
					AVE.	MAX.	MIN.	s	X±3s		
Group D	1	Mating force	25 N MAX.	5	5	12.260	13.12	11.38	0.794	14.642	Pass
	2	Contact Resistance (LLCR)	55 mΩ MAX.	5	335	28.557	35.57	20.88	4.670	42.567	Pass
	3	Unmating force	25 N MAX.	5	5	8.972	9.67	8.47	0.526	10.550	Pass
	4	Durability	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	5	Mating force (30th)	25 N MAX.	5	5	10.190	10.93	9.33	0.688	12.254	Pass
	6	Contact Resistance (LLCR, 30th)	ΔR = 20 mΩ MAX.	5	335	-0.392	1.27	-2.13	0.619	1.465	Pass
	7	Unmating force (30th)	25 N MAX.	5	5	8.344	9.18	7.78	0.566	10.042	Pass
	8	Durability	No abnormality adversely affecting the performance shall occur.	5	5	No abnormality					Pass
	9	Mating force (60th)	25 N MAX.	5	5	9.848	10.66	9.14	0.703	11.957	Pass
	10	Contact Resistance (LLCR, 60th)	ΔR = 20 mΩ MAX.	5	335	-0.035	2.05	-2.15	0.728	2.149	Pass
	11	Unmating force (60th)	25 N MAX.	5	5	8.016	8.61	7.35	0.582	9.762	Pass
Group E	1	Dielectric withstanding voltage	No abnormalities such as creeping discharge, flashover, insulator breakdown occur.	5	325	No abnormality					Pass
	2	Insulation resistance	500 MΩ MIN.	5	325	2.56 × 10 <sup>5</sup> MΩ MIN.					Pass
Group F	1	Temperature rise versus current	Over ambient ΔT 30 °C MAX.	5	5	ΔT=23.2°C MAX.					Pass
Group G	1	Solder ability	More than 95% of the dipped surface shall be evenly wet.	5	5	Wet 95% MIN.					Pass
Group H	1	Soldering heat resistance	No deformation nor defect adversely affecting the performance occur.	5	5	No abnormality					Pass



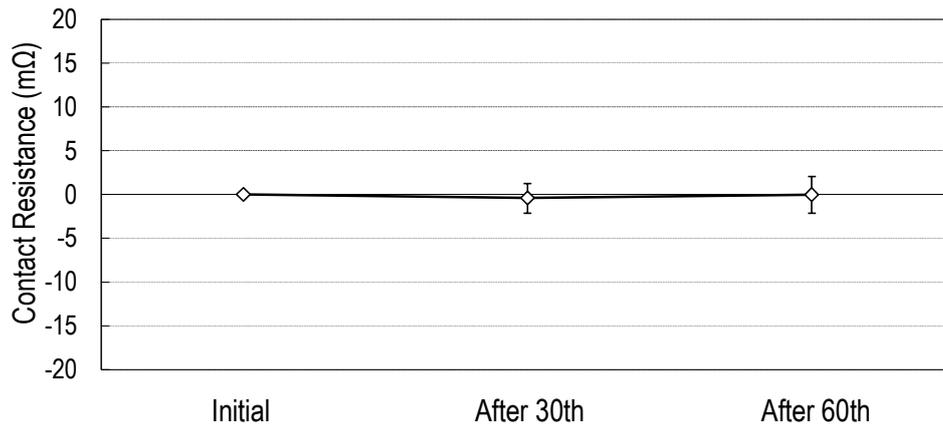
Graph. 1. A change of contact resistance - Group A



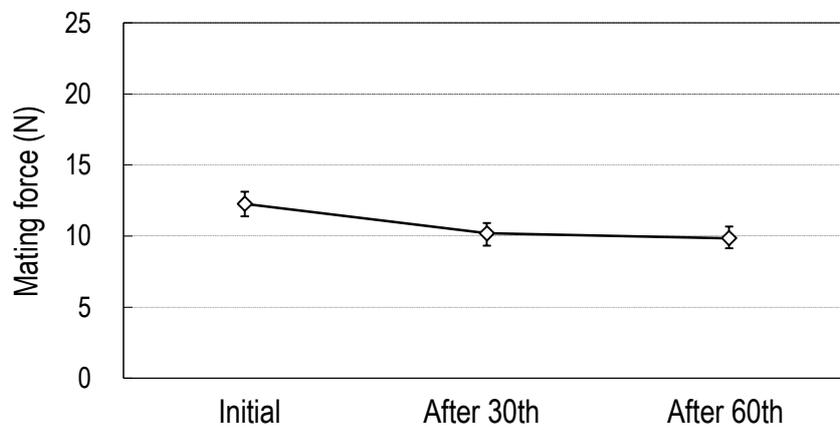
Graph. 2. A change of contact resistance - Group B



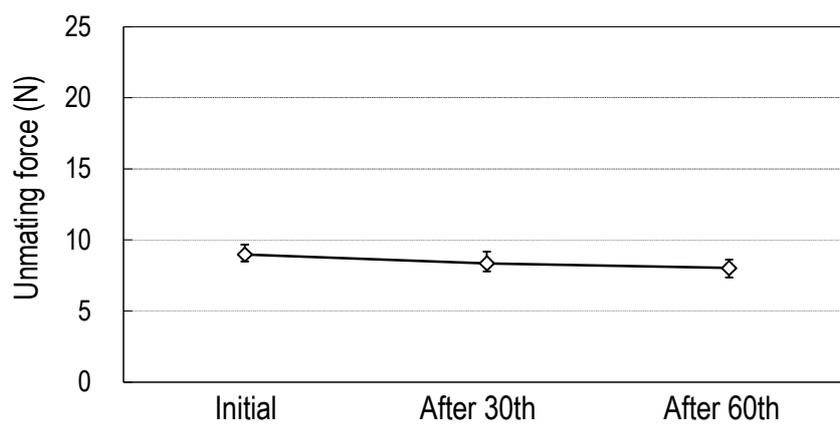
Graph. 3. A change of contact resistance - Group C



Graph. 4. A change of contact resistance - Group D



Graph. 5. A change of Mating force - Group D



Graph. 6. A change of Unmating force - Group D