MINIDOCK™

Part No. PLUG:30***-**0T-F,**F RECEPTACLE:30***-**0T-F,**F

Test Report

Product Specification no. PRS-1011

Rev.	ECN	Date	Prepared by	Checked by	Approved by
7	T24032	June 6, 2024	E.Tanaka	Y.Baba	S.Suzuki
6	T21151	November 5, 2021	Y.Kuribayashi	S.Suzuki	Y.Hashimoto
5	T15170	October 29, 2015	M.T		K.N
4	T13079	July 2, 2013	Y.W		Tom

1. Purpose

To evaluate the performance of MINIDOCK Connector in accordance with PRS-1011.

2. Specimen

(1) PLUG ASS'Y （Part No. 30***-**0T-F，**F）

(2) RECEPTACLE ASS'Y （Part No. Part No. 30***-**0T-F，**F）

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 8. For the details of the testing conditions and requirements, see PRS-1011.

The “n” in the tables show the number of measurement points.

5. Conclusion

All the specimens met the requirements of PRS-1011.

Table1 Test Sequence and Sample Quantity

Test Item	Group											
	A	B	C	D	E	F	G	H	J	K	L	M
Appearance	1,6		1,3	1,3	1,5	1,9	1,5	1,5	1,5	1,5	1,3	1,3
C/T Resistance	3,5				2,4	2,6	2,4	2,4	2,4	2,4		
Insulation Resistance						3,7						
D. W. Voltage						4,8						
Temperature rising		1										
Mating/Unmating Force	2											
Durability	4											
Vibration			2									
Shock				2								
Thermal Shock					3							
Humidity(Steady state)						5						
Humidity(Cycles)							3					
Salt water Spray								3				
Gas(SO_2)									3			
High Temperature Life										3		
Solder ability											2	
Soldering Heat Resistance												2
Sample q'ty	3	3	3	3	3	3	3	3	3	3	3	3

※The number of group is test sequence.

Table.2-1 Test result

Mechanical

Test Item				Specifications	Unit	Result				Judge
						Ave.	Max.	Min.	S	
Durability	C/T Resistance	Initial	S	70 mΩ Max.	mΩ	30.81	35.1	27.8	1.31	OK
			L			50.04	54.0	47.6	1.35	OK
		After 5000 cycles	S	ΔR=25mΩMax.		5.12	16.7	1.0	3.45	OK
			L	ΔR=25mΩMax.		7.20	20.8	2.2	5.84	OK
	Mating Force	Initial		0.9N Max./pos.	N	0.225	0.24	0.21	1.77	OK
		After 5000 cycles				0.148	0.16	0.14	1.84	OK
	Unmating Force	Initial		0.059N Min./ pos.	N	0.192	0.21	0.18	2.26	OK
		After 5000 cycles		0.059N Min./pos.	N	0.124	0.13	0.12	0.85	OK
	After Appearance			*	–	No abnormality				OK
Vibration	During Discontinuity			1 μsec	–	No discontinuity				OK
	After Appearance			*		No abnormality				OK
Shock	During Discontinuity			1 μsec	–	No discontinuity				OK
	After Appearance			*		No abnormality				OK

*Appearance Spec.: No abnormality adversely affecting the performance shall occur.

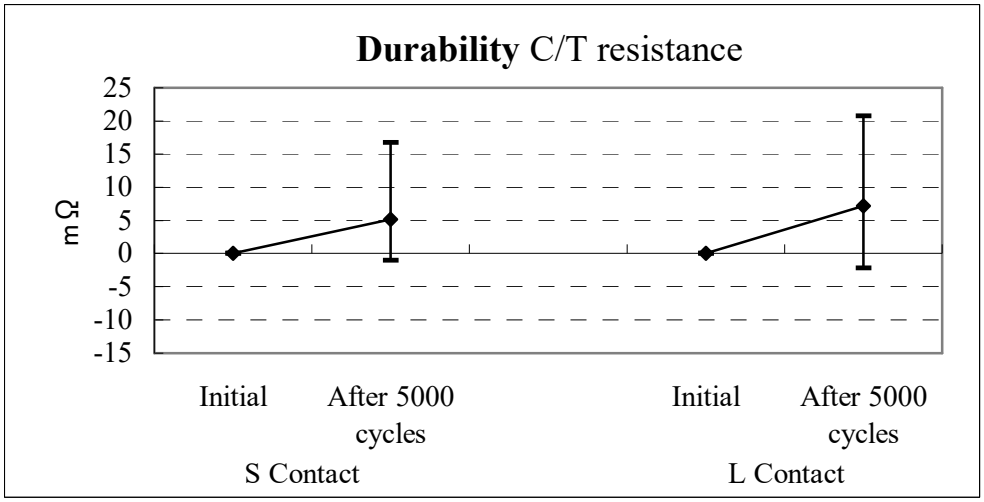
Table.2-2 Test result

Electrical/others

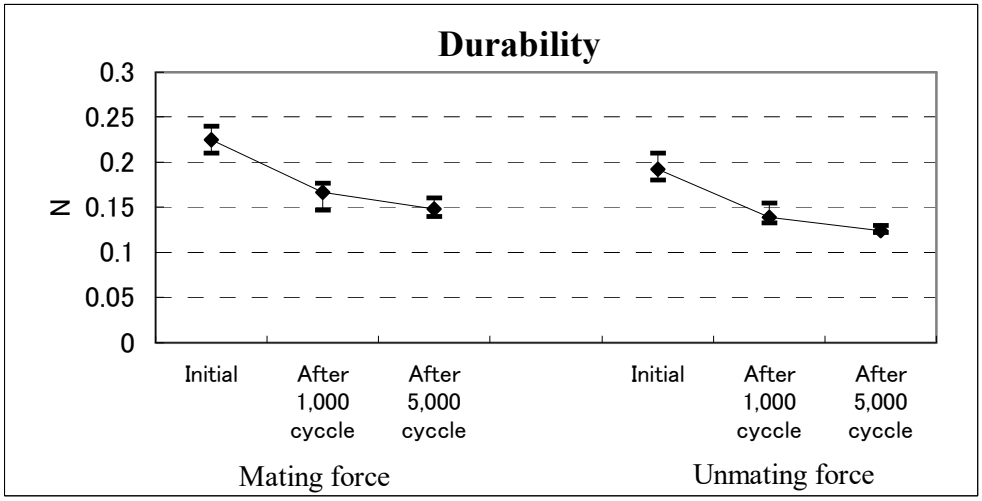
Test Item				Spec.	Unit	Result Ave.	Result Max.	Result Min.	Result S	Judge
Temp. Rising		Initial		ΔT=30℃MAX	℃	⊿T=22.0℃ MAX.				OK
Thermal Shock	C/T Resistance	Initial	S	70mΩMax.	mΩ	32.861	34.66	31.08	0.900	OK
			L			54.372	56.36	52.02	1.120	OK
		After Testing	S	ΔR=25mΩMax.		2.572	5.38	0.70	1.737	OK
			L			2.653	5.27	1.36	1.523	OK
	After Appearance			*	–	No abnormality				OK
Humidity (steady state)	C/T Resistance	Initial	S	70mΩMax.	mΩ	33.642	35.87	31.32	1.178	OK
			L			54.691	56.73	51.64	1.262	OK
		After Testing	S	ΔR=25mΩMax.		0.065	2.17	0.87	0.620	OK
			L			0.571	1.56	2.30	0.933	OK
	D.W.Voltage	Initial		* *	–	No abnormality				OK
		After Testing				No abnormality				OK
	Insulation Resistance	Initial		10,000MΩ Min.	MΩ	200,000MΩ Min.				OK
		After Testing		1,000MΩ Min.		40,000MΩ Min.				OK
	After Appearance			*	–	No abnormality				OK
Humidity (cycles)	C/T Resistance	Initial	S	70mΩMax.	mΩ	33.195	35.63	31.07	1.239	OK
			L			54.802	59.95	53.26	1.417	OK
		After Testing	S	ΔR=25mΩMax.		0.403	3.42	1.48	1.132	OK
			L			1.005	6.19	1.88	1.863	OK
	After Appearance			*	–	No abnormality				OK
Salt water spray	C/T Resistance	Initial	S	70mΩMax.	mΩ	33.063	35.80	31.18	0.991	OK
			L			53.813	56.04	51.99	1.005	OK
		After Testing	S	ΔR=25mΩMax.		0.030	1.21	2.85	0.773	OK
			L			0.101	5.66	1.51	1.254	OK
	After Appearance			*	–	No abnormality				OK
Gas(SO_2)	C/T Resistance	Initial	S	70mΩMax.	mΩ	32.967	35.48	30.50	1.282	OK
			L			53.662	55.58	50.84	1.095	OK
		After Testing	S	ΔR=25mΩMax.		0.711	1.59	1.98	0.843	OK
			L			0.228	3.46	1.83	1.112	OK
	After Appearance			*	–	No abnormality				OK
High Temp Life	C/T Resistance	Initial	S	70mΩMax.	mΩ	32.746	34.73	30.34	1.110	OK
			L			53.980	63.26	51.49	2.122	OK
		After Testing	S	ΔR=25mΩMax.		4.098	6.24	1.86	1.174	OK
			L			3.276	6.74	6.57	2.351	OK
Solderability	Wetness			95% Min.	–	95% Min.was wet				OK
Solder Heat Resistance	Appearance			*	–	No abnormality				OK

*Appearance Spec.: No abnormality adversely affecting the performance shall occur.

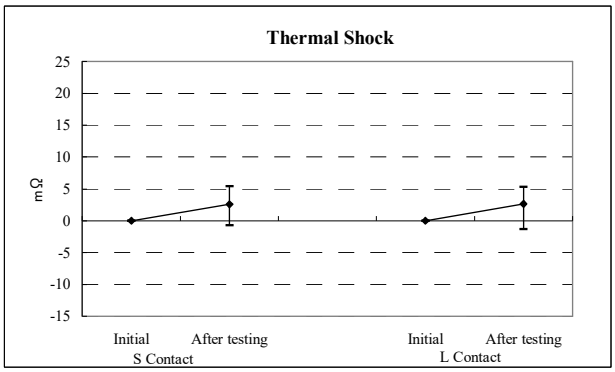
**Dielectric Withstanding Voltage Spec.: No abnormalities such as creeping discharge, flashover, insulator breakdown occur.



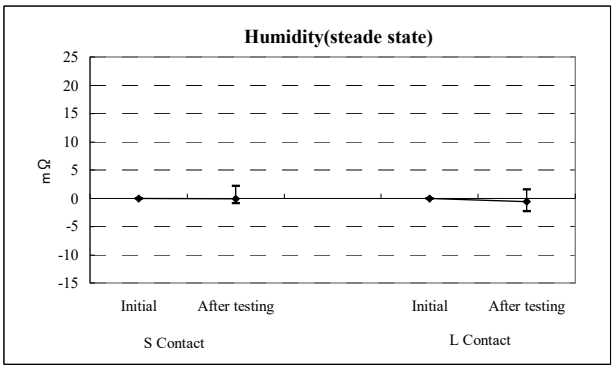
Graph.1 Durability C/T Resistance



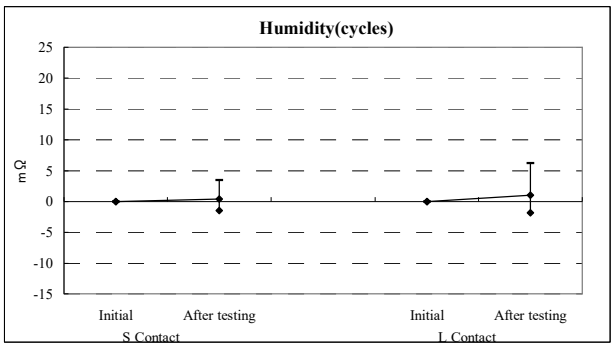
Graph.2 Durability Mating/ Unmating Force



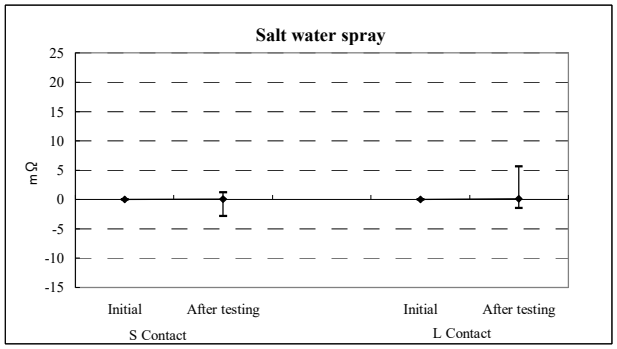
Graph.3 Thermal Shock



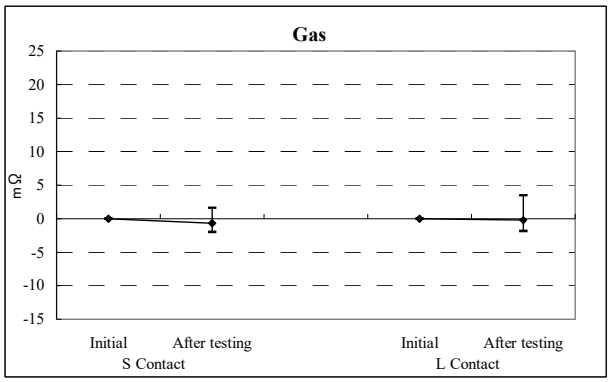
Graph.4 Humidity (Steady State)



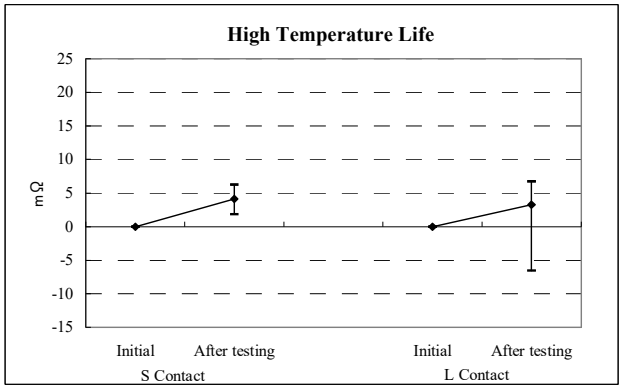
Graph.5 Humidity (cycles)



Graph.6 Salt water spray



Graph.7 Gas(SO_2)



Graph.8 High Temperature Life