

MP-S01

Part No. 3110-0001

Test Report

Product Specification no. PRS-2227

0	T19012	January 31, 2019	S.Kamada	-	T.Hirakawa
Rev.	ECN	Date	Prepared by	Checked by	Approved by

MP-S01 Test Report

1. Purpose

MP-S01 コネクタの性能を PRS-2227 に基づいて評価する。

To evaluate the performance of MP-S01 Connector in accordance with PRS-2227.

2. Specimen

MP-S01 (Part No. 3110-0001)

3. Test Sequence

全ての評価は表 1 の試験順序に従って行った。

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

4. Result

表 A～N、グラフ 1～9 参照。試験条件の詳細は PRS-2227 参照。n 数は測定データを意味する。

See Table A to N, Graph 1 to 9. For the details of the testing conditions and requirements, see PRS-2227.

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

5. Conclusion

全ての資料が製品規格 (PRS-2227) の必要条件を満足した。

All the specimens met the requirements of PRS-2227.

Table 1 試験順序と試料数 / Test Sequence and Sample Quantity

試験項目 Test Item	グループ / Group												
	A	B	C	D	E	F	G	H	J	K	L	M	N
接触抵抗 Contact Resistance			1,4	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3		2
定格電圧/電流 Rated Voltage/Current	1												
接圧 Contact Force		1	3										
耐久性 Durability			2										
耐振動性 Vibration				2									
耐衝撃性 Shock					2								
低温寿命 Cold Test						2							
高温試験 Heat Test							2						
熱衝撃 Thermal Shock								2					
湿度 (定常状態) Humidity (Steady State)									2				
硫化水素ガス H ₂ S Gas										2			
塩水噴霧 Salt Water Spray											2		
半田付け性 Solder ability												1	
半田耐熱性 Soldering Heat Resistance													1
試料数 Sample QTY.	5 pcs.	10 pcs.	10 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	5 pcs.	10 pcs.	10 pcs.	10 pcs.

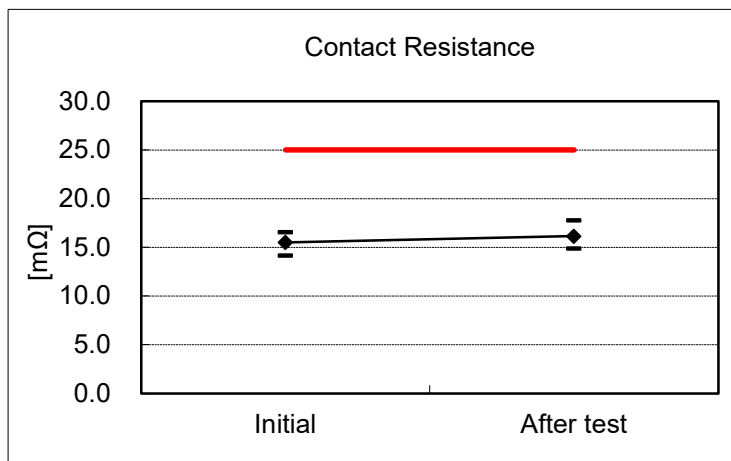
※グループ表中の番号は、試験順序を示す。 / Numbers indicate sequence in which tests are performed.

Table 2-1. 試験結果 / Table.2-1 Test result

Group	Contents of measurement	Spec.	Unit	n	Data				Judge.	
					AVE.	MAX.	MIN.	S		
A	Rated Voltage/Current									
	Temperature	ΔT 30 MAX.	°C	5	26.0 MAX				OK	
B	Contact Force									
		Working Height MAX	0.30N MIN.	N	10	0.376	0.39	0.36	0.010	OK
		Working Height MIN.	0.95N MAX			0.630	0.65	0.60	0.020	OK
C	Durability									
	Contact resistance	Initial	70 MAX	mΩ	5	15.516	16.570	14.180	0.821	OK
		After 10 cycles				16.148	17.800	14.890	0.888	OK
	Contact Force	Working Height MAX	0.30N MIN.	N	5	0.361	0.380	0.350	0.009	OK
		Working Height MIN.	0.95N MAX			0.622	0.640	0.590	0.016	OK
	Apearance	After test	No abnormality	-		No abnormality				OK
D	Shock									
	Contact resistance	Initial	70 MAX	mΩ	5	15.122	15.628	14.514	0.490	OK
		After 10 cycles				15.119	15.561	14.262	0.595	OK
	Electrical discontinuity	During test	1μs MAX	-		No discontinuity				OK
	Apearance	After test	No abnormality	-		No abnormality				OK
E	Vibration									
	Contact resistance	Initial	70 MAX	mΩ	5	15.201	15.855	14.546	0.492	OK
		After 10 cycles				16.104	16.535	15.826	0.347	OK
	Electrical discontinuity	During test	1μs MAX	-		No discontinuity				OK
	Apearance	After test	No abnormality	-		No abnormality				OK
F	Cold Test									
	Contact resistance	Initial	70 MAX	mΩ	5	16.826	17.464	16.405	0.435	OK
		After 10 cycles				16.741	16.923	16.569	0.130	OK
	Apearance	After test	No abnormality	-		No abnormality				OK
G	Heat Test									
	Contact resistance	Initial	70 MAX	mΩ	5	16.277	16.813	15.635	0.482	OK
		After 10 cycles				16.472	16.937	16.190	0.300	OK
	Apearance	After test	No abnormality	-		No abnormality				OK
H	Thermal Shock									
	Contact resistance	Initial	70 MAX	mΩ	5	15.027	15.617	14.661	0.366	OK
		After 10 cycles				15.843	16.172	15.435	0.263	OK
	Apearance	After test	No abnormality	-		No abnormality				OK
J	Humidity(steady state)									
	Contact resistance	Initial	70 MAX	mΩ	5	15.397	15.480	15.209	0.110	OK
		After 10 cycles				15.547	15.900	15.245	0.233	OK
	Apearance	After test	No abnormality	-		No abnormality				OK

Table 2-2. 試験結果 / Table.2-2 Test result

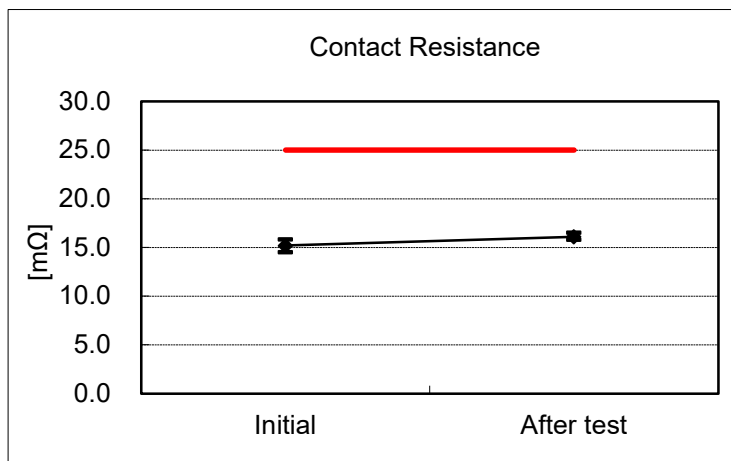
Group	Contents of measurement		Spec.	Unit	n	Data				Judge.
						AVE.	MAX.	MIN.	S	
K	H2S Gas		70 MAX	mΩ	5	15.000	15.378	14.647	0.329	OK
	Contact resistance	Initial				16.514	16.866	16.293	0.215	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
L	Salt water spray		70 MAX	mΩ	5	16.041	16.859	15.130	0.668	OK
	Contact resistance	Initial				16.503	17.067	15.666	0.548	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
M	Surface Mount Solderability Test		No abnormality	%	5	95 MIN.				OK
	Solder Wetting Area	After test								
N	Resistance to Reflow Soldering Heat		70 MAX	mΩ	5	15.901	17.600	14.380	1.020	OK
	Contact resistance	After 10 cycles				No abnormality				OK
	Apearance	After test	No abnormality	-	No abnormality				OK	



Graph-1.Durability



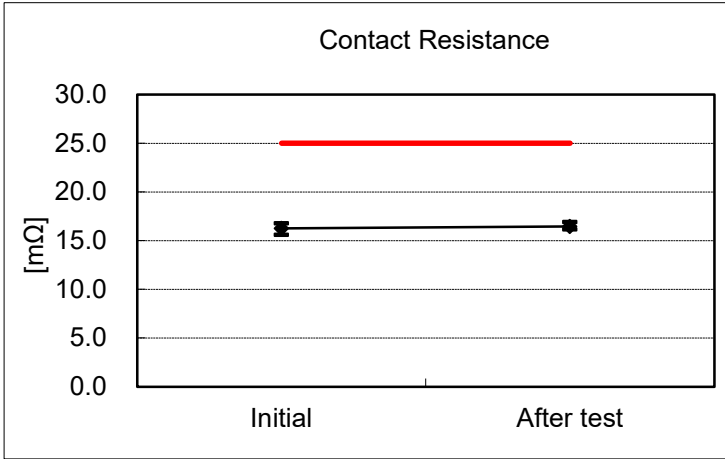
Graph-2.Shock



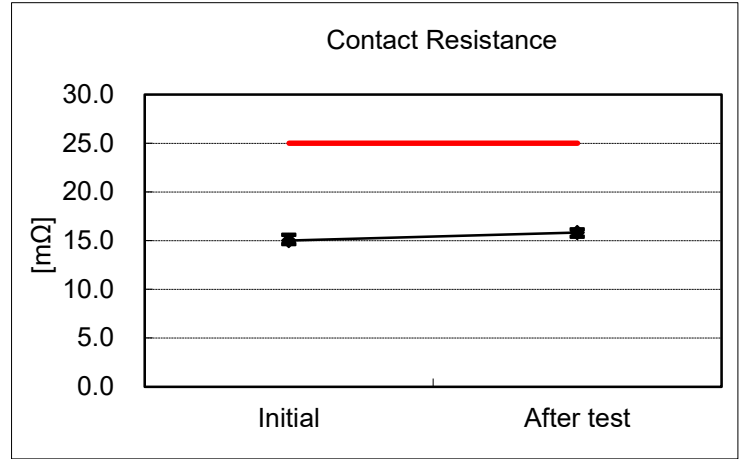
Graph-3.Vibration



Graph-4.Cold Test



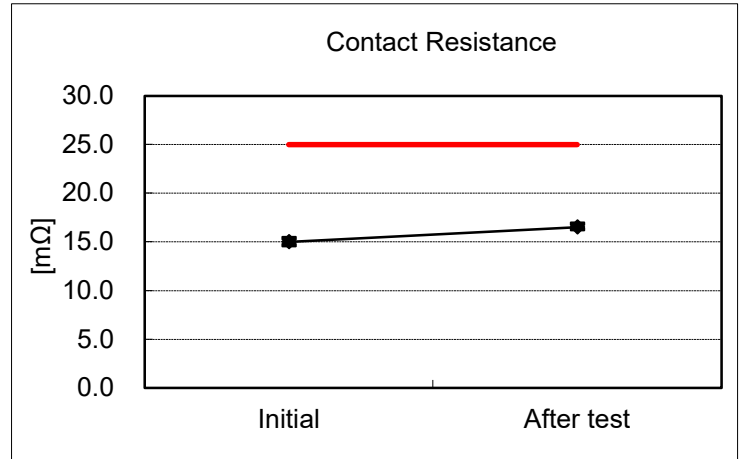
Graph-5.Heat Test



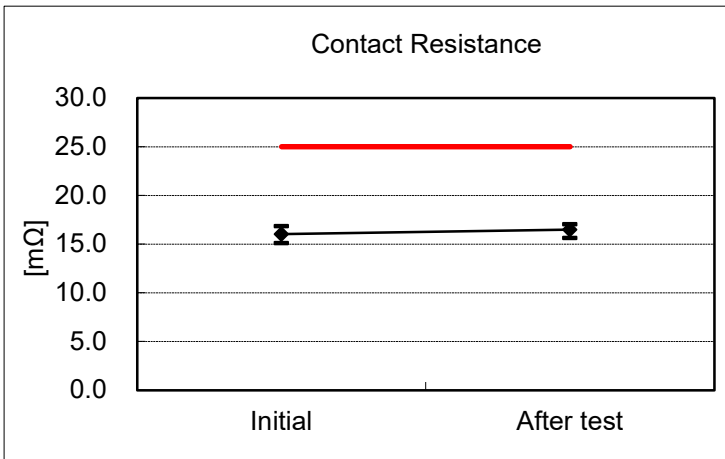
Graph-6.Thermal Shock



Graph-7.Humidity(steady state)



Graph-8.H2S Gas



Graph-9.Salt Water Spray