MP-S03

Part No. 3112-0001

Test Report

Product Specification no. PRS-2228

1	T21116	November 8, 2021	T.Kawakami	S.Kamada	Y.Hashimoto
0	T19013	January 31, 2019	S.Kamada	-	T.Hirakawa
Rev.	ECN	Date	Prepared by	Checked by	Approved by

1. Purpose

To evaluate the performance of MP-S03Connector in accordance with PRS-2228.

2. Specimen

MP-S03 （Part No. 3112-0001）

3. Test Sequence

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

4. Result

See Table A to M, Graph 1 to 9. For the details of the testing conditions and requirements, see PRS-2228.
The “n” in the tables show the number of measurement points.

5. Conclusion

All the specimens met the requirements of PRS-2228.

Table 1 Test Sequence and Sample Quantity

Test Item	Group												
	A	B	C	D	E	F	G	H	J	K	L	M	N
Contact resistance			1,4	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1.3		2
Rated voltage/Current	1												
Contact force		1	3										
Durability			2										
Shock				2									
Vibration					2								
Cold test						2							
Heat test							2						
Thermal shock test								2					
Humidity (steady state)									2				
H_2S gas										2			
Saltwater spray											2		
Surface mount solderability test												1	
Resistance to reflow soldering heat													1
Specimen quantity	5	10	10	5	5	5	5	5	5	5	5	5	5

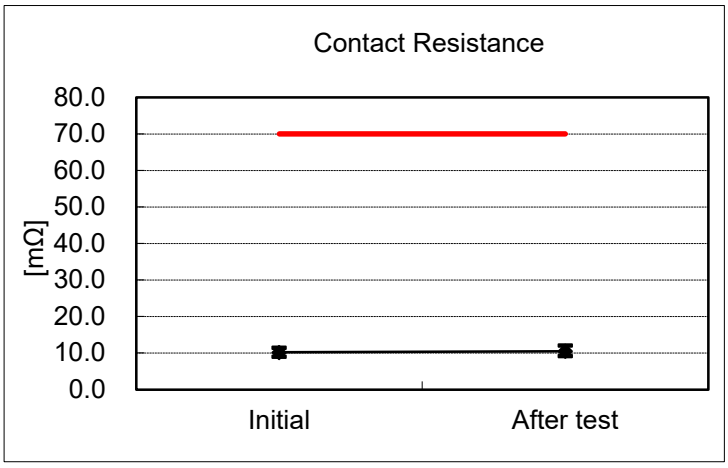
※Numbers indicate sequence in which tests are performed.

Table.2-1 Test result

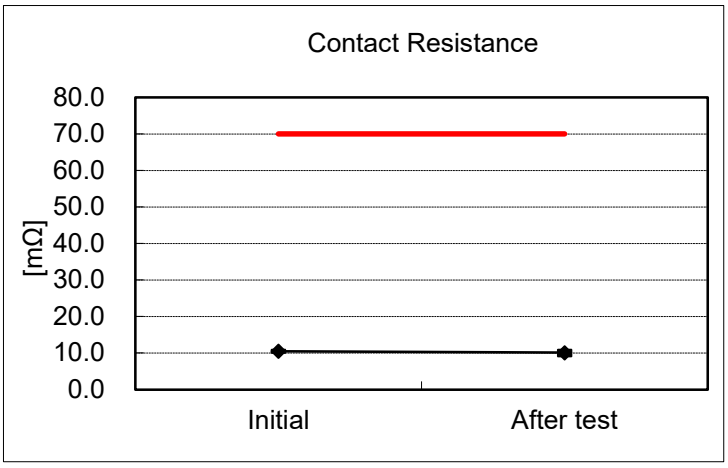
Group	Contents of measurement		Spec.	Unit	n	Data AVE.	Data MAX.	Data MIN.	Data S	Judge.
A	Rated Voltage/Current									
	Temperature		⊿T 30 MAX.	℃	5	20.5 MAX				OK
B	Contact Force									
		Working Height MAX	0.30N MIN.	N	10	0.451	0.48	0.43	0.017	OK
		Working Height MIN.	1.10N MAX			0.816	0.85	0.80	0.019	OK
C	Durability									
	Contact resistance	Initial	70 MAX	mΩ	10	10.208	11.150	9.060	0.631	OK
		After 10 cycles				10.511	12.090	9.250	0.910	OK
	Contact Force	Working Height MAX	0.30N MIN.	N		0.422	0.444	0.410	0.011	OK
		Working Height MIN.	1.10N MAX			0.797	0.833	0.780	0.019	OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK
D	Shock									
	Contact resistance	Initial	70 MAX	mΩ	5	10.487	10.636	10.397	0.096	OK
		After test				10.125	10.623	9.495	0.411	OK
	Electrical discontinuit	During test	1μs MAX	-		No discontinuity				OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK
E	Vibration									
	Contact resistance	Initial	70 MAX	mΩ	5	9.713	10.070	9.138	0.389	OK
		After test				10.311	10.992	9.370	0.757	OK
	Electrical discontinuit	During test	1μs MAX	-		No discontinuity				OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK
F	Cold Test									
	Contact resistance	Initial	70 MAX	mΩ	5	10.298	10.846	9.480	0.569	OK
		After test				10.287	10.961	9.912	0.402	OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK
G	Heat Test									
	Contact resistance	Initial	70 MAX	mΩ	5	11.184	12.271	10.393	0.797	OK
		After test				9.929	10.500	9.346	0.451	OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK
H	Thermal Shock									
	Contact resistance	Initial	70 MAX	mΩ	5	9.890	10.278	9.463	0.343	OK
		After test				10.352	10.656	10.055	0.240	OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK

Table.2-2 Test result

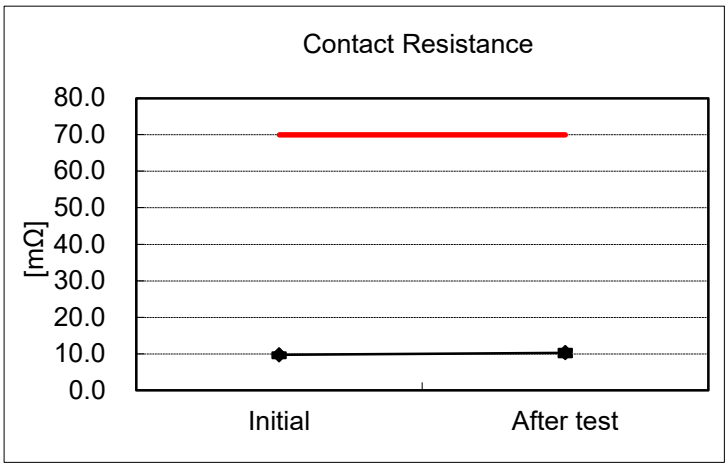
Group	Contents of measurement		Spec.	Unit	n	Data AVE.	Data MAX.	Data MIN.	Data S	Judge.
J	Humidity(steady state)									
	Contact resistance	Initial	70 MAX	mΩ	5	9.762	10.309	9.349	0.466	OK
		After test				10.164	10.712	9.823	0.331	OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK
K	H_2S Gas									
	Contact resistance	Initial	70 MAX	mΩ	5	10.097	10.447	9.611	0.302	OK
		After test				10.330	10.604	10.094	0.230	OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK
L	Salt water spray									
	Contact resistance	Initial	70 MAX	mΩ	5	10.327	10.844	9.811	0.392	OK
		After test				10.642	10.892	9.958	0.387	OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK
M	Surface Mount Solderability Test									
	Solder Wetting Area	After test	95 MIN.	%	5	95 MIN.				OK
N	Resistance to Reflow Soldering Heat									
	Contact resistance	After test	70 MAX	mΩ	5	9.991	11.370	8.920	0.890	OK
	Apearance	After test	No abnormality adversely affecting the performance shall occur.	-		No abnormality adversely affecting the performance shall occur.				OK



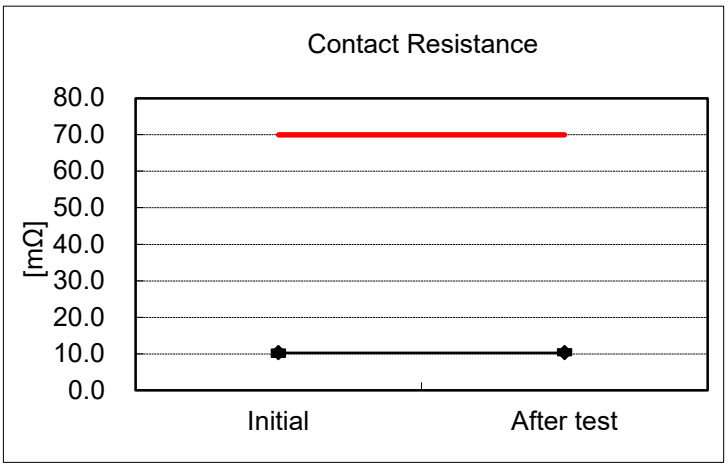
Graph-1.Durability



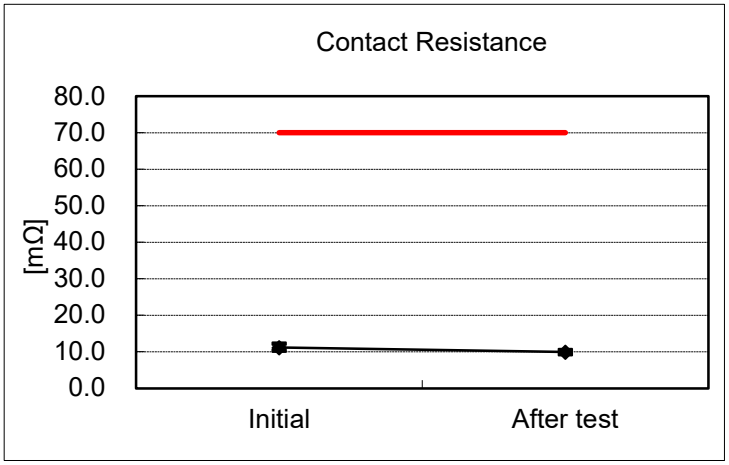
Graph-2.Shock



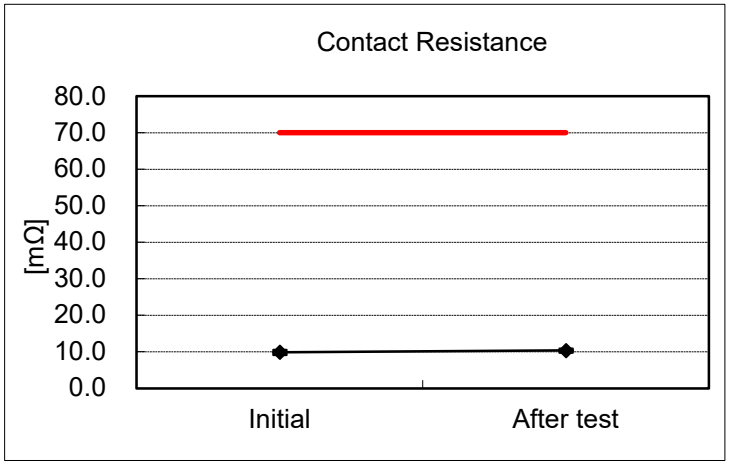
Graph-3.Vibration



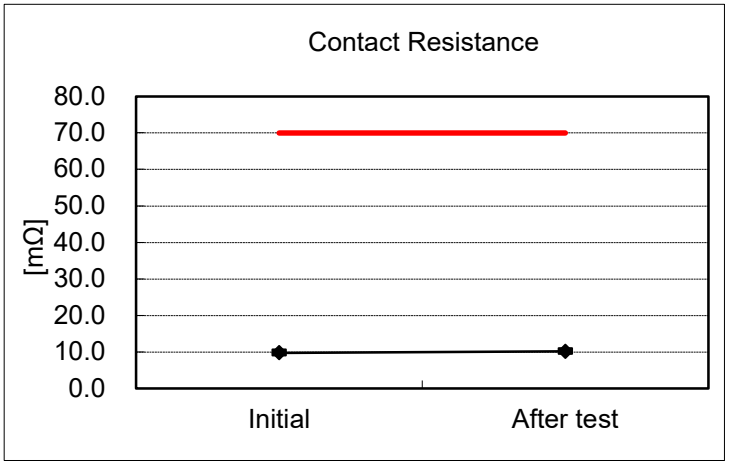
Graph-4.Cold Test



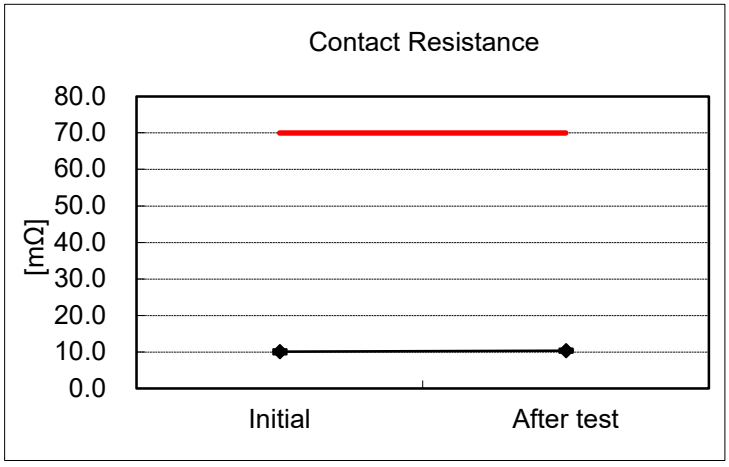
Graph-5.Heat Test



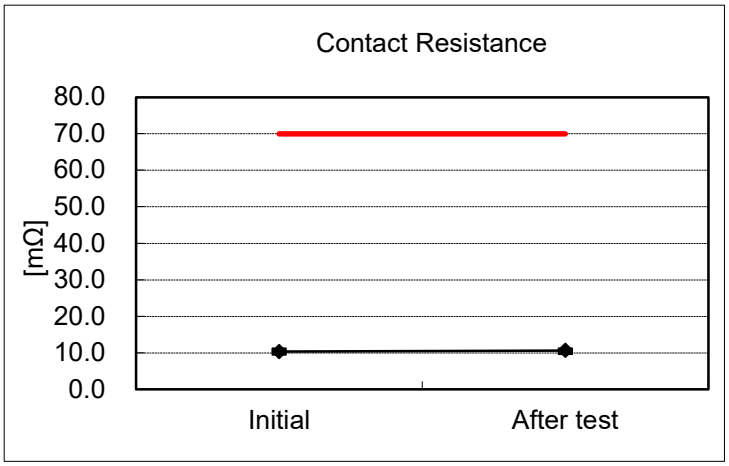
Graph-6.Thermal Shock



Graph-7.Humidity(steady state)



Graph-8.H2S Gas



Graph-9.Salt Water Spray