

# **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
Confidentia	al C		I-PEX Inc.		QKE-DFFDE07-07 REV.10

#### 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.

Document No.	
TR-16041-01EN	

	<u>Table</u>	1	Test Se	equenc	e and S	Sample	Quan						
Test Item	A	В	С	D	Е	F	Group G	Н	J	K	L	М	N
Contact resistance		D	1,4	1,3	L 1,3	г 1,3	1,3	п 1,3	J 1,3	к 1,3	1.3	IVI	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 <sub>2</sub> S 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

 $\ensuremath{\overset{\scriptstyle\frown}{\times}}\xspace$  Numbers indicate sequence in which tests are performed.

Document No.

TR-16041-01EN

		]	lable.	<u>2-1 Test result</u>							
Group	Contents of measurement	Space II		Unit	n			Judge.			
Group	Contents of measurement			Spec.	Unit	11	AVE.	MAX.	MIN.	S	Judge.
Α	Rated Voltage/Current										
	Temperature	⊿T	30	MAX.	°	5		20.5	MAX		OK
В	Contact Force										
	Mandulan Llaight MAN	0 20					0 4 5 4	0.40	0 4 2	0.017	01/

Working Height MAX	Working Height MAX 0.30N MIN. Working Height MIN. 1.10N MAX	N	10	0.451	0.48	0.43	0.017	OK
Working Height MIN	Working Hoight MIN 1 10N MAX		10	0.816	0.85	0.80	0.019	OK
	•							

С	Durability									
	Contact resistance	Initial	70 MAX	mΩ		10.208	11.150	9.060	0.631	OK
		After 10 cycles	70 MAX	11122		10.511	12.090	9.250	0.910	OK
	Contact Force	Working Height MAX	0.30N MIN.	Ν		0.422	0.444	0.410	0.011	OK
		Working Height MIN.	1.10N MAX	IN	10	0.797	0.833	0.780	0.019	OK
	Apearance		No abnormality adversely affecting the performance			No abno affecting	,			ОК
			shall occur.			occur.				

D	Shock									
	Contact resistance	Initial	70 MAX			10.487	10.636	10.397	0.096	OK
		After test	70 MAX	mΩ		10.125	10.623	9.495	0.411	OK
	Electrical discontinuit	During test	1µs MAX	I	5	No disco	ontinuity			OK
			No abnormality adversely		5	No abno	ormality a	adversely	Ý	
	Apearance	After test	affecting the performance	-		affecting	g the per	formanc	e shall	OK
			shall occur.			occur.				

Е	Vibration											
	Contact resistance	Initial	70 MAX	mΩ		9.713	10.070	9.138	0.389	OK		
		After test	70 MAX	11122		10.311	10.992	9.370	0.757	OK		
	Electrical discontinuit During test		1µs MAX	-	5	No discontinuity						
			No abnormality adversely		J	No abno	lo abnormality adversely					
	Apearance	After test	affecting the performance	-		affecting	g the per	formanc	e shall	OK		
			shall occur.			occur.						

F	Cold Test									
	Contact resistance	Initial	70 MAX	mΩ		10.298	10.846	9.480	0.569	OK
		After test	70 MAX	11125		10.287	10.961	9.912	0.402	OK
			No abnormality adversely		5	No abno	ormality a	adversely	Ý	
	Apearance	After test	affecting the performance	-		affecting	g the per	formanc	e shall	OK
			shall occur.			occur.				

G	Heat Test									
	Contact resistance	Initial	70 MAX	mΩ		11.184	12.271	10.393	0.797	OK
		After test	70 MAX	11122		9.929	10.500	9.346	0.451	OK
			No abnormality adversely		5	No abno	ormality	adversely	Ý	
	Apearance	After test	affecting the performance	-		affecting	g the pei	formanc	e shall	OK
			shall occur.			occur.				

н	Thermal Shock									
	Contact resistance	Initial	70 MAX	mΩ		9.890	10.278	9.463	0.343	OK
		After test	70 MAX	11152		10.352	10.656	10.055	0.240	OK
			No abnormality adversely		5	No abno	ormality a	adversely	/	
	Apearance	After test	affecting the performance	-		affecting	g the per	formanc	e shall	OK
			shall occur.			occur.				

### Document No. TR-16041-01EN

### Table.2-2 Test result

Group	Contents of	measurement	c	pec.	Unit	n		Da	ta		Judge
Group	Contents of	measurement		pee.	Offic	11	AVE.	MAX.	MIN.	S	Judge
J	Humidity(steady sta						0.762	10.200	0.240	0.466	
	Contact resistance	Initial	- 70	MAX	mΩ			10.309		0.466	OK
		After test	No abnormi	lity adversely		5	No abnc	10.712		0.331	OK
	Apearance	After test		e performance	-	J	affecting				ок
	Apearance		shall occur.	e performance			occur.	y the per	Tormane	e shan	
			Johan Occur				occuri				
К	H2S Gas										
		Initial	7 70				10.097	10.447	9.611	0.302	OK
	Contact resistance	After test	- /0	MAX	mΩ		10.330	10.604	10.094	0.230	OK
			No abnorma	lity adversely		5	No abno	ormality a	adversely	y	
	Apearance	After test	affecting the	e performance	-		affecting	g the per	formanc	e shall	OK
			shall occur.				occur.				
	[										
L	Salt water spray				1						
	Contact resistance	Initial	70	MAX	mΩ			10.844		0.392	OK
		After test				-		10.892		0.387	OK
	Anoaranco	After test		ality adversely e performance		5	No abno				OK
	Apearance	After test	shall occur.	e performance	-		-	g the per	Tormanc	e shall	OK
							occur.				
М	Surface Mount Solde	erability Test									
	Solder Wetting Area		95	MIN.	%	5		95 N	1IN.		ОК
	j ·										
Ν	Resistance to Reflow	v Soldering Heat									
	Contact resistance	After test	70	MAX	mΩ		9.991	11.370	8.920	0.890	OK
			No abnorma	lity adversely		5	No abno	ormality a	adversely	y	
	Apearance	After test	affecting the	e performance	-	5	affecting	g the per	formanc	e shall	OK
			shall occur.				occur.				
		Contact Resistance					Co	ontact Re	esistance	<b>;</b>	
0	0.0			80.0							
	0.0			70.0							
7	0.0										
	<u> </u>			60.0							
6	0.0			<b>FO O</b>							
6	0.0			50.0							
6	0.0			50.0 							
6 5 [U 4 3	0.0 0.0 0.0			면 40.0 월 30.0							
6 5 [0 4 3 _2	0.0			50.0 <u>40.0</u> 30.0 20.0 10.0							

Initial After test Graph-1.Durability

Graph-2.Shock

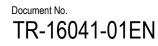
After test

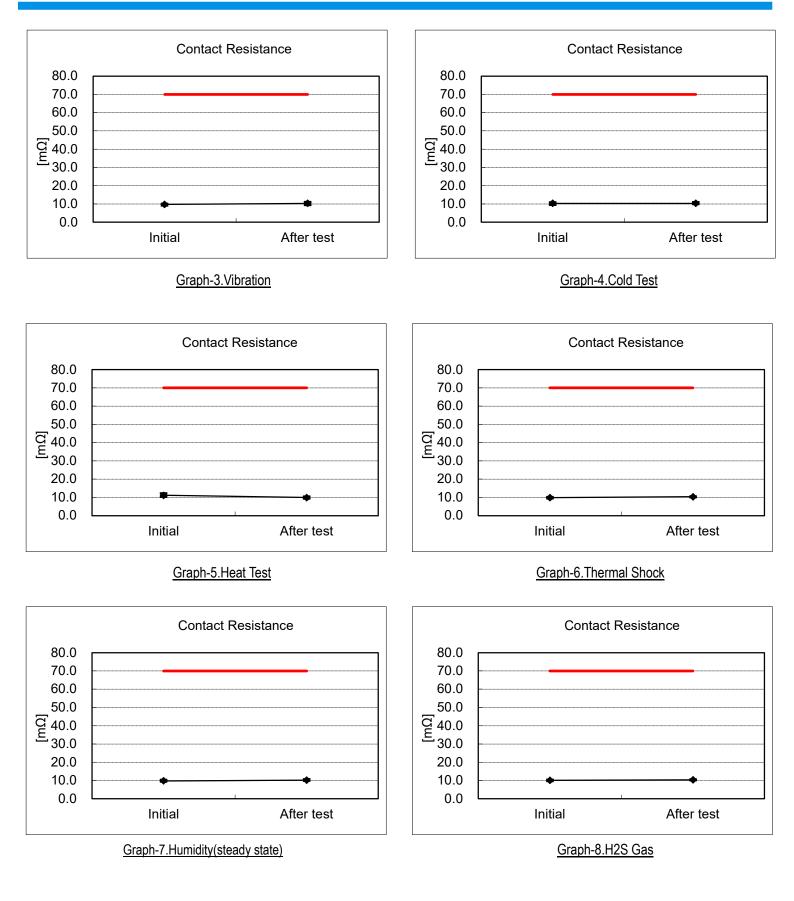
Initial

Confidential C

0.0

0.0





Confidential C



Graph-9.Salt Water Spray



Confidential C

I-PEX