

MP-A 01

Part No. 3096-0001

Test Report

Product Specification no. PRS-2048

1	T17100	June 16, 2017	M.N		Ken
0	T14115	December 19, 2014	T.Hirakawa	K.Yotsutani	T.Takano
Rev.	ECN	Date	Prepared by	Checked by	Approved by

1.Purpose / 目的

The MP-A 01 was evaluated in accordance with product specification PRS-2048.

MP-A 01 の性能を製品規格 PRS-2048 に基づいて評価する。

2.Conclusion / 結論

All specimens satisfied the requirements of the product specification PRS-2048.

全ての試料が製品規格(PRS-2048)の条件を満足した。

3.Sample / 試料

Mount clip: MP-A 01 (P/N: 3096-0001)

4.Method / 試験方法

Refer to product specification, PRS-2048.

製品規格(PRS-2048)参照。

4-1 試験順序と試料数 / Test Sequence and Sample Quantity

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

Test Item 試験項目	Group / グループ									
	A	B	C	D	E	F	G	H	J	K
1 Contact Resistance 接触抵抗		1,3	1,3	1,3	1,3	1,3	1,3	1,3		2
2 Mating Force 挿入力	1,4									
3 Un-mating Force 抜去力	2,5									
4 Durability 耐久性	3	2								
5 Shock 衝撃			2							
6 Vibration 振動				2						
7 Cold Test 低温試験					2					
8 Heat Test 高温試験						2				
9 Thermal Shock Test 熱衝撃試験							2			
10 Humidity (Steady State) 湿度(定常状態)								2		
11 Surface Mount Solderability Test 半田付け性試験									1	
12 Resistance to Reflow Soldering Heat 半田耐熱性										1
Amount of samples サンプル数	10	10	5	5	5	5	5	5	5	5

※グループ表中の番号は、試験順序を示す。

*The number of group is test sequence.

5. Results / 結果

表(Table)2 試験結果/Test results

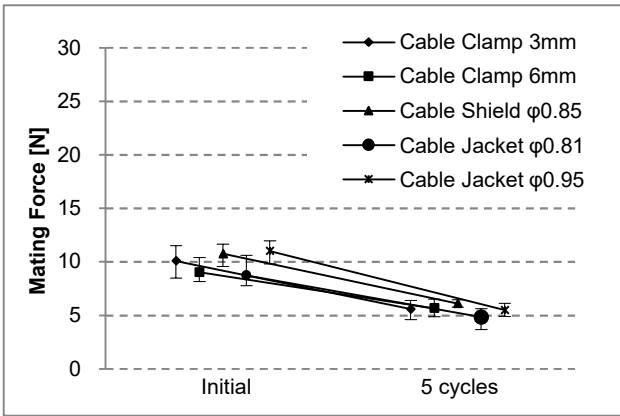
Test Item	Measurements	Spec.	n	Unit	Data				Judge
					AVE.	MAX.	MIN.	σ	
A									
Mating Force									
Cable Clamp 3mm	Initial	25 MAX.	10	N	10.088	11.52	8.49	0.861	OK
	5 cycles				5.588	6.40	4.62	0.505	OK
Cable Clamp 6mm	Initial	25 MAX.	10	N	9.035	10.41	8.16	0.689	OK
	5 cycles				5.664	6.52	4.87	0.540	OK
Cable Shield ϕ 0.85	Initial	25 MAX.	10	N	10.768	11.68	9.57	0.677	OK
	5 cycles				6.123	6.46	5.79	0.212	OK
Cable Jacket ϕ 0.81	Initial	25 MAX.	10	N	8.754	10.63	7.77	0.783	OK
	5 cycles				4.849	5.63	3.70	0.610	OK
Cable Jacket ϕ 0.95	Initial	25 MAX.	10	N	11.028	11.98	9.82	0.734	OK
	5 cycles				5.505	6.14	4.90	0.456	OK
Un-mating Force									
Cable Clamp 3mm	Initial	3 MIN.	10	N	5.428	6.24	4.35	0.687	OK
	5 cycles	1.5 MIN.			3.892	5.04	3.36	0.458	OK
Cable Clamp 6mm	Initial	3 MIN.	10	N	5.025	6.11	4.24	0.608	OK
	5 cycles	1.5 MIN.			4.082	4.62	3.28	0.424	OK
Cable Shield ϕ 0.85	Initial	3 MIN.	10	N	5.004	5.87	4.09	0.641	OK
	5 cycles	1.5 MIN.			3.268	4.27	2.54	0.614	OK
Cable Jacket ϕ 0.81	Initial	3 MIN.	10	N	4.943	5.80	4.25	0.534	OK
	5 cycles	1.5 MIN.			3.820	4.60	3.32	0.397	OK
Cable Jacket ϕ 0.95	Initial	3 MIN.	10	N	5.057	6.29	4.12	0.677	OK
	5 cycles	1.5 MIN.			3.400	3.85	2.70	0.379	OK
B									
Durability									
Cable Clamp 3mm									
Contact Resistance	Initial	70 MAX.	10	m Ω	11.588	12.11	10.70	0.363	OK
	5 cycles				11.766	12.51	10.97	0.352	OK
Apearance	After test	No abnormality	-	-	No abnormality			OK	
Cable Clamp 6mm									
Contact Resistance	Initial	70 MAX.	10	m Ω	10.380	11.14	9.04	0.523	OK
	5 cycles				11.778	12.56	10.87	0.539	OK
Apearance	After test	No abnormality	-	-	No abnormality			OK	
Cable Shield ϕ 0.85									
Contact Resistance	Initial	70 MAX.	10	m Ω	10.206	12.47	9.35	0.692	OK
	5 cycles				10.413	11.71	9.71	0.448	OK
Apearance	After test	No abnormality	-	-	No abnormality			OK	
C									
Shock									
Cable Clamp 3mm									
Contact Resistance	Initial	70 MAX.	5	m Ω	13.661	14.86	13.07	0.750	OK
	After test				11.167	12.37	9.68	0.996	OK
Electrical discontinuity	During test	1 μ s MAX.	-	-	No discontinuity			OK	
Apearance	After test	No abnormality	-	-	No abnormality			OK	
Cable Clamp 6mm									
Contact Resistance	Initial	70 MAX.	5	m Ω	12.418	12.71	12.03	0.280	OK
	10cycles				10.663	11.67	10.03	0.608	OK
Electrical discontinuity	During test	1 μ s MAX.	-	-	No discontinuity			OK	
Apearance	After test	No abnormality	-	-	No abnormality			OK	
Cable Shield ϕ 0.85									
Contact Resistance	Initial	70 MAX.	5	m Ω	10.082	11.08	9.61	0.585	OK
	10cycles				9.585	9.78	9.18	0.258	OK
Electrical discontinuity	During test	1 μ s MAX.	-	-	No discontinuity			OK	
Apearance	After test	No abnormality	-	-	No abnormality			OK	

Test Item	Measurements	Spec.	n	Unit	Data				Judge	
					AVE.	MAX.	MIN.	σ		
Vibration										
D	Cable Clamp 3mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	14.242	14.83	13.11	0.660	OK
		After test				11.866	12.28	11.45	0.330	OK
	Electrical discontinuity	During test	1 μ s MAX.	-	No discontinuity				OK	
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Clamp 6mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	13.172	14.46	12.10	1.019	OK
		10cycles				12.182	12.81	11.15	0.652	OK
	Electrical discontinuity	During test	1 μ s MAX.	-	No discontinuity				OK	
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Shield ϕ 0.85									
	Contact Resistance	Initial	70 MAX.	5	m Ω	10.181	11.03	9.79	0.504	OK
10cycles		10.421				10.92	10.06	0.334	OK	
Electrical discontinuity	During test	1 μ s MAX.	-	No discontinuity				OK		
Apearance	After test	No abnormality	-	No abnormality				OK		

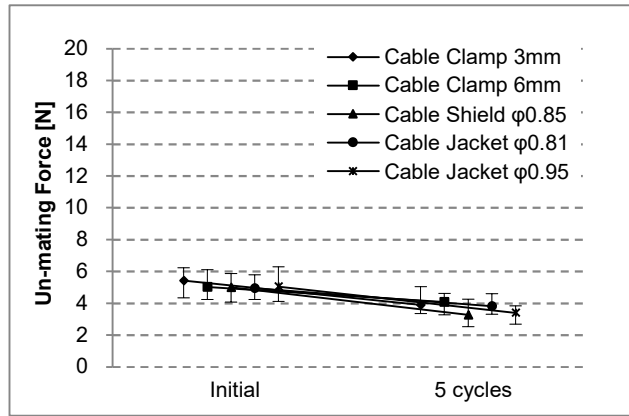
Cold Test										
E	Cable Clamp 3mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	12.465	12.6	12.38	0.084	OK
		After test				11.838	12.75	10.99	0.673	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Clamp 6mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	12.586	12.99	12.33	0.261	OK
		After test				11.414	11.85	11.01	0.365	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Shield ϕ 0.85									
	Contact Resistance	Initial	70 MAX.	5	m Ω	11.501	12.10	11.14	0.358	OK
		After test				11.311	12.27	10.42	0.776	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	

Heat Test										
F	Cable Clamp 3mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	12.604	12.89	12.18	0.277	OK
		After test				12.189	12.29	12.05	0.089	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Clamp 6mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	12.531	12.66	12.42	0.114	OK
		After test				11.413	12.10	10.84	0.483	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Shield ϕ 0.85									
	Contact Resistance	Initial	70 MAX.	5	m Ω	11.110	11.20	10.90	0.127	OK
		After test				10.364	10.64	9.95	0.289	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	

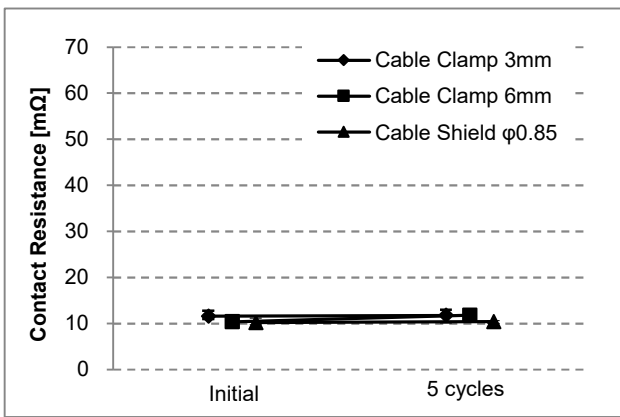
Test Item	Measurements		Spec.	n	Unit	Data				Judge
						AVE.	MAX.	MIN.	σ	
Thermal Shock										
G	Cable Clamp 3mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	12.484	12.69	12.39	0.120	OK
		After test				13.703	13.94	13.45	0.217	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Clamp 6mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	12.542	12.89	12.19	0.268	OK
		After test				13.273	13.58	12.90	0.294	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Shield ϕ 0.85									
Contact Resistance	Initial	70 MAX.	5	m Ω	11.223	11.48	11.02	0.194	OK	
	After test				12.176	12.39	11.91	0.207	OK	
Apearance	After test	No abnormality	-	No abnormality				OK		
Humidity (Steady State)										
H	Cable Clamp 3mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	12.912	14.33	11.72	0.538	OK
		After test				13.629	14.21	13.10	0.407	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Clamp 6mm									
	Contact Resistance	Initial	70 MAX.	5	m Ω	11.951	13.10	11.17	0.416	OK
		After test				12.702	12.99	12.33	0.171	OK
	Apearance	After test	No abnormality	-	No abnormality				OK	
	Cable Shield ϕ 0.85									
Contact Resistance	Initial	70 MAX.	5	m Ω	10.769	12.39	9.66	0.748	OK	
	After test				12.667	13.38	12.29	0.312	OK	
Apearance	After test	No abnormality	-	No abnormality				OK		
Surface Mount Solderability Test										
J	Solder Wetting Area	After test	95 MIN	5	%	95 MIN.				OK
Resistance to Reflow Soldering Heat										
K	Cable Clamp 3mm									
	Contact Resistance	After test	70 MAX.	5	m Ω	12.429	12.75	12.14	0.259	OK
		Apearance	After test			No abnormality	-	No abnormality		
	Cable Clamp 6mm									
	Contact Resistance	After test	70 MAX.	5	m Ω	11.607	11.95	11.24	0.283	OK
		Apearance	After test			No abnormality	-	No abnormality		
	Cable Shield ϕ 0.85									
	Contact Resistance	After test	70 MAX.	5	m Ω	10.349	10.73	9.55	0.486	OK
		Apearance	After test			No abnormality	-	No abnormality		



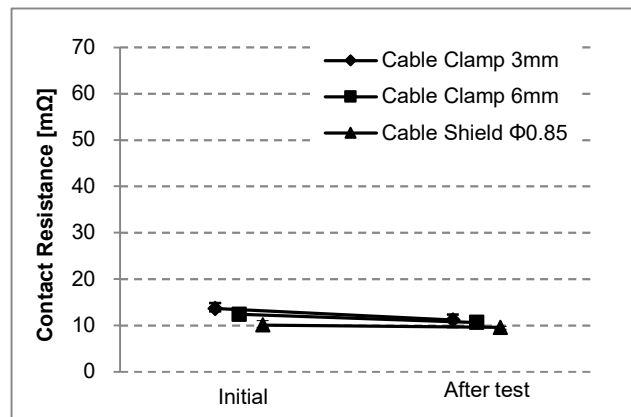
A Group : Mating Force



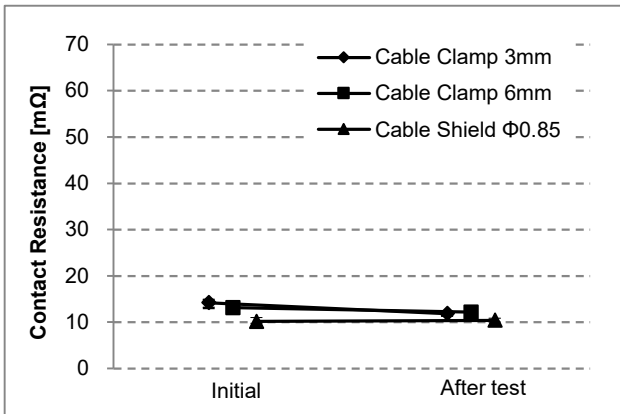
A Group : Un-mating Force



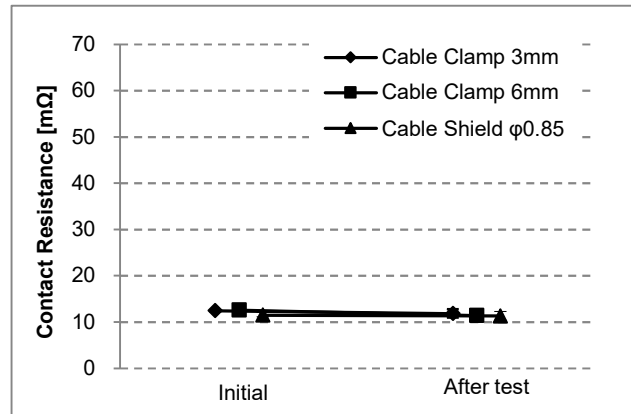
B Group : Durability



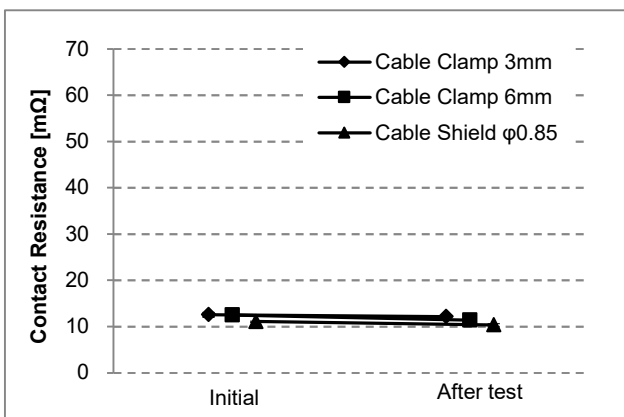
C Group : Shock



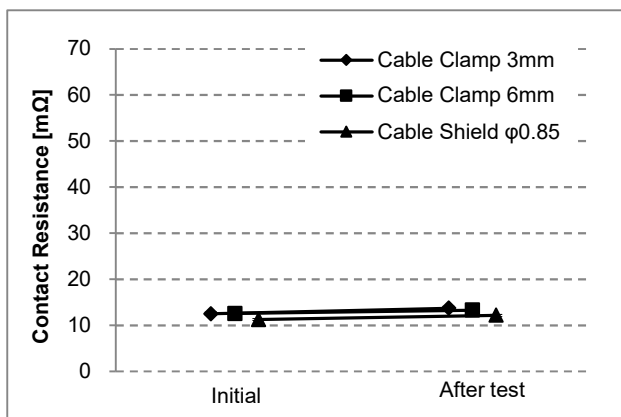
D Group : Vibration



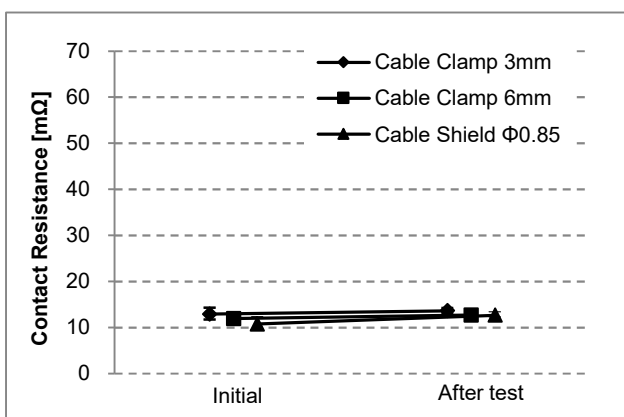
E Group : Cold test



F Group : Heat Test



G Group : Thermal Shock



H Group : Humidity (Steady State)