HTK 本多通信工業株式会社

AXA Series　Vibration・Shock Resistance Reports　Contents

※A part of evaluation data is provided as an example.
We provide individual evaluation data of a particular product or unpublished data after a request by e-mail. please contact us individually for data not listed on the site.

※individual evaluation data of a particular product can be downloaded from the Product Search page.

HTK HONDA CONNECTORS

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Vibration Resistance (UHS-II Card)	TEST REPORT

Product :	SD Memory Card Socket
Data No. :	AXA573062-007
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Purpose

Confirm characteristics of vibration resistance in accordance with spec.

Sample

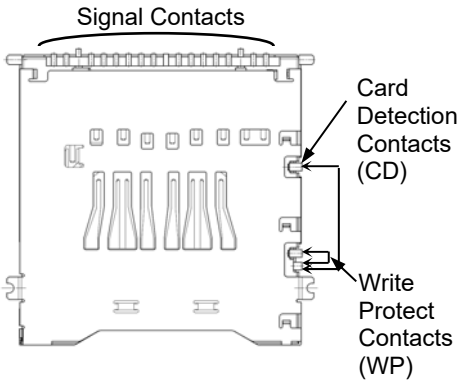
SD Memory card socket UHS-II type, Reverse type
【AXA573062】 (N=3)

Test condition

frequency: 10 Hz ~ 2,000 Hz
Acceleration: 20.0 m/s^2
Direction: 3 axes (X,Y,Z)
Sweep time: 5 minutes
Duration: 10 cycles / axis
Sample condition: Test sample is mounted on the substrate.
UHS-II card was tested with vibration machine.
Use card: Non UHS-II SD test card by Panasonic (Non UHS-II card)
UHS-II SD test card by Panasonic (UHS-II card)
UHS-II SD test card type PCB (Card type PCB)
c)d) Contiguity terminals measured unmating card.
c)d) Between shell and each contact measured mating Non UHS-II card.
e) measured by Non UHS-II card and Card type PCB.
f)g) measured by Non UHS-II card and UHS-II card.

Criteria

After 10 cycles
a) Appearance: There is no deforming, camber and crack of molded parts.
b) Current interception: Signal contacts: Less than 0.1 microsec.(at 100 mA)
Card detection contacs: Less than 1.0 microsec.(at 100 mA)
c) Insulation resistance: 100 M ohm min. (at D.C. 500 V)
d) Breakdown voltage resistance: A.C. 500 V / 1 minute. (Detection current: 1 mA)
e) Contact resistance:
Signal contacts: A change in 40 m ohm max. after test
Card detection contacts: 150 m ohm min.
Write protect contacts: 150 m ohm min.
f) Card insertion force: 40 N max.
g) Card removal force: 1 N min. 40 N max.



Test result

a) Appearance: There was no deforming, camber and crack of molded parts.
b) Current interception:
Signal contacts: There are no current interception of 0.1 microsec or more.
Card detection contacs: There are no current interception of 1.0 microsec or more.

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	Checked by ———	Approved by	Y. Kato

c) Insulation resistance:

Measurement part	Test result
Contiguity terminals Between shell and each contact	More than 100 M ohm

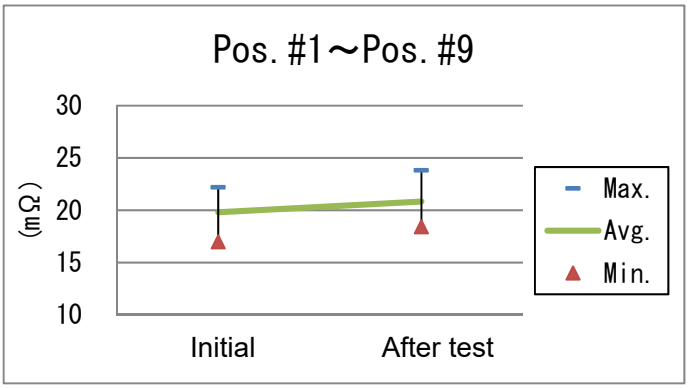
d) Breakdown voltage resistance:

Measurement part	Test result
Contiguity terminals Between shell and each contact	There are no short and damage at A.C. 500 V for 1 minute.

e) Contact resistance:

•Non UHS-II card mated

・ Signal contacts

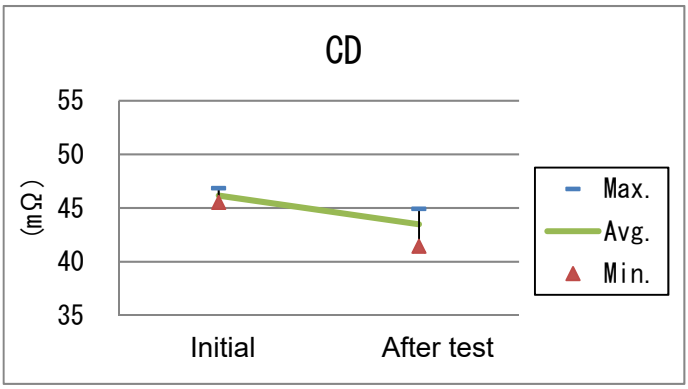


・ Difference of Contact Resistance

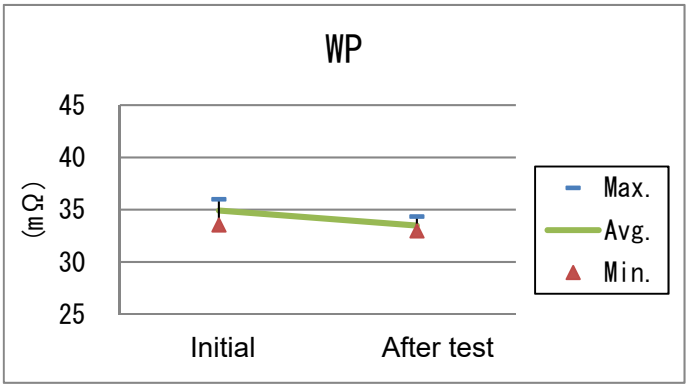
[m ohm]

	Pos.#1～Pos.#9 After test
Max.	3.78
Min.	1.029
Avg.	-1.64

・ CD



・ WP



Vibration Resistance (UHS-II Card)	TEST REPORT

Product :	SD Memory Card Socket
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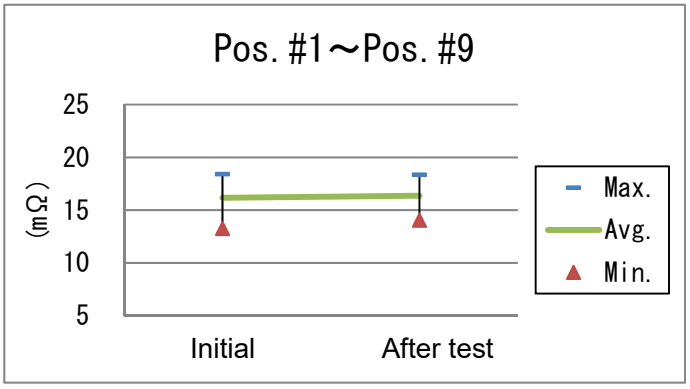
●Card type PCB mated

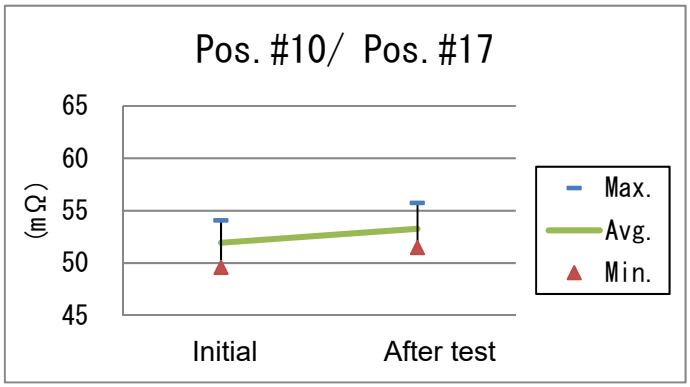
・ Signal contacts



・ Difference of Contact Resistance

[m ohm]

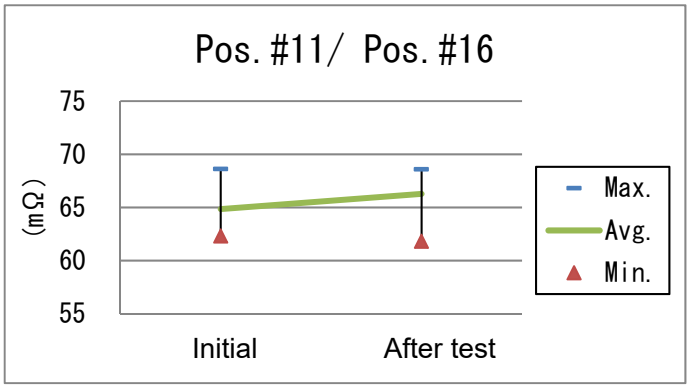
	Pos.#1～Pos.#9
	After test
Max.	3.84
Min.	0.197
Avg.	-2.37



・ Difference of Contact Resistance

[m ohm]

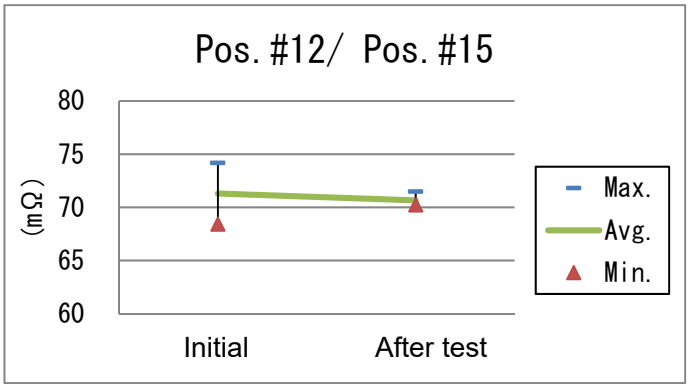
	Pos.#10/ Pos.#17
	After test
Max.	3.59
Min.	1.332
Avg.	-1.56



・ Difference of Contact Resistance

[m ohm]

	Pos.#11/ Pos.#16
	After test
Max.	6.28
Min.	1.433
Avg.	-6.80



・ Difference of Contact Resistance

[m ohm]

	Pos.#12/ Pos.#15
	After test
Max.	1.91
Min.	-0.644
Avg.	-3.95

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Vibration Resistance (UHS-II Card)	TEST REPORT

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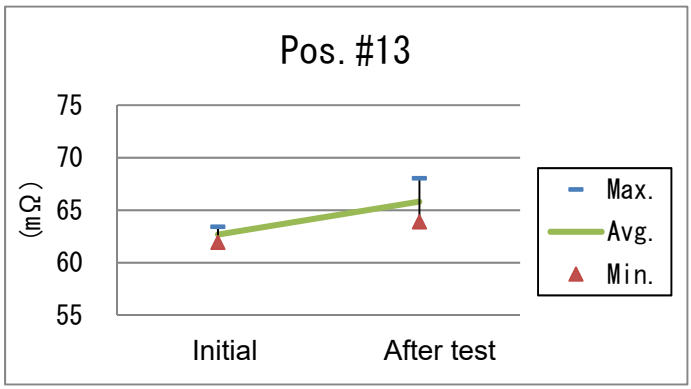
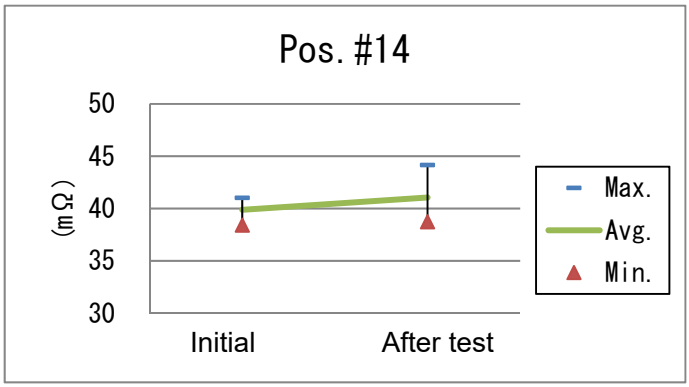


・ Difference of Contact Resistance

[m ohm]

	Pos.#13
	After test
Max.	6.11
Min.	3.127
Avg.	0.46

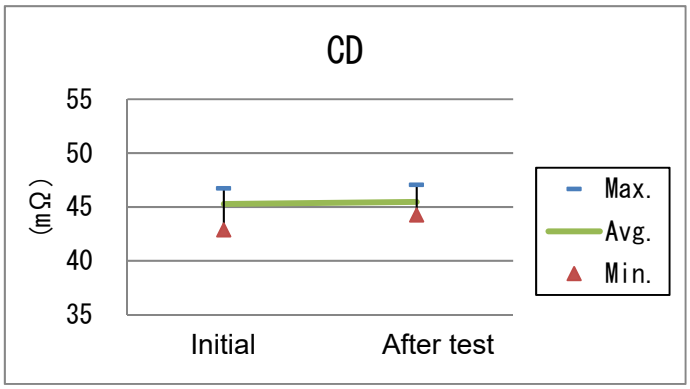


・ Difference of Contact Resistance

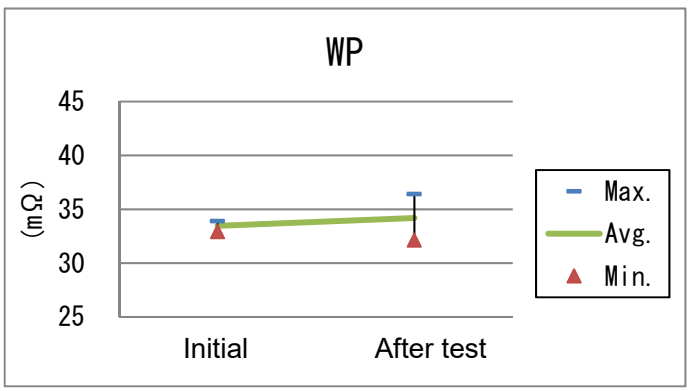
[m ohm]

	Pos.#14
	After test
Max.	3.15
Min.	1.179
Avg.	0.07

・ CD



・ WP



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Vibration Resistance (UHS-II Card)	TEST REPORT

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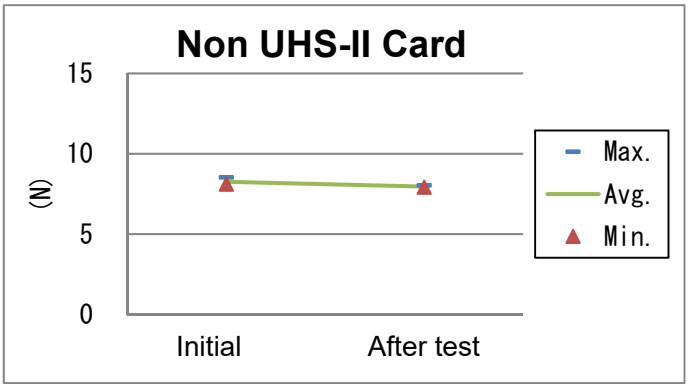
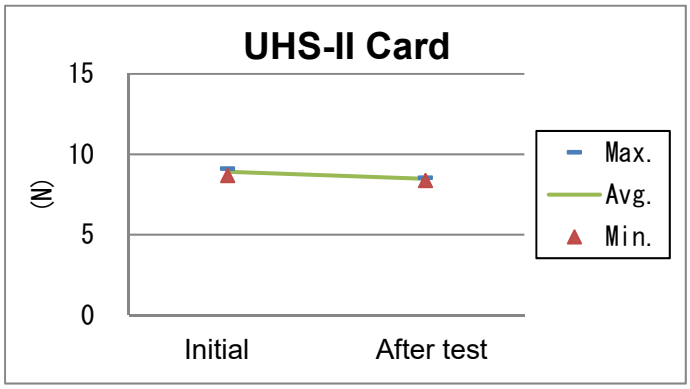
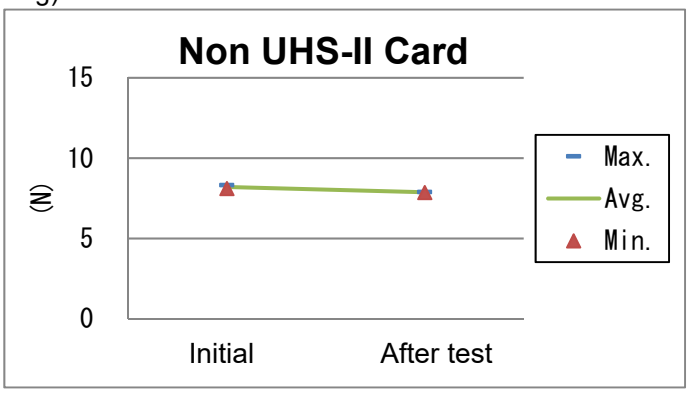
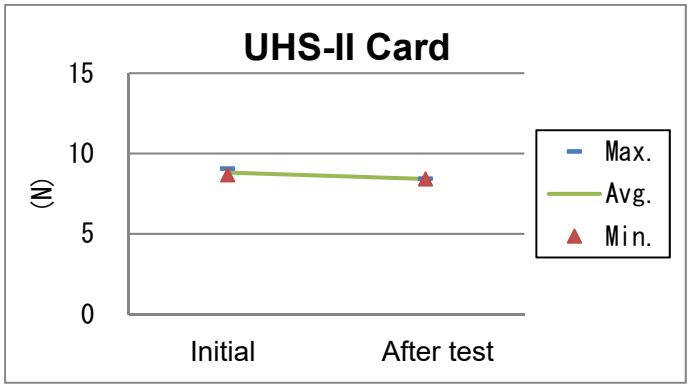
f) Card insertion force





g) Card removal force





Conclusion

No problems were observed.

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Shock Resistance	TEST REPORT

Product :	SD Memory Card Socket
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Purpose

Confirm characteristics of shock resistance in accordance with spec.

Sample

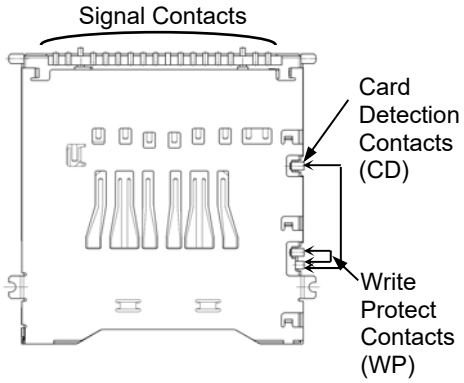
SD Memory card socket UHS-II type, Reverse type
【AXA573062】 (N=3)

Test condition

Acceleration: 980 m/s^2
Direction: 6 axes (X+, X-, Y+, Y-, Z+, Z-)
Impact cycles: 3 cycles in each direction (Total 18)
Sample condition: Test sample is mounted on the substrate.
UHS-II card was tested with vibration machine.
Use card: Non UHS-II SD test card by Panasonic (Non UHS-II card)
UHS-II SD test card by Panasonic (UHS-II card)
UHS-II SD test card type PCB (Card type PCB)
c)d) Contiguity terminals measured unmating card.
c)d) Between shell and each contact measured mating Non UHS-II card.
e) measured by Non UHS-II card and Card type PCB.
f)g) measured by Non UHS-II card and UHS-II card.

Criteria

After the test
a) Appearance: There is no deforming, camber and crack of molded parts.
b) Current interception: Signal contacts: Less than 0.1 microsec.(at 100 mA)
Card detection contacs: Less than 1.0 microsec.(at 100 mA)
c) Insulation resistance: 100 M ohm min. (at D.C. 500 V)
d) Breakdown voltage resistance: A.C. 500 V / 1 minute. (Detection current: 1 mA)
e) Contact resistance:
Signal contacts: A change in 40 m ohm max. after test.
Card detection contacts: 150 m ohm min.
Write protect contacts: 150 m ohm min.
f) Card insertion force: 40 N max.
g) Card removal force: 1 N min. 40 N max.



Test result

a) Appearance: There was no deforming, camber and crack of molded parts.
b) Current interception:
Signal contacts: There are no current interception of 0.1 microsec or more.
Card detection contacs: There are no current interception of 1.0 microsec or more.

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	Checked by	———	Approved by Y. Kato

c) Insulation resistance:

Measurement part	Test result
Contiguity terminals Between shell and each contact	More than 100 M ohm

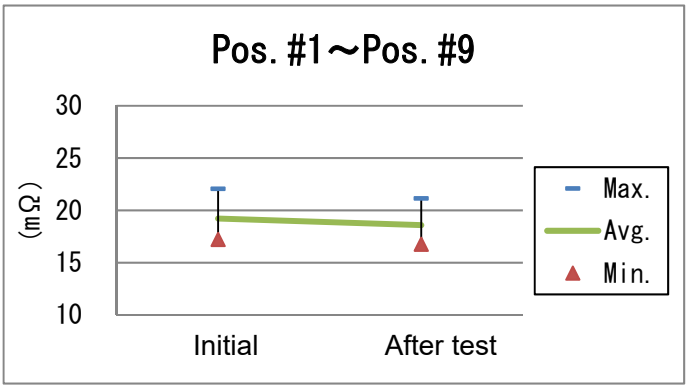
d) Breakdown voltage resistance:

Measurement part	Test result
Contiguity terminals Between shell and each contact	There are no short and damage at A.C. 500 V for 1 minute.

e) Contact resistance:

●Non UHS-II card mated

・ Signal contacts

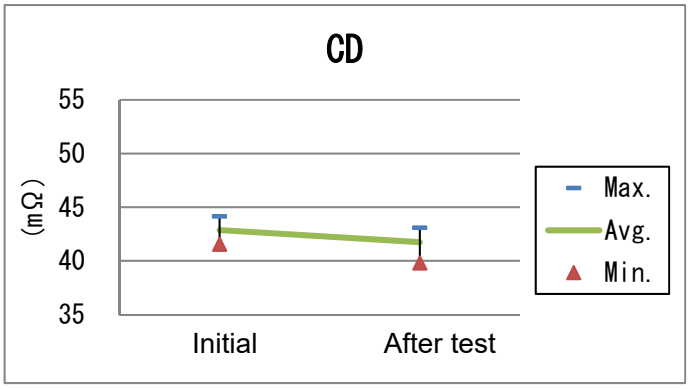


・ Difference of Contact Resistance

[m ohm]

	Pos.#1～Pos.#9
	After test
Max.	1.77
Min.	-2.84
Avg.	-0.631

・ CD



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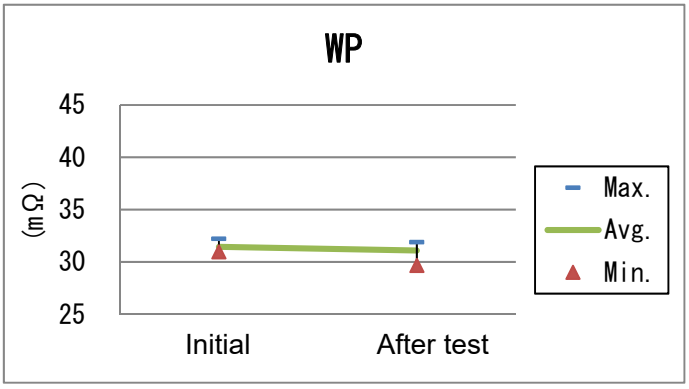

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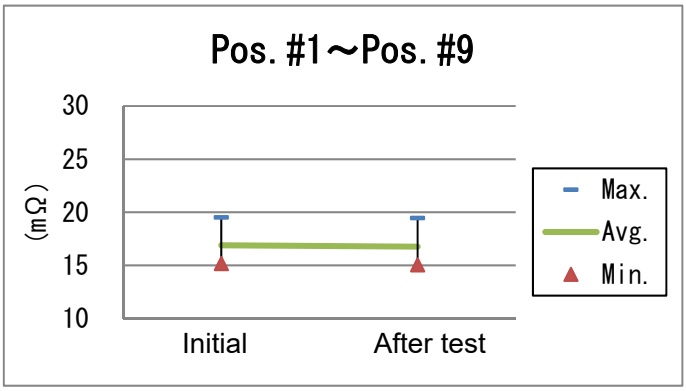
●Card type PCB mated

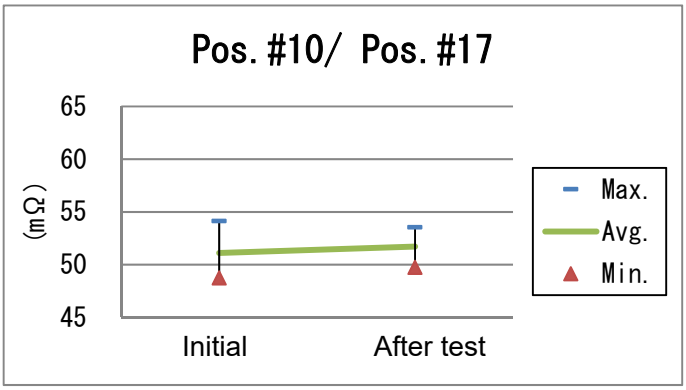
・ Signal contacts



・ Difference of Contact Resistance

[m ohm]

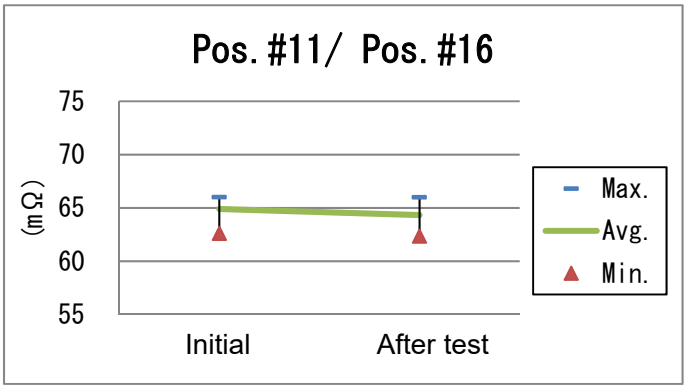
	Pos.#1～Pos.#9
	After test
Max.	3.09
Min.	-3.01
Avg.	-0.128



・ Difference of Contact Resistance

[m ohm]

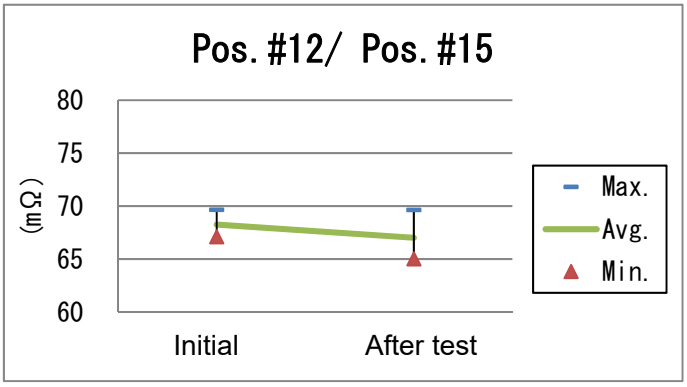
	Pos.#10/ Pos.#17
	After test
Max.	2.93
Min.	-2.11
Avg.	0.613



・ Difference of Contact Resistance

[m ohm]

	Pos.#11/ Pos.#16
	After test
Max.	0.42
Min.	-3.56
Avg.	-0.571



・ Difference of Contact Resistance

[m ohm]

	Pos.#12/ Pos.#15
	After test
Max.	0.93
Min.	-3.00
Avg.	-1.248

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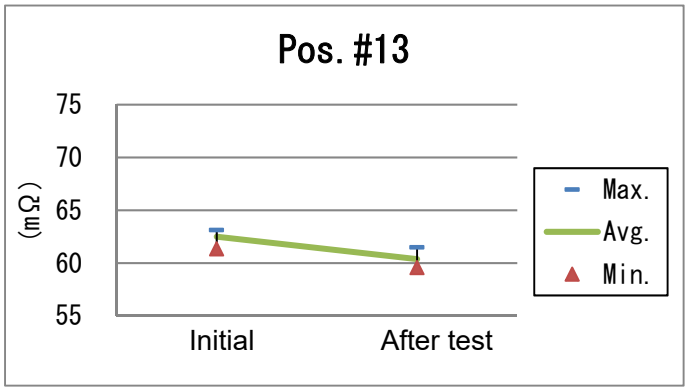
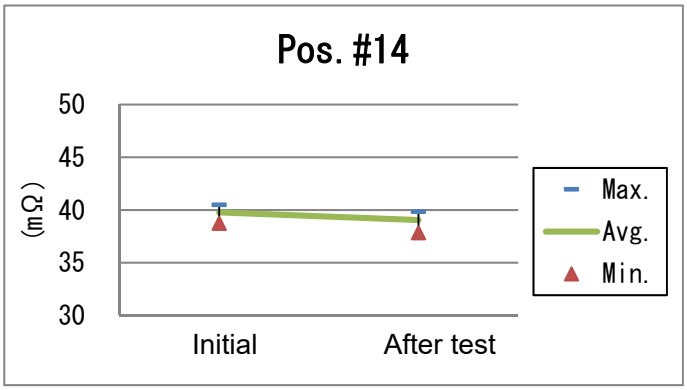


・ Difference of Contact Resistance

[m ohm]

	Pos.#13
	After test
Max.	0.15
Min.	-3.42
Avg.	-2.126

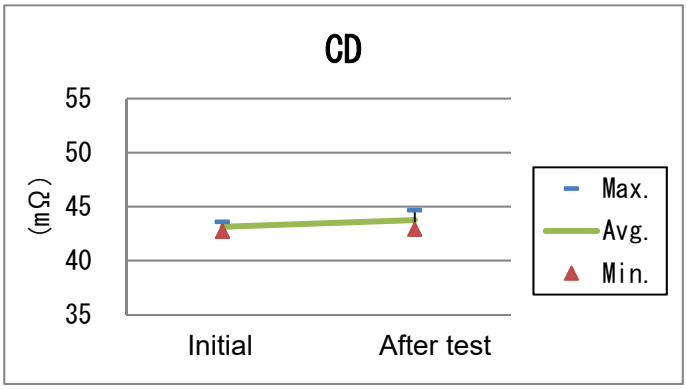


・ Difference of Contact Resistance

[m ohm]

	Pos.#14
	After test
Max.	0.69
Min.	-2.66
Avg.	-0.729

・ CD



・ WP

Shock Resistance	TEST REPORT

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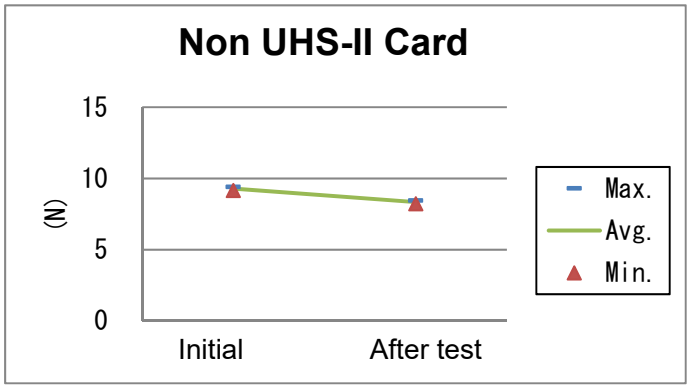
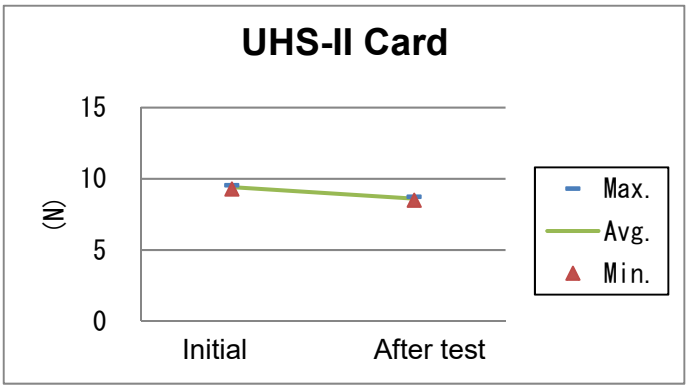
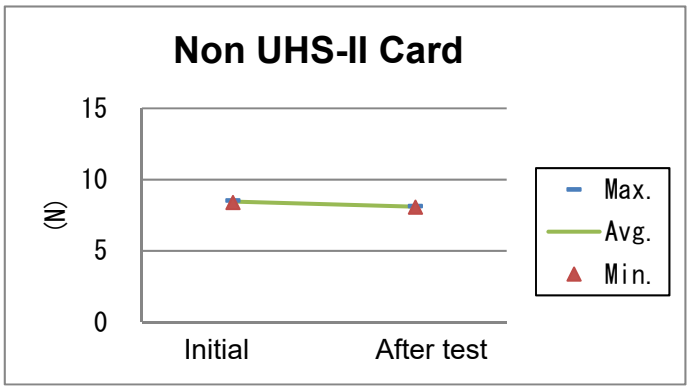
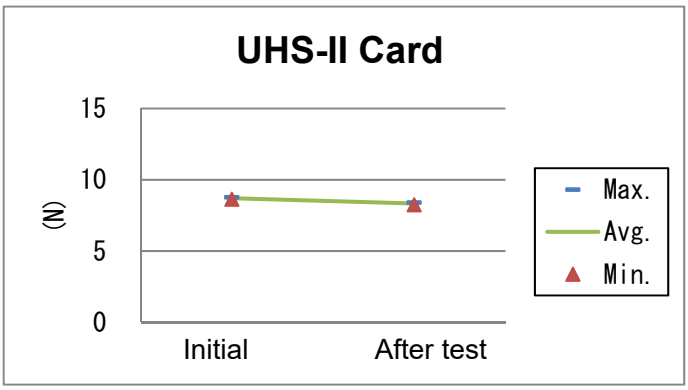
f) Card insertion force





g) Card removal force





Conclusion

No problems were observed.

Date: September 25, 2019

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