



# Product Change Notification

## TE Connectivity

**Product Change Notification:** PCN-24-197207

**PCN Date:** 17-JAN-24

TE would like to inform you of the following change(s) to the listed TE Connectivity Product. In case of any further questions about this change(s), please contact your TE Connectivity Sales Engineer. Affected part, drawing and/or specification numbers are listed on the attached sheet(s).

**Product Description:** (Text limited to 120 characters)

CDFP Gen4 2291931-1,-2,-3,-4,-5,-6,-7 2377292-1 2274233-1 2311882-1

**General Description of Changes**

Change the Chicklet's resin material to the same material as the other parts Front HSG and Rear HSG . The purpose is to standardize the resin materials used in products and improve product efficiency. This change can be expected to shorten Lead time. There is no change in performance due to this change. Please check the attached report Existing material : ZENITE 5244L(LCP) New material : LAPELOS E130i(LCP)

**Other attachments:**

[CDFP GEN4 sample SI test report 102023](#)

[CDFP GEN4 Chicklet material change](#)

**Reason for Changes:**

The purpose is to standardize the resin materials used in products and improve product efficiency. This change can be expected to shorten Lead time.

**PCN Attributes:**

**Product Category:**

Connectors

**Kind of Change:**

Material

**Change Feature:**

Material Change

**Potential Customer Impact:**

**Remarks:**

<b>Estimated Dates:</b>	
<b>Last Order Date</b> (Obsolete Parts Only):	<b>First Ship Date of Changed Items</b> (Changed Parts Only):
	12-APR-2024
<b>Last Ship Date of Changed Items</b> (Obsolete Parts Only):	<b>Last Date for Mixed Shipments:</b> (Changed Parts Only):
	No Mixed Shipments
<b>Effectivity Date:</b>	<b>Date of First Samples:</b>

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2291931-1</a>	NO						
<a href="#">2311882-1</a>	NO						

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2311882-1</a>	NO						

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2291931-1</a>	NO						

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2291931-1</a>	NO						

Part Number(s) being Modified:

Part Number	Part Discontinued per PCN	Customer Drawing	Customer Part Number	Alias Part Number(s)	Substitute Part Number	Substitute Alias Part Number(s)	Description Of Difference
<a href="#">2311882-1</a>	NO						



# CDFP Gen4 sample SI test report

SI team – 10/20.23



EVERY CONNECTION COUNTS



# Overview

CDFP Connector PN 2274230-3

Test board PN 14-3628-06 Rev.2

Board A Host

Board B module

40mm Trace Length (Host/Mod)

Nelco 400-13SI Material

6 layers

1mm thick

SOLT Calibration

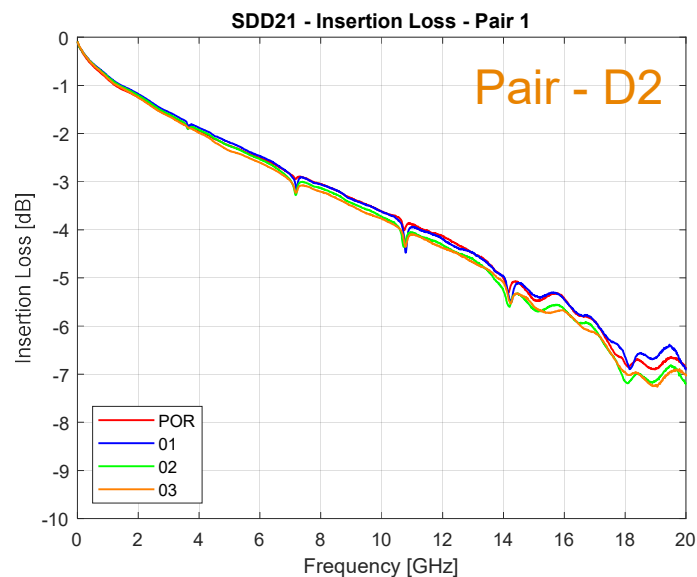
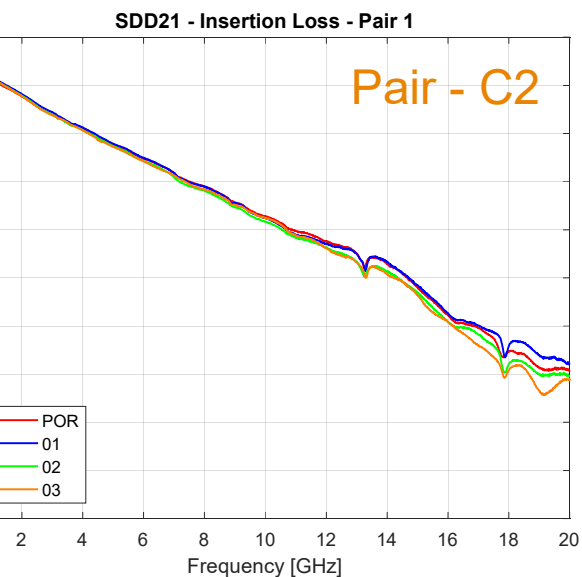
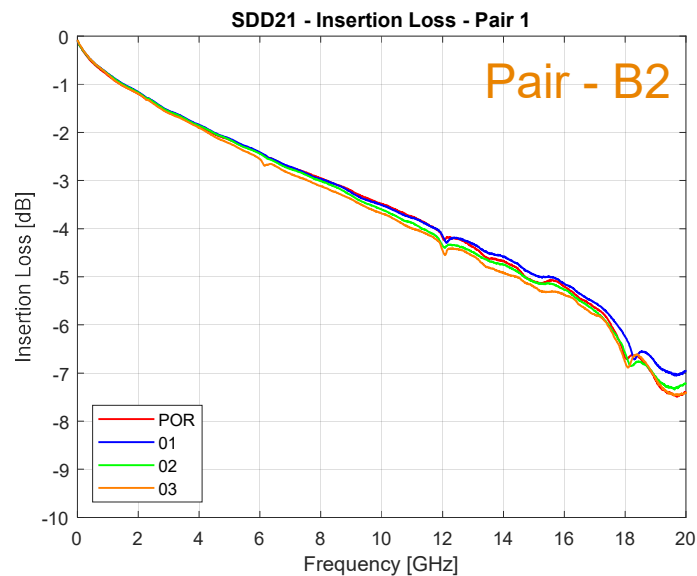
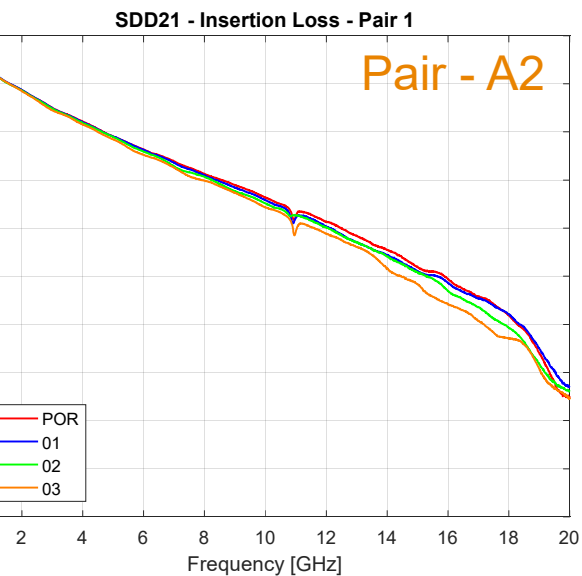
10MHz – 20GHz, 10MHz steps

SMA Bulkhead Test Points

AFR de-embedded



# Testing – Insertion Loss

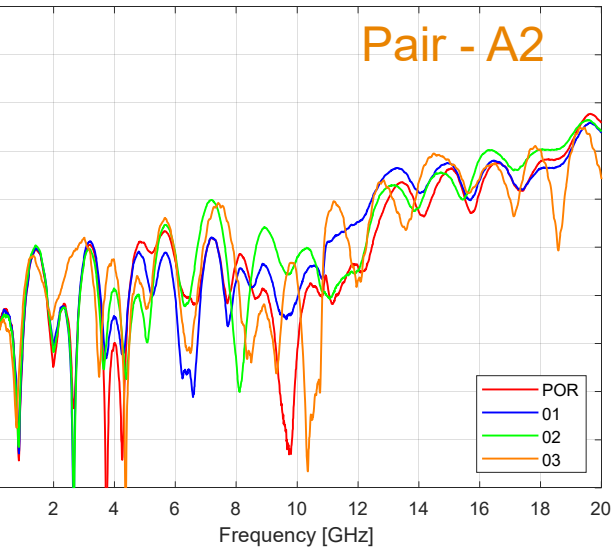


- All data of the samples are similar.
- These test data are without the de-embedded.

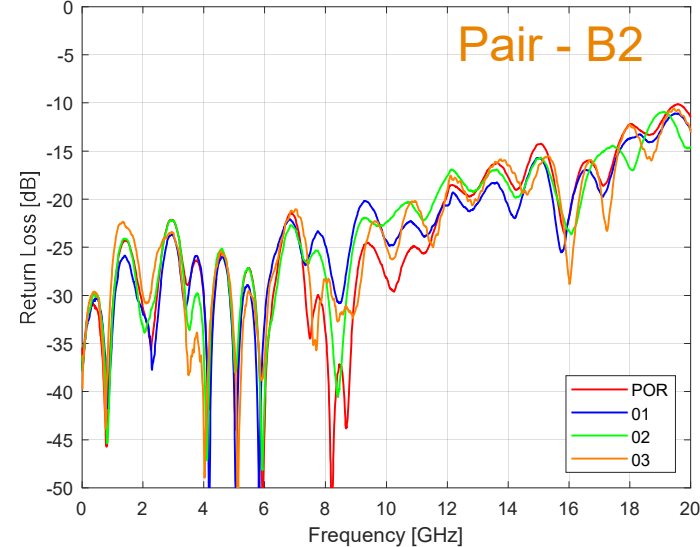
Index	Description
POR	Process of reference – tested at 202207
01	TEZH Capacity Expansion new mold sam
02	Alternative resin materials E130i sample
03	Normal mass production sample

# Testing – Return Loss

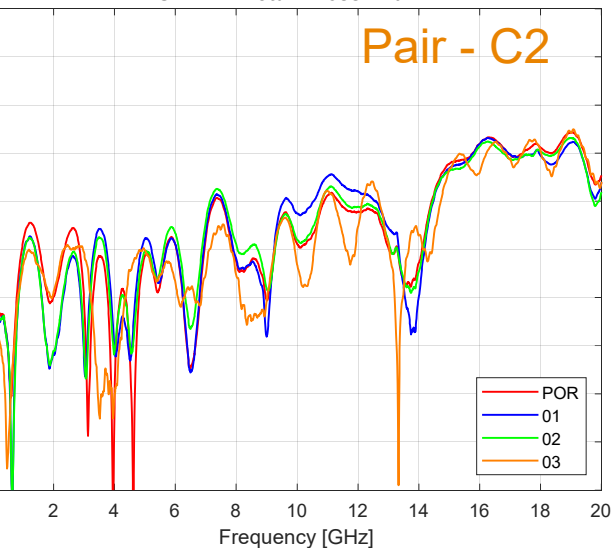
SDD11 - Return Loss - Pair 1



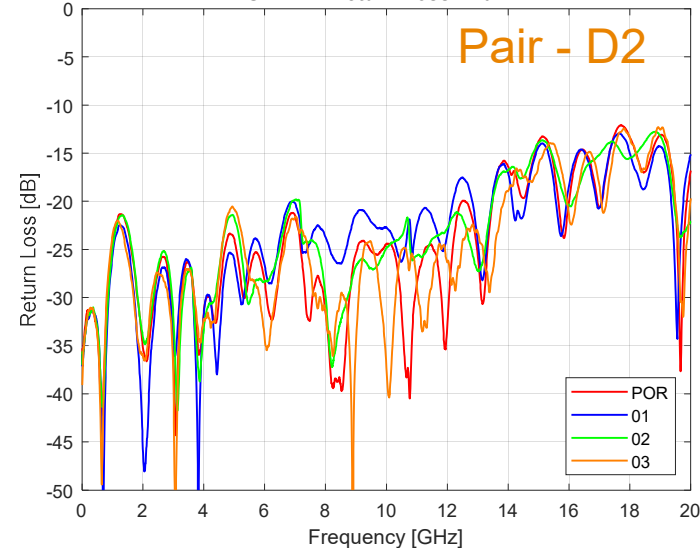
SDD11 - Return Loss - Pair 1



SDD11 - Return Loss - Pair 1



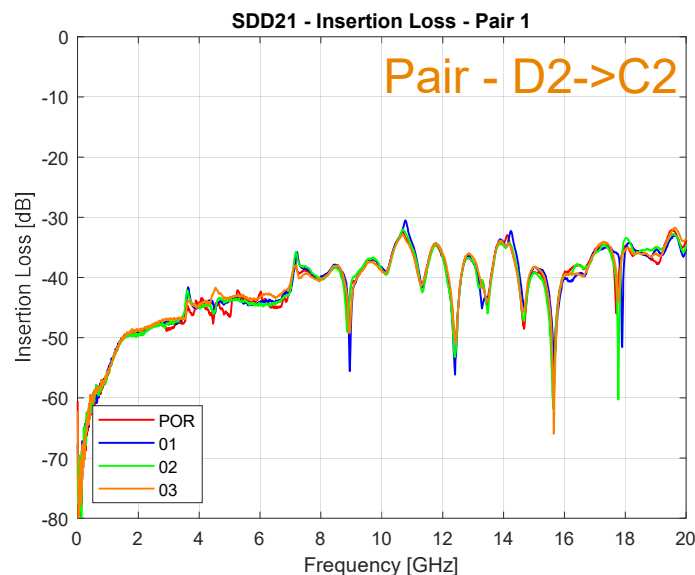
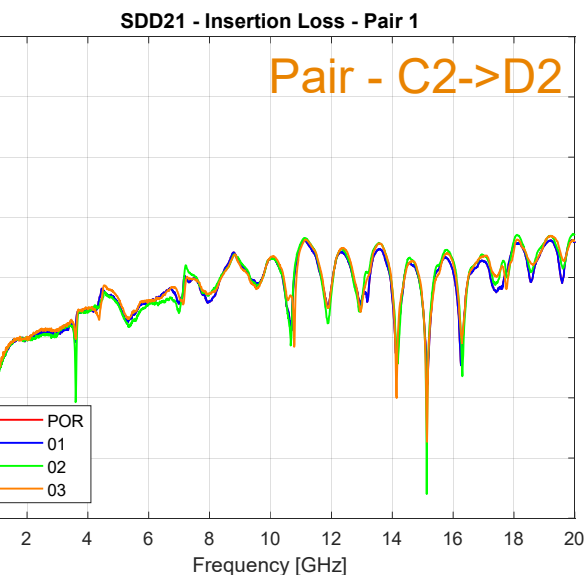
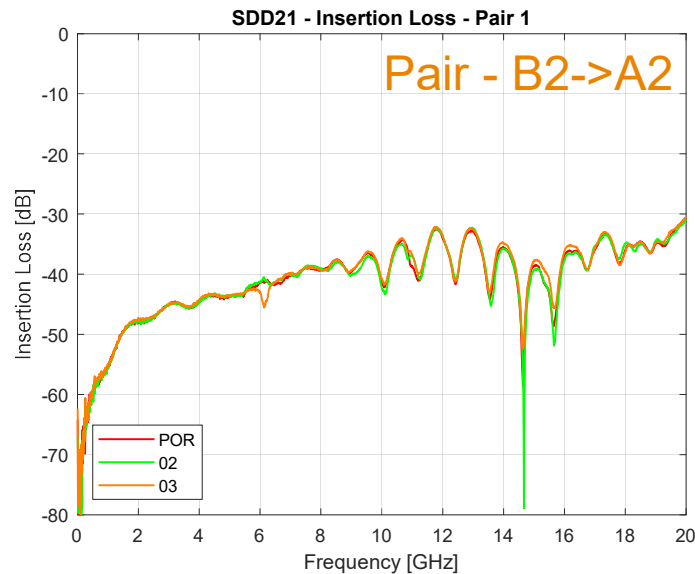
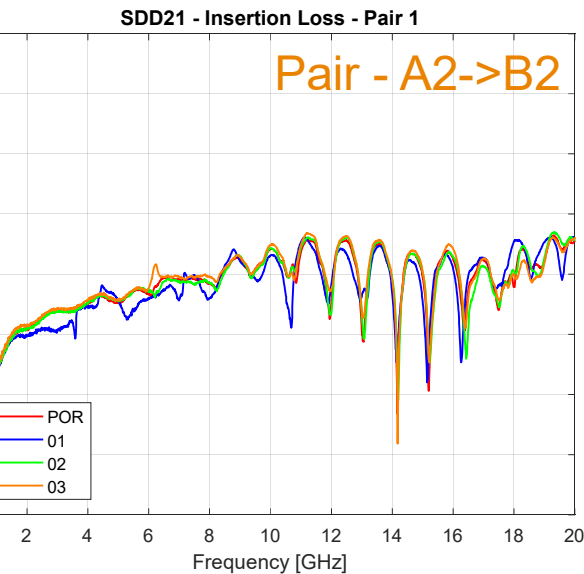
SDD11 - Return Loss - Pair 1



- All data of the samples are similar
- These test data are without the de-embedded

Index	Description
POR	Process of reference – tested at 202207
01	TEZH Capacity Expansion new mold sample
02	Alternative resin materials E130i sample
03	Normal mass production sample

# Testing – Crosstalk



- All data of the samples are similar
- These test data are without the de-embedded.
- The data of B2->A2 is lacking for 01 sample.

Index	Description
POR	Process of reference – tested at 202207
01	TEZH Capacity Expansion new mold sample
02	Alternative resin materials E130i sample
03	Normal mass production sample



# CDFP GEN 4

## Chicklet material change

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EVERY CONNECTION COUNTS



# Chicklet material change

## Purpose :

Evaluate material changes for Chicklet material with the aim of standardizing it with other parts.

Existing material : ZENITE 5244L(LCP)

New material : LAPELOS E130i(LCP)

## Part number of applicable product :

- 2291931-1,-2,-3,-4,-5,-6,-7 and -8
- 2377292-1
- 2274233-1
- 2311882-1

## Test item :

Evaluated according to MSA and TE 108-32065 spec.

The evaluation focused on changes in contact force due to material changes and associated contact reliability.

- 1) Contact normal force
- 2) Contact reliability test①( Initial⇒After temperature life ⇒Durability 100cycle ⇒ Random vibration/mechanical shock)
- 3) Contact reliability test②( Initial⇒After thermal shock/ Humidity-temperature cycling)
- 4)Insulation resistance and Withstanding voltage( Initial⇒After thermal shock/ Humidity-temperature cycling)

## Conclusion :

This material change has no impact on product quality.

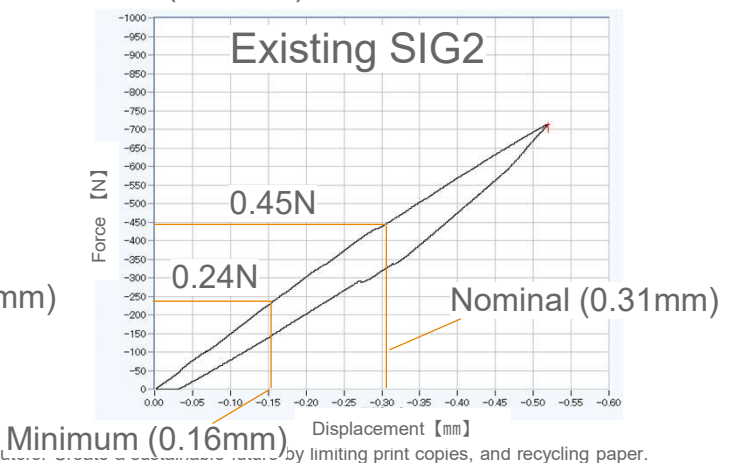
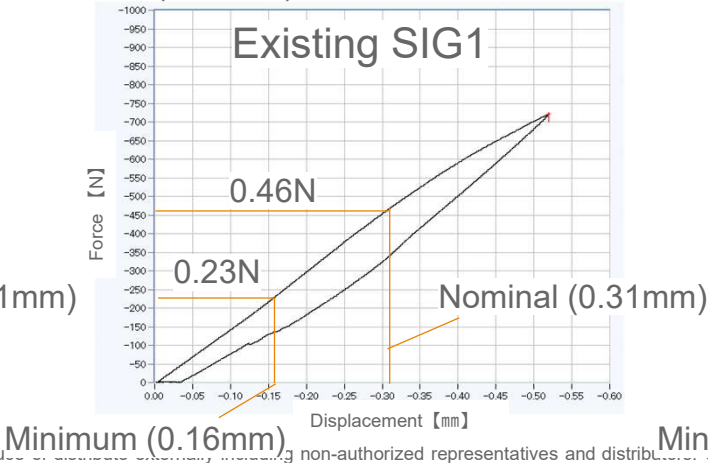
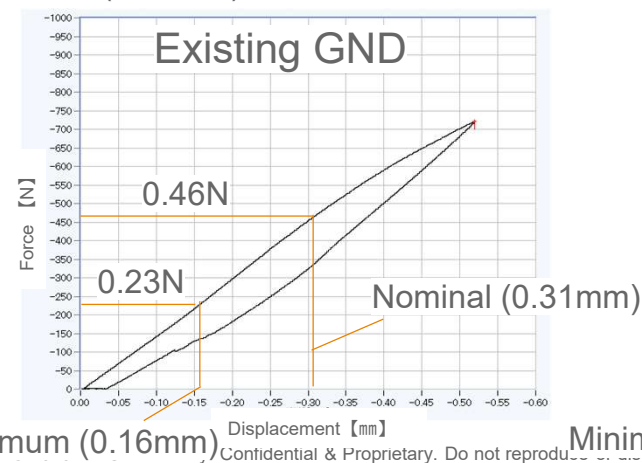
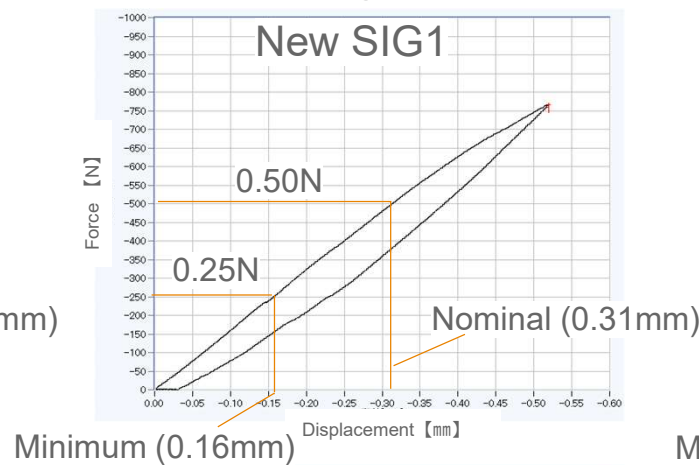
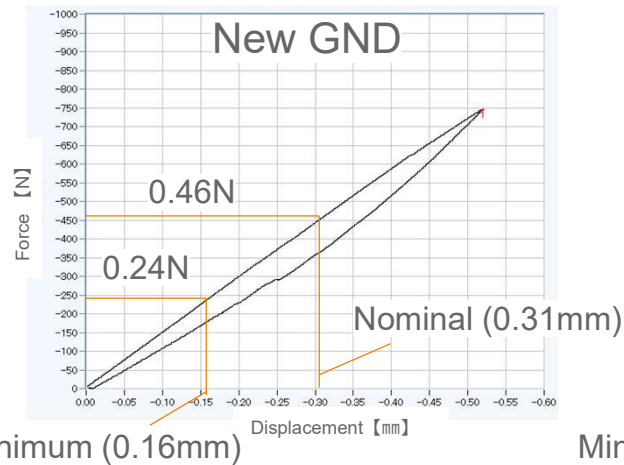
From this test result, there are no concerns regarding electrical performance and contact normal force.

# Contact normal force



Confirm that there is no change in Contact normal force for each Chicklet part.  
Design target : minimum 0.2N

Result : Satisfied contact normal force equivalent to existing products



Minimum (0.16mm)

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# Contact reliability test①

Confirm that contact reliability meets product specifications even after material change.  
Test method and conditions follow 108-32065.

## Test requirement

- Initial LLCR 80mΩ maximum
- After test  $\Delta R$  20mΩ maximum

## Test sequence:

- Mating
- LLCR
- Temperature life 85°500 h
- LLCR
- Durability 100cycles
- LLCR
- Random vibration / mechanical shock
- LLCR

Result : Satisfied LLCR test requirements

Unit : 【mΩ】

	LLCR			
	Initial	After temperature $\Delta R$	After durability $\Delta R$	After Vibration/ Mechanical shock $\Delta R$
Max	68.47	4.09	2.92	2.64
Min	31.90	-2.09	-2.15	-2.88
Ave	49.14	0.54	0.56	0.57

# Contact reliability test②

Confirm that contact reliability meets product specifications even after material change.  
Test method and conditions follow 108-32065.

## Test requirement

- Initial LLCR 80mΩ maximum
- After test  $\Delta R$  20mΩ maximum

## Test sequence:

- LLCR
- Thermal shock and Humidity temperature cycling
- LLCR

Result : Satisfied LLCR test requirements

Unit : 【mΩ】

	LLCR	
	Initial	After thermal shock/ Humidity-temperature cycling $\Delta R$
Max	68.76	3.62
Min	32.16	-3.03
Ave	49.07	0.66

# Insulation resistance and Withstanding voltage

Confirm that Insulation resistance and Withstanding voltage meets product specifications even after material change.  
Test method and conditions follow 108-32065.

## Test requirement

- Insulation resistance : 1000MΩ minimum
- Withstanding voltage : No breakdown or flash down

## Test sequence:

- Insulation resistance and Withstanding voltage
- Thermal shock and Humidity temperature cycling
- Insulation resistance and Withstanding voltage

Result : Satisfied Insulation resistance and Withstanding voltage test requirements

Insulation resistance

Unit : 【Ω】

	Initial	After thermal shock/ Humidity-temperature cycling
Insulation resistance	$2.79 \times 10^{13}$	$7.16 \times 10^{12}$

Withstanding voltage

No breakdown and flash down