26th Jan 2026

Product Change Notification

Dear Valued Customer,

We extend our sincere gratitude for your continued support of Panasonic. Your loyalty and dedication to Panasonic products have been vital to us.

In our continuous pursuit of excellence, we are committed to making adjustments to ensure that we offer the best solutions to meet your needs. Therefore, we would like to inform you of an upcoming change regarding **part of our Chip-Type Multilayer Metallised Film Capacitors ECHU(X) series.**

Below are the details of the affected products:

Affected Product	Parts of ECHU(X) Series (16VDC, 50VDC models) (Please refer to the affected Part Number list)
Change	Change of internal solvent blended in the phenolic resin used as the raw material for the conductive resin paste of external electrodes (no change in resin solids content) Internal Solvent: Solvent A → Solvent B ***Note: The relevant solvent does not remain after resin curing. No impact on product performance (mountability, electrical characteristics, etc.).* For more details, please refer to the attached Explanation Document.
Effective date	Production from August 2026
Reason	Discontinuation notice and change request from the supplier
Acknowledgement	Deadline for signature: 31st May 2026 If we have not received a returned acknowledgement form on or before the above date, we will conclude that the acknowledgement has been received and approved.

We understand that changes like these may impact your operations, and we apologize for any inconvenience this may cause. Our team is fully prepared to support you during this transition period and provide assistance as needed.

Thank you for your understanding and continued support as we strive to deliver superior products and services to you.

Best regards,

Panasonic Industry Europe GmbH

Panasonic
INDUSTRY

Acknowledgement Form

Acknowledgement of Receipt and Understanding

I, ____________________________ (Name of the Recipient), hereby acknowledge that I have received and read the above notification.

Company name: _____________________________________

Signature: _____________________________________

Date: ________________________

Chip-Type Multilayer Metallized Film Capacitor Change of Conductive Resin Paste for External Electrodes

November 27, 2025
Panasonic Industry Co., Ltd.
Device Solutions Division

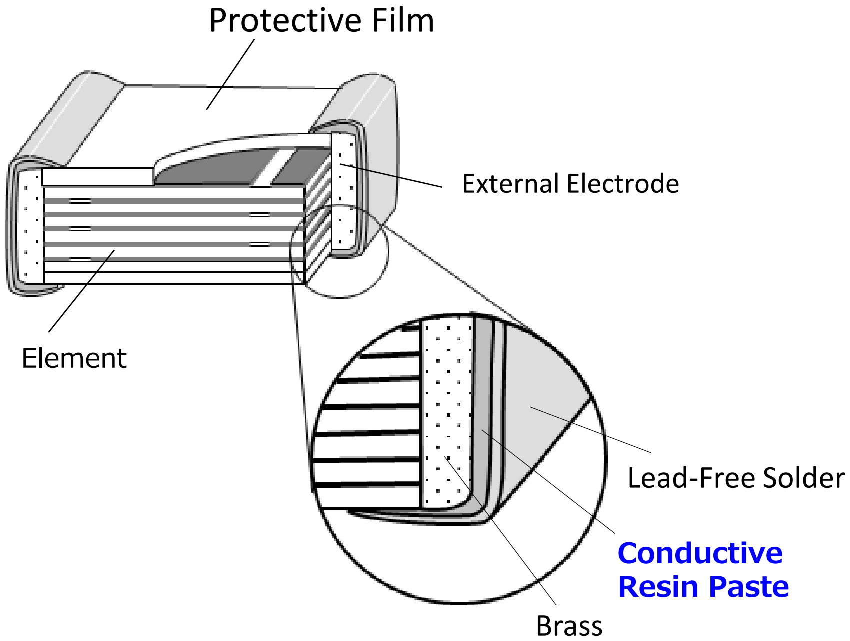
1. Details of the Change

- **Target Products:** Chip-Type Multilayer Metallized Film Capacitors
  ECHU(X) Series, 16VDC, 50VDC models
- **Change Details:** Change of internal solvent (*) blended in the phenolic resin used as the raw material for the conductive resin paste of external electrodes
  (no change in resin solids content)
  Internal Solvent: Solvent A → Solvent B
  Note: The relevant solvent does not remain after resin curing.
- **Reason for Change:** Discontinuation notice and change request from the supplier
- **Implementation Date:** From production in August 2026

Purpose of Conductive Resin Paste
Conductive resin paste is a material used to achieve both electrical connection and mechanical fixation when mounting components on printed circuit boards.

1. Ensuring Electrical Conductivity:The paste contains conductive metal powders such as silver and copper, which are dispersed throughout. After curing, these powders form low-resistance conductive paths between electrodes, enabling stable electrical connections between the component electrodes and the board.

2.Mechanical Fixation and Improved Reliability:As the resin component cures, it firmly secures the component to the board, allowing it to withstand the reflow process as well as vibrations and thermal expansion during use.



2. Comparative Composition of Conductive Resin Paste (Details of Change)

(%)

Component		Current Product	Changed Product
Phenolic Resin Solution*	Phenolic Resin	8–11	8–11
	Solvent	1–5 (Solvent A)	1–5 (Solvent B)
Metal Powder (Cu/Ag/Ni)*		80–83	80–83
Additives		0.1–1	0.1–1
Solvents (C, D)		1–5 each	1–5 each

*Components Remaining After Curing

Only the solvent in the phenolic resin solution is changed.
The solvent volatilizes during curing and does not remain in the final product.

3. Points of Change and Evaluation of Concerns

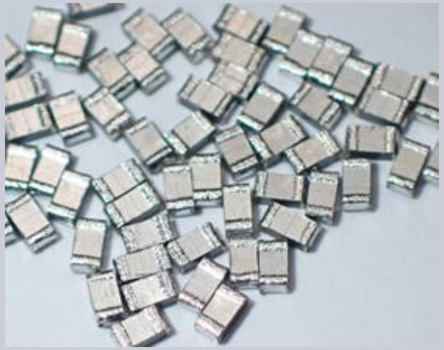
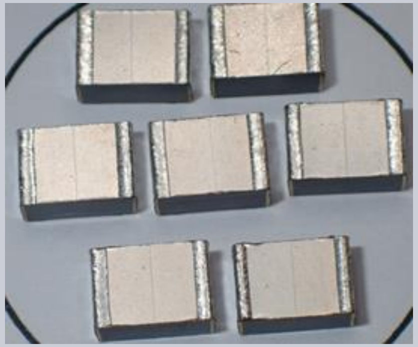
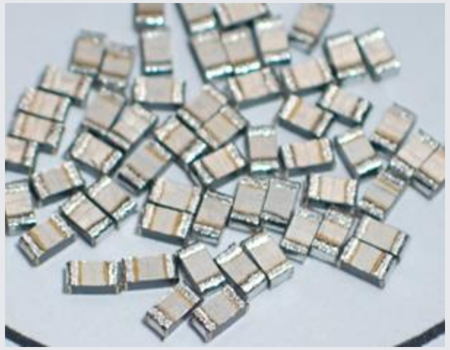
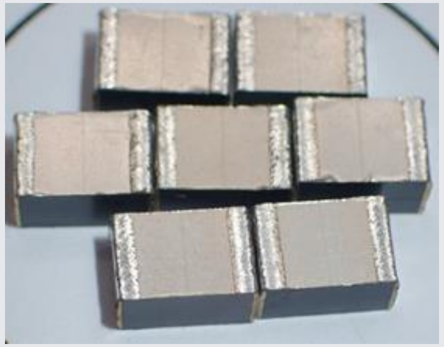
▶ Change ５Ｍ＋１Ｅ

Item	Change	Details
Man	None	—
Machine	None	—
Material	Yes	Change of solvent in phenolic resin
Method	None	—
Measurement	None	—
Environment	None	—

▶Points of Concern and Evaluation Results

Check Item	Content	Evaluation Result	Fig
Appearance	Finished product	Increased amount of brown phenolic resin on surface; no performance issues	Fig.1
Electrical	Capacitance, tanδ, ESR	Within standard range, equivalent to current product; no issues	Fig.2
Mountability	Reflow soldering	Equivalent to current product; no issues	Fig.3
Adhesion strength	Shear strength	Within standard range, equivalent to current product; no issues	Fig.4

4.Evaluation Results - Fig.1 Finished Product Appearance -

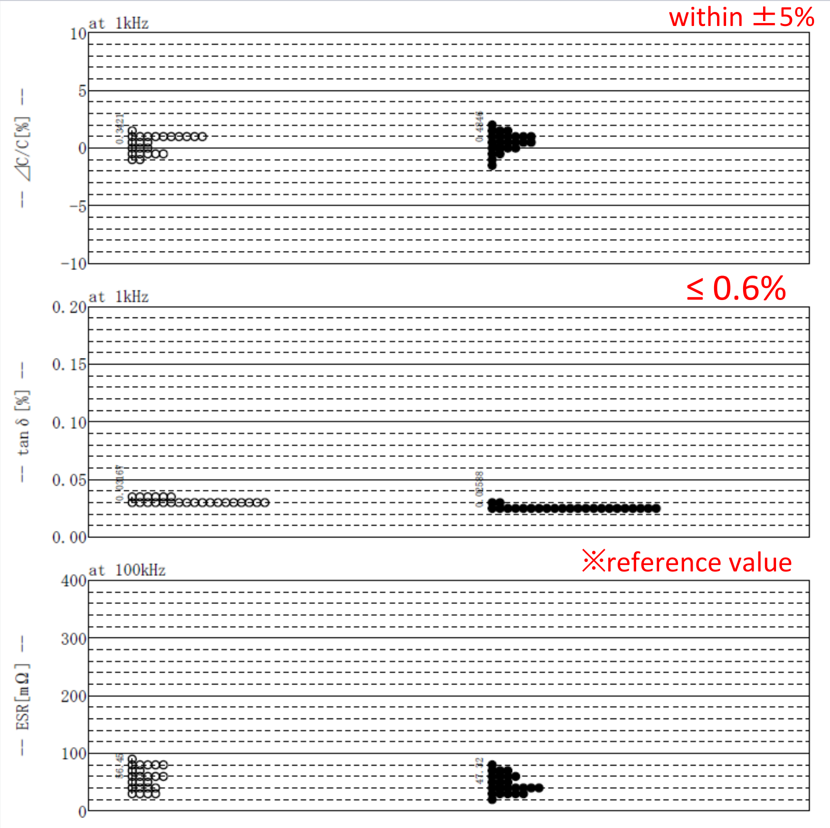
	1608 Shape	3225 Shape	6041 Shape
Current Product			
Changed Product			

Due to resin characteristics, the changed product shows increased reddish-brown phenolic resin on the surface near the external electrode compared to the current product.
No impact on product performance (mountability, electrical characteristics, etc.).

4.Evaluation Results - Fig.2 Electrical Characteristics -

3225 Shape (ECHU1C104JX5)

Current Product Changed Product



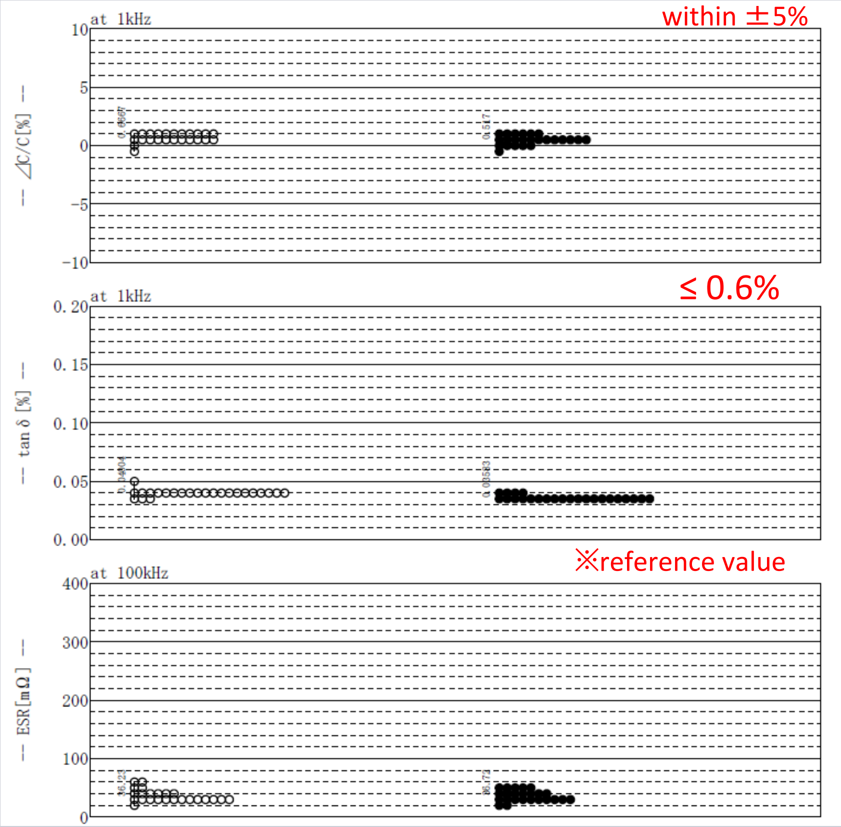
within ±5%

≤ 0.6%

※reference value

6041 Shape (ECHU1H224JX9)

Current Product Changed Product



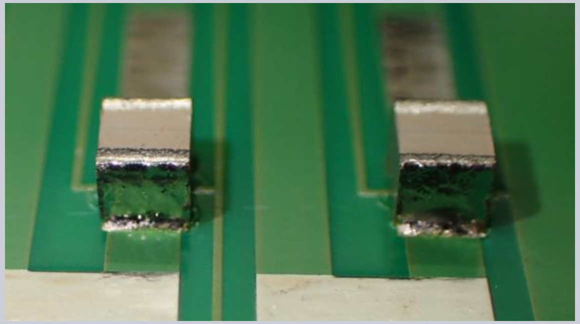
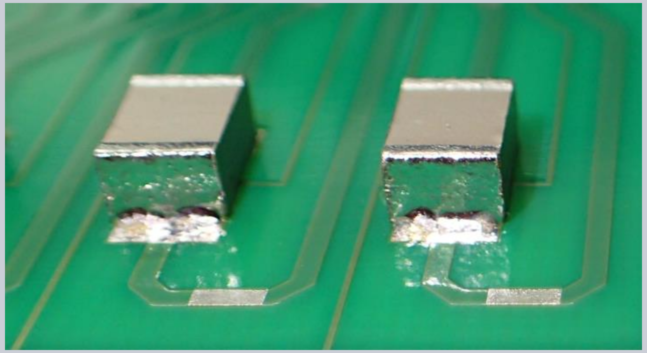
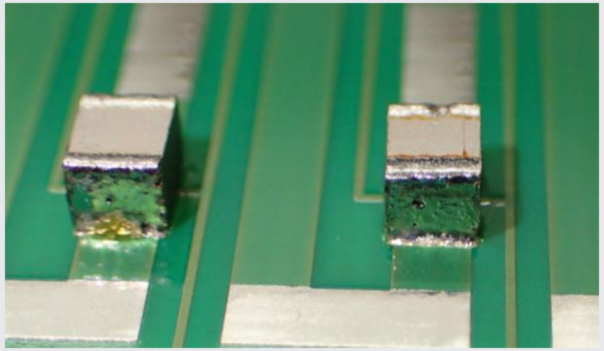
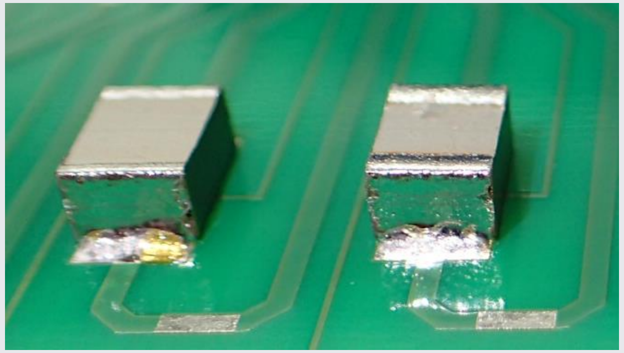
within ±5%

≤ 0.6%

※reference value

Both capacitance and tanδ are within standard range and equivalent to current product.
ESR values are for reference only.

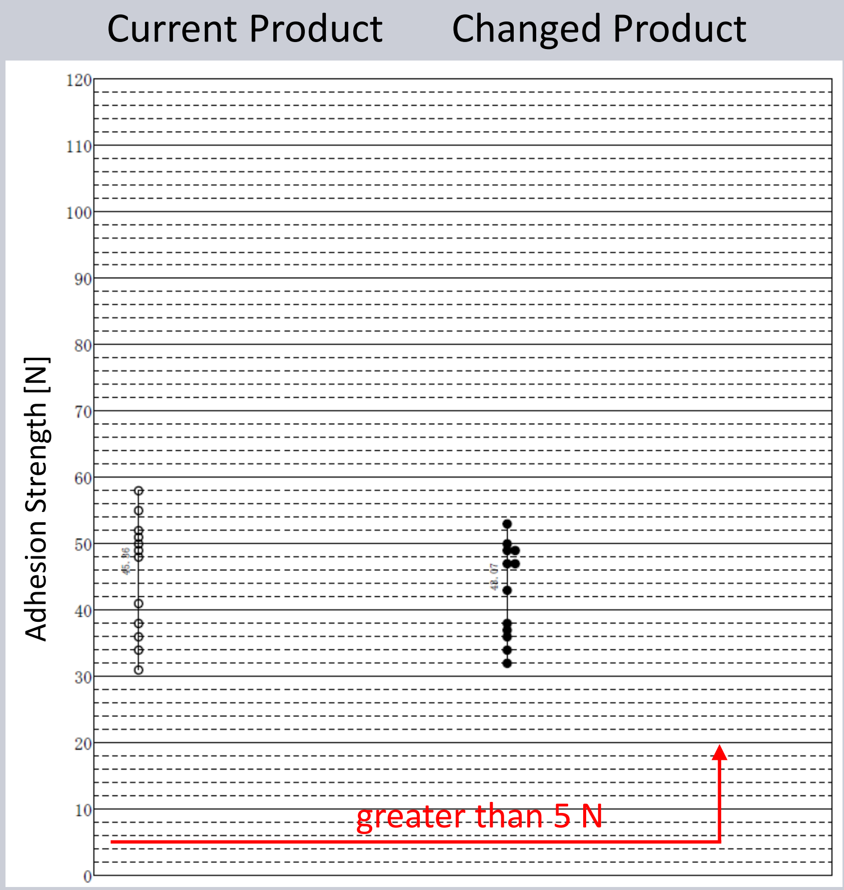
4.Evaluation Results - Fig.3 Mountability -

	3225 Shape (ECHU1C104JX5)	6041 Shape (ECHU1H224JX9)
Current Product	 No abnormalities in 12 out of 12 units	 No abnormalities in 12 out of 12 units
Changed Product	 No abnormalities in 12 out of 12 units	 No abnormalities in 12 out of 12 units

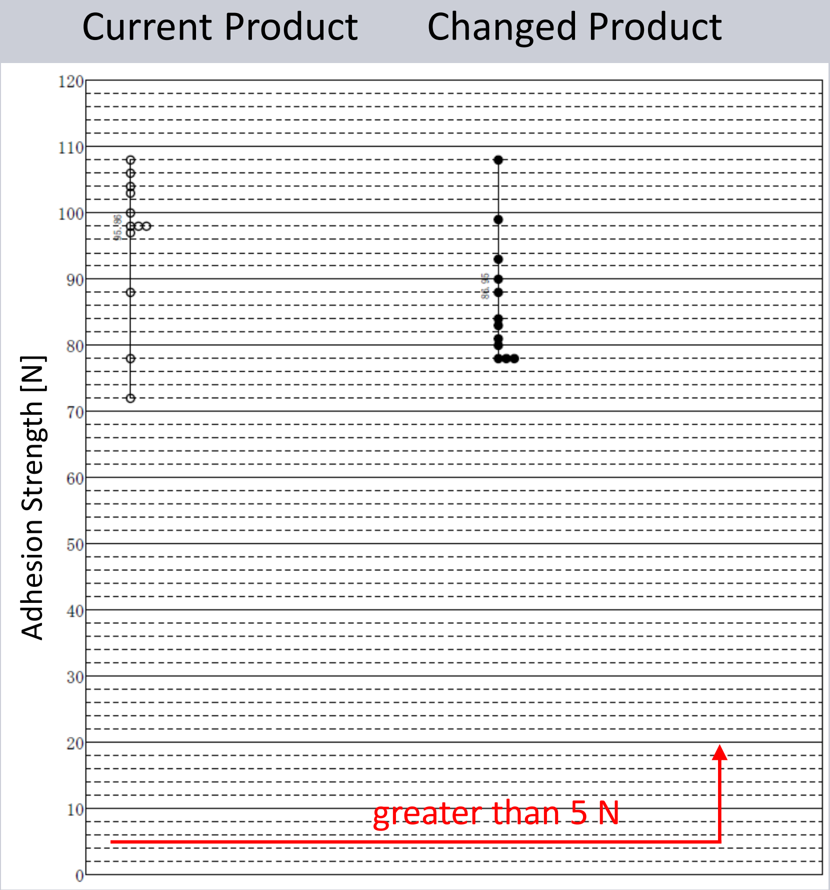
Mountability of the changed product is equivalent to the current product; no issues found in 12/12 samples.

4.Evaluation Results - Fig.4 Adhesion Strength -

3225 Shape
(ECHU1C104JX5)



6041 Shape
(ECHU1H224JX9)



Adhesion strength to the board is within standard range and equivalent to the current product.