DPCC™ （Direct Printed Copper on Ceramics base substrate）

POINT

Forming with Copper Paste

- ✓ Thick Copper Wiring
- ✓ Narrow Spacing

- ・High current and high heat dissipation substrate applications
- ・Logic circuits can also be formed on the same substrate as heat dissipation circuits
- ・Available thick copper with narrow L/S

Ver. 2312

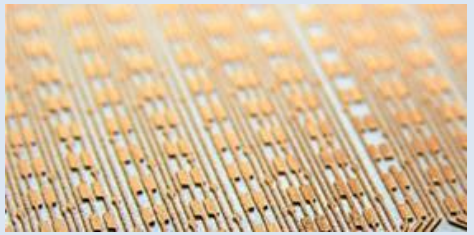
DPCC™ (Direct Printed Copper on Ceramics base substrate)

1 Over 1,000μm* Circuit Thickness

Circuit pattern thickness suitable for power semiconductor substrates can be selected.

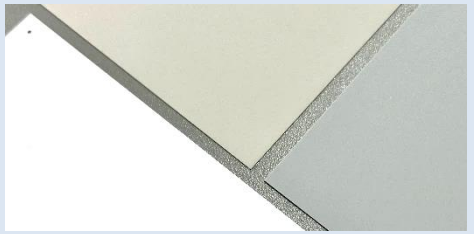
2 Min.25μm* Pattern Spacing

Enables high-density wiring formation that exceeds conventional DBC/AMB substrate.



3 Various Ceramics Substrate

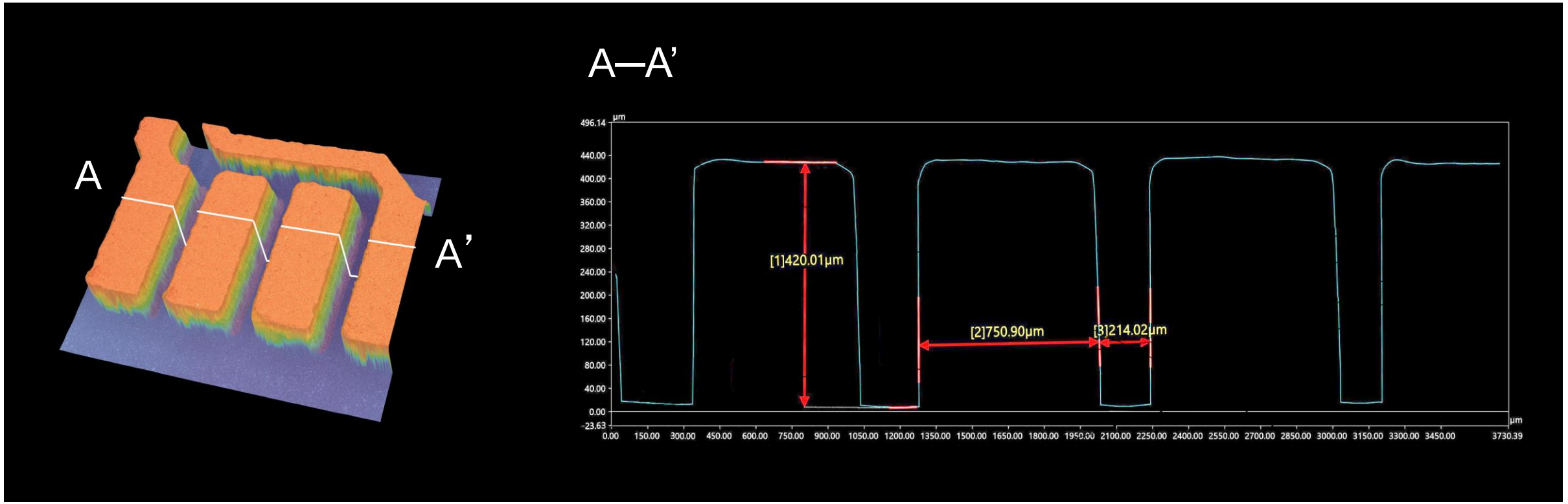
Available Cu circuit patterns on various ceramic substrates.
(Ex. Al_2O_3 , AlN , Si_3N_4 etc.)



*Depends on printing conditions

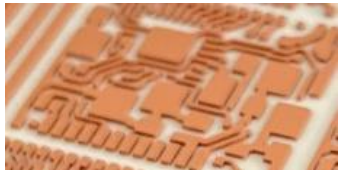
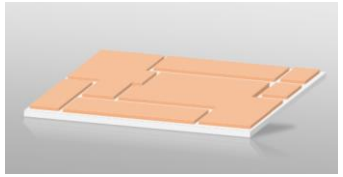
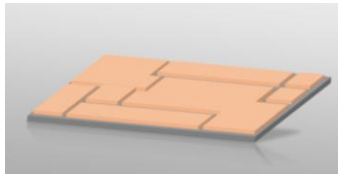
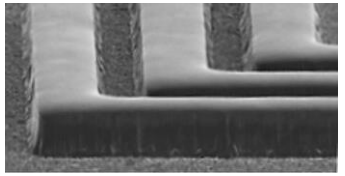
1. DPCC™ Product Features

Thick with Narrow Spacing



- Print method : Possible to form L/S that is difficult to achieve with etching.
- High aspect ratio terminal formation.

2. DPCC™ Design Rules

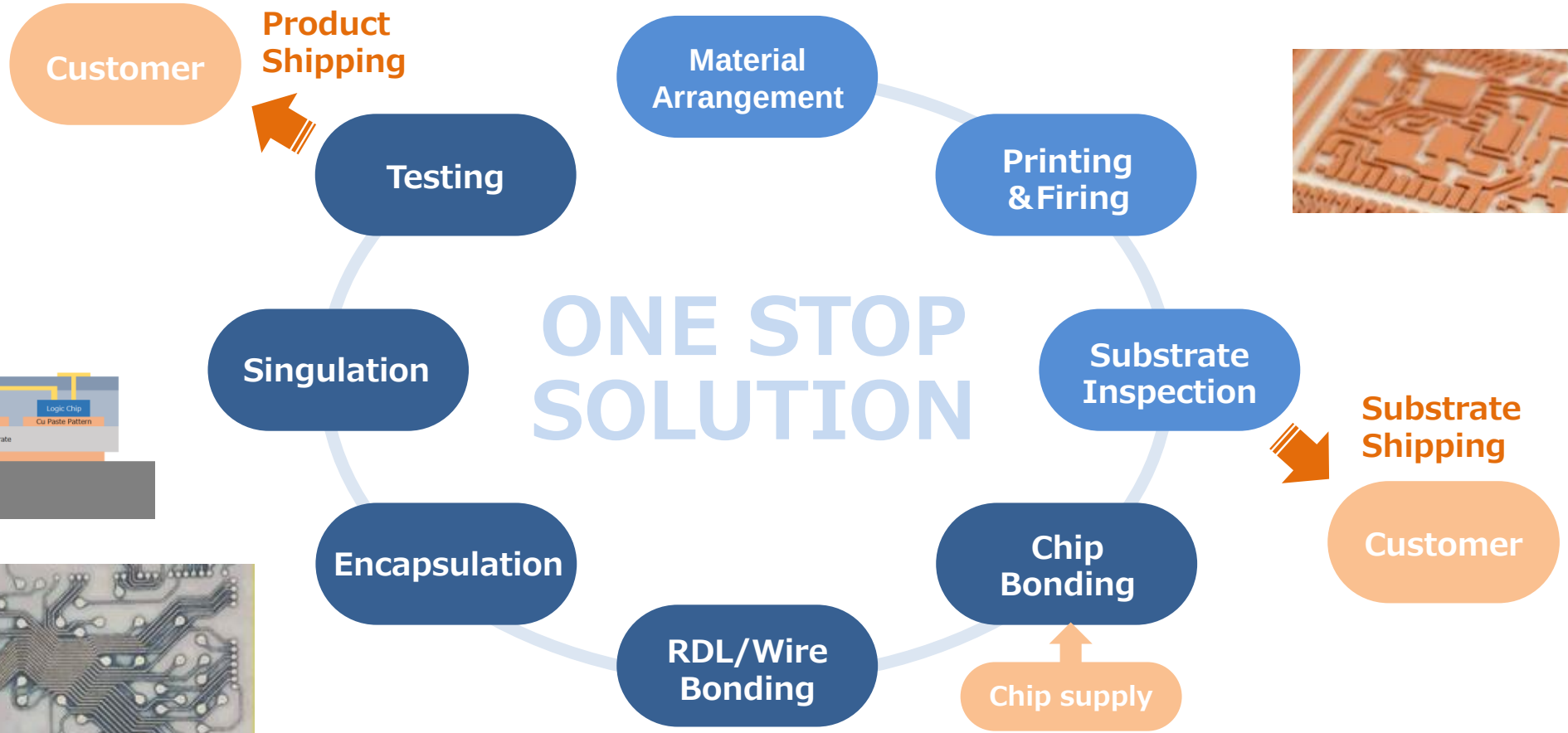





	DPCC™	DBC	AMB	MSAP
Base material	Al_2O_3 , AlN , Si_3N_4 etc.	Al_2O_3	AlN , Si_3N_4	Al_2O_3 , AlN , Si_3N_4 etc.
Patterning material	Cu	Cu	Cu	Cu, Ag, Au, etc.
Max. size	No limit	Depends on Cu foil size/Substrate size	Depends on Cu foil size/Substrate size	Depends on Substrate size
Max. thickness	＞1,000μm*	＜800μm	＜800μm	＜50μm＊
Min. L/S	＞25μm*	Pattern thickness	Pattern thickness	＞10μm＊
L/S tolerance	±50μm	±50μm	±50μm	±10μm
Surface plating	Available	Not available	Not available	Available
Process	Just a printing process (Suitable of mass production)	Complicate	Complicate	Plating and etching etc.
Pattern resistance value	2.4μΩ/cm2	1.7μΩ/cm2	1.7μΩ/cm2	1.7μΩ/cm2

*Depends on design

3. One-Stop Solution

Available from substrate manufacturing to product assembly.



Thank you!

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