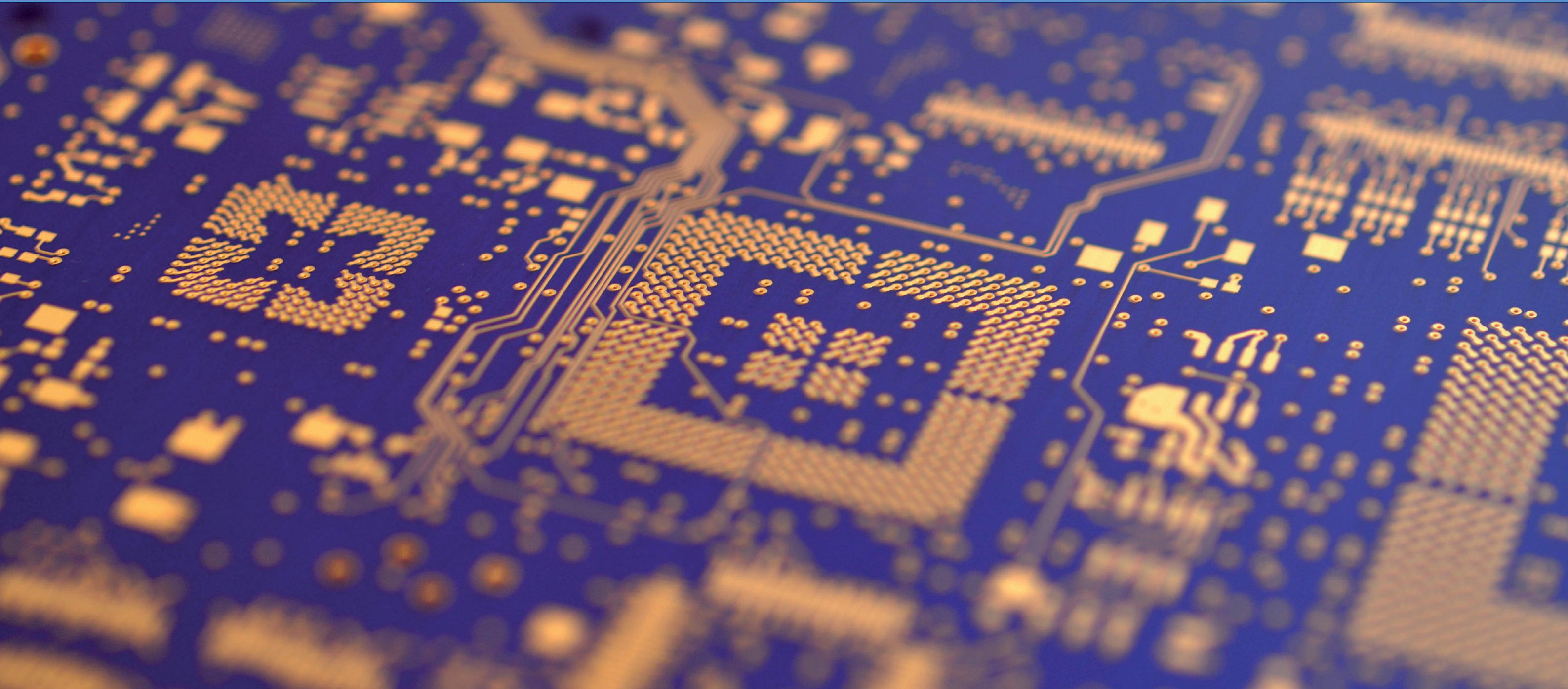
Cuprapulse® XP7

Vertical conformal pulse plating

Electronics | Panel and pattern plating | www.atotech.com



Vertical conformal pulse plating of TH and BMV with soluble anodes

>90%
throwing power

Increasing productivity and quality at once

Cuprapulse® processes are for vertical pulse copper plating with soluble anodes.
Productivity increases with simultaneous quality improvements:

- With Cuprapulse® circuit boards are plated at up to 3 A/dm² in pattern plating.
- The throwing power into the hole (1.6/0.3 mm) is approx. 100%.
- The surface distribution is kept within a narrow range.

As there is less copper used this results in fewer anode consumption, lower consumption of soldermask and a thinner dry film can be used. DC technology does not even come close to the throwing power performance achieved with Cuprapulse®. This holds true for the whole range of board thickness from 1-6 mm, any aspect ratio and especially blind micro vias.

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Cuprapulse® XP7 – excellent conformal copper plating in hoist type equipment

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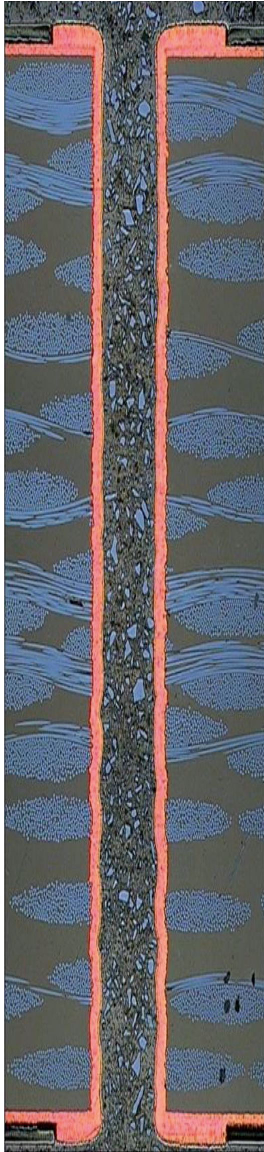

Figure 1:
Panel thickness 3.2 mm with hole diameter 0.25 mm.
Effective current density 1.7 A/dm²
Throwing power >80%

Figure 2:
Panel thickness of 4.2 mm, hole diameter 0.3 mm, throwing power >90%

Features and benefits

- Capable for panel and pattern plating of high aspect ratio at high current densities
- Much better surface distribution in tracks and line shapes than in DC mode
- Low surface tension for effective wetting of high aspect ratio through vias and BMVs
- Improved deposit tensile strength and ductility compared to standard pulse plating
- Meets solder shock requirements according to industry standards
- Excellent plating results for HDI applications
- Qualified for production at European automotive PCB suppliers

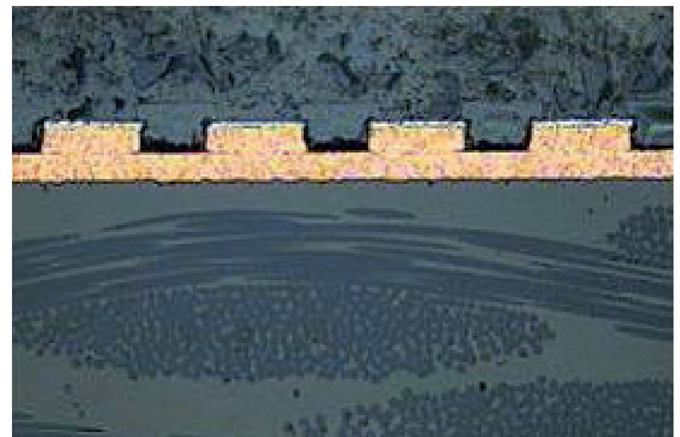

Figure 3:
Pattern plate line width 80 µm, spaces 50 µm (tin as metal etch resist on top)

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