

Shadow Plus

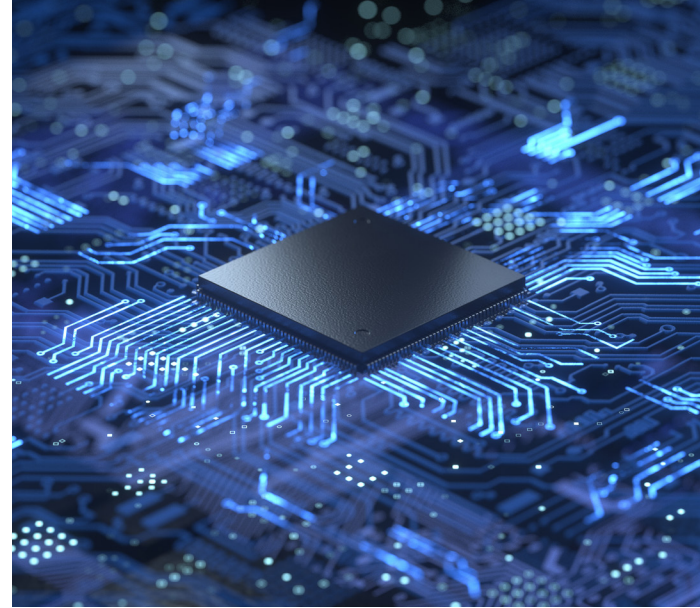
Advanced Direct Metallization

Shadow Plus is our Fastest Throughput and Most Reliable Alternative to Electroless Copper

Shadow Plus enables the plating of microvia and through hole structures using graphite-based colloids and proprietary additives to make holes conductive.

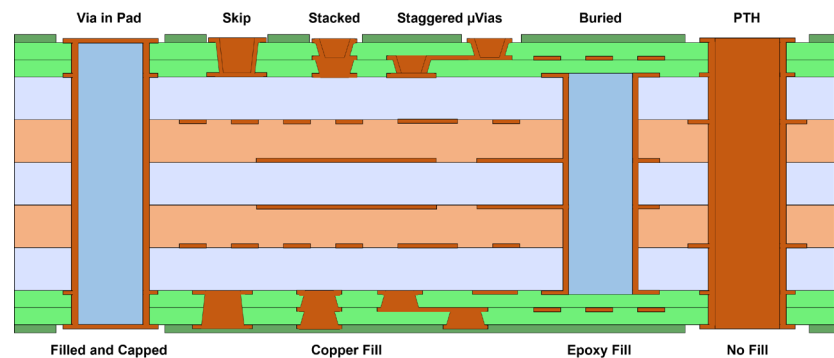
Our direct metallization process allows designers to integrate microvias and any-layer HDI using high performance and exotic materials.

Shadow Plus is a more consistent process that uses less power and runs at lower operating temperatures. With no formaldehyde and lower chemical consumption, it is safer for operators and reduces maintenance. This direct metallization process can handle the most demanding designs used in critical applications.



KEY FEATURES

- Higher throughput via faster propagation
- Even greater bath stability
- Wider process operating window
- Reduces feed & bleed into the waste treatment stream
- No heavy metals & no formaldehyde used
- Reduced power consumption lowers the carbon footprint
- Non-dynamic chemistry with a longer bath life
- Smooth three-chemical step process that is easy to control
- Reliability proven by OM, Thermal Cycling and IST
- Strong copper-to-copper direct bond strength
- Elimination of expensive palladium activators

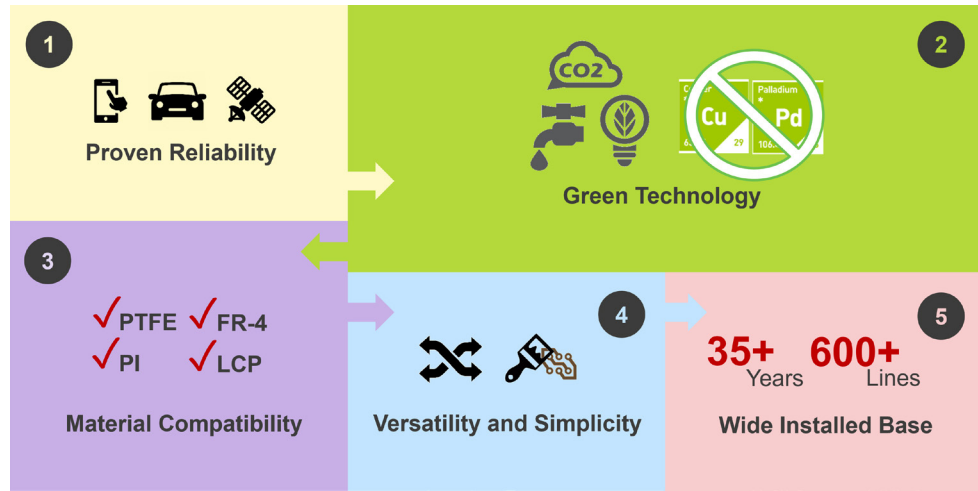
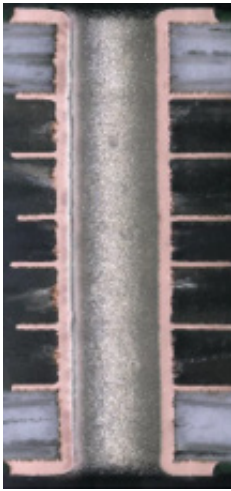


Shadow Plus

Advanced Direct Metallization

Cutting-Edge Substrates, HDI. Shadow Plus Outperforms

Shadow Plus is an excellent alternative to electroless copper. Utilizing fewer rinse steps, Shadow Plus delivers savings and sustainability. Non-dynamic chemistry and reduced process steps enable less analysis and easy line start / stops.



Shadow Plus has wide material compatibility with various exotic materials. This primary metallization technology is ideal for advanced substrates with high aspect ratios, blind, buried and stacked vias, tight lines and spaces, and more. Any-layer HDI and mSAP designs are plated with ease by Shadow Plus.

Environmentally Friendly Value

