

PallaBond®

The next final finish



Electronics

Final finishing technology

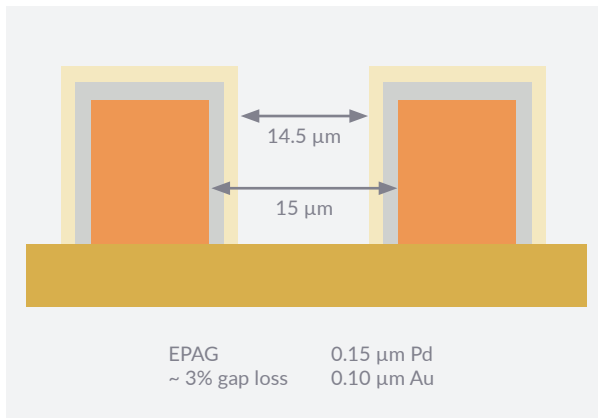
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Universally applicable for high end circuitry

Ideal suited for high frequency design

PallaBond® has been designed to achieve maximum fine feature resolution and definition whilst enhancing high frequency design.

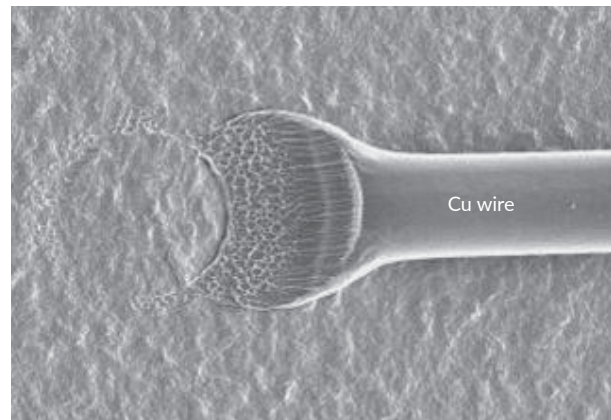
The totally phosphor free finish is also bio-compatible for medical applications.



Meeting diverse requirements

PallaBond® is an autocatalytic palladium final finish. The system does not employ a nickel diffusion barrier. The benefits are multiple and include minimal gap loss from the deposited layers and low impact on signal loss through the utilization of highly conductive deposits. The operating temperatures are also lower than competitive final finish processes.

Offering excellent bonding capabilities



Top view: copper-wire 20 μm on pure EPAG finish

Process compatibility

- Vertical processing is established
- Horizontal processing is under development
- Pure palladium
- Autocatalytic gold

PallaBond® provides best final finishing for now and the future

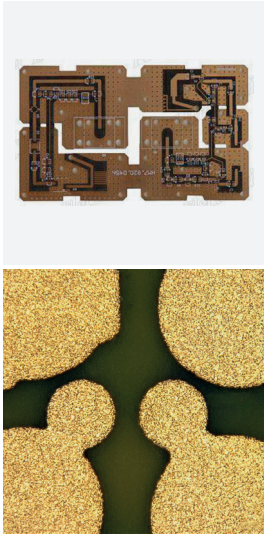


Figure 1-2:
Functions and benefits of
PallaBond®

Enabling high frequency

PallaBond® is the optimum finish for high frequency application such as radar. The signal integrity performance is similar to silver and the low deposit thicknesses and their related conductive properties ensure minimal skin effect contributions.

Ultra high frequency is under evaluation.

Capable of fine detailed design

Increasingly fine features dictate a high resolution capable final finish. The overall geometry contributions of the deposit is approximately 200 nm.

The omission of a nickel diffusion barrier is the key. Not only does an effective nickel deposit contribute significantly to the overall dimensions of a feature, there exists a very real potential for extraneous plating.

Features and benefits

- Capable of high density circuitry
- Low temperature active steps to accommodate high frequency materials
- Offers planar surface for soldering
- Multi solderable at 0.1 μm of Pd
- Suitable for wire bonding of Au, Cu-Pd, Cu, Al, Ag
- Used with conductive adhesives
- Suitable for ceramic electronics
- Fine line capable < 15 μm space
- Thermo compression bonding
- Supports flex applications
- Improved high frequency performance

