# PallaBond®

## The next final finish

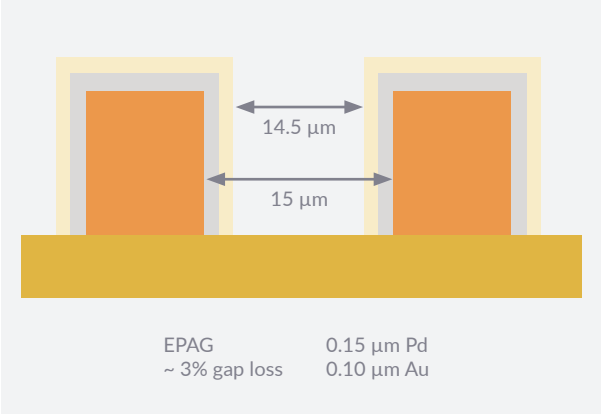
Electronics | Final finishing technology | atotech.com

# 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.

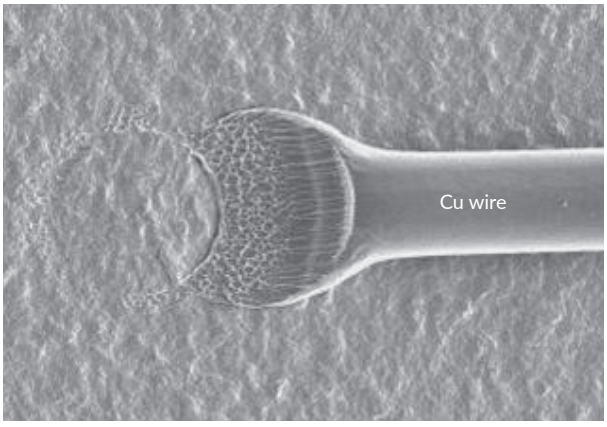
The totally phosphor free finish is also bio-compatible for medical applications.




## 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

- Pure palladium deposit
- No flash gold step needed
- Versatile Pd and Au electrolytes available to combine ENEPIG and EPAG plating in one plating line

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# PallaBond® provides best final finishing for now and the future

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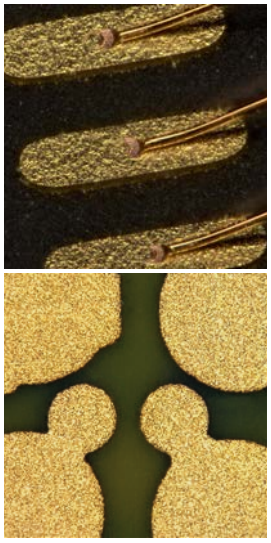

**Figure 1-2:**
Functions and benefits of Pallabond®

## 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. Additionally, it does not only provide highest solder joint reliability but also the capability for wire bonding.

## 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 to 300 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