TechniPad

High-Performance EPIG

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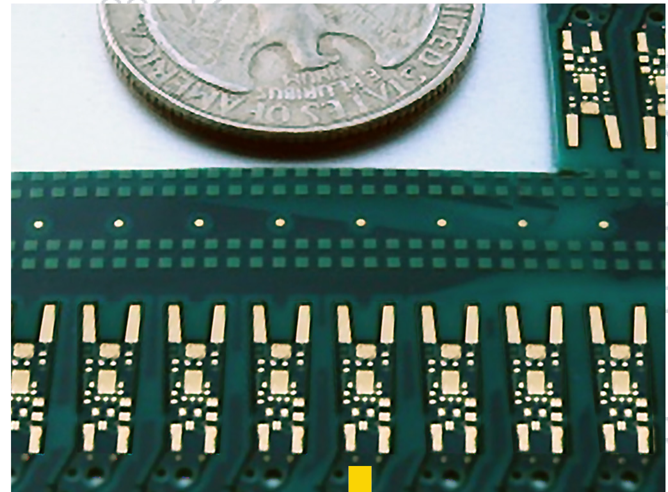
Electroless Palladium Immersion Gold

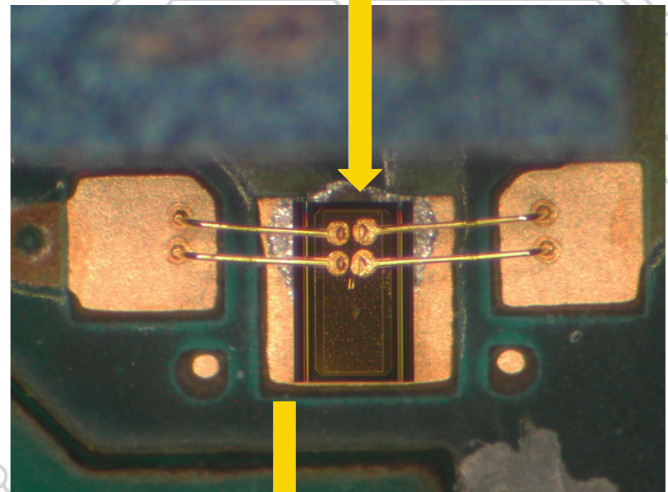
TechniPad EPIG utilizes direct Palladium deposition over Copper to end up with a High performance process, Nickel free.

To the fabricator, this means excellent coverage, no extraneous plating, and reduced operating costs. To the assembler and OEM, the result is excellent solderability, superior bondability, and reliable low contact resistance.



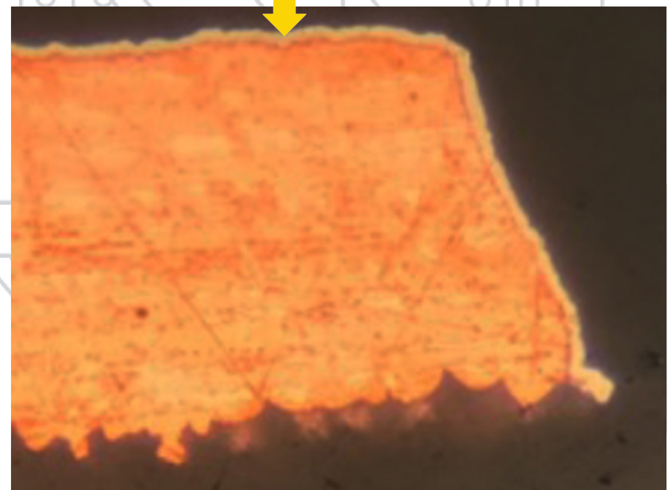
Features

- Substrate catalyzed Au deposit eliminates corrosion potential
- Precise activation
- Pure Pd deposit from a stable process
- Predictable process



Fabrication Benefits

- Low operating cost
- Reduced gold & palladium usage
- Long bath lives
- Reduced maintenance and analytical costs
- No extraneous plating
- No Nickel



Assembly Benefits

- Best in class solderability
- Low contact resistance
- Excellent bondability
- World class acceptability

TechniPad EPIG Process

For today's electronics market, the performance of any final finish on a PCB is measured by its solderability, the ability to wire bond and low contact resistance.

Solderability

The TechniPad EPIG process provides excellent solderability. If solder joint adhesion is critical due to the size of the component attachment pad, TechniPad EPIG is recommended. For soldering applications, 2-5 micro inches of Pd is recommended.

Wire Bonding

The TechniPad EPIG will provide a gold wire bondable surface with over 6 grams of pull even with no surface failures. Based on testing, a minimum of 5 micro inches of electroless Pd is recommended but 10 is preferred.

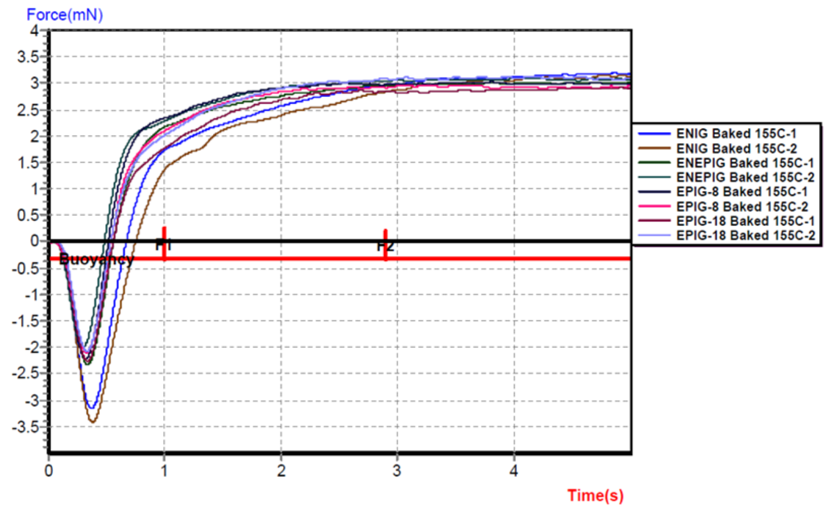
Contact Resistance

TechniPad EPIG provides excellent low-contact resistance for single insertions. However, for multiple insertions or for more critical applications, TechniPad EPIG with a minimum of 10 micro inches of Pd is recommended.

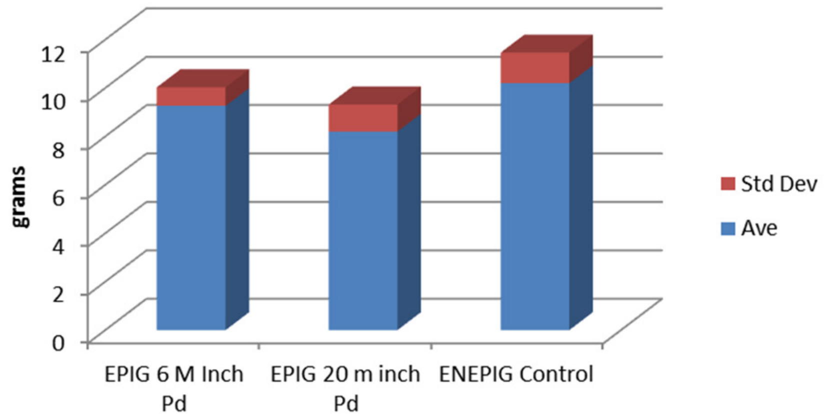
SEM/EDS

Analysis has shown that TechniPad EPIG has lubricity similar to electrolytic hard gold deposits. Lubricity allows for self-healing of the final finish with each insertion. However, at 10 micro inches of Pd, EDS analysis shows stable, low Ni levels at the surface after multiple insertions.

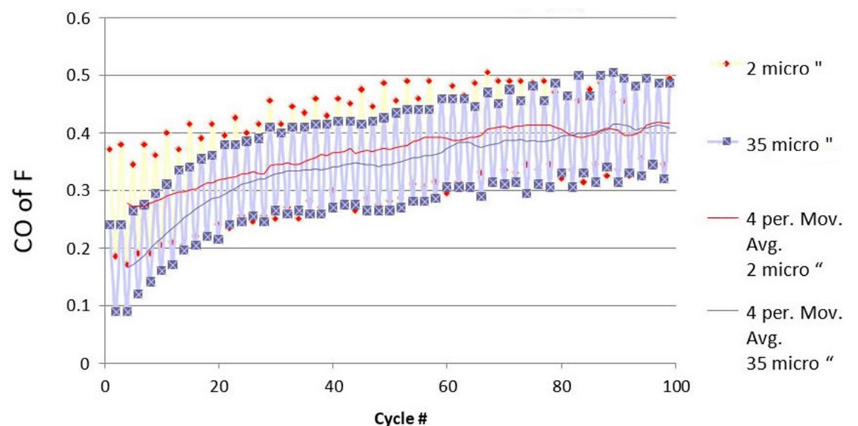
TechniPad Wetting Balance after 2 hour 155 °C



Wire Bond Pull Srength EPIG vs ENEPIG



Coefficient of Friction Low vs. High Pd Thickness



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