

Mitigation of 5G Signal Loss Due to PCB Copper Foil Surface Treatments

Motivation:

- Copper foil manufacturers apply treatments to copper foil and PCB fabricators treat copper surfaces to improve adhesion to resin systems. This treatment is often essential for PCBs to survive thermal shock but can have a detrimental effect to signal loss and integrity, particularly critical for high frequency 5G applications which require very low-profile copper foil and low-loss resin systems for electrical performance.

Objective:

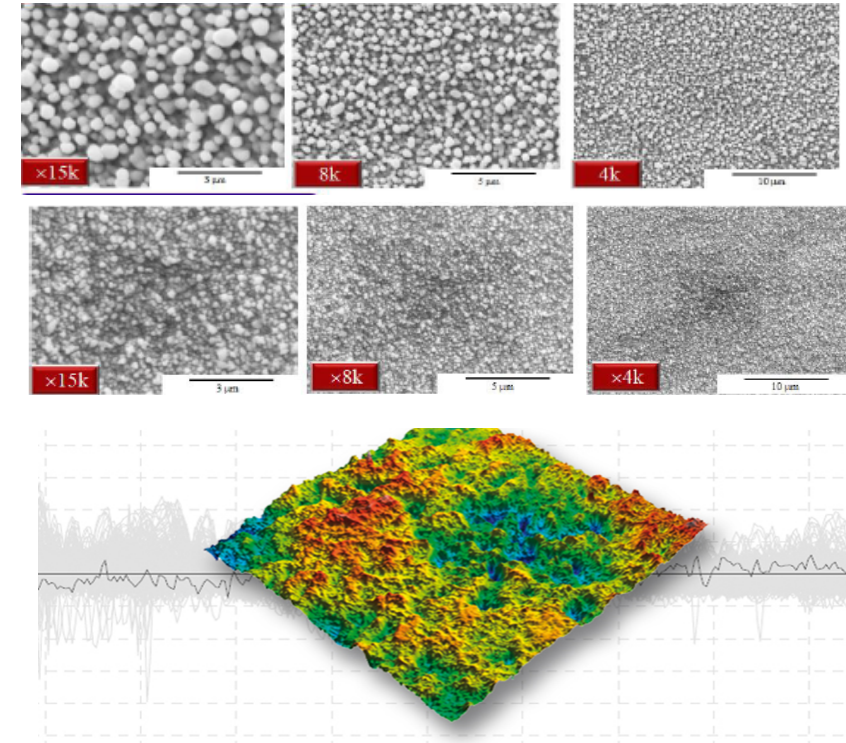
- To characterize various copper surface treatments / resin systems to mitigate signal loss while maintaining good adhesion within the PCB structure. Determine best metrology and test methodology to characterize bond strength.

Strategy/Approach:

- Investigate metrology for very low-profile copper surface finish. Determine best test methodology which relates surface finish to adhesion and durability of PCB interlayer bond.

Longer term:

- Guideline publication



Status:

- Of interest to OEMs, EMS providers, PCB fabricators & laminate suppliers
- Draft project scope
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