Reliability Testing of Hybrid PCBs for RF Applications

Motivation:

- A hybrid multilayer PCB uses dissimilar materials to optimize electrical performance for high-frequency applications whilst reducing costs. A key challenge is predicting PCB reliability and durability for various material combinations.

Objective:

- To develop a predictive comparative simulation tool, to provide guidance for combining different resin systems.

Strategy/Approach:

- Investigate cure kinetics and rheology characterization of a range of laminate resin systems typically considered for high frequency and 5G PCB products.
- Investigate key fabrication processes such as via hole formation and subsequent resin de-smear (chemical and plasma).

Longer term:

- Best practice manufacturing procedures

Multilayer PCB X-section with outer layer Microwave laminate

Status:

- Of interest to OEMs - users and designers of PCBs. PCB material suppliers & fabricators
- Draft project scope
- Plan call for interest webinars