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Webinar Course Description

Die Bond Wirebond..... Back to Basics (4 sessions)

Die attach and wirebond are the fundamental skill sets needed to assemble hybrids, microwave modules and other types of packaged microelectronic devices. This condensed four part webinar is designed to highlight critical material and process issues and emphasis the important steps needed to build a quality product. The instructor relies on years of experience and clear graphics to talk through the technical details of epoxy and eutectic solder attach of silicon and delicate gallium arsenide chips and other types of passive components. Interconnecting these state of the art devices to the outside world involves gold and aluminum wirebonding, which must be performed to exacting standards.

Webinar Outline

- Session 1: Epoxy Component Attach- Material and Process Review
Substrate Attach
Die Attach using Conductive and Non-Conductive Epoxy
Destructive and Non-Destructive Process Evaluations
Die Shear, Temp Cycle, Stud Pull
Things to Look For After Die Attach
- Session 2: Solder Component Attach- Material and Process Review
Eutectic Solders
Vacuum and Scrub Assisted Methods
Non-Destruct Evaluation; X-Ray, Acoustic Imaging, Centrifuge
Simple Thermal and Heat Dissipation Model (Excel Spreadsheet)
Material Trade Offs and Thermal Heat Spreading
- Session 3: Gold Ball Bonding- Material and Process Review
Factors that Affect the Wirebond Process
Ball Shear Testing per the ASTM
Deep Access Au Wedge Bonding
- Session 4: Wedge Bonding with Aluminum Wire- Material and Process Review
Wire bond pull testing
Destruct Pull Test and Mil Spec Limits
Non-Destruct Pull Testing
Intermetallic Formation and Common Wirebond Reliability Issues
Heavy Gauge Aluminum Wirebond