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Webinar Course Description

Visual Inspection of Microelectronic Assemblies (3 sessions)

Visual defects that go unnoticed during assembly operations can cause field failures in military and high rel commercial and medical products. This fast paced three part webinar series is intended to educate operators, inspectors and QEs about the importance of identifying and eliminating visual defects that result from assembly operations. The webinar is focused on critical defects seen at incoming, Pre Cap and external visual inspection in accordance with MIL-STD-883 and MIL-STD-750 inspection criteria.

Webinar Outline

Hybrid Materials and Processing Overview
- Review of terminology

General Inspection Guidelines and Procedures
- Visual inspection requirements flowdown
- MIL-PRF-38534 MIL-STD-883 TM 2017 TM 2010
- MIL-STD-750 requirements

Visual Inspection Criteria
- Defects related to wafer fab, saw and break, probe test etc.
- Thick film/thin film substrate defects e.g., cracks, chipouts
- Laser Trim defects
- Epoxy die attach, fillet criteria for active and passive elements
- Eutectic solder attach
- Epoxy attach of chip capacitors and chip resistors
- Wirebond defects, e.g., excessive squash out, heel cracks, misplaced bonds, etc.
  - ball bonds, wedge bonds, ribbon bonds and heavy wedge aluminum

Foreign Material Identification and Contamination Control
External Visual Inspection Criteria

Summary and Course Review