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HYBRID PRE CAP VISUAL INSPECTION

1 DAY

Course Description

Hybrids/MCMs/RF Modules all require a visual inspection step just prior to encapsulation or hermetic seal. This is a critical process step that requires a high degree of operator skill and understanding of what to look for and reject as part of the inspection process. This course defines the inspection criteria based on traditional Mil Spec documents in conjunction with industry accepted best commercial practices. Over 200 color photographs of actual production defects are reviewed and discussed in detail. The students are exposed to a variety of defects and how the defects relate to the materials and process flow. Inspection checklists are used to simplify the criteria and focus on the major problem areas.

- Understand what to look for as part of a pre cap visual inspection
- Learn how to interpret and apply traditional Mil Spec visual inspection guidelines

Who should attend

The course is intended for quality assurance personnel, inspectors, lead operators and others responsible for inspection of the hardware prior to the final package sealing process.

Course Outline

Hybrid Materials and Processing Overview

Review of terminology

General Inspection Guidelines and Procedures

Visual Inspection Requirements Flowdown

MIL-PRF-38534 MIL-STD-883

Pre Cap 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, typical problems encountered

Eutectic solder attach

Epoxy attach of chip capacitors and chip resistors

Wirebond defects, e.g., excessive squash out, heel cracks, misplaced bonds, etc.

Foreign Material Identification and Contamination Control

Rework and Repair Limitations

External Visual Inspection (optional)

Summary and Course Critique

Course Fee: \$695