

Failure Analysis and Reliability Testing

Continuing Professional Advancement in Electronics Manufacturing



ISO 9001:2008
CERTIFIED

Overview

The objective of this course is to prepare the participant to make informed decisions when troubleshooting a manufacturing problem or collaborating with an analytical laboratory. Case studies provide a forum for problem formulation, investigation and resolution. The program is based on IPC, ANSI, ASM, ISTFA, EDFAS and IEEE test methods and specifications.

Who Should Attend

Both the novice and experienced participants can benefit from a failure analysis course, even those that do not deal with failure analysis directly: reliability engineers, product engineers, design engineers, quality assurance, manufacturing engineers, procurement managers and production line supervisors.

Content

The course is divided into lab and lecture sessions. Students are introduced to a broad range of failure analysis and reliability issues through hands-on instruction. In addition to exposure to common electronic failure mechanisms, participants learn the most effective analytical methods. The course contains the latest information on lead-free solder, x-ray fluorescence, RF plasma etching, and micro-probing of integrated circuits. Also included are:

- Decapsulation of Integrated Circuits
- Differential Scanning Calorimetry (DSC)
- Fourier Transform Infrared Spectroscopy (FTIR)
- Optical Microscopy
- Probe Station and Micro-Probing of Circuits
- RF Plasma Etching
- Scanning Acoustic Microscopy (SAM)
- Scanning Electron Microscopy (SEM)
- Shear/Pull Testing
- Solderability Testing
- Transmission X-Ray
- X-Ray Fluorescence (XRF)

Benefits

Students learn sample preparation, microstructure and evaluation techniques specific to lead-free solders, components and surface finishes. The two-day course layout provides the proper format for comprehensive understanding of topics covered. Coupled with the lab exercises, the class includes scheduled time to address specific problems encountered by the students at their workplace. Each student walks away from the course with a better understanding of manufacturing related issues, as well as text that will aid in resolving any further failure analysis issues.

Duration, Registration and Pricing

Contact the training center via any of the methods provided below for pricing of this two-day course.



ACI Technologies, Inc. • phone: 610.362.1200 • web: www.aciusa.org
Training Center • phone: 610.362.1295 • email: registrar@aciusa.org
Helpline • phone: 610.362.1320 • email: helpline@aciusa.org