

## Pb-Free and Medical Applications

½ Day Course

### ABSTRACT

The day of reckoning regarding Pb-free continues to come closer for most medical OEMs. While there is a wide range of medical applications, with a diversity so great that the idea that they have a unique set of requirements can be called into question, the need and approach to Pb-free does have some general similarities. In this seminar, specific case studies will be used to provide guidance and understanding on how the medical industry is dealing with Pb-free and identify the organic evolution of a series of industry best practices. A specific focus will be on quality and reliability assurance and how these activities are in play for devices that monitor, treat, and control medical situations.

Specific areas of concern that will be addressed will include:

- Scrubbing of bill of materials (BOM) for RoHS compliance and compatibility
- Tin whisker risk assessment and mitigation
- Selecting and qualifying printed board materials
- Developing controlled Pb-free processes
- Product qualification testing and acceptance

### OUTLINE

- Introduction
- Environmental Legislation Worldwide (RoHS, REACH, ELV, etc.)
- Case Study: Devices for Emergency Treatment
  - Specific requirements and limitations (complexity, volume of production, use environment)
  - Potential challenges
  - Field issues
  - Identified solutions
- Case Study: Complex Systems for Medical Treatment
  - Specific requirements and limitations (complexity, volume of production, use environment)
  - Potential challenges
  - Field issues
  - Identified solutions
- Case Study: Implantable Devices
  - Specific requirements and limitations (complexity, volume of production, use environment)
  - Potential challenges
  - Field issues
  - Identified solutions
- Conclusion