IPC PCB DESIGNER CERTIFICATION (CID)

IPC's Interconnect Designer Certification

IPC-2221 / IPC-2222 / IPC-T-50

COURSE DESCRIPTION

The IPC Designer Certification (CID) is a professional development program introducing the basics of PCB design and a better understanding between design and actual assembly of the final product. The program reviews the production process and how changes in PCB layout can reduce production problems further down the road.

This 4-day, lectured course (3-days lecture, 1-day review and testing), goes beyond the fundamentals of component placement and track routing to encompass an understanding of all the elements that go into product development utilizing IPC-2221 "Generic Standard on Printed Board Design" and IPC-2222 "Sectional Design Standard for Rigid Organic Printed Boards".

The program covers guidance and requirements for printed board assembly and design parameters from component mounting, interconnecting structures, conductor characteristics, surface finishes, board electrical test, thermal stress, panelization, laminate selection, scoring and routing parameters, board thickness tolerance, nonfunctional lands, hole aspect ratios, via hole size and printed board edge spacing just to name a few.

Taught by recognized industry professionals, this program enhances your experience by exposing you to IPC Certified Instructors who possess a broad expertise and appreciation for the process.

Class materials are sent out upon enrollment. Participants are expected to be familiar with course materials prior to class.

WHO SHOULD ATTEND

This course is designed for anyone involved in the development, design and fabrication–at any level from sales, management, procurement, or quality–in printed circuit board production.

PREREQUISITES

- Understanding of the English language, oral and written

CLASS SIZE

Maximum number of students is limited to ten (10) in order to provide greater instructor interaction. Call early to reserve your space.

COURSE OUTLINE

DAY 1

DESIGN CONSIDERATIONS
- Considerations for Design
- Placement and Routing Techniques
- Electrical Characteristics
- Copper Clad Laminates
- Holes in Printed Boards
- Drilling and Hole Locations
- Features Formed in Copper

THERMAL, RELIABILTTY, AND TESTING ISSUES
- Thermal Management of Boards
- Thermal Management of Assemblies
- Reliability
- Board and Assembly Testing

ELECTRICAL PARAMETERS
- Printed Board and Assembly Viewing Principles
- Introduction to Datum Dimensioning
- Grid Systems
- Tooling Holes and Fiducials
- Board and Assembly Panelization
- Panel/Pallet Separation Methods

DAY 2

COMPONENT TYPES
- Basic Components
- Embedded Components
- Edge Board Connectors
- Stiffeners, Bus Bars, Sockets, Jumpers and Terminals, MELFs, Eyelets

COMPONENT AND ASSEMBLY ISSUES
- Parts List Development
- Printed Board Tolerance Analysis
- Documentation to Facilitate Design to Fabrication Interface
- Printed Board and Assembly Data Format Standardization
- Component Insertion & Attachment Techniques
- Solder Processes
- Clinched Leads

BOARD SURFACE TREATMENTS
- Solder Mask, Conformal Coatings, Protective Coatings/Surface Finishes
- Legend
- Conductive Inks

DAY 3

DOCUMENTATION AND DIMENSIONING
- Documentation and Classifications
- Basic Drawing Formats

SCHEMATIC AND LOGIC DIAGRAMS

FABRICATION AND TOLERANCING REQUIREMENTS
- Board Fabrication Documentation
- Dimensioning and Tolerancing

ASSEMBLY DOCUMENTATION AND BOMS

DAY 4

Q & A

CERTIFICATION TESTING

REGISTRATION For up to date pricing and more information on any of the EPTAC programs, or to enroll, please call us toll free or visit eptac.com.

Toll Free: 1-800-64-EPTAC
email: register@eptac.com
Web: eptac.com

ON-SITE TRAINING Please call a training consultant and ask about customized course content, on-site training and training around your production schedules.