

Axiom Electronics PCBA Design for Manufacturability Guidelines

Section: 3.0	Revision: A	Revision Date: 2/14/13
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DFM Subject: Industry Standards

<p>3.1 Industry Standards That Support DFM, Table 3.1</p> <ul style="list-style-type: none"> • Standards from three different organizations are used: IPC (Association Connecting Electronic Industries), JEDEC (Solid State Technology Association) and SMEMA (Surface Mount Equipment Manufacturers Association). • IPC covers PCB fabrication and PCBA manufacturing. • JEDEC covers electrical and electronic components. • SMEMA covers SMT assembly equipment.
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Table 3.1 Industry Standards

Document ⁽¹⁾	Document Name
IPC-7351	Generic Requirements for Surface Mount Design and Land Patterns
IPC-7093	Design and Assembly Process Implementation for BTC's
IPC-7095	Design and Assembly Process Implementation for BGAs
JEP95 (JEDEC standard)	Publication 95, Registered and Standard Outlines for Solid State and Related Products.
EIA-481-1,2,3	Tape and Reel Standards
IPC-SMEMA-9851	Mechanical Equipment Interface Standard
SMEMA 3.1	Fiducial Mark Standard
ANSI/ESD-S20.20	Protection of Electrical and Electronic Parts, Assemblies and Equipment
J-STD-033 (IPC standard)	Standard for Handling, Packing, Shipping and Use of Moisture Reflow Sensitive Surface Mount Devices
IPC-1601	Printed Circuit Board Handling and Storage Guidelines
IPC-2221	Generic Standard on Printed Board Design
IPC-2222	Sectional Design Standard for Rigid Organic Printed Boards
IPC-2223	Sectional Design Standard for Flexible Printed Boards
IPC-2224	Sectional Standard for Design of PWBs for PC Cards
IPC-2226	Sectional Design Standard for High Density Interconnect Printed Boards
IPC-SM-840	Permanent Solder Mask and Flexible Cover Materials
IPC-4553	Immersion Silver Plating for PCBs
IPC-4556	Electroless Nickel Immersion Gold Plating for PCBs
IPC-4562	Metal Foil for Printed Board Applications
IPC-4101	Base Materials for Rigid and Multilayer Printed Boards
IPC-4503	Base Materials for High Speed High Frequency Applications
IPC-6011	Generic Performance Specification for Printed Boards
IPC-6012	Qualification and Performance Specification for Rigid Printed Boards
IPC-6016	Qualification and Performance Specification for High Density Interconnect (HDI) Layers or Boards

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IPC-2615	Printed Board Dimensions and Tolerances
IPC-9252	Requirements for Electrical Testing of Unpopulated Printed Boards
IPC-4761	Design Guide for Protection of Printed Board Via Structures

Note 1: use latest revision