

IPC-2222B

2020 - October

Sectional Design Standard for Rigid Organic Printed Boards

Supersedes IPC-2222A
December 2010

An international standard developed by IPC



BUILD ELECTRONICS BETTER

This is a preview. [Click here to purchase the full publication.](#)

The Principles of Standardization

In May 1995 the IPC's Technical Activities Executive Committee (TAEC) adopted Principles of Standardization as a guiding principle of IPC's standardization efforts.

Standards Should:

- Show relationship to Design for Manufacturability (DFM) and Design for the Environment (DFE)
- Minimize time to market
- Contain simple (simplified) language
- Just include spec information
- Focus on end product performance
- Include a feedback system on use and problems for future improvement

Standards Should Not:

- Inhibit innovation
- Increase time-to-market
- Keep people out
- Increase cycle time
- Tell you how to make something
- Contain anything that cannot be defended with data

Notice

IPC Standards and Publications are designed to serve the public interest through eliminating misunderstandings between manufacturers and purchasers, facilitating interchangeability and improvement of products, and assisting the purchaser in selecting and obtaining with minimum delay the proper product for his particular need. Existence of such Standards and Publications shall not in any respect preclude any member or nonmember of IPC from manufacturing or selling products not conforming to such Standards and Publication, nor shall the existence of such Standards and Publications preclude their voluntary use by those other than IPC members, whether the standard is to be used either domestically or internationally.

Recommended Standards and Publications are adopted by IPC without regard to whether their adoption may involve patents on articles, materials, or processes. By such action, IPC does not assume any liability to any patent owner, nor do they assume any obligation whatever to parties adopting the Recommended Standard or Publication. Users are also wholly responsible for protecting themselves against all claims of liabilities for patent infringement.

IPC Position Statement on Specification Revision Change

It is the position of IPC's Technical Activities Executive Committee that the use and implementation of IPC publications is voluntary and is part of a relationship entered into by customer and supplier. When an IPC publication is updated and a new revision is published, it is the opinion of the TAEC that the use of the new revision as part of an existing relationship is not automatic unless required by the contract. The TAEC recommends the use of the latest revision. Adopted October 6, 1998

Why is there a charge for this document?

Your purchase of this document contributes to the ongoing development of new and updated industry standards and publications. Standards allow manufacturers, customers, and suppliers to understand one another better. Standards allow manufacturers greater efficiencies when they can set up their processes to meet industry standards, allowing them to offer their customers lower costs.

IPC spends hundreds of thousands of dollars annually to support IPC's volunteers in the standards and publications development process. There are many rounds of drafts sent out for review and the committees spend hundreds of hours in review and development. IPC's staff attends and participates in committee activities, typesets and circulates document drafts, and follows all necessary procedures to qualify for ANSI approval.

IPC's membership dues have been kept low to allow as many companies as possible to participate. Therefore, the standards and publications revenue is necessary to complement dues revenue. The price schedule offers a 50% discount to IPC members. If your company buys IPC standards and publications, why not take advantage of this and the many other benefits of IPC membership as well? For more information on membership in IPC, please visit www.ipc.org or call 847/597-2809.

Thank you for your continued support.



IPC-2222B

Sectional Design Standard for Rigid Organic Printed Boards

Developed by the IPC-2221/2222 Task Group (D-31b) of the Rigid
Printed Board Committee (D-30) of IPC

Supersedes:

IPC-2222A - December 2010
IPC-2222 - February 1998
IPC-D-275 - September 1991

Users of this publication are encouraged to participate in the
development of future revisions.

Contact:

IPC
3000 Lakeside Drive, Suite 105N
Bannockburn, Illinois
60015-1249
Tel 847 615.7100
Fax 847 615.7105

This is a preview. [Click here to purchase the full publication.](#)

This Page Intentionally Left Blank

Acknowledgment

Any document involving a complex technology draws material from a vast number of sources across many continents. While the principal members of the IPC-2221/2222 Task Group (D-31b) of the Rigid Printed Board Committee (D-30) are shown below, it is not possible to include all of those who assisted in the evolution of this standard. To each of them, the members of IPC extend their gratitude.

Rigid Printed Board Committee	IPC-2221/2222 Task Group	Technical Liaison of the IPC Board of Directors
Chair Cliff Maddox Boeing Company	Chair Michael Creeden EPTAC Corporation Vice-Chair Allen Holl TTM Technologies	Bob Neves Microtek (Changzhou) Laboratories
IPC-2221/2222 Task Group		
Norman Armendariz, Raytheon Company	Pierre-Emmanuel Goutorbe, Airbus Defence & Space	Michael P. Miller, NSWC Crane
Filbert Arzola, Raytheon Company	Vicka Hammill, Honeywell Inc. Air Transport Systems	Kristopher Moyer, California State University - Sacramento
Lance A. Auer, Conductor Analysis Technologies, Inc.	Philip M. Henault, Raytheon	Steven Murray, Northrop Grumman Corporation
Jimmy Baccam, Lockheed Martin Missiles & Fire Control	Joe Hughes, Hughes Circuits, Inc.	Kathy Nargi-Toth, Bowhead
John A. Bauer, Collins Aerospace	Joseph E. Kane, BAE Systems	Thi V. Nguyen, Lockheed Martin Missile & Fire Control
Gerald Leslie Bogert, Bechtel Plant Machinery, Inc.	Allen Keeney, Johns Hopkins University	Gerard A. O'Brien, Solderability Testing & Solutions, Inc.
Scott A. Bowles, Lockheed Martin Corporation	Kelly Kovalovsky, BAE Systems	James Parke, The Aerospace Corporation
Steven A. Bowles, DuPont SVTC	Kevin Kusiak, Lockheed Martin Corporation	Stephen Pierce, SGP Ventures, Inc.
Mark Buechner, BAE Systems	Jeremy Lakoskey, Honeywell International	David Rafson, Collins Aerospace
Denise Charest, Amphenol Printed Circuits, Inc.	Jeff Lewis, Holaday Circuits Inc.	Randy R. Reed, R. Reed Consultancy LLC
Stephen V. Chavez, UTC Aerospace Systems	Dan Loew, L3Harris	Jose A. Rios, Raytheon
Patrice Chetanneau, Sagem	Chris Mahanna, Robisan Laboratory Inc.	Thomas Romont, IFTEC
Michael A. Collier, Teledyne Leeman Labs	Laura Martin, Lockheed Martin Missile & Fire Control	Joseph C. Schmidt, Raytheon Missile Defense
Don Dupriest, Lockheed Martin Missiles & Fire Control	Anthony Martinelli, Raytheon Company	Douglas R. Schueller, AbelConn, LLC
Gary F. Erickson, Sanmina Corporation	Rene R. Martinez, Northrop Grumman Space Systems	Tony R. Senese, Panasonic Industrial Devices Sales Company of America (PIDSA)
Timothy A. Estes, Conductor Analysis Technologies, Inc.	Karen E. McConnell, Northrop Grumman Corporation	Gilbert Shelby, Raytheon Systems Company
Gary M. Ferrari, EPTAC Corporation	Melissa Meagher, Raytheon Missile Defense	Russell S. Shepherd, NTS - Anaheim
Mark Finstad, Flexible Circuit Technologies, Inc.	Nicholas J. Meeker, Conductor Analysis Technologies, Inc.	Jeff Sonnenberg, Extreme Engineering Solutions, Inc.
Mahendra S. Gandhi, Northrop Grumman Space Systems	Peter B. Menuetz, L3Harris Technologies, Inc.	Bhanu Sood, NASA Goddard Space Flight Center