

IPC-6012ES

2020 - April

Space and Military Avionics Applications Addendum to IPC-6012E, *Qualification and Performance Specification for Rigid Printed Boards*

An international standard developed by IPC



BUILD ELECTRONICS BETTER

Copyright Association Connecting Electronics Industries
Provided by IHS Markit under license with IPC
No reproduction or networking permitted without license from IHS

Licensee=Hong Kong Polytechnic University/9976803100, User=ERIKSSON, Arma Yonul
Not for Resale, 05/11/2020 11:26:23 MDT

AVA Documents
Document Sharing Hub

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.

©Copyright 2020. IPC International, Bannockburn, Illinois, USA. All rights reserved under both international and Pan-American copyright conventions. Any copying, scanning or other reproduction of these materials without the prior written consent of the copyright holder is strictly prohibited and constitutes infringement under the Copyright Law of the United States.



IPC-6012ES

**Space and Military
Avionics Applications
Addendum to IPC-6012E,
*Qualification and
Performance Specification
for Rigid Printed Boards***

Developed by the IPC-6012 Aerospace Addendum Task Group (D-33AS)
of the Rigid Printed Board Committee (D-30) of IPC

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 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-6012 Aerospace Addendum Task Group (D-33AS) 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 the IPC extend their gratitude.

Rigid Printed Board Committee	IPC-6012 Aerospace Addendum Task Group	Technical Liaison of the IPC Board of Directors
Chair Cliff Maddox Boeing Company	Co-Chairs Scott Bowles Lockheed Martin Space Denise Charest Amphenol Printed Circuits, Inc.	Bob Neves Microtek (Changzhou) Laboratories
IPC-6012 Aerospace Addendum Task Group		
Lance Auer, Conductor Analysis Technologies, Inc.	Frank Huijsmans, PIEK International Education Centre (I.E.C.) BV	Thi Nguyen, Lockheed Martin Missile & Fire Control
James Blanche, NASA Marshall Space Flight Center	Joe Hughes, Hughes Circuits, Inc.	William Orloff, Raytheon Company
Steven Bowles, DuPont SVTC	Allen Keeney, Johns Hopkins University	Gerry Partida, Summit Interconnect - Anaheim
Mark Buechner, BAE Systems	Ernest Kreiner, L3Harris	Alan Preston, TTM Technologies
Thomas Clark, Lockheed Martin Missiles & Fire Control	Kevin Kusiak, Lockheed Martin Corporation	Randy Reed, R. Reed Consultancy LLC
Robert Cooke, NASA Johnson Space Center	Meredith LaBeau, Calumet Electronics Corp.	Owen Reid, Lockheed Martin Missiles & Fire Control
Jiong (Crystal)Dai, Shennan Circuits Co. Ltd.	Jeremy Lakoskey, Honeywell International	Yaoru Ren, Shengyi Electronics Co. Ltd.
Don Dupriest, Lockheed Martin Missiles & Fire Control	Peggy LeGrand, TTM Technologies	Jose Rios, Raytheon
Gary Ferrari, FTG Circuits	Jeff Lewis, Holaday Circuits Inc.	Thomas Romont, IFTEC
Mahendra Gandhi, Northrop Grumman Space Systems	Dan Loew, L3Harris	Russell Shepherd, NTS - Anaheim
Pierre-Emmanuel Goutorbe, Airbus Defence & Space	Chris Mahanna, Robisan Laboratory Inc.	David Sommervold, Henkel US Operations Corp.
Vicka Hammill, Honeywell Inc. Air Transport Systems	Karen McConnell, Northrop Grumman Corporation	Bhanu Sood, NASA Goddard Space Flight Center
Eric Harenburg, Boeing Company	Michael Miller, NSWC Crane	Marshall Stolstrom, TTM Technologies, Inc.
Philip Henault, Raytheon	James Monarchio, TTM Technologies	Larry Tate, NASA Marshall Space Flight Center
Allen Holl, TTM Technologies	Steven Murray, Northrop Grumman Corporation	

This Page Intentionally Left Blank