

# IPC-6012DA

2016 - April

## **Automotive Applications Addendum to IPC-6012D Qualification and Performance Specification for Rigid Printed Boards**

*A standard developed by IPC*

*Association Connecting Electronics Industries*



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**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

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Addendum to IPC-6012D  
Qualification and  
Performance Specification  
for Rigid Printed Boards**

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

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

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## 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 Automotive Addendum Task Group (D-33AA) 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.

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# Automotive Applications Addendum to IPC-6012D Qualification and Performance Specification for Rigid Printed Boards

**0.1 Scope** This addendum provides requirements to be used in addition to, and in some cases, in place of, those published in IPC-6012D to ensure the reliability of printed boards that must survive the vibration and thermal cycling environments of electronic interconnects within the automotive industry.

**0.1.1 Purpose** When required by procurement documentation/drawings, this Addendum replaces specifically identified requirements of IPC-6012D.

**0.1.2 Precedence** The procurement documentation takes precedence over this Addendum and referenced standards. In the event of a conflict between this Addendum and the applicable documents cited herein, this Addendum takes precedence. Where referenced criteria of this addendum differ from the published IPC-6012D, this Addendum takes precedence.

**0.1.3 Existing or Previously Approved Designs** This Addendum **shall not** constitute the sole cause for the redesign of previously approved designs. When drawings for existing or previously approved designs undergo revision, they should be reviewed and changes made that allow for compliance with the requirements of this Addendum.

**0.1.4 Use of this Addendum** This addendum **shall not** be used as a stand-alone document.

Where criteria are not supplemented, the Class 2 or Class 3 requirements of IPC-6012D **shall** apply as indicated in Table 3 of this addendum. Where IPC-6012D criteria are supplemented or new criteria are added by this Addendum, the clause is listed in IPC-6012DA, Table 1, Automotive Applications Requirements, and the entire IPC-6012D clause and its associated Table 4-3 entry is replaced by this Addendum except as specifically noted.

The clauses modified by this Addendum do not include subordinate clauses unless specifically stated (i.e., changes made to 3.5 do not affect 3.5.1 unless 3.5.1 is also addressed in this Addendum.)