

# IPC-2581B-WAM1

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## Generic Requirements for Printed Board Assembly Products Manufacturing Description Data and Transfer Methodology

Supersedes IPC-2581B

September 2013

*An international standard developed by IPC*

Association Connecting Electronics Industries



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- Contain simple (simplified) language
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- Focus on end product performance
- Include a feedback system on use and problems for future improvement

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Developed by Product Data Description (Laminar View) Subcommittee  
(2-16) of the Electronic Product Data Description Committee (2-10) of  
IPC

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# Generic Requirements for Printed Board Assembly Products Manufacturing Description Data and Transfer Methodology

## 1 SCOPE

This standard specifies the XML schema that represents the intelligent data file format used to describe printed board and printed board assembly products with details sufficient for tooling, manufacturing, assembly, and inspection requirements. This format may be used for transmitting information between a printed board designer and a manufacturing or assembly facility. The data is most useful when the manufacturing cycle includes computer-aided processes and numerical control machines.

The data can be defined in either English or International System of Units (SI) units. The format is a convergence of the IPC-2511 “GenCAM” and the Valor Computerized Systems “ODB-X” format structure.

### 1.1 Focus and intent

The generic format requirements are provided in a series of standards focused on printed board manufacturing, assembly, and inspection testing. This standard series consists of a generic standard (IPC-2581) that contains all the general requirements. There are seven sectional standards that are focused on the XML details necessary to accumulate information in the single file, that address the needs of the manufacturing disciplines producing a particular product.

The sectional standards (IPC-2582 through 2588) paraphrase the important requirements and provide suggested usage and examples for the topic covered by the sectional standard.

### 1.2 Notation

Although the data would be contained in a single file, the file can have different purposes as described in Section 4. The XML schema used for this standard follows the notations set forth by the W3C and is as follows:

- element – Element appears exactly one time
- element? – Element may appear 0 or 1 times
- element\* – Element may appear 0 or more times
- element+ – Element may appear 1 or more times

Any IPC-258X file is composed of a high level element (IPC-2581) that contains up to six sub-elements:

- Content – information about the contents of the 258X file
- LogisticHeader – information pertaining to the order and supply data
- HistoryRec – change information of the file
- Bom – Bill of Materials (Material List) information
- Ecad – Computer Aided Design (engineering) information
- Avl – Approved Vendors List information