Sectional Requirements for Electronic Diagramming Documentation (Schematic and Logic Descriptions)

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

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Table of Contents

Tables:

Figures:

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1 SCOPE

This standard establishes the requirements for the documentation of electronic diagrams used as the foundation for defining the electrical interconnectivity of electronic parts. The description pertains to either schematic diagrams, logic diagrams or Boolean truth tables and includes methodology for defining circuit flow, electrical or functional restrictions, or maintenance test procedures used to design or maintain the electronic product. The requirements pertain to hard copy, electronic copy or electronic data descriptions.

1.1 Purpose

The purpose of this document is to establish a consistent set of naming conventions, schematic and logic attributes, and documentation standards. The standard should ensure that all schematics and logic descriptions contain the information required for inspection, hardware realization, software development, and design reuse.

The initial schematic/ logic diagram designates the electrical functions and interconnectivity to be provided by the printed board and its assembly. The schematic should define, when applicable, critical circuit layout areas, shielding requirements, grounding and power distribution requirements, the allocation of test points, and any pre-assigned input/output connector locations. Schematic information may be generated as hard copy or computer data (manually or automated).

1.2 Classification

Classification of Schematic and logic diagrams **shall** meet the requirements of IPC-2611. The classification concepts **shall** include the Grade and completeness characteristics of the electrical diagrams.

There are three grades of documentation defined in the IPC-2610 series. A specific grade **shall** consist of a letter to define the differences between hard copy and electronic data, and a number (mode) that defines the completeness of the documentation procurement package.

2 APPLICABLE DOCUMENTS

The following documents form a part of this standard to the extent specified herein. The revision of the document in effect at the time of solicitation **shall** take precedence.

2.1 IPC[1]

IPC-T-50	*Terms and Definitions for Interconnecting and Packaging Electronic Circuits*
IPC-2581	*Generic Requirements for Printed Board Assembly ProductsManufacturing Description Data and Transfer Methodology*
IPC-2611	*Generic Requirements for Electronic Product Documentation*
IPC-2611-1	*Generic Requirements for Electronic Product Data Base Storage Recommendations*[+]
IPC-2613	*Sectional Requirements for Electrical, Mechanical and Discrete Wiring Part Descriptions Documentation* (specification control, source control, wire harness and cabling)[+]
IPC-2614	*Sectional Requirements for Board Fabrication Documentation* (printed circuit board description, including embedded passives)
IPC-2615	*Printed Board Dimensions and Tolerances* (principles of general and geometric dimensioning practices)[+]

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[1] www.ipc.org
+ under consideration