



ASSOCIATION CONNECTING
ELECTRONICS INDUSTRIES®

IPC-D-326A

Information Requirements for Manufacturing Printed Boards and Other Electronic Assemblies

Developed by the IPC-D-326A Task Group (2-11A) of the Data
Generation and Transfer Committee (2-10) of IPC

Supersedes:
IPC-D-326 - April 1991

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

Contact:

IPC
2215 Sanders Road
Northbrook, Illinois
60062-6135
Tel 847 509.9700
Fax 847 509.9798

Table of Contents

1 SCOPE	1	5 THE BILL OF MATERIAL	2
1.1 Purpose	1	5.1 Component Detail	3
1.2 Classification	1	5.2 Panelization Documentation	3
2 APPLICABLE AND REFERENCE DOCUMENTS ...	1	5.3 Qualified Parts List	3
2.1 Applicable Documents	1	5.4 Component History Records	3
2.1.1 IPC	1	5.5 Component Traceability Record	3
2.2 Reference Documents	1	5.6 Defective Material Record	3
3 DOCUMENTATION CONSIDERATIONS	1	6 THE ASSEMBLY DOCUMENTATION	3
3.1 Terms and Definitions	1	6.1 The Assembly Drawing	3
4 THE STATEMENT OF WORK	1	6.2 Product Process Routing	3
4.1 Bill of Materials	1	6.3 Operation Instructions	3
4.2 Assembly Identification	1	7 TEST DOCUMENTATION	5
4.3 Documentation Listing	1	7.1 Test Procedure	5
4.4 Test Requirements	2	7.2 Schematics	5
4.5 Programmable Devices	2	8 ENVIRONMENTAL STRESS SCREENING	
4.6 Packaging for Shipment	2	(ESS)	5
4.7 Marking Requirements	2		
4.8 Quality System Requirements	2		
4.9 ESS Requirements	2		
4.10 Workmanship and Acceptance Standards	2		
4.11 Models or Illustrations	2		
4.12 Quantity and Delivery	2		
4.13 Tooling	2		
4.14 Other Relevant Business Practices for Assembly Services	2		

Figures

Figure 6-1	Mixed Technology Board	4
------------	------------------------------	---

Tables

Table 4-1	Statement of Work Check List	2
Table 6-1	Assembly Checklist	3
Table 7-1	Electrical Test Checklist	5
Table 8-1	Burn-In/ESS Requirements	5

Information Requirements for Manufacturing Printed Boards and Other Electronic Assemblies

1 SCOPE

This document covers the information requirements for the procurement of material, box build, assembly, system integration, inspection, test, burn-in, and delivery and/or distribution of electronic assemblies.

1.1 Purpose The purpose of this document is to outline an effective method of transferring product assembly information intercompany or from OEM to the assembler.

1.2 Classification The level of assembly documentation that is required is dependent on both the overall complexity of the product and whether the assembly process must meet government, military or other regulatory agency requirements.

2 APPLICABLE AND REFERENCE DOCUMENTS

2.1 Applicable Documents The following documents of the issue currently in effect form a part of this document to the extent specified herein. Subsequent issues of, or amendments to, these documents shall become a part of this specification unless otherwise stated.

2.1.1 IPC¹

IPC-T-50 Terms and Definitions for Interconnecting and Packaging Electronic Circuits

IPC-D-325 End Product Documentation for Printed Board and Assemblies

IPC-A-610 Acceptability of Printed Board Assemblies

IPC-CM-770 Component Mounting Guidelines for Printed Boards

IPC-7711 Rework of Electronic Assemblies

IPC-7721 Repair and Modification of Printed Boards and Electronic Assemblies

IPC-9191 General Guidelines for Implementation of Statistical Process Control

IPC-EMSI-TC2 IPC Sample Master Ordering Agreement for EMS Companies and OEMs

2.2 Reference Documents The following documents are listed as reference documents only. These documents contain information relevant to this specification.

J-STD-001 General Requirements for Soldering Electronic Interconnections

MIL-C-45662 Calibration

3 DOCUMENTATION CONSIDERATIONS

The information contained in the document describes systems of communicating product information required to effectively produce or procure material, assemble, inspect, test, burn-in, and deliver varying complexities of electronic assemblies.

The success or failure of the utilization of independent assemblers depends largely on communicating product and acceptability requirements.

All documentation shall be in the English language. All documentation for BOMs, drawings, tooling, test nodes, etc., should be such provided in electronic format. Examples of electronic formats are spreadsheets, Gen-CAM, Gerber, CAD, SRFF, etc.

3.1 Terms and Definitions Definitions of all terms used herein shall be as specified in IPC-T-50.

4 THE STATEMENT OF WORK

There is certain basic information required for all products independent of their complexity or end use. These documents are listed in Table 4-1, and are detailed in the following sections.

A Statement of Work should be generated that specifically identifies the services to be performed. Statement of work includes but is not limited to the following items.

4.1 Bill of Materials Material procurement requirements shall be specified in detail. State if all material is to be purchased by the assembler or identify that material which is to be supplied by the OEM.

4.2 Assembly Identification Identify the product to be assembled making reference to part number and revision level.

4.3 Documentation Listing A listing of all drawings and documents that are under your configuration control.

1. www.ipc.org