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Requirements for Electrical Testing of Flexible Printed Electronics

Developed by the Printed Electronics Performance Specification Test Methods Task Group (D-65a) of the Printed Electronics Committee (D-60) of IPC

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

Contact:

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Table of Contents

1 SCOPE	1	3 TEST METHODOLOGIES	7
1.1 Purpose	1	3.1 Continuity Test.....	7
1.1.1 Introduction	1	3.1.1 Resistive Continuity Testing	7
1.1.2 Costs	1	3.1.2 Indirect Continuity Testing by Signature Comparison	7
1.2 Classification	2	3.2 Isolation Testing	8
1.2.1 Selection of the Proper Test Level.....	2	3.2.1 Resistive Isolation Testing	8
1.3 Measurement Units	2	3.2.2 Indirect Isolation Testing by Signature Comparison	9
1.4 Definition of Requirements.....	2	3.3 Test Parameter Matrix.....	9
1.5 Process Control Requirements.....	2	3.4 Tests Other than Continuity and Isolation	9
1.6 Order of Precedence	3	3.5 Verification (Retesting)	9
1.6.1 Conflict	3	3.6 Test Records, Traceability and Marking	9
1.6.2 Clause References	3	3.6.1 Retention	9
1.6.3 Appendices	3	3.6.2 Traceability.....	9
1.7 Use of “Lead”	3	3.6.3 Marking	9
1.8 Abbreviations and Acronyms	3	4 TEST PROGRAM GENERATION	9
1.9 Terms and Definitions.....	3	4.1 Source Data	9
1.9.1 Adjacency	3	4.1.1 CAD/CAM Data Test.....	9
1.9.2 Adjacency Distance.....	3	5 ELECTRICAL TEST CERTIFICATION AND TRACEABILITY	10
1.9.3 Computer Automated Design/Manufacturing (CAD/CAM) Net List.....	4	5.1 Certificate of Conformance.....	10
1.9.4 Contamination	4	5.1.1 Example of a Test Certificate of Conformance	10
1.9.5 End Points/Midpoints.....	4	5.2 Traceability.....	10
1.9.6 Horizontal Adjacency Distance	4	6 OTHER TESTS AND CONSIDERATIONS	12
1.9.7 Impedance Testing	5	6.1 Flexible Printed Electronic Technology Considerations	12
1.9.8 Indirect Test by Signature Comparison.....	5	6.1.1 Purpose	12
1.9.9 Isolation Resistance.....	5	6.1.2 Considerations	12
1.9.10 Leakage Current.....	5	6.2 Characterization Tests	12
1.9.11 Line of Sight Adjacency	5	6.2.1 High Potential (Hi-Pot) Testing.....	12
1.9.12 Moving (Flying) Probe	5	6.2.2 Impedance Testing	13
1.9.13 Printed Via Connection.....	5	6.3 Equipment Concerns	13
1.9.14 Resistance Measuring Method.....	5	6.3.1 Environmental Considerations.....	13
1.9.15 Time Domain Reflectometer (TDR).....	5	6.3.2 Calibration.....	13
1.9.16 Vertical Layer Adjacency.....	5	6.3.3 Fixtures.....	13
2 APPLICABLE DOCUMENTS	6	6.4 Statistical Process Control (SPC) for Electrical Test Operations.....	13
2.1 IPC	6		
2.2 International Organization for Standardization (ISO)	7		
2.3 American National Standards Institute (ANSI)	7		
2.4 JEDEC	7		

APPENDIX A Abbreviations and Acronyms 14**Figures**

Figure 1-1	Automatic Test Equipment (ATE) Selection Criteria	1
Figure 1-2	Adjacency Distance Example	3
Figure 1-3	Endpoints/Midpoints Classification	4
Figure 1-4	Horizontal Layer Adjacency	4
Figure 1-5	Line of Sight Adjacency	5
Figure 1-6	Vertical Layer Adjacency	6
Figure 3-1	Resistive Continuity Test (Network Resistance)	7
Figure 3-2	Resistive Continuity Test (Network Resistance)	8
Figure 6-1	Flat Probe Tip	12

Tables

Table 3-1	Test Levels	8
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Requirements for Electrical Testing of Flexible Printed Electronics

1 SCOPE

This document is intended to assist in selecting the test equipment, test parameters, test data and fixturing required to perform electrical test(s) on flexible printed electronics.

1.1 Purpose Electrical testing verifies that the conductive networks on the flexible printed electronics are interconnected according to the design requirements.

Electrical testing does not ensure that the flexible printed electronics can be assembled or that the flexible printed electronic meets all of the customer's requirements. Many physical characteristics of the conductors (e.g., dimensional accuracy, conductor geometry and registration, presence of holes) can't be determined by electrical test. Other checks should be employed to confirm these characteristics.

1.1.1 Introduction Electrical testing of flexible printed electronics ensures conformance to the electrical design requirements. This document defines different levels of testing available to achieve this purpose. In selecting the appropriate test level, technology, equipment and associated fixturing, a suitable compromise between productivity, features and costs can be found.

1.1.2 Costs The costs associated with electrical testing can vary dramatically. Costs alone, however, should never be the only criteria for selecting the appropriate test level and equipment. As shown in Figure 1-1, many other important areas require consideration. For example, spacing and density of a printed electronic design may be of paramount importance to one user, while another may be concerned with testing parameters and service reliability. Therefore, a careful examination of all areas of concern and how they may affect each other, not just how they perform individually, is significant. Whatever the selection criteria may be, qualifying benchmarks should be performed on known product.

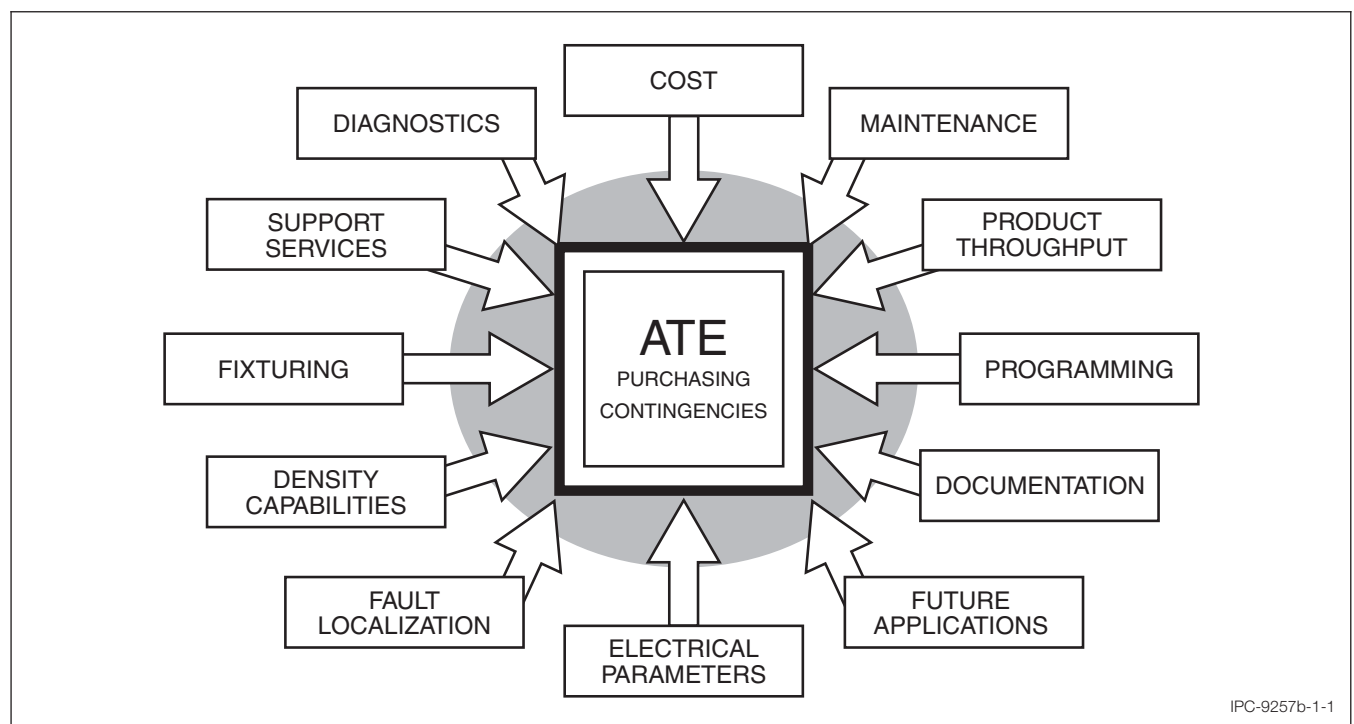


Figure 1-1 Automatic Test Equipment (ATE) Selection Criteria