



IPC/JPCA-6901

JPCA



Application Categories for Printed Electronics

Developed by the Printed Electronics Final Assembly Subcommittee (D-64) of the Printed Electronics Committee (D-60) of IPC and the JPCA Printed Electronics Committee

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

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Application Categories for Printed Electronics

1 SCOPE

This standard establishes a Market Classification System for printed electronics and assemblies and provides a list of performance criteria and testing methods.

This standard also establishes the Market Classification System and the Level Classification System for printed electronics assemblies. It also provides a list of suggested performance criteria and testing methods for printed electronics assemblies.

1.1 Purpose The purpose of this standard is to provide developers of printed electronics and assemblies with the necessary classification structure to design and manufacture printed electronics and assemblies that conform to industry-established performance metrics as determined by accepted testing methods.

1.2 Procurement Documentation Procurement documentation **shall** provide sufficient information so that the designer can manufacture the printed electronics and assemblies to meet industry-established in-use performance. The procurement documentation should specify the performance specifications that are applicable within this standard.

1.3 Printed Electronics and Assemblies Performance Requirements The printed electronics and assemblies made to the specifications listed in this standard will perform in a variety of environments as required per the application-use scenario. Printed electronics and assemblies made to achieve performance requirements as listed in this standard may have characteristics that provide specific enhanced performance (e.g., under hood, in body, submerged in liquid). Both the user and supplier should review these specified characteristics since they may meet or exceed the necessary requirements and will be as designated in the purchasing documentation (as agreed upon between user and supplier (AABUS), see 1.3.1).

1.3.1 As Agreed Upon Between User and Supplier (AABUS) AABUS indicates additional or alternate requirements to be decided upon between the user and the supplier in the procurement documentation. Examples include:

- Contractual requirements
- Modifications to purchase documentation
- Performance requirements
- Certificates of compliance
- Information on the drawing

Agreements can be used to define:

- Printed electronics and assembly test methods
- Printed electronics and assembly in-use performance conditions
- Frequency of testing during printed electronics and assembly in-use
- Categories or acceptance criteria within a test, if not already established

1.4 New Testing Methods The testing methods applicable to printed electronics and assemblies contained in this standard represent consensus-established methods. As new tests become available, they will be added to future revisions of this standard. Users and suppliers of printed electronics and assemblies are encouraged to supply information on newly established testing methods to the IPC D-64 Printed Electronics Final Assembly Subcommittee for review and consideration in a future version of IPC/JPCA-6901.

1.5 Interpretation of “Shall” The imperative form of the verb “**shall**” is used throughout this standard whenever a requirement is intended to express a provision that is mandatory. Deviation from a “**shall**” requirement may be considered if sufficient data are supplied to justify the exception.

The words “should” and “may” are used whenever it is necessary to express non-mandatory provisions.

“Will” is used to express a declaration of purpose. To assist the reader, the word “**shall**” is presented in boldface font.

1.6 Presentation All dimensions and tolerances in this specification are expressed in hard SI (metric) units and parenthetical soft Imperial (inch) units. Users of this specification are expected to use metric dimensions. All dimensions ≥ 0.25 mm [0.00984 in] will be expressed in millimeters and inches. All dimensions < 0.25 mm [0.00984 in] will be expressed in micrometers and microinches.