IPC-T-50K

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Terms and Definitions for Interconnecting and Packaging Electronic Circuits

Supersedes IPC-T-50J
October 2011

A standard developed by IPC

Association Connecting Electronics Industries

IPC®

The Principles of Standardization

In May 1995 the IPC's Technical Activities Executive Committee (TAEC) adopted Principles of Standardization as a guiding principle of IPC's standardization efforts.

Standards Should:

- Show relationship to Design for Manufacturability (DFM) and Design for the Environment (DFE)
- Minimize time to market
- Contain simple (simplified) language
- Just include spec information
- Focus on end product performance
- Include a feedback system on use and problems for future improvement

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- Increase time-to-market
- Keep people out
- Increase cycle time
- Tell you how to make something
- Contain anything that cannot be defended with data

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Thank you for your continued support.

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Terms and Definitions for Interconnecting and Packaging Electronic Circuits

Developed by the IPC Terms and Definition Committee (2-30)

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

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Acknowledgment

Members of the IPC Terms and Definition Committee (2-30) have worked together to develop this document. We would like to thank them for their dedication to this effort. Any document involving a complex technology draws material from a vast number of sources. While the principal members of the IPC Terms and Definitions Committee (2-30) are shown below, it is not possible to include all of those who assisted in the evolution of this standard. To each of them, the members of the IPC extend their gratitude.

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Terms and Definitions for Interconnecting and Packaging Electronic Circuits

Scope This document is designed to provide definitions for terms commonly used in the electronics industry which have meanings specific to electronics. The definitions are intended to provide sufficient clarity of detail such that a reader utilizing English as a second language could understand the subtleties of the meaning. Terms which have a specialized meaning or usage within a single IPC document may be defined differently within that document. Commonly used English language terms which do not change meaning when applied to electronics are not defined here.

Acronyms commonly used in electronics are defined in Appendix A.

Note: Changes made to this revision of the IPC-T-50 are indicated throughout by gray-shading of the term and definition and/or Figure header.

A

AABUS (As Agreed Between User and Supplier)

Indicates additional or alternate requirements to be decided between the user and the supplier in the procurement documentation. Examples include contractual requirements, modifications to purchase documentation and information on the drawing. Agreements can be used to define test methods, conditions, frequencies, categories or acceptance criteria within a test, if not already established.

Abrasion Resistance

The ability of a material to withstand surface wear.

Absolute Maximum Ratings

The range of voltages, currents, temperatures, etc., beyond which a device may suffer degradation in performance or reliability, may cease functioning or may suffer irreversible damage.

Absorption Coefficient

A measure of the absorption of radiant energy as it passes through a specific substance.

Absorptivity, Infra-red

The ratio (or percentage) of the amount of energy absorbed by a substrate as compared with the total amount of incident energy.

Accelerated Aging

A test in which the parameters such as voltage and temperature are increased above normal operating values to obtain observable or measurable deterioration in a relatively short period of time.

Accelerated Equivalent Soak (Plastic Encapsulated SMDs)

An environmental soak of a component at a higher temperature for a shorter time (compared to the standard soak), to provide roughly the same amount of moisture absorption. See also "Soak."

Accelerated Life Test

See "Accelerated Aging."

Accelerated Test

A test to check the life expectancy of an electronic component or electronic assembly in a short period of time by applying physically severe condition(s) to the unit under test.

Accelerator

See "Catalyst."

Acceleration Factor (AF)

The ratio of stress in reliability testing to the normal operating condition.

Acceptable Condition

This condition, while not necessarily perfect, will maintain the integrity and reliability of the assembly in its service environment.

Acceptance Quality Level (AQL)

A specified maximum number of defects, expressed as a percentage, that is considered to be acceptable quality and normally associated with statistically derived sampling plans.

Acceptance Tests

Those tests deemed necessary to determine the acceptability of a product and as agreed to by both purchaser and vendor.

Acceptance Inspection (Criteria)

An inspection that determines conformance of a product to design specifications as the basis for acceptance.