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IPC-1783-CO2E

International Standard for Data Collection and Reporting of CO₂ Emissions (CO₂e) for the Electronics Manufacturing Supply Chain

Developed by the Data Collection and Reporting of CO₂ Equivalent (CO₂e) Emissions Task Group (2-19f) of the Electronic Product Data Description Committee (2-10) of Global Electronics Association.

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IPC-1783-CO2E

International Standard for Data Collection and Reporting of CO₂ Emissions (CO₂e) for the Electronics Manufacturing Supply Chain

1 SCOPE

This standard provides definitions for what needs to be measured, estimated, collected and reported for subsequent product CO₂ equivalent (CO₂e) emissions calculations in the electronics manufacturing supply chain. This standard provides a choice of methodology and associated data quality indicators for achieving this.

1.1 Purpose The purpose of this standard is to enable consistency in reporting in accordance with the Greenhouse Gas (GHG) Protocol.

This standard takes the approach of generating activity Process Models. By structuring the manufacturing process into an activity model, manufacturers can quickly and accurately build the total CO₂e for a given product.

1.1.1 Accounting Principles and Overview This standard is focused on product carbon footprints (PCF) and follows the same principles for accounting and reporting of inventory as defined by the GHG Protocol Product Life Cycle Accounting and Reporting Standard of Relevance, Accuracy, Completeness, Consistency and Transparency.

This standard applies the GHG Product Life Cycle accounting guidance and International Organization for Standardization (ISO) standards of Lifecycle Assessment (ISO 14040/ISO 14044) with Global Warming as the impact category (ISO 14067).

By following the GHG accounting principles and offering sector-specific guidance, this allows the collected data (carbon emissions) to comply with regulations and customer requests that require application of the GHG Protocol Product Life Cycle Accounting and Reporting Standard and ISO 14067.

Removals (also referred as carbon offsets) are not to be considered in any calculations according to this standard.

1.1.2 Guidance Appendix A provides examples for how to apply the standard to different manufacturing processes. Appendix B provides an example for calculating a quality control (QC) score.

1.2 Definition of Requirements The words **shall** or **shall not** are used in the text of this document wherever there is a requirement for materials, preparation, process control or acceptance.

The word “should” reflects recommendations and is used to reflect general industry practices and procedures for guidance only.

Line drawings and illustrations are depicted herein to assist in the interpretation of the written requirements of this Standard. The text takes precedence over the figures.

1.3 Order of Precedence The contract **shall** take precedence over this Standard, referenced standards, and drawings.

In the event of conflict, the following order of precedence applies:

1. Procurement as agreed and documented between customer and supplier.
2. Master drawing reflecting the customer’s detailed requirements.
3. When invoked by the customer or per contractual agreement, this standard.

When documents other than this standard are cited, the order of precedence **shall** be defined in the procurement documents.

The User has the opportunity to specify alternate acceptance criteria.

1.3.1 Conflict In the event of conflict between the requirements of this standard and the applicable drawing(s) and documentation, the applicable user-approved drawing(s) and documentation govern.

Some examples of documentation include the contract, purchase order, technical data package, engineering specification or performance specification. In the event of a conflict between the text of this standard and the applicable documents cited herein, the text of this standard takes precedence. In the event of conflict between the requirements of this standard and drawing(s) and documentation that has not been user approved, this standard governs.

1.3.2 Clause References When a clause in this document is referenced, its subordinate clauses apply unless the requirement references specific subordinate clauses.