

SEMI G71-0996 (Reapproved 1104) SPECIFICATION FOR BARCODE MARKING OF INTERMEDIATE CONTAINERS FOR PACKAGING MATERIALS

This standard was technically approved by the Global Assembly & Packaging Committee and is the direct responsibility of the Japanese Packaging Committee. Current edition approved by the Japanese Regional Standards Committee on July 23, 2004. Initially available at www.semi.org September 2004; to be published November 2004. Originally published in 1996.

1 Purpose

1.1 This specification describes a common format, content, size, and location for printed, machine-readable labels on an intermediate container of materials used for semiconductor packaging.

1.2 This specification provides for a smooth transition from existing traceability and labeling procedures to a comprehensive, unified system envisioned for the future.

2 Scope

2.1 This document applies to the following packaging materials:

2.1.1 Leadframe

2.1.2 Molding compound

2.1.3 Bonding wire

2.1.4 Die attach materials

2.2 This document applies to only the intermediate container. Barcode specification for shipping pack is referred to EIA 556A or EIAJ barcode specification.

2.3 This document does not apply to product package label.

NOTE 1: There are requests for labeling on product packages from the customers. However, task force concluded that the product package label was not included in scope of the specification because of limitation of area to be labeled on the package. For further activity, two-dimensional barcode symbol may be needed to standardize the barcode marking specification for product packages.

NOTICE: This standard does not purport to address safety issues, if any, associated with its use. It is the responsibility of the users of this standard to establish appropriate safety and health practices and determine the applicability of regulatory or other limitations prior to use.

3 Referenced Standards

3.1 AIM Specification¹

USS-39 — Universal Symbol Specification Code 39

3.2 ANSI Specifications²

ANSI X3.182 — Barcode Print Quality - Guideline

ANSI/FACT-1 — Data Application Identifier Standard

3.3 EIA Specification³

EIA 556A — Outer Shipping Container Bar Code Label System

3.4 EIAJ Specification⁴

EIAJ — Standard, Bar Code Label System

NOTICE: Unless otherwise indicated, all documents cited shall be the latest published versions.

4 Terminology

4.1 Definitions

4.1.1 Many items relating to barcode technology are defined in EIA 556, Appendix Definitions, and EIAJ Bar Code Label Systems, Appendix A.

4.1.2 *intermediate container* — a container housing one or more product packages for the purpose of product/ order segregation in a shipping container.

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2 American National Standards Institute, Headquarters: 1819 L Street, NW, Washington, DC 20036, USA. Telephone: 202.293.8020; Fax: 202.293.9287, New York Office: 11 West 42nd Street, New York, NY 10036, USA. Telephone: 212.642.4900; Fax: 212.398.0023, Website: www.ansi.org

3 Electronic Industries Alliance, EIA Engineering Department, Standards Sales Office, 2001 Eye Street, NW, Washington, D.C. 20006, USA., Website: www.eia.org

4 Electronic Industries Association of Japan, Available through: Japan Electronics and Information Technology Industries Association, 3rd Fl., Mitsui Sumitomo Kaijo Bldg. Annex 11, Kanda Surugadai 3-chome, Chiyoda-ku, Tokyo 101-0062, Japan, <http://www.jeita.or.jp/eiaj/english/>

4.1.3 *product package* — the first tie, wrap, or container to a single item or quantity thereof that constitutes a complete identifiable pack. Product package may be packaged together or a group of the parts packaged together. Product package is also called unit pack.

4.1.4 *shipping pack* — a package or shipping container/ final container that is of sufficient strength to be used in commerce for packing, storing, and transporting products (see Figure 1).

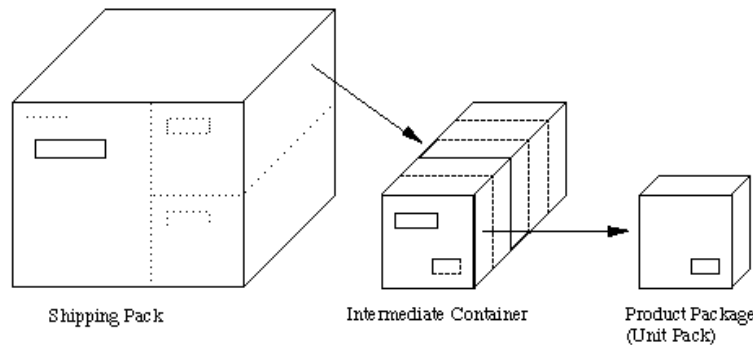


Figure 1
Definition of Package Form

4.1.5 Package forms for each material type are defined in Table 1.

5 Ordering Information

5.1 Purchase orders for the materials furnished in an intermediate package to the specification shall be include the following:

5.1.1 Content of message characters for customer product ID.

5.1.2 User-specified data, if required.

5.2 In addition, the following optional items may be specified.

5.2.1 Label location on the intermediate container.

5.2.2 Label size, if a label larger than the specified size in this specification.

6 Content of Data Field

6.1 The label shall include vendor field and customer field.

6.2 The customer field shall contain three data fields for barcode symbols. Each data field shall contain a maximum 17 message in addition to the start and stop characters. The content of the barcode symbol is shown in Table 2.

6.2.1 The upper data field shall contain a barcode symbol with customer product ID which consists of maximum 15 characters, preceded by a “P”, the data identifier for this item as specified in ANSI/FACT-1.

6.2.2 The middle data field shall contain a barcode symbol with lot number which consists of maximum 12 characters, preceded by a “1T”, the data identifier for this item as specified in ANSI/FACT-1.

6.2.3 The lower data field shall contain quantity and the production date concatenated into a single barcode symbol. Quantity is indicated by maximum 7 characters, preceded by a “7Q”, the data identifier for this item as specified in ANSI/FACT-1. The production date is indicated by 6 characters, preceded by a “D”, the data identifier for this item as specified in ANSI/FACT-1. The quantity and the production date are separated by a space.

6.2.3.1 Quantity indicated in this field shall be quantity in the intermediate container. The unit of measure should follow the quantity data to indicate what unit of measure is being used in the quantity count. The Unit uses 2 characters listed in Appendix D of ANSI/FACT-1.