

SEMI G94-0113 (Reapproved 1123) SPECIFICATION FOR COIN-STACK TYPE TAPE FRAME SHIPPING CONTAINER FOR 300 mm WAFER

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1 Purpose

1.1 The purpose of this Standard is to standardize the specifications for coin-stack type tape frame shipping container for 300 mm wafer used for test and packaging processes for wafers.

2 Scope

2.1 This Specification defines the dimensions of container (refer to § 5.1.1) and requirements for securing the interface between container and processing equipment or wafer transportation equipment.

2.2 This Standard specifies the requirements for wafer spacers used for separation of wafers and for a cushion material used for wafer protection.

2.3 This Standard specifies the electrical characteristics and requirements for hazardous substances for the material of container.

2.4 The maximum number of tape frame wafers of both metal (SEMI G74) and plastic (SEMI G87) stored in the container shall be 13.

NOTICE: SEMI Standards and Safety Guidelines do not purport to address all safety issues associated with their use. It is the responsibility of the users of the Documents to establish appropriate safety and health practices, and determine the applicability of regulatory or other limitations prior to use.

3 Limitations

3.1 This Specification does not specify the cleanliness level of container.

4 Referenced Standards and Documents

4.1 SEMI Standards and Safety Guidelines

SEMI G74 — Specification for Tape Frame for 300 mm Wafers

SEMI G87 — Specification for Plastic Tape Frame for 300 mm Wafer

4.2 IEC® Standards¹

IEC 60093 — Methods of Test for Volume Resistivity and Surface Resistivity of Solid Electrical Insulating Materials

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

¹ International Electrotechnical Commission, 3 rue de Varembe, Case Postale 131, CH-1211 Geneva 20, Switzerland; Telephone: +41.22.919.02.11, <http://www.iec.ch>. IEC trademark is owned by International Electrotechnical Commission.

5 Terminology

5.1 Definitions

5.1.1 *coin-stack type tape frame shipping container ('container')* — a container in which tape frame wafers are horizontally stored for shipment.

5.1.2 *container lid ('lid')* — a material used to prevent the wafers from jumping out of main body and from being contaminated.

5.1.3 *container main body ('main body')* — bottom material on which wafers and other materials are stacked.

5.1.4 *cushion material ('cushion')* — an in-between material inserted main body, wafers, and lid.

5.1.5 *effective wafer storage height* — concerning height inside the container when the lid is coupled to the main body.

5.1.6 *wafer retaining wall of main body ('wafer retaining wall')* — a circular wall located on main body in order to retain the wafers placed on main body.

5.1.7 *wafer spacer ('spacer')* — a material inserted between the adjacent wafers to prevent damage caused by friction.

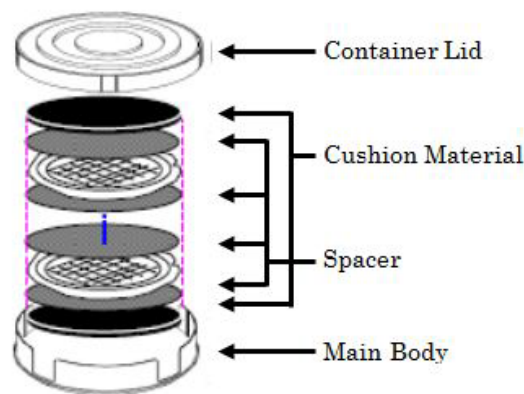


Figure 1
Composition of Container

6 Requirements

6.1 *Composition of Container* — As illustrated in Figure 1, container shall be composed of main body, lid, cushions, and spacers.

6.2 Dimensions of Container

6.2.1 Maximum height of container shall be 89 mm when container is fully assembled.

6.2.2 The dimensions of main body and wafer retaining wall shall be as shown in Figure 2 and Table 1.

6.2.3 A hole for positioning pin shall be provided at location shown in Figure 2 (d), so that container can be positioned on the processing equipment by engagement with a pin of the equipment.

6.2.4 The dimension of main body shall be as shown in Figure 2 and Table 1.