

SEMI G26-90

SPECIFICATION FOR HERMETIC SLAM CHIP CARRIER LIDS

This Standard was technically approved by the Assembly & Packaging Global Technical Committee.

NOTICE: This Standard or Safety Guideline has an Inactive Status because the conditions to maintain Current Status have not been met. Inactive Standards or Safety Guidelines are available from SEMI and continue to be valid for use.

1 Preface

1.1 This Specification covers the ceramic piece part commonly referred to as a lid, used in the construction of a hermetic SLAM package with a 0.050 in. pad centerline. The SLAM package is covered separately in the SEMI G5 Specification for Ceramic Chip Carriers.

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.

2 Referenced Standards and Documents

2.1 *United States Military Standards*¹

MIL-STD-883 — Test Methods and Procedures for Microelectronics

MIL-M-38510 — General Specification for Microcircuits

MIL-I-23011 — Iron Nickel Alloys for Sealing to Glass and Ceramic

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

3 Terminology

3.1 *Definitions*

3.1.1 *burr* — a fragment of excess material or foreign particle adhering to the surface.

3.1.2 *chip* — region of ceramic missing from the surface or edge of a package which does not go completely through the package. Chip size is given by its length, width and depth from a projection of the design plan-form (refer to Figure 1).

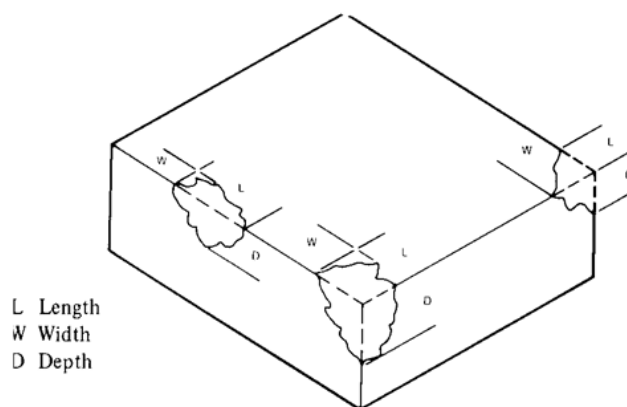


Figure 1
Chip Illustration

¹ United States Military Standards, Available through the Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120-5099, USA; Telephone: +1.215.697.3321.

3.1.3 *crack* — a cleavage or fracture that extends to the surface of a package. It may or may not pass through the entire thickness of the package.

3.1.4 *fin* — a fine, feathery-edged projection on the edge or corner of the ceramic.

3.1.5 *glass flow* — heated just sufficiently to remove all screen mesh marks visible at 10× magnification.

3.1.6 *overhang* — horizontal extension of glass from the ceramic.

3.1.7 *projection* — raised portion of the surface indigenous with the parent material.

3.1.8 *pullback* — defines a dimension covering the linear distance between the edge of the ceramic and the first measurable glass interface excluding any glass spatter (refer to Figure 2).

3.1.9 *rundown* — vertical extension of glass from the ceramic (refer to Figure 2).

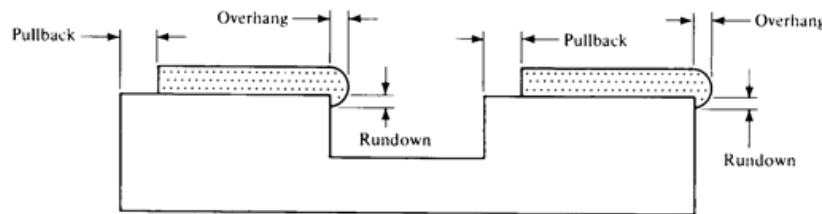


Figure 2
Glass Misalignment

3.1.10 *seal area* — a dimensional outline area designated for sealing the lid and package together.

3.1.11 *terminal* — case outline at point of entry or exit of an electrical contact.

3.1.12 *void* — an absence of glass from a designated glassed area on the ceramic surface.

4 Ordering Information

4.1 Purchase orders for SLAM lids furnished to this specification shall include the following items:

4.1.1 Drawing number and revision level

4.1.2 Type and color of ceramic

4.1.3 Type and thickness of sealing material

4.1.4 Length, width, thickness and sealing area

4.1.5 Certification

4.1.6 Method of test and measurements (see Section 9)

4.1.7 Lot acceptance procedures (see Section 8)

4.1.8 Packaging and marking (see Section 10)

5 Dimensions and Permissible Variations

5.1 The lid dimensions shall conform as specified in Figure 3 and Table 1.