

SEMI G75.13-0698 (Reapproved 0615) TEST METHOD FOR MEASUREMENT OF THE LEAKAGE CURRENT IN LEADFRAME TAPE

This Standard was technically approved by the Assembly & Packaging Global Technical Committee. This edition was approved for publication by the global Audits and Reviews Subcommittee on March 26, 2015. Available at www.semiviews.org and www.semi.org in June 2015; originally published June 1998; previously published July 2006.

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.

NOTICE: Paragraphs entitled 'NOTE:' are not an official part of this Standard or Safety Guideline and are not intended to modify or supersede the official Standard or Safety Guideline. These have been supplied by the global technical committee to enhance the usage of the Standard or Safety Guideline.

NOTICE: The section symbol (§) is used to reference a numbered section, paragraph, or header and all subordinate paragraphs, headers, and embedded material (i.e., EXCEPTIONs, lists) therein. The paragraph symbol (§) is used to reference a particular numbered paragraph and embedded material therein. When duplicated (i.e., §§ and §§) the symbols are used to reference more than one section or paragraph, respectively.

1 Summary of Method

1.1 Taped leadframes are molded under normal conditions, and the leakage current between designated leads is measured before and after submitting the samples to HAST (121°C/2 atm/100% RH) moisture testing.

2 Equipment

- 2.1 HAST Chamber.
- 2.2 Amperemeter with 10^{-15} ampere measuring capability.
- 2.3 Power supply capable of 500 volts DC maximum.
- 2.4 Electrostatically and electromagnetically shielded box.

3 Sampling

3.1 The sampling is one sample per one lot. The vendor must report the definition of lot if the customer requires it.

4 Preparation of Specimens

- 4.1 Leadframes shall be cleaned up previous to taping, using a procedure agreed on between vendor and customer.
- 4.2 *Taping Conditions* — Temperature, pressure, and dwell time shall be agreed on between vendor and customer.

NOTE 1: A typical taped 40 pin DIP leadframe is shown in Figure 1, and relevant information for this frame is tabulated in Table 1.

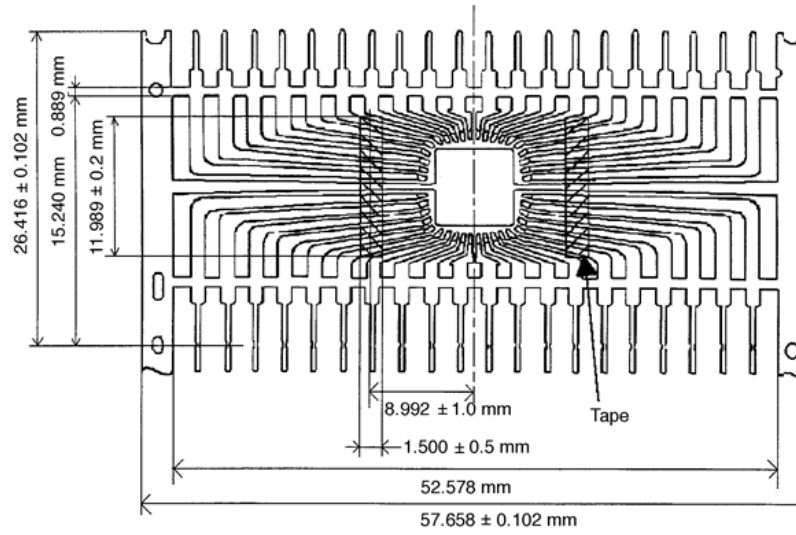


Figure 1
Typical Taped 40 Pin DIP Leadframe

Table 1 Relevant Information for 40 Pin DIP Leadframe

<i>Leadframe Attribute</i>	<i>Specification</i>
Leadframe thickness	0.25 mm
Leadframe material	Alloy 42
Leadframe manufacturing process	Stamping
Plating	None/Silver/Others
Surface treatment	To be agreed between tape user and supplier.

NOTE 2: The surface state of Alloy 42 is stable compared with Cu alloy, which is oxidized easily.

4.3 The leadframes shall be molded using molding compounds and cured with post mold curing conditions agreed on between vendor and customer. The untaped leadframe shall be prepared with the same procedure as a control.

4.4 Trim the leads according to a procedure agreed on between vendor and customer.

5 Procedure

5.1 Setup the test circuit as shown in Figure 2.

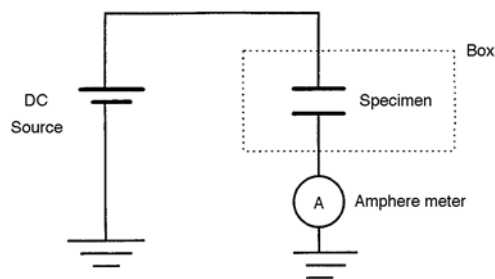


Figure 2
Test Circuit for Measurement of Leakage Current