

SEMI G75.2-0698 (Reapproved 0706) TEST METHOD FOR MEASUREMENT OF ADHESIVE STRENGTH OF LEADFRAME TAPE

This standard was technically approved by the global Assembly & Packaging Committee. This edition was approved for publication by the global Audits and Reviews Subcommittee on May 16, 2006. It was available at www.semi.org in June 2006 and on CD-ROM in July 2006. Originally published June 1998.

1 Summary of Method

1.1 *Two methods are described:*

1.1.1 *Pull-Up Method* — Using a hook attached to a tensile tester, the tape is pulled away from the leadframe inner leads.

1.1.2 *Push-Down Method* — Using a probe attached to a tensile tester, a leadframe inner lead is pushed away from the tape.

1.2 The adhesive strength between the lead and the tape should be measured at $23 \pm 5^\circ\text{C}$ and 250°C .

2 Equipment

2.1 Tensile tester with appropriate load cell, clamping chucks, and a chart recorder. Tensile tester shall keep constant the traveling speed of clamping chucks, of which the traveling distance can be read to the nearest 1 mm, and shall simultaneously record the load imposed on the sample. It shall measure and record the imposed load with $\pm 1\%$ on a chart recorder.

2.2 *Pull-Up Method*

2.2.1 A clamp should be suitable for each leadframe type. Example of the clamp design, for a typical 40 pins DIP leadframe, is shown in Figure 1.

2.2.2 A pull-up hook should be suitable for each leadframe type. Example of the pull-up hook, for a typical 40 pins DIP leadframe, is shown in Figure 2.

2.3 *Push-Down Method*

2.3.1 A table should be suitable for each leadframe type. Example of the table, for a typical 40 pins DIP leadframe, is shown in Figure 3.

2.3.2 A push-down probe should be suitable for each leadframe. Example of the push-down probe, for a typical 40 pins DIP leadframe, is shown in Figure 4.

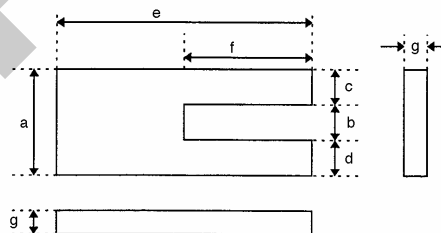


Figure 1
Example of Clamp Design
(40 Pins DIP Leadframe)

Table 1 Dimension and Material of Clamp and Hook in Push-Up Method

Item/Dimension	Value	Material	Reference Figure
Clamp		Aluminum	1
a	60 mm		
b	8 mm		
c	26 mm		
d	26 mm		
e	60 mm		
f	30 mm		
Clamp			
g	3 mm		
Pull-Up Hook		Piano Wire	2
	0.4 mm		
a	100 mm		
b	5 mm		
r	2.0 mm		

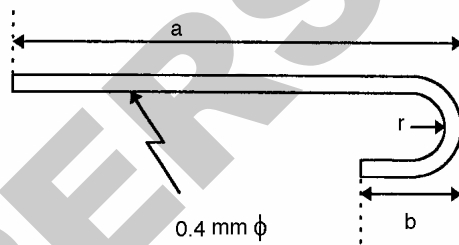


Figure 2
Pull-Up Hook
(40 Pins DIP Leadframe)

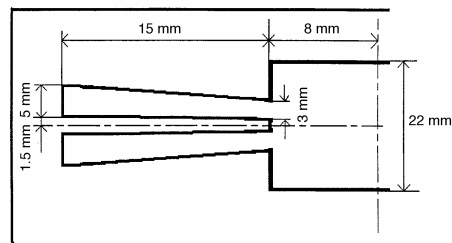


Figure 3
The Dimension of the Table