

EIA RS-216

EIA STANDARD

***Standard Method of Test for
Adhesion of Printed Wiring***

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STANDARD METHOD OF TEST FOR ADHESION OF PRINTED WIRING

(From Standards Proposals Nos. 484 and 581 formulated under the cognizance of EIA Working Group P-7.6 on Printed Wiring Boards.)

1. SCOPE

This Standard is intended for determining the following characteristics of printed wiring boards: (a) resistance to pull-off of lands before and after soldering of component leads, (b) resistance to peel or stripping of conductors at standard room temperature before and after solder dipping, and at elevated temperatures, and (c) resistance of large conductor areas to blistering as a result of solder dipping.

2. DESCRIPTION OF TERMS

- 2.1 Peel Strength — The load per unit width required to sustain separation of the conductor from the base at an angle of 90 degrees. It is expressed in pounds per inch (newtons/mm) of width.
- 2.2 Pull-off Strength — The load, normal to the printed test pattern, required to separate the land from the base.
- 2.3 Blistering — Visual evidence of separation of the conductor from the base material or separation or delamination within the base material.

3. APPARATUS

- 3.1 Testing Machine — A properly calibrated power driven testing machine capable of maintaining either a specified rate of traverse or of loading.

NOTE 1: For measurement of peel strength, the machine shall be capable of indicating instantaneous load through the duration of the test. The machine shall preferably be autographic, giving a chart having jaw separation as one axis and applied load as the other axis. The rate of testing shall be such that no more than two minutes is required to peel a conductor strip from the base.

NOTE 2: For determination of pull-off strength, the machine need not be autographic, but shall be capable of maintaining maximum load indication. The rate of traverse or loading shall be such that no more than two minutes is required to pull the land off the base.

NOTE 3: The capacity of the machine shall be such that the maximum load applied shall not be greater than 85 percent nor less than 15 percent of the rated capacity.