



# IPC-TM-650 TEST METHODS MANUAL

**1 Scope** This test method is used to determine the electrical resistance of the dielectric material between conductors (including plated through holes (PTHs)) within a specific layer during and after cycling.

## 2 Applicable Documents

**IPC-TM-650** Test Methods Manual

5.8.3 Peel Strength Test Pattern

2.5.10 Insulation Resistance, Multilayer Printed Wiring (Between Layers).

## 3 Test Specimen

**3.1** Test coupon "H" from test pattern described in IPC-TM-650, Method 5.8.3

## 4 Equipment/Apparatus

**4.1** Test chamber capable of maintaining 65°C to -10°C and 95% RH

**4.2** Megohm meter capable of delivering 100 volts (polarized) and of reading from 1 ohm to 30,000 megohms

## 5 Procedure

### 5.1 Preparation

Number <b>2.5.11</b>	
Subject <b>Insulation Resistance, Multilayer Printed Wiring (Within a Layer)</b>	
Date <b>4/73</b>	Revision
Originating Task Group <b>N/A</b>	

**5.1.1** Mount the specimens by normal mounting means in the normal mounting position of the production boards being represented by the test coupons.

**5.1.2** Prior to cycling, perform and record initial resistance measurements at room ambient conditions.

**5.1.3** Subject each specimen to 10 cycles (see IPC-TM-650, Method 2.5.10).

### 5.2 Test

**5.2.1** Take measurements after the fifth and tenth cycles. Electrification must be 100 volts  $\pm$  10% for one minute.

**5.2.2** Measurements should also be taken 15 minutes after removal from the chamber.

**5.2.3** Check points 1 & 1', 2 & 2', 3 & 3', and 4 & 4' of the test coupons.

## 6 Notes

**6.1** For Class A requirements of IPC-TM-650, Method 2.5.10, use polarized voltage; for Class B, use non-polarized voltage.