The Institute for Interconnecting and Packaging Electronic Circuits
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IPC-TM-650
TEST METHODS MANUAL

Number	
2.4.45	
Subject	
Solder Paste—Wetting Test	
Date	Revision
1/95	
Originating Task Group	
Solder Paste Task Group (5-24b)	

1.0 Scope Determine the ability of a solder paste to wet an oxidized copper surface and to qualitatively examine the amount of spatter of the solder paste during reflow.

2.0 Applicable Documents None

IPC-TM-650 Test Methods Manual

2.4.43 Solder Paste—Solder Ball Test

3.0 Test Specimen

7.6 cm x 2.5 cm x 0.8 mm specimen of 1 ounce oxygen-free high conductivity (OFHC) copper.

4.0 Equipment/Materials/Apparatus

Flat hot plate

Specimen tongs

Beaker 400 cc

Magnifying glass with 10 times magnification

Liquid copper cleaner

Deionized water

Isopropyl alcohol

Solvent for residual flux removal

4.1 Stencil 76 mm x 25 mm x 0.2 mm provided with at least 3 round holes or 6.5 mm diameter aperature with a minimum between centers of 10 mm.

5.0 Procedure

5.1 Preparation

5.1.1 The specimen shall be cleaned with a liquid copper cleaner, washed thoroughly with water, rinsed with isopropyl alcohol, dried and then placed in boiling deionized water for 10 minutes and air dried

5.2 Test

5.2.1 Place stencil on test specimen and print solder paste test pattern.

5.2.2 Reflow using the procedure outlined in paragraph 5.2.3.2 of IPC-TM-650, Test Method 2.4.43.

5.2.3 After reflow, the residual flux shall be removed with a suitable solvent.

5.3 Evaluation When examined visually at 10X, the solder shall uniformly wet the copper and there should be no evidence of dewetting or non-wetting of the copper and there shall be no solder spatter around the printed dots.

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