ASSOCIATION CONNECTING
ELECTRONICS INDUSTRIES ®

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IPC-TM-650
TEST METHODS MANUAL

Number **2.4.29**	
Subject **Solder Mask - Adhesion to Flexible Circuits**	
Date **03/07**	Revision **C**
Originating Task Group **Solder Mask Performance Task Group (5-33b)**	

1 Scope This test method is used to determine the adhesion quality of solder masks used on flexible circuits.

2 Applicable Documents

IPC-A-42-G-KIT[1] Double-Sided Artwork

3 Test Specimen The IPC-A-42-G-KIT artwork package provides the electronic Gerber information necessary for the fabrication of the IPC B-42 test board. IPC-B-42 flexible test patterns H1, H2, and/or H3, or production test samples with solder mask coating. Each flexible section shall be separated and tested independently.

4 Apparatus 3.18 ± 0.1 mm [0.125 ± 0.004 in] diameter mandrel (metal rod).

5 Procedures

5.1 Test

5.1.1 Bend the test specimen around the mandrel so that the ends of the test specimens are on the same side of the mandrel and nominally parallel to each other. (The test specimen forms a ‘‘U’’ shape around the mandrel.) Each cycle must be at the same point on the flexible circuit.

5.1.2 Flip the test specimen so that its opposite surface is against the metal rod and repeat 5.1.1.

5.1.3 Repeat 5.1.1 and 5.1.2 nine times (ten cycles total) for each of the test specimens.

5.2 Evaluation Visually examine the flexible circuit test pattern with corrected 20/20 vision without magnification for solder mask delamination or cracks.

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[1] www.ipc.org/onlinestore