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

Number	
2.4.32	
Subject	
Fold Temperature Testing, Flexible Flat Cable	
Date	Revision
4/86	**A**
Originating Task Group	
N/A	

1 Scope This method describes the procedure for fold temperature testing.

2 Applicable documents None

3 Test sample

3.1 The number of production samples shall be determined by the manufacturer and/or user and shall be a minimum of three specimens.

3.2 The test specimen shall be 0.6 meters minimum.

4 Apparatus

4.1 Mechanism that will produce 2.11 kg/cm^2 (the total force is based on the overlapping area included in the fold) of pressure between two metal plates and hold that pressure for a minimum of 15 minutes at room temperature

4.2 Forced convection test chamber or chambers, capable of being maintained at the specimen rated high temperature and capable of being maintained at the specimen rated low temperature

5 Procedure

5.1 The specimens of 3.1 and 3.2 shall be folded 180° transversely along a 45° angle to the conductors and pressed between two metal plates with a pressure of 2.11 kg/cm^2. See Figure 1.

Example: 76 mm wide cable

$$FA = \frac{\text{width}^2}{2}$$

$$FA = \frac{3X}{2} = 4.5 \text{ in}^2$$

Total Force = FA x 2.11 kg
Total Force = 4.5 x 30
Total Force = 61.2 kg

5.2 After 15 minutes, the pressure shall be released. The folded specimen shall be placed in a forced convection oven at the elevated temperature. After four hours of exposure the specimen shall be placed in a test chamber at the low rated temperature (the transfer time shall be a maximum of five minutes between temperature extremes). The specimen shall be removed from the cold chamber and allowed to stabilize at room temperature.

5.3 Evaluation The specimens shall be evaluated per the appropriate requirement of the applicable specification.

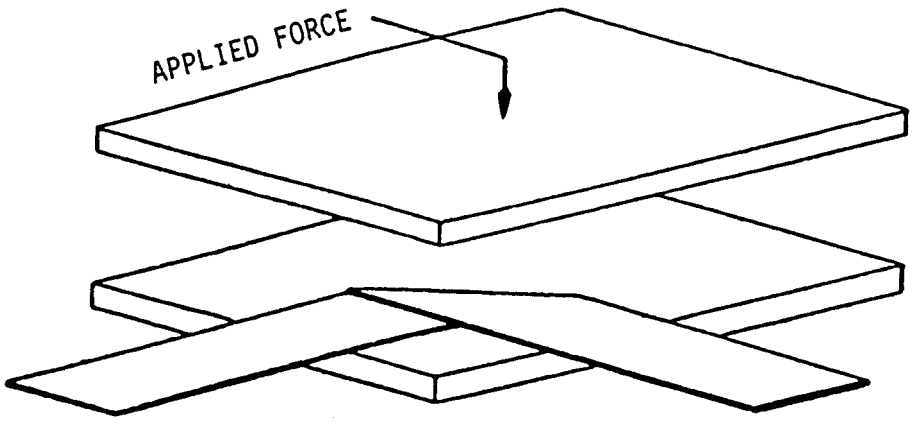

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Figure 1 Applied Force on Folded Specimen