



THE FUTURE OF RIGID FLEX CIRCUITRY

Pre-Assembly Recommendations for Flexible Circuits

All flexible PWB's, including rigid flex, absorb moisture from the atmosphere. Per IPC FC-231/1 (Line 14), flexible material specifications allow up to 6% moisture absorption by weight.

It is the soldering standard, for any PWB, to have less than 0.02% moisture by weight before being exposed to soldering temperatures.

Tests performed by Printed Circuits, Inc. have shown that up to 5% by weight of moisture absorption will occur in flexible circuits, within two hours of exposure to a temperature of 68° F and 50% relative humidity. Flexible circuits are hydroscopic.

Printed Circuits, Inc. recommends the following preparation work prior to assembly:

1. Prior to component assembly, bake PWB's overnight for a minimum of 10 hours, at 250 ° Fahrenheit.
2. Soldering and assembly should be performed within two hours of the initial bake cycle. If this is not possible or practical, dry box desiccation is required until the parts can be assembled.
3. Alternatively, the PWB's can be placed in a vacuum chamber of not less than 50 millitorr for two hours minimum, to achieve an acceptable level of desiccation.

Not following these guidelines for moisture removal could cause post assembly defects.

Desiccation is the single most important practice prior to any soldering operation, particularly with flexible and rigid flex circuitry.