

PWB REQUIREMENTS -IPC CLASS 3

1.0 Definition of terms:

1.0.1 The term “shall”, “will” and “may” are used with specific intent thought-out these documents and will observe the following rules:

- 1.1** Requirements defined using “**shall**” in the text are mandatory requirements and are considered to be binding and require formal verification. Departure from such a requirement is not permissible without formal agreement between Subcontractor and CSPI.
- 1.2** Requirements defined using “**will**” in the text expresses a provision or service by CSPI or an intention by CSPI in connection with a requirement of this document. The subcontractor is implicitly authorized to rely on such service or intention.
- 1.3** The word “**may**” in the text expresses a permissible practice or action. It does not express a requirement of this document.

2.0 PWB Requirements – IPC Class 3

2.0.1 The Buyer shall be allowed access to all PCB data.

2.1 The materials, fabrication, and test requirements for the Printed Wiring Boards (PWBs) shall meet the IPC 6012 Class-3 industry standard requirements of the following specification:

2.1.a Design (IPC-2220),

2.1.b Qualification and performance (IPC-6012 series class-3),

2.1.c Inspect/Test/Acceptability (IPC-A-600, IPC-TM-650, IPC-QL-653, IPC-MI-660).

2.2 Inner layer repairs are not allowed for Class-3 PWBs

2.3 Provide microsection certificate of conformance for:

2.3.a “A and B” microsections that have been solder floated.

2.3.b Microsections representing blind vias, buried vias, etc.

2.3.c Coupon strips representing the micro sectioning above.

2.3.d Any special strips (impedance, peel strength, etc.) that are specified on CSPI drawing.

2.4 Provide panel drawings showing all coupon locations.

2.5 Each PCB shall be marked with a part number, revision, date code, panel number and panel location.

2.6 CSPI designed or CSPI approved IST coupons shall be present on every panel. IST test results shall be supplied to CSPI prior to delivery.

This document is an integral part of the purchase order. The revision in effect at the time the purchase order was placed applies.

- 2.7** IST test conditions: 6X preconditioning (room temp to 230C for reflow) and 300 operational cycles to pass.
- 2.8** IST testing can be performed by the supplier if the supplier has the equipment and process in place. The supplier's process must be approved by CSPI.
- 2.9** 100% inspection regardless of lot size is required for structural integrity evaluation using 3X float. Sampling is not allowed.
- 2.10** Provide scrap data on each lot with details on fall-out. (Only a small sample of each panel is represented by the coupons, it is essential that batch processing defects are not allowed to escape by prescreening operations).

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