

REVISION HISTORY

<u>REV</u>	<u>DATE</u>	<u>ORIGIN</u>	<u>REASON FOR CHANGE(S)</u>
A	04/17/08	Scott M. Ubl	New
B	29SEP16	Eric Steif	Added clarification language to COC requirements
C	04May18	Daniel Crouse	Added PCN language
D	11Oct18	Daniel Crouse	Added cross section for ENIG boards for hyper-corrosion check per IPC 4552, section 3.6.1.2
E	30Oct18	Joyce Conn	Revised hyper-corrosion requirement

Q-CODE Q22S QUALITY REQUIREMENTS FOR SAFETY CRITICAL PCBS

The following are the quality requirements for product purchased under Q-code Q22S. Unless, a written waiver is received from Plexus, the supplier agrees to abide by the quality requirements listed below.

1st Shipment - The documentation and quality requirements for the 1st shipment are as follows:

- A. First Article Inspection Report - All dimensions and specifications on drawing must be verified and within print tolerance. Plexus must approve any dimension that is not within print specification in writing before product can be shipped.
- B. Cross-Section (with inspection data) per IPC-6012 section 3.6.2
- C. Hyper-corrosion – For ENIG boards, process controls shall be implemented as per Plexus PCB specification G9000-3. Results and applicable cross-sections shall be retained by the supplier and provided to Plexus on request.
- D. Contamination Test Report
- E. PCB for Solderability Sample - Complete and physically intact PCB or Array as supplied for the Part Number. This should be segregated and boldly identified. The box containing the solderability sample must also be identified as such.
- F. 100% Electrical Testing Certificate or Stamp. Including an Impedance Report on impedance designs.
- G. Certificate of Compliance – Must include a statement of overall compliance to all the applicable specifications (statement is not required to list, but shall cover all the applicable specifications such as; drawing, PO, customer specifications, Plexus G9000-3, IPC specification, hyper-corrosion acceptability, etc), being manufactured from UL certified material and having a flammability class rating of 94V-0. The PCBs must also be marked with the UL recognized component mark and the 94V-0 flammability class.
- H. All cartons, packing slips, certificates and Certificate of Compliances must have part number, EC level or revision, quantity and P.O. number listed on them.

Subsequent Shipments - The documentation and quality requirements for all subsequent shipments will be as follows:

- A. Cross-Section (with inspection data) per IPC-6012 section 3.6.2 (not required for PCB's less than 8 layers)
- B. Hyper-corrosion – For ENIG boards, process controls shall be implemented as per Plexus PCB specification G9000-3. Results and applicable cross-sections shall be retained by the supplier and provided to Plexus on request.



- C. Contamination Test Report
- D. 100% Electrical Testing Certificate or Stamp - Including an Impedance Report on impedance designs.
- E. Certificate of Compliance – same requirements as G above.
- F. A Solderability Sample as defined in E when a revision is made that affects the physical shape or the outerlayer artwork.
- G. All cartons, packing slips, certificates and Certificate of Compliances must have part number, EC level or revision, quantity and P.O. number listed on them.

The above listed documentation must be submitted with each shipment. Any shipment received without this documentation will be considered defective.

Product change notification

Upon acceptance of conforming product, documentation, and the requirements of this Q-code, the supplier's manufacturing process shall be considered "qualified". All changes require written approval from Plexus prior to implementation. Product or Process change notification requests (PCNs) shall be submitted to pcns@plexus.com.