



REVISION HISTORY			
REV	DATE	ORIGIN	REASON FOR CHANGE(S)
A	12April18	Rachel Perry	New
B	17May18	Daniel Crouse	Added PCN language
C	11June18	Rachel Perry	Added Date Code Information to Subsequent Shipments Added hyper corrosion requirement
D	30Oct18	Joyce Conn	Added new customer requirement for Tooling/Equipment numbers and copies of calibration certificates for FAIR's
E	12Dec18	Rachel Perry/Thang Tran	
F	23Jun21	Rachel Perry	Remove Customer Link as it was added to PO Message and updated applicable sentence

### **Q-CODE Q46A QUALITY REQUIREMENTS**

The following are the quality requirements for product purchased under Q-code Q46A. These requirements are specific to our customers L3 Aviation Products and L3 Interstate Electronics Products. This includes but is not limited to granting the right of access to the supplier's facilities and all applicable records to Plexus, their customers L3 Aviation Products and L3 Interstate Electronics Products and regulatory authorities with the acceptance of this Purchase Order, flow down all applicable requirements to sub-tier suppliers including key characteristics and retention of all records for a minimum of 10 years that support the manufacturing or material per the requirements of this Plexus customer. Unless a written waiver is received from Plexus, the supplier agrees to abide by the quality requirements listed below **for Acceptance of Printed Circuit Boards/Printed Wiring Boards**.

In addition to the PO requirements and requirements set forth below, please also ensure compliance to our customer requirements using the https:// link that is included in the PO Message for L-3 Aviation Products Division or L-3 Display Systems.

#### **ALL Shipments:**

**Shipments and handling of Export Controlled Items, Data, or Services** – Supplier will be required to meet the documentation and quality requirements as follows:

The Supplier agrees to comply with The Arms Export Control Act, 22 U.S.C 2751-2794, the International Traffic in Arms Regulation (ITAR), 22 C. F. R. 120 - 130, the Export Administration Act, 50 U.S.C. app 2401-2420, and the Export Administration Regulations, 15 C.F.R. 730-774 for this product, all specifications, and associated documentation. This includes, but is not limited to:

- Export controlled items, data, or services, or any element thereof, will not be exported from the United States without U.S. Government authority and the express written authorization of a Plexus ITAR Empowered Official.
- Export controlled items, data, or any element thereof, will not be transferred or disclosed to foreign persons including transfer to foreign persons employed by or associated with, under contract to Sub-tier suppliers including transportation carriers.
- Import Licenses will be provided with all shipments where applicable.

#### **ALL Shipments Prior to Shipping:**

**Bake Requirements: 220F for 4-6 hours, package after cooled in Moisture Barrier Bags with HIC and desiccant.**

**First Production Run (1<sup>st</sup> Shipment)/Change to Product/2 years or more since last built**

Before a product can be released for production the supplier will be required to meet the documentation and quality requirements as follows:

- A. First Article Inspection Requirement** - Supplier will execute the Aerospace First Article Inspection requirements of the SAE standard, AS9102 and provide the results to Plexus with each shipment in which the requirement is to be executed. PCB's will comply with IPC-A-600 unless otherwise specified and will default to Class 3 if class is not otherwise specified.
- Special processes utilized by the supplier will require written approval from Plexus prior to performing for review and approval. If approved, a certificate of conformance is required that includes the applicable name of, specification number, type and class of material or process used.
- B. For all shipments of Printed Circuit Boards/Printed Wiring Boards, the following requirements must be completed for Acceptance for the 1<sup>st</sup> Shipment:**
- 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/parts can be shipped. The FAIR must also include all the applicable tooling/equipment numbers and the expiration calibration dates for the tools and equipment used.
- B. Cross-Section Report** - including 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 state compliance to all applicable specifications (drawing, PO, customer specifications, Plexus G9000-3, IPC specifications, etc.). The statement of compliance **Must** include the name and location of the facility that manufactured the Printed Circuit Board/Printed Wiring Board.
- H. Tooling/Equipment Calibration Certificates** - Must include copies of the actual calibration certificates of the tooling/equipment used.
- I. All cartons, packing slips, reports and certificates must have Plexus Part Number, EC level or Revision, quantity and PO Number listed on them.**

**Subsequent Shipments** - The documentation and quality requirements for all subsequent shipments will be as follows and need to include all date codes included in shipment, even if previously shipped:

- A. **First Article Inspection Requirement** - Supplier will execute **First Production Run requirements** and provide the results to Plexus with each shipment following any subsequent change that invalidates the previous First Article Inspection result per AS9102. In addition, products/parts held in inventory by the supplier for 2 or more years or not received by Plexus in 2 or more years **Must** have the **First Production Run requirements** performed to assure no revision change or product/part deterioration during storage.
- B. **Cross-Section Report**, including 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.
- C. **Contamination Test Report**
- D. **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.
- E. **100% Electrical Testing Certificate or Stamp** - Including an Impedance Report on impedance designs.
- F. **Tooling/Equipment Calibration Certificates** - Must include copies of the actual calibration certificates of the tooling/equipment used.
- G. **Certificate of Compliance** - Must state compliance to all applicable specifications (drawing, PO, customer specifications, Plexus G9000-3, IPC specifications, etc.). The statement of compliance **Must** include the name and location of the facility that manufactured the Printed Circuit Board/Printed Wiring Board.
- H. In addition to all other requirements listed, all required documentation, labels, packaging and packing slips must have Plexus part number, EC level or Revision, quantity and PO number listed on them.

*When the revision of the product/part changes, **First Production Run requirements** Must be completed as a new part Before the shipment of product/part to Plexus.*

The above listed required documentation must be submitted with each shipment. Shipments received without the completion and proper execution of these Quality Requirements is considered non-conforming and Plexus reserves the right to return to the supplier at the supplier's expense.

#### 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](mailto:pcns@plexus.com).