



## **1.0 PURPOSE**

- 1.1. This document lists quality requirement short codes or “Q-Codes” for use with suppliers to designate documentation or handling requirements.

## **2.0 SCOPE**

- 2.1 This procedure applies to any purchase order issued to outside supplier or contracted service.

## **3.0 APPLICABLE DOCUMENTS**

- 3.1 WI-0024 Procurement Specification for Laminate and Prepreg

## **4.0 PERSONNEL RESPONSIBLE FOR IMPLEMENTATION**

- 4.1 *Lead Purchaser* is responsible provide the resources required for the effectiveness of the quality management.

## **5.0 TERMS & DEFINITIONS**

- 5.1 Raw Materials- Any material intended to be built into finished goods ( i.e. Laminate, Prepreg, Copper Foil, Chemistry, Via Fill)
- 5.2 For definition pertaining to this document, Price Circuits, LLC is the “Buyer” and is the party issuing the purchase order.
- 5.3 For definition pertaining to this document, the “Seller” is the party receiving the purchase order FROM Price Circuits, LLC and supplying the goods or services TO Price Circuits, LLC.
- 5.4 For definition pertaining to this document, the “Seller” may also be referred to as the “Supplier.”

## **6.0 Applicable to all purchase orders**

- 6.1 Flow Down Requirement
  - 6.1.1 Suppliers must flow down any special requirements and /or key characteristics in the purchasing documents to sub-tier suppliers as applicable including Price Circuits’ customer’s requirements.
- 6.2 Shipping ‘known & approved’ non-conforming material
  - 6.2.1 Prior to submittal of potentially non-conforming product, the non-conforming product must be clearly identified, packaged or shipped separately from any other product within that shipment. The supplier assumes all financial responsibility for replacement, rework and material related to production/supplies, manufactured unless otherwise approved to ship. The supplier is denied MRB authority. Nonconforming product shall be tagged as such and acceptance of nonconforming product is the prerogative of Price Circuits and shall be prescribed by Price Circuits and/or their customer. All products received are subject to inspection and approval by Price Circuits. The Seller upon discovery of a shipment/delivery of

nonconforming product must provide a notice of disclosure to Price Circuits within 24 hours of discovery.

- 6.3 Changes to product and/or process definitions or a change in manufacturing line, facility, or location:
  - 6.3.1 Any changes to changes to processes, products, or services, including changes of sub-tier external providers or location of manufacture must be notified to Price Circuits Industries for an approval. This includes any changes to the contract requirements (PO). Price Circuits must approve this in writing.
- 6.4 Right of Entry
  - 6.4.1 By accepting the PO, the supplier agrees to right of entry and access for Price Circuits' customers, or regulatory agencies into all facilities and access to related records in the performance of this contract. This includes right of entry to all levels of the suppliers supply chain.
- 6.5 Certificate of Compliance (CofC)
  - 6.5.1 The Certificate of Compliance statement shall include certification to part number as stated by Price Circuits Purchase Order and compliance with specified requirements. By acceptance of the Purchase Order, the supplier certifies that materials and processes supplied under the Purchase Order shall be or have been controlled and inspected in accordance with the Purchase Order and that they meet the specified order requirements, application specifications and drawings. Additional requirements for C of C for Raw Materials apply see Section 7.0.
- 6.6 Shipment Delays or discrepancies
  - 6.6.1 Delay in shipment for any reason or part count discrepancies must be conveyed to Price Circuits Industries Purchasing Department in writing (email) prior to delivery date of the purchase order. Notification of delinquency does not eliminate Price Circuits' on time delivery requirement. Unless Price Circuits accepts the vendor delinquency notification, and a revised purchase order is issued.
- 6.7 Packaging & Preservation
  - 6.7.1 Product shall be packaged and preserved to the extent necessary (or as noted by purchase order) to prevent physical damage during shipment. This includes protection from physical damage during handling while in your possession or in transit. In addition, supplier shall handle, package, and otherwise protect in a manner that prevents nicks, scratches, or other types of handling damage and corrosion or other surface imperfections from excessive moisture.

6.8 Confidentiality:

6.8.1 All customer information (electronic data, drawings, etc.) received in the request for quote stage or from the Purchase Order must be held in confidence by the supplier and no third-party request for information will be authorized unless instructed in writing by Price Circuits.

6.9 Quality Management System:

6.9.1 Seller shall maintain a Quality Management System that has been 3rd Party accredited to ISO9001:2015 or AS9100, latest revision, or compliant to Price Circuits evaluation to the applicable elements of ISO9001:2015 or AS9100. Seller shall promptly notify Price Circuits of intended or actual changes in the management representative with assigned responsibility and authority for its quality management system. Furthermore, any major quality system changes must be identified to Price Circuits in writing with a list of the changes and the revision level along with a signed statement that these changes do not diminish the quality system's approval in any manner.

6.9.2 The following QMS requirements applied to all Aviation, Space and Defense POs':

6.9.2.1 Built-to-print suppliers: Must be certified to Latest revision of AS9100 or ISO9001:2015

6.9.2.2 Distributor: Must be certified to latest revision of AS9120

6.9.2.3 Special Processes: Must be NADCAP Certified

6.9.2.4 Raw materials: Must be Certified to ISO9001:2015

6.9.2.5 Calibration Services: ISO/IEC 17025 or National Equivalent

6.10 Natural Disaster Occurrence:

6.10.1 Seller shall promptly notify Price Circuits of any occurrence of natural disaster that diminishes Seller's ability to deliver conforming goods or services.

6.11 English Language

6.11.1 When specifically requested by Price Circuits, Seller shall specifically make specified quality of data and/or approved manufacturing data available in the English language. Seller shall maintain an English language translation of (1) its quality manual, (2) the operating instructions that implement the quality requirements, and (3) an index of Seller's procedures that contain quality requirements. Price Circuits may require additional documentation to be translated, including but not limited to shop orders, technical specifications, certificates, reports, and nonconformance documents.

6.12 Specification Revision

6.12.1 All suppliers are responsible to supply materials to the latest specification(s) revision defined on the drawing or within the specification(s) unless explicitly overwritten.

6.13 Awareness

6.13.1 Supplier must be aware and train all employees for:

6.13.1.1 Their contribution to product conformity.

6.13.1.2 Their contribution to product safety and

6.13.1.3 The importance of ethical behavior

6.14 Control and Monitoring of Supplier Performance

6.14.1 The expectations of all suppliers to Price Circuits are: On time delivery of 95% and Quality acceptance of 99%. Designated 'Top Suppliers' who fail to meet Price Circuits expectations evaluated annually, or any suppliers at the discretion of Price Circuits' Supplier Development Team, Purchasing, and /or Quality System Coordinator, may be placed on probation. This could lead to removal from Price Circuits' Approved Suppliers List.

6.15 Subcontracting

6.15.1 The supplier shall not subcontract any portion of an order without prior authorization of the Buyer. Only Price Circuits and / or Customer approved vendors may be used upon authorization.

6.16 FOD

6.16.1 The supplier shall establish and maintain an effective Foreign Objects and subsequent Foreign Object Damage (FOD) elimination program that meets the requirements of AS9146.

6.17 Counterfeit Product

6.17.1 Seller shall only supply buyer with new materials. Used, re-marked, fraudulent & counterfeit materials will not be accepted. Seller shall establish a counterfeit control program in order to prevent the acceptance and shipment of fraudulent and counterfeit materials in accordance with AS6174 or AS5553, as applicable. Seller shall immediately notify Price Circuits if it becomes aware or suspects that it has furnished fraudulent or counterfeit materials. Buyer shall not return or pay for any fraudulent or counterfeit materials but shall provide evidence of such to the seller.

6.18 Publicity

6.18.1 Seller shall not release any publicity, advertisement, news release or denial or confirmation of same regarding this contract or the goods or program to which it pertains, without Buyer's prior written approval.

6.19 Calibration Clause

6.19.1 All calibration must be complaint to ANSI Z540.3, ISO10012, and ISO 17025 and traceable to the National Institute of Standards and Technology (N.I.S.T.) and the as found condition of all calibration equipment.

6.20 Items With Expiration Dates

6.20.1 Items with expiration or use by dates must have, at the minimum, 75% of its life remaining at the time of receipt at Price Circuits.

6.21 ITAR Regulation

6.21.1 The Supplier certifies that it will advise its employees who have access to ITAR-controlled Technical Data of their obligations regarding compliance with the following:

6.21.1.1 The Supplier understands its responsibilities under U.S. export control laws and regulations, including ITAR, and certifies that it will not disseminate any ITAR-controlled Technical Data that would violate applicable export control laws and regulations.

6.21.1.2 The Supplier understands that ITAR restricts Foreign National access to ITAR-controlled technical data. The Supplier certifies that it will not allow access by any Foreign National to ITAR-controlled technical data packages without the prior written approval of the Prime Contractor. This includes Foreign National employees as well as Foreign Nationals outside the Supplier's company.

6.21.1.3 The Supplier certifies that it will not assign any Foreign National to perform work which requires access to ITAR controlled Technical Data without the prior written approval of the Prime Contractor.

6.21.1.4 If the Supplier provides documentation or information containing ITAR-controlled Technical Data to subcontractors, it will mark such documents, emails, etc. with the following statement: "This document contains technical data that is controlled by the International Traffic In Arms Regulations. Access to this document is restricted to U.S. citizens and lawful permanent residents (US "green card" holders)." By accepting this data, the consignee agrees to honor the requirements of the U.S. International Traffic in Arms Regulations (ITAR)."

6.22 SDS (as applicable):

6.22.1 For all hazardous materials purchased, the supplier must supply Price Circuits with a copy of the latest revision of the SDS sheets at the time of shipment or purchase.

6.23 Record retention

6.23.1 Suppliers shall retain verifiable objective evidence of build, inspection & test records, special process certifications, raw material certifications and certificates of conformance for a minimum of ten (10) years from date of shipment, unless a period is otherwise specified on the Purchase Order as directed by our customer. The data shall be made available to Price Circuits upon request.

**7.0 Applicable to Orders Containing Raw Materials**

7.1 Certificate of Conformance: A Certificate of Conformance is required with each shipment. It will certify that the specified quantity of parts or materials, shipped on the date indicated, are in full conformance with all referenced specifications, drawings and purchase order requirements. An authorized company representative shall sign this certificate. **ALL** Certificates of Compliance (CoC's) must be included in the shipment when purchasing from distributors or 3<sup>rd</sup>. party sources, including the original manufacturer's CoC. Each lot number must be displayed and traceable back to the original manufacturer's lot number and the original manufacturer's CoC **MUST** have the **lot number** on it.

7.2 Materials must meet the requirements of WI-0024 Procurement Specification for Laminate and Prepreg

7.3 Date Code / Serial Number Traceability to manufacturer's lot. The supplier shall provide manufacturer's lot or date code information for each item shipped against this purchase order. Documentation accompanying each shipment shall state how many lot number(s), date code or serial number is being provided

**8.0 As Required Per Purchase Order**

8.1 Q1 – First Article Inspection IAW AS9102 with 'balloon drawing' - The supplier shall submit a First Article Inspection Report (FAIR) in compliance with AS9102. This report shall contain objective evidence that the design characteristics per AS9102 are accounted for, uniquely identified, and have inspection results traceable to each identifier.

Characteristics required on this FAIR are:

- Key Characteristics
- Design Characteristics
- Parts Lists & Notes

In addition, for Geometric Dimensioning and Tolerance Drawings, identify:

- Datum System
- Major Features
- Minor Features

The Supplier shall perform a full FAI, or a partial FAI for affected characteristics, when the following event occurs:

- A change in design.
- The Supplier shall perform a full FAI for affected characteristics, when any of the following events occurs:
  - A change in manufacturing sources, processes, inspection methods, tooling or materials.
  - A natural or man-made event, which may affect the manufacturing process.
  - A lapse in production for two years or as specified by Purchase Order.

8.3 Q3 – Plating finishes:

- Q3A - Immersion Tin: IPC-4554
- Q3B - Immersion Silver: IPC-4553
- Q3C - Electrolytic Gold:
  - OPTION 1: MIL-G-45204 (MIL-PRF-55110 build);
  - OPTION 2: ASTM-B-488 (Commercial IPC 6012 build);
  - OPTION 3: 580-0143 (Rockwell build)
- Q3D - ENIG: IPC-4552
- Q3E - Electrolytic Nickel: SAE-ams-QQ-N-290
- Q3F - Lead-Free HASL:
- Q3G – OSP (Organic Solderability Preservative) per customer requirements, if applicable

Additional plating restrictions or tolerances may apply and shall be specified on the Purchase Order if applicable.

8.4 Q4 – Solder bars are to be manufactured and certified to J-STD-006 Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications Rev. B Amends 1 & 2 (Sn63/Pb37)

- Q4A – Lead-Free solder bars are to be manufactured and certified to J-STD-006 Requirements for Electronic Grade Solder Alloys and Fluxed and Non-Fluxed Solid Solders for Electronic Soldering Applications Rev. B Amends 1 & 2 (Sn96)

8.5 Q5 – Material Safety Data Sheets – One copy of the MSDS for each product ordered shall accompany each shipment.