

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)

6.0 Applicable to all purchase orders

- 6.1 Flow-Down: Supplier shall flow down to any sub supplier the applicable requirements including, any noted in this document, customer requirements, and relevant industry standards. We expect suppliers to follow applicable international trade laws, including import and export control regulations, and compliance with sanctions and anti-boycott laws. Our suppliers have a responsibility to ensure they comply with these trade laws and regulations in any country where they do business (Examples of compliance are, but not limited to, ITAR, EAR, and DFARS compliance).
- 6.2 Non-Conformity: Supplier shall notify Price Circuits LLC within five (5) business days of any discovery of nonconforming product. Supplier shall request a Waiver / Deviation from Price Circuits LLC and receive written notice of acceptability before shipping.
- 6.3 Packaging: Items supplied shall be packaged in a manner to prevent damage during shipment. Any temperature sensitive materials shall have adequate insulation and cold packs to prevent. Moisture sensitive materials shall be packed in appropriate packaging to prevent damage from moisture in transit or storage.
- 6.4 Counterfeit Parts: The Supplier shall establish and maintain an effective program preventing the shipment of counterfeit parts to Price Circuits LLC, Inc. A ‘counterfeit part’ is defined as a copy or substitute without legal right or authority to do so, where materials, performance or characteristics are knowingly misrepresented by supplier, distributor, or manufacturer at any

level in the supply chain. Examples include but are not limited to parts remarked to disguise parts differing from those offered by the OEM; previously used parts, salvaged or defective parts

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 3rd. 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 The supplier shall maintain a quality system, compliant with the requirements of ISO 9001:2015/AS 9100 or equivalent. This system is subject to review and approval by Price Circuits LLC, Inc. at all times. Maintenance of the system does not relieve the supplier of the responsibility for meeting all other requirements of the Purchase Order and the obligation to deliver an acceptable product.
- 7.4 Record Retention: The supplier shall maintain all applicable test/inspection and contract quality data for a period of seven (7) years or according to customer requirements. Price Circuits LLC shall be allowed access to all applicable data at any time within normal business hours given 48-hour notice.
- 7.5 Supplier shall make no changes to product under this Purchase Order including any change in design, manufacturing process, materials, or otherwise which may affect form, fit, or function of the product without prior notification to and approval by Price Circuits LLC, Inc. Such written notification shall consist of detailed drawings clearly defining such changes and the date such changes are proposed to be effective. Such notification shall not constitute approval of the proposed change nor relieve the Supplier of the obligation to comply with requirements

contained in the Purchase Order. If the proposed change is approved, the change approval shall be documented.

7.6 Foreign Object Damage (FOD) Prevention – the supplier shall establish and maintain an effective program preventing foreign objects or material from entering and remaining in deliverable products. The supplier shall inspect for foreign materials prior to shipment.

7.7 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.

