



# BGA TECHNOLOGY

## Purchase Order Quality Clauses

### **Clause-001: Quality Management System Requirements**

#### **Clause -001A: ISO 9001 Quality System Requirement**

Seller shall comply with **QMS standard ISO 9001** "Quality System Requirements," and all other terms of this Purchase Order in the manufacture and / or delivery of the materials or services in this order.

**Clause -001B: Certificate of Conformance (C of C)**: The seller shall provide Certificate of Conformance with the delivery of the product stating that the requirements of the Purchase Order and Statement of Work (SOW –when specified) has been fully met. The C of C shall be signed by the Quality Manager or General Manager.

#### **Clause -002A: Quality Flow -Down to Sub-Tier Suppliers**

The supplier's Quality System shall assure all relevant Purchase Order requirements are flowed down to their sub-tier suppliers. The supplier's sub-tier suppliers are responsible to comply with the same specifications and requirements specified on this Purchase Order. The supplier shall flow down to the supply chain the applicable requirements including customer requirements.

#### **Clause -002B: Requirement for the qualification of personnel**

The supplier's Quality System shall assure all relevant Purchase Order requirements are met and all applicable processes affecting the final quality of the product in the Purchase Order were rendered by qualified personnel.

**Clause -003: Product and Process Control and Quality Record Retention**

Supplier's Product and Process Control and Quality Records shall be retained at the supplier's location a minimum of 10 years from the date of shipment, unless a longer retention period is herewith on the Purchase Order. The records shall be adequate to ascertain the quality level of production processes. This includes chemical and physical test results of Raw Material used in the manufacture of the item on this Purchase Order. Quality records shall be provided upon request from BGA TECHNOLOGY.

**Clause -004: Government /Customer Inspection & (Right of Access)**

**Right of Access/Entry:**

The Supplier shall reserve the right of entry for BGA TECHNOLOGY, BGA TECHNOLOGY customers and regulatory agency personnel, for access to any and all facilities where work is being performed or is scheduled to be performed, including those facilities of Supplier's sub-tier Suppliers, in order to perform inspections, inspection and access to applicable records, surveys or system surveillance as part of verification of conformance to the requirements.

Supplier's denial of access may result in disqualification of future procurement with BGA TECHNOLOGY. The Supplier shall include the provisions of these facility access requirements in its PO's with sub-tier Suppliers. This access shall provide, at no increase in price, cost or fee to BGA TECHNOLOGY.

**Clause -005: Manufacturer's Part Numbers**

If an item on this Purchase Order is controlled by a Manufacturer Part Number, it is the Sellers responsibility to assure that the "Manufacturer Part Number" meets all requirements of the latest manufacturer data sheet.

**Clause -005B: Requirement regarding the need for the supplier to notify BGA TECHNOLOGY on non-conforming product:**

Requirements exist relative to supplier notification to BGA TECHNOLOGY of nonconforming product, and arrangements for BGA TECHNOLOGY's approval of supplier nonconforming material.

**Clause -005C: Requirement regarding the need for the supplier to notify BGA TECHNOLOGY on supplier changes of product, suppliers & changes of manufacturing facility /location:**

The supplier shall notify BGA TECHNOLOGY of changes in product and/or process, changes in suppliers, changes of manufacturing facility locations definition and, where required, shall obtain BGA TECHNOLOGYs approval.

**Clause -006: No Changes without Approval**

Except for first time purchases, items furnished under this Purchase Order shall be identical in form, fit and function to a product previously accepted by BGA TECHNOLOGY.

No component substitution is allowed without BGA TECHNOLOGY approval. Alternate or equivalent parts must be approved by Purchase Order amended prior to shipment and acceptance by BGA TECHNOLOGY Quality and Purchasing Department.

**Clause -007 : Prohibition of Pure Tin (Sn)**

The uses of Pure Tin Plated finishes are strictly PROHIBITED. Any Tin (Sn) Plating or Solder processes shall contain NO LESS then 3 percent LEAD (Pb) composition, unless specifically authorized in writing by BGA TECHNOLOGY. These restrictions apply for all types and levels of procurements, with the supplier responsible for communicating these restrictions to manufactures or sub-tier suppliers as required.

**Clause -008: Electrostatic Discharge Control (ESD) Program-Quality**

For electrical and electronic parts susceptible to damage from Electrostatic Discharge (ESD), the supplier is responsible to establish and implement and ESD Control Program per the latest revision of one

of either MIL-STD-1686, EIA-625, ESD 20.20 or better equivalent. The supplier shall take the necessary precautions to ensure that static susceptible devices are adequately protected from ESD damage during manufacturing, test, inspection, storage, packaging and shipping. Packaging shall be marked with an ESD cautionary note or symbol.

### **Clause -009: Requirements on Moisture Sensitive Devices**

#### **Clause -009A: Plastic Encapsulated Microcircuit (PEM)-Level 1**

This PEM device has been identified as an MS Level 1. Therefore, devices supplied under this purchase order shall be packaged IAW the latest revision of IPC/JEDEC J-STD-033.

#### **Clause -009B: Plastic Encapsulated Microcircuit (PEM)-Level 2-6**

This PEM device has been identified as an MS Level range between 2 and 6. Therefore, devices supplied under this purchase order shall be packaged IAW the latest revision of IPC/JEDEC J-STD-033. The "Moisture-Sensitive Identification" (MSID) label and the "Caution" label as specified in JEDEC JEP113 shall be affixed to the outside surface of the moisture bag (MBB).

#### **Clause -009C: Specialty Metals Clause Flow-down to Supplier:**

Reference: DFARS 252.225-7014, DFARS Subpart 225.7002-2 and DFARS 225.872-1(a) or (b)

DoD's interpretation of this **specialty metals clause** is that it prohibits the contractor (including its suppliers at every tier) from incorporating into military parts, components, and/or and item deliverables "**specialty metals**" (identified in the clauses, including titanium and stainless steel) which have been melted outside the United States, its possessions, or Puerto Rico, unless certain limited exceptions set forth in the clause or DFARS Subpart 225.7002-2 apply. One such exception is for specialty metals melted in a qualifying country or incorporated into an article manufactured in a qualifying country. Those countries are listed at DFARS 225.872-1(a) or (b).

- a.) If a distributor or other sub tier supplier is the source of your material, ensure that the specialty metals clause requirements have been flowed down. Also take the necessary steps to ensure that your supplier provides only specialty metals (such as titanium or stainless steel) that have been melted within the United States or a qualifying country, and if required, proper certifications are issued.

**Clause -009D: Mercury - Free Certification (when applicable)**

Supplies furnished under this contract shall ***not be contaminated by mercury or mercury compounds***. Contamination shall be prevented by ensuring that the supplies during the manufacturing processes, test and inspections have not come in direct contact with mercury or any of its compounds, not with any mercury containing device employing a single boundary of containment.

**Clause -009E: Foreign Object Debris (FOD) Program**

The Supplier shall develop and maintain a Foreign Object Debris (FOD) prevention program to identify and eliminate foreign object entrapment areas and paths through which foreign objects may migrate and cause product failure. The FOD program will include design, manufacturing, and process controls to prevent FOD in deliverable items. The Supplier shall include periodic self-assessment of internal FOD prevention practices. Delivered material must be clean and free from any material/debris, such as machined chips, burrs, grinding dust, forming materials, corrosion, oil and other foreign material on surfaces to prevent FOD entrapment.

**Clause -009F: Requirement on Segregation of lots:**

The Supplier will not co-mingle different date codes or production lots, nor combine resubmitted parts with new production parts. Parts may be submitted in one shipment provided the different date codes and lots are identified and segregated.