



Complete Listing of Giga-tronics/Microsource PO QA Clauses

Quality Requirements: Seller shall meet the requirements of the clauses specified on the purchase order and as defined in detail within this document and all applicable requirements therein in effect as of the date of this PO. Seller shall maintain Internet access for obtaining requirements of this PO.

Seller must comply with all applicable statutory and regulatory requirements.

P1 Certificate of Compliance

- Seller shall:
 - prepare a certificate of conformance (“CoC”) to assert the Items contained with the shipment are in compliance with all applicable requirements of this PO; and
 - annotate in the delivery package any exceptions, e.g. variances, Supplier Quality Assurance Report (“SQAR”), Advanced Engineering Authorization (“AEA”), etc;
 - ensure the CoC is signed by a Seller’s quality representative, and
 - include a copy of the CoC inside the shipping container and with shipping documents.\
- The certification shall as a minimum contain the following:
 - Seller’s name and address
 - Date certification issued
 - Buyers purchase order number
 - Governing specification, when applicable
 - Part number (Sellers and/or Buyers)
 - Lot/serial number/ or model number (Sellers), when applicable
 - Signature of an authorized QA Representative
 - MIL specification, when applicable

P2 Domestic Specialty Metals

- Metal fabrication must comply with DFARS clause 252.225.7014 for Domestic Specialty Metals. DoD’s interpretation of this specialty metals clause (DFARS 252.225-7014) is that it prohibits the contractor (including its suppliers at every tier) from incorporating into military parts, components, and/ or end item deliverables “specialty metals” (identified in the clause, 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). Since the United States is not listed as a qualifying country, DoD does not consider it to be a qualifying country. Even if a qualifying country exception applies, the source for specialty metals melted outside the United States may also have to be listed in an applicable Qualified Products List (QPL), such as set forth in Douglas Material Specification (DMS) 2201, “Procurement From Foreign Sources – Metallic Raw Material”. Please check your purchase order carefully for any such requirement. If your purchase order contains this requirement, you must comply with its provision. If your organization is issued a purchase order with specialty metals clause, compliance to this requirement is required and this includes your sub-tier suppliers to ensure that no foreign melted specialty metals are utilized to fabricate any sold product to Giga-tronics from a non-qualifying country. If your organization needs further



information and/or assistance on this matter, then please contact Giga-tronics Purchasing Department.



P3 SCD Revision Controlled Documentation

- Giga-tronics/Microsource supplied SCD (Specification Control Document) shall be used by the supplier and no product changes are to be made to this SCD without an approved Giga-tronics deviation. Product is to be built to the current supplied revision noted on the SCD. All SCD built product shipped shall be properly identified with the SCD part number and the current revision number.

P4 Deviations and Repair

- No material Deviations to the specified ordering product requirements
- No Repair to the specified ordering product requirements
- No nonconforming USE AS IS material to the specified product ordering requirements, Seller to notify Buyer on any nonconforming material to the Buyers ordering requirements
- No manufacturing facility location changes without prior notice to Buyer
- As set forth on the body of the PO, as stated - any exceptions "to the above" must be noted on the Buyers PO authorizing the Seller to proceed with product order completion.

P5 Part Number or Revision Referenced on Product Ordered

- Seller to reference part number or revision on all products ordered.

P6 Seller to Maintain an Effective Quality System

- Seller shall fully incorporate all necessary measures and controls to assure a consistent quality controlled product.

P7 Source Inspection

- Giga-tronics/Microsource reserves the rights for Source inspection with confirmation between Buyer and Seller.

P8 On-Site Audits, Surveys & Right of Access

- Supplier shall grant Giga-tronics/Microsource, their customers and/or regulatory agencies the right to perform periodic on-site supplier audits and surveys, the right to all quality management system documentation and applicable records, & the right of access to supplier's, and their sub-tier supplier's facilities, that are involved with this purchase order.

P9 Supplier Flow Down to Sub-tier Suppliers

- Supplier flow down to sub-tier suppliers needs to be made available when specified on the body of the PO for key characteristics.

P10 Supplier Record Retention

- Seller shall:
 - maintain complete records of the following:
 - all manufacturing, inspection, test, CoC, and shipping; and
 - all nonconforming material, dispositions, assignable causes, corrective and preventive actions, and effectiveness of corrective actions; and
 - make records available for at least ten (10) years or for longer periods if specified elsewhere in this PO; and
 - upon Buyer's request, forward records to Buyer at no additional cost, price, or fee to Buyer.

P11 Special Testing Requirements

- Special testing requirements to be supplied when specified on the body of the PO such as test samples required, 1st articles, etc.

P12 Control of Nonconforming Product / Material Review Process

- Buyer and Buyer's customers have the right to refuse to accept any and all Seller nonconformances.
- Seller shall ensure Seller's quality system has capability to report nonconformance(s) on CSI in full compliance with Defense Federal Acquisition Regulation Supplement ("DFARS") 252.246-7003.
- *When Buyer's customer has delegated oversight/surveillance of Buyer's work to a cognizant Government representative at Seller's facility, Seller shall submit all material review dispositions for Buyer-related work to the cognizant Government representative, regardless of ownership of design and regardless of tier level for concurrence.
- Buyer has the right to limit or eliminate Material Review processing on work defined by this PO.
- MR for Seller designed or Buyer-designed Items is not applicable to Buyer-Furnished Equipment (BFE).
 - BFE is equipment or Items provided to Seller from Buyer; therefore not procured or built by Seller. Seller's continued processing, prior to obtaining Buyer's MR disposition, of any nonconforming BFE shall be at Seller's risk.
 - Seller shall request Buyer MR disposition.
- For Seller-designed Items, Material review dispositions are limited to non-conformances that do not affect a parameter controlled by Buyer drawing or specification, where form, fit or function, interchangeability, Critical Safety Characteristic (CSC) related to Critical Safety Item (CSI) service life or reliability is affected. Seller shall submit requests for recommended disposition of non-conformances, if any, affecting any such parameter(s) to Buyer for Major Variance approval as defined in this PO.
- For Buyer-designed Items, Seller Material review process is limited to scrapping of Items, eliminating the nonconformance by rework to engineering, or returning to vendor. Seller shall request repair or Use-as-Is disposition from Buyer's MRB. Seller's continued processing shall be limited to subsequent operations that do not hide, alter or limit the ability to inspect, disposition or repair Item unless Seller has received written approval from Buyer. When Buyer has delegated MR to Seller for Buyer-designed Items, Seller's process shall be limited to the scope provided in the MR delegation.

Seller's request for Buyer MR disposition of Seller or Buyer-designed Items shall be submitted in writing via email to the buyer.

- When requested by Buyer, Seller shall provide Buyer's Supplier Quality Engineer with Seller's MRB disposition information related to Buyer's Item(s).

P13 Acceptance Test Procedure

- Acceptance test procedure to be submitted for approval when specified on the body of the PO. Acceptance testing shall be performed prior to shipment. Acceptance testing shall be performed to the seller's prepared Acceptance Test Procedure approved by Giga-tronics/Microsource. Seller shall show evidence of formal Giga-tronics/Microsource approval of the test procedures, when requested.



P14 Test Data

- Test data in accordance with specification requirements shall be available for product shipments. Data shall include, as a minimum, results of the specific testing and objective evidence that the test data required is valid.

P15 Transportation Packaging

- Proper transportation packaging shall be accomplished for maximum protection against physical damage and shipment damage.

P16 Quality/Delivery/Service

- Giga-tronics/Microsource monitor's supplier's "Quality/Delivery/Service" and expects the same from all of our suppliers. Suppliers are expected to maintain good quality standards, on-time delivery and maintain good service with competitive cost for product ordered.

P17 No unauthorized deviations to PO's

- No deviations to the Giga-tronics/Microsource PO without a written purchase order amended notice.

P18 QUF03019 "Statement of Work"

- The seller shall comply with the Giga-tronics/Microsource QUF03019 "Statement of Work". This QUF03019 "Statement of Work" is utilized by Giga-tronics/Microsource contract manufacturers (CM) and Giga-tronics Turnkey suppliers.

P19 Optical Inspection

- Automatic Optical Inspection System (AOI) as per TR7100EP optical diagnostic system or the equivalent shall be used when specified on the body of the PO.

P20 (ICT) Performed In-Circuit Test

- (ICT) Performed In-Circuit Test, using Giga-tronics/Microsource Test Fixtures/Programming for Giga-tronics/Microsource Printed Circuit Assemblies and ICT test data shall be supplied with product shipments.

P21 Soldering Workmanship Standards

- Soldering Workmanship standards shall comply to the latest revision of ANSI/IPC-A-610, Class III and to Giga-tronics/Microsource SCD specifications.

P22 Rework, Modifications and Repair of Electronic Assemblies

- Rework, Modification and Repair of electronic assemblies shall to the latest revision of ANSI/IPC-7711/-7721 and to Giga-tronics/Microsource SCD specifications.

P23 Hybrid Workmanship Standards

- Hybrid Workmanship assembly standards shall comply to the latest revision of MIL-STD-883, Method 2032, 2017 & 1017 and to Giga-tronics/Microsource SCD specifications.

P24 Static Sensitive Product

- Static Sensitive Products shall be in compliance to the latest revision of ESD MIL standard MIL-STD-1686.



P25 Special Packaging

- Special packaging shall be supplied when specified on the body of the PO such as requested Waffle packaging, Gel packaging, etc.

P26 Compliance to the Approved Manufacturers Part Number

- Seller must comply to the Approved Mfg. part number when specified on the body of the PO.

P27 Shelf Life Product

- Shelf Life products ordered shall have at least two-thirds of un-expired life remaining when received at Gigatronics/Microsource.

P28 Counterfeit Parts / Material Prevention:

- Seller shall establish and maintain a Counterfeit Parts / Material Prevention and Control Plan using SAE AS-5553 (Ref. elements of Section 4) and/or AS6174 (Ref. elements of Section 3) to ensure that Counterfeit Work is not delivered to Buyer. The purpose of Seller's Plan shall be to develop a robust process to prevent the delivery of counterfeit commodities and control commodities identified as counterfeit.

- For purposes of this clause, Work consists of those commodities delivered under this Contract that are the lowest level of separately identifiable items (e.g., articles, components, standard hardware, goods, raw materials and assemblies). "Counterfeit Work" means Work that is, or contains, items misrepresented as having been designed and/or produced under an approved system or other acceptable method. The term also includes approved Work that has reached a design life limit or has been damaged beyond possible repair, but is altered and misrepresented as acceptable.
- Seller shall only purchase products to be delivered or incorporated as Work to Buyer directly from the Original Component Manufacturer (OCM)/Original Equipment Manufacturer (OEM), OCM/OEM authorized distributor chain, Aftermarket Manufacturer, or Authorized Reseller. These products shall have verification that Work is traceable to OCM/OEM; OCM/OEM authorized distributor chain, Aftermarket Manufacturer, or Authorized Reseller that identifies the name and location of all the supply chain intermediaries from the part manufacturer to the direct source of the product for the Seller. Work can only be acquired from independent distributors or brokers in cases of diminishing material supply (DMS) or obsolescence and shall be subjected to a screening process appropriate to the commodity in accordance with the Counterfeit Parts / Material Prevention and Control Plan.

If traceability is not obtainable, written notice shall be provided to the Supplier Quality Engineer and Buyer prior to delivery with records of evidentiary tests and inspections performed and conformance of the product to specified acceptance criteria that ensures verification activities taken to assure authenticity. Written notice is not required for raw material and standard hardware purchased from independent distributors or brokers, but products must be able to provide commodity level traceability to the Original Manufacturer.

- Seller shall notify Supplier Quality Engineer and Buyer in accordance with 2.2 with the pertinent facts if Seller becomes aware or suspects that it has furnished Counterfeit Work. Seller shall provide to Supplier Quality Engineer and Buyer, upon request, the supply chain traceability to an Original Manufacturer or authorized distributor chain that



identifies the name and location of all the supply chain intermediaries from the part manufacturer to the direct source of the product for the Seller.

- Seller shall include this clause or equivalent provisions in lower tier subcontracts for the delivery of items that will be included in or furnished as Work to Buyer. Sellers eligible for utilization of the Government-Industry Data Exchange Program (“GIDEP”) shall utilize the GIDEP process to alert the industry of encountered counterfeit parts.
- Also see Gigatronic’s [“Policy on Avoidance, Detection, Mitigation, And Disposition of Counterfit Electronic Parts” MKF01025](#)

P29 Independent Distributors

- Preferred suppliers are to have IDEA (*Independent Distributor Electronic Association*) certification & ISO certification. Seller is to warrant against any counterfeit or no pulls/no used parts. Giga-tronics may request the following Vendor criteria conditions when stipulated in the PO line Item covering: component x-ray required, de-lidded/de-capped, submit photographs on parts being supplied, submit part samples for Giga-tronics/Microsource electrical testing & component date code restrictions.

P30 QUF17026 “Statement of Work (AS9100 Programs)”

- This Statement of Work takes precedence over QUF03019 when noted in the body of the PO. This QUF17026 “Statement of Work” is utilized by Giga-tronics/Microsource contract manufacturers (CM) and Electronic Turnkey suppliers.

P31 Purchase Order Exclusivity

- Giga-tronics/Microsource Purchase Orders will take precedence over all other requirements. Unless noted on the PO then the Purchase Order controls all procured product requirements.

P32 CAM File Precedence

- CAM file(s) supplied with PO take precedence over the drawing. In the event of a conflict between the CAM file(s) and the drawing, the supplier shall notify Giga-tronics/Microsource Purchasing.

P33 Raw Material Certifications

- Supplier shall maintain a copy of all procured raw material and plating/finishing certifications from sub-tier suppliers. Such certifications shall be available for review upon request by Giga-tronics/Microsource, OR shall be furnished to Giga-tronics/Microsource if the PO includes a First Article requirement. Certifications shall include material description and specification. This requirement does not apply if Giga-tronics/Microsource has supplied consigned material for use by the supplier.

P34 Serial Number Labeling On Printed Circuit Boards

- Supplier shall supply serial number labeling on production printed circuit board assembly units and utilize the 1st alpha sequence as the suffix to the name of the supplier & then use the next two numerical digits as the year & then the next two numerical digits as the week, followed by four sequential numerical numbers. The serial number labeling shall be located next to the assembly part number labeling on the board unless otherwise specified on the supplied drawing.

P35 Chromate Conversion

- Sheet Metal & Machining Drawings that specify Chromate Conversion coating per Mil-C-5541 or Mil-DTL-5541 and are not specific to the type of material, shall use Type II (non-hexavalent chrome) material.

P36 Cancellation

- Buyer may at its option cancel the Purchase Order without liability due to pro-long delivery delays exceeding a one week period with no advance notice received from Seller or un-resolved quality issues with no corrective action response received from the Seller exceeding 30 days.

P37 Confidentiality

- Any information regarding our intellectual property is to remain confidential. Buyers supplied documentation shall be treated as confidential. There shall be no disclosure to a third party of our confidential information for any purpose other than your performance under this order without prior written consent from buyer.

P38 Quality System Changes & Relocation

- Seller shall notify Buyer's Supplier Quality Engineer, in writing, within 10 days of any of the following:
 - change in its quality system status; or
 - loss of third party registrar's certification status; or
 - change in Seller's quality organization, process or procedures that affects conformity of any Item; or
 - adverse action taken by Seller's customer, the Government, the Federal Aviation Agency ("FAA"), or the Civil Aviation Agency ("CAA") to include any of the following:
 - Issuance of a Level II Corrective Action Request ("CAR") associated with Buyer Items
 - Issuance of any Level III CAR
 - Suspension of Government Source Inspection ("GSI")
- Seller shall notify Supplier Quality Engineer and Buyer, in writing, at least 90 days in advance of any sale, relocation, or transfer of Seller's manufacturing operations. Seller shall include the following, as a minimum, in the written notification:
 - purpose of the relocation,
 - address of the new location(s),
 - assessment of actual or potential impact to current POs,
 - risk mitigation plan to ensure compliance to existing requirements,
 - plan defining the identification, storage, protection, retrieval and retention of records,
 - master schedule and timeline of relocation activities, and relocation Coordinator/Point of Contact

P39 Language

- Upon request by Buyer, Seller shall provide all Seller records, reports, specifications, drawings, inspection and test results and other documentation in English.

P40 Government/Industry Data Exchange Program ("GIDEP") Membership

- If Seller is eligible for GIDEP membership, Seller is required to be a member of GIDEP.

P41 Buyer-Certified Materials:

- Seller shall establish and maintain controls to prevent the use of non-certified materials when Buyer-certified materials (e.g. Engineering Materials and Approved Products [EMAPs]) are required.

P42 Calibration

- Seller shall maintain a documented calibration system for the calibration and maintenance of tools, jigs, inspection and test equipment. Seller shall have and maintain a calibration system compliant to ISO 17025, ISO10012-1, or ANSI Z540.

P43 Buyer-Furnished, Seller-Manufactured or Seller-Owned Tooling:

- Seller shall include in its documented quality system written procedures for the control, maintenance, and calibration of special tooling, jigs, inspection and test equipment, and other devices used in manufacturing processes.

P44 Corrective Action, Preventive Action, Request and Reporting

- Seller shall:
 - ensure effective corrective and preventive action is taken (including repetitive non-conformances dispositioned “Use-As-Is” or “Repair” by Buyer’s or Seller’s Material Review Board [“MRB”] actions) to prevent, minimize, or eliminate non-conformances; and
 - evaluate each nonconformance for its potential to exist in previously produced Items and notify Buyer, in writing, within 24 hours of potential or verified non-conformances impacting flight safety on Items in transit or delivered to Buyer; and
 - notify Buyer in writing within 5 working days of all other potential or verified non-conformances by email and;
 - provide effective corrective and preventive action upon request by Buyer and, when requested by Buyer, provide trend data; and
 - assess all Buyer-identified non-conformances, whether or not Item(s) was/were returned to Seller, and take appropriate actions ensure causes of non-conformance are corrected.

P45 Facility Access

- Regardless of Buyer’s or Buyer's Customer Point of Acceptance on this PO or whether Buyer's Customer has issued a delegation for this PO, Seller shall provide or obtain for Buyer, Buyer’s customers and regulatory agency personnel, access to any and all facilities where work is being performed or is scheduled to be performed, including those facilities of Seller’s subcontractors, in order to perform Item inspections, surveys or system/process surveillance as part of verification of conformance to the requirements of this PO. Seller’s denial of any such access may result in inactivation of Seller’s approval. Seller shall include the provisions of this facility access requirement in its POs with its subcontractors, for this PO. And
- Seller shall provide the following, at no increase in price, cost or fee to Buyer, Buyer’s customers or regulatory agencies:
 - suitable facilities at Seller and Seller’s subcontractors’ manufacturing locations for Buyer, Buyer’s Supplier Quality Engineer, Buyer’s customer and regulatory agency representatives to perform Item inspections, surveys or system/process surveillance, and
 - Buyer’s Supplier Quality Engineer with high speed internet access (DSL or wireless).