



<b>QA Clause</b>	<b>PURCHASE ORDER QUALITY SYSTEM REQUIREMENTS</b>
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**QA1 Quality System Requirements – General**

The supplier shall maintain a quality system that utilizes procedures which are consistent with the requirements of AS 9100 (ISO-9001) and ANSI/NCSL Z540-1 (ISO-10012-1), as a minimum. The supplier shall notify Microphase of any changes in product and/or process, change of suppliers, change of manufacturing facility location and, where required, obtain approval. Right of access by Microphase, their customer, and regulatory authorities to the applicable areas of all facilities at any level of the supply chain involved in the order and to all applicable records, shall be granted. When applicable to the product being procured, the Microphase Specialty Metal Clause QA19 is incorporated into this purchase order. The supplier shall flow down to sub-tier suppliers the applicable requirements in the purchasing documents, including key characteristics where required, and the use of customer approved special process sources when specified. The Supplier shall retain all records showing conformance to the Purchase Order requirements for a period of seven (7) years after the date of the completion of the Purchase Order, unless otherwise specified in the Purchase Order. Microphase approval of non-conforming material is required prior to shipping. A Certificate of Conformance “C of C” is required with each shipment.

**QA2 Quality System Requirements – Military Components Devices**

QPL traceability is required. Active components shall be shipped in ESD packages. A Certificate of Conformance “C of C” is required with each shipment.

**QA3 Quality System Requirements – Non-MIL Components Devices**

The supplier shall maintain a quality system that utilizes procedures which are consistent with the requirements of AS 9100 (ISO-9001) and ANSI/NCSL Z540-1 (ISO-10012-1), as a minimum. The supplier shall notify Microphase of any changes in product and/or process, change of suppliers, change of manufacturing facility location and, where required, obtain approval. Microphase approval of non-conforming material is required prior to shipment. Active components shall be shipped in ESD packaging. All chip elements shall be shipped ESD waffle packs. SMT components may be shipped in bulk. A Certificate of Conformance “C of C” is required with each shipment.

**QA4 Quality System Requirements – RF Active Devices**

The supplier shall maintain a quality system that utilizes procedures which are consistent with the requirements of AS 9100 (ISO-9001) and ANSI/NCSL Z540-1 (ISO-10012-1), as a minimum. The supplier shall notify Microphase of any changes in product and/or process, change of suppliers, change of manufacturing facility location and, where required, obtain approval. Microphase approval of non-conforming material is required prior to shipment. Devices shall be shipped in ESD packaging. Certification screening test report serialized final electrical test data and a Certificate of Conformance “C of C” are required with each shipment.

**QA5 Quality System Requirements — RF Isolators**

The supplier shall maintain a quality system that utilizes procedures which are consistent with the requirements of AS 9100 (ISO-9001) and ANSI/NCSL Z540-1 (ISO-10012-1), as a minimum. The supplier shall notify Microphase of any changes in product and/or process, change of suppliers, change of manufacturing facility location and, where required, obtain approval. Microphase approval of non-conforming material is required prior to shipment. Serialized final electrical test data and a Certificate of Conformance “C of C” are required with each shipment.

**QA6 Quality System Requirements — PWA Subassembly**

The requirements of IPC610, class 3 “Acceptability of Electronic Assemblies” is imposed. Only MIL-F-14256 RMA liquid flux and QQ-S-571 type SN62 RMA solder shall be used unless otherwise specified in the purchase order. Each PWA shall be shipped in ESD package.

**QA7 Quality System Requirements — Military Hardware**

QPL traceability is required. A Certificate of Conformance “C of C” is required with each shipment.

**QA8 Quality System Requirements — Non-Military Hardware**

A Certificate of Conformance “C of C” is required with each shipment.

**QA9 Quality System Requirements — Wire/RF Cable**

A Certificate of Conformance “C of C” is required with each shipment.

**QA10 Quality System Requirements — Raw Stock-Metal**

Material shall be identified by either tagging or marking in accordance with FED-STD-183 or 184 or other industry wide method. A Certificate of Conformance “C of C” is required with each shipment.

**QA11 Quality System Requirements — Paint, Adhesive, Epoxy, etc. Including Chemicals**

Limited shelf-life items require Date of Expiration and special storage conditions to be marked on each container. No material with less than 90% of its useful shelf life shall be shipped. Current Material Safety Data Sheet (MSDS) and a Certificate of Conformance “C of C” are required with each shipment.

**QA12 Quality System Requirements — RF Connectors & Glass to metal seals**

The supplier shall maintain a quality system that utilizes procedures which are consistent with the requirements of AS 9100 (ISO-9001) and ANSI/NCSL Z540-1 (ISO-10012-1), as a minimum. The supplier shall notify Microphase of any changes in product and/or process, change of suppliers, change of manufacturing facility location and, where required, obtain approval. Microphase approval of non-conforming material is required prior to shipping. A Certificate of Conformance “C of C” is required with each shipment.

**QA13 Quality System Requirements — Machined piece parts.**

The supplier shall maintain a quality system that utilizes procedures which are consistent with the requirements of AS 9100 (ISO-9001) and ANSI/NCSL Z540-1 (ISO-10012-1), as a minimum. Notification of non-conforming material is required prior to shipment. A Certificate of Conformance “C of C” is required with each shipment.

**Raw Material Report and/or Certificate of Conformance**

The supplier shall provide a Report or Certificate of Conformance (C of C), with each delivery, for the raw material supplied or used in the parts supplied. The C of C shall be from the original raw material supplier and include original supplier, lot number, material specification, tests conducted, and any other relevant information needed to identify the raw material. Acceptable examples include foundry report, mill report, dimension/description, temper/hardness, alloy, and condition. The supplier shall maintain the original mill certification and any secondary independent test laboratory certification(s) if any additional process was done after original mill certification for procured metallic material that shall include physical properties, chemical analysis, and lot number(s). In addition, material shall meet any other contractual requirements as stated in the Purchase Order, and any applicable DFARs such as Specialty Metals.

**QA14 Quality System Requirements — Finish & Plating**

The supplier shall maintain a quality system that utilizes procedures which are consistent with the requirements of AS 9100 (ISO-9001) and ANSI/NCSL Z540-1 (ISO-10012-1), as a minimum. Notification of non-conforming material is required. The plating facility (excluding printed circuit board manufacturers) shall be an approved NADCAP processor (whether prime or sub-tier) for all the applicable plating’s (including underplating’s), surface finish, or conditioning process(es). Process Certification in accordance with the requested plating specification and a Certificate of Conformance “C of C” are required with each shipment.

**QA15 Quality System Requirements — Military Printed Wiring Boards**

The requirements of MIL-P-13949, MIL-P-55110, AS 9100 (ISO-9001) and ANSI/NCSL Z540-1 (ISO-10012-1) are imposed. Microphase approval of non-conforming material is required prior to shipment. MIL-P-55110 Process Certification (with coupons) and a Certificate of Conformance “C of C” are required with each shipment.

**QA16 Quality System Requirements — Non-Military- Printed Wiring Boards**

The requirements of MIL-P-13949, AS 9100 (ISO-9001) and ANSI/NCSL Z540-1 (ISO-10012-1) are imposed. MIL-P-55110 is not imposed but should be used as a guide in processing. Microphase approval of non-conforming material is required prior to shipment. MIL-P-55110 Process Certification is not required. A Certificate of Conformance “C of C” is required with each shipment.

**QA17 Quality System Requirements — Hybrid Substrates**

The hybrid substrates shall be capable of meeting the requirements of MIL-PRF-38534 para.C.3.7 Substrate evaluation for Class H devices. The supplier shall notify Microphase of any changes in product and/or process, change of suppliers, change of manufacturing facility location and, where required, obtain approval. Microphase approval of non-conforming material is required prior to shipment. A Certificate of Conformance “C of C” is required with each shipment.

**QA18 Quality System Requirements — Hybrid Packages**

The hybrid substrates shall be capable of meeting the requirements of MIL-PRF-38534 Para. C.3.8 Package evaluation for Class H devices. Notification of product configuration changes is required, and Microphase Quality approval of non-conforming material is required prior to shipment. A Certificate of Conformance “C of C” is required with each shipment.

**QA19 Specialty Metals**

Specialty metals DFARS 252.225-7009 (formally 252.225-7014 with Alternate I) “Restriction on Acquisition of Certain Articles Containing Specialty Metals” (excluding paragraph (d)) is incorporated into this purchase order. These requirements shall apply to the Seller and shall be flowed down to all the Seller’s sub-tiers who provide specialty metals for use on this purchase order. Seller should confirm that all deliverable products are in compliance with the specialty metals clause.

**QA20 Counterfeit Parts Prevention**

SELLER represents and warrants that only new and authentic materials are used in products required to be delivered to Microphase and that the material delivered contains no Counterfeit Items. The SELLER also represents that they are either an Original Equipment/Component Manufacturer (OEM/OCM) or an OEM/OCM authorized distributor.

- a) “Counterfeit Item” is defined to include, but is not limited to:
  - (i) an item that is an illegal or unauthorized copy or substitute of an Original Equipment Manufacturer (“OEM”) or Original Component Manufacturer (“OCM”) item.
  - (ii) an item that does not contain the proper external or internal materials or components required by the OEM or OCM or that is not constructed in accordance with OEM or OCM design but is represented as such.
  - (iii) an item or component thereof that is used, refurbished, or reclaimed but the Seller represents as being a new item.
  - (iv) an item that has not successfully passed all OEM or OCM required testing, verification, screening, and quality control but that Seller represents as having met or passed such requirements; or
  - (v) an item with a label or other marking intended, or reasonably likely, to mislead a reasonable person into believing a non-OEM or OCM item is a genuine OEM or OCM item when it is not.
- b) “Authorized Distributor” is defined as a distributor with which the OEM has a contractual agreement to stock, repackage, sell and distribute its product lines.
- c) SELLER shall flow the requirements of this provision to its subcontractors and suppliers at any tier for the performance of this purchase order.
- d) Notifications: Should SELLER become aware of a Counterfeit Part or Suspect Counterfeit Part that, by any means, has been delivered to Microphase Corporation, or acquired for this purchase order whether delivered to Microphase Corporation. SELLER shall notify Microphase Corporation as soon as possible but not later than 7 days of discovery. SELLER will verify receipt of this notification by Microphase. This requirement will survive this purchase order.



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- e) SELLER shall be liable for cost of Counterfeit Parts and Suspect Counterfeit Parts and the cost of rework or corrective action that may be required to remedy the use or inclusion of such parts.
- f) SELLER shall quarantine Suspect Counterfeit Electronic Parts and Counterfeit Electronic Parts and make them available for investigation by appropriate government authorities. Suspect Counterfeit Electronic Parts and Counterfeit Electronic Parts shall not be returned to the supply chain unless and until such time that the parts are determined to be authentic.

**QA21 First Article Inspection**

The seller shall perform a First Article Inspection (FAI) on this order conforming to the requirements of Aerospace Standard AS9102. The revision of this standard at the time of the purchase order shall apply. A First Article Inspection Report is required and must accompany the shipment.

**QA22 Pure Tin Prohibition**

The use of Pure Tin-Plated finishes is strictly PROHIBITED. Any Tin Plating or Tin Solder processes shall contain NO LESS than 3 percent LEAD composition, unless specifically authorized in writing by Microphase. Reflowed pure tin plating is not acceptable.

**QA23 Foreign Object Debris/Damage (FOD) Prevention**

The Seller shall utilize effective FOD prevention practices. By delivering items against the referenced purchase order, the Supplier certifies that such items, and any associated packaging material, are free from any foreign materials that could result in FOD.

**QA24 Conflict Minerals Declaration/Requirement**

Microphase Corporation is aware and knowledgeable of the Dodd-Frank Act regarding the purchase, use and declaration requirements concerning conflict minerals originating from the Democratic Republic of Congo (DRC) or an adjoining country. Microphase shares the concern and commitment of its customers to help eradicate the use of 3TG conflict minerals (tantalum, tin, tungsten and gold) mined in the Democratic Republic of the Congo.

Microphase is not a smelter of tantalum, tin, tungsten, or gold, and does not procure any items classified as "Conflict Minerals" directly from any mines or smelters. All our suppliers are required to confirm that the products they supply to us meet the requirements of the Dodd-Frank Conflict Minerals legislation.

As such, suppliers are expected to ensure that parts and products supplied to Microphase Corporation are DRC conflict-free (do not contain metals derived from "conflict minerals"; columbite-tantalite (tantalum), cassiterite (tin), gold, wolframite (tungsten), or their derivatives such that they directly or indirectly finance, or benefit armed groups through mining or mineral trading in the Democratic Republic of the Congo or an adjoining country). Suppliers are to establish policies, due diligence frameworks, and management systems, consistent with the OECD Due Diligence Guidance for Responsible Supply Chains or Minerals from Conflict-Affected and High-Risk Areas, that are designed to accomplish this goal. All of our suppliers are required to confirm in writing that the products they supply to Microphase meet the requirements of the Dodd-Frank Conflict Minerals legislation.

**QA25 Defense Priority and Allocation Requirements (Apr 2008)**

This is a rated order certified for national defense, emergency preparedness, and energy program use, and the Contractor shall follow all the requirements of the Defense Priorities and Allocations System regulation (15 CFR 700).



**QA26 FAR Clause 52.204-24 Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment**

Note: FAR Clause details can be viewed at:

<https://www.acquisition.gov/far/52.204-24>

**QA27 FAR Clause 52.204-25 Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment**

Note: FAR Clause details can be viewed at:

<https://www.acquisition.gov/far/52.204-25>

## THIS PAGE FOR REVISION HISTORY ONLY

### Revision History

<b>Date</b>	<b>Author</b>	<b>Rev</b>	<b>Description of Change</b>
01/10/12	B. Pasciucco	-	Initial release - Contents taken from 0300006 (QSP06)
03/22/12	B. Pasciucco	A	Revised AS9003 (ISO-9002) with AS9100 (ISO-9001), added NADCAP to QA14, added definitions to QA20
05/01/12	B. Pasciucco	B	Added QA22 & QA23
06/21/12	B. Pasciucco	C	Revised QA1 to add record retention
10/25/12	B. Pasciucco	D	Revised QA1 to include reference to updated QA19.
10/04/13	B. Pasciucco	E	Added QA24 Conflict Minerals
08/08/14	B. Pasciucco	F	Added QA25 Defense Priority and Allocation Requirements
05/19/15	B. Pasciucco	G	Clerical spelling corrections
05/04/16	B. Pasciucco	H	Revised QA20, Counterfeit Parts Prevention
10/21/19	B. Pasciucco	I	Added clauses QA-26 and QA-27
03/16/23	S. Kent	03/16/23	Added Raw Material Report and/or Certificate of Conformance requirements to QA13 and reformatted the tables to be paragraphs for easier editing. Updated links for QA26 and QA27