OSI ELECTRONICS

Supplier Quality Clauses

APPLICABILITY

The quality assurance requirements are applicable to the Organization Purchase Orders [POs] when incorporated by reference to the applicable clause or clauses by code numbers in such POs. Acceptance of the articles or material specified on this PO will be withheld pending receipt of all required data and documentation.

SIGNIFICANCE

The requirements and execution thereof shall be in addition to and not in derogation of other PO requirements.

REFERENCED DOCUMENTS

Unless specifically stated, all standards referenced herein shall be the issue in effect on the date of quotation for this PO, unless prior approval has been granted by OSI Electronics.

100 COMMON REQUIREMENTS

101 The seller should maintain a quality management system that is compliant to ISO 9001, and if applicable ISO 13485 or equivalent standard.

102 All work performed for OSI Electronics shall be in full compliance with all applicable federal, state, and local government environmental, health, and safety laws and regulations.

Supplier shall maintain applicable environmental permits and licenses during the conduct of work performed for OSI Electronics.

Supplier personnel performing work for OSI Electronics shall be trained and otherwise qualified and competent to perform work assigned to them that has actual or potential environmental impacts, and shall retain applicable records.

Seller shall package products delivered to the buyer in accordance with ISTA Standards unless otherwise specified on the purchase order including the Responsible Packaging by Design (RPbD) Guide.

Supplier shall indemnify and hold OSI Electronics harmless to the full extent of any loss, damage, or expense, including lost profit, attorney's fees and court costs, that relates to environmental damages, property damage, and/or personnel injury, including injury to remediation personnel, and all related liabilities and associated costs relating to or arising from the Supplier's performance under OSI Electronics purchase orders.

Supplier shall dispose of all hazardous material resulting from the work being performed to OSI Electronics orders in accordance with applicable laws and regulations.

Supplier is encouraged to establish a recycling program for cardboard, wood, plastic, scrap metal, and paper waste.

OSI Electronics encourages its suppliers to certify to or comply with ISO 14001.

103 The supplier shall allow the right of access by OSI Electronics, its customers, and regulatory authorities to the applicable areas of facilities and to applicable documented information (e.g., documents, records), at any level of the supply chain.

104 The Supplier shall flow down to suppliers/external providers applicable requirements including customer requirements.

105 The supplier shall notify OSI Electronics of changes to processes, products, or services, including changes of external providers (suppliers) or location of manufacture, and obtain OSI Electronics' approval.

106 The supplier shall maintain, on file at the supplier's facility, records traceable to the conformance of product delivered to OSI Electronics. Unless specified by contract or purchase order, the supplier shall retain such records for a period of not less than ten (10) years from the date of shipment under each applicable order for all products.

The supplier for medical devices shall maintain records for a period of fifteen (15) years per the requirements of ISO 13485 and be available for review, if so requested.

The supplier shall also ensure such records of the supplier's subcontractor(s) shall remain on file by the supplier's Subcontractor(s) or the supplier for the same retention period.

The supplier shall make such records available to OSI Electronics and its authorized representatives, its customers, and regulatory authorities.

When requested by OSI Electronics, the supplier shall make specified records available in the English language.

At any time during the identified retention period, at OSI Electronics' request, the supplier will deliver such records or any part thereof in format / media and within a time frame as agreed to by both parties, to OSI Electronics, at no additional cost to OSI Electronics.

At expiration of the retention period, the supplier shall notify OSI Electronics in writing. OSI Electronics reserves the right to request delivery of such records. In the event OSI Electronics chooses to exercise this right, the supplier shall promptly deliver such records to OSI Electronics at no additional cost on media agreed to by both parties. If OSI Electronics does not request the records, expired hardcopy records related to OSI Electronics shall be shredded. Expired electronic records shall be permanently deleted.

107 The supplier shall have and maintain a calibration system which effectively controls the accuracy of all measurement and test equipment used for acceptance of items deliverable under applicable PO. The supplier's calibration system is subject to review and approval by the purchaser's Quality Assurance department at all times during the performance of applicable P.O.

108 All materials should be identified by a part number, permanently and legibly affixed directly to the surface of each article. In the event this is not possible due to physical size or nature of material, an identification tag will be securely affixed to each article, or if articles are supplied in individual or multi-unit containers the container must reveal the appropriate identification.

109 The supplier shall maintain an inspection system applicable and adequate for the product or service being supplied.

110 The supplier shall notify OSI Electronics of nonconforming processes, products, or services and obtain approval for their disposition.

The notification shall be in writing within 24 hours upon identification of any actual or possible nonconformance or deviation from requirements of applicable specification, drawings, samples, or descriptions. Written notification shall include (i) affected process or product number and name, (ii) description of the problem, (iii) quantity, dates, and destination of shipment delivered, (iv) suspected/affected serial number(s) or date codes, when applicable. The supplier shall obtain OSI Electronics" approval for nonconforming product disposition. No deviation will be considered approved without written confirmation of that fact from the Buyer.

111 The supplier shall incorporate good commercial practices for preservation and packaging of all articles applying to this PO and shall identify each package permanently and legibly with PO number, manufacturer's name, date shipped and packing sheet number.

112 Prior to each shipment all materials, components and finished goods shall be inspected for applicable workmanship standard, they should be uniform in quality and shall be free from defects and all foreign substances or residue from processing or handling that could affect fit, form, function, reliability or serviceability.

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** Reference Only – Valid when viewed On-Line **

Supplier Quality Clauses

113 Revision Control – Drawings, technical data, specifications and standards (including government and industry related specifications and standards), and reference document revisions in effect at time of order placement apply, unless otherwise specified on the purchase order.

114 Obsolescence – Supplier shall be aware and proactively monitor all items and material used in the manufacture of OSI Electronics orders for impending obsolescence issues. If obsolescence issues are identified, the supplier shall provide immediate notification to OSI Electronics buyer and impacted personnel, describing the obsolete item, reason for obsolescence, estimated date the product will no longer be available, and any proposed alternatives. Timely notification is imperative to allow sufficient time to identify alternates for the affected parts, and perform any necessary certifications, which may involve regulatory agencies.

The Supplier shall procure or will maintain, during the performance of OSI Electronics' orders, sufficient components and materials necessary to perform the orders, including obtaining commitments from its suppliers required to meet all requirements.

The Supplier shall flow down and manage this requirement with its suppliers to ensure they can meet the Supplier's obligations.

The Supplier agrees to maintain an obsolescence policy/procedure adequate to ensure that the Supplier and its suppliers can provide OSI Electronics adequate notice that components and material necessary to supply additional new-order quantities can be purchased through the Supplier by placing on order within 90 days of receiving said notice. Further, the Supplier agrees to supply OSI Electronics with such additional products or components of which are due to be discontinued subject to OSI Electronics agreeing to compensate the Supplier for its reasonable cost plus profit for such additional orders.

115 Control of Suspect or Counterfeit Product – Supplier shall establish a program to eliminate the risk of introducing both counterfeit electronic parts as well as non-electronic parts and materials. This includes:

- Identification, mitigation, detection, and avoidance techniques, and reporting of suspect or confirmed counterfeit parts, assemblies, and/or materials;
- Training for the detection and prevention of counterfeit parts.

For guidance, the supplier may refer to:

- AS5553 – Counterfeit Electrical, Electronic, and Electromechanical (EE) Parts; Avoidance, Detection, Mitigation, and Disposition;
- AS6174 – Counterfeit Materiel; Assuring Acquisition of Authentic and Conforming Material.
- ARP6178 – Fraudulent/Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors
- AS6171 – Suspect/Counterfeit Test Evaluation Method

Supplier and their sub-tier suppliers that are allowed access to the US Government Industry Data Exchange Program (GIDEP) shall participate in monitoring GIDEP reports and the Supplier shall act on GIDEP reports that affect product delivered to OSI Electronics.

Supplier shall issue a GIDEP report when suspect or confirmed counterfeit item(s) associated with this Purchase Order are discovered and ensure suspect counterfeit items are not delivered to OSI Electronics.

Supplier shall immediately notify OSI Electronics with the pertinent facts if the Supplier becomes aware or suspects that items delivered in accordance with the OSI Electronics Purchase Order are or contain suspect or confirmed counterfeit items.

116 Employee Awareness and Training – Suppliers shall ensure that their employees are aware of:

- their contribution to product or service conformity;
- their contribution to product safety;
- the importance of ethical behavior.

117 Control of Foreign Objection Debris (FOD) – Supplier shall establish a program for the prevention, detection, and removal of foreign objects.

118 OSI Electronics controls and monitors the performance of its suppliers, including on-time and quality performance.

119 Supplier shall maintain the following internal processes to control and prevent malware, defined as viruses, malicious code, Trojan horse, worm, time bomb, self-help code, back door, or other software code or routine designed to: (a) damage, destroy or alter any software or hardware; (b) reveal, damage, destroy, or alter any data; (c) disable any computer program automatically; or (d) permit unauthorized access to any software or hardware.

1) Supplier shall maintain a malware management process for the underlying manufacturing information systems used in building the electronic assembly. This process shall consist of continuously monitoring the manufacturing information systems to ensure absence of malware, using up-to-date commercially available anti-virus software. The Supplier shall maintain evidence of the continuous monitoring (include name/version of the anti-virus software, and scanning machine name/serial number).
2) For deliverable assemblies that contain only Commercial-of-the-Shelf (COTS) software or Free and Open Source Software (FOSS) including commercially available operating systems, the Supplier shall implement a process of scanning these assemblies to ensure that they are free of malware, using up-to-date commercially available anti-virus software. The Supplier shall maintain evidence of the scan occurrences (include date of scan, assembly part number, name/version of the anti-virus software, and scanning machine name/serial number).
3) Supplier shall immediately notify OSI Electronics with the pertinent facts if the Supplier becomes aware or suspects that assemblies delivered in accordance with the OSI Electronics Purchase Order contain any malware.
4) Supplier shall provide evidence of these two processes to OSI Electronics upon request.

200 QUALITY REQUIREMENTS

201 The Supplier shall maintain a system which meets requirements of ANSI/NCSL Z540-1 and ISO/IEC 17025 "General requirements for the competence of Testing and Calibration Laboratories", and when applicable FDA/cGMP/cGLP, as applies to the testing and calibration of the Companies test and inspection equipment.
The supplier's calibration system is subject to review and approval by the Quality Assurance Department at all times during the performance of this PO.

202 The Organization reserves the right to perform source inspection at the supplier's facilities or where designated in the PO prior to shipment. Inspection and test of the articles defined in the contract shall be performed by the supplier, and shall be subject to witness.

203 The Organization reserves the right to perform in-process inspection at the supplier's facilities. Supplier shall submit their inspection plan or traveler designating in-process source inspection points. Approval is required for in-process source inspection points prior to supplier commencing manufacturing or test operations. Supplier shall notify the cognizant buyer 48 hours prior to the time in-process inspection is required.

204 Inspection and acceptance of the first article manufactured against this PO is required prior to start of fabrication. The supplier shall submit a First Article Report demonstrating compliance with the requirements of the PO and referenced documents. This report shall be submitted with the first article for inspection and acceptance. (Latest revision of AS9102 form is preferable.)

205 Government source inspection is required prior to shipment from supplier's plant. Upon receipt of this PO, promptly furnish a copy of the purchase order and notify the Government representative who normally services suppliers plant so that appropriate planning for government inspection can be accomplished. In the event the representative or office cannot be located notify the cognizant buyer immediately.

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Supplier Quality Clauses

206 The Supplier shall control all test equipment used for acceptance of items deliverable under this PO, in accordance with any of the following standards. ANSI/NCSL Z540, ISO/IEC 17025, ISO 10012. The supplier's calibration system is subject to review and approval by the Quality Assurance Department at all times during the performance of this PO.

300 TEST AND WORKMANSHIP

301 Drawing Requirements – Drawings and specifications sufficient to inspect and/or test the articles being delivered shall accompany first shipment of this PO.

302 Functional Test Data – Functional test data referencing PO numbers, supplier's name and address, part number, part name, serial numbers, data and run time of units if applicable, including actual test data, must accompany each shipment. These reports shall be validated by an authorized representative of the supplier's quality department.

303 The Seller shall comply with the requirements of the latest revision (and all cumulative change notices) of ANSI/IPC-A-610, "Acceptability of Electronic Assemblies."

304 The Seller shall comply with the requirements of the latest revision (and all cumulative change notices) of ANSI/J-STD-001, "Requirements for Soldered Electrical and Electronic Assemblies

305 The Seller shall comply with the requirements of the latest revision (and all cumulative change notices) of IPC/WHMA-A-620, "Requirements and Acceptance of cable and wire harness assemblies."

306 Perform XRF testing per specified requirements. XRF will be performed on sample basis, or as indicated on purchase order, for each material or component item per manufacturer lot date code. XRF test report and the test result of each sample shall be provided to OSIE electronically. Test samples and test report/results shall be returned to OSIE upon completion of the test.

400 CERTIFICATION, INSPECTION DATA, AND TRACEABILITY

401 The Seller shall submit a Certificate of Compliance signed by an authorized representative with each shipment which states that the product supplied is in full compliance with the PO and/or applicable specification. The Purchase Order Number shall be referenced on all certification documents and serial/lot number if applicable.

402 The Seller shall submit a Certificate of Origin as define by the country of manufacture with each shipment which states that the product supplied is in full compliance with the PO and to render such a country as the country of origin.

403 The Seller shall submit a manufacturers' inspection/test report that states the material type and shows the physical and chemical properties by reference to melt, cast, heat, etc., and signed by its authorized representative (or by the agency performing the tests) with each shipment. Non-metallic material shall only require a chemical properties inspection/test report.

Inspect Test Data – Inspection data referencing purchase order numbers, supplier's name and address, part number, part name, serial numbers and quality characteristic data must accompany each shipment. These reports shall be validated by an authorized representative of the supplier quality department and must relate to each shipment. If statistical sampling is used as the basis of exception, then the procedures shall be in accordance with industry accepted sampling plans.

404 The Buyer shall assign permanent, individual serial numbers to all items shipped under the Purchase Order or Sub-contract. If the Buyer elects to delegate this responsibility to the Seller, it will be stated in the Procurement Document. The manner of affixing the serial numbers will also be specified in the notes of a Buyer furnished drawing. Traceability of each serialized item to the raw materials employed in its fabrication will be maintained by the Seller. Material certifications, analyses, test bars, samples, etc. and all pertinent inspection data, and inspector identity and maintained to provide traceability for each parts and assembly serialized.

405 The seller shall assign a common lot control number to all items in a particular manufactured lot (defined for this purpose as a quantity that has been manufactured during an uninterrupted period of time, following a standard process and using the same equipment/facility). Traceability shall be the same as that specified in **Clause 404**, but on a lot number rather than on an individual serial number basis.

406 Material Data Safety Sheet (MSDS) or Safety Data Sheet (SDS) required with shipment.

500 MATERIAL IDENTIFICATION AND PACKAGING

501 The supplier shall incorporate good commercial practices for preservation and packaging of all articles delivered to OSI Electronics and shall identify each package permanently and legibly with PO number, manufacturer's name, date shipped and packing sheet/Packing Slip number.

502 The supplier shall identify materials and articles having definite characteristics of quality degradation or drift with age and/or environment. This identification shall indicate the date and/or cycle that the critical life was initiated and the date and/or cycle at which the useful life will be expended. If environment is a factor in determining useful life, identification shall also include the storage temperature, humidity, etc., required to achieve the stated useful life. In no case shall material or articles be supplied with less than 80% of the useful life cycles remaining.

503 All materials which are volatile, toxic or emit fumes which are harmful to human health shall be properly contained in accordance with applicable health and safety requirements. The containers will be plainly marked as to contents with appropriate warnings, precautions, instructions and storage conditions.

504 Materials considered ESD sensitive per ANSI/ESD S20.20 shall be packaged/shipped in accordance with Buyer requirements. Moisture sensitive surface mount devices handling and packaged/shipped per IPC/JEDEC J-STD-033. In the absence of these requirements, packing shall meet or exceed ANSI/ESD S541, MIL-PRF-81705. Labeling, per MIL-STD-129, for intermediate and external packages is required. Alternate labeling symbol, JEDEC JESD471, may be used on packages/cartons.

505 The Supplier shall ensure that all printed wiring boards are preservation packaged per MIL-PRF-55110, MIL-PRF-31032, MIL-STD-2073-1 or as specified on the Purchase Order, drawing or specification.

506 If Seller uses special processes, customer approval is required. Special process certification: The Seller shall furnish a certificate of compliance which states the product conforms to applicable specifications required by purchase order, drawing or specification signed by an authorized representative of the agency performing the special process (plating, chemical finishing, vapor deposited coating, welding and brazing, heat treating, anodizing, painting, non-destructive testing, etc.) with each shipment. When applicable, batch lot, heat number, x-ray, heat treat chart, etc., for the special processes performed shall accompany shipment.

Suppliers, including sub-tier suppliers, performing a Special Process shall meet one of the following:

1) NADCAP accredited for the special process; or
2) Approved supplier of the special process by OSI Electronics, or
3) Recommended source by the customer of OSI Electronics for this Purchase Order.

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507 If the seller is supplying specialty metals as part of the order then contractor must follow the requirements of DFARS 252-225-7014 Preference for Domestic Specialty Metals. Specialty metals are defined as:

1. Steel:

a) With a maximum alloy content exceeding one or more of the following limits: manganese, 1.65%. Silicon, 0.60%: or copper, 0.60% or

b) Containing more than 0.25% if any of the following elements: aluminum; chromium, cobalt, molybdenum, nickel, titanium, tungsten, or vanadium.

2. Metal Alloys:

Consisting of nickel, iron-nickel, and cobalt base alloys containing a total of other alloying metals (except iron) in excess of 10%.

3. Titanium and Titanium alloys.

4. Zirconium and zirconium base alloys.

508 Components and components in completed subassemblies / assemblies furnished under this Purchase Order shall not be received with any of the following Non-Approved termination finishes: (Note: These restrictions apply only to component solderable finishes and are not applicable to solder alloys used for attachment, nor for BGA solder spheres (balls)).

1) Any plating or solder finish of solderable termination in tin (Sn)-lead (Pb) that does not contain at least 3% of lead by weight.
2) Components termination finishes not meeting component specifications.

The solderable termination finish on bare components shall be capable of meeting, but not required to be tested to, the solderability requirements of IPC/J-STD-002.

Certification of conformance may be required for lead content for Tin-Lead finish in conjunction with Clause 401 or RoHS compliance for Lead-Free finish in conjunction with Clause 701.

600 SPECIAL RESTRICTIONS

601 Documentation supplied as part of this contract may be considered technical data or technology within the definitions of the U.S. Department of State (DOS) International Traffic in Arms Regulations (ITAR) or the U.S. Department of Commerce (DOC) Export Administration Regulations (EAR) and are subject to the Export Control Laws of the U.S. Government. Transfer of this technical data or technology by any means to a foreign person, foreign entity or otherwise restricted entity or individual whether in the United States or abroad, without a prior export license or other approval from the U.S. Government, is prohibited

602 Unless specified by contract or purchase order, the supplier shall retain such records for a period of not less than **15 years** from the date of shipment under each applicable order for all products, This Clause overwrite **ONLY** the records retention period specified in Clause 106, however all other requirements stated in Clause 106 remain in effect.

603 Unless specified by contract or purchase order, the supplier shall retain such records for a period of not less than **7 years** from the date of shipment under each applicable order for all products, This Clause overwrite **ONLY** the records retention period specified in Clause 106, however all other requirements stated in Clause 106 remain in effect.

700 PROHIBITED MATERIALS

701 Where applicable, supplier hereby represents and warrants that all products delivered by Supplier shall be in compliance with Directive 2011/65/EU (or latest revision) of the European Parliament and of the Council on the restriction of the use of certain hazardous substances (“RoHS”). Supplier shall provide a statement certifying compliance with RoHS with each shipment.

702 Where applicable, supplier hereby represents and warrants that all products delivered by Supplier shall be in compliance with Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 (as may be amended or updated from time to time) concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (“REACH”). Supplier shall provide a statement certifying compliance with REACH with each shipment.

703 Pursuant to Section 1502 of the United States Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 and the rules and regulations of the SEC thereunder (“Dodd-Frank”), Supplier hereby represents and warrants that no Conflict Minerals, including columbite-tantalite (coltan), cassiterite, gold, wolframite, and their derivatives (which derivatives are currently limited to tantalum, tin, and tungsten) will be contained in or necessary to the functionality or production of any of the products or materials delivered by Supplier. Supplier or Manufacturer shall be able to provide Declaration or Certification of Compliance upon request.

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