

Quality Provision Requirements

Herein, "Buyer" and Kulite mean Kulite Semiconductor Products, Inc.; "Seller" means that party with whom Buyer is contracting and includes, by reference, Supplier, Vendor, Contractor or Subcontractor; "Order" means Purchase Order/Subcontract and all documents, exhibits, specifications, and attachments referenced therein and maintained at their latest revision level unless otherwise specified by contract. Every Kulite Supplier Partner has a responsibility to provide conforming products, ethical behavior and assure product safety as Kulite's product is used in aircraft and industrial operations that require safe, conforming product.

The following Quality Provisions are a part of the order to the extent specified. Nonconforming items received are subject to rejection and return to the seller.

- QN 1 During the performance of this Order, the Seller shall assure the Buyer and/or the responsible Government/Customer Representative(s) shall have right of entry into the Seller's and the Seller's sub-tier contractors facility, for the purpose of determining and verifying the quality of work and material, at all stages of production, intended for incorporation into the Buyer's products. A notice of intent to exercise the foregoing will be given prior to such visits.
- QN 2 All items rejected by the Buyer and later resubmitted by the Seller shall bear obvious indication of such resubmission on those items and/or on the shipping document. Reference shall be made to the rejection document and objective evidence presented that cause(s) for the rejection have been corrected.
- QN 3 Product Design changes by the Seller shall require the Buyer's written approval prior to any such design, configuration or performance characteristic changes to items to be delivered under this Order. This shall include, but not be limited to, changes in materials or manufacturing processes utilized in the production of such items.
- QN 4 The seller shall supply Kulite a Certificate of Conformance/Compliance, attached to or as a part of the packing sheet, signed by an authorized company representative, certifying that item(s) delivered herewith are in conformance with all terms, conditions, specifications, and requirements of the purchase order. The Certificate shall contain, as a minimum, the following:
 - a. A statement that "the material(s)/item(s) shipped conforms with all aspects of the Purchase Order, Drawings, Specification/Standards, terms, conditions, and Requirements" as stated or referenced in the order.
 - b. Kulite Purchase Order number.
 - c. Part Number and Revision Letter.
 - d. Each Specification/Standard specifically identified in the Purchase Order.
 - e. Quantity.
 - f. Signature of an authorized representative of the company.
 - g. For POs with QN 15 (machined parts, metallic raw material, precious metals, castings) reference to heat lot or job number to assure traceability from raw material to delivered goods.
- QN 5 The Seller shall perform such functional/operational tests and inspections of components, subassemblies, and assemblies as required to demonstrate and ensure item(s) being delivered to Kulite satisfactorily meet all operational and contractual requirements.
- QN 6 All processing and testing utilized in the manufacture of item(s) for delivery to Kulite, shall be procured from Kulite Semiconductor Products Inc. Approved Sources only. For a listing of approved sources telephone (201) 461-0900, ext. 100.
- QN 7 Seller shall ensure material being prepared for shipment shall be packaged/crated to provide protection against damage in transit and storage in accordance with applicable drawings, specifications, contract requirements, vendor packaging requirements (when supplied by Kulite) or by best commercial methods when the preceding are not supplied. Container shall be clearly identified either by labels, tags, or markings with the Seller's name, address, contents, quantity, Buyer's Purchase Order Number, Subcontract Number, Serial Numbers, and destination. Parts or assemblies packaged inside the shipping container shall be identified the same as the shipping container and shall also be identified to each other. Example: Package number 1 of 1, 1 of 2, etc.
- QN 8 The Seller shall provide and maintain, as a minimum, a documented Quality Program which meets Kulite's requirements, unless altered by contract.
- QN 9 The Seller shall provide and maintain, as a minimum a documented Inspection System which meets Kulite's requirements, unless altered by contract.
- QN 10 The Seller shall prepare and submit test procedures for review and approval by Kulite Engineering and Quality Assurance Departments prior to submission of item(s) for acceptance and/or delivery to Kulite Semiconductor Products, Inc.

- QN 11 The Seller shall furnish the Buyer, without solicitation, all failure analysis when requested. When it has been determined that product which has already been shipped to Kulite is defective Kulite must be informed. The report shall, as a minimum, contain the item part number, revision level, quantity, description of item, description of discrepancy, and the corrective action initiated to ensure nonrecurrence of the failure. Such reports shall be submitted within forty-eight (48) hours of Seller's knowledge of such discrepancy.
- QN 12 Seller shall furnish information for raw materials supplied against this Order which pertains to Shelf Life, Date of Critical Life initiation or the expiration of Useful Life, and proper storage and handling of such perishable materials as raw and synthetic rubber, paints, epoxies, plastics, preimpregnated materials, etc., and for other materials which require precautionary user safety instructions, as follows:
 - a. Material Storage Life - for perishable materials
 - b. Material Storage Temperature - recommended by manufacturer.
 - c. Material Hazards - flammable, nonflammable toxicity, etc.
 - d. Remaining shelf life must be at least 75% of the total shelf life when received by Kulite.
- QN 13 The Seller shall furnish information pertaining to perishable item (s) supplied against this Order relative to their Shelf Life, Controlled Storage, and Handling Characteristics. Such typical perishable items include finished rubber, synthetic hoses, "O" rings, etc.
- QN 14 Physical and Chemical test reports are required. The Seller shall furnish with each shipment a report of the results of all tests of the tensile specimen(s), including a copy of the stress strain curve, the chemical composition of each master heat represented. Each report shall bear an original signature/stamp and date.
- QN 15 For Metallic Material: The seller shall provide Kulite a physical and chemical Test Report to Kulite for all materials procured for manufacturing the product. Each report to bear an original signature/stamp and date. The report number / heat lot / work order shall be referenced on C of C per QN 4.
- QN 16 For NonMetallic Material: The seller shall provide the typical physical properties (i.e. specification sheet) to Kulite for all materials procured for manufacturing the product. Each report to bear an original signature/stamp and date.
- QN 17 The Seller shall provide Kulite with Certification of heat treat, hardness test results, and the methods used, in duplicate, with this Order.
- QN 18 The Seller shall ensure compliance with ISO 10012, ISO17025, Calibration System Requirements or equivalent ISO/ANSI STD, for all equipment, tools, secondary standards, and sources used to provide calibration of such items used for inspection or test criteria on products to be delivered to Kulite.
- QN 19 The item(s) procured under this Order are considered to be susceptible to Electro-Static Discharge and it is therefore the Seller's responsibility to ensure that such items are manufactured, identified, handled, and shipped in a manner which shall provide adequate protection against the effects of Electro-Static Damage.
- QN 20 The Seller, by acceptance of this Order, certifies that any or all semiconductor end item devices, supplied under this Order, were in fact manufactured by the manufacturer whose name, trademark, logo, or other identifier appears on the items supplied. A copy of certification to this requirement shall be provided to Kulite with each shipment of such items. The seller shall maintain records of certification for a period of not less than three(3) years from date of shipment and shall upon request. The seller shall be responsible for any and all damages incurred by Buyer as a result of noncompliance to this requirement.
- QN 21 The Seller shall maintain archive copies of all numerical control media for operations that require the use of tape or other media for numerical control (NC) such as machining, drilling or other such operations and shall have a documented system providing for the preservation of such media from back-up sources in the event of loss or destruction of the original media. The Seller shall implement and maintain a system that shall provide for configuration control of the operating and back-up media. Compliance to this requirement is subject to review and audit by Kulite Quality. The Seller shall ensure the flow-down of this requirement to any and all lower tier sources.
- QN 22 Serial number control is required. All items, shipping documents and shipping containers shall be identified with serial number(s).

- QN 23 Compliance to MIL-P-55110, MIL-PRF-31032, or IPC-2221 Group A and B testing is required to be performed and results of such testing (actual data sheets) must be provided with shipment against this Order. Associated test specimens (test table/coupons) for items delivered, whether used during testing or not, shall be retained by the Seller for a period of not less than three (3) years, unless so directed by this order. The Seller shall ensure that such specimens shall be made available to the Buyer and/or Government/Customer responsible representative(s) upon request for review/approval.
- QN 24 Material procured under this Order must be provided by a QPL certified manufacturer. Sellers, including distributors, providing QPL items shall provide Kulite with a Certificate of Compliance/Conformance with each shipment. This Certificate shall provide traceability to the QPL certified manufacturer by specifically identifying the following information on such certificate:
 - a. QPL certified manufacturer's name and address.
 - b. QPL manufacturers FSCM number and Cage Number.
 - c. QPL Test Report Number.
 - d. Original dated signature of the company's responsible representative.
- QN 25 The items procured under this Order are considered to be Hazardous Material and therefore the Seller shall assume the responsibility to package, identify, mark, and ship such materials in a manner which will not be hazardous to human body and life and in full compliance with applicable Federal, State and Local regulations for such materials. The Seller shall provide, with each shipment, all information pertaining to the safe handling, storage, or other precautionary instructions required to maintain human safety.
- QN 26 Government inspection is required prior to shipment from your plant. Upon receipt of this order, promptly furnish a copy to the Government Representative who normally services your plant, or to the nearest Army, Navy, Air Force, or Defense Supply Agency inspection office. In the event that the Representative or office cannot be located, notify the Kulite responsible buyer immediately.
- QN 27 Kulite Source Inspection shall be required to witness the applicable test as depicted below, as specified in this order.
 - A - Development Test
 - B - Qualification Tests
 - C - Destructive Physical Tests
 - D - Environmental Tests
 - E - Burn-in Tests
 - F - Calibration Tests
 - G - Functional Tests
 - H - Non-Destructive Test
- QN 28 This is a Group I purchase as defined by MIL-STD-1535.
- QN 29 This is a Group II purchase as defined by MIL-STD-1535.
- QN 30 This is a Group III purchase as defined by MIL-STD-1535.
- QN 31 Seller shall furnish all applicable catalog manufacturers data and/or specifications which include inspection and testing parameters identifiable to the item(s) procured under this Order for use by Kulite Receiving Inspection.
- QN 32 Items procured and delivered to Kulite as a part of the Purchase Order shall be classified and identified as Group I, II or III as defined in MIL-STD-1535, Paragraphs 3.2, 3.3, 3.4, and 4.1.
- QN 33 The Seller shall ensure compliance of calibration traceable to the National Bureau of Standards and is required to provide Kulite with a report of calibration consisting of the following:
 - a. Supplier or NBS test number and/or;
 - b. Listing giving description/identification of test equipment used to perform calibration.
 - c. Calibration interval of equipment used in performing calibration.
 - d. Signature of individual who performed the calibration, and
 - e. Next required calibration due date.

When a listing is provided it shall have a unique number for referencing.
- QN 34 Seller shall provide, in addition to requirements of QN 33, data indicating the "as received out-of-tolerance condition" of the equipment on which calibration was performed.

- QN 35 All actual test data and/or dimension inspection of items purchased to Buyer's specification, and/or drawings shall be recorded and supplied with each shipment.
- QN 36 The seller shall perform inspection and acceptance of a First Article manufactured against this Order prior to the start of the first production lot. As part of this requirement the Seller shall submit to Kulite for inspection and approval a First Article Report consisting of, as a minimum, part number, revision level, purchase order number, shipper document number, all applicable drawings and/or specifications, physical and functional characteristics with tolerances and actual measurements noted.
- QN 37 Kulite Source Inspection is required on this Order prior to shipment from Seller's facility. The Seller shall notify Kulite Quality Management twenty-four (24) hours in advance, when items are deemed acceptable for Kulite inspection. Telephone (201) 461-0900.
- QN 38 Solderability shall be in accordance with MIL-STD-202, method 208, per Nema HP3.
- QN 39 All Seller procured supplies/services which become a part of the item(s) delivered in accordance with this Purchase Order shall conform to drawing(s) and specification(s) requirements. Seller's system shall assure: Purchase Order flowdown of applicable quality and technical requirements, suppliers capability to produce items and adequate methods of assuring compliance. Seller's suppliers shall be required to flowdown and verify requirements of supplies/services they subcontract.
- QN 40 In compliance with DFAR 252.225-7009, all metals, excluding aluminum must be melted in the USA or Qualifying Country per DFAR 225.003. Certificates of conformance must indicate source of raw material.
- QN 41 Tape Adhesion Test in accordance with FED-STD-141 Method 6301.3, applies for painting process only.
- QN 42 All records created as a result of this order shall be maintained on file for a period of 7 years.
- QN 43 Electronic Components Counterfeit Prevention – All electronic components such as resistors, capacitors, diodes, inductors, thermistors, hybrids, ICs, microcircuits and other related electronic components and/or assemblies provided on this order shall be from the original manufacturer or authorized distributor. If the supplier is a manufacturer's authorized distributor, a packing list or shipper from the original manufacturer to the distributor with part number traceable to the original manufacturer shall be provided with the shipment in addition to the requirement under QN 4.
- QN 44 The Seller shall notify the Buyer of any major changes to the business, including changes in ownership, location or organization.
- QN 45 Soldered electrical and electronic assemblies shall be inspected to the requirements of IPC-A-610 Class 3.
- QN 46 Machined parts shall be free of Foreign Object Debris. Refer to ST-D 1036 for details.
- QN 47 Supplier agrees to comply with all requirements set forth in DFARS 252.204-7012 SAFEGUARDING COVERED DEFENSE INFORMATION AND CYBER INCIDENT REPORTING (OCT 2016) to the extent applicable. Supplier represents that it has:
 - (1) Maintained at least a current basic NIST SP 800-171 DoD Assessment for all covered contractor information systems related to its business with Kulite that are not part of an information technology service or system operated on behalf of the Government and
 - (2) Submitted or will submit to the Government for posting to the USG's Supplier Performance Risk System (SPRS), the information required by paragraph (d) of DFARS 252.204-7020 prior to accepting this Order.