



AP MICROELECTRONICS

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ISO 9001: 2008 Registered

PURCHASE ORDER QUALITY CLAUSES

(The following quality clauses become part of the contract requirements when referenced on the Purchase Order)

- QC1 INSPECTION:** Items supplied on this purchase order may be subject to test and/or inspection at SST. Items will not be accepted unless purchase order requirements, part specifications and all requirements relevant to certifications, test data, quality systems and associated documentation are satisfied.
- QC2 CERTIFICATE OF CONFORMANCE (C OF C):** Each shipment must include a C of C stating that all materials, processes and/or services comply with all purchase order and specification requirements. All C of Cs must reference a lot or batch number for the material shipped and must be signed, dated and includes the title of signer. Data supporting the C of C must be available to SST and/or Government representatives upon request for a period of at least 7 years from date of purchase.
- QC2A Solderability:** Current solderability date must appear on the C of C.
- QC3 CHEMICAL AND PHYSICAL TEST REPORTS:** Each shipment must include a chemical and/or physical analysis test report traceable to the given lot or batch.
- QC4 MATERIAL TRACEABILITY:** In execution of this contract, supplier must maintain a system and all necessary documentation to provide traceability on all materials supplied. Proof of traceability must be available at supplier facility for review for a minimum of 7 years after this contract expires. Each shipment must be identified by lot #, batch # and/or date code, part type, part number, specification and revision level (as applicable), and records of acceptance (i.e. test reports).
- QC4A** If more than 1 lot of material is used to satisfy 1 line item, keep lots segregated and labeled by lot number.
- QC4B** All material must be supplied from 1 production lot.
- QC4C** All material must be supplied from 1 diffusion lot.
- QC4D** All assembled devices for a single line item must have the same date code except by written waiver from SST Sales.
- QC4E** Date code not to be more than 1 year old code except by written waiver from SST Sales.
- QC5 SPECIMEN FOR SET-UP:** One specimen must be supplied for use by SST in test set-up. Specimen must be identified by contract number and traceable lot or batch number and must have been manufactured at the same time using the same processes and materials as the supplied lot.
- QC6 SPECIAL PROCESS CONTROL:** All special processes, including but not limited to soldering, welding, brazing, X-ray, plating must be performed per the requirements noted on the SST purchase order. Where applicable, personnel must be certified to applicable military specifications, with copies of certifications available for SST review for a minimum of 7 years after this contract expires.
- QC7 MSDS:** Copy of the current Material Safety Data Sheet is required with every shipment of material.
- QC8 TEST REPORTS:** Each shipment of material supplied on this contract must be accompanied by a test report identified by contract number, SST part number and (if applicable) serial number. Test reports must include discrete readings unless go/no go format has been approved by SST. Vendor must maintain and provide to SST copies of SST's test reports for not less than 7 years from date of issue.
- QC9 FIRST ARTICLE INSPECTION:** First article inspection may be performed by SST on a minimum of 1 piece from each lot supplied under this contract. No production materials may be accepted until first article testing is complete.
- QC10 SOURCE INSPECTION:**
- QC10A Government source:** Is required prior to shipment from your plant. Upon receipt of this order, promptly notify the Government Representative who normally services your plant so that appropriate planning for Government Source can be accomplished.
- QC10B SST source:** All items on this purchase order are subject to source by SST. Supplier must make available (at no cost to SST) the necessary facilities, equipment and personnel to test the material for full compliance to all specifications. Final acceptance of sourced material will be at SST. Supplier must notify SST buyer at least 3 working days prior to the desired source date. SST reserves the right to waive source.
- QC10C SST/ Customer source:** All items on this purchase order are subject to source inspection by SST and SST end customer at supplier facility.

- QC11 SYSTEM COMPLIANCE:** Supplier inspection system must conform to the designated system requirements. SST reserves the right to verify compliance at any time.
A) MIL-I-45208 B) MIL-Q-9858 C) ISO-9001 or equivalent D) ANSI/NCSS Z540-1 E) MIL-STD-45662 F) ISO-10012
- QC12 QUALITY SURVEYS:** SST reserves the right to perform periodic surveys at the vendor facility or request completion of a vendor mail survey by supplier to verify supplier capabilities and conformance to all contract requirements. SST shall provide notification prior to conducting on-site surveys.
- QC13 LIMITED SHELF LIFE MATERIALS:** Notice of shelf life expiration date must be included with and be traceable to all materials having a limited shelf life.
QC13A SST will not accept material with less than 75% of useful shelf life remaining at time of receipt.
QC13B SST will not accept material with less than 50% of useful shelf life remaining at time of receipt.
- QC14 CONTROL OF SUPPLIERS:** Supplier is responsible for verifying that their sub-tier suppliers meet the full requirements of the SST purchase order.
- QC15 CALIBRATION REPORTS:** Calibration laboratories must supply written reports with actual test data readings, model number, serial number (if available), calibration date for all equipment used in the calibration and authorized signature. Measurement standards used by the lab must be traceable to NIST and so stated on the test report.
- QC16 SENSITIVE MATERIAL:** Notice of any material sensitivity to temperature, humidity or light must be attached to packing slip of each lot of material.
- QC17 CORRECTIVE ACTION:** If material supplied under this contract fails to meet all purchase order requirements, supplier must provide written statement of cause of discrepancy and corrective action taken to prevent recurrences.
- QC18 PACKAGING:** All shipments require special packaging to avoid damage in transit. Improperly packaged parts are subject to rejection at SST incoming inspection.
QC18A Sensitive parts must be individually wrapped and/or packed to prevent contact in shipping.
- QC19 ESD CONTROL:** ESD handling and packaging is required. Improperly packaged parts are subject to rejection at SST incoming inspection.
- QC20 PROHIBITED MATERIALS:** No shipment may contain any of the following prohibited materials.
QC20A Pure Tin – All Tin alloys must have 3% lead minimum.
QC20B BeO
QC20C Pure Zinc
QC20D Pure Cadmium
QC20E Mercury
- QC21 MATERIAL REVISIONS:** Material is to be supplied to the revision level in effect on the date the order was placed.
- QC22 FAILURE ANALYSIS:** Failure analysis of rejected devices is required. A report on analysis findings is due within 30 days of SST submission of rejects for analysis.
- QC23 MARKING:** Marking must be permanent and able to withstand normal manufacturing processes.
QC23A Mark per MIL-STD-130.
- QC24 CONTRACT CHANGES:** Written approval from SST is required for any proposed changes in design and/or processing methods that affect form, fit or function.
- QC25 RESUBMITTED ARTICLES:** Vendor must provide documentation of corrective actions for all non-conformances for articles rejected by SST and resubmitted to SST.
- QC26 DIE MAP:** Provide a die map with pad functions identified with each die shipment.
- QC27 DRAWING:** Provide a detailed drawing with dimensions for each shipment.
- QC28 CALIBRATED RENTAL EQUIPMENT:** Calibrated test equipment rented by SST must have data on file at vendor site as evidence that calibration was performed with standards traceable to NIST. The calibration status of all rented test equipment must be current at time of receipt.
- QC29 EVIDENCE OF CERTIFICATION:** Must provide evidence of Certification to the applicable Mil-Std and/or process being performed.
- QC30 CONFLICT MINERALS:** Shipments containing any conflict minerals as defined by Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") must include a completed copy of the "Conflict Minerals Reporting Template". Conflict minerals are currently defined as tin, tantalum, tungsten and gold. A copy of the template is available at www.conflictreesmelter.org.