



Ampex Supplier Quality Assurance Requirements

1. Right of Access:
Ampex and its customers reserve the right to request the supplier arrange for timely access to their facility for the purpose of auditing, survey of their facility and to witness inspection, tests and manufacturing operations of product supplied or manufactured by the supplier or its sub-tier suppliers. Ampex will sign a NDA if required by supplier.
2. Certificate of Conformance:
The supplier shall certify that materials and processes provided are in accordance with purchase order requirements and all applicable specifications and drawings: The supplier shall provide raw material certifications and test reports as noted on the purchase order. Objective evidence including test, inspection, and raw material records shall be maintained on file and be available for review by Ampex or its customer.
3. First article Inspection: (Only required for parts manufactured to an Ampex drawing)
First Article inspection shall be performed on parts that the supplier has not previously manufactured or production has lapsed for 2 years or more and that are made to drawings or specifications that Ampex or its customer have control over. Numbered drawing notes along with raw material, process and hardware certifications shall be supplied as part of the First Article documentation package.
4. Record Retention:
Unless specified otherwise on the purchase order, all quality records including receiving, first article, and manufacturing inspections shall be kept on file and available for review for a period of 7 years or greater.
5. Non-Conforming Material:
The supplier must submit a deviation request prior to supplying any product or process that does not meet requirements identified on the purchase order, referenced drawings, or specifications. The supplier deviation request must be approved prior to shipment of non-conforming product to Ampex. If the product or process is determined by the vendor to be non-conforming after delivery to Ampex the vendor is responsible for immediate notification to Ampex of the non-conformance.
6. Returned Material Authorization (RMA):
The supplier is responsible for a timely (within 2 business days or as requested) response to Ampex when an RMA number is requested when non-conforming material is found by Ampex during inspection.
7. Measurement and Calibration:
Supplier measuring and test equipment used as a basis for acceptance of product must be of suitable accuracy and undergo calibration at regular intervals in accordance with ISO 10012-1 with results traceable to NIST.
8. Software Control Requirements:
Non-deliverable software that is used to inspect, test and manufacture (i.e. CNC machines and automated test systems) the product shall be adequately controlled and validated by the supplier to assure conformance of the product to drawings, specifications, and PO requirements.
9. Packing:
Unless otherwise specified by contract, the supplier shall be responsible for packaging and delivery of product without damage or deterioration in an efficient and economical manner. Each package shall be identified as to its contents to include the purchase order, part number, quantity and any hazardous labeling or cautionary handling instructions (ESD, etc.).

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10. Corrective Action:
The supplier is responsible for a timely (within 20 business days or as requested) response to Ampex corrective action requests. Replies may be made by fax, mail, or email and must include containment of defective product, identification of root cause, correction of defect, action taken to prevent recurrence and the effective date corrective action was implemented.
11. Quality and Delivery:
The supplier shall participate when requested in regular quality and delivery performance reviews as determined by Ampex.
12. Notification of Design, Process, Facility Location, or Supplier Changes
The supplier shall notify Ampex of any design or process changes on any of their parts or any sub-tier supplied parts that affect the form, fit, or functionality or safety of the product being ordered. The supplier shall notify Ampex of any facility location change or change to suppliers of material or processes related to Ampex parts. Ampex approval shall be obtained prior to manufacture and delivery of affected product. The supplier shall notify Ampex of any change in their quality system status including 3rd party approvals to ISO 9000, AS9100 or similar.
13. Flow Down to Sub-Tier Suppliers:
The supplier shall flow down to sub-tier suppliers the applicable requirements in the Ampex purchasing documents, including key characteristics where required.
14. Foreign Object Damage:
The supplier shall implement and maintain a FOD prevention program. At a minimum, this program must require inspection of product before it leaves your plant for entrapped foreign objects that could interfere with the functionality of the product or result in FOD at Ampex.
15. Government and Ampex Source Inspection:
When specified on the purchase order or contract, the supplier shall comply with requests to allow the US Government, Ampex, or its customer to perform on-site inspection of the product, manufacturing processes and documentation.
16. Age Sensitive Materials:
All age sensitive materials that have a limited shelf life shall be identified as such and marked with the useful shelf life remaining and any special storage conditions necessary to achieve the stated life. If less than 75% of the original shelf life remains, the supplier must get Ampex approval prior to shipping.
17. Hazardous Materials Statement of Compliance:
Ampex seeks the identification and elimination of hazardous materials from its products. The supplier shall identify specific hazardous materials for elimination, minimization or control in components and products it sells to Ampex. All supplier activities shall be in compliance with applicable federal, state, and local environmental laws and regulations. The supplier shall ensure to strive to eliminate or reduce hazardous materials and wastes. The supplier shall not use substances listed in Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313 "toxic chemicals" and EPCRA Section 302, "extremely hazardous substances", or products containing such substances, without Ampex approval. The supplier shall request approval to use substances identified in the Environmental Protection Agency 17 – list OR paragraph 3.6.3 of the TUAV/TCDL Subsystem Specification R39489-00001. The supplier shall not use any Class I Ozone Depleting Chemical/Ozone Depleting Substance in the manufacture of items required by this Purchase Order, unless a waiver is obtained from the Buyer. **Please refer to current publications from www.epa.gov for up-to-date information regarding Hazardous Materials.**

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18. Printed Circuit Boards / Printed Wiring Boards: Printed circuit boards shall be fabricated in accordance with IPC-6012, Class 3, qualification and performance specification; and acceptance shall conform to requirements of IPC-A-600, Class 3. A producibility analysis shall be performed on new board designs including First Article Inspection verification. Each PCB shall be 100% net list tested at 250 volts minimum unless otherwise specified. Solderability samples, Microsection reports and inspection data shall be required for submittal to buyer of the PCB's with test coupons and microsections. Note: Microsections must represent PCB complexity including blind vias etc All work must be accomplished in a documented and controlled process that complies with the workmanship requirements of IPC-A-610, Class 3. All objective evidence of the required work, inspections, and training shall be retained by the supplier and made available to Ampex on request. Any deviations from Class 3 for PWB's may only be approved by the Ampex Data Systems Quality Assurance Manager or designee. Exception: Boards to be used in test fixtures may be Class 2.
19. Counterfeit Parts and Materials: Supplier shall have a counterfeit parts avoidance, detection, mitigation, and disposition program meeting the requirements of Aerospace Standard AS5553. Seller shall only deliver authentic components, devices, pieces, material, modules, assemblies, subassemblies, goods, etc. that are manufactured by or obtained from original equipment manufacturers (OEMs), original component manufacturers (OCMs), or authorized distributors. Seller shall make available to Ampex documentation that authenticates and provides traceability of the Parts to the applicable OEM or OCM.