Supplemental Quality Requirements:
Counterfeit Electronic Parts Prevention

0701QS

Quality Assurance Specification **0701QS** establishes specific Avtech quality requirements to reduce the risk of counterfeit electronic parts entering Avtech's supply chain. These requirements are applicable to procurement of electronic components by Avtech or Avtech's subcontractors from non franchised distributors, and are in addition to those set forth in any other contracted document. The provisions indicated herein are an integral part of each purchase order.

Compliance with the requirements of these clauses does not reduce supplier responsibility for furnishing materials and services which fully comply with all applicable drawings and specifications requirements, nor does it guarantee acceptance of materials or services by Avtech. In the event that materials or services are found to be defective and cannot be demonstrated by the supplier to be in conformance with purchase order requirements, Avtech shall have the right to reject them.

Electronic parts are defined as: Electrical or electronic devices that are not subject to disassembly without destruction or impairment of design use. They are sometimes called electronic components or piece parts.

An electronic assembly is defined as: An assembly containing one or more electronic parts.

A counterfeit electronic part is defined as: A part falsely represented in some manner, e.g., manufacturer, part number, date code, lot code, reliability level, etc.

The Seller shall ensure that all electronic components procured to fulfill Avtech purchase order requirements include a certificate of conformance from the Original Equipment Manufacturer or a Franchised Distributor. In some instances parts must be procured from Brokers or Suppliers other than the Original Equipment Manufacturer or their Franchised Distributor; in these cases the original product certification may not be available. This 0701QS covers requirements **ONLY** for products purchased from Brokers or Distributors other than the Original Manufacturer.

The procedures defined in this 0701QS are in no way to be interpreted as relieving the Supplier/Seller from the responsibility of meeting all contractual/purchase order requirements.

Seller and Supplier shall implement appropriate controls to assure product origin and conformance to AVTECH requirements and related engineering drawings, including:

- Procurement of parts only from Manufacturer or authorized Distributor(s), when available within Avtech lead time requirements.
- Internal procedures to provide suspect parts awareness training relative to identification and reporting of counterfeit parts.
- Validation of subcontractor's procurement methodology and sources of supply where procurement is outsourced to another entity.

The requirements defined in this 0701QS apply to all new Avtech Corporation product purchase orders issued on or after *month day year*. Existing supplier inventory, as of *month day year*, including piece parts and finished goods, is exempt from the requirements defined in this 0701QS.

This "grandfather" provision does not apply to Non-franchised Distributors ("Brokers").

REQUIREMENTS

Electronic components are to be purchased only from the Original Equipment Manufacturer (OEM) or a Franchised Distributor of the OEM.

- The OEM or Franchised Distributor shall provide with the shipment a Certificate of Conformance, certifying that the component provided is thepart number being procured on the Avtech Purchase Order. A certificate which certifies the vendor part number, with the Avtech ordered part number identified as "Reference or Customer P/N," does not indicate certification to the Avtech ordered part number, if the Avtech drawing includes additional requirements.

- A certificate from a Franchised Distributor must also establish traceability to the Original Manufacturer. The preferable method is for the Franchised Distributor to provide a copy of the Manufacturer's certificate for the lot number being supplied, along with their Franchised Distributor certification. Acceptable, but not preferable, is a Franchised Distributor certificate identifying the Original Manufacturer.

Electronic components may NOT be purchased from Brokers (non-franchised distributors), except in the event that the components are not available from the OEM or Franchised Distributor within Avtech lead time.

- Broker must meet the same certificate of conformance requirements as those required from an OEM or Franchised Distributor (see above). If the certification requirement cannot be met, the inspection and test requirements defined below must be met.

- Broker must also provide their own certification that warrants parts to be "original" (that is, not refurbished or reworked). If Broker cannot provide this certification, the parts may not be procured.

INSPECTION AND TEST REQUIREMENTS

In the event that any source of supply (OEM, Franchised Distributor, or Broker) cannot provide a Certificate of Conformance certifying the component provided is the part number being procured on the Avtech Purchase Order AND establishing traceability to the Original Equipment Manufacturer, the components may only be procured if the following inspection and test requirements are met. All inspection and testing performed to satisfy the conditions of this SPOC shall be performed by a test laboratory approved by Avtech.

The term "Lot Acceptance Testing," as used in this SPOC, shall be defined as: "Lot testing at specified temperature range, as defined in the OEM device data sheet. The data sheet may identify these requirements as Group A testing, critical parameters, or key performance parameters."

In the case of Integrated Circuits (IC):

- The component Supplier must verify that the physical attributes of the package meet the data sheet specifications and that the case / package marking is consistent with the marking

requirements given in the OEM device data sheet and, if applicable, the Avtech drawing.

- The component Supplier must de-lid a minimum of one (1) sample IC from each data or lot code.
    - Confirm and document that the device die is a product of the OEM indicated on the case / package marking.
    - Contact the OEM to obtain verification that die and case / package markings, as well as date / lot codes are valid. If this verification is provided, the lot is acceptable with little or no further testing.
    - If OEM date and lot codes are NOT valid or OEM verifies they did NOT manufacture the part, the lot must be rejected.
    - If OEM verification cannot be obtained, Lot Acceptance Testing, as defined below, must be performed.
- Perform Lot Acceptance Testing, if required:
    - If OEM verification cannot be obtained, perform Lot Acceptance Testing, as specificied on the device data sheet and, if applicable, the Avtech drawing.
        - Sample size: As specified on the OEM's device data sheet. If no sample size is specified on the OEM data sheet, sample size shall be 116/0. That is, a sample size of 116 shall be randomly selected from each lot/date code and submitted to the specified testing.
        - If the lot size is less than the required sample size (116), each and every device in the lot shall be tested and all failed devices removed from the lot.
        - If any device in the sample fails any parameter in the lot acceptance testing, each and every additional device in the lot shall be tested on the same test set-up for all parameters in the test, and all failed devices shall be removed from the lot. If this testing results in a percent defective greater than 5 percent, the results shall be submitted to the Avtech buyer for lot disposition prior to the use of any devices in the lot.

In the case of components that are not integrated Circuits:

- The component Supplier must verify that the physical attributes of the package meet the data sheet specifications and that the case / package marking is consistent with the marking requirements given in the OEM device data sheet and, if applicable, the Avtech drawing.
- Contact the OEM to obtain verification that case / package markings and date / lot codes are valid. If this verification is provided, the lot is acceptable with no further testing.
- If OEM date and lot codes are NOT valid or OEM verified they did NOT manufacture the part, the lot must be rejected.

- If OEM verification cannot be obtained, perform Lot Acceptance Testing, as specified on the device data sheet and, if applicable, the Avtech drawing.

    - Sample size: As specified on the OEM's device data sheet. If no sample size is specified on the OEM data sheet, sample size shall be 116/0. That is, a sample size of 116 shall be randomly selected from each lot / date code and submitted to the specified testing.

    - If the lot size is less than the required sample size (116), each and every device in the lot shall be tested and all failed devices removed from the lot.

    - If any device in the sample fails any parameter in the lot acceptance testing, each and every additional devicein the lot shall be tested on the same test set-up for all parameters in the test, and all failed devices shall be removed from the lot. If this testing results in a percent defective greater than 5 percent, the results shall be submitted to the Avtech buyer for lot disposition prior to the use of any devices in the lot.

Documentation Requirements

Documentation requirements shall be in accordance with SPOC 183 and/or as directed by the procuring site's purchase order.