

**AVTECHTYEE SUPPLEMENTAL
ENGINEERING QUALITY REQUIREMENTS
COUNTERFEIT ELECTRONIC PARTS PREVENTION
0701QS**

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1 PURPOSE

To provide uniform requirements, practices and methods to mitigate the risks of receiving and installing counterfeit electronic parts. This procedure standardizes requirements, practices and methods for avoidance, detection, mitigation, and disposition of counterfeit parts.

2 DEFINITIONS

2.1 Electronic parts: 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.

2.2 Electronic assembly: An assembly containing one or more electronic parts.

2.3 Counterfeit electronic part: A part falsely represented in some manner, e.g., manufacturer, part number, date code, lot code, reliability level, etc.

2.4 NCR: Nonconforming Material Report

2.5 GIDEP: Government Industry Data Exchange Program

3 APPLICABLE DOCUMENTS

8801QS Quality Requirements for Suppliers

AS5553 Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition

4 PROCESSES

4.1 Avoidance

- a. Electronic components should be purchased whenever possible only from the Original Equipment Manufacturer (OEM) or a Franchised Distributor of the OEM.
- b. Quality Assurance will require a Survey and a Vendor Approval form to be completed and approved before a supplier can be added to the Approved Supplier Listing. Preference will be given to suppliers who have AS9100 or ISO-9001 registration.
- c. Components will be source controlled or defined by specification to a QPL/QML on the Engineering drawing when considered appropriate.
- d. When appropriate the Engineering drawing will specify for suppliers to procure directly from the AvtechTyee approved supplier listing, or to obtain AvtechTyee approval prior to purchasing components from certain suppliers.
- e. Procurement will buy components from trusted long term suppliers.
- f. Whenever possible Procurement will purchase components from domestic suppliers.

4.2 Detection

- a. Receiving Inspection will be provided information as appropriate on critical or problem parts or assemblies.
- b. Assemblies will be tested to see if they meet all the requirements of ATP's and Design requirements. If a failure occurs, the problem will be investigated to see if it is related to

- a counterfeit part.
- c. Burn In, Thermal Cycle and/or electrical testing will be required to shake out premature failures that may be caused by counterfeit parts.
- d. The GIDEP Alerts will be reviewed for instances of counterfeit parts. This may be used to confirm suspect counterfeit parts.

4.3 Mitigation

- a. Suppliers are required to provide the certification (C of C) with each receipt of parts per 8801QS Quality Requirements for Suppliers.
- b. The Terms and Conditions of 8801QS forbid the use of counterfeit parts.
- c. First Article Inspection (FAI) is required for all first time buys of “at risk” parts or assemblies.
- d. Suppliers are required to have a counterfeit parts prevention plan as appropriate to the product.
- e. If it is necessary for parts to be purchased from a broker, then the parts must be tested by an approved test lab to verify authenticity.

4.4 Disposition

- a. If by inspection, test failures or documentation, there is suspicion that counterfeit parts have been delivered from a supplier, the suspect parts or assemblies shall be written up on a nonconforming report (NCR –Reject tag) to identify the parts as suspect/counterfeit and quarantined in a secure area (Material Review - MRB).
- b. An investigation shall take place by a team consisting of Engineering, Quality and Procurement to verify authenticity of the suspect parts.
- c. If the parts are found to be counterfeit, the team will investigate if any of the counterfeit parts have been shipped and evaluate the risks these counterfeit parts may pose.
- d. These counterfeit parts are not to be returned to the Supplier except under controlled conditions to allow the supplier to conduct internal investigation These controlled conditions must preclude resale of the suspect counterfeit parts into the supply chain.
- e. The Investigating Team will be responsible to determine what further action to take (report to GIDEP, contact Legal Department, US Government, Office of Inspector General, notify affected customers, etc.).

4.5 Counterfeit Part’s Tasks as they relate to job functions:

4.5.1 Avoidance (Electrical, Mechanical & Hardware Commodities):

4.5.2 Quality Assurance: obtain the Vendor Survey and Supplier Approval form (AS9100 & ISO9001 certification preferred).

4.5.3 Engineering: provide Spec and/or Source Control documentation, maintain QPL/QML, and monitor part obsolescence.

4.5.4 Procurement: specify a preference for suppliers to procure directly from ASL. Purchase compliant hardware that is compliant with DFARS. Whenever possible purchase from Domestic Suppliers.

Detection (Electrical, Mechanical & Hardware Commodities):

- a. Receiving Inspection: Inspect for counterfeit parts. Examples and counterfeiting techniques include: Sanding & Remarking, Blacktopping & Remarking, Up-screening, Re-Balling BGAs from no lead to leaded without OEM concession, Visual External Inspection for Signs of Resurfacing, Visual Microscopic Inspection of Encapsulant Finish and Lead Surfaces.
- b. Quality Assurance: Review GIDEP alerts relating to counterfeit parts.
- c. Test: Test Assemblies to see that they meet all ATP requirements & Design Requirements. When failures occur, investigate for counterfeit parts as a cause.

4.5.3 Mitigation (Mechanical, Electrical, and Hardware Commodities)

- a. Quality Assurance: Require certification (C of C) with each shipment. Require First Article Inspection on risk parts or assemblies. Require suppliers to have a counterfeit parts prevention plan as appropriate to product. If it is necessary that parts be purchased from a broker, then the parts must be tested by an approved lab to verify authenticity.
- b. Procurement: identify 8801QS Supplier Quality Requirements on Purchase Order as part of terms and conditions forbidding counterfeit parts.

4.5.4 Disposition and Reporting:

- a. Quality Assurance: Verify authenticity of the suspect parts.
- b. Engineering: Disposition parts if found to be counterfeit.
- c. Procurement: Investigate if any of the counterfeit parts have been shipped and evaluate the risks these counterfeit parts may pose. Report to GIDEP, contact AFP/ACX Legal, US Government, Office of the Inspector General, notify affected customers, etc.