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AMENDMENT TC1

Counterfeit Parts Prevention and Control

APPROVED:
President *Mark A. Sargent*
Quality Manager *David Lukjanovs*
ORIGINATOR: David Lukjanovs

1. PURPOSE

To protect ETI Tech Inc. known as ETI throughout this document, our supply chain, and ultimately our customers from the infiltration of counterfeit or questionable pedigree components into our end products.

2. SCOPE

This policy applies to all electronic components and parts delivered to ETI, either in assemblies or as individual components.

2.1 ETI suppliers are required to purchase from OCM, OEM, or authorized distributors for such OCM/OEM, as sole and exclusive sources for all Electronic Assemblies, components or parts to be delivered to ETI and to obtain and retain written records for such.

2.1 Suppliers shall secure a C of C and/or C of CT for all electronic assemblies, components or parts to provide to ETI upon request and maintain on file as described within applicable ETI purchase orders and in compliance with AS9100 and/or ISO9001 requirements as well as ETI's Terms and conditions.

Note 1 The use of Non-Authorized Suppliers/Brokers without express written consent by ETI is hereby strictly prohibited

Note 2 See paragraph 6 for Process for Use of Non-Authorized Suppliers/Brokers.

3. BACKGROUND

Numerous customers are requiring ETI and our suppliers to implement a counterfeit parts policy with their suppliers and sub-tier suppliers. ETI is diligently working to control any potential counterfeit parts entering our facility, even those source controlled by our customers.

4. DEFINITIONS

4.1 **OCM** - Original Component Manufacturers

4.2 **OEM** - Original Equipment Manufacturers

4.3 **C of C** - Certification of Conformance or Certificate of Compliance

4.4 **C of CT**-Certificates of Conformance and acquisition traceability

4.5 **Authorized/Franchised distributors** - Those distributors with which OCM/OEM have contractual agreements identifying them as "Authorized" or in a like manner to buy, stock, re-package, sell, and distribute their product lines.



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- 4.6 **Non-Authorized Suppliers/Brokers** – A Non-Authorized/Franchised distributors, Independent distributors or any organization other than an OCM, OEM or their Authorized/Franchised distributors.
5. **SUPPLIER RESPONSIBILITY**
All suppliers are required to take the following actions:
- 5.1 Implement and enforce a written Counterfeit Parts Prevention and Control Plan designed to preclude, detect, and remove any counterfeit components/parts from all deliveries to ETI
- 5.2 As an integral part of this plan, the supplier shall maintain a database of counterfeit components/parts received and applicable source data
- 5.3 ETI requires that suppliers review AS5553 and other published or unpublished standards (See “Associated Documents”), for counterfeit component/parts avoidance, detection, migration and disposition, as best practice review and confirm internal procedures are appropriate and effective.
- 5.4 Actively cooperate with ETI in the implementation of this policy to eliminate counterfeit components from all products
- 5.5 Ensure this policy and the expected actions are communicated to quality and business leaders throughout your company and your suppliers and their sub-tiers.
6. **USE OF NON-AUTHORIZED SUPPLIERS/BROKERS**
The use of Non-Authorized suppliers/Brokers without express written consent by ETI is hereby strictly prohibited. Should business reasons (obsolescence, cost, lead time, customer commitments, etc.) dictate the use of such suppliers, the following process is required:



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- 6.1 Supplier shall notify in writing the Purchasing Representative at ETI of a requirement to utilize a non-authorized source.
- 6.2 Supplier shall provide specific details regarding the suggested source, the known details on component pedigree, date code, and use of this suggested verification/test plan for component Verification.
- 6.3 Electronic parts not available through a OCM, OEM or authorized distributors for such OCM/OEM may be procured from a Broker without C of CT only after ETI approval and Component authenticity verification per Component Verification section and Testing/Analysis Table.
- 6.4 Broker shall have an active counterfeit part detection program. ETI may review relevant databases (ERAI, GIDEP) to evaluate broker's history of supplying counterfeit components prior to approval.
- 6.5 Suppliers shall notify the appropriate ETI buyer to request Design activity for component replacement or circuit board re-design.
- 6.6 Supplier shall provide all details in writing on a supplier request form document which includes a customer sign off and approval section.
- 6.7 ETI shall review the supplier request and will either approve, reject, or return with comments of requested changes including but not limited to additional or alternative verification requirements. Visual inspection, part marking inspection, and C of C inspection shall be included as critical verification steps in all such instances.
- 6.8 Should ETI provide approval, the supplier shall provide Certification of Conformance, verification documentation, and any test results promptly to ETI.
- 6.9 Supplier is not approved to deliver product(s) to ETI until signed approval is provided and certification of conformance and test results are provided and confirmed to be compliant to the details agreed upon in the approved supplier request form.

7. Component Verification

- 7.1 All inspection and testing shall be performed to the original manufacturer's specifications and Parameters Steps A, B, C, D, E, and F should be performed in order. If a nonconformance is found, stop testing, reject the lot, and notify the ETI buyer. Testing shall only



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Be performed by test house pre-approved by ETI Supplier Quality personnel or approved labs.

A: Visual Inspection

Each lot to be delivered shall be subjected to a visual inspection at an AQL of 1.0 or tighter with a 40x minimum magnification. 100% of the remaining lot shall be visually inspected without Magnification Visual inspection shall include but is not limited to: verifying lot/date codes against Manufacturer's database, correct English spelling, manufacturer's logo, evidence of component Remarking, damaged bent leads, chip-outs, scratches, cracks, terminal finish inconsistent with Manufacturer's specification for that part number, any discrepancies to the pin one indicating area, and inconsistencies between the upper and lower mold of the component.

B: Authenticity Verification

Each lot to be delivered shall be subjected to an inspection at an AQL of 1.0 or tighter. Testing shall include verification of the components physical attributes to the original manufacturer's drawing, Swabbing and other applicable testing to verify authenticity. Swabbing shall be performed to the Current revision of MIL-STD-883 testing method 2015 using acetone and the alcohol and mineral Spirits solution.

C: X-ray Inspection

Each lot to be delivered shall be subjected to an inspection at an AQL of 1.0 or tighter. X-ray Inspection shall include checking for the presence of the die, cracks in the epoxy, checking wire Bonds, product or manufacturing markings that are X-ray detectable and any mixed die Configurations within the same lot/date code.

D: Electrical Testing

Electrical testing of each lot to be delivered shall be completed at an AQL of 1.0 or tighter. Testing shall include verifying electrical specifications from the original manufacturer's technical data sheets

As approved by ETI. Testing must be performed at thermal temperatures as identified on the OEM/OCM specification.

E: Destructive Physical Analysis



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Each lot to be delivered shall be subjected to a DPA inspection of 2% to a maximum of 30 units per Lot code. Inspection shall include verification of authenticity of the die and any other internal features

That may be shown on the original manufacturer's technical data.

F: Plating Inspection

Each lot shall be verified for lead finish per manufacturer's specification using appropriate Methodology such as X-Ray Fluorescence.

Testing/Analysis Requirements Table- by Component Type	Plating Inspection (F)	Visual Inspection (A)	Authentic Verification (B)	X-ray Inspect (C)	Electr Test (D)	Destructive Physical Analysis (DPA) (E)
Capacitors	X	X	X			
Connectors	X	X	X			
Crystals	X	X	X	X	X	X
Diodes	X	X	X			
Fuses	X	X	X			
Heat sinks	X	X				
IC	X	X	X	X	X	X
Inductors	X	X		X	X	
LED	X	X	X			
Mechanical parts	X	X				
Potentiometer	X	X	X			
Relays	X	X	X	X		
Resistors	X	X	X			
Speakers	X	X				
Switches	X	X				
Transformers	X	X	X	X		
Transistors	X	X	X			

8. Disposition and Reporting of Counterfeit Parts Disposition and Segregation

- 8.1 Nonconforming parts shall be disposition and segregated per this document. Confirmed counterfeit parts shall be prevented from re-entering the supply chain. Reporting all occurrences of counterfeit parts shall be documented and reported, as appropriate, through ETI Purchasing and when possible to external organizations such as: (ERAI, GIDEP law enforcement agencies). Membership and CONTERFEIT PART POLICY AMENDMENT TC1 REV -INTERNATIONAL)



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and /or GIDEP (GOVERNMENT - INDUSTRY DATA EXCHANGE PROGRAM) organizations should be attempted should a counterfeit part be determined.

Find ERAI web site at: <http://www.era.com/>

Find GIDEP web site at: <http://www.gidep.org/>

9. **Liability**

9.1 Suppliers shall be held liable for any counterfeit parts entering ETI supply chain up to and including all costs incurred by ETI resulting from the counterfeit parts.

10. **INTERPRETATION**

The ETI Quality Management or Purchasing Representative can be contacted for further interpretation or clarification of this policy.

11. **ASSOCIATED DOCUMENTS**

Documentation (supporting quality records) retention is subject to all AS9100 or customer specific requirements, whichever is greater.

ETI REFERENCE DOCUMENTS:

1. **ETI Quality Systems Manual AS9100**
2. **ETI Quality Control Procedures QP/TC**
3. (Terms and Conditions Amendment TC1)
4. (Approved Supplier Listing)

Standards Reference Documents:

Published or Unpublished

AS5553 - Counterfeit Electronic Parts; Avoidance, Detection, Mitigation and Disposition [AS5553](#)

AS6081 - Counterfeit Electronic Parts; Avoidance Protocol, Distributors [AS6081](#)

AS6174 - Counterfeit Material; Detection, Mitigation and Disposition [AS6174](#)

AS9100 - Aerospace Quality Management Standard



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AS9120 - Quality Management Standard; Requirements for Aviation's, Space and Defense Distributors

ARD6884 - Terms and Definition; Fraudulent/Counterfeit Electronic Parts

ARP6178 - Fraudulent/Counterfeit Electronic Parts; Tools for Risk Assessment of Distributors

ISO9001 - Quality Management

Standard **GIDEP** - [GIDEP OPERATIONS MANUAL](#)