

PROTECTION AGAINST COUNTERFEIT GOODS PROCEDURE

Approved By:	Scott Krider	Date:	7/27/2015
	_____ Sr. Production/Sr. Supply Chain Manager		_____
Reviewed By:	David E. Laird	Date:	7/27/2015
	_____ VP of Programs/ Operations		_____
Reviewed By:	Jeffrey White	Date:	7/27/2015
	_____ CM/DM Manager		_____
Reviewed By:	Bill Gates	Date:	7/27/2015
	_____ Director of Quality Assurance		_____
Reviewed By:	Dale Gates for Tanya Kirby	Date:	7/27/2015
	_____ Contracts Manager		_____
Reviewed By:	Glen Larmore	Date:	7/27/2015
	_____ Director of Hardware Engineering		_____

MICRO SYSTEMS, INC.
35 Hill Avenue
Fort Walton Beach, FL 32548-3858
(850) 244-2332

1 PURPOSE

This policy establishes Micro Systems, Inc. commitment to protecting the company and its customers from counterfeit goods being incorporated into its products or used in its services. This procedure serves to prevent counterfeit goods from entering our material stores by defining the process for selecting suppliers, ordering, inspecting, processing and controlling components, materials and other goods. This procedure also provides for the proper disposal of components and materials to prevent re-cycling.

1.1 Summary of Revision

A change bar in the left margin indicates revisions/changes made from the previous edition. Numerous changes throughout the procedure have been made due to customer concerns/comments April – July 2014, making this procedure comply for all customers and QP4-6G obsolete.

2 POLICY AND RESPONSIBILITY

It is the responsibility of all employees of Micro Systems, Inc. (MSI) to follow this procedure. It is the Purchasing Department's responsibility to ensure this procedure is followed and updated as required for continuous improvement.

It is the responsibility of all Supply Chain, Quality Assurance, Contracts and Program Management personnel to ensure this procedure is followed and enforced.

Because this policy is invoked on all Purchase Orders for customer-deliverable goods and services, Micro Systems' suppliers and subcontractors are required to adhere to this policy.

The policy is to ensure that counterfeit parts are not incorporated into MSI products or used in the services we provide using the following methods, as well as other appropriate measures to ensure protection.

- Ensure that scrutiny is given to sources of supply.
- Ensure that products are inspected upon receipt.
- Ensure that notice is provided to affected parties, including any customers, in the event of a discovery of counterfeit parts.
- Ensure that scrap materials are properly disposed to prevent them from being obtained by those who would counterfeit them.

Supersedes: QP4-6E, Rev M, August 20, 2014
Summary of Changes: Located in ALM tool
Originator: Purchasing

3 REFERENCE

The below listed documents are required for implementing this process:

OA-027	Kratos Global Policy; Protection Against Counterfeit Goods
QP4-6	Purchasing Procedure
QP4-15	Handling, Storage, Packaging, Preservation & Delivery Proc
QP4-16	Control of Quality Records
IDEA-STD-1010	Independent Distributors of Electronics Association, “Acceptability of Electronic Components Distributed in the Open Market”
AS5553	Aerospace Standard, “Counterfeit Electronic Parts; Avoidance, Detection, Mitigation and Disposition”
AS9120	Aerospace Standard, “Quality Management Systems - Aerospace Requirements for Distributors”
AS9100	Aerospace Standard, “Quality Management Systems – Requirements for Aviation, Space, and Defense”
ISO9001	International Standards Organization, “Requirements for Quality Management Systems”
CCAP-101	Component Technology Institute, “Counterfeit Components Avoidance Program, Certification For”
ANSI/ASQZ1.4	(or MIL-STD-105) Sampling Procedures

4 DEFINITIONS

- Independent Distributors of Electronics Association (IDEA): An organization of distributors dedicated to generating standards for the distribution industry.
- Original Component Manufacturer (OCM): The original designer or name manufacturer of a component.
- Original Equipment Manufacturer (OEM): The original designer or manufacturer of an item other than an electronic component.
- Authorized or Franchised Distributor (AFD): A party that is authorized to sell an OCM/OEM device to a contractor or user.
- Broker: An individual or organization who acts as an intermediary for purchasing and selling of electronic components. Also known as a non-franchised distributor.
- Non-Franchised Distributor: A Distributor who has not been granted the right or license by the OCM to distribute goods or services. Also known as a broker.

- Independent Distributor: An organization that purchases new excess inventories from end users (Original Equipment Manufacturers and Contract Manufacturers) with the intention to resell and redistribute back into the market.
- Electronic Services Manufacturer (ESM): A business that is contracted to manufacture MSI products to our drawings with MSI supplied material.

NOTE: For the purpose of this procedure, the designation “Broker”, “Non-Franchised Distributor”, and “Independent Distributor” are interchangeable and the controls defined herein apply regardless of the designation used.

- A counterfeit item is:
 - An item that is a copy or substitute without legal right or authority to do so or one whose material, performance, or characteristics are knowingly misrepresented by the vendor, supplier, distributor, or manufacturer
 - An item in which there is an indication by visual inspection, testing, or other information that it may not conform to established Government- or industry-accepted specifications or national consensus standards
 - A substandard component misrepresented by the supplier
 - Items that are deliberately altered in such a way as to misrepresent the actual quality of the item with intent to defraud or deceive the purchaser. Any information omitted or means taken to mislead the purchaser to believe that such items are authentic or lawful
 - Suspect items must be further investigated to determine whether they are counterfeit. When an item contains indications, but insufficient evidence, of irregularities such as noncompliance with agreed-upon specifications in the manufacturing process, it may be declared suspect

5 PROCESS IMPLEMENTATION

5.1 Management Approval

When the need to procure a brokered component/item arises, the Buyer and the Program Manager will produce a narrative document that;

- explains the situation

- enumerates the actions taken to avoid procuring a brokered component
- delineates any risk mitigation actions
- summarizes the procurement source and actions the source will take to authenticate the components
- if possible, a cost trade-off or schedule trade-off for different procurement scenarios

This narrative document will be signed by the Buyer and the Program Manager then presented (in order) to the Director of Operations, Director of Quality Assurance, and then Vice-President of Operations for signature concurrence. If all parties approve, then the buyer may move forward to create a Purchase Order.

The approval document will be retained with the paper copy of the Purchase Order that is filed.

5.2 Sources of Supply

The vast majority of counterfeit cases reported are associated with purchases through independent distributors, brokers, or non-franchised distributors.

Therefore, when purchasing components, there shall be a preference for suppliers as follows:

1. Original Equipment Manufacturers (OEMs)
2. Original Component Manufacturers (OCMs)
3. Authorized/Franchised Distributors (AFDs)
4. Independent distributors, brokers and non-franchised distributors may only be used when parts are not available from OEMs, OCMs, or AFDs and then ANY component or material shall be authenticated / tested, and approved.

This policy requires the Purchasing Department to place purchase orders with OCM/OEM/AFDs as the primary and fundamental method of avoiding counterfeit components.

There may be times that the use of an Independent Distributor/broker/non-franchised distributor is the only or best alternative available. Examples include when products are no longer available through franchised or authorized suppliers due to obsolescence or when other preferred sources cannot provide the item when needed. In such cases, use of Independent Distributors/brokers/non-authorized distributors should be considered only after consideration of alternate parts, re-design, and schedule adjustments needed to obtain the part from a preferred source as noted above.

If there are no alternatives to the acquisition of an item(s) from an Independent Distributor/broker/non-franchised distributor, the supplier must be thoroughly investigated and

approved. **QP4-6B, Assessment of Subcontractors / Vendors Procedure, will be used with the additional requirements in this procedure and re-certified every 2 years.**

MSI requires these Independent Distributors/brokers/non-franchised distributors to have an industry recognized certification. The Purchasing Department must locate components at a supplier that has AS9100, AS9120, AS5553, ISO9001, CCAP-101, IDEA-STD-1010 or other industry recognized certification. All MSI Purchase Orders to Independent Distributors/brokers/non-franchised distributors are required to have PO Code: PO0100014B applied imposing quality standards:

- Certificate of Origin
- Certificate of Conformance
- ISO 9001:2008 or equal to or better standard
- AS9120 Quality management Systems compliant system
- AS 5553, Counterfeit Electronic Parts; Avoidance, Detection, Mitigation and Disposition.

AS9100C, page 20, 7.4.1, “Note: one factor that can be used during supplier selection and evaluation is supplier quality data from objective and reliable external sources, as evaluated by the organization (e.g. information from accredited quality management system or process certification bodies, organization approvals from government authorities. Use of such data would be only component of an organization’s supplier control process and the organization remains responsible for verifying that purchased product meets specified purchase requirements.”

These certifications may be independently verified by using the website of the specific certification such as:

- International Aerospace Quality Group (OASIS) for AS9100 and AS9120 at <http://www.sae.org>
- Components Technology Institute, Inc. for CCAP-101 at <http://www.cti-us.com>
- Independent Distributors of Electronics Association (IDEA) for IDEA-STD-1010 at <http://www.idofea.org>
- The specific registrar for a distributor that claims AS5553 certification such as British Standards Institute at www.bsiamerica.com

These types of Independent Distributors/broker/non-franchised distributor should be submitted to the (QP4-6B) approval process with the addition of a QF4-6E1 form (Independent Distributor Questionnaire) prior to QA approval.

5.3 Certificate of Conformance (C of C)

It is the policy at Micro Systems, Inc. that all purchased material used for Customer Deliverable products and services shall be received with a Certificate of Compliance (C of C).

The C of C shall certify the components delivered meet the purchase order requirements and the appropriate specification for the part ordered. The C of C must be from the OCM/OEM or if from an AFD, their C of C must provide traceability back to the OCM/OEM (and/or on file).

Certified Independent Distributors shall supply their own C of C and the OCM/OEM C of C. When the certified Independent Distributor/broker/non-franchised distributor does not have traceability back to the OCM/OEM, authentication data shall be substituted for the OCM/OEM C of C.

As with a component, a Certificate of Conformance must be examined for authenticity. Receiving Inspection will review Certificates of Conformance and examine them for any suspicious feature such as alterations, omissions, additions, and clarity of the document. Receiving Inspectors will contact the Quality Assurance Manager with any suspicions or evidence of forgery for resolution.

If the certified Independent Distributor/broker/non-franchised distributor does not have an OCM/OEM C of C and/or traceability from the OCM/OEM, the supplier shall authenticate the component/material/item by methods that are appropriate to the specific type of component/material/item. These certified suppliers will supply their own Certificate of Conformance and the authentication testing data/results/information.

5.4 Receiving Inspection

All procurements for customer deliverable components/materials/items, including deliveries from certified Independent Distributors, must be submitted to Receiving Inspection. These components and the authentication data will be examined/inspected in MSI Receiving Inspection in accordance with QP4-10B, Receiving Inspection Procedure.

The components/material/item will be procured on a Purchase Order with “BK” in the numeration (e.g. PO-BK12001) to serve special attention to Receiving Inspection.

5.5 Testing/Screening/Authentication

Certified Independent Distributors/brokers/non-franchised distributors will locate, buy and authenticate components/items as part of their service and it is the primary method for mitigating the risk of procuring counterfeit goods from non-OCM/OEM/AFDs. If the OCM/OEM C of C is not available, authentication shall be accomplished in accordance with this procedure:

This policy requires the Purchasing Department to utilize (TS9000, AS9100, AS9120, AS5553, ISO9001, CCAP-101, IDEA-STD-1010 or other) certified Independent Distributors/brokers/non-franchised distributors and laboratories / testing services.

5.6 Types of Tests/Screens/Authentication Methods

The following methods shall be applied to verify the authenticity of brokered parts and materials:

- MSI policy requires authentication on all Independent distributor/broker/non-franchised distributor procured parts.
- The certified Independent distributor/broker/non-franchised distributor will conduct Visual Inspection - including inspection of packaging, labels, and device marking should be performed. Typically this inspection includes:
 1. Resistance to solvents testing for evidence of remarking and/or evidence of re-surfacing. {MSI prefers 3 parts mineral spirits, 1 part isopropyl alcohol, acetone, 1-methyl 2-pyrrolidone for marking permanency and heated Dynasolve 750 for resurfacing (blacktopping)}.
 2. Inspection of the leads for evidence of previous use or refinishing (performed at magnification).
 3. Verification that the product was packaged to prevent physical damage or damage due to ESD.
 4. Verification that there are no bent or striated leads.
 5. Leads with too much or too little solder.
 6. Flux or dross on the parts.
 7. Any chipped or peeling surfaces.
 8. Differences in surface texture between the top and bottom of part.
 9. Scratches on the surface of the device.
 10. Rounded or chipped corners.
 11. Blurred, intermittent, or otherwise poor quality ink markings.
 12. Uneven laser markings.

13. For plastic encapsulated microcircuits (PEMs), the pin 1 marking and mold release cavities should be smooth and shiny, and easy to see.
 14. Small cracks in the package.
 15. Presence of several different date codes in the shipment.
- Physical and Material Analysis – Both destructive and non-destructive analysis shall be conducted as the specific commodity or specific component dictates. Applicable techniques may include electrical testing, real time x-ray, chemical etch, de-cap and internal visual inspection, and energy dispersive x-ray spectroscopy. As a minimum, de-cap and internal visual inspection should be performed as the specific commodity or specific component dictates and approved by the QA Director. Materials and mechanical items shall have a specific authentication/test plan developed and approved by the QA Director.
 - Electrical Testing – Electrical testing can determine item capability and functionality. Testing shall be performed at rated speed and environmental conditions as the specific commodity or specific component dictates.
 - All date/lot codes will be verified 100% by the Independent Distributor / broker/non-franchised distributor.
 - ANSI/ASQ Z1.4 or MIL-STD-105 will be used for sampling procedures. Inspection Level II, Single, Normal, AQL 1.5 will be used as a typical sampling plan.
 - Any Independent distributor/broker/non-franchised distributor components / parts being shipped to MSI shall be ordered with the alpha characters ‘BK’ in the purchase order number (e.g. PO-BK12001).

In accordance with direction from the Vice President, Contracts, Kratos Defense & Security Solutions, Inc.

All responses to requests or correspondence regarding supply chain due diligence from customers, partners or government agencies are sent to the Kratos General Counsel and Vice President Contracts for review and approval PRIOR to submission to third parties. Such requests may pertain to counterfeit or corrupt parts or other areas of inquiry.

Please ensure that all responses to requests or correspondence regarding counterfeit or corrupt parts, conflict minerals or other supply chain inquiries from customers, partners or government agencies are sent to the Kratos General Counsel and Vice President Contracts for review and approval PRIOR to submission to third parties.

This is a mandatory action. No exceptions.

5.7 When Counterfeit Goods are Identified

If at any point in the procurement, receiving inspection, or post-receiving inspection phases a component or material is identified as counterfeit, the suspect or counterfeit components/material/items shall be properly identified and segregated.

If the discovery is by a supplier, the MSI buyer will be notified. Notification should include a full accounting of the reason for rejection. The MSI buyer will, in turn, notify the Purchasing Manager, Program Manager, Contracts Manager and the Quality Assurance Manager.

If the suspect or counterfeit component/material/item is discovered internally (or after delivery) the components/material/item will be presented to Quality Assurance and a Non-Conforming Material Report (QF4-13) will be initiated. The Purchasing Manager, Program Manager, Contracts Manager and the Quality Assurance Manager will be notified.

When a counterfeit component/material/item has been identified, it is the joint responsibility of the Purchasing Manager, Program Manager, Contracts Manager and the Quality Assurance Manager to properly investigate the situation and determine the appropriate actions. Consideration should be given to but not limited to:

- Notifying DCMA and any affected parties.
- Notifying the customer if product has already been delivered and possibly recalling delivered product.
- Communicating and notifying the OEM/OCM.
- Stock sweeps and other actions to contain suspect or known counterfeit goods.
- Listing the item in Government Industry Data Exchange Program (GIDEP) counterfeit parts system.

When discovered by a supplier, they shall properly dispose of any counterfeit goods accordance with their internal procedures with every effort to prevent them from being re-cycled again.

When discovered by MSI or a customer, any components/material/items that are identified will be dispositioned and disposed of in accordance with QP4-13 (Non-Conforming Material) and QP4-14 (Corrective and Preventive Actions) with every effort to prevent them from being re-cycled again.

5.8 Flow Down Of Counterfeit Components Avoidance

All of MSI's purchase orders have a statement that this procedure, QP4-6E, is invoked on the procurement and that the procedure is available on the MSI website (<http://herley-msi.com>).

Additionally, the standard Purchase Order Terms and Conditions have a clause that this procedure is invoked on all Purchase Orders.

5.9 Disposal

Once counterfeit components/materials/items have been properly documented and dispositioned, they should be properly disposed.

- A supplier shall dispose of any counterfeit goods in accordance with their internal procedures with every effort to prevent them from being re-cycled again.
- MSI treats electronic and electrical waste as a Hazardous Material because it contains lead. MSI utilizes a certified hazardous material waste company to dispose of this waste in accordance with the details in QP4-15, Handling, Storage, Packaging, Preservation & Delivery Procedure. All other Non Hazardous waste will be evaluated for proper disposal while making every effort to prevent counterfeit materials from being re-cycled.

6 TRAINING

Counterfeit Recognition Training has been conducted for all manufacturing, supply chain, and Quality Assurance personnel by the Training Specialist. New personnel in these departments shall have Counterfeit Recognition Training as part of their incoming orientation training. Refresher training will be given if there are any changes in customer requirements or counterfeiting method improvements

7 DOCUMENTATION

The following documents were generated as a result of this procedure:

QF4-6E1 Independent Distributor Questionnaire

8 SCHEDULE

It is required that this procedure be reviewed annually using QF4-2A to assure its' accuracy and relevancy. This procedure may also be reviewed as needed by the Quality Assurance Departments, designee or as requested by management. Retention of this document and its associated records shall follow the guidelines specified herein and QP4-16.