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Supplier Policy Manual

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Revision History

Revision	Change Summary	Date
-	Initial Release	April 7, 2009
A	Re-arranged content and added Supplier Name Requirement	June 18, 2009
B	Updated Record Retention Section/Add Counterfeit Material Section	July 16, 2010
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Company History

K&L Microwave, Incorporated began operation in 1970 with the goal of designing and manufacturing the best RF and Microwave components and integrated assemblies in the world. Today, in the highly competitive component and integrated assembly industry, K&L Microwave continues to set the standard of excellence as a worldwide leader in the supply of RF and Microwave Filters.

K&L Microwave Incorporated is a subsidiary of Dover Corporation (a Fortune 400 company). K&L Microwave has its main office located in Salisbury, Maryland with an operation in San Isidro, Dominican Republic and sales offices in the UK and China. As the industry has changed over the years, K&L Microwave has adapted to meet the varying global and local needs of its customers. Presently, K&L Microwave maintains one of the most efficient RF filter manufacturing operations in the world.



Introduction

K&L Microwave designs and manufactures a full line of RF and microwave filters, duplexers and subassemblies, including ceramic, lumped element, cavity, waveguide and tunable filters. K&L Microwave supplies many of today's most significant military and homeland security defense electronics programs. Applications include satellite communications, radar, radio communications, fire control radars, telemetry applications, missile guidance systems, mobile radio base stations and air traffic control and communications. Commercial products include high-performance receive and transmit filters, delay line filters, duplexers and diplexers, combiners, receive multi-couplers, wireless system assemblies for base station requirements and lower-cost ceramic and lumped element parts.

K&L Microwave's mission is to produce high-quality, cost-effective solutions based on our customers' specific needs. By controlling internal design and production processes, K&L Microwave ensures and guarantees high quality and exceptional product performance. The K&L Microwave team is committed to achieving excellence through aggressive investment in research and development, through capital investments in manufacturing technology and through the use of proven and innovative designs.

We understand that in order to fulfill our mission we need the full cooperation and participation of our suppliers. The Supply Chain Management team at K&L Microwave is committed to working with our supply chain both externally and internally to make sure we provide our customers with the materials and services they need on time, at the best price, and with the best quality. We select suppliers who are capable of continually providing process, system, and organization improvements, as well as defect-free products and services. Each Purchasing Representative works with our suppliers to provide the information needed to make a successful relationship.



Purpose

The intent of this document is to define the Purchasing and Quality requirements necessary to ensure a successful partnership between K&L Microwave and our suppliers. This manual documents the required quality standards for products and services purchased from suppliers, and outlines K&L Microwave's overall expectations.

- Suppliers must be capable of providing defect-free products that meet design intent and on-time delivery.
- All proposed material or process changes must be communicated in writing to the appropriate K&L Microwave Purchasing Representative.
- All proposed manufacturing location changes must be communicated in writing to the appropriate Purchasing Representative prior to the move.
- All design changes must be communicated to the appropriate Purchasing Representative in advance.
- Suppliers must have a full understanding and compliance with all applicable federal, state, and local regulations.
- Timely delivery or advance notification of late deliveries. This includes meeting K&L Microwave quality and delivery requirements.
- Communication of loss of registration or change in QMS registration.

Scope

The scope of this document is to provide guidance to the supply base on activities relating to the performance of the Purchase Order requirements. This manual is applicable to all existing suppliers and potential new suppliers of purchased production material or services to K&L Microwave. It outlines the process for initially becoming an Approved supplier to K&L Microwave as well as the ongoing performance monitoring system. K&L Microwave teams with suppliers who have made or demonstrated a commitment to continuous improvement in their product quality. It is our intent to develop desirable and mutually beneficial long-term relationships with these suppliers. These suppliers can enhance their own future by supplying zero-defect products, timely delivery, and competitive pricing, in a reliable supply chain environment.



K&L Microwave Quality Policy

K&L Microwave's VISION is to be a healthy, growing and top performing company recognized by our customers as their supplier of choice for RF and microwave filter and filter-related products in the military and commercial markets.

Our MISSION is to understand and achieve our customers' expectations through:

Continual Improvement of Business Processes

Development of People

Supply Chain Management

Deployment of Leading-Edge Technologies

Involvement of Everyone

K&L Microwave Environmental Policy

K&L Microwave is committed to increase our environmental awareness, reduce our environmental impact, protect the health and safety of our employees, support our community and continue to meet the needs of our customers.

We will fulfill this commitment through:

- Continual Improvement of systems and technology to reduce waste and prevent pollution.
- Continual Improvement of our environmental management system.
- Compliance with applicable federal, state and local environmental, health and safety laws and regulations or other requirements.
- Using our natural resources wisely.
- Applying the policy when setting and reviewing the environmental objectives and targets.

Declared Value & Direct Signature Charges on Shipments Policy

On all K&L Microwave Purchase Orders where the ship via states Freight Collect, K&L Microwave requires that there is no Declared Value amount or Direct Signature entered, unless specifically called out on the Purchase Order. For International Shipments, the Commercial Value of the shipment is required; however, it is not a requirement for additional declared value. Any unauthorized declared value charges or direct signature charges billed to K&L Microwave will be debited back to the supplier's account. Please make sure this information is available to your shipping department personnel.



Ethics Policy

As a unit of Dover Corporation, K&L Microwave is committed to the highest ethical standards and to conducting business with the highest level of integrity. These values must drive our behavior as we aspire to earn and keep the respect and trust of our shareholders, customers, and employees. We have the same expectations of our suppliers.

Dover Corporation's Code of Business Conduct and Ethics policy can be found at www.dovercorporation.com under the Governance section.

To report concerns, please contact either K&L locally at hr@klmicrowave.com or through Fulcrum, an independent hotline provider:

By Telephone:	1-800-495-1775 (or 213-270-9984 for international calls)
By the Internet:	www.fulcruminquiry.com/dover.htm
By E-mail:	whistle@fulcruminquiry.com
By Fax:	213-891-1300
By Mail:	Fulcrum Financial Inquiry LLP Whistleblower Department 888 S. Figueroa Street, Suite 2000 Los Angeles, CA 90017

Purchasing Representative's Authority and Responsibilities

K&L Microwave's Purchasing department is responsible for all aspects of procurement, logistics and delivery. The choice of suppliers in any of these areas may be the result of investigation and deliberation amongst various departments within K&L Microwave, but price negotiation and commitment to purchase authority rest solely with the appropriate purchasing member of K&L Microwave. Only Purchasing Representatives may commit K&L Microwave to a purchase contract. Properly approved purchase orders are required to commit the company for items or services. Consistent with our corporate values, K&L Microwave will treat all its suppliers and their representatives fairly and impartially.

Credit References

K&L Microwave will provide all new suppliers with a list of credit references upon request before entering into any purchasing contracts.



Delivery Requirements

Suppliers are expected to deliver in accordance with requested and promised dates on the purchase order. On-time delivery is measured by the number of shipments received in a timely manner per the K&L Microwave purchase orders then, calculated as a percentage of total deliveries. Continued delinquent deliveries require immediate improvement activity. All costs incurred due to delivery problems may become the responsibility of the supplier. On-time delivery is based on the initial scheduled delivery date confirmed by the supplier, but allows the shipment to be received early up to 3 days and zero (0) days late. K&L Microwave expects 100% on-time delivery from all suppliers.

Shipments in excess of the purchase contract quantity must have prior written approval from the appropriate Purchasing Representative.

Supplier Selection

Representatives from K&L Microwave's Purchasing and Quality departments will evaluate all new suppliers. All new potential suppliers may be required to submit any or all of the following items:

- K&L Microwave Supplier Self-Evaluation (Document #1001147)
- Supplier Size Classification Certificate (Document #1009618)
- Mutual Non-Disclosure Agreement
- Supplier Policy Manual Review Signature
- Dunn & Bradstreet Rating

After the above information is received, K&L Microwave Purchasing and Quality Representatives will review all of the information and make one or some of the following determinations:

- Add the supplier to the Approved Supplier List as approved.
- Schedule an on-site survey/visit (if required).
- Request additional information from the supplier- if necessary.
- Eliminate the supplier from further consideration.

Once a supplier is selected, the appropriate Purchasing Representative will work with the supplier to facilitate the specific qualification requirements for materials or components. Supplier selection for a new part is based upon the supplier's stated ability to meet K&L Microwave's design specifications, as well as successful completion of the requirements defined above. Continued business is awarded to suppliers based on their quality, on-time delivery, cost, technological expertise and customer service record.



Purchase Orders

The supplier is responsible for reviewing and meeting all of the K&L Microwave purchase order requirements, specifically:

1. Purchase order number.
2. Purchase item part number.
3. Latest revision level of the drawing if applicable to item.
4. Order quantity and accuracy of price.
5. Special notes to be followed.
6. Required delivery date.
7. Purchase Order Quality Requirements
8. Terms and Conditions.

If the supplier cannot meet the requirements, the supplier must notify their K&L Microwave Purchasing Representative. Once the Purchase Order has been reviewed, the supplier must return confirmation to the appropriate Purchasing Representative for acknowledgement within 24 hours ARO.

Purchase Order Changes/Engineering Changes

When an engineering drawing or specification has been revised, the K&L Microwave Purchasing Representative will send the supplier an updated drawing with information on the change. The supplier should review the drawing/document in order to accept or decline the requested changes. K&L Microwave's suppliers are required to confirm the change request and respond back to K&L Microwave's Purchasing Representative within three (3) working days.

Packaging, Handling, Storage and Preservation

All products shall be packed, packaged, marked and otherwise prepared for shipment in a manner which is (1) in accordance with good commercial practices unless otherwise specified in a particular manner; (2) acceptable to common carriers for shipment at the lowest rate that could include ocean shipment for the particular suppliers; and (3) adequate to insure safe arrival of the material. The label and character size should be legible.

The supplier shall mark each container, rack, box or pallet with necessary lifting, handling and shipping information. Suppliers are held responsible to ensure packaging is sufficient to protect material from shipping damage (nicks, dings, bends, scratches, etc.). The supplier shall also assure that all packaged items are permanently and legibly identified.



Identification requirements may include any or all of the following as specified by K&L Microwave documentation: Bar codes must be Human Readable.

1. Part identification, complete K&L Microwave part number and revision level
2. Name of manufacturer.
3. Lot Number and/or Date code (date of manufacture).
4. K&L Microwave's purchase order number.
5. Identification and Quantity of parts per carton
6. Certificate of Origin- where applicable.
7. An itemized package sheet must accompany each shipment.

Supplier shall identify item(s) and/or package(s) container(s) of shelf life material with the manufacture date or the expiration date along with special storage and handling conditions, in addition to the normal identification requirements of manufacturer name, part number, revision type, size, quantity, etc. When the item/material/product is age control sensitive and requires shelf-life certification to accompany each shipment. If not otherwise specified, minimum 80% shelf life must be remaining upon receipt at K&L Microwave.

Electro Static Sensitive Devices

All devices that are susceptible to damage or degradation from the application of electrostatic discharges shall be packaged in a manner to prevent damage. All packaging shall be clearly labeled with and ESD caution label. Nonconductive or static generating wrapping or cushioning material is not acceptable. Reference IPC-A-610 for guidance.

Moisture Sensitive Devices

All devices that are susceptible to damage or degradation from moisture shall be handled, packaged and shipped in a manner to prevent damage. Handling, packaging, shipping and identification shall be completed in accordance with J-STD-033, latest revision.

Return Material Request

When material is to be returned to the supplier, K&L Microwave must receive authorization (RMA - Return Material Authorization) from the supplier within two (2) business days from the date of request. If return authorization has not been received within seven (7) business days, K&L Microwave may return the material to the supplier and debit their account.



Prohibited/Hazardous Materials

As a supplier to the aerospace industry, K&L Microwave and its suppliers must comply with and follow governmental and safety constraints on restricted, toxic and hazardous substances. In order to meet these constraints, each supplier to K&L Microwave shall provide certification, when required by purchase order, prior to shipment of product or included with each shipment a Certification for List of Prohibited Material Exclusion. When applicable, the supplier may send a facility certification to K&L Microwave indicating prohibited exclusion for all products shipped from their facilities, which will satisfy the above requirements. For reference, a sample list of prohibited materials is listed below.

Sample List of Prohibited Materials:

- Asbestos, Asbestos Compounds, Asbestos filled molding compounds
- Beryllium, Cadmium, Chloroflouorocarbons,(CFC), such as freon
- Lithium or lithium compounds, Lead or Lead compounds (except for printed circuit boards or batteries)
- Magnesium, or Magnesium Alloys
- Mercury or its compounds and amalgams, Methyl Ethyl Ketone, n-Hexane, Polychloride
- biphenyl(PCB)Polyvinyl chloride, (PVC),except when used for component leads.
- Radioactive material, Tetrachlorethane, Xylenes
- Zinc Compounds



Supplier Performance Rating and Performance Monitoring System

K&L Microwave's Purchasing Representatives, with input from Quality and Engineering, gather the appropriate data to evaluate suppliers.

There are two categories of suppliers:

- Approved Supplier – a supplier who has met K&L Microwave's evaluation criteria and has been selected by the Purchasing Manager and Quality Assurance Representative to be added to the "Approved Supplier List".
- Key Supplier – A supplier that provides at least one critical part to K&L Microwave's product lines or a supplier that K&L Microwave spends a minimum dollar amount per year with and has been selected by the Purchasing Manager and the Quality Assurance Representative to be added to the "Key Supplier List".

K&L Microwave uses a point system for the Performance Matrix that is divided into four (4) areas of focus listed below:

- Quality System/Performance 30%
- Delivery/Logistics 30%
- Total Cost 30%
- Flexibility 10%

On a monthly basis, K&L Microwave will issue a Supplier Performance Report for quality and delivery requirements to Key Suppliers. Suppliers are responsible for analysis of the report and self-led improvements. K&L Microwave may require an improvement plan from suppliers whose performance is inadequate. On a bi-annual/annual basis, K&L Microwave will issue the Supplier Performance Matrix with key suppliers to review not only quality and delivery, but total costs and flexibility as well.

Quality Performance Measurement

Quality Performance will be scored based on defective Parts Per Million (PPM). This is calculated by the number of parts received in a given time period divided by the number of rejects in the same period multiplied by a million. This calculation describes how many parts would be defective if a million were received. An example, if 1,000 parts were received in the first quarter and 10 parts were rejected the PPM would be 10,000.

Delivery Performance Measurement

On-Time Delivery Performance will be scored based on the total quantity received on time (shipping window is 3 days early and 0 days late) to the purchase order due date. Due date is the date the material is expected on K&L Microwave's dock. K&L Microwave measures on-time delivery to want date (our need date) and to promise date (confirmed dock date from supplier). The goal is for the promised date to meet our want date.



Quality Management System Requirements

Suppliers shall implement and maintain a Quality Management System (QMS). It is recommended that suppliers shall be compliant to ISO9001 or AS9100.

Suppliers shall forward a copy of their registration certificate to K&L Microwave's Purchasing Representative. Any change to the certification such as change in scope, update, withdrawal or disapproval shall be forwarded to the K&L Microwave Purchasing Representative. Any change to supplier name, ownership or facility location is subject to reevaluation by K&L Microwave and the supplier shall notify their Purchasing Representative in writing.

Nonconforming Material

Nonconforming material shall be identified, documented, segregated (when practical) and evaluated for the appropriate disposition to prevent unintended use.

Disposition Authority

The supplier's disposition authority is limited to rework, scrap and return to vendor. All other disposition, such as Repair and "Use As Is" dispositions cannot be used without written approval from the K&L Microwave's Quality Department. Below are disposition definitions:

Nonconformance – The failure of a characteristic to conform to the requirements specified in the drawings, specifications or other approved product description.

Rework – A procedure applied to a nonconformance that will completely eliminate it and result in a characteristic that conforms completely to the drawings, specifications, or contract requirements.

Scrap – Nonconforming material that is not useable for its intended purpose and which cannot be economically reworked or repaired in an acceptable manner.

Return to Vendor – Return of supplied product found to be discrepant for subsequent rework or replacement.

Repair – A procedure which reduces, but does not completely eliminate a nonconformance, and which has been reviewed and concurred in by the MRB and approved for use by the customer, when required. The purpose of repair is to reduce the effect of the nonconformance. Repair is distinguished from rework in that the characteristic after repair still does not completely conform to the applicable drawings, specifications or contract requirements.

Use As Is – A disposition of material with one or more minor nonconformities determined to be usable for its intended purpose in its existing condition.

Notification of Nonconforming Material

The supplier shall notify K&L Microwave in a timely manner of any nonconforming material that may affect already delivered product. Notification to the Purchasing Representative and Quality shall include a clear description of the discrepancy, part number, serial number (if applicable), manufacture date, quantities and purchase order. Suppliers with design authority shall provide a technical assessment and recommended disposition.



K&L Microwave Source Inspection

When source inspection is required, the supplier must notify the K&L Microwave Purchasing Representative within seven business days in advance of need to schedule the source inspection. K&L Microwave will provide an inspector to the supplier facility for the inspection.

Quality Records Retention

The supplier shall maintain Quality Records in accordance with the applicable Quality System. Quality Records shall be retained for a period of no less than ten (10) years from completion of the purchase contract or more if contractually specified. This requirement shall be flowed down to all sub tiers. Quality Records include, but are not limited to the following:

- First Article Inspection Reports
- Test results
- Evidence of inspection
- Raw Material and Process certifications
- Nonconforming Material Reports

Certificates of Compliance

Supplier shall provide a Certificate of Conformance with all shipments for each part number assuring that all work performed in connection with the purchase order is in accordance to current specifications. The C of C may be a separate document or be included in the packing documentation. The supplier's Quality Representative shall sign or stamp the C of C.

Raw Material and Machining suppliers shall provide a Raw Material Certificate of Compliance with each shipment.

Special Process Suppliers - may be required to provide evidence of approval by regulatory entities or by K&L's customer, when specified by our customer.

Counterfeit Material

K&L Microwave Inc. is committed to preventing the entry of counterfeit electronics components into our facility by mandating the exclusive use of factory-direct or their authorized distributors only as approved vendors for component procurement. Component brokers or other unauthorized distributors where the exposure to refurbished, reclaimed, reverse-engineered, remarked, rebranded, or counterfeit components is greatest are not used for procurement sources.

Corrective and Preventive Action

The supplier shall respond to all requests for corrective and preventive action on or before the requested due date. If extra time is needed a request for extension shall be made to the K&L Microwave Quality Representative in writing. It is at the discretion of the Quality Representative to grant extensions and document them accordingly.

The supplier shall maintain a corrective/preventive action system in accordance with ISO9001:2000 or AS9100 or approved quality management system for determining root cause and corrective and preventive action internally and sub tiers.

K&L Microwave reserves the right to conduct verification of corrective and preventive action at the suppliers' and supplier's sub tiers facility to assess the effectiveness of the corrective and preventive action taken.

Supplier Sub Tier Control

The supplier is responsible for ensuring that all items procured from their sub tiers conform to K&L Microwave purchase order. The supplier shall ensure that all applicable provisions are flowed to their sub tiers, including Quality System compliance to ISO9001, AS9100, or approved Quality Management System.

First Article Inspection

First Article Inspection shall be performed on any new parts or on existing parts being manufactured by an established supplier for the first time. First Article Inspection shall be performed on any parts which have a print revision change and a major change has been made (to form, fit, or function). Only the changes require first article documentation. A copy of the First Article Inspection Report shall be included with the shipment (document #1001300).

Rework/Repair/Replacement/Modified Items

Supplier's Certification of Conformance and/or packing sheet document shall reflect the following requirements for rework, replacement, repair or modification items returned to supplier or including work performed by supplier at K&L Microwave's facility.

1. The items(s) have been reworked, repaired, replaced or modified (as applicable), in accordance with respective nonconformance documents or Purchase Order.
 2. The item(s) meet the requirements of the engineering documents.
 3. The original configuration and qualification status of the item(s) remains in effect (as applicable).
 4. All applicable nonconformance document numbers or other references to ensure traceability.
- Discrepant material shall not be shipped to K&L Microwave without prior approval from K&L Microwave Quality Engineer.

You may visit our website at www.klmicrowave.com for additional information on Supply Chain Management with K&L Microwave.