



TITLE: Purchase Order Quality Requirements	
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RESPONSIBLE DEPT: Purchasing	REF. QMS 8.4

Purpose of this Document: To define quality requirements to suppliers.

Document Applies to: Purchasing, Quality, Sales, Engineering

Definitions and Acronyms:
 FAI First Article Inspection
 MSDS Material Safety Data Sheet
 MTT Manufacturing Technology Team

Purchase Order Quality Requirements

The following provisions with their terms and conditions become an integral part of the purchase order and become a supplement to the presently existing terms and conditions of the purchase order. All specifications and standards referenced in this document are the latest issue in effect unless otherwise stated.

All requirements stated in the purchasing agreement with K&L Microwave shall be flowed down to all the suppliers' sub-tier suppliers, including any key characteristics that have been identified.

Quality Clause PU07: Priority Rating

This purchase order contains rated order quantities certified for national defense use, and you are required to follow all the provisions of the Defense Priorities and Allocations System regulation (15 CFR part 700) only as it pertains to the rated quantities. Rating: xx.

Quality Clause PU42: DFARS 252.225-7009

Any Specialty Metals Included In Any Articles Delivered Under This Purchase Order Must Comply With That Clause, And You Must Flow Down DFARS 252.225-7009 To All Of Your Vendors Supplying Any Articles Delivered Under This Purchase Order That Include Specialty Metals. Each shipment shall be accompanied by a signed Supplier Certificate of Conformance which certifies compliance to this clause.

Quality Clause Q01: Process Change Notification

The seller shall not, without prior written approval from K&L Microwave, make any changes in product design or process design that could affect form, fit or function of the product being purchased.

Quality Clause Q02: Record Retention

Quality records shall be maintained at the supplier's facility for a minimum of ten years from end of contract. Offsite record retention is acceptable as long as records are readily retrievable.

Quality Clause Q03: Material Certifications

Copies of the original material certifications for all items/materials used in the article(s) being purchased are required for metal and metal alloy raw materials. Material certifications will provide objective quality evidence that all inspections and tests have been satisfactorily completed per the applicable specification(s).

Quality Clause Q04: Certificate of Traceability

Provide a certificate of calibration that indicates traceability to the National Institute of Standards and Technology (NIST). Indicate referenced standard nomenclature, serial number, NIST report number and calibration date. Also show accuracy and environmental conditions under which results were obtained.

Quality Clause Q05: Certificate of Compliance

Certification is required with each shipment of this item. The certificate must contain the signature of a duly authorized officer or Quality Control representative of the seller and will read substantially as follows: "Materials and processes used to produce the item(s), components, parts, described on this Purchase Order conform to all Purchase Order requirements, reference specifications or special requirements."

Quality Clause Q06: Physical and Chemical Analysis

A detailed Chemical Analysis Report and/or Physical Test Report shall accompany raw material delivered against this order.

Quality Clause Q07: Limited Life

Materials or articles having a definite characteristic of quality degradation with age shall be marked in a manner to indicate the date at which the criteria life was initiated and when the useful life will be expended. Product will not be accepted with less than 80% shelf life remaining.

Quality Clause Q08: First Article Inspection

Seller shall submit 1 first article part, accompanied by a first article inspection report with numerical test results, covering all appropriate physical and functional characteristics of the part and providing objective evidence that all engineering design and specification requirements are properly understood, accounted for, verified, and documented. This requirement is prior to the manufacture and delivery of the first production lot. The first article piece shall be verified by inspection and released to manufacturing (MTT/Engineering), which shall formally approve the functioning and workability of the part.

K&L Microwave drawing number _____ revision ____ is the governing specification document.

Quality Clause Q09: Plating Thickness Report

Plating thickness results shall accompany each shipment of parts. X-ray Fluorescence (XRF) data shall be obtained from each sample part for all plating layers. If the underlying metallization thickness cannot be measured using XRF then it must be measured on suitable coupons plated with the plating lot. If the applicable K&L drawing specifies measurement location, all measurements shall be taken at that location. If measurement location is not specified on K&L drawing, then measurements shall be taken on significant surfaces where minimum plating thickness would be expected. *The number of parts tested shall be five minimum.*

Quality Clause Q10: First Article Inspection IAW AS9102

A First Article Inspection (FAI) in accordance with AS9102 is required.

First Article Inspection (FAI) shall be performed by the Seller in accordance with the requirements of AS9102.

When documenting the FAI, the Seller may use the forms contained within AS9102 or their equivalent, so long as the forms contain all the information required by AS9102. Seller will include copy of the FAI report with the initial shipment of the FAI item.

Additionally, when a partial FAI is performed as required by AS9102, Seller will include copy of such FAI report with the initial shipment of the FAI item.

Material certifications shall be submitted as part of the FAI documentation package.

This requirement does not apply to procured Standard Catalog Hardware or Deliverable Software.

K&L Microwave drawing number _____ revision ____ is the governing specification document.

Quality Clause Q11: Special Process Certification

Certificates shall be submitted with each shipment to specify that all special processes or inspection methods, such as plating, anodizing, chemical conversion, heat-treating, non-destructive testing and destructive testing, demonstrate compliance with the requirements of the drawings, specifications, or purchase order and are accomplished by an approved source using approved equipment and personnel.

Quality Clause Q12: Acceptance Test Report

Material shipped against this order must be accompanied by Seller's Acceptance Test Data to provide evidence of compliance with all acceptance test requirements as outlined in the applicable specifications. Test data shall be complete and shall cover all test and/or inspections performed. Unless specifically noted in the body of the order, nothing herein is to be constructed as a requirement that qualification testing is to be performed.

Quality Clause Q13: Nonconforming Material

The seller's disposition authority on nonconforming material is limited to rework, return to vendor, and scrap. All other dispositions shall be submitted to K&L Microwave Quality Assurance for review. Deviations from the specification and/or specification waivers shall be submitted to K&L Microwave Quality Assurance.

Quality Clause Q14: Surveys, Audits, Evaluation and Inspection

The operations and work of the supplier are subject to evaluation, review, audit, survey, and inspection by K&L Microwave or its customers, to determine that the supplier meets purchase order requirements and the materials, articles, and related services are of satisfactory quality and meet the drawing requirements.

Quality Clause Q15: Supplier Verification at Subcontractor's Premises

K&L Microwave reserves the right to verify purchased product at the subcontractor's premises. Details of the verification arrangements and the method of product release shall be stated on the purchase order. Verification shall not be used by the subcontractor as evidence of effective Control of Quality.

Quality Clause Q16: Customer Verification of Subcontracted Product

K&L Microwave's customer reserves the right to verify purchased product at the subcontractor's premises to assure conformity to specified requirements. This does not preclude the customer from verification of this product at K&L Microwave, Inc. This verification shall not be used by K&L Microwave, Inc. as evidence of effective control of quality by the subcontractor, nor shall it preclude subsequent rejection by the customer.

Quality Clause Q17: Source Inspection

All work under this contract is subject to buyer acceptance at the source at either random or 100% inspection. Seller must notify K&L Microwave at least seven business days before shipment is ready for source inspection.

Quality Clause Q18: Raw Material Country of Origin Requirement

All metal raw materials or metal alloys must be melted in the United States or a Qualifying Country defined under DFARS 225.003(10). This applies to all metals - not only to those specified as a specialty metal. Country of Origin must be stated on Material Certificate of Compliance.

Quality Clause Q19: Government Source Inspection (Acceptance)

Government source inspection for the purpose of final acceptance is required at your plant prior to shipment. When parts are ready for final acceptance notify the Government Representative who normally services your plant.

Quality Clause Q20: Government Review

During Performance of this order, your Quality System and Process Controls are subject to review, verification and analysis by an authorized Government Representative. Government Inspection or release of parts prior to shipment is not required unless you are otherwise notified. You will provide a copy of this order to your Government Representative upon his or her request.

Quality Clause Q21: Quality Management System

Supplier's quality management system shall be in compliance with the current revision of AS9100, ISO 9001 or have a K&L Microwave approved Quality Management System. Suppliers certified to AS9100 or ISO 9001 must provide evidence of certification and are required to provide evidence of recertification prior to their current certification expiring. Suppliers that are not certified to AS9100 or ISO 9001 must pass a K&L Microwave Quality Management System audit or self-evaluation.

Quality Clause Q22: Electrostatic Discharge Control Program

For electrical and electronic parts, assemblies, and equipment, susceptible to damage from Electrostatic Discharge (ESD), the supplier is responsible to establish and implement an ESD Control Program. K&L Microwave suppliers shall take the necessary precautions to ensure that static susceptible devices are adequately protected from ESD damage during manufacturing, test, inspection, packaging and shipping. Packaging shall be marked with an ESD cautionary note or symbol.

Quality Clause Q23: Prohibition of Pure Tin

The uses of Pure Tin Plated finishes are strictly PROHIBITED. Any Tin Plating or Tin Solder processes shall contain NO LESS than 3 percent LEAD composition, unless specifically authorized in writing by the K&L Purchasing Agent. These restrictions apply for all types and levels of procurements, with the supplier responsible for communicating these restrictions to subcontractors or sub-tier suppliers as required.

Quality Clause Q24: Deleted
Quality Clause Q25: Deleted
Quality Clause Q26: Deleted
Quality Clause Q27: Deleted
Quality Clause Q28: Deleted

Quality Clause Q29: Final Inspection Report

A final inspection report is required with recorded variable data, covering agreed upon physical and functional characteristics of the part or assembly. The sampling plan and level used shall be approved by K&L Microwave, Inc. Quality Assurance prior to shipment.

Quality Clause Q30: Deleted
Quality Clause Q31: Deleted
Quality Clause Q32: Deleted
Quality Clause Q33: Deleted
Quality Clause Q34: Deleted

Quality Clause Q35: Traceability to Raw Materials (Inspection Records)

Items fabricated under this purchase order must be traceable to raw materials used. All traceability and inspection records must be identifiable to a) raw materials; b) parts or assemblies. Raw materials used must be identified by lot number as well as material type, specification, heat number, etc., and must be traceable to records of acceptance. Parts fabricated shall be identified on all records with the lot of raw material used. All records must be maintained on file by the supplier for ten (10) years unless otherwise stated on the purchase order, and shall be available for audit by a K&L Microwave, Inc. representative or a copy of such to be sent to K&L Microwave, Inc. upon request.

Quality Clause Q36: Deleted
Quality Clause Q37: Deleted
Quality Clause Q38: Deleted
Quality Clause Q39: Deleted
Quality Clause Q40: Deleted

Quality Clause Q41: Material Safety Data Sheet

In accordance with provisions outlined in OSHA hazard communications 29 CFR 1910, 120, K&L Microwave, Inc. requires all potentially hazardous materials to be accompanied by a MSDS.

Quality Clause Q42 Critical Dimensions

In accordance with the referenced drawing note, a cpk of equal to or greater than 1.5 is required on the designated parameters, per K & L procedure 406-200-008.

There are instances where traditional Statistical Process Control (SPC) techniques may not be appropriate (low volume production, non-normal distributions). Each of these cases must be discussed individually with the K&L Quality Engineer and have a control plan agreed upon.

K&L must be notified of non-conforming material (to the requirements of the individual specifications or this document) prior to shipment. Request to ship non-conforming material must receive written approval from a K&L Quality Engineer. These exceptions must be indicated on the purchase order.

Do not ship a lot to K&L if Cpk is less than 1.5 unless written approval is received from a K&L Quality Engineer. Data is to be maintained at your facility unless it is specifically requested to be shipped with the product.

Quality Clause Q43 Microscopic Cross-Section

One completely plated (finished) sample part from the plating lot shall be microscopic cross-sectioned to confirm the XRF measurements for all of the specified plating layer thicknesses. An image(s) of the microscopic cross-section with plating layer thickness measurements shown on the image shall be supplied with the XRF measurements. This microscopic cross-section shall be taken in a location(s) so that the plating thickness of any identified significant location(s) can be verified. This Quality Clause may be invoked for First Article inspection, new plating suppliers, new part geometries from new or existing plating suppliers, or for addressing plating issues.