

# Procurement Supplier Quality Codes

## Procurement QA Code

### KQA-0001 – General Supplier Quality Codes.

- The following eight paragraphs apply to all purchase orders (KQA-0010 through KQA-0075). All other Quality Codes, if applicable, will be indicated separately on the Request for Quotation and any resulting Purchase Order(s).

### KQA-0010 - Surveillance.

- Seller must allow the L3Harris - Northampton representative access to facility. Access to any areas which involve proprietary processes or intellectual property will require an agreed to arrangement between the Buyer and the Seller.
- The US Government has the right to inspect, at any reasonable time, any or all of the work performed on US Government contracts.

### KQA-0020 - Non Conformances.

- Material Review Board authority is not granted to the Seller. The Seller shall not deliver non-conforming material to L3Harris - Northampton, unless L3Harris - Northampton Quality Engineering has previously approved a Vendor Disposition Request (VDR).
- The VDR form is available at <https://www.l3harris.com/all-capabilities/naval-platform-imaging>
- Unauthorized Repairs/Rework: No repair or rework shall be allowed outside of the specific specification limits, (i.e., welding, reheat-treat, insert removal, re-installation, etc.) unless L3Harris - Northampton Quality Engineering has previously approved a Vendor Disposition Request (VDR).
- The approved VDR shall be included with the part/documentation package when delivered to L3Harris - Northampton.

### KQA-0030 - Corrective Action.

- When requested, Supplier is obligated to perform a Root Cause/Corrective Action investigation for non-conforming material detected at L3Harris - Northampton and to furnish a written response within 15 days.
- The CAR form is available at <https://www.l3harris.com/all-capabilities/naval-platform-imaging>

### KQA-0040 - Revision of Specifications.

- Supplier shall build to the revision listed on the Purchase Order.
- Part substitution shall not be allowed. The exact part number as identified on the Purchase Order (MIL-Spec or Supplier Part Number), or the exact part number identified in the purchase item drawing shall be provided.
- All Industry Standards/specifications shall be to the latest revision unless otherwise stated on the drawing or Purchase order.

### KQA-0050 - Quality System Requirements.

Supplier shall establish and maintain a quality management system acceptable to L3Harris and consistent with current industry standards (e.g., ISO9001, AS9100, AS9115, AS9120, AS5553, AS6496, AS6174, etc.).

Supplier shall permit L3Harris - Northampton to review procedures, practices, processes and related documents to determine such acceptability.

If the supplier uses facilities other than their own, that facility is subject to and shall adhere to the same conditions of the L3Harris - Northampton Purchase Order. All certifications submitted, as objective evidence must indicate the name and location(s) of the facility providing the service/material.

Objective evidence of all inspection/tests used to verify or demonstrate compliance with applicable specifications must be available for review and retained as specified in the [Federal Acquisition Regulation \(FAR\), section 4.703](#), unless specified differently in the L3Harris - Northampton contract.

L3Harris - Northampton reserves the right to require failure analysis on any or all failures that may occur that are associated with the item(s) delivered on this P.O.

## Procurement Supplier Quality Codes

### **KQA-0060 - Counterfeit Parts Prevention.**

All suppliers shall purchase parts, materials, chemicals, and assemblies directly from authorized sources. Only new and authentic materials are to be supplied or used in products delivered to L3Harris. No counterfeit or suspect counterfeit parts are to be delivered or contained within delivered product. Refer to L3Harris Terms and Conditions for full clause description.

### **KQA-0070 – Prohibited Materials.**

- ***Mercury Exclusion:***
  - Mercury or mercury containing compounds SHALL not be intentionally added or come in direct contact with hardware or supplies furnished under this order.
  - Supplies SHALL not contain functional mercury. Functional mercury is that mercury or mercury compound required for proper operation of the component or without the presence of which the component would fail to function properly. External contamination by metallic mercury or mercury compounds SHALL be cause for rejection. The mercury vapor concentration in the air trapped about any tested item(s) SHALL not exceed 0.01 mg per cubic meter when tested in accordance with NAVSEAINST 5100.3D.
- ***Chromium Containing Paints or Primers:*** materials containing Chromium (VI) or any other Chromate type of wash primers, primers, and paints are prohibited [hexavalent chromium or Cr (VI) means chromium with a valence of positive six, in any form and in any compound].

### **KQA-0075 Foreign Object Debris (FOD) Prevention.**

Supplier shall take steps to mitigate contamination by foreign objects/debris throughout the manufacture, assembly, test and shipping processes. In addition, packaging materials will be taken into consideration when mitigating FOD; packaging materials that generate particles, fibers, or other debris are not acceptable.

### **KQA-0080 - Government Source Inspection.**

- Government Source Inspection (GSI) is required prior to shipment of product from your plant.
- Immediately notify government representative that GSI has been invoked, upon receipt of the order.
- In the event that the government office or representative cannot be located, the L3Harris - Northampton Buyer must be notified, immediately.
- Evidence of GSI must accompany each shipment.

### **KQA-0090 - L3Harris - Northampton Source Inspection.**

- L3Harris - Northampton Source Inspection (KSI) is required prior to shipment of product from your plant.
- The KSI performed may include witnessing of Final Acceptance Testing, Final Acceptance Inspection and/or review of supporting in-process records.
- Notify the L3Harris - Northampton Buyer seven (7) days in advance of items ready for source inspection.
- Evidence of KSI, via a completed Quality Assurance Supplier Report, L3Harris - Northampton Form A-92, must accompany each shipment.

### **KQA-0100 - Qualification Testing.**

Qualification tests shall be performed on the first system produced by a supplier who has not previously completed Qualification Testing.

- The tests shall consist of a Factory Acceptance test, a Qualification test and a follow up Factory Acceptance test conducted in accordance with the applicable item specification.
- The supplier shall provide L3Harris - Northampton with a reproducible, signed copy of a Qualification report documenting all test results and certifications as required in the item specification.
- The design Qualification test shall be performed on a unit as nearly identical as possible in design to units produced through the remainder of the contract.

## Procurement Supplier Quality Codes

### **KQA-0110 - Test Data.**

Supplier to provide results of all final acceptance tests performed to determine acceptability of each part delivered. Electronic media is not acceptable, hard copies of data to be delivered with shipments.

Test data shall provide traceability and should include:

- L3Harris - Northampton part number and revision
- L3Harris - Northampton Purchase Order number
- Supplier part number and revision (if applicable)
- Date of test(s) performed
- Serial number(s)
- Identity of person that performed the test
- Acceptance criteria used
- Results of tests performed
- Supporting documentation
- Supplier's QA rep. approval with typed name, signature, title and date

### **KQA-0120 - Dimensional Inspection Data.**

Supplier to provide results of inspection performed to determine acceptability of each part delivered. Electronic media is not acceptable, hard copies of data to be delivered with shipments.

NOTE: A Certificate of Conformance does not satisfy the requirements of this code.

Inspection results shall provide traceability and should include:

- L3Harris - Northampton part number and revision
- L3Harris - Northampton Purchase Order number
- Supplier part number and revision (if applicable)
- Date of test(s) performed
- Serial number(s)
- Identity of person that performed the inspection(s)
- AQL used for each requirement
- Acceptance criteria used
- Results of inspection(s) performed
- Additional test data/reports required by Purchase Order

### **KQA-0130 - Optical Inspection Data.**

Supplier to provide results of inspections performed to determine acceptability of each part delivered. Electronic media is not acceptable, hard copies of data to be delivered with shipments. 100% inspection is required for all parts delivered (AQL sampling is not permitted).

Documentation delivered should include the following items as applicable:

- L3Harris - Northampton part number and revision
- L3Harris - Northampton Purchase Order number
- Raw material certification(s)
- Geometrical inspection data (including any lower level details)
- Transmission and reflectance chart(s)
- Surface power and irregularity measurements
- Surface map of defects (scratches, digs, stains, etc.) deemed to be within drawing tolerances
- Results of environmental and durability testing of coating(s)

## Procurement Supplier Quality Codes

### **KQA-0140 - First Article Inspection/Test.**

First Article Acceptance is required for the part number supplied.

The supplier shall submit a reproducible, signed copy of a First Article Report stating recorded inspection and test variable data for all characteristics, requirements and parameters. The Supplier shall record all measurable characteristics (i.e. drawing dimension, tolerance, measured dimension, electrical tests, etc.) including a verification of drawing notes. This report shall document acceptance of each measurable characteristic. The supplier shall identify all measuring equipment used and the calibration expiration date(s) of the equipment, for all recorded data. The supplier shall also provide applicable raw material and special process certifications.

Once a First Article Report has been supplied for the part number, the requirement for First Article Inspection has been satisfied for future purchases of this part number, unless:

- The part is purchased from a new supplier.
- There has been a break in production of greater than three (3) years.
- The physical location of the production processes has changed.

### **KQA-0150 - Acceptance Test Procedures.**

Supplier to submit a copy of their acceptance test procedure thirty (30) days, prior to use, for L3Harris - Northampton QA approval.

- Procedure should include data sheets for recording all results.
- Procedure shall identify all test equipment to be used for acceptance.
- Procedure to include calibration data sheet listing equipment used, calibration date and expiration date.

Once Acceptance Test Procedure has been approved for the part number, the requirement for ATP has been satisfied for future purchases of this part number, unless a revision change is made to the documentation.

Supplier is obligated to notify L3Harris - Northampton of any changes made to the approved ATP.

### **KQA-0160 - Material Process Control.**

- The supplier shall have on file at their facility or at their supplier's facility inspection reports per the applicable specification for the materials shipped under this order.
- This is to certify that all items noted are in conformance with the contract, drawings, specification and other applicable documentation that all process certifications, chemical and physical test reports, are on file at your facility or your supplier's facility and are available for review by L3Harris - Northampton.

### **KQA-0170 - Special Process Control.**

Special Processes are those that produce part features that require destructive testing to verify conformity.

- Suppliers engaged in special processes (example: soldering, brazing, welding, etching, plating, casting, heat treating) shall have in place procedures to support special processes. Supplier must have approved methods on file supporting acceptance of special processes (example: magnetic particle inspection, dye penetrant inspection, radiographic inspection).
- Test results and process certifications are on file at your facility or your supplier's facility and are available for review by L3Harris - Northampton.
- Supplier shall maintain a control system for all special process sub-tier suppliers ensuring all processes are documented and controlled.
- Supplier shall ensure that all personnel performing such processes as welding, soldering and Non-destructive Evaluation or Testing are certified in accordance with the specifications contained on the drawings and purchase orders. Supplier shall also ensure the associated equipment used is certified as appropriate.
- Changes to Special Processes must be immediately communicated to L3Harris - Northampton. Changes may require additional review and auditing by L3Harris - Northampton.

## Procurement Supplier Quality Codes

### **KQA-0170A – Approval of Special Process Procedures.**

Supplier to submit a copy of their special process procedure(s) thirty (30) days, prior to use, for L3Harris - Northampton QA approval. The requirements contained herein apply to procedures used in fulfilling the requirements of this purchase order. The requirements are applicable to both suppliers and their subcontractor(s).

- All production and repair special processes (reference KQA-0170) when required by this purchase order or sub-tier documents (i.e., fabrication/material specifications, drawings, etc.), must be performed in accordance with written procedures.
- Written procedures of special processes shall be approved by the buyer prior to performance of any work and should be submitted for approval within thirty (30) days of supplier's receipt of a purchase order.
- Evidence of personnel qualifications shall be available upon request when such qualification is a requirement.
- Procedures shall be provided to the buyer.

Once the Special Process procedure has been approved for the part number, the requirement for Special Process Procedure has been satisfied for future purchases of this part number, unless a revision change is made to the documentation.

Supplier is obligated to notify L3Harris - Northampton of any changes made to the approved Special Process Procedure.

### **KQA-0175 Asbestos Warning.**

Asbestos is a human carcinogen which presents a hazard to personnel handling or otherwise working with it. Any asbestos or asbestos containing material supplied on this order must be annotated on the packing list and must be identified accordingly with appropriate OSHA approved labels or tags to inform all personnel who handle or work with the material of the potential asbestos hazard.

### **KQA-0180 - Serial Numbers.**

- Supplier shall assign individual serial numbers to each item shipped under this order.
- Duplication of serial numbers shall not be allowed.
- Serial numbers will be applied in accordance with drawing and/or specification.
- For Optical items, unless specified on the drawing, Serial Numbers shall be marked on the individual packaging/container.

### **KQA-0190 - Lot Control.**

- Supplier shall assign a lot control number to each manufactured lot under this order.
- Lot consists of a quantity of items manufactured during an uninterrupted period.

### **KQA-0195 - Technical Data Sheets.**

- Supplier will provide the most current technical data sheet for the product listed on the Purchase Order.
- The Technical Data Sheet will include:
  - ✓ General Information including a description of the product and its use and, where applicable, the Military or Commercial specification(s) the product is qualified under.
  - ✓ Application instructions, including;
    - Surface / substrate cleaning and preparation
    - Recommended application equipment / techniques and environmental condition requirements
    - Cure / drying time / condition requirements
    - Clean - up and other special requirements

## Procurement Supplier Quality Codes

### **KQA-0200 - Witness Sample/Test Bars/Specimens.**

The supplier shall submit with each shipment, witness samples, test bars, and test specimens specific to the process being performed:

- Optical coatings. Supplier shall submit one (1) sample to be used for environmental and durability tests. Inspection and tests results must be traceable to the samples tested.
- Test Bars. Supplier shall submit test bars representative of original material. Testing and quantity of test bars required shall be in accordance with the applicable specification or as detailed in the Purchase Order. Appropriate inspection/test results are required and must be traceable to the sample tested.
- Specimens. Specimens representing plating, painting, heat treating, or as specified in the applicable specification or Purchase Order, shall be supplied with each shipment. Appropriate inspection/test results are required and must be traceable to the sample tested.

### **KQA-0210 - Limited Life Items.**

- Supplier to identify manufacture/cure date and expiration date on each item in shipment.
- Shelf life must exceed 75% of total shelf life at time of receipt at L3Harris - Northampton.

### **KQA-0220 - Non Destructive Testing Records.**

- The referenced specifications shall control the processes, procedures and operator certifications.
- Shall be subject to review and approval by an L3Harris - Northampton QA representative.
- Detailed inspection/test record showing actuals shall accompany each item of order.
- Supplier's QA representative shall review and approve all inspection/test records.
- Supplier's QA representative must sign (with their title) and date all Inspection /test records.

### **KQA-0220A – Approval of Nondestructive Testing (NDT) Procedures.**

Supplier to submit a copy of their nondestructive testing procedure(s) thirty (30) days, prior to use, for L3Harris - Northampton QA approval. The requirements contained herein apply to procedures used in fulfilling the requirements of this purchase order. The requirements are applicable to both suppliers and their subcontractor(s).

- All nondestructive testing (reference KQA-0220) when required by this purchase order or sub-tier documents (i.e., fabrication/material specifications, drawings, etc.), must be performed in accordance with written procedures.
- Written procedures of nondestructive testing shall be approved by the buyer prior to performance of any work and should be submitted for approval within thirty (30) days of supplier's receipt of a purchase order.
- Evidence of personnel qualifications shall be available upon request when such qualification is a requirement.
- Procedures shall be provided to the buyer.

Once the Nondestructive testing Procedure has been approved for the part number, the requirement for nondestructive testing procedure has been satisfied for future purchases of this part number, unless a revision change is made to the documentation.

Supplier is obligated to notify L3Harris - Northampton of any changes made to the approved Nondestructive testing Procedure.

### **KQA-0230 - Records of Material Properties.**

- Supplier shall provide material property certifications and/or test reports. This includes finishes (e.g. paint, anodize, coatings) listed on the L3Harris - Northampton documents.
- Reports must comply with and identify the material specification listed on the L3Harris - Northampton documents and/or Purchase Order and must include the associated material specification revision.
- Reports must be reviewed and approved by Supplier's Quality representative.
- All reports must have Quality Rep's signature, title and date of the approval.



## Procurement Supplier Quality Codes

### **KQA-0240 - Records of Heat Treatment.**

- Supplier to provide oven heat treat charts and data reports.
- Test reports must have a Quality representative's signature, title and date.
- Heat treat must be performed in accordance with procurement specification B/P and/or documents referenced on the Purchase Order.

### **KQA-0250 - Electrostatic Discharge (ESD) Protection.**

- Supplier shall conduct and maintain an effective ESD protection/control program.
- ESD program at a minimum shall be in accordance with the latest revisions of MIL-STD-1686, MIL-HDBK-263 or ANSI/ESD S20.20.
- Supplier shall mark ESD packaging with ESD Caution label IAW MIL-STD-129.
- Packaging shall be made of ESDS protective material.

### **KQA-0260 - Certificate Of Conformance.**

A certificate of conformance shall be supplied with each shipment of material supplied against this Purchase Order. The certificate shall certify the seller is the Original Equipment Manufacturer (OEM) or Authorized Distributor. The certificate shall certify that the material meets all applicable L3Harris - Northampton specification requirements or military/industrial specification requirements. Certification shall provide traceability and shall contain the following:

- L3Harris - Northampton part number and revision
- L3Harris - Northampton Purchase Order number, revision (if applicable), and line item number
- Supplier part number and revision (if applicable)
- Serial number(s) (if applicable)
- Supplier's QA rep. approval with typed name, signature, title and date
- Supplier's name and address
- Customer's name and address
- All pages within C of C documentation package must be numbered as Page of Pages
- Quantity
- Conformity details (if applicable)
- Remarks/Notes (if applicable)

Supplier shall perform inspection, as necessary, to determine the acceptability of all articles under this Order. The applicable material test results, process certifications and inspection records shall be available upon L3Harris - Northampton request.

### **KQA-0265 – Certification of Shelf Life IAW MIL-HDBK-695.**

One copy of certification by seller that all O-rings, gaskets, packings or other elastomeric products in components or sub-assemblies being furnished under this order are installed prior to expiration of their shelf life. The shelf life shall be that specified in the latest revision of MIL-HDBK-695 (Military Standardization Handbook, rubber products: recommended shelf life). This clause shall not apply to elastomers not listed in MIL-HDBK-695.

Verification of certification of conformance documents shall be signed and dated by the seller's authorized representative. The certification must be forwarded with a complete or partial shipment under this order. Material will be rejected if the certification is not received. Certification shall be attached to the packing list. Where more than one container or package is included in the shipment, the certification shall be attached securely to or placed in one container or package and clearly identified on the outside.

## Procurement Supplier Quality Codes

### **KQA-0270 - Cable and Harness Assemblies.**

Unless otherwise specified on the drawing:

- Cables and Harness Assembly workmanship and acceptance criteria shall be in compliance with IPC-620 Class 3.

### **KQA-0280 - Casting Inspection.**

- L3Harris - Northampton requires approval on NEW patterns, pattern CHANGES and MAJOR pattern REFURBISHMENTS.
- Supplier shall lay out one sample piece (Blued and Scribed) and record actuals on all drawing characteristics.
- Multi cavity molds shall be identified with each cavity laid out.
- L3Harris - Northampton QA Review & Approval of casting inspection required prior to production.

### **KQA-0290 - Circuit Card Assemblies.**

Unless otherwise specified on the drawing:

- Soldering shall be in accordance with the requirements of J-STD-001 Class 3.
- IPC-A-610 Class 3 shall be the inspection criteria.
- Evidence of manufacturing and results of final inspection shall be delivered with each assembly/lot.
  - Flying probe Test
  - Automatic Optical Inspection (AOI)
  - X-Ray (BGAs, QFNs, LGAs)
- Handling and Packaging of Moisture Sensitive Devices shall be in accordance with the requirements of J-STD-033.

Printing Wiring Boards shall be listed on the Qualified Manufacturers List QML-31032 or Qualified Products List QPL-55110 as specified (applicable).

Unless otherwise specified on the drawing:

- Printed Wiring Boards shall be fabricated and tested IAW MIL-PRF-31032.
- Solderability testing shall be in accordance with J-STD-003, Class 3.
- Lot acceptance data sheets listing the actual parameters tested in each case shall accompany each shipment.

### **KQA-0300 - Solderability.**

- Unless governed by a procuring document (JANTX part, DESC, etc.), Solderability of leads and terminations (including wire) shall comply with requirements of J-STD-002, Category 3.
- Leads, pins and terminals of components or parts susceptible to oxidation shall be protected by adequate packaging to minimize oxidation during storage and shipment.

### **KQA-0310 - Certificate of Conformance from QPL Approved Manufacturer.**

Material used for this order must be purchased from a supplier on the Government's Published QPL.

- A certificate of conformance from the manufacturer shall be supplied with each shipment of material supplied against this Purchase Order.
- The certificate shall be signed and dated by the responsible manufacturer representative and shall certify that the material meets all applicable specification requirements or military/industrial specification requirements.
- The certificate shall certify the seller is the Original Equipment Manufacturer (OEM) or Authorized Distributor.



## Procurement Supplier Quality Codes

### **KQA-0320 – MIL-PRF-31032/MIL-PRF-55110 Printed Wiring Boards.**

Supplier for Printing Wiring Boards shall be listed on the Qualified Manufacturers List QML-31032 or Qualified Products List QPL-55110 as specified (applicable).

Unless otherwise specified on the drawing:

- Printed Wiring Boards shall be fabricated and tested IAW MIL-PRF-31032.
- Solderability testing shall be in accordance with J-STD-003, Class 3.
- Lot acceptance data sheets listing the actual parameters tested in each case shall accompany each shipment.

### **KQA-0330 – SUBSAFE.**

- Material on this Purchase Order is defined as SUBSAFE. It is utilized in a critical safety marine application where product failure in service could result in loss of life.
- SUBSAFE material stored at the supplier's facility must be segregated to preclude intermingling with non-SUBSAFE material.
- SUBSAFE material must be positively identified to a Heat/Lot through all phases of manufacture. In the event material traceability is questioned or compromised, the supplier shall immediately notify L3Harris - Northampton for direction.
- 100% inspection is required. No sampling is permitted. All dimension actuals must be recorded with corresponding gage number utilized. Calibration due date of the gage must also be recorded.
- All internal threads shall be formed by cutting. Cold forming of internal threads is not acceptable.

If L3Harris - Northampton has supplied SUBSAFE Material to manufacture items on this Purchase Order, the Supplier must return all residual material, properly identified as initially received, to L3Harris - Northampton upon completion of the purchase order.

### **KQA-0340 - Calibration Test Report.**

- Supplier shall provide a calibration test report for each item.
- The report shall contain at a minimum, the Suppliers name, date, NIST test number traceable to standard, environmental conditions during calibration, part number and revision, L3Harris - Northampton P.O. number, serial number and actual data sheets.

### **KQA-0350 - Controlled Manufacturing Process.**

- Supplier to submit a manufacturing plan that identifies sequential procurement, fabrication, processing, sub-contracting, inspection and test steps.
- The manufacturing plan must be provided to L3Harris - Northampton, for review and approval, at least thirty (30) days prior to start of initial production.
- Controlling documents can be in the form of supplier drawings, assembly instructions, routers, acceptance test procedures, inspection sheets, etc. The documents shall be revision controlled.
- Upon approval of supplier's manufacturing plan, the supplier shall control all manufacturing, processing, testing and inspections as stated in the documented plan.
- Changes to the approved manufacturing plan, must be immediately communicated to L3Harris - Northampton.
- Submitted changes to the manufacturing plan may require additional auditing, qualification and/or submittal of a delta F.A.I. to address the critical characteristics affected.
- Supplier process is subject to audit by L3Harris - Northampton Quality Assurance.

### **KQA-0360 - L3Harris - Northampton Supplier Inspection Plan.**

Item requires Supplier to use L3Harris - Northampton provided Inspection Plan.

- Supplier shall use the L3Harris - Northampton Inspection Plan(s) to record actual inspection results for items listed on Purchase Orders.
- Supplier Inspection Plan(s) (SIP) shall accompany each shipment of material.
- The completed SIP shall be legible and reproducible.
- The completed SIP shall be dated and signed by the supplier's Quality Representative.

## Procurement Supplier Quality Codes

### **KQA-0370 - Traceability for Subsafe Items.**

- Supplier shall ensure that all parts are received with Yellow Subsafe tags.
- Traceability of unique identification numbers (heat no. or boule no.) must be maintained throughout the manufacturing process.
- Supplier shall ensure that these tags remain with the parts throughout the manufacturing process.

### **KQA-0380 - Certification of Compliance - Bearings.**

- All bearings shall be in compliance with DFAR 252.225-7016.
- Certificate of Compliance shall indicate manufacturing origin.

### **KQA-0390 - Material Traceability Certification.**

- All material must be heat or boule traceable.
- All material must be marked with the heat or boule number referenced on the cert.

### **KQA-0400 - Software Release Notes.**

The supplier shall provide a document which contains the following:

- A description of the release or change to the software (release notes).
- Validation checksum or equivalent.
- Date of release.
- Item identification number (part number).

### **KQA-0410 - Unique Item Identification (UII).**

- Supplier shall assign Unique Item Identifier (UII) to each item shipped under this order.
- The Unique Item Identifier (UII) shall be permanent as defined by MIL-STD-130.
- If not specified on the drawing, apply UII 2D Matrix IAW MIL-STD-130 by current item identification marking requirements.
- If item identification is not otherwise specified, mark on the exterior of the part in a location that will not affect the performance.
- Supplier shall include the verification report for the Unique Item Identification for each item shipped under this order. The IUD shall have a passing grade when verified per ISO/IEC 15415. Additionally, Supplier shall maintain a copy of the verification report as a quality record.

### **KQA-0420 - Failure Analysis/Corrective Action Report (FRACA).**

Prior to proceeding with repair, the supplier shall provide L3Harris - Northampton with a written failure analysis and corrective action report which details:

- L3Harris - Northampton part number, name and revision
- L3Harris - Northampton Purchase Order number
- Supplier part number (if applicable)
- Serial number(s) (if applicable)
- Root Cause(s)
- List of parts required to repair item(s);
- Quoted Cost to complete the repair;
- Specific and contributory causes of failure;
- Corrective action taken to preclude recurrence and effectivity by date or serial number of corrective action;
- Signature and title of Supplier's Quality Representative approving the failure analysis report.

All replaced material shall be identified as L3Harris - Northampton property and controlled until notice of disposition.

## Procurement Supplier Quality Codes

### KQA-0430 - Independent Distributor Purchase Order Clause - Active Components (Exhibit A).

Independent Distributor's procedures shall meet the requirements of IDEA-STD-1010 and AS6081.

Quality Management System shall be certified to AS9120 and/or AS9100.

Inspections and tests shall be conducted in accordance with IDEA-STD-1010 and AS6081. IDEA-STD-1010 and the inspection and tests defined below shall take precedence over AS6081 for conflicts in inspection methodology and defect criteria. Manufacturer specifications and parameters shall be used for part requirements as applicable. Recorded evidence of all testing performed shall be included with each shipment. When available, OEM/OCM and/or AD Certificates of Conformance (C of Cs) shall also accompany each shipment.

The following inspections and tests are required for active components as applicable based on device package type.

- 100% Visual Microscopy Inspection of all parts in the order is required to a magnification level capable of identifying nonconformities related to part size. This includes visual inspection requirements for packaging. Sampling for mechanical dimensions shall be as defined by Seller's internal procedures.
- X-Ray inspection (100% of the lot)
- XRF/RoHS (3 parts per lot date code)
- Solderability testing per IPC/EIA J-STD-002 (3 parts per lot date code)
- Scanning Electron Microscopy (1 part per lot date code)
- Solvent Testing for Remarking (3 parts per lot date code)
- Solvent Testing for Resurfacing w/acetone, (same 3 parts per lot date code)
- Scrape testing - only applicable to parts that cannot be heated solvent tested (same 3 parts per lot date code)
- Solvent Testing for Resurfacing (If pass acetone test) - Heated Solvent testing w/Dynasolve 750, (same 3 parts per lot date code)
- De-lid and Die Verification (3 parts per lot date code)
- Flash and programmable memory devices shall be verified (100%) for clean memory, not pre-programmed

If suspect/counterfeit parts are furnished under this subcontract and are found in any of the goods delivered hereunder, such items will be impounded by Buyer. The Seller shall promptly replace such suspect/counterfeit parts with parts acceptable to the Buyer and the Seller shall be liable for all costs relating to the removal and replacement of said parts as specified in the subcontract requirements or Distributor's insurance policies. Buyer reserves all contractual rights and remedies to address grievances and detrimental impacts caused by suspect/counterfeit parts.

Seller shall report all occurrences of Counterfeit parts to GIDEP and ERAI.

## Procurement Supplier Quality Codes

### KQA-0440 - Independent Distributor Purchase Order Clause - Passive Components and Connectors (Exhibit B).

Independent Distributor procedures shall meet the requirements of IDEA-STD-1010 and AS6081.

Quality Management System shall be certified to AS9120 and/or AS9100.

Inspections and tests shall be conducted in accordance with IDEA-STD-1010 and AS6081. IDEA-STD-1010 and the inspection and tests defined below shall take precedence over AS6081 for conflicts in inspection methodology and defect criteria. Manufacturer specifications and parameters shall be used for part requirements as applicable. Recorded evidence of all testing performed shall be included with each shipment. When available, OEM/OCM and/or AD Certificates of Conformance (C of Cs) shall also accompany each shipment.

The following inspections and tests are required for passive components and connectors as applicable based on device package type:

- 100% Visual Microscopy Inspection of all parts in the order is required to a magnification level capable of identifying nonconformities related to part size. This includes visual inspection requirements for packaging. Sampling for mechanical dimensions shall be as defined by Seller's internal procedures.
- X-Ray inspection for non-glass diodes and tantalum capacitors (100% of the lot)
- XRF/RoHS (3 parts per lot date code)
- Solderability testing per IPC/EIA J-STD-002 (3 parts per lot date code)
- Scanning Electron Microscopy (1 part per lot date code)
- Solvent Testing for Remarking (3 parts per lot date code)
- Solvent Testing for Resurfacing w/acetone, (same 3 parts per lot date code)
- Scrape testing - only applicable to parts that cannot be heated solvent tested (same 3 parts per lot date code)
- Solvent Testing for Resurfacing (If pass acetone test) - Heated Solvent testing w/ Dynasolve 750, (same 3 parts per lot date code)

All electrical test reports shall contain a read/record data table showing the measured values of each device tested. Electrical test shall be performed after parts have passed the inspection and tests listed above.

Sample value measurements required per ANSI/ASQ Z1.4 at ambient temperature, 1% AQL level II.

Component value tests are defined in the following chart:

COMPONENT	TEST
Resistors	DC resistance
Capacitors	Capacitance
Inductors	Inductance
Transformers (open framed/wiring)	Winding-to-winding isolation, winding continuity, winding inductance, turns or voltage ratio
Connectors	Continuity on a 1% AQL sample of pins/connections
Relays	Contact and coil resistance

If suspect/counterfeit parts are furnished under this subcontract and are found in any of the goods delivered hereunder, such items will be impounded by Buyer. The Seller shall promptly replace such suspect/counterfeit parts with parts acceptable to the Buyer and the Seller shall be liable for all costs relating to the removal and replacement of said parts as specified in the subcontract requirements or Distributor's insurance policies. Buyer reserves all contractual rights and remedies to address grievances and detrimental impacts caused by suspect/counterfeit parts.

Seller shall report all occurrences of Counterfeit parts to GIDEP and ERAI.

## Procurement Supplier Quality Codes

### KQA-0450 - Independent Distributor Purchase Order Clause - COTS Assemblies (Including Electro-mechanical items, Hard Drives, Network Equipment, and Peripheral Cards) (Exhibit C).

Independent Distributor procedures shall meet the requirements of IDEA-STD-1010 and AS6081.

Quality Management System shall be certified to AS9120 and/or AS9100.

Manufacturer specifications and parameters shall be used for part requirements as applicable. Recorded evidence of all testing performed shall be included with each shipment. When available, OEM/OCM and/or AD Certificates of Conformance (C of Cs) shall also accompany each shipment.

The following inspections and tests are required for general COTS assemblies, hard drives, network equipment and peripheral cards:

#### General COTS Assemblies.

- Packaging inspection (part number, evidence of tampering, etc.)
- Mechanical dimensions (3 parts minimum per lot)
- Visual Inspection (100%) for indications of prior usage/refurbishment/counterfeiting including damage to:
  - Components visible on circuit cards when applicable
  - Interface connector(s)/contact(s)
  - Crimped, cut, spliced, pinched, and/or broken wire(s) where applicable
- Manufacturer label bar code information verification

#### Hard Drives.

- Packaging inspection (part number, evidence of tampering, etc.)
- Mechanical dimensions (3 parts minimum per lot)
- Visual Inspection (100%) for indications of prior usage/refurbishment/counterfeiting including damage to:
  - Components visible on circuit cards when applicable
  - Interface connector(s)/contact(s)
  - Casing
- Manufacturer label bar code information verification
- 100% Power on test
- 100% Read/write benchmark
- 100% Self-Monitoring, Analysis, and Reporting Technology (S.M.A.R.T.) data pull (when applicable)
  - Verification of serial number
  - Total power on hours
- Serial numbers recorded

#### Network Equipment.

- Packaging inspection (part number, evidence of tampering, etc.)
- Mechanical dimensions (3 parts minimum per lot)
- Visual Inspection (100%) for indications of prior usage/refurbishment/counterfeiting including damage to:
  - Components visible on circuit cards when applicable
  - Interface connector(s)/contact(s)
  - Casing
- Manufacturer label bar code information verification
- 100% Power on test
- 100% Test RJ-45 ports (when applicable)
- Serial numbers recorded

## Procurement Supplier Quality Codes

### Peripheral Cards.

- Packaging inspection (part number, evidence of tampering, etc.)
- Mechanical dimensions (3 parts minimum per lot)
- Visual Inspection (100%) for indications of prior usage/refurbishment/counterfeiting including damage to:
  - Components visible on circuit cards when applicable
  - Interface connector(s)/contact(s)
- Manufacturer label bar code information verification

If suspect/counterfeit parts are furnished under this subcontract and are found in any of the goods delivered hereunder, such items will be impounded by Buyer. The Seller shall promptly replace such suspect/counterfeit parts with parts acceptable to the Buyer and the Seller shall be liable for all costs relating to the removal and replacement of said parts as specified in the subcontract requirements or Distributor's insurance policies. Buyer reserves all contractual rights and remedies to address grievances and detrimental impacts caused by suspect/counterfeit parts.

Seller shall report all occurrences of Counterfeit parts to GIDEP and ERAI.

### KOA-0460 - Test Lab Purchase Order Clause – Mechanical Parts and Materials (Exhibit D).

Manufacturer specifications and parameters shall be used as applicable for part and material requirements. Recorded evidence of all testing performed shall be included with each shipment.

The following inspections and tests are required for mechanical parts and materials by an accredited third party testing facility:

- Packaging inspection (part number, evidence of tampering, etc.)
- Part/Packaging marking inspection for evidence of remarking or alterations (part number, mfg. name, trademark or logo, lot or date code, grade, etc.) - sample of 3 pieces per lot for part markings.
- Mechanical parts external visual inspection (100%) for damage, wear, contamination, or use.
- Mechanical parts dimensional inspection – selected critical dimensions shall be verified per manufacturer specifications on a sample of 3 pieces per lot.
- Plating Verification (e.g. XRF) - sample of 3 pieces per lot.
- Base material verification (certification of composition/chemical analysis, heat treatment, hardness testing, tensile strength, torque testing, magnetic particle, etc. as applicable per material specification) - sample of 1 piece per lot.
- Mechanical Item Test Verification (if required by the item specification) - sample of 1 piece per lot.

Seller shall report all occurrences of Counterfeit parts to GIDEP and ERAI.