





## STANDARD QUALITY REQUIREMENTS

### **QR4**    **PHYSICAL INSPECTION REPORT**

**SEND DATA ITEM**

Each shipment shall be accompanied by one (1) legible and reproducible copy of a Physical Inspection Report. The report shall include the drawing parameters, tolerances, notes, lot size, and sample size. Record the actual measurement readings or range for the lot sample, and indicate if the drawing parameters, tolerances and notes have been met.

QR4 Notes:

1. Sampling shall be in accordance with ANSI/ASQC Z1.4, Level II / Normal, Single Lot Sampling Plan.
2. ACCEPT the lot based on zero (0) defectives in the sample, or REJECT on one (1) or more defectives in the sample for any given attribute per AS9100 requirements (C=0). Screen the lot 100% for the defect type(s) found.
3. See Appendix B for suggested QR4 report format; contact the Buyer for an electronic MS Word template of the QR4 format.

### **QR5**



L3HARRIS ANTENNA SYSTEMS  
150 CONSTITUTION DRIVE, MENLO PARK CA 94025

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cont'd**

- c. The FAIR for an assembly may consist of incremental FAI reports for component parts, and a top level FAIR for the assembly.
- d. When an alternate tooling approach, manufacturing method, or facility will also be used, the Seller must submit first article reports covering each approach, method, or facility.
- e. FAI reports for molded or formed parts shall be identified to show the tool, tool serial number and, when applicable, the individual cavity number used.

**QR13**

**PHYSICAL PROPERTIES AND CHEMICAL ANALYSIS REPORT**

**SEND DATA ITEM**

The Seller shall provide with each shipment, evidence that the materials being purchased or used in fabrication conform to the material requirements described in the purchase order and applicable product specification documents. Submit with each shipment one (1) reproducible record of actual physical properties and chemical analysis, and a Certification of Conformance to the applicable product specifications. The report shall contain:

- A list of applicable specifications including revision letters;
- Traceability identification by lot, batch, heat, or melt number;
- Values for actual physical properties measured and chemical analysis;
- Statement of conformance;
- Signature and title of authorized manufacturer representative certifying the report.

QR13 Notes:

1. Chemical analysis portion is required for metal alloy content, and typically is NOT required for non-metal commercial formulations or proprietary blends.
2. Report should include the allowed minimum and/or maximum values found in applicable product specification documents, for physical properties and chemical analysis.

**QR14**

**PHYSICAL PROPERTIES REPORT - SUPERSEDED; SEE QR13 INSTEAD**

**QR15**

**FUNCTIONAL TEST REPORTS**

**SEND DATA ITEM**

Each shipment shall be accompanied by one (1) legible and reproducible copy of reports of actual functional test results identifiable with test parameters and products submitted. These reports must contain the signature of a responsible representative of the agency performing the test and must assure conformance to specified requirements. The specification must be listed including the specification revision letter(s) or revision number(s).

**QR16**

**PRESSURE OR LEAK TEST REPORTS**

**SEND DATA ITEM**

Each shipment shall be accompanied by one (1) legible and reproducible copy of a report covering all products in the shipment with actual pressure or leak test results, including test parameters, identifiable to the individual products submitted. The report must contain the signature of a responsible representative of the agency performing the test and must assure conformance to specified requirements. The specification must be listed including the specification revision letter(s) or revision number(s).

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## STANDARD QUALITY REQUIREMENTS

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1. All Special Processes imposed by engineering drawing, specification, or Purchase Order shall be performed by either:
  - a. Sources approved by L3Harris. L3Harris Supplier Quality maintains both an Approved Supplier List, and a list of Approved Special Processors; contact the Buyer for details, **OR**
  - b. Sources fully accredited for the particular process by Nadcap. Nadcap is administered by PRI/SAE. A searchable Qualified Manufacturers List (QML) of Nadcap accredited Special Process providers can be found at the eAuditNet website <https://www.eauditnet.com/eauditnet/ean/user/login.htm>. However, NUCAP compliance certification is NOT accepted by L3Harris Antenna Systems.
2. Where special processes are performed by a sub-tier Special Processor, it is the responsibility of the Seller providing items to L3Harris to ensure the sub-tier special processor is approved by L3Harris for the processes, **OR** is fully Nadcap accredited for the specific processes as listed at eAuditNet.
  - a. The Seller shall accurately flow down to sub-tier special processors all portions of drawings, specifications, or other purchase order requirements applicable to the special process, NDT, or service to be provided.
  - b. The Seller shall require from the sub-tier special processor a reproducible signed copy of a certification for the special process, NDT, or service being provided, including NDT results (see below for certificate requirements).
3. Each shipment shall be accompanied by a legible and reproducible signed copy of certification(s) for Special Processes performed on the product, stating that the processes were performed to requirements of the specification, including the full process description from the Engineering drawing, specification, or Purchase Order.
  - a. An NDT certificate will require the signature of a responsible agency representative, and the name and certification level of the reader/operator, certified for the specific NDT process in accordance with the provisions of NAS 410, Certification and Qualification of Nondestructive Test Personnel.
  - b. A welding certificate will require the signature or stamp of a Certified Welder or Weld Inspector.
4. The Seller's Certificate of Conformance (see QR21) shall include:
  - a. The applicable Special Process specification(s), including the full process description from the Engineering drawing, specification or Purchase Order.
  - b. The name of the agency that performed the process, if other than Seller.
  - c. The date and signature of a responsible representative of the Seller.
  - d. When parts are serialized, serial numbers must appear on the certification.
  - e. The Sellers Certificate of Conformance (see QR21) must be accompanied by a reproducible copy of each certification for special processes and/or NDT testing performed by a sub-tier provider/agency.
5. Chem Film (Conversion Coat) shall be gold in color, unless otherwise specifically requested by the procuring activity.

### QR19 FUNCTIONAL TEST CERTIFICATION

### SEND DATA ITEM

Each shipment shall be accompanied by one (1) legible and reproducible copy of a certification stating that Functional Test Reports, which assure conformance to specified requirements, are on file and available for examination. The certification must be identifiable with articles submitted and must contain the signature of a responsible representative of the Seller. The specification must be listed including the specification revision letter(s) or revision number(s).

### QR20 CERTIFICATION OF MATERIAL COMPLIANCE

### SEND DATA ITEM

Each shipment shall be accompanied by one (1) legible and reproducible copy of a certification stating that the items were produced:

From materials for which the Seller has available for examination, specified data or other objective evidence of conformance to the applicable specifications, **AND/OR**

From materials furnished by L3Harris for the production of each item.

#### QR20 Notes:

1. These materials include components, parts, and hardware installed such as fasteners or threaded inserts, and chemicals that become part of the deliverable item, such as adhesives and sealants.
2. Include with the certification statement, reproducible copies of sub-tier supplier certifications for these materials.
3. For L3Harris supplied material, list the traceability identifier and shipper/purchase order number when the material was delivered to the Seller, **OR** include a reproducible copy of the L3Harris shipper.
4. The certificate must contain the signature of a responsible representative of the Seller.

# STANDARD QUALITY REQUIREMENTS



## STANDARD QUALITY REQUIREMENTS

**QR28 QUALITY REQUIREMENTS FOR SOLDERED ELECTRICAL CONNECTIONS**

The Seller shall provide and maintain a system that meets the requirements of IPC J-STD-001, Class 3, "Requirements for Soldered Electrical or Electronic Assemblies." System approval must be established prior to fabrication under this contract. The soldering process, system, and facility shall be made available for audit by L3Harris representatives upon request.

**QR29 RENTAL EQUIPMENT CALIBRATION CERTIFICATION**

**SEND DATA ITEM**

The rental equipment shall be accompanied by one (1) legible and reproducible copy of a Certificate of Calibration stating that the item (s) are calibrated and will be maintained in calibration during the rental period.

**QR30\* PACKAGING AND HANDLING**

The following guidelines define the minimum requirements for packaging of material by L3Harris' suppliers for their in-house handling, storage, and shipment, and for use during storage at L3Harris.

Items with sharp points shall be adequately padded to prevent damage to other parts.

Electrical connectors, studs, and external threads must be capped or protected to prevent thread damage and provide protection from dust and dirt.

Items shrequest.

## STANDARD QUALITY REQUIREMENTS

**QR32** were properly controlled prior to use, and were applied within the manufacturer's stated shelf-life period or within a Buyer approved extension.\*  
**Cont'd** QR32 Notes:

1. The certificate must contain the signature of a responsible representative of the Seller, and shall state that Manufacturer certification(s) for such materials are maintained on file at the Seller's facility.
2. Material shelf life may be extended, subject to restrictions, with the prior written approval of the L3Harris Buyer after consideration by L3Harris Engineering. Include the Seller certification, written Buyer approval for extension, and extension testing results with each affected shipment.

**QR33** **HEAT AND/OR MELT IDENTIFICATION**

All parts and/or material and applicable documents must be identified by a heat number, heat code, heat lot number or melt number by the Seller. Where stamping of individual parts is not practical due to size or shape, the heat number, heat code, heat lot number, or melt number shall be stamped on the package by the Seller.

**QR34** **MANUFACTURING LOT, BATCH, OR SERIAL NUMBER IDENTIFICATION**

All deliverable parts, assemblies, or material and applicable documents must be identified by a manufacturing lot, batch, or serial number by the Seller. Serialization is typically defined in the drawing or specification when it is required.

QR34 Notes:

1. Where stamping of individual parts, assemblies, or material is not practical due to size or shape, then lot or batch number identification shall be labeled on the package by the Seller.
2. In the absence of a Lot Control Specification required by this purchase order, a lot or batch number shall be defined as deliverable parts, assemblies, or material produced for one purchase order by one manufacturer in one unchanged process run in accordance with the same drawing and/or specification revision.

**QR35\*** **RAW MATERIAL IDENTIFICATION**

Raw material shall be identified by;

Tagging or labelling (example, copper clad PC board material, etc.).\*

Strip marking in accordance with FED-STD-183 or 184 or by other material specification requirements as applicable (example, conduit, mill stock, etc.).\*

**QR36** **LOCKHEED MARTIN FLOWDOWN- APPROVED PROCESSOR LISTING**

When the Seller uses a sub-tier supplier to provide special processes, only Lockheed Martin Approved Processors shall be used. Such suppliers are identified at the following website, accessed by company name:

[https://www.lockheedmartin.com/en-us/su38.57 Tm0 0 1 rgl-6\(r\)13\(o\)-6\(v\)-6\(e\)17\(d\)-6\( \)-2\(\(38.57 Tm0 0 1 rgl-6\(r\)13\(o\)sl](https://www.lockheedmartin.com/en-us/su38.57 Tm0 0 1 rgl-6(r)13(o)-6(v)-6(e)17(d)-6( )-2((38.57 Tm0 0 1 rgl-6(r)13(o)sl)





# STANDARD QUALITY REQUIREMENTS

**QR40 QUALIFIED PRODUCTS LIST (QPL) CERTIFICATION (UC)4(TS)-3(-)-2 Tm0 g0 G(Q)5(SfQ)5(T 8)BDC 412.5BT/**



# STANDARD QUALITY REQUIREMENTS

2.

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# STANDARD QUALITY REQUIREMENTS



## STANDARD QUALITY REQUIREMENTS

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d. An assessment of the effectiveness of Corrective and Preventive Actions (this assessment may be submitted by an agreed upon due date).

Note: When Source Surveillance (QR9) or Source Inspection (QR10) is required by the Purchase Order, the Seller shall coordinate corrective action with, and obtain approval signature of the L3Harris Quality Assurance representative on the Seller's written response.

3. NOTIFICATION OF CHANGES - The Seller shall notify the Buyer in writing of any change(s) in product design, fabrication methods or location, parts, materials or processes.
- 4.





# STANDARD QUALITY REQUIREMENTS

## **QR57 PARTS AND MATERIALS OBSOLESCENCE**

## **QR58**



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## APPENDIX B - Sample QR4 Physical Inspection Report (Contact the Buyer for an MS Word template)

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Supplier Name	Part Name	P/N	Rev.	PO No.
<p><b>Based on ASQ Z1.4, Level II / Normal, Single Lot Sampling, Identify or Segregate the Sample Parts:</b></p> <p style="font-size: small;">* Acceptance of Defects is Based on 40 (20) Defects in 1000 (500) Sample(s)</p>				
<p><b>Insert Additional Rows As Needed Below</b></p>				

Inspected	Date	Authorized Signature	Please Print
Accepted	Date	Print Name	Print