The following General Quality Requirements of QC-1, apply in addition to the specified Supplier Quality Requirement codes in the procurement documentation. Suppliers shall ensure that these requirements, or applicable portions thereof, are invoked on lower-tier suppliers of parts, materials, or services. It is the responsibility of the Supplier to ensure ALL the requirements defined in the Buyer's PO is properly flowed down to any sub-tier supplier. Compliance with the provisions of these clauses does not relieve the supplier from the final obligation to provide acceptable supplies or services as specified in the procurement documentation.

When conflict exist between Harris drawing requirements and Harris Quality Requirement codes applied to that drawing or order, the Seller shall contact the Buyer for contractual direction.

Definitions:  
- **BUYER** – Harris Corporation  
- **SELLER** - The legal entity that is the contracting party with the Buyer, with respect to the procurement documentation.

### Part 1 GENERAL QUALITY REQUIREMENT CODES: QC-1

**A. PROHIBITED PRACTICES**  
Unauthorized Repairs: Seller may not repair by welding, brazing, plating, splicing, soldering, adhesives, or any other methods, items damaged or found to be faulty without Buyer's prior written approval.

**CHANGE IN APPROVED DRAWINGS, PROCESSES, MATERIALS, OR PROCEDURES**  
Seller shall not change any drawing, process, material, or procedure without prior Buyer written approval, if such drawing, process, material, or procedure was originally approved by Buyer. Failure to notify the Buyer of these changes may result in rejection of the material.

Seller shall not change any process, material, or procedure from that used to qualify items or which was used by Seller to become a qualified source, without written approval by Buyer.

**UNAUTHORIZED SUBMITTAL OF PRODUCTION**  
When the Procurement Document requires Buyer acceptance of a "first article," Seller shall not submit items from a production run for Buyer inspection before Buyer's acceptance of such "First Article."

**NOTIFICATION OF FACILITY CHANGE**  
Seller shall not use or relocate any production, manufacturing, and/or processing facilities during performance of the work specified on the Procurement Document from those production, manufacturing, or process facilities approved by Buyer, without promptly notifying Buyer and affording Buyer an opportunity to examine such facilities for compliance with Quality Assurance requirements.

**NONCONFORMING CONDITIONS**  
Final acceptance and formal disposition of all materials will be determined upon receipt at the Buyer's facility. The Seller, or lower-tier Suppliers, is not authorized to disposition Minor nonconformances as "repair" or "use as is" unless Material Review Board (MRB) authority has been delegated. For this purpose, materials shall be defined as all parts, materials, components, or assemblies of the Seller or lower-tier Supplier. Nonconforming materials shall be segregated and withheld from shipment unless negotiated in advance. When authorized to ship nonconforming materials, the Seller shall ensure that the items are identified (e.g. tagged) and specifically referenced as being nonconforming in certification statements. The Seller shall notify the buyer, within 24 hours of identification, of nonconforming product that was inadvertently shipped to the Seller.

**RESUBMITTAL OF REJECTED ITEMS**  
Items rejected by the Buyer and subsequently resubmitted to Buyer shall be clearly identified on Seller's shipping document as resubmitted items. Materials rejected by Buyer action shall not be reshipped without having corrective action plan being submitted and approved by Buyer prior to shipment.

**B. MEASURING AND TEST EQUIPMENT**  
Seller shall be responsible for validating the accuracy and stability of tools, gages, and test equipment used to demonstrate that items conform to the Procurement Document. The level of accuracy shall be a minimum of 4 to 1 greater than the tolerance measured.
Documented schedules shall be maintained to provide for periodic calibration to adequate standards. Objective evidence of calibrations shall be recorded and made available for Buyer review.

C. DOCUMENTATION
The Buyer may refuse to accept items if the Seller fails to submit certifications, documentation, test data, or reports specified by the Procurement Document. Documentation includes Buyer Source Inspection reports when such Source Inspection is performed.

The preferred method to furnish actual dimension and test data is by electronic media (read-only format via CD or DVD). This media shall contain data of ALL parameters listed on the Purchase Order as well as dimensional data selected by the Seller to demonstrate product conformance. Data MUST reference, at a minimum, PO number, Part Number, Lot identification and Serial Number (if applicable) on media delivered.

D. DOCUMENT RETENTION
Records created by the Seller or distributor of products produced or delivered to the Buyer shall be maintained on file as specified below. Records include, assembly, test, inspection and verification/validation data identifying conformance to each of the requirements specified in the referenced drawing and/or specification as applicable. Records shall be traceable to the Buyers purchase order number. All records and test samples shall be made available to the Buyer and/or Government/Regulatory Representative upon request.
Retention times as follows:
1. 5 Years
2. 7 Years (default, unless otherwise specified)
3. 10 Years or deliver records with material to Buyer for record retention
4. 15 Years or deliver records with material to Buyer for record retention
5. Records created by the supplier or distributor of products produced or delivered to Buyer shall be included with material delivered to Buyer as applicable.
If seller cannot meet selected retention time, then all records must be shipped to the buyer at time of shipment.

Seller shall notify the Buyer 30 days prior to expiration of record retention time to allow for the retrieval of all records from Seller.

E. DISTRIBUTION OF DOCUMENTATION
Records include, assembly, test, inspection and verification/validation data identifying conformance to each of the requirements specified in the referenced drawing and/or specification. Said records are also to include parts & materials data, certifications, inspection results, and are to be associated with the part or material manufacturer's lot/batch number and/or date codes as well as the seller's lot number. Records shall be traceable to the Buyers purchase order number.

F. BUYER SURVEYS, SURVEILLANCE, AUDITS, AND INSPECTIONS
The Buyer reserves the right to:
• Conduct surveys, audits, and surveillance of Seller's facilities or those of Seller's subcontractors or suppliers with prior coordination with Seller to determine the capability to comply, and to verify continuing compliance, with the requirements of the Procurement Document.
• Perform inspections at Seller's facilities or those of Seller's subcontractors or sub-tier suppliers with prior coordination with the Seller, during the period of manufacture and inspection prior to shipment.
• Establish a resident inspector at the Seller's facility.
• Use MIL-STD-1916 or equivalent sampling plans for the acceptance or rejection of items
• WAIVE the Buyer source inspection by notifying the Seller in writing.
• Make use of Sellers facility, documentation and instrumentation as required.
Buyer Source Inspection may include validation of Seller's automated test programs and procedures to Buyer's specification requirements and witnessing Seller's performance of acceptance tests/inspections to Buyer's specification/drawing. Seller may be required to perform additional acceptance test/inspections when Seller's original acceptance test/inspections have not been witnessed by the Buyer's Source Inspector. Buyer Source Inspection may also include review of lot qualification (groups B, C, or D) test data to Buyer specification requirements. After Buyer Source Inspection, any rework or test of the item, including any nonscheduled...
entry, such as removal of a panel, cover, or enclosure will void the source inspection. Seller shall provide all facilities, tools, instruments, gauges and support personnel, including office space, for Buyer to verify conformance to requirements.

Buyer in-process, source, and/or surveillance inspection or tests shall not constitute final acceptance by the Buyer; nor shall it in any way replace the Seller's inspection/ test or otherwise relieve the Seller of their responsibility to furnish an acceptable end item. Final acceptance shall be at the Buyer's facility.

G. **Deleted (Reference OP-15)**

H. **PACKAGING**

Preservation, packaging, packing, handling, and shipment of items shall be in accordance with appropriate procedures to prevent damage and ensure that original quality is maintained. All electrostatic discharge sensitive material must be packaged in ESD-shielding in accordance with EIA-541.

1. Packaging constituents shall NOT contain amine based or ionic antistatic chemistry. Meaning no pink poly, no pink foam, or equivalent, etc.)
2. Packaging shall be designed to provide physical protection for device case and leads.
3. Use tape (reel as applicable) or waffle pack as originally packaged from the Manufacturer for all electrical components, where applicable, in accordance with ESD (ANSI/ESD S541) or equivalent.
4. Bulk packaging or repackaging from bulk pack to tape or waffle pack is prohibited.

I. **ELECTROSTATIC DISCHARGE CONTROL**

Seller shall provide and maintain a program for electrostatic discharge control for all Electronic items furnished on this procurement. Electrostatic discharge control shall be per ANSI/ESD S20.20. All electrostatic sensitive devices shall be packaged in static shielding packaging that meets the requirements of ESD STM 11.31, ANSI/ESD S541. The Seller's ESD control program is subject to review and approval by the Buyer.

1. Leads shall be shorted together as appropriate using closed cell non-slothing conduction foam, packaged in sealed static shielding containers or bags designed for ESD protection. Each individual package shall include a destructible ESD precautionary label (ANSI/ESD S8.1 or Mil-STD. 129P), applied over the closure area of the packaging item.

J. **CORRECTIVE ACTION REQUESTS**

When a quality problem exists with Seller's items, Buyer may forward a Corrective Action Request to Seller. Seller shall respond to Corrective Action requests within 30 business days and must include the following information: analysis of the cause of the problem, statement of the action taken to prevent recurrence, and the effectiveness of the action. When corrective action is required in response to Government Source Inspection, Seller shall coordinate such action with the Government Quality Assurance Representative assigned to Seller's facility.

K. **SPECIAL PROCESSES**

When special process specification (ex. anodize, heat treat, plating, soldering, x-ray, cleaning, welding, or magnetic particle and penetrant inspection) are used, the seller shall have special processes approved by the buyer quality assurance, unless the special process supplier is NADCAP certified. The seller is responsible for maintaining a system to control such special processes whether performed at their facilities or at a lower-tier facility. The Seller shall perform systematic, periodic evaluation of personnel, equipment, methods, and material required in these special processes to ensure positive control at all times. Objective evidence of these evaluations shall be made available to the Buyer upon request.

L. **Deleted (Reference OD-1)**

M. **CONTAMINATION CONTROL**

The Seller shall provide and maintain a program for contamination control approved by the Buyer. The Buyer retains the right to audit any of the Seller’s CC procedures, documents, certifications, and clean room/clean bench environments. Requirements include, but are not limited to, meeting one of each of the following sets of standards:

- Federal Standard 209E and/or ISO 14644-2

Clean rooms and associated controlled environments – Part 2:
Specifications for testing and monitoring to prove continued compliance with ISO 14644-1

- IEST-STD-CC1246D (formerly Mil.Std.1246D)
- Product Cleanliness Levels and Contamination Control Program and/or JSC SN-C-0005D

N. Deleted (Reference QD-15)

PART 2 QUALITY SYSTEM REQUIREMENTS:

QS-1 QUALITY SYSTEM
The Seller shall maintain a Quality (or Inspection) System structured to the model provided by:
A. ANSI/ISO/ASQ-Q9001 or ISO 9001.
B. Software provided to the Buyer shall be developed in a controlled environment modeled after ISO 9001, ISO 9000, and/or ANSI/IEEE-STD-730.
C. SAE AS 9100
D. NHB 5300.4(1C)

QS-2 INSPECTION SYSTEM
Seller shall provide and maintain an inspection system that is in conformance with the model provided by:
A. NASA Publication NHB 5300.4 (1C), "Inspection Systems Provisions for Aeronautical and Space System Material, Parts, Components, and Services."
B. MIL-I-45208, "Inspection System Requirements."
C. MIL-STD-1520, "Corrective Action and Disposition System for Nonconforming Material."
E. Military Specification "Software Quality Assurance Program Requirements."

QS-3 Deleted

QS-4 DEFENSE SYSTEM SOFTWARE DEVELOPMENT - AS9100
A. Seller shall provide and maintain a software development program, which is in conformance with AS9100B - Quality Management System Aerospace Requirements.
  - CMMI Maturity Level 3, for Systems Engineering / Software Engineering Version 1.1, Stage or Continuous Representation
B. Seller shall provide and maintain a software development program, which is in conformance with DOD Standard DOD STD-2167, "Defense System Software Development."

QS-5 Deleted

PART 3 QUALITY INSPECTION REQUIREMENTS:

QI-1 GOVERNMENT SOURCE INSPECTION (NASA)
All work under this procurement is subject to inspection and test by the Government at any time and place. The Government representative who has been delegated NASA Quality Assurance functions for this procurement shall be notified immediately upon receipt of this Procurement Document. The Government representative shall be notified three (3) working days in advance of the times the items are ready for inspection or test. In the event the Government representative cannot be contacted, Buyer shall be notified immediately. The Seller, without additional charge, shall provide all reasonable facilities and assistance for the safety and convenience of the Government representatives in the performance of their duties.

QI-2 GOVERNMENT SOURCE INSPECTION (DOD)
Government Source Inspection is required prior to shipment from Seller’s facility. Upon receipt of this Procurement Document, Seller is required to immediately notify and provide a copy of the Procurement Document(s) to the Government representative who normally services the Seller’s facility so that appropriate planning for Government Inspection can be accomplished. If a Government representative does not normally service the Seller’s facility, the nearest Army, Navy, Air Force, or Defense Supply Agency Inspection office shall be contacted. In the event the Government representative cannot be contacted, Buyer shall be notified immediately. The Seller, without additional charge, shall provide all reasonable facilities and assistance for the safety and convenience of the Government representative in the performance of their duties.

QI-3 BUYER SOURCE INSPECTION
Inspection by Buyer must be performed at Seller’s facility or at the Seller’s subcontractor prior to shipment. Seller shall notify Buyer's Procurement or Quality Organization representative not less than five (5) working days prior to the time that items are ready for Buyer Source Inspection. Evidence of source inspection shall be included with shipment.

QI-4 BUYER IN-PROCESS INSPECTION
Items will be inspected by Buyer Source Inspection during manufacture at one or more of the following:
- Defined machining steps
- Prior to cleaning
- Prior to plating
- Prior to assembly close-up
- Prior to encapsulation/ conformal coating
- Other points specified in the Procurement Document.

Seller or agent of seller shall notify the Buyer's Procurement or Quality Organization representative not less than five (5) working days prior to the time that items are ready for Buyer inspection. Evidence of in-process inspection shall be included with shipment.

QI-5 FIRST ARTICLE INSPECTION
First Article Inspection Report(s) must meet the requirements of SAE AS9102, latest Revision or equivalent.

First Article Inspection (FAI) or test shall be accomplished at the Seller's facility prior to initial shipment. The Seller shall submit the complete FAI documentation package electronically to the Buyer prior to shipment. One copy of the FAI report shall be forwarded with the FAI article.

The record of this inspection is to include all characteristics and requirements specified by the engineering drawing(s) or other design media, including notes and specifications. A first article report must be included with the first shipment of any parts that require a new or updated First Article Inspection.

This FAI package shall include the completed First Article Inspection Report on the AS9102 forms or approved equivalent forms, a completed Certificate of Conformance and all supporting material and process certifications. Also include a copy of all nonconformance's documented with the Buyer approvals, if applicable.

Note: When completing a FAI package for an assembly, the Certificate of Conformance will refer to all of the detail part numbers and standard hardware used in constructing that assembly. Each detail part number will have its own complete FAI package approved prior to the assembly's FAI package. The approved Certificate of Conformance for each detail part number shall be included with the FAI package for the assembly.

QI-6 Deleted (Reference QC-1F)
QI-7 Deleted (Reference QP-171)
QI-8 BUYER PRECAP INSPECTION

Items on this procurement require precap inspection by the Buyer Source Inspector subsequent to 100 percent precap visual inspection performed by the Seller. Seller shall notify the Buyer's Procurement or Quality Organization representative not less than five (5) working days prior to the time that the items are ready for inspection. Evidence of precap inspection shall be included with shipment.

QI-9 Deleted
QI-10 Deleted
QI-11 Deleted (Reference QI-1 and QI-2)
QI-12 GOVERNMENT/NASA ACCESS
During performance on this order your quality control or inspection system and manufacturing processes are subject to review, verification and analysis by authorized Government/NASA /Regulatory representatives. Government/NASA inspection or release of product prior to shipment is not required unless you are otherwise notified. This will be done at no cost to the Buyer.

A. Buyer requires right of access to supplier facility. Quality control or inspection system and manufacturing processes are subject to review, verification and analysis by authorized Government/NASA /Regulatory representatives. Government/NASA inspection or release of product prior to shipment is not required unless you are otherwise notified.

QI-13 MATERIAL REVIEW BOARD (MRB)
MRB authority is NOT delegated: Nonconforming product requires Buyer approval via a documented Waiver prior to shipment.

QI-14 MECHANICAL INSPECTION
Visual inspection shall be aided by magnification between 4x and 7x or as specified below. Additional magnification shall be used as necessary to resolve suspected defects.

A. 100% Inspection of all surfaces is required.
B. 10x magnification

PART 4 PROCESS CONTROL REQUIREMENTS:

QP-1 SPECIAL PROCESS CONFORMANCE
Supplier and any sub-tier supplier engaged in special processes (ex. Anodize, heat treat, plating, soldering, x-ray, cleaning, welding, or magnetic particle and penetrant inspection) shall have special processes approved by the buyer quality assurance, unless the special process supplier is NADCAP certified. A copy of the NADCAP certification and certificate of conformance to the special process shall be supplied with order.

QP-2 BUYER SEM ANALYSIS
Supplier Quality Requirements

Buyer approval of Scanning Electron Microscope (SEM) Analysis is required for wafer lots to be incorporated in parts supplied to Buyer. The SEM Analysis shall be performed by Seller and must be approved in writing by Buyer prior to incorporation of wafers in parts.

QP-3 Deleted

QP-4 CONTROL OF TEST SOFTWARE
Seller shall provide and maintain a system for control of software used in the qualification/acceptance testing on this procurement. Seller shall maintain procedures and test records on items delivered to Buyer, and test records shall be available for Buyer review.

QP-5 DESTRUCTIVE PHYSICAL ANALYSIS
Destructive Physical Analysis (DPA) is required. The Seller shall provide destructive physical analysis for this lot of parts.

A. Buyer approval of Seller’s DPA procedure is required prior to implementation. If Seller chooses to have the analysis performed by an outside supplier, Buyer approval of that supplier is required.

B. Buyer approval of the lab to be used for the DPA is NOT required.

C. The DPA must be done by an independent third party lab which is DSCC certified to perform DPAs on this part commodity. The DPA must be done according to the requirements of MIL-STD-1580 (current revision). A comprehensive DPA report must be supplied as part of the delivered data package for the shipped parts.

D. The sample quantity shall be those designated as the quantity of parts listed on an RFI/PO as “Samples for DPA.”

E. DPA shall be done in accordance with the Buyers Source Control Drawing.

QP-6 SOLDERING (for previous version, reference QP-6B)

A. Soldering shall comply with NASA Standard 8739.2. Requirements for Surface Mount.

B. Soldering shall comply with NASA Standard 8739.3. Requirements for Soldered Electrical Connections.

C. Soldering shall comply with IPC-A-610C Class 3

D. Soldering shall comply with IPC J-STD-001D

E. Other Standards as approved by Buyer

QP-7 Deleted (Reference QP-6C)

QP-8 COUPON REQUIREMENTS (PWBs – Rigid and Flex)

A. The Seller shall provide one coupon from each printed wiring board panel with each shipment. Unless otherwise specified, the test specimens shall be processed at the same time and conditions and traceable for each uniform lot or batch processed.

B. Coupons requirements shall conform to the requirements of Buyer’s specification.

QP-9 PWB/FLEX CIRCUIT REQUIREMENTS

A. MIL-PRF-31032 (Rigid and Flex) or MIL-PRF-55110

B. MIL-P-50884

C. IPC 6010 Series:
   1. IPC 6010
   2. IPC 6011
   3. IPC 6012
   4. IPC 6013
   5. IPC 6014

D. Buyers drawing 8147294

E. Buyers drawing 8193759

QP-10 MARKING PERMANENCY (FOR PREVIOUS VERSION, REFERENCE QP-10a)

A. Each part must meet solvent resistance requirements per MIL-STD-202 Method 215.

B. Semiconductors must meet the marking permanency requirements of MIL-STD-750 Method 1022.5

C. Microcircuits must meet the marking permanency requirements per MIL-STD-883 Method 2015.13

QP-11 MICROCIRCUIT AND SEMICONDUCTOR DICE EVALUATION

A. Microcircuit dice supplied on this order shall be shipped with lot-specific wafer identification along with summary data for all required M883 wafer lot qualification tests and inspections. All information shall be provided as part of the data package supplied with the parts.

B. Microcircuit dice supplied on this order shall be shipped with additional testing and inspections as specified in TOR-2006(8583)-5236, latest revision, Table 960-1 All Subgroups. Summary test results for the lot to be shipped to the Buyer shall be provided for all subgroups in Table 960-1 as part of the data package supplied with the parts.

C. Semiconductor dice on this order shall be shipped with lot-specific wafer identification along with summary data for all wafer lot qualification tests and inspections. All information shall be provided as part of the data package supplied with the parts.

D. Semiconductor dice on this order shall be shipped with additional testing and inspections as specified in TOR-
2006(8583)-5236, latest revision, Table 960-2 All Subgroups. Summary test results for the lot to be shipped to the Buyer shall be provided for all subgroups in Table 960-1 as part of the data package supplied with the parts.

E. Dice geometry shall be supplied with each lot shipment.
F. Element evaluation is to be performed in accordance with Buyer specification provided for each manufacturer’s wafer lot.

QP-12 PASSIVE ELEMENT EVALUATION FOR HYBRIDS AND ASSEMBLIES
All required test information and data below shall be provided as part of the data package supplied with the parts.

A. All passive elements shall meet the evaluation requirements of MIL-PRF-38534, Appendix C.
B. Ceramic chip capacitors shall be M123 per MIL-PRF-123.
C. Chip resistors shall be M55342 at FR T per MIL-PRF-55342.
D. Discrete semiconductors shall be JANKC or JANS according to MIL-PRF-19500.
E. Monolithic microcircuits shall be QML V or JAN Class S according to MIL-PRF-38535.
F. Silicon substrate, metal element, chip resistors, with wire bond terminals must be compliant with MIL-PRF-55342. The only exception to this is Power Conditioning; which may be done, with Buyer approval of sample size, on a sample basis.
G. Hybrid packages shall be hermetic and meet all MIL-PRF-38534 package requirements.
H. Any hybrids contained as elements of a hybrid or assembly ordered from the Seller shall meet all of the requirements of this Quality Code.
I. Any alternates to the parts specified above, and parts of types not covered above, require Buyer approval and processing according to the tables in TOR-2006(8583)-5236, latest revision, section 960.
J. The use of commercial parts is strongly discouraged. Buyer approval of such parts will require strong technical justification and a strong quality assurance / reliability assurance plan from the Seller. The judgment as to the efficacy of the aforementioned justification and plan rests solely with the Buyer.
K. A complete As-Designed EEEE Parts list shall be provided to the Buyer for approval before purchasing or parts or hybrid / assembly build begins.
L. A complete As-Built EEEE Parts list shall be provided to the Buyer with the data pack shipped with the finished hybrids or assemblies.
M. Passive elements supplied on this order shall conform to the requirements of Buyer’s specification.

QP13 HYBRID PACKAGE AND COVER EVALUATION
A. Hybrid packages and covers supplied on this order shall conform to the requirements of MIL-PRF-38534.
B. The Buyer shall be notified of all design or construction changes by the Seller, prior to shipment of material to the Buyer. Failure to notify the Buyer of these changes will result in rejection of the material.

QP-14 Deleted

QP-15 TIME AND/OR TEMPERATURE SENSITIVE MATERIAL
Time and/or Environment (Temperature, Humidity, Barometric Pressure, Ambient Light, other) Sensitive Material must be identified with the following information on the outside of the shipping container and the lowest level packages containing the material:
- Storage Requirements (Temperature, Humidity, Barometric Pressure, Ambient Light, other) as applicable to the item.
- Shelf life (expiration date) at stated storage conditions.

A minimum of 75% of the shelf life period must be remaining at the time of receipt at the Buyer’s ship to address.

QP-15A TIME AND/OR TEMPERATURE SENSITIVE MATERIAL
Time and/or Environment (Temperature, Humidity, Barometric Pressure, Ambient Light, other) Sensitive Material must be identified with the following information on the outside of the shipping container and the lowest level packages containing the material:
- Date of Manufacture
- Storage Requirements (Temperature, Humidity, Barometric Pressure, Ambient Light, other) as applicable to the item.
- Shelf life (expiration date) at stated storage conditions.

A minimum of 75% of the shelf life period must be remaining at the time of receipt at the Buyer’s ship to address.

Any material which will have six (6) months or less of shelf life when received at the Buyer’s ship to address, shall be boldly and obviously marked as “Short Life Material” on the outside of the shipping container and on the lot documentation shipped with the material. Date of Manufacture
QP-16 TRACABILITY DOCUMENTATION
Traceability documentation shall be provided to the following requirements:
A. MIL-PRF-19500 (Semiconductors)
B. MIL-PRF-38534 (Hybrid Microcircuits)
C. MIL-PRF-38535 (Microcircuits)
D. Manufacturer’s heat, lot, or batch number and the Buyers Purchase Order number shall be included with the material.

QP-17 DATA
Each deliverable device shall be supplied with the following:
A. Attributes data for all screening tests.
B. Variable data for all burn-in and operations life tests.
C. Lot specific final electrical parameter test data.
D. Data specified in the referenced drawing.
E. Objective evidence of current acceptable Group B, C, D and E (if radiation data is available) testing.
F. Each deliverable device shall be supplied with the following: Lot specific data necessary to prove compliance to all electrical performance and Group A testing requirements of the specification. Summary reports of all screening tests performed and Group B, C, D and E (if radiation data is available) as required by the governing specification including dated indication of completion and compliance.
G. Provide test measurement data (actual readings) covering the functional parameters of the referenced drawing and/or specification.
H. Electronic x-ray or film (Approved by Buyer) must as a minimum be annotated with:
   • Part Number
   • Part Serial Number(s)
   • Identification of the area photographed
   • Identification of the view direction
Radiographic/Photographic film shall be interpreted by the buyer approved facility and the findings documented in a written report. The radiographic report shall include at a minimum
   • Name and location of the radiographic facility performing the inspection
   • Radiographic/photographic specification or procedure used
   • Quantity of parts inspected
   • Quantity of parts accepted
   • Quantity of parts rejected and reason for rejection.

QP-18 SOLDERABILITY FOR PREVIOUS VERSION, REFERENCE QP-18a)
A. Each part must meet solderability requirements per MIL-STD-202 Method 208.
PART 5 DOCUMENTATION:

QD-1 CERTIFICATE OF COMPLIANCE (from original manufacturer)
A Certificate of Compliance is required with each shipment. Certifications shall include:
- Manufacturer’s Name
- Manufacturer’s Address (where part or material is made)
- Manufacturer’s cage code (if applicable)
- Part Number or identification as shown on the purchase order
- Part Number Revision (if applicable)
- Purchase Order Number
- Serial Number (if applicable)
- Manufacturer’s heat, lot, batch number/date code
- Expiration and/or cure date (if applicable)
- Special process and inspection/specification (including revision number) numbers as applicable.

Certifications must be signed by an authorized agent of the Seller. If it is an electronic certification, an electronic signature is required from an authorized agent of the Seller.

Buyer may refuse delivery of items if Seller fails to submit with each shipment all documentation specified here-in.

QD-2 CERTIFICATE OF PHYSICAL ANALYSIS
A Certificate of Physical Analysis shall be required with each shipment of material. The certificate shall identify the material by reference to the
- melt
- cast
- heat
- drop
- lot

or other similar designation and must indicate the applicable specifications, revision, and Purchase Order number as well as Physical Analysis data.

QD-3 CERTIFICATE OF CHEMICAL ANALYSIS
A Certificate of Chemical analysis shall be required with each shipment of material. The certificate shall identify the material by reference to the
- melt
- cast
- heat
- drop
- lot

or other similar designation and must indicate the applicable specifications, revision, and Purchase Order number as well as Chemical Analysis data.

QD-4 Deleted (Reference QD-7)
QD-5 Deleted (Reference QD-2)
QD-6 BUYER SUPPLIED MATERIAL CERTIFICATE
The Seller shall provide a Certificate with each shipment of product. This Certificate shall indicate the batch, lot, date code, or other pertinent traceability data of Buyer supplied materials contained in the shipment.

QD-7 RAW MATERIAL DOCUMENTATION REQUIREMENTS
The Seller shall provide a Certificate of Conformance with each shipment of product. This Certificate shall indicate the batch, lot, date code, or other pertinent traceability data of supplied materials contained in the shipment.

A. Shipment of metallic or non-metallic raw material shall be accompanied by a manufacturer’s test report for the raw material containing:
- Name and location of raw material manufacturer or mill
- Material identification by specification number and material condition
- Manufacturer’s mill lot identification number or batch number or heat number of the raw material
- Actual chemical and physical property test results as specified in the applicable specification.

B. Shipment of finished or semi-finished items manufactured from metallic or non-metallic raw materials shall be accompanied by manufacturer’s test reports containing:
- Name and location of raw material manufacturer or mill
- Material identification by specification number and material condition
- Manufacturer’s mill lot identification number or batch number or heat number of the raw material.
- Actual chemical and physical property test results as specified in the applicable specification.

C. Shipment of finished or semi-finished items manufactured from metallic or non-metallic...
raw materials shall be accompanied by a certification from the Seller containing:

- Name and location of the manufacturer(s) of the raw material(s), lot number(s) or mill lot identification number(s) or heat number(s) of the raw material(s) used in the manufacture of the finished or semi-finished item(s)
- Statement that the raw material(s) used in the manufacture of the finished or semi-finished item(s) meets applicable specification requirements.

D. Shipment of finished or semi-finished items manufactured from metallic or non-metallic raw materials shall be accompanied by manufacturer’s test reports containing:

- Name and location of raw material manufacturer or mill
- Material identification by specification number and material condition
- Manufacturer’s mill lot identification number or batch number or heat number of the raw material.

QD-8  SELLER INSPECTION REPORTING REQUIREMENTS

A. Seller is required to submit with each shipment of items one copy of an inspection report reflecting 100 percent inspection (of all drawing characteristics for each part in the order). Seller shall inspect and report on everything called out on the drawing characteristics.

Items with a total tolerance >.010” or threaded features, shall allow, at the manufacturer’s discretion, the use of an attribute gauge for inspection. If an attribute gauge is used the manufacturer may record the dimension as “OK” or acceptable in the inspection report.

The report shall delineate each drawing characteristic, location (sheet and zone), tolerance, and specify actual measurement results for all drawing characteristics including all out-of-tolerance conditions. The only exception to the above procedure applies to items machined under tape control or automated conditions.

The inspection data shall be keyed to unique serial numbers assigned to each item (check the Purchase Order for pre-assigned serialization). Serial numbers shall be affixed to each item with a tag and are not to be physically scribed or stamped into the items unless directed by the Buyer, PO, or drawing.

Suggested report format is as follows:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Tolerance</th>
<th>DWG Location</th>
<th>S/N 001</th>
<th>S/N 002</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.250</td>
<td>+0.005</td>
<td>Sheet 1</td>
<td>0.251</td>
<td>0.253</td>
</tr>
<tr>
<td></td>
<td>-0.005</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.250</td>
<td>+0.010</td>
<td>Sheet 1</td>
<td>0.259</td>
<td>0.253</td>
</tr>
<tr>
<td></td>
<td>-0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.250</td>
<td>+0.010</td>
<td>Sheet 1</td>
<td>0.257</td>
<td>0.263</td>
</tr>
<tr>
<td></td>
<td>-0.010</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. Seller is required to submit with each shipment of items one copy of an inspection report reflecting all drawing characteristics as required in QD-8A. This report shall be limited to the first, middle and last item produced from one continuous set-up; and the inspection report shall state the items were machined under tape controlled, automated conditions, or if a batch assembly process was used. If a sampling plan is specified by the Buyer’s drawing, inspection of a lot to that sampling plan is allowed. The document number of the sampling plan and relevant sampling plan information used shall be recorded on the inspection report. When no sampling plan is specified by drawing and seller is a distributor of catalog parts (i.e., connectors, pins, sockets, plugs, screws, nuts, bolts etc.), inspection of the first and last packaged is allowed

C. Superseded by QD-8A

D. Superseded by QD-8B

E. Same as QD-8A, however, the only documented drawing characteristics required on the inspection report are those characteristics and notes identified as Critical to Function (CTF) and any other nonconforming dimensions. Supplier is responsible for compliance to dimensions and notes on the drawing.

F. Provide normal inspection/test data covering parameters identifying conformance to the requirements of the referenced drawing and/or specification.

G. Provide test measurement data (actual readings) covering the functional parameters of the referenced drawing and/or specification.

H. Provide dimensional measurement data (actual readings) for each part in this order, covering the mechanical parameters of the referenced drawing and/or specification.

QD-9  Deleted

QD-10  TEST DATA
When Buyer specifications require test data to be recorded during performance of acceptance
testing, a copy of the recorded data, showing evidence of Seller’s inspection and verification of conformance, shall accompany shipment of items to Buyer. Data shall meet the format requirements of the Buyer’s specification and, as a minimum be identified with:
• Buyer Procurement Document number and change notice b
• Buyer specification/drawing number and revision letter
• Buyer engineering order(s)
• Part number
• Type of test performed
• Lot numbers, serial numbers, date codes of items tested
• Total quantity tested, quantity accepted, and quantity rejected
• Any codes, keys, or other information necessary to interpret Seller’s data.

QD-11 SOFTWARE DELIVERY DOCUMENTATION
Seller shall deliver documentation of software as specified in the Procurement Documents. Software documentation shall be sufficient to establish that:
• All requirements are achieved
• Configuration is correct and deliverables are properly identified and marked
• Planned level of acceptance is achieved and/or deviation/ waivers are made part of the deliverable package
• Operating instructions accompanying the developed software which are sufficient to enable loading initialization, and operation by Buyer.
• Software Version Description Document, which includes, any known problems, target system configuration requirements, build/installation instructions and change history
• Contain ITAR marking (if applicable)
• Compliant to Data Item Description (DID) contents and format per contract

QD-12 Deleted (Reference QC-1A and QI-13)

QD-13 REQUIREMENTS FOR DISTRIBUTORS
The Distributor (a Seller other than the manufacturer) shall identify:
• Manufacturer
• Manufacturing plant location or cage code (if applicable)
• Manufacturer’s part number
• Manufacturer’s lot or batch number
• Lot date code (if applicable) for each item under the procurement.

QD-14 Deleted

QD-15 MATERIAL SAFETY DATA SHEETS (MSDS)

The Seller must provide the applicable material safety data sheets with the product shipment.

QD-16 HEAT TREATMENT OVEN CHARTS
The supplier shall supply heat treatment oven charts for all heat treatments specified in the procurement documentation and referenced drawings. Oven charts shall include reference to oven used, date of heat treatment, starting time, and definition of pen scales used to record times and temperatures.

QD-17 DEVICE PKG
Packaging constituents shall not contain amine based or ionic antistatic chemistry - meaning no pink poly, no pink foam, or equivalent, etc. It is required that packaging for all electrostatic discharge sensitive material must be packaged in ESD-shielding in accordance with EIA-541. Packaging shall be designed to provide physical protection for device case and leads. Use tape (and reel as applicable) or waffle pack as originally packaged from the Manufacturer for all electrical components where applicable, in accordance with ESD (ANSI/ESD S20.20) or equivalent.
Bulk packaging or repackaging from bulk pack to tape or waffle pack is prohibited. In lieu of bulk packaging, parts can be individually packaged.

QD-18 ELECTRONIC DATA DELIVERABLE REQUIREMENTS
Documentation Package:
• Documentation shall be uploaded to the Buyer’s data portal in a format which is acceptable to Buyer/Industry standards prior to deliverable product being inspected at the Buyer’s facility. See link: EXPO Supplier Portal Document List
• Harris Corporation will provide access (login and password) to this secure site.

Note: If the only required documentation is the Certificate of Conformance, and the C of C is provided on the Seller’s packing slip, it is not required to upload the C of C in the electronic format.
• Documentation provided on digital media does not have to be uploaded to the Harris EXPO Supplier Document List.

HZ-01 HAZARDOUS MATERIAL (CERTIFICATE OF CONFORMANCE)
A separate statement on the Certificate of Conformance (C of C) shall certify that all external Beryllium or Beryllium Composite surfaces meet the cleanliness levels of < (less than) 25 micrograms (ugms)/sq.ft. as specified by the Brush Wellman specification, before the shipment of parts to Buyer or its customers.
HZ-02  HAZARDOUS MATERIAL (WARNING LABEL)

ALBEMET or any other Beryllium Composite Material or fabricated parts being shipped to Buyer or its customers shall have warning label attached externally to each individual package containing such subject parts.