

# **SQR - Supplier Quality Requirements (Q-Notes)**

# **REVISION AND APPROVAL**

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### 1. STANDARD REQUIREMENTS

#### **Prohibited Practices**

The following acts or practices are prohibited:

# 1.1. Unauthorized Repair

Repair made on purchased items damaged or found to be defective during the fabrication and/or manufacture, which are not authorized by Hinson Industries.

#### 1.2. Unauthorized Submittal of Production Parts

When the Purchase Order requires buyer acceptance of First Article prior to delivery, seller shall not submit articles from a production run prior to buyer's approval of the First Article unless authorized by buyer in writing.

# 1.3. Notification of Facility Change

Seller shall not relocate any production, manufacturing, and/or processing facilities, or transfer work between seller facilities, during performance of the Purchase Order, without promptly notifying Hinson Industries and providing an opportunity to examine such facilities for compliance.

### 1.4. Subcontracting

Seller shall not subcontract any item covered by this order without written approval of buyer.

# 1.5. Proprietary Rights

Unless otherwise expressly agreed, all information supplied by buyer is proprietary to and shall be used only for purposes of providing goods or services to buyer pursuant to this Purchase Order and shall not be disclosed to any other party without buyers written consent. These items supplied by buyer or obtained by Seller in performance of this Purchase Order paid for by buyer shall be promptly provided to buyer on request or upon completion of this Purchase Order.

#### 1.6. Retention of Records

Unless otherwise specified, seller shall retain objective evidence, including records of the inspections and test performed during all phases of processing items on the Purchase Order for a minimum of ten (10) years after completion of the order. Such records shall be made available to buyer for review upon request.

# 1.12. Change to Product, Process or Quality Management System

Seller is required to obtain written approval from buyer if there is a change to seller's and their external providers processes, products, services, processes or a change to their Quality Management System.

### 1.13. Authorized Deviations



Seller may submit for review of any material which does not meet the requirements of the drawings, specifications, and/or Purchase Order requirements. This submittal shall include a complete description of each discrepancy, root cause, and the corrective action taken to preclude recurrence. Dependent upon buyers customer requirements and agreements pertaining to nonconforming material, buyer shall review and disposition all seller reported discrepancies. A completed copy of the submitted document shall be returned to the seller upon completion of the buyers review. Seller shall not ship any discrepant items to buyer without buyers prior concurrence. Seller shall reference the submitted document number on the shipping document and include a copy of the approved submittal document with each shipment of items identified of the submittal.

#### 1.14. Access to Facilities

The seller agrees to provide the right of access to the organization, their customer, and regulatory authorities to the applicable areas of facilities and to applicable documented information, at any level of the supply chain. Buyer, its customers, regulatory and statutory authorities reserve the right to perform an on-site audit, inspection or visit of the seller's facility and its sub-tier suppliers. This may include the seller's processes, procedures and the seller's Quality Management System. Seller shall provide all necessary data as required by applicable drawings, Purchase Order, specifications, and inspection instructions to facilitate the on-site inspection notification.

#### 1.15. Government Contracts

On items intended for use in Government contracts, the access to the seller's facilities as defined above shall be made available to authorized Government representative(s) upon request.

### 1.16. Fraud or Falsification

At times, buyer performs work under contracts which are in the jurisdiction of departments or agencies of the United States Government. Some of the work performed under these contracts affects the national security of the United States and the requirements of these contracts are designed to ensure that essential attributes of work are carefully checked or inspected and that records accurately reflect the results of all work. Any falsification, concealment or alteration of any material fact, or any false fraudulent or fictitious statement or representation in connection with the work under any contract within the jurisdiction of the Government is not only prohibited by company policy but may also be punishable under Federal law. The seller further agrees that Confirmation & Acknowledgement of any Purchase Order, constitutes that you have read and understand the above and will conform & comply to this statement.

# 1.17. Awareness

Seller is required to ensure all persons doing work under the organizations control are aware of:



- Their contribution to product or service conformity;
- Their contribution to product safety;
- The importance of ethical behavior.

#### 2. QUALITY MANAGEMENT SYSTEM

Seller shall provide and maintain, and require subcontractors to provide and maintain an ISO9001, AS9100 or equivalent Quality Management System which is approved by buyer. Seller shall notify buyer in writing of any change, other than editorial, to their or their sub tiers' Quality Management System.

#### 3. CERTIFICATE OF COMPLIANCE

Seller shall provide a certificate of conformance ensuring the item has passed all inspections and required tests identified on buyer's Purchase Order. The document shall clearly state at a minimum:

- Buyer's Purchase Order Number, PO revision and line item number;
- Item Part number, revision and quantity;
- Drawing or specification number and revision;
- Serial numbers, date code, lot, or batch number;
- Cage Code (if applicable);
- Seller's authorized agent's name, signature, title and date.

#### 4. LIMITED SHELF LIFE MATERIAL

Seller shall clearly label each container of materials having a limited or specified shelf the date of manufacture, expiration date, lot or batch number and any special storage and handling conditions.

Each item purchased shall exhibit at least 80% of its original shelf life in order to be accepted.

Items received with less than 80% of shelf life remaining will be rejected and returned.

# 5. FIRST ARTICLE REPORT

Seller shall perform a first article inspection to applicable drawings, specifications, technical instructions including processing tooling and test equipment in accordance with the guidelines below to assure the product is compliant with the requirements of this purchase order.

Report applies to one piece from the first production run, unless otherwise noted on the purchase order.



Seller is responsible for determining the method of performing FAI and shall use a form that contains all required information as specified in SAE AS9102. The FAI requirement shall continue to apply after initial compliance. Any or all the following events requires a full, or a delta/partial FAI for affected characteristics:

- A change in the design affecting form, fit, or function of the part;
- A change in manufacturing source, processes, assembly line, inspection method, location, tooling, or materials;
- A natural or man-made occurrence which may adversely affect the manufacturing process;
- Repeat production of parts when more than two years has elapsed (or as otherwise directed in the purchase order) since the last production item was produced;
- When required as part of corrective action for a part number with repetitive rejection history.

Seller shall segregate and identify the FAI unit in a separate container when delivering to buyer. The FAI report shall accompany the FAI unit or provided electronically.

First Article reports for items controlled by CAD files as referenced in the item drawing shall record all dimensions listed on the drawing. A CAD file dimension not listed on the drawing is only to be documented in the inspection report when its respective tolerance is called out on the drawing.

#### 6. FIRST ARTICLE INSPECTION AT SELLER'S FACILITY

Buyer's acceptance of a First Article is required prior to the production run. The First Article shall be identified as such including the Purchase Order number, part number and part name. Seller shall submit the First Article to buyer for test, inspection, and reporting.

# 7. 100% FINAL INSPECTION

Seller shall perform 100% inspection of all items covered by the Purchase Order. Records of seller's 100% inspection results showing actual values shall be provided to buyer upon request.

# 8. TEST SAMPLES

Seller shall provide one (1) additional part of suitable test sample of the same material lot and processed simultaneously with each lot of parts supplied on this order.

Both the test sample and seller shipping documents shall identify the sample part number, process and batch or lot number.

#### 9. TEST REPORTS



Seller shall provide test results with actual readings for all tests on an individual item or lot submitted and signed by seller's authorized representative.

#### 10. HINSON INDUSTRIES SOURCE INSPECTION

This Item requires final inspection, test or surveillance by buyers Quality Representative at the seller's facility, prior to shipment. When the product is ready for source inspection, seller shall notify buyer at least two working days in advance to permit scheduling of source inspection. Upon request, seller shall make available; facilities, equipment and personnel to operate the equipment as required.

#### 11. GOVERNMENT SOURCE INSPECTION

This Item requires final inspection, test or surveillance by the US Government at seller's facility, prior to shipment. When the product is ready for source inspection, seller shall notify their Government Representative to schedule source inspection.

Upon request, seller shall make available; facilities, equipment and personnel to operate the equipment as required. If seller is unsure of their Government Representative, they should contact their buyers Purchasing Department or Quality Engineer.

Measuring and Test Equipment: When required, Measuring and Test Equipment shall be made available for use by the Government Representative to determine conformance of contract requirements. In addition, if conditions warrant, seller's personnel shall be made available for operation of such devices and for verification of their accuracy and condition.

Seller shall repeat any measurement and/or test performed to ensure the order requirements have been meet.

# 12. CALIBRATION

Seller's calibration system shall meet the requirements of ANSI/NCSLZ540-1:2006 (R2013)

# 13. CALIBRATION SERVICES

The calibration facility shall be accredited to ISO/IEC 17025 or equivalent. All calibrations must be performed in accordance with ANSI Z 540 (latest revision). The calibration service supplier must provide a certificate of calibration for each service performed including certification including at a minimum:

- Verification of calibration in accordance with ISO/IEC 17025 and ANSI Z 540 requirements;
- Identification of all standards used with certifiable traceability to NIST;

Actual measurements of calibrated equipment vs. standards used;



- Statements describing any adjustments made to the equipment;
- A statement of the environmental conditions at the time of calibration, including both temperature and humidity;
- Unless otherwise specified on the PO, accuracy shall be in accordance with the manufacturer's recommendations;
- Statement of conformance to specification after calibration;
- Condition as received, including any out of specification readings;

Buyer shall be notified immediately if out of specification condition exists.

# 14. ELECTRONIC DISCHARGE PROGRAM (ESD)

Seller shall maintain an ESD Program in accordance with MIL-STD-1686 and/or ANSI/ESD-S20.20.

Areas in which ESD items are handled SHALL be equipped with humidity monitoring devices. When the relative humidity drops below the permitted lower limit of 30%, all work on ESDS items SHALL cease until either:

- The relative humidity increases to at least the lower limit or,
- Ionization equipment utilized at the ESD workstation must be turned on and properly positioned with respect to the product and operated in accordance with the manufacturer's operating instructions.

# 15. HINSON INDUSTRIES' FURNISHED MATERIAL

Strict accountability of all buyers' material furnished on this order must be maintained. Seller shall attach to the packing slip covering each shipment of articles a statement certifying that:

- The articles are manufactured from material furnished by buyer;
- The articles are from material of lot number(s) identified on the material or buyers' shipper;
- Material substitution was not made. If more than one lot of material is furnished, seller shall maintain individual material lot integrity.

#### 16. DISTRIBUTOR WAREHOUSE

If seller does not maintain an AS9120 Certification, seller shall:

 Maintain a control system for the identification, storage, stock rotation, handling, and packaging of articles to ensure that manufacturer's quality levels are not degraded;



- Use applicable specifications to determine requirements for handling, storage and packaging;
- Inspect articles upon receipt and prior to shipping for identification and damage.

# 17. NON-FRANCHISED DISTRIBUTORS (BROKER)

Seller shall maintain a Material Authenticity program that aligns and is consistent with SAE AS5553

Seller shall maintain objective evidence of supply chain traceability to the original manufacturer, authorized aftermarket manufacturer, or manufacturer.

Examples of traceability documents indicating proper component transfer from one company to another in the supply chain include but are not limited to: packing slips, receiving documents, purchase orders, and shipping documents. Certificates of Conformance from non- franchised distribution sources are not adequate to meet the supply chain traceability requirements. The seller shall request and obtain buyer's authorization prior to shipping product.

If evidence of supply chain traceability to the OCM/OEM is not available, then seller shall have all components submitted to an inspection/test service provider to verify for authenticity prior to shipment. Verification shall include the following:

- All packaged active electronic components and packaging labeling are consistent and that component marking meets permanency and black topping tests.
- High magnification digital photographs of top and bottom of one component for each date code provided in the delivery and a photograph of the packaging.
  Component marking and packaging labeling must be clearly legible in the photographs.
- Component and package markings such as date/lot code shall be validated with the manufacturer or by comparison to other authentic components or images.
- All packaged components shall be inspected for manufacturer and Mil-Spec required markings and dimensions in accordance with MIL-STD-883 and IDEA-STD-1010.
- 100% of the components shall be tested to all specified limits of all group A static DC parameters at ambient temperature specified per applicable drawing or in accordance with the applicable industry/military requirements or manufacturers data sheet.
- Seller shall hold the lot for buyer's review, if 100% (Group A) test failures exceed 10% of the lot quantity. Product containing these components shall not be shipped unless authorized in writing by buyer.



- Packaged components with internal die cavities, unless the seller requests and obtains buyer approval, both De-cap and X-Ray is required as follows:
- De-Cap internal visual on at least one component for each date code performed in accordance with MIL-STD-883, Method 2014 and IDEA-STD-1010, with digital photograph(s). Seller shall verify die topology and markings are authentic with the OCM/OEM/AAM or by comparison to other authentic components or images.
- 100% X-Ray inspection per MIL-STD-883, Method 2012 (digital format).
- Seller shall verify any mixed construction and/or construction anomalies within a single date code identified in the De-cap or X-Ray inspection to be authentic by the OCM/OEM or validated against a known authentic component prior to shipment. For bare die products, inspect for consistent markings on the die and the wafer packaging and verify die size and geometry (visual inspection per MIL-STD-883, Method 2010). Seller shall verify die topology and markings are authentic with the OCM/OEM or by comparison to other authentic components or images. Mixed construction shall be cause for rejection.

Seller shall maintain verification records and results, including a copy of X-Ray and digital photographs, for the components that pass the inspection and test above. Seller shall not ship components which fail these tests/inspections nor utilize such components in circuit card assemblies or other products delivered to buyer.

# **Buyer Approved Test Houses:**

Verification as required in this clause shall be completed by one of the following approved test providers. Request for additional test providers can be made to buyer but shall not be utilized without a purchase order amendment or an approved deviation.

- Integra Technologies 3450 N. Rock Road, Wichita, KS
- Velocity Electronics 2208 Energy Dr. Austin, TX
- SMT Corporation 14 high Bridge Road, Sandy Hook, CT
- Electro Product Management Inc -5 Daniel Rd East, Fairfield, NJ
- Electro-Comp Services, Inc 3634 131st Avenue, Clearwater, FL
- Premier Semiconductor Services 11701 28th St. N. St. Petersburg, FL.
- Anloy Technologies 1924 American Dr., Lago Vista TX

#### 18. END-OF-LIFE NOTIFICATION

Seller shall monitor obsolescence (EOL) as follows:

Known obsolescence: Part is no longer in production by the manufacture.

Potential obsolescence: Part is nearing the End-of-Life cycle.



The End-of-Life Policy only applies to End-of-Life and End-of-Sale announcements. The general policy guidelines are as a general rule, seller shall provide three (3) months notification of the affected product's end-of-sale date and/or the last day when the affected product can be ordered.

#### 19. PRODUCT CHANGE NOTIFICATION

Seller shall provide (3) three months notification of any major change that may impact form, fit or function, endurance or reliability prior to implementing any noticeable changes. Product Change Notice must contain below information:

- Part Number
- Change description
- Change of manufacturing location
- Change in fabrication processes
- Change in raw materials used in fabrication process
- Reason for product change
- Recommended Replacement/Action
- Schedule including effective date, Last-Buy-Order date and Last-Buy-Shipment date

# 20. DFARS 252.225-7014

Specialty metals shall be melted in the United States or a qualifying country, or they can be melted anywhere but must be "incorporated in an article manufactured in a qualifying country". The clause allows a qualifying country to manufacture parts from metal that was melted anywhere, provided it meets all required specifications, but a United States company can only use metal that was melted in the United States or a qualifying country.

As of the date of this document, the qualifying countries are; Australia, Belgium, Canada, Czech Republic, Denmark, Egypt, Estonia, Federal Republic of Germany, Finland, France, Greece, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom of Great Britain and Northern Ireland

# 21. EXPORT CONTROLS

Seller agrees to comply with all U.S. export laws and regulations and agrees not to transfer any export controlled item, data or services, to foreign persons without the authority of export authorization.



Seller shall immediately notify buyer if seller is listed in the Denied Parties List or if Seller's export privileges are otherwise denied, suspended or revoked in whole or in part by any U.S. Government entity or agency.

Please refer to DFARS 225-872-1 and refer to DFARS 252.225-7014 for further clarification.

### **22. ITAR**

Seller shall adhere to ITAR compliance requirements to perform work or service involving ITAR compliance.

In accordance with ITAR 22 C.F.R. 120-130 International Traffic in Arms Regulation, all documents identified as ITAR controlled shall be identified, controlled and segregated from Non-ITAR documents. Documents identified as ITAR controlled shall be viewed only by a U.S. Person.