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| TITLE: First Article Inspection of Purchased Product | |
| DOCUMENT #: 1022778 | REV #: A |
| DOCUMENT CLASS: K-QA WRK | |
| RESPONSIBLE DEPT: QA | REF. QMS 7.4.3 |

Purpose of this Document: Provide guidelines for the performance of First Article Inspection of purchased product.

Document Applies to: K&L Microwave, Salisbury Operations

Definitions and Acronyms:

FIRST ARTICLE INSPECTION (FAI): A complete, independent, and documented physical and functional inspection process to verify that prescribed production methods have produced an acceptable item as specified by engineering drawings, planning, purchase order, engineering specifications, and/or other applicable design documents.

The purpose of the First Article Inspection is to provide objective evidence that all engineering design and specification requirements are properly understood, accounted for, verified, and documented. It affirms the manufacturing process resulted in a product that meets the defined requirements, and subsequent production can proceed with confidence, to produce acceptable product in terms of fit, form, and function.

AS9102- Aerospace First Article Inspection Requirement

COTS-Commercial-off-the-Shelf also known as Standard Catalog Hardware

Work Instruction

NOTE: A successful completion of first article inspection does not relieve the supplier from performing usual quality conformance inspection of outgoing lots.

1.0 **Purchasing** – Refer to 1001302, Global Process for the First Article Flow of Purchased Parts to determine if First Article Inspection is required. Unmodified COTS parts are exempt.

2.0 **Supplier** - Unless FAI is to be accomplished in accordance with AS9102, the supplier's own format may be used for the FAI report. When FAI per AS9102 is required the supplier will perform a "Detail" FAI, using the forms contained in the Appendix of AS9102. Complete the forms using the instructions in the AS9102 Appendix.

2.1 Regardless of format:

2.1.1 All forms shall be completed either electronically or in ink. All forms shall be completed in English.

2.1.2 All requirements must be listed on the report.

2.1.2.1 Include all specified characteristics, for example, linear dimension, diameter, radius, flatness, surface finish, etc.

2.1.2.2 Measured dimensions may be recorded directly on a copy of the part outline drawing. Dimensions, their associated tolerances, and the actual measured recorded values must be shown.

2.1.2.3 Include an indication of acceptance of non-measured characteristics, for example, material call-out.

2.1.2.4 Include remarks, if applicable, for each characteristic.

2.1.2.5 Include additional notes or comments if applicable.

2.1.2.6 Where notes appear on the drawing, compliance with the notes must be recorded on the First Article Inspection Report.

2.1.2.7 Include Purchase Order Quality clauses and indication of compliance on the First Article Inspection Report.

2.1.2.8 Additional documents may be required as part of the First Article Inspection Report, for example, material certifications, plating thickness reports, or special process certifications.

2.2 FAI will be performed on new Product representative of the First Production Run. FAI shall NOT use prototype parts, or parts manufactured using methods different from those intended for the normal production process.



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- 2.3 If a nonconformance is identified on a First Article unit, the cause of the nonconformance must be identified and corrected. A second unit that has been through the corrected process will undergo First Article inspection.
- 2.4 Original FAI reports and supporting documentation shall be included with delivery of the initial first article.
- 2.5 **“Delta” FAI** - A partial FAI that accounts for subsequent changes that occur from the original FAI over time. Partial or re-accomplishment of First Article Inspection: The FAI requirements may be satisfied by a partial FAI that addresses differences between the current configuration and prior approved configurations.
 - 2.5.1 A Delta FAI is performed on the characteristic(s) affected by the change.
 - 2.5.2 Examples of when a Delta or New FAI is required:
 - 2.5.2.1 Change in the design affecting fit, form, or function of the part.
 - 2.5.2.2 Change in manufacturing source(s) processes, inspection methods, location of manufacturing, tooling or materials, numerical control or translation, a natural or man-made event that can potentially affect fit, form, or function.
 - 2.5.2.3 Lapse of production if greater than two years.
- 2.6 The First Article Inspection report will be sent to K&L with the clearly-identified First Article part. A copy will be retained by the supplier. Record retention shall be as specified in K&L Supplier Policy Manual, 1010603.
- 3.0 **K&L Quality Assurance**-Review the Supplier’s FAI report and process in accordance with documents 1001302 and 1001300, First Article Approval Form.

Records Required:

Supplier First Article Inspection Report
Completed 1001300, First Article Approval Form