



**SUPPLIER QUALITY MANUAL**  
**FOR**  
**KORRY ELECTRONICS COMPANY SUPPLY CHAIN**

Prepared by:  
Korry Electronics Co.  
11910 Beverly Park Road  
Everett, WA 98204  
<http://www.korry.com>  
CAGE 81590

**Proprietary Notice:** This document and all information and expression contained herein are the property of Korry Electronics Co. This document contains trade secrets protected by the Uniform Trade Secrets Act and the Economic Espionage Act of 1996, 18 USC 1831, et. seq., which are disclosed to you in confidence. Neither this document nor the trade secrets disclosed herein may be used, reproduced or disclosed (in whole or in part) by you for any purpose without the prior written permission of Korry Electronics Co.

Generic\_DID\_Template.dotx  
03/2019

**NOTICE:** This document only contains business process information.  
It does not contain technical data as defined in 15 CFR 772 or 22 CFR 120.10.  
This document is not subject to U.S. export controls under the EAR or the ITAR.

## RECORD OF REVIEW AND HISTORY

REV	DESCRIPTION	APPROVED	
		DATE (YYYY-MM-DD)	BY (Finitial/Lname)
-	Initial release. Per ECO0153169.	2019-12-20	M. Gravert

See separate ECO for revision approvals.

Document initiated by: Matthew Gravert, Supplier Quality Manager

## TABLE OF CONTENTS

1. INTRODUCTION.....	4
1.1 Purpose .....	4
1.2 Scope .....	4
2. APPLICABLE DOCUMENTS .....	5
2.1 Government Documents.....	5
2.2 Non-Government Documents .....	5
2.3 Order of Precedence .....	7
3. SUPPLIER QUALITY REQUIREMENTS .....	8
3.1 Quality Management System Requirements .....	8
3.2 Communication with Korry.....	9
3.3 Purchase Order Requirements and Contract Review .....	9
3.4 Compliance.....	10
3.5 Right of Entry.....	11
3.6 Preservation.....	11
3.7 Identification and Traceability .....	13
3.8 Recordkeeping.....	14
3.9 Korry Provided Property .....	14
3.10 Training, Competence and Awareness.....	15
3.11 Monitoring and Measurement of Product.....	16
3.12 Control of Measurement and Monitoring Equipment.....	17
3.13 Variation Management.....	17
3.14 Control Plans .....	18
3.15 Non-Conforming Product .....	18
3.16 Permanent Corrective and Preventive Action .....	19
3.17 Management of Supply Chain.....	20
3.18 Counterfeit Parts Prevention.....	21
3.19 Electronic Component Management Plan (ECMP):.....	22
3.20 Obsolescence .....	22
3.21 Management of Change in Parts, Processes and Documents .....	22
3.22 First Article Inspection .....	23
3.23 Production Part Approval Process (PPAP) .....	24
3.24 Packaging and Labeling .....	25
3.25 Delivery Documentation.....	25
3.26 Special Processes .....	28
3.27 FAA Maintenance Provider Requirements.....	29
3.28 Delegated Source Inspection.....	30
3.29 Supplier Performance Measurement and Metrics.....	30

## LIST OF TABLES

Table I. Specifications, Standards, and Handbooks.....	5
Table II. Non-Government Documents.....	5
Table III. Industry Standards .....	6

## 1. INTRODUCTION

### 1.1 Purpose

The purpose of this Supplier Quality Manual is to define the quality requirements for all production suppliers and their sub-tiers that provide processes, products and / or services to Korry Electronics Company, referred to as Korry throughout the remainder of this document. While the goal of this manual is to assure Korry and its customers receive the highest quality product, suppliers are responsible for the quality of their process, products and / or services.

Korry is committed to Continuous Improvement with an ultimate goal of Zero Defects. To achieve this goal we need our suppliers to be committed as well. Korry intends to establish and maintain long-term partnerships with our suppliers who are committed to continuous improvement in quality, delivery and cost. This Supplier Quality Manual outlines our basic quality requirements, which will be used as the foundation to drive continuous improvement throughout the supply chain.

### 1.2 Scope

This Supplier Quality Manual is to be used by all production suppliers and their sub-tier suppliers that provide processes, products and / or services to Korry.

**2. APPLICABLE DOCUMENTS****2.1 Government Documents**

The following documents form a part of this document to the extent specified herein. If no issue or date are specified the latest issue shall be used.

Table I. Specifications, Standards, and Handbooks

<b>Document</b>	<b>Title</b>
14 CFR Part 145	Air Agency Certification
DFARS 252.204	Safeguarding Covered Defense Information and Cyber Incident Reporting
FAA - A449	Antidrug and Alcohol Misuse Prevention Program
NIST SP 800-171	Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations

**2.2 Non-Government Documents**

The following documents form a part of this document to the extent specified herein. If no issue or date are specified the latest issue shall be used.

Table II. Non-Government Documents

<b>Document</b>	<b>Title</b>
D35524-001	Subcontractor Assembly Flow-down per Electronic Component Management Plan
D36233	QA Provisions Purch Elect Assy
D40124	LED CCA Specification Document
SQE010	Purchase Order Quality Notes
SQE400	Supplier Corrective Action Request
SQE401	Supplier Corrective Action Notification
SQE402	Supplier Corrective Action Request Form

Table III. Industry Standards

Documents	Title
ANSI/NCSL Z540.3	Requirements for the Calibration of Measuring and Test Equipment
ANSI/ESD S20.20	Protection Of Electrical And Electronic Parts, Assemblies And Equipment (Excluding Electrically Initiated Explosive Devices)
AS13003	Measurement System Analysis Requirements for the Aero Engine Supply Chain
AS5553	Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition
AS6174	Counterfeit Material; Assuring Acquisition of Authentic and Conforming Material
AS7003	Nadcap Program Requirements
AS9003	Inspection and Test Quality System
AS9100	Quality Systems – Aerospace – Model for Quality Assurance in Design, Development, Production, Installation and Servicing
AS9102	Aerospace First Article Inspection Requirement
AS9103	Variation Management of Key Characteristics
AS9110	Quality Maintenance Systems – Aerospace – Requirements for Maintenance Organizations
AS9120	Quality Maintenance Systems – Aerospace Requirements for Stockist Distributors
AS9138	Aerospace Series – Quality Management System Statistical Product Acceptance Requirements
AS9146	Foreign Object Damage (FOD) Prevention Program – Requirements for Aviation, Space, and Defense Organizations
EIA-STD-4899	Standard for Preparing an Electronic Components Management Plan
IEC 61340-5-1	Electrostatics – Part 5-1: Protection of Electronic Devices From Electrostatic Phenomena – General Requirements
IEC 62239-1	Process Management for Avionics – Management Plan – Part 1: Preparation and Maintenance of an Electronic Components Management Plan
IPC/JEDEC J-STD-033	Handling, Packing, Shipping and Use of Moisture/Reflow Sensitive Surface Mount Devices
ISO 10012	Measurement Management Systems – Requirements for Measurement Processes and Measuring Equipment
ISO 17025	General Requirements for the Competence of Testing and Calibration Laboratories
NAS 412	Foreign Object Damage (FOD) Prevention Guidance Document

## 2.3 Order of Precedence

In the event of a conflict between this document and the references cited herein, the order of precedence shall be as follows:

- Korry Purchase Order
- Korry Drawing / Specification
- Korry Contract / Long Term Agreement
- Korry Supplier Quality Manual
- All other documents cited herein and others as referenced by those documents

**3. SUPPLIER QUALITY REQUIREMENTS****3.1 Quality Management System Requirements****3.1.1 General:**

The supplier shall maintain a Quality Manual that documents the processes within the Quality Management System (QMS) that demonstrate their commitment to meeting customer expectations of delivering quality products, processes and/or services. The supplier must promptly notify Korry of any changes to the supplier's Quality Management System that may impact the capability of fulfilling the contract / purchase order.

**3.1.2 Quality Management Certification:**

The supplier shall have and maintain a Quality Management System compliant with the following requirements specified based on the supplier type:

<b>Supplier Type</b>	<b>Certification Requirement</b>
Manufacturer	AS/EN/JISQ 9100
Distributor	AS/EN/JISQ 9120
Special Processor	AS9003 or satisfactory audit to Nadcap (AC7004)
Material & NDT Laboratories	ISO 17025, or AS9003, or satisfactory audit to Nadcap (AC7004)
Calibration Laboratory	ISO 17025
Software Supplier	AS/EN/JISQ 9100 and AS/EN/JISQ 9115
Repair and Overhaul	AS9100 or AS9110, and National Aviation Authority Certification (Local and/or international regulatory agency)

The supplier shall notify Korry within 24 hours of loss of certification or major audit finding by their ANSI National Accreditation Board (ANAB) accredited third party registrar.

**3.1.3 Quality Representative:**

The supplier shall promptly notify Korry of any changes in their Quality Representative who has responsibility as Korry's quality contact.

**3.1.4 OASIS and Nadcap Information Access:**

The supplier shall permit Korry access to all data in the International Aerospace Quality Group's Online Aerospace Supplier Information System (OASIS) and the Performance Review Institute (PRI) Nadcap databases. Korry may input escape data, audit findings and delinquent responses into the OASIS database feedback process.



**3.1.5 Supplier Sub-tier QMS Requirement:**

The supplier's sub-tiers providing products, processes, and/or services are responsible for maintaining Quality Systems that are compliant to the applicable Korry Quality Management System Requirements, including the requirements of this Supplier Quality Manual. Supplier's sub-tiers that are not certified to the applicable registration per section 3.1.2 are subject to periodic compliance audits by Korry at the expense of the supplier.

**3.1.6 Calibration Vendor Requirement:**

All calibrations performed shall be compliant with at least one of the following:

- a. Traceable to NIST;
- b. Obtained from independent reproducible standards derived from acceptable values of natural physical constraints;
- c. Derived from the ratio type of self-calibration techniques.

**3.2 Communication with Korry****3.2.1 General:**

All communication shall be through a Korry Supply Chain Representative (Buyer, Commodity Manager, and/or Supplier Quality Representative). Supplier shall only accept agreements and instructions in writing. Verbal agreements or instructions shall under no circumstances be construed as approval or authorization to proceed.

**3.2.2 English Language:**

The supplier shall have the capability to communicate in English for written and verbal transaction with Korry. Quality records provided to Korry shall be in English. Any documents for internal use by the supplier may be in English or supplier's native language. In cases of conflict, the English language document takes precedence. Upon Korry's request, the supplier's documents shall be translated to English and any associated translation fees may be charged to the supplier.

**3.3 Purchase Order Requirements and Contract Review****3.3.1 General:**

The supplier shall have a documented contract review process that requires cross-functional review and approval.

### **3.3.2 Purchase Order Quality Notes:**

In addition to the quality requirements specified herein, Korry production contract / purchase order may contain unique quality requirements designated with Quality Notes.

It is the responsibility of the supplier to review each contract / purchase order to ensure their capability of meeting the most recent revision of requirements specified in SQE010 – Purchase Order Quality Notes on the Supplier Information webpage of Korry’s website: <https://korry.com/SupplierInformation>

## **3.4 Compliance**

### **3.4.1 Awareness:**

It is necessary for the supplier to recognize its contribution and responsibility for:

- a. Product or service conformity;
- b. Product safety; and
- c. The importance of ethical behavior. This means acting with integrity and honesty, meeting commitments, bringing value to our customers and ensuring that your employees and sub-tier suppliers act accordingly. We expect that you will report any situation where you observe or suspect any unethical or illegal activity relating to Korry, including any unethical or illegal conduct by any of our employees or representatives.

### **3.4.2 Export Control / ITAR:**

Any item or technical information pertaining to any contract / purchase order subject to Export Control laws shall not be provided to or accessed by a non-U.S. person, entity, foreign country or any Denied Party without the prior written authorization from Korry and, where applicable, the relevant U.S. Government Agency.

Korry is committed to the highest standards of business ethics and this includes compliance with laws governing international trade and export regulations. Korry's export compliance policies ensure that Korry and its supplier base is in compliance with the Export Administration Regulations (EAR), the International Traffic in Arms Regulations (ITAR), and Office of Foreign Assets Control (OFAC).

### **3.4.3 Defense Federal Acquisition Regulation Supplement (DFARS):**

As a supplier to Korry, if your company provides products being sold to the Department of Defense (DoD) you are required to comply with the minimum cybersecurity standards set by Defense Federal Acquisition Regulations (DFARS).

All DoD contractors that process, store or transmit Controlled Unclassified Information (CUI) must meet DFARS minimum security standards. DFARS provides a set of adequate security controls to safeguard information systems where contractor data resides. Based on NIST Special Publication 800-171 “Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations”, manufacturers must implement these security controls through all levels of their supply chain.

### **3.4.4 REACH, Conflict Materials, Human Trafficking, Hazardous Material:**

Korry has contracted the services of a third party provider, Assent Compliance, to act as our agent for all REACH, Conflict Minerals, Anti-Slavery, Human Trafficking and Hazardous Material Declaration responses and requests. We expect that you will respond with integrity and honesty to all requests made by Assent on Korry’s behalf.

## **3.5 Right of Entry**

### **3.5.1 General:**

The supplier shall allow Korry and Korry’s customers and regulatory agencies right of entry into a supplier’s facility to verify the quality of work, applicable records and material at any place, including the supplier’s sub-tiers’ facilities. The supplier agrees to provide reasonable assistance to these efforts. When on-site verification of contract / purchase order conformance is required, the supplier shall provide the equipment, facilities and personnel necessary for the Korry representatives to verify compliance.

### **3.5.2 Records:**

Korry reserves the right to access records at the supplier or its sub-tiers involved in the manufacture of Korry product. The supplier shall make the records available within two business days of the request for access.

## **3.6 Preservation**

### **3.6.1 General:**

The supplier shall preserve the outputs during production and service provision, to the extent necessary to ensure conformity to requirements. Preservation of outputs shall include, when applicable, provisions for:

- a. Cleaning;
- b. Prevention, detection, and removal of foreign objects;
- c. Special handling and storage of sensitive products;
- d. Marking and labeling, including safety warnings and cautions;

- e. Shelf life control and stock rotation;
- f. Special handling and storage of hazardous materials.

### **3.6.2 Foreign Object Debris/Damage:**

The supplier shall maintain a Foreign Object Debris Prevention Program compliant with National Aerospace Standard NAS 412 "Foreign Object Damage / Foreign Object Debris (FOD) Prevention" or SAE AS9146 "Foreign Object Damage (FOD) Prevention Program". For further guidance refer to SAE International Aerospace Quality Group's Supply Chain Management Handbook Section 3.4.

### **3.6.3 Electrostatic Sensitive Devices:**

If handling electrostatic sensitive devices, the supplier shall maintain an Electrostatic Discharge Control Program compliant with an industry-recognized standard such as ANSI/ESD S20.20 or IEC 61340-5-1.

### **3.6.4 Moisture Sensitive Product:**

To protect moisture sensitive parts the supplier shall handle, package, ship and process per the requirements of IPC/JEDEC J-STD-033 unless specified in design documentation.

### **3.6.5 Refrigerated / Frozen / Cryogenically-Stored Product:**

For refrigerated, frozen, or cryogenically-stored product, the supplier shall display the type of storage necessary on the outside of the package. Packages shall be adequately thermally insulated to ensure temperature requirements are maintained through reasonably anticipated transportation, in-transit delays, transfers and destination.

### **3.6.6 Shelf Life Sensitive Products:**

#### **3.6.6.1 Direct to Korry:**

Korry Electronics Company purchase orders may be orders for shelf life sensitive materials. These parts will be identified in the part's extended description: "Shelf Life Req'd – refer to QA & purchasing reqts Q13A" and represented by Q13 on the Korry contract / purchase order.

The supplier shall ensure shelf life sensitive materials have at least two-thirds of their shelf life remaining at the time of delivery. The material's expiration date shall be recorded on the Certificate of Conformance. Refer to section 3.25 for additional delivery documentation requirements. This requirement also applies to any raw material that has been converted by the supplier (i.e. cut pressure sensitive adhesive).

Any exceptions to these requirement, requires the supplier to obtain prior approval in the form of a modified purchase order from Korry prior to shipment in accordance with section 3.2.

### **3.6.6.2 Integrated into Korry Product:**

Assemblies supplied to Korry Electronics Company may be comprised of shelf life sensitive subcomponents (i.e. adhesives applied to assemblies). It is the responsibility of the supplier to ensure subcomponents are within their expiration date at the time of assembly, and to maintain quality records demonstrating said compliance.

## **3.7 Identification and Traceability**

### **3.7.1 General:**

The supplier's traceability records shall provide adequate documentation to determine the configuration of the product shipped to Korry. The supplier of any manufactured product shall maintain traceability records of all purchased items and materials utilized in the production of said product. The supplier shall be able to trace backwards from the shipment to Korry through each level of test and integration back to each lot or serial number (as applicable) of component level purchased items and materials.

In any purchasing case, the supplier shall be capable of demonstrating the traceability to the original source of manufacture. Component traceability must provide complete chain of custody through the delivery to Korry.

Upon request, the supplier shall be able to provide the following information within 48 hours:

- a. Purchased component name;
- b. Component part number;
- c. Component revision;
- d. Reference designator(s);
- e. Quantity used per assembly;
- f. Lot number(s) and/or serial number(s)
- g. Certificates of Conformance tracing back to the OEM for each component.

The supplier's traceability system shall account for all processing history, including:

- a. Process name;
- b. Date and time;
- c. Location; and
- d. Operator identification of the personnel performing the process function.

The supplier's traceability system shall account for all components that require replacement past initial installation. Product losing their traceability shall be treated as non-conforming materials in accordance with section 3.15.

### **3.7.2 Acceptance Authority Media:**

Any person who performs an operation or inspection on Korry product must have their identification recorded on the work order traveler and managed by an appropriate method to provide traceability of operations. When Acceptance Authority Media is used, the supplier shall maintain a documented control system to ensure the correct and legitimate use of all manufacturing and inspection authority media. The use of acceptance authority media shall be restricted to authorized personnel as identified in the acceptance authority media control system (i.e. stamp control). Acceptance authority media shall be traceable to the individuals responsible and qualified for their use.

## **3.8 Recordkeeping**

### **3.8.1 Record Retention:**

The supplier shall retain records relating to processing, testing, calibration, manufacture, supply, and certification until the end of the life of the product or minimum of fifteen (15) years from date of last shipment to Korry. Any loss or potential compromise of any records must be reported to Korry without delay.

### **3.8.2 Record Destruction:**

Requests to destroy official Korry information locally on the supplier's site must be authorized by Korry Supply Chain Representative in accordance with Korry's contract conditions. A cross-cut shredder shall be the only acceptable means to destroy hard copy Korry information. If the supplier is unable to destroy Korry information in such a way, the supplier shall notify Korry to develop an alternative destruction plan.

## **3.9 Korry Provided Property**

### **3.9.1 General:**

All materials (tooling, equipment, products, etc.) used by the supplier at Korry's expense, or supplied by Korry for suppliers use, shall be considered property of Korry. Korry's property shall be properly identified with the following elements unless otherwise specified:

- a. "Property of Korry Electronics";
- b. Part number of tool / equipment;
- c. Inspection date and re-inspection due date; and
- d. Calibration date and re-calibration due date (if applicable).

Korry property shall be exclusively used for fulfilling the contract / purchase order for which they were supplied, unless written authorization from Korry. The supplier shall have an inventory controlling system for all Korry property that assures its proper use and storage to prevent loss or damage. The supplier shall notify Korry within 48 hours of any Korry provided property being lost or damaged.

### **3.9.2 Inspection and Calibration:**

Unless otherwise specified, all Korry's property used to determine acceptance of material will be subject to, at a minimum:

- a. An initial inspection and calibration; and
- b. Periodic re-inspection and recalibration thereafter by the suppliers.

### **3.9.3 Korry and Korry Customer Owned Tooling:**

Suppliers who possess Korry owned or Korry's customer owned tooling shall notify Korry regarding the status and location of all applicable tooling. Reasons for notification include but not limited to: initial receipt, need for repair, transferred outside of the supplier's facility, newly fabricated, remastering, and calibration. It is the responsibility of the supplier to maintain Korry owned / Korry's customer owned tooling in good working condition while in their possession at their facility. The supplier shall provide an updated list and report the condition of all tooling on an annual basis, or as agreed with Korry.

## **3.10 Training, Competence and Awareness**

### **3.10.1 General:**

The supplier shall ensure personnel processing orders or performing work affecting conformity to product or service are trained and aware of the relevance and importance of their activities in relation to meeting the requirements of Korry's contract / purchase orders and associated documentation.

### **3.10.2 Skills Matrix:**

The supplier shall at a minimum produce a skills matrix which details the training undertaken by suppliers' staff / operators in relation to the processes specific to Korry's product. The skills matrix shall be maintained by an appropriate supervisor / manager or Human Resources Department and demonstrate control of applicable activities. In addition, the skills matrix procedure shall detail how the organization plans to deal with the risks associated with highly skilled operators during times of sickness, leave, and succession planning.

### **3.10.3 IAQG Supply Chain Management Handbook:**

It is highly recommended that the free resources provided by the International Aerospace Quality Group's Supply Chain Management Handbook are utilized to their full potential by all suppliers. These online documents contain invaluable training and guidance material to assist with the advancement of best practices within the Aviation, Space and Defense Industries including but not limited to: First Article Inspections, Configuration Management, Quality Plans, Counterfeit Management, FOD Prevention, and Contract Review.

## **3.11 Monitoring and Measurement of Product**

### **3.11.1 General:**

The supplier is responsible for all tests and inspections of the product during receiving, manufacture and final inspection. The supplier shall inspect or otherwise verify all products, process and/or services, including components procured from or furnished by sub-tiers, comply with all requirements prior to shipment to Korry. The supplier agrees to furnish copies of test and/or control data upon request.

### **3.11.2 Sampling Plans:**

The supplier shall perform 100% inspection for in-process and final inspection, or conform to the requirements of AS9138 when implementing statistical sampling methods. The sampling plan shall meet the recommended minimum probability of conformance level specified in AS9138 Table A1 and  $C = 0$ . Korry reserves the right to disallow a supplier's statistical sampling method for product acceptance, and conduct surveillance at the supplier's facility to assess conformance to the requirements of AS9138.

### **3.11.3 Eye Examinations:**

The supplier shall implement procedures to ensure eye examinations, including visual acuity and color perception, as applicable, are administered by a medically qualified / trained person to all individuals performing visual inspection and/or other product acceptance activities that require visual acuity. Visual acuity shall be confirmed on an annual basis in at least one eye, either corrected or uncorrected. Color perception is only required once. Examinations shall be compliant to Snellen 14/18, (20/30), or Jaeger 2. Records shall be retained for each individual and made available to Korry upon request.

### **3.11.4 Raw Material Acceptance via Test Reports:**

When the supplier utilizes test reports to accept raw material, test reports must be checked 100% against requirements and applicable specifications. In addition, the supplier must periodically validate test reports. Frequency of validation should be based on historical



performance of the raw material provider. Both the raw material provider's test reports and the validation test reports must be retained per section 3.8.

### **3.12 Control of Measurement and Monitoring Equipment**

#### **3.12.1 General:**

The supplier's management system for the control of monitoring and measuring equipment shall be compliant with one of the following:

- a. ISO 10012;
- b. ISO 17025;
- c. ANSI/NCSL Z540.3;

The supplier shall select all monitoring and measuring equipment with a minimum accuracy ratio of 4 to 1, unless otherwise specified.

#### **3.12.2 Significant-Out-Of-Tolerance:**

The supplier shall document an impact review whenever monitoring and measuring equipment is identified with a Significant-Out-Of-Tolerance condition (>25% Out-Of-Tolerance) and notify Korry within 24 hours of discovery if impacted product has been shipped to Korry. Refer to section 3.15.2 for guidance on Notification of Escape.

#### **3.12.3 Measurement System Analysis:**

Measurement System Analysis (MSA) is used to determine if a process measurement system is reliable and accurate. The supplier shall perform an MSA on all measurement systems used to measure Korry's Key Characteristics. When performing an MSA, the supplier shall comply with the requirements of AS 13003 Table 2.

### **3.13 Variation Management**

#### **3.13.1 Key Characteristics:**

Drawings with Key Characteristics flagged shall be managed by the supplier in accordance with AS9103. The supplier shall implement effective controls to minimize variation in Korry's identified Key Characteristics. Each Key Characteristic shall be capable of a Cpk that meets or exceeds 1.33.

In addition to key characteristics identified by Korry, the supplier should identify and control any additional key characteristics (process, part, subassembly, or system) that may have a significant influence on product fit, performance, or reducibility of the product.

### **3.14 Control Plans**

#### **3.14.1 General:**

Upon request, suppliers shall develop control plans to address possible or known process or part issues based on Failure Mode and Effect Analysis of their processes. The supplier shall provide a copy of the control plan to Korry and maintain continued compliance to the plan. The supplier shall not implement changes to the control plan without providing prior notification to Korry. Changes to established control plans must be reviewed and approved by Korry.

### **3.15 Non-Conforming Product**

#### **3.15.1 Control of Non-Conforming Product:**

Material that departs from the drawing, specification or requirements shall be identified and controlled to prevent unauthorized use and delivery to Korry or other designated destinations. Quality records documenting the review and approval of disposition shall be maintained, including approval by Korry as required by contract / purchase order.

- a. Non-conforming product that is dispositioned as use-as-is or repair requires approval by an authorized representative of the organization responsible for the design if the non-conformity departs from the contract / purchase order requirements.
- b. Non-conforming product dispositioned as scrap shall be conspicuously and permanently marked or positively controlled until physically rendered unusable.
- c. Non-conforming product that is corrected (reworked) shall be inspected and verified to be conforming to all requirements.

#### **3.15.2 Escape of Non-Conforming Product / Notice of Escape:**

The supplier shall promptly (within 24 hours) notify the Korry Buyer and Supplier Quality Representative when non-conforming product has shipped to Korry. Non-conforming product includes instances where the loss of quality records compromises traceability requirements specified in section 3.7.

Official Notification of Escape shall be in writing and shall include at a minimum:

- a. Part Number(s);
- b. Traceability (lot, serial, and manufacturing numbers);
- c. Ship dates and associated purchase orders;
- d. Quantities;
- e. Description of non-conformance against Korry's requirement(s); and
- f. Signature and date of supplier's quality representative.

The supplier shall immediately begin the Root Cause Corrective Action process to assure full containment is in effect, and document all non-conformance causes and associated actions to prevent recurrence. Refer to section 3.16.1 for deliverable and timing requirements.

To ensure effectiveness of the corrective action, suppliers shall perform 100% inspection of the deviated characteristics for a minimum of the next three consecutive manufactured lots unless otherwise specified by Korry.

### **3.15.3 Sorting and Rework:**

In the event defective product is discovered at Korry and/or Korry's customer location, it is the supplier's responsibility to provide replacement product or sort defective product in accordance with direction given by Korry. Korry reserves the right to sort / rework supplied product at any time to ensure our requirements are not compromised. The supplier will be responsible for all expenses including, but not limited to, Korry administration fees, hourly rate charges for sorting and rework, and travel expenses.

### **3.15.4 Return Material Authorization:**

The supplier shall provide a Return Material Authorization (RMA) number or permission to send non-conforming product back within 24 hours of notification of discrepancy report. If the supplier fails to provide an RMA, Korry reserves the right to scrap on-site or send non-conforming product back without the supplier's authorization.

### **3.15.5 Request for Deviation:**

Korry expects products and services to be delivered in accordance with contract / purchase order requirements (including drawings, specifications and procurement requirements). Korry's approval of deviation does not absolve the supplier of responsibility or guarantee Korry's acceptance upon receipt.

The supplier shall provide prompt written notification of the request for deviation to their respective Korry Supply Chain Representative per section 3.2. Supplier shall obtain a documented waiver from Korry prior to shipment. In addition to the standard delivery documentation, the supplier shall include reference to Korry's waiver number. A copy of the approved waiver must accompany the affected shipment.

## **3.16 Permanent Corrective and Preventive Action**

### **3.16.1 Supplier Corrective Action Request:**

Korry Supplier Quality may request formal corrective action via SQE400 – Supplier Corrective Action Request. It is the supplier's responsibility to review their processes to identify true root causes of nonconforming material and to take the appropriate corrective

action to prevent recurrence. In addition to product/process nonconformities, Korry Supplier Quality may issue corrective action requests stemming from audit findings or to address gaps in supplier performance in areas of On Time Delivery and/or Quality.

Korry expects the following deliverables to be complete by the supplier and communicated to Korry no later than the specified duration (in working days) from notification of corrective action (Day 0). Exceptions to the deadlines require Korry Supplier Quality approval.

<b>Day</b>	<b>Action to be completed</b>
0	Korry transmits Corrective Action Request to supplier.
1	Successful containment confirmed at supplier's facility and/or transit.
5	Root Cause Corrective Action report with the following identified: root cause (both system failure, and non-detection), permanent and irreversible corrective and preventive actions, commitment date(s), and the name(s) of those responsible for the indicated action.
20	Completed Corrective Action report with all corrective actions implemented.

Validation of permanent corrective action taken shall be documented and submitted before the corrective action is closed. A Korry Supplier Quality or designee may require on-site verification in order to close the corrective action. Supplier may be required to present evidence of effectiveness of implemented corrective actions.

### **3.16.2 Supplier Corrective Action Notification:**

Korry Supplier Quality may request the supplier to investigate the defect(s) noted on Discrepancy Reports via SQE401 – Supplier Corrective Action Notification, and ask the supplier to take appropriate corrective action internally to prevent recurrence.

A formal response back to Korry is not required for these notifications, however, the results of the investigation shall be documented and retained on file at the supplier's facility for future reference and review by Korry upon request. Incorporation of identified corrective action is required for all future shipments of the impacted material.

## **3.17 Management of Supply Chain**

### **3.17.1 General:**

The supplier as the recipient of the contract / purchase order shall be responsible for meeting all requirements including work performed by the supplier's sub-tier suppliers.

### **3.17.2 Supplier Evaluation and Selection:**

The supplier shall evaluate and select suppliers based on their ability to comply with the requirements of AS/EN/JSIQ 9100. In addition, the supplier shall evaluate and select special

processors based on their ability to comply with the requirements of Nadcap. The results of the supplier's sub-tier selection process shall be documented and maintained. The supplier shall maintain an active register of approved sub-tiers, which shall be made available to Korry upon request.

### **3.18 Counterfeit Parts Prevention**

#### **3.18.1 General:**

Where appropriate, the supplier shall establish and maintain a counterfeit parts prevention and control plan compliant with AS5553 for electronic components and AS6174 for non-electronic components to ensure that counterfeit work is not delivered to Korry.

All goods to be delivered shall consist of new and unused materials unless otherwise specified on the Korry contract / purchase order. The supplier shall implement appropriate controls to assure product origin and conformance to Korry requirements and related engineering drawings. The supplier shall verify and retain as quality record, that the source of the purchase is authorized by performing the following actions:

- a. Refer to the Approved Manufacture Part List; or
- b. Refer to source controlled drawing, slash sheet or vendor item drawing.

Material that has been acquired directly from an Authorized Source shall have procurement history provided as authorizing traceability documentation to ensure parts have chain of custody to the authorized source. The Authorized Source shall provide a Certification of Conformance certifying the material is the actual part being procured. The Certificate of Conformance from an Authorized Source shall also provide traceability to the OEM or OCM.

#### **3.18.2 Non-Authorized Sources:**

##### **3.18.2.1 General:**

Korry limits procurement from distributors to Authorized Distribution only.

Korry prohibits brokering, which can be defined as:

- a. Sourcing from Non-Authorized Distributors; or
- b. Sourcing from Distributors who buy from other Distributors.

##### **3.18.2.2 Exceptions:**

It is always preferable to buy materials from the OCM or an Authorized Distributor. Special controls are required in the event that material is unavailable from normal authorized channels. Any request for deviation from Authorized Distribution must be approved by Korry.

Material from non-authorized sources shall be segregated. The materials shall have test documentation in accordance with Korry's prescribed Counterfeit Avoidance Testing Statement of Work traceable to each specific lot / date code and shipment that was evaluated.

### **3.19 Electronic Component Management Plan (ECMP):**

#### **3.19.1 General:**

Contract Manufacturers shall develop and comply with an Electronic Component Management Plan (ECMP) that meets the applicable requirements of the latest revisions of IEC 62239-1 or SAE EIA-STD-4899.

To assist with compliance, Korry has developed document D35524-001 - Subcontractor Assembly Facility Requirements Flowdown per ECP for Korry Electronics Co. which can be found on the Supplier Information webpage of Korry's website. This document is intended to help the supplier meet the requirements of IEC 62239-1 or SAE EIA-STD-4899, and can either be used to generate an internal procedure or can be adopted by the supplier as their own ECMP.

#### **3.19.2 Circuit Card Assembly Manufacturers**

Manufacturers of electronic circuit card assemblies (CCA) shall comply with the quality assurance provisions contained in D36233, QA PROVISIONS FOR PURCHASED ELECTRONIC ASSY and/or D40124, LED CCA SPECIFICATION DOCUMENT, when included in the Korry Technical Data Package (TDP).

### **3.20 Obsolescence**

#### **3.20.1 General:**

The supplier shall notify Korry of any impending part obsolescence for all parts that are on open orders or which have been shipped by the supplier to Korry over the previous 24 months. This includes part change notices (PCN) received from manufacturers of electronic components approved for use on Korry designed CCAs. The notification shall occur at the earliest possible point and at least six months prior to the "end of life" order date.

### **3.21 Management of Change in Parts, Processes and Documents**

#### **3.21.1 General:**

Suppliers shall comply with all contractual requirements, including but not limited to Long Term Agreements, Terms and Conditions, and general purchase order provisions agreed between the parties, for notification and approval of changes in design, material,

manufacturing location, manufacturing equipment, production processes, and any other process related to the contract / purchase order.

### **3.21.2 Work Transfer:**

The supplier shall not make any changes to the manner of producing the products without obtaining Korry's prior written consent. Supplier-initiated requests for transfer of work (changing manufacturing locations) shall be provided in writing (including a detailed description of the proposed change) at least 60 days prior to the requested change date and may be accepted or rejected at Korry discretion. Korry reserves the right to request a last time order from the original source to ensure continuity of component supply to ensure no disruption to Korry's supply chain. First Article and/or product requalification costs associated with supplier-initiated work transfers shall be at the expense of the supplier unless otherwise agreed.

In order to manage risk to delivery or quality, the supplier-initiated work transfer will be subjected to a work transfer process. Korry's objective is to efficiently and effectively manage any associated risk by ensuring appropriate actions are executed, and decisions are made at the appropriate times.

Korry may request the supplier to perform a product readiness review checklist and provide evidence of compliance. When planning and executing a transfer of work, the supplier shall take into consideration at a minimum:

- a. Documentation;
- b. Tooling and Gauging;
- c. Facilities and Equipment;
- d. Handling;
- e. Supply Chain;
- f. Health, Safety, Environment (HSE);
- g. Human Resources;
- h. Process and Quality; and
- i. Capacity and Delivery.

## **3.22 First Article Inspection**

### **3.22.1 General:**

A First Article Inspection (FAI) shall be completed in accordance with AS9102 and submitted prior to shipment of parts to Korry. The supplier holding the contract / purchase order is responsible for assuring the completion of the FAI Report for all finished part characteristics, including those generated by sub-tier suppliers.

A Full or Partial First Article Inspection shall be performed for all or affected characteristics when any of the following occurs:

- a. First time build;
- b. Change in design;
- c. Change in manufacturing source, process, inspection method;
- d. Change in manufacturing location;
- e. Change in tooling or materials;
- f. Change in numerical control program or translation to another media;
- g. Natural or man-made event which may adversely affect manufacturing process;
- h. Lapse in production for two years or as specified by Korry.

Korry Electronics may request a complete FAI to be performed in lieu of a partial FAI at any time.

### **3.22.2 Net-Inspect Submission:**

FAI reports shall be submitted via Net-Inspect ([www.net-inspect.com](http://www.net-inspect.com)) unless otherwise specified. The FAI must have “Korry Electronics Co. – Everett” selected as the customer, or the submitted First Article Inspection Report will be rejected. The supplier shall submit the First Article Inspection Report in Net-Inspect prior to shipping parts to Korry. Unless otherwise specified, Korry will review and approve FAI Report upon receipt of subject parts.

### **3.23 Production Part Approval Process (PPAP)**

#### **3.23.1 General:**

The purpose of the Production Part Approval Process is to:

- a. Provide evidence that all Korry engineering design records and specification requirements are properly understood by the supplier; and
- b. Demonstrate that the supplier’s manufacturing process has the ability to produce product that consistently meets Korry’s requirements during normal production runs.

Korry’s Production Part Approval Process is based on the requirements of AS9145 – Requirements for Advanced Product Quality Planning and Production Part Approval Process.



**3.23.2 Submission:**

Upon agreement with the supplier, when PPAP is invoked per the contract / purchase order the supplier shall plan and execute all applicable requirements of Korry's Production Part Approval Process.

**3.24 Packaging and Labeling****3.24.1 General:**

The supplier is responsible for assuring that all items are delivered to Korry without damage or deterioration, and are efficiently and economically packed for the method of transportation and type of handling involved. Refer to the International Safe Transit Association's Test Procedures, Process Standards, & Guidelines when determining acceptable packaging.

**3.24.2 Safe Handling Requirements:**

Large shipments have special packaging requirements to ensure safe handling:

- a. Manually handled containers must not exceed 50 pound maximum weight.
- b. All 55 gallon drums shall be packaged on pallets.

**3.24.3 Packing Slips and Labeling:**

Two copies of packing slips shall accompany each shipment. One copy shall be affixed to the container in a clearly marked envelope in a conspicuous location otherwise approved by Korry. The second copy shall be part of the documentation package in accordance with section 3.25.1.

Each shipping container and intermediate package shall be identified with:

- a. Purchase Order number;
- b. Part number;
- c. Quantity;
- d. Electrostatic Discharge (ESD) sensitive warning (if applicable);
- e. Cautionary handling instructions (if applicable).

**3.25 Delivery Documentation****3.25.1 General:**

One documentation package should accompany each unique lot. The documentation package shall include at a minimum:

- a. Packing Slip;
- b. Certification of Conformance;
- c. Applicable certifications;
- d. Test reports (if applicable).

Each document package shall be grouped without being folded. All documentation delivered shall be legible and reproducible, including stamps and / or signatures.

### **3.25.2 Certificate of Conformance:**

#### **3.25.2.1 Production Vendors:**

A Certificate of Conformance certifying that the shipment complies with all Korry Purchase Order requirements must accompany every unique lot and include the following elements at a minimum:

- a. Name and address of the manufacturer;
- b. Purchase Order number;
- c. Part number;
- d. Part revision;
- e. Quantity delivered;
- f. Signature, title and date of the authorized quality representative;
- g. Date of manufacture or date code (if applicable);
- h. Serial number(s) or lot number(s) (if applicable);
- i. Shelf life (if applicable);
- j. Qualified Parts List Vendor (applicable only for Mil Spec parts).

#### **3.25.2.2 Calibration Vendors:**

A Certificate of Conformance must accompany every unique lot and include the following data elements at a minimum:

- a. Asset number: unique number identifying the individual equipment;
- b. Date calibration was performed;
- c. Calibration interval;
- d. Date Test and Measurement (T&ME) item will be due for calibration;
- e. List of standards used to perform calibration;
- f. Temperature at which calibration was performed;
- g. Percent humidity at which calibration was performed;

- h. Calibration facility/source performing the calibration;
- i. Unique number identifying the calibration certificate;
- j. Calibration technician's identity;
- k. Date and serial number of out-of-tolerance report (if applicable);
- l. Out of tolerance notes/calibration notes: Comments relative to the calibration performed including actual measured value for out-of-tolerance condition;
- m. Seals o.k.: "Y" or "N", indicating whether the item was received with tamper seals intact;
- n. Number identifying the calibration procedure used;
- o. Revision of the calibration procedure used.

### **3.25.3 Shelf Life Sensitive Shipments:**

In addition to the standard identification requirements the supplier shall identify each item, package, or container of shelf life sensitive material with:

- a. Cure or manufacture date;
- b. Expiration date; and
- c. Any special storage and handling conditions.

### **3.25.4 First Article Shipments:**

In addition to the standard delivery documentation, shipments containing a First Article shall include copies of the following documents:

- a. First Article Inspection Report;
- b. Hardware certifications;
- c. Raw material test reports and certifications;
- d. Special processing certifications.

Note: Suppliers of product of their own design are not required to furnish the First Article Report with shipment to Korry. However, the documents shall be made available to Korry upon request.

### **3.25.5 Test Reports:**

#### **3.25.5.1 General:**

Test reports shall not be attached to individually package products. Test reports shall be delivered in accordance with section 3.25.1.

**3.25.5.2 Chemical and Physical Test Reports:**

Suppliers of custom formulated materials and chemicals shall include with each shipment one legible and reproducible copy of all chemical and physical test reports. The test report shall contain at a minimum:

- a. Reference to the applicable test procedure;
- b. Test data with evaluation against the requirement;
- c. Korry's Purchase Order number; and
- d. Signature and title of the authorized representative for the agency performing the test.

Note: Commercial (off-the-shelf) materials purchased to the OEM's part number are exempt.

**3.25.5.3 Functional Test Reports:**

Suppliers who perform functional testing per Korry requirements shall include with each shipment one legible and reproducible copy of the functional test report. The test report shall contain at a minimum:

- a. Reference to the applicable test procedure;
- b. Test data with evaluation against the requirement;
- c. Traceability to the unique part that was evaluated; and
- d. Signature and title of the authorized representative for the agency performing the test.

**3.25.6 Safety Data Sheets:**

Raw material deliveries for chemicals shall include the applicable Safety Data Sheet.

**3.26 Special Processes****3.26.1 General:**

Korry procures products/services that utilize the following special processes:

- a. Chemical Processing;
- b. Coatings;
- c. Electronics;
- d. Heat Treating;
- e. Materials Test Laboratories;
- f. Nonconventional Machining and Surface Enhancement;
- g. Nondestructive Testing; and
- h. Welding.

**3.26.2 Nadcap Certified Suppliers:**

All suppliers performing any of the Korry defined special processes in section 3.26.1 shall be certified to Nadcap and maintain certification. The supplier shall notify Korry within 24 hours of loss of certification or major audit finding.

**3.26.3 Non-Nadcap Certified Suppliers:**

Supplier's performing any of the Korry defined special processes in section 3.26.1 without Nadcap certification shall be issued an approval document by Korry following confirmation of adequate process control and training of personnel.

**3.27 FAA Maintenance Provider Requirements****3.27.1 FAA Certified Repair Stations:****3.27.1.1 Domestic Suppliers:**

The supplier shall be an FAA and EASA certified repair station and shall provide an FAA / EASA dual-release 8130-3 airworthiness certificate with each delivery.

The supplier shall have an active Antidrug and Alcohol Misuse Prevention Program that includes documentation through an A449 Operations Specification.

**3.27.1.2 International Suppliers:**

The supplier shall be an FAA and EASA certified repair station and shall provide an FAA / EASA dual-release 8130-3 airworthiness certificate with each delivery.

**3.27.2 Non-FAA Certified Repair Stations:****3.27.2.1 Domestic Suppliers:**

Any repair station without FAA certification must have a quality control system that includes a description of the system and procedures used for compliance to 14 CFR 145.211 requirements.

The supplier shall have an active Antidrug and Alcohol Misuse Prevention Program.

**3.27.2.2 International Suppliers:**

Any repair station without FAA certification must have a quality control system that includes a description of the system and procedures used for compliance to 14 CFR 145.211 requirements.

The supplier shall comply with one of the following:

- a. The supplier shall be an EASA certified repair station and shall provide an EASA Form 1 airworthiness certificate with each delivery; or
- b. The supplier shall be a certificated repair station through their local Civil Aviation Authority and shall provide an airworthiness certificate appropriate to their local Civil Aviation Authority with each delivery.

### **3.28 Delegated Source Inspection**

#### **3.28.1 General:**

Delegated source inspection, commonly referred to as Dock to Stock, may be granted to suppliers based on the needs of the business and the supplier's performance. Korry is responsible for the final approval of all delegated source inspection candidates. This authority is not given without an official notification from Korry declaring the type and extent of delegation.

### **3.29 Supplier Performance Measurement and Metrics**

#### **3.29.1 Monthly Score Card:**

Korry communicates Delivery (Percent On-Time), Quality (Defective Parts Per Million) and Cost (Percent Cost Reduction) performance metrics on a monthly basis using supplier score cards.

On an annual basis, Korry defines the minimum performance expectations for Delivery and Quality. When a supplier does not meet these minimum performance levels, Korry reserves the right to require the supplier to engage in a Performance Improvement Plan – lead by the supplier's leadership as well as Korry Stakeholders.

#### **3.29.2 Comprehensive Score Card:**

In addition to the monthly performance metrics, Korry measures partnership metrics in areas of Responsiveness, Strategic Alignment, and Continuous Improvement. Results of the comprehensive score card are communicated during regularly scheduled business reviews with key suppliers.

#### **3.29.3 Surveillance:**

Korry may conduct surveys and / or perform surveillance audits at the supplier's facility to evaluate the ability to comply with all applicable requirements, or assist in the resolution of issues in the areas of delivery, quality and / or cost. Korry will provide as much advanced notice as possible to allow the supplier adequate time to prepare for any on-site visit.

## **3.29.4 Disputes:**

Any monthly score card disputes are to be communicated to Korry within 30 days of receipt of the score card, any requests beyond 30 days may not be considered.