



Rev L SPO FORM 8.4.3-001 ACDi Quality Clauses

QUALITY CLAUSES

ISO9001		AS9100	
Supplier Type	Default Clauses	Supplier Type	Default Clauses
Manufacturer (OCM)	QC1; QC2-A; QC3; QC4; QC7; QC8-A; QC9-C; QC10-A; QC11-A; QC12; QC13; QC14-D; QC15-A; QC16; QC18; QC20; QC21; QC22	Manufacturer (OCM)	QC1; QC2-B; QC3; QC4; QC7; QC8-A; QC9; QC10-A; QC11-A; QC12; QC13; QC14-D; QC15-A; QC16; QC18; QC20; QC21; QC22
Distributor	QC1; QC2-A; QC3; QC4; QC7; QC9-C; QC10-A; QC11-A; QC12; QC13; QC14-D; QC15-A; QC16; QC18-A; QC20; QC21; QC22	Distributor	QC1; QC2-B; QC3; QC4; QC7; QC9; QC10-A; QC11-A; QC12; QC13; QC14-D; QC15-A; QC16; QC18-A; QC20; QC21; QC22
Fabricator	QC1; QC2-A; QC3; QC4; QC5-A; QC7; QC8; QC9-A,B,C; QC10-B; QC11; QC12; QC13; QC14-D; QC15; QC16; QC18-A; QC20; QC 21; QC22	Fabricator	QC1; QC2-B; QC3; QC4; QC5-A; QC7; QC8; QC9; QC10-B; QC11; QC12; QC13; QC14-D; QC15; QC16; QC18-A; QC20; QC21; QC22
Value-Added Suppliers	QC1; QC2-A; QC3; QC4; QC5-A; QC7; QC8; QC9-A,B,C,I; QC10-B; QC11; QC12; QC13; QC14-D; QC15; QC16; QC18-A; QC20; QC 21; QC22	Value-Added Suppliers	QC1; QC2-B; QC3; QC4; QC5-A; QC7; QC8; QC9; QC10-B; QC11; QC12; QC13; QC14-D; QC15; QC16; QC18-A; QC20; QC21; QC22

QC1 – Quality Management System (QMS):

Note: Exclusions shall be noted on the Purchase Order

- A. The supplier shall maintain an approved quality management system. The system shall include, but not limited to the following processes:
 1. Document Control
 2. Control of Quality Records
 3. Corrective Action
 4. Preventive Action
 5. Internal Audit
 6. Control of Nonconforming Product
- B. A quality manual or equivalent shall be available for review upon request.

QC2 – Quality Standards Compliance

- A. The Supplier shall provide and maintain a Quality System that is registered to ISO9001.
 1. Supplier shall demonstrate compliance to these requirements by having an ISO9001 Certification from an accredited registrar.
 2. ACDi reserves the right to conduct an assessment of Supplier's Quality System.
- B. The Supplier shall provide and maintain a Quality System that is registered to AS9100.
 1. Supplier shall demonstrate compliance to these requirements by having an AS9100 Certification from an accredited registrar.
 2. ACDi reserves the right to conduct an assessment of Supplier's Quality System.

QC3 - Configuration Control

- A. The Supplier shall not make any changes to the product configuration as stated on the purchase order without ACDi's approval.



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- B. The Supplier agrees not to make any changes to this product which would affect physical or functional interchangeability, reliability or repair and maintenance operations unless this part identification is changed.

QC4 - Workmanship

All items must conform to workmanship requirements as specified on applicable drawings and specifications. If no workmanship is specified, the items shall be fabricated and finished to industry-acceptable standards.

QC5 – First Article Inspection

NOTE: First Article inspection and reporting is required for first-time build and any subsequent builds when there is change to the product's configuration. For part programming, this includes if the programmable device has changed or if the code has changed.

- A. The Supplier shall complete a standard First Article report. The report shall accompany the first lot of materials shipped against this order.
 - 1. The data submitted should be variable data when possible to show compliance with drawing requirements (dimension and notes).
 - 2. The data should consist of, as a minimum, each variable measured, its tolerance, drawing zone and actual measurement for each item.
 - 3. For part programming work, the programmer will not proceed with programming the balance of the order until they receive written approval from ACDi.
- B. The Supplier shall complete and provide a First Article report in accordance with the requirements of the latest revision of SAE AS9102. The report shall accompany the first lot of materials shipped against this order.

QC6 – Source Inspection

ACDi reserves the right to require acceptance of material on the purchase order prior to shipment from the supplier's facility. Acceptance at the Supplier's facility does not negate the Supplier's responsibility, as the Supplier, to meet all the requirements for the contract/specification. The Supplier will give three days minimum advance notice for source inspection coverage. Final acceptance is subject to review at buying facility, with accompanying source approvals for shipment.

QC7 - Final Acceptance

All items on this order shall be processed through ACDi's Receiving and/or Incoming Inspection prior to final acceptance.

QC8 – Inspection and/or Test Data

- A. Inspection and/or test data for the items submitted under this purchase order shall be maintained by the Supplier and shall be made available upon ACDi's request for review.



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- B. PCB Suppliers shall submit standard Inspection and Test Data, in their own format, for the items submitted under this purchase order.
- C. Conformal coating suppliers shall provide variable coating thickness data (individual values or a range) with each lot, using minimum sample quantities as per ASQH1331 at 4% AAQL, C=0

QC9 – Responsibility for Conformance

- A. Supplier shall obtain approval from ACDi for the following nonconforming product disposition:
 - 1. Use-As-Is
 - 2. Repair
 - 3. Scrap
- B. Supplier shall notify ACDi when nonconforming product is identified post-delivery.
- C. Items, products or materials not conforming to requirements of this purchase order/subcontract, drawing, specification, test, etc., shall not be shipped to ACDi without prior written approval of ACDi Quality Assurance. Shipment approval request shall be made by the Supplier through ACDi's buyer. Failure to comply may result in return of the shipment at the Supplier's expense.
- D. Supplier shall notify ACDi of any proposed change to the following:
 - 1. Changes in product and/or process
 - 2. Changes of suppliers
 - 3. Changes of manufacturing facility location
 - 4. Supplier shall not proceed with said changes without written approval from ACDi
- E. ACDi, as well as its customers and regulatory authorities, retains right of access to applicable areas of all facilities, at any level of the supply chain, involved in the order and to all applicable records.
- F. The Supplier shall apply appropriate controls to their direct and sub-tier suppliers, to ensure that above QC9 requirements are met.
- G. The Supplier shall ensure that personnel are aware:
 - 1. Of their contribution to product or service conformity
 - 2. Of their contribution to product safety
 - 3. Of the importance of ethical behavior
- H. Supplier shall not outsource any part of this order without written approval from ACDi.
- I. Repair or re-ball work, as requested by or as approved by ACDi, will restore a device to manufacturer specifications. Any deviation will only be done with approval from ACDi.



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QC10 – Certificate of Conformance

- A. The Supplier shall provide their standard Certificate of Conformance (CoC) to certify that the articles delivered under this purchase order conform to the applicable requirements of ACDi's or Manufacturer's specifications.
- B. The Supplier shall submit a Certificate of Compliance (CoC), in the supplier's own format, to certify that the materials and processes used in the parts supplied on the order meet all the drawing, functional performance testing, specifications and contract requirements. The CoC should include the following:
 - 1. Supplier's name and address
 - 2. ACDi purchase order number
 - 3. Part number and revision
 - 4. Serial or lot number(s) as applicable
 - 5. Date code(s) as applicable
 - 6. Quantity
 - 7. Certifying signature, title and date

QC11 - Packaging and Shipping

- A. Materials are to be shipped by the Supplier in containers in keeping with commercial practices to preclude any damage during shipping and storage to ACDi. Each container shall be identified on the outside with the ACDi purchase order number. Failure to do this may result in payment delay and possible return of the delivery. Each sub package shall be identified with the part number.
- B. In any case when ACDi consigns material to the Supplier, the Supplier shall return all parts in the same packaging that ACDi sent them in. Packaging shall be marked with the quantity returned. Packaging shall be marked with relevant sub-totals: this applies to programmed vs blank parts; or to successfully repaired/re-balled vs non-repaired units; or to units that are an approved deviation from specs vs units that conform to specs.

QC12- Shelf-Life Data

The Supplier shall state, in writing, the starting date, shelf life and/or expiration date for all limited shelf-life items supplied under this order. All items shall have 3 months or more of their shelf life remaining at the time of shipment to ACDi.

QC13 – Moisture Sensitive Devices (MSD)

The Supplier, when packaging Moisture Sensitive Devices, must follow the requirements of IPC/JEDEC standard J-STD-033, or at the least:

- A. SMD Packages and Carrier Materials must be dry before being sealed in Moisture Barrier Bag (MBB)



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- B. MBB must consist of desiccant material and a Humidity Indicator Card (HIC) and sealed with the SMD.
- C. MBB must be properly identified, including classified moisture-sensitive level (MSL)

QC14 - Electrostatic Discharge (ESD)

- A. The Supplier shall define and implement the procedures required to protect product from degradation due to electrostatic discharge at all process steps. The Supplier shall identify all devices susceptible to ESD with proper “ESD Sensitive” markings on packaging and/or containers. ESD-sensitive items must be packaged so that no static damage can occur during shipment to ACDi.
- B. The Supplier shall define and implement ESD control procedures compliant with the requirements of ANSI/ESD S20.20 to protect product from degradation due to electrostatic discharge at all process steps. The Supplier shall identify all devices susceptible to ESD with proper “ESD Sensitive” markings on packaging and/or containers. ESD-sensitive items must be packaged so that no static damage can occur during shipment to ACDi.
- C. The Supplier’s ESD control procedures shall protect product from degradation due to electrostatic discharge at all process steps and shall be certified compliant with the requirements of ANSI/ESD S20.20 by a 3rd party certification agency. The Supplier shall identify all devices susceptible to ESD with proper “ESD Sensitive” markings on packaging and/or containers. ESD-sensitive items must be packaged so that no static damage can occur during shipment to ACDi.
- D. The Supplier shall define and implement ESD control procedures compliant with the requirements of MIL-STD-1686C or ANSI/ESD S20.20 to protect product from degradation due to electrostatic discharge at all process steps. The Supplier shall identify all devices susceptible to ESD with proper “ESD Sensitive” markings on packaging and/or containers. ESD-sensitive items must be packaged so that no static damage can occur during shipment to ACDi.

QC15 - Part Identification

- A. The Supplier shall identify all items supplied under this order with complete nomenclature and part numbers as specified by the applicable drawing, specification, catalog, P.O., etc.
- B. The supplier shall clearly identify and segregate within sub-packaging any populations of parts that have significantly different attributes from each other within the complete nomenclature. This applies to programmed vs blank parts; or to successfully repaired/re-balled vs non-repaired units; or to units that are an approved deviation from specs vs units that conform to specs.



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QC16 – Safety Data Sheet

The Supplier shall provide a safety data sheet with hazardous material when delivered to ACDi.

QC17 – Lot Control

Items supplied under this purchase order shall be from one (1) date code and/or lot code. The date/lot code shall be recorded on the packing list, certification and other applicable documents.

QC18 – Counterfeit Part, Material and Process Avoidance and Certification

- A. The Supplier shall ensure that parts, material or processes are procured only through Original Equipment Manufacturers (OEMs)/Original Component Manufacturers (OCMs) or their authorized suppliers.
- B. The Supplier shall provide a CoC to certify that the shipment does not contain any “suspect” or “known” counterfeit parts, material, or process per the requirements below. Any use of other than an OEM/OCM or authorized supplier requires ACDi’s written approval prior to procurement and use, and shall be contained within the deliverable data package.
 1. The Supplier shall verify the procurement source and associated certifying documentation.
 2. The Supplier’s receiving inspection process shall utilize incoming inspection or test methods, or both, to detect potential counterfeit parts, material or processes.
 3. The Supplier shall flow this clause in its entirety or equivalent down to all lower tier subcontracts to prevent the inadvertent use of counterfeit parts, material or processes.

QC19 – Counterfeit EEE Parts

The Supplier shall meet the requirements of AS5553, Counterfeit EEE Part Avoidance, Detection, Mitigation and Disposition. Supplier compliance to AS5553 may be subject to ACDi on-site review and approval.

QC20 – Traceability

All items furnished on this order shall have documentation on file for the time period specified on the purchase order to permit traceability from the delivered item back through its manufacture and inspection to the procurement records on its constituent parts and materials.

QC 21 - Records

Below are the requirements for maintaining records stating results achieved, or providing evidence of activities performed including ACDi requirements conformity and quality management system (QMS) operations.

- A. Identification: Records shall be properly identified and controlled.
- B. Legibility: Records shall be written and/or printed in a manner that ensures the recorded data is Clear, Readable, Intelligible, Decipherable, Understandable and Comprehensible.



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- C. Storage: Records shall be stored in a manner suitable to the work environment affording accessibility to the responsible member of the organization.
- D. Protection:
 - 1. Records shall be protected in such a manner that the records will not be damaged or lost.
 - 2. Records that have been damaged, lost, altered or are incomplete or illegible are corrected and/or replaced.
- E. Retrieve-ability: Records shall be retained in a way that ensures the records are retrievable in a timely manner.
- F. Retention: Records shall be retained for **a minimum of ten years, if no time limit is specified on the purchase order.**
- G. Disposition: Records past their retention time are properly disposed as to prevent unintended use.

QC22 – Revisions of Standards

The supplier shall use the revision of any applicable military and/or industry standards that is in effect at the time of PO acceptance, unless otherwise specified.