



Q-Clause Requirements

Supplier is responsible for meeting all the Q-Clause requirements flowed down on Purchase Order (PO)

Q-Clause #	Subject	Requirement(s)
Q1	Not used	
Q2	Certification of Traceability (C of T)	A C of T is required with each shipment. The C of T shall state that the parts or materials meet all the requirements of this order. In addition, the C of T must provide traceability to a specific manufacturing control identifier by means of a lot, batch, or date code. If the parts or material were not manufactured by the Supplier, the name and address of the original manufacturer must be identified. The C of T shall include Extant Aerospace's PO number, Part Number, applicable drawing/specification number, revision, and quantity in shipment. The C of T shall be signed by the Supplier's authorized Quality representative.
Q3	Not used	
Q4	Material Test Reports	A Material Certification Test Report is required with each shipment. The test report shall state that the material has been tested, inspected, and found to be compliant with the applicable drawings/specifications. The test report shall list the specifications/drawings including revision to which the material has been tested and traceability to the material lot. The test report shall contain the actual measurements for chemical, mechanical and physical properties.

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<p style="text-align: center;">Q5</p>	<p style="text-align: center;">FAA PMA (14 CFR Part 21) Production Approval Holder Quality Program Requirements</p>	<p>Supplier shall comply with the following:</p> <ul style="list-style-type: none"> • Must maintain present approved Quality System & notify Extant Aerospace of any changes to said system. • Must notify Extant Aerospace of any changes to its certifications. • Must notify Extant Aerospace of any changes to design details, materials & process previously approved for this PO or Contract. • Must maintain measuring & test equipment traceable to NIST in the performance of this PO or Contract. • Must have documented data retention control that meets CFR Part 21 requirements in the performance of this PO or Contract. • Must maintain traceability throughout the manufacturing, inspection & test systems in the performance of this PO or Contract. • All substitutes processes for which work is performed under this PO or contract must be approved by Extant Aerospace. • No MRB authority is granted in the performance of this PO or Contract. • Must guarantee access to Customer / Regulatory agencies in the performance of this PO or Contract.
<p style="text-align: center;">Q6-Q9</p>	<p style="text-align: center;">Not used</p>	
<p style="text-align: center;">Q10</p>	<p style="text-align: center;">QML/QPL Listing*</p>	<p>Parts or materials will be processed in accordance with the Military or Federal specification referenced on the purchase order, drawings or specifications, and the material will be certified to be in full conformance with these Government documents. The actual manufacturer of the material must be qualified to the specification and listed on the appropriate qualification list.</p> <p>*Note: QML-QPL</p> <p>Qualified Manufacturers List (QML). A list of manufacturers' qualified processes and materials at each facility that have been successfully subjected to a defined set of qualification and periodic tests using processes, worst case designs or materials, to verify the end product's design, performance, quality, and reliability meet all the applicable specification requirements.</p> <p>Qualified Products List (QPL). A list of products or families of products that have successfully completed the formal qualification process (including all specified periodic tests) that examines, tests, and verifies that a specific product design meets all the applicable specification requirements.</p>



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Q11	Critical Process	The material supplied against this order requires a "critical process" in its fabrication. Evidence of objective certification of the process and/or operators must be provided to Extant Aerospace for inspection as requested.
Q12	Failure Analysis	Failure Analysis/Tear down Reports required. Supplier must submit failure analysis report or for FAA conformity items a tear down report. This shall document the Extant Aerospace purchase order number, Defective Material Tag (DMT) number (if provided), part number, serial number, cause of the failure, corrective action to preclude recurrence and effect on other delivered product. The failure analysis / Tear down report must accompany the product when returned to Extant Aerospace.
Q13	Test Data	Generated test data will be on file at the manufacturer's facility and will be available for review by Extant Aerospace as required.
Q14	Test Data Deliverable	Requested test data must be furnished with the material shipped against this order.
Q15	Data Retention	Inspection and test data must be retained for a minimum of eleven (11) years at supplier's facility and are to be made available for review by Extant Aerospace and/or Government Representative upon request.
Q16	Acceptance at Destination	Materials on this order will be inspected and or tested upon receipt at Extant Aerospace to verify full conformance to all specified requirements. Failure to meet any specifications may result in immediate rejection and return of the material at the supplier's expense.
Q17	Not used	
Q18	Government Source Inspection	This material is subject to evaluation by a government representative prior to shipment. Upon receipt of this order, promptly notify the Government representative, who normally services your plant, so that appropriate planning for Government inspection can be accomplished. If the supplier has a difficulty in locating a government representative, Extant Aerospace's Purchasing Department will aid. Shipping papers for each lot shipped must bear evidence of Government surveillance in the form of authorized Government Quality Assurance Representative Signature and/or stamp.
Q19	Not used	
Q19A	Not used	

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Q20	Limited Shelf Life	The material on this order is considered to have a limited shelf-life and must be so identified. Each container must bear a mix, batch, cure, date, and a “not to be used after” date. All storage condition limitations must be clearly detailed on each label. At the date of receipt by Extant Aerospace, at least two-thirds of such designated use life must still be remaining, or the material may be returned for replacement.
Q21	Coupons/Test Specimens Deliverable	Test specimens (micro sections) and coupons, as required by controlling specification, drawing, or Purchase Order notes, must be included in each shipment against this order. Extant Aerospace assumes Defense Logistics Agency (DLA) retention responsibilities.
Q22	Not used	
Q23	First Article Source Inspection	A “First Article” Inspection for all requirements shown on the control drawing and/or specification will be performed in the presence of an Extant Aerospace Representative at the supplier’s facility.
Q23A	Not used	
Q23C	Not used	
Q23D	Not used	
Q24	Not used	
Q24A	Packaging of IC’s	Components packaged in tubes, rails, reels, or matrix trays shall be oriented in the same direction. Components shall be restrained from flipping over and sliding back and forth.
Q25	Electrostatic Discharge Control (ESD) Program	The Supplier shall have an established ESD Control Program in accordance with MIL-STD-1686, JESD-625 or ANSI/ESD S20.20. The Supplier shall take the necessary precautions to ensure that components and assemblies susceptible to static damage are adequately protected during manufacturing, inspection, test, packaging, and shipping. Packaging shall be marked with an ESD caution label.
Q26	Not used	
Q27	MSL Packaging	Moisture sensitive non-hermetic solid-state Surface Mount Devices (SMD) shall be handled, packaged, labeled, and shipped in accordance with IPC/JEDEC J-STD-020 and IPC/JEDEC J-STD-033. The applicable Moisture Sensitivity Level (MSL) as defined by the component manufacturer applies.
Q28	Not used	
Q29	Drop Ship Items	A copy of all documentation (as required by this document) shall be shipped with the item to the ship to location on the purchase order and another copy shall be delivered to Extant Aerospace’s Buyer
Q30	SDS Sheets	Safety documents are required to be submitted to Extant Aerospace, such as Safety Data Sheets (SDS)



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Q31	Solderability	Item must meet solderability requirements per MILSTD-202 Method 208, MIL-STD-750 Method 2026, MIL-STD-883 Method 2003, or J-STD-002
Q32	Not used	
Q33	Not used	
Q34	Tubing	Polytetrafluoroethylene tubing shall conform to ASTM-D-3295.
Q35	Heat Shrink Tubing	Heat shrinkable tubing shall conform to MIL-I-23053, except that the use of polyvinylchloride tubing is prohibited
Q36	Extruded Tubing	Extruded vinyl plastic tubing shall conform to MIL-I-7444, Type 1 or MIL-I-22076.
Q37	Special Handling Notification	Supplier shall notify Extant Aerospace of any special handling required for material being supplied to Extant Aerospace. This notification may be shipped with the material or noted on the packing slip.
Q38	Not used	
Q39	Solder Pb content	Supplier and Supplier's sub-tier suppliers shall not use lead free solder in goods. For the purposes of this clause, solder shall be considered lead free if it has a lead content of less than three percent (3%). Supplier may request a waiver of this clause by submitting a SIR form, SIF-PRO-015 to Extant Aerospace's Purchasing Department.
Q40	Lead Finish Requirements	Tin finishes should be coated with a tin alloy containing not less than 3% Pb alloy. This requirement applies to internal and external surfaces of the lead. This restriction also includes plating over an existing pure tin finish.
Q41	Pb Free Requirements	Pb (lead) free requirements are flowed down from Customer specifications to Extant Aerospace & our suppliers – No substitutions without prior written permission from Extant Aerospace Quality Assurance. No Pb containing materials will be accepted.

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<p style="text-align: center;">Q42</p>	<p style="text-align: center;">Replacing finish on electronic parts</p>	<p>Supplier shall adhere to GEIA- STD-0005-2 and GEIA-STD- 0006. Replace lead-free finish with Sn63/Pb37 finish.</p> <p>Re-balling – Orange dot shall be placed as close as possible to pin one on top of part without obscuring part number, lot code, date code, or any other part marking. Supplier shall furnish a C-of-C certifying that ESD controls, part handling, MSL controls, solder re-balling processes and post re-balling co planarity shall conform to the original manufacturing requirements.</p> <p>Re-tinning (microcircuits)- Orange dot shall be placed as close as possible to pin one on top of part without obscuring part number, lot code, date code, or any other part marking. Supplier shall furnish a C-of-C certifying that ESD controls, part handling, MSL controls, solder processes and post co planarity shall conform to the original manufacturing requirements.</p> <p>Re-tinning (other devices) – Orange dot shall be placed, if part is of sufficient size, as close as possible to pin one on top of part without obscuring part number, lot code, date code, or any other part marking. Supplier shall furnish a C-of- C certifying that ESD controls, part handling, MSL controls, solder processes and post co planarity shall conform to the original manufacturing requirements.</p>
<p style="text-align: center;">Q43</p>	<p style="text-align: center;">Digital Product Definition</p>	<p>As a part of this purchase order, Boeing or Boeing sub-contractor is providing digital product definition (DPD) material which shall be controlled, maintained, and validated in accordance with Boeing's DPD procedure D6-51991 (current revision). Within 2 weeks after the receipt of this order, the supplier shall submit procedures which demonstrate compliance with Boeing's DPD procedure D6-51991. Production shall not commence without prior and written acceptance of the DPD process by Extant Aerospace Supplier Quality Assurance representative.</p>

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<p>Q44</p>	<p>Vision Requirements</p>	<p>Suppliers to have the following VISION REQUIREMENTS:</p> <ul style="list-style-type: none"> • All inspectors performing to this procedure shall successfully pass an annual eye exam by a medically qualified / trained person in accordance with ASQR-01 and the table below: • Intervals shall not exceed one year. • Individuals shall be tested in at least one eye, either corrected or uncorrected. • Color Perception testing is required one time only. Individuals shall be capable of adequately distinguishing and differentiating colors used in the method for which certification is required, the process being performed or inspection activity. Documentation shall be retained 11 years. <p>Records shall be retained for each individual. Individual performing... Visual inspection (i.e., calibration, non-weld, in- process, layout, dimensional) Near vision requirements of Snellen 14/18. (20/30), or Jaeger 2</p> <p>Visual Inspections on Welds American Welding Society Standard (AWS) D17.1</p> <p>Nondestructive Testing (NDT) Aerospace Industries Association National Aerospace Standard (AIA/NAS) 410</p>
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