

Supplier Quality Assurance Provisions

NOTE: Teledyne Storm Microwave is herein referred to as TSM

Table 1

GENERAL REQUIREMENTS – Applicable to all TSM Purchase Orders

Requirement Name	Requirement
Supplier Obligation(s)	TSM monitors suppliers for quality, delivery, service and cost. These measures are shared with select suppliers when deemed appropriate. All suppliers shall be aware their contribution to product or service conformity, product safety and conduct business in an ethical manner to meet those expectations and communicate when as appropriate when expectations cannot be met. The use of statistical techniques is required when required by contract.
Surveillance & Right of Entry	Representatives of TSM, its customers, Government, and / or regulatory agencies (if applicable) reserve the right to visit the supplier and its suppliers with the intent of performing surveillance activities including inspections, surveys, and audits with the intention of verifying conformance to 1) product requirements as invoked by TSM purchase order; 2) general requirements as defined in this table; and 3) specific requirements in Table 2 as invoked by TSM purchase order. In addition, TSM reserves the right to visit to resolve product quality issues.
Design, Process and/or Material Changes	The supplier shall not implement any changes to TSM drawings and / or specifications and / or materials without written approval from TSM.
Submission of Nonconforming Material to TSM	Items not in conformance with the requirements of the Purchase Order, TSM drawings, specifications, and industry standards referenced therein, or that cannot be corrected through continuation of the original manufacturing process or by rework, shall not be submitted to TSM without prior written approval. Submittals shall include supplier-recommended disposition(s) with sufficient technical justification.
Return of Nonconforming Material from TSM	Nonconforming items returned from TSM which are subsequently resubmitted by the supplier following material review disposition activities shall bear a particular indication of such resubmission on the accompanying paperwork and shipping documents. Reference shall be made to the TSM rejection documentation and evidence presented to demonstrate that the causes for rejection have been corrected.
Corrective Action	When requested by TSM, the supplier shall investigate nonconformities to determine the root cause(s) of failures, and take effective action(s) as appropriate to correct the items and prevent future failures. Unless otherwise requested by TSM, such corrective action(s) may be documented in the supplier's format.
Calibration	Suppliers providing calibrations services or calibration certificates with new equipment shall utilize inspection and test equipment traceable to NIST and suppliers shall be certified or compliant to ANSI/NCSL Z540.1-1994, ISO/IEC 17025 or other industry recognized standard for calibration. Calibration certificates shall include statements for traceability of equipment and supplier credentials.
Preservation & Packaging	Unless otherwise specified, the supplier shall use good commercial practices for preservation and packaging of items supplied to TSM.
Flow Down Requirements	The supplier shall insure that requirements be flowed down to sub-tier suppliers, including key characteristics where required.
Traceability	The supplier shall maintain internal traceability to the raw material level, and shall be able to provide such traceability within a reasonable time frame if requested by TSM.
Record Retention	The supplier shall maintain all records supporting items shipped against this PO for a period of no less than seven (15) years from date of shipment to TSM.
TSM Furnished Tooling	Tooling (fixtures, jigs, molds, etc.) and test equipment fabricated by the supplier at TSM expense, or furnished by TSM, shall be considered property of TSM. TSM is responsible for routine and periodic maintenance and calibration of such items. Suppliers are responsible for insuring appropriate protection during transport, storage, and use. Some amount of wear and tear is expected through usage.
Change of Facility or Ownership	The supplier shall notify TSM when manufacturing operations being performed in support of this purchase order are moved to another facility with a separate street and / or city address. Supplier shall also notify TSM if ownership of the supplier has changed.
Counterfeit Material Risk Mitigation	The Supplier shall maintain a Counterfeit Item risk mitigation process and with its' suppliers and shall provide evidence of said process to Buyer upon request.
Conflict Minerals	Seller warrants that it has policies and procedures in place to determine whether parts and products supplied to TSM are DRC conflict free (i.e., do not contain metals derived from "conflict minerals"). Conflict minerals include columbite-tantalite (tantalum), cassiterite (tin), gold, wolframite (tungsten), or their derivatives that directly or indirectly finance or benefit armed groups through mining or mineral trading in the Democratic Republic of the Congo or an adjoining country. Seller has established policies, due diligence frameworks and management systems consistent with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas that are designed to accomplish this goal. Seller agrees to provide information to Buyer necessary for Buyer to comply with its conflict minerals reporting requirements.
Foreign Object Debris	The supplier shall maintain a FOD prevention process and with its' suppliers and shall provide evidence of the process to Buyer upon request.
CAGE Code	The manufacturer's CAGE code shall be included on the certificate of compliance for OEM's and authorized distributors when product supplied is manufactured to the supplier's specification. This does not apply to parts manufactured to a TSM specification. If the supplier does not have a CAGE code, please note on CofC or contact the TSM buyer or QE representative.

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Table 2
SPECIFIC REQUIREMENTS - SQAP Codes as Invoked by TSM Purchase Order

Code No.	Requirement Name	Requirement
1	Product Verification System	For product verification the supplier shall have implemented as a minimum, an inspection system meeting the requirements of MIL-I-45208 or equivalent. When required, the supplier shall be prepared to demonstrate the system through 1) submission of quality manual and supporting documentation; 2) responding to questionnaires; and 3) on-site surveys and audits by TSM representatives, etc. <ul style="list-style-type: none"> • <u>Note:</u> Suppliers are encouraged to utilize <u>Statistical Process Controls (SPC)</u> and other proactive and preventive control methods wherever possible.
2	First Article Inspection	Do not use
3	Certificate of Conformance	A legible "Certificate of Conformance" (C of C) statement shall be provided with each shipment submitted to TSM. The C of C shall be in the supplier's format and may either be a separate document or may be included within the packing list. The C of C statement shall state that the items were produced in conformance with requirements as specified in the TSM purchase order. As a minimum, the C of C shall note 1) the manufacturer or distributor's name and address; 2) the TSM purchase order number; 3) the part number(s) and revision(s) when applicable; 4) traceability information including serial numbers, lot codes, or date codes as appropriate; 5) shelf-life expiration dates if applicable; and 6) signature of the supplier's authorized representative; 7) when purchased from a distributor, a C of C from OEM must also be provided. The C of C shall contain enough additional information as necessary to facilitate traceability to supporting supplier documentation, which shall be maintained on-file by the supplier and available for retrieval if necessary.
4	DPAS Rated Orders Defense and Priorities Allocation System	This is a government rated order certified for national defense use, and you are required to follow all the provisions of the Defense Priorities and Allocations System regulation (15 CFR part 700) as specified on TSM purchase order. You are also required to: <ol style="list-style-type: none"> 1. Acknowledge (or reject) PO within the time as follows: <ol style="list-style-type: none"> a. DX rated within 10 working days b. DO rated within 15 working days 2. Reject DX/DO orders in writing with specific reason for rejection. Failure to acknowledge PO conditions shall imply acceptance to PO as written.
5	Use of Special Processors	The supplier shall insure that special processes (including plating, painting, passivation, heat treating, welding, NDT, etc.) as defined by NADCAP were performed in accordance with military or industry specifications as listed in the fabrication drawing or purchase order. Suppliers are encouraged to utilize NADCAP approved special processors.
6	Test Data	The supplier shall provide test data with the subject item(s). Such test data shall include individual or summary parameter measurements as appropriate.
7	Government Source Inspection	Government inspection is required prior to shipment from supplier's facility. Upon receipt of purchase order, the supplier shall notify the government representative(s) who normally service the supplier's facility, for coordination and scheduling of inspection(s).
8	TSM Source Inspection	TSM source inspection is required prior to shipment from supplier's facility. TSM shall be notified a minimum of 24 hours prior to intended shipment when items are ready for TSM source inspection. To schedule, contact TSM Quality Department. Please provide 1) the TSM purchase order number; 2) the TSM part number(s); 3) the quantity of each part number; and 4) the date(s) source inspection is being requested for.
9	Soldering Workmanship	Soldering workmanship shall be in accordance with the requirements of IPC/EIA J-STD-001, Class 3.
10	Solderability	Component leads, terminations, lugs, terminals, and wires shall be capable of meeting the solderability requirements of IPC/EIA J-STD-002. Printed wiring boards shall be capable of meeting the solderability requirements of IPC/EIA J-STD-003.
11	Limited-Life Materials	Limited-life materials shall be identified by either 1) the date at which the useful life has begun [date of manufacture]; and 2) the date the useful life will be expended [expiration date]. For limited life items with date of manufacture as start of useful life, supplier should have available when requested an official explanation of the life cycle of the product. In addition, appropriate environmental conditions for storage and usage shall be clearly labeled on the item(s) as applicable. Material(s) with less than 75% of the useful life remaining shall not be accepted upon receipt at TSM without written approval from TSM.
12	Plating Certifications & Data	The supplier shall furnish a certification of plating plus thickness measurements for all layers of plating supplied. If plating was applied by a Nadcap-approved special processor, the processor shall be required to only supply the Certificate of Conformance as noted in Code 10 as well as the plating measurements.

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Code No.	Requirement Name	Requirement
13	Mercury Exclusion	Products furnished under this purchase order shall contain no metallic mercury or mercury compounds and shall be free of mercury contamination. The supplier shall furnish a signed statement of conformance to this requirement. The statement can be included within the supplier's certification of conformance submitted per Code No. 3.
14	Spare and Replacement Parts	For items not fabricated to TSM drawings and specifications (for example, off-the-shelf and/or supplier part number), the supplier shall document spare and replacement parts or assemblies and supply sufficient data and/or information for ordering spares and replacements.
15	Dock-to-Stock, Certified Supplier	Parts received from the supplier shall be routed directly to TSM inventory or work in process area without TSM incoming or source inspection by virtue of certified status granted to suppliers having exceptional quality and delivery performance record according to criteria specified in the TSM Certified Supplier Program.
16	Raw Material Test Reports	For raw materials (metals) utilized to fabricate TSM parts, the supplier shall provide raw material test reports containing detailed physical and chemical analysis and data.
17	Raw Material Test Reports, Maintain on-File	For raw materials (metals) utilized to fabricate TSM parts, the supplier shall maintain on file raw material test reports containing detailed physical and chemical analysis and data. Such reports shall be available to TSM if requested.
18	Use of NADCAP-Approved Special Processors	The supplier shall utilize NADCAP approved special processors as listed on the most current revision of the TSM Approved Special Processor List (ASPL) to perform special processes (heat treatment and plating being the most common) as noted in the applicable TSM drawing(s) and referenced specifications. Suppliers are encouraged to recommend additional NADCAP approved special processors to TSM for possible addition to the TSM Approved Vendor List (AVL) and ASPL due to cost, quality, or delivery reasons. In such instances, please contact TSM Purchasing in advance so TSM can contact the special processor candidate and perform a simple qualification process.
19	RoHS	Components used on materials supplied as non-taxable items must be compliant to EC Directive 2002/95/EC Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
20	Specialty Metals DFARS 252.225-7009	<p>Metals used on materials supplied as non-taxable items must be compliant to DFARS 252.225-7009, <i>Restriction on Acquisition of Certain Articles Containing Specialty Metals</i>.</p> <p>SPECIALTY METALS – Specialty metals incorporated in articles delivered to Buyer must comply with the requirements of this clause. The following articles are specifically exempt: Circuit Card Assemblies (CCAs) and components designed or intended for use on CCAs or substrates, such as diodes, capacitors, resistors, transistors and integrated circuits; however, assemblies and components are not exempt if they incorporate high performance magnets (samarium cobalt).</p> <p>Any other waivers, Domestic Non-Availability Determinations, deviations, or other forms of exemption from this requirement do not apply to this purchase order, unless otherwise stated in the Purchase Order Line Item Material Details text.</p> <p>(a) <i>Definitions.</i> As used in this clause— (1) "Qualifying country" means any country listed in subsection 225.003 of the Defense Federal Acquisition Regulation Supplement. (2) "Specialty metals" means— (i) Steel— (A) With a maximum alloy content exceeding one or more of the following limits: manganese, 1.65 percent; silicon, 0.60 percent; or copper, 0.60 percent; or (B) Containing more than 0.25 percent of any of the following elements: aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, or vanadium; (ii) Metal alloys consisting of nickel, iron-nickel, and cobalt base alloys containing a total of other alloying metals (except iron) in excess of 10 percent; (iii) Titanium and titanium alloys; or (iv) Zirconium and zirconium base alloys. (b) Any specialty metals incorporated in articles delivered under this contract shall be melted in the United States or its outlying areas. (c) This clause does not apply to specialty metals melted in a qualifying country or incorporated in an article manufactured in a qualifying country. (d) The Supplier shall insert the substance of this clause, including this paragraph (d), in all subcontracts, including commercial subcontracts, for items containing specialty metals.</p>
21	Export Classification and Origin	The supplier shall provide the export classification for items they design and the country of manufacture of the purchased item. Refer to the International Traffic in Arms Regulations 22 CFR Chapter I, Subchapter M, Parts 120-130 and the Export Administration Regulations 15 CFR Chapter VII, Subchapter C, Parts 730-774 for information on making export classifications.
22	REACH	Components used on materials supplied as non-taxable items must be compliant to REACH Regulation 1907/2006/EC