



TRUSTED
Semiconductor Solutions

PURCHASE ORDER SUPPLEMENT

100-9021

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Version History

Version	Date	Author	Description	ECO #
A	4/22/2020	T. Hertog	Initial Release	20-010
B	6/18/2020	T. Hertog	Update numbering of codes in para. 3	20-023
C	7/2/2020	J. Mette	Updating company name on page 5	20-027
D	9/14/2020	T. Hertog	Remove duplication in change notifications. Clarify lot number requirements in Q1	20-046
E	10/13/2020	T. Hertog	Add Conflict Minerals statement	20-059

1 Purpose

This manual contains requirements that are applicable when invoked by Trusted Semiconductor Solutions, Inc Purchase Orders.

2 Requirements Applicable to all Purchase Orders

1. Applicability

The Trusted Semiconductor Solutions, Inc (TSS) Purchase Order is the official binding contract in the order of precedence described in the Terms & Conditions of Purchase.

If conflicts between flow down documents and the Purchase Order are detected, the Supplier shall immediately notify the TSS Buyer.

Handwritten, lined-out or initialed changes to purchase orders are not allowed. Handwritten, lined-out or initialed changes to engineering drawings/specification or technical data are not allowed. Verbal and/or email authorizations are not permitted.

2. Subcontracting Policy

TSS suppliers shall ensure flow down to, and compliance with, all applicable Purchase Order and Engineering requirements to their sub-tier suppliers, including approved Special Process providers.

3. Quality Requirements

The core quality requirement is for all features to comply to specifications and purchase orders 100% for all parts produced and shipped.

4. Right of Entry

TSS reserves the right to perform audits and/or inspections at the Supplier's and/or supplier's subcontractor's facility. Supplier material, records, process and routing sheets, manufacturing, and test and inspection facilities are subject to review by TSS. When on-site verification of Contract / Purchase order conformance is required, the supplier shall provide the equipment, facilities, and personnel necessary for the TSS representatives to verify compliance.

5. Supplier-initiated changes

Suppliers are required to inform the TSS buyer prior to shipping material or products with changes in product, processes, components, sub-suppliers / sub-contractors, manufacturing facility locations, packaging, shipping method, or outside processors.

For items where TSS has design authority, suppliers are required to obtain written approval from the buyer prior to any change(s). Suppliers are required to maintain a record of all such approvals and have them available upon request.

In addition, the supplier shall also provide notification to TSS within 24 hours of any change in top management, ownership, QMS, a major change in the number of employees, or resources used to provide TSS products or materials.

6. Configuration Management

The supplier shall ensure that products are built using the current revision of all drawings, specifications and instructions or as called out on the TSS contract/purchase order.

7. Quality Records

Quality/Inspection records shall be retained on file by the supplier for 10 years after contract closure. The supplier must have a process in place to designate the disposition of records after the retention requirements are met.

8. Prohibited Practices

The following acts or practices are prohibited:

1. Unauthorized Repair - Repairs (by welding, brazing, soldering, or the use of adhesives) of parts damaged or found faulty in the fabrication process; repairing holes in castings, forgings or other materials by plugging or bushing without authorization from Buyer.
2. Unauthorized Processing - Addition, revision, or deletion of thermal, chemical, or electrochemical processes in manufacturing when processes are subject to specification control by Buyer.
3. Improper Material Submittal - Submission of material having known defects/problems to Buyer without notification.
4. Improper Material Re-submittal - Resubmission of material to Buyer without material being clearly identified as resubmitted material.
5. Unauthorized Material and Information Transfer. No supplier shall buy, sell, trade, or transfer TSS owned/supplied drawings, data, material, parts, devices, assemblies or end equipment for purposes other than the performance of TSS business, without prior written approval.
6. Reclaimed Material - No supplier shall use reclaimed material without prior written approval from the Buyer.

9. Quality System Requirements

Suppliers shall be third-party registered to ISO-9001 and receive periodic system audits or be subject to periodic compliance audits by TSS.

10. Protection of Materials

All items must be packaged to ensure that they are delivered to TSS undamaged. If items are damaged due to inadequate packaging, they are subject to rejection.

11. Nonconforming Material

Material that departs from drawing, specification or purchase order shall be identified and controlled to prevent unauthorized use or delivery to TSS or other designated destinations. The Supplier shall provide prompt, (ordinarily within 24 hours), written notification to both the TSS Buyer if nonconforming product or process escapes are identified after shipment has taken place.

The Supplier shall not exercise Material Review authority without written approval by TSS's Quality Organization.

The supplier may request consideration for TSS acceptance of nonconforming material by submitting a Request for Waiver in the supplier's standard format.

TSS reserves the right to request Failure Analysis and/or Corrective Action for delivered non-conforming material.

12. Conflict Minerals

Seller shall use commercially reasonable efforts to:

- Identify whether goods purchased under this purchase order contain tantalum, tin, tungsten or gold,
- Conduct a reasonable country of origin inquiry regarding the origin of such minerals in section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act,
- Conduct due diligence on the chain of custody of the source of any minerals originating in covered countries to identify the smelter of said minerals, and
- Assist buyer in conducting reasonable due diligence concerning the smelters of such minerals. Seller shall include the substance of this section in any agreement between the seller and its lower tier suppliers. Seller shall provide buyer with reasonable documentation of seller's and its lower tier suppliers' due diligence efforts, in a format prescribed by buyer when requested by buyer.

3 Additional Requirements if Indicated on the Purchase Order

The following requirements apply if the code is indicated on the Purchase Order

Code	Requirement
Q1	<p>The supplier shall provide a manufacturer's Certificate of Conformance with each shipment. The C of C must include the following information:</p> <ul style="list-style-type: none"> • Purchase order number • Part number as ordered on the TSS purchase order • Revision level as indicated on the TSS purchase order • Quantity • Manufacturer's name and part number if applicable • Lot number that provides traceability to all elements of the manufactured lot • A statement that the parts/materials conform to all applicable purchase order, drawing and specification requirements • Shelf life requirements if applicable • Distributors shall include all documents that indicate traceability (chain of custody) to the original manufacturer for each lot in the shipment.
Q2	<p>A First Article Inspection (FAI) report shall be submitted to TSS with the initial shipment using AS9102 format. The FAI shall be repeated if there is a tooling change, revision to the drawing, or change in the manufacturing location.</p>
Q3	<p>Fixed Process Control Written manufacturing process approval is required prior to production of parts on purchase orders referencing this code. The supplier's manufacturing processing procedure must be submitted to the TSS Buyer and approved by the design authority prior to production of a part with fixed process control. Once a fixed process approval has been obtained, any change in product and / or process changes, changes of suppliers and /or change of manufacture locations requires re-submittal to the TSS Buyer and approval by the design authority prior to implementation.</p>
Q4	<p>The supplier shall have a system that includes written procedures for control of all customer or government furnished tooling, test equipment, and material. The supplier shall maintain a record of all government/customer owned property in its possession. U.S. Government owned, acquired or furnished property supplied by TSS is Government Property and subject to the provisions of the Federal Acquisition Regulation (FAR) 52.245-2 (FP) or 52.245-5 (CP), or 52.245-1.</p>
Q5	<p>Source Inspection Customer source inspection is required prior to shipment from your facility. Contact the buyer 5 days prior to the expected date of shipment.</p>
Q6	<p>Software used to test devices on this purchase order shall be audited against the test specification provided by TSS and any discrepancies rectified. Audits shall be documented and made available for review by TSS representatives.</p>

Code	Requirement
Q7	<p>Counterfeit Risk Mitigation</p> <p>TSS requires that all suppliers of electrical parts or assemblies shall document and implement a policy compliant to the current revision of SAE AS5553, Counterfeit Electronic Parts; Avoidance, Detection, Mitigation, and Disposition. Suppliers of mechanical parts are to comply with similar methodology by adopting and implementing standard counterfeit mitigation processes applicable to their industry. Suppliers shall purchase material directly from original equipment manufacturers, original component manufacturers, or their authorized distributors.</p> <p>Purchases from independent distributors (<i>i.e.</i> brokers) are not allowed without prior documented approval from TSS.</p>
Q8	<p>Devices identified as electrostatic discharge sensitive shall be handled, stored, packaged, and shipped in such a manner as to preclude damage from electrostatic discharge. Electrostatic protection processes shall be compliant to ANSI/ESD S20.20 Protection of Electrical and Electronic parts, Assemblies and Equipment or equivalent. Electrostatic protection requirements specified on the component specification, drawing, or elsewhere on the order take precedence over this paragraph.</p>
Q9	<p>The supplier shall document and implement a program for the prevention, detection, and removal of Foreign Object Damage/Foreign Object Debris (FOD) in accordance with SAE AS9146, Foreign Object Damage (FOD) Prevention Program-Requirements for Aviation, Space and Defense Organizations. The program shall include training and the active involvement of employees. In addition, the supplier shall conduct audits and maintain records to demonstrate the program's effectiveness.</p>