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1.0 Introduction

1.1 Samtec Quality Policy
Samtec accepts responsibility for the complete satisfaction of its customers. We exercise this responsibility through adequate training of associates, adherence to proven procedures, appropriate quality objectives, total commitment to meeting and exceeding customer requirements, and through maintaining an organizational culture that fosters continual improvement on the effectiveness of the quality management system.

We expect our suppliers to align with these principles. We expect our suppliers to strive towards zero defects, 100% on time delivery, and to demonstrate commitment through delivery of fully conforming parts or products, flexibility and innovation, and proactive risk management and continuous improvements.

1.2 Purpose and Scope
The intent of this manual is to explain the fundamental quality requirements for suppliers providing bill of material components, materials, and packaging used in customer shipments, or services related to the execution of customer orders.

This manual becomes effective at the time when the supplier starts any production preparation activities for production, sample components, and/or shipments whichever occurs earliest.

This manual covers Samtec’s fundamental requirements. However, the purpose of this manual does not exclude future requests from Samtec Quality Assurance Department, Sourcing, and/or Engineering.

Samtec’s goal is that all products will be delivered by the supplier 100% on time to the supplier’s confirmation date with zero defects.

Note: All government standards and requirements will be followed as applicable for all products supplied to Samtec. (Evidence of such will be available upon request)

1.3 Definitions and Acronyms
ACD and A- – Automotive Certified Design
AIAG – Automotive Industry Action Group
AML – Approved Material List
ASP – Application Specific Product
BOM – Bill of Materials
COA – Certificate of Analysis
C of C – Certification of Conformance
CPC – Control Plan Critical
DFMEA – Design Failure Mode and Effects Analysis
EAU- Estimated Annual Usage
1.4 Order of Precedence

The following order of precedence shall be followed unless otherwise noted in Samtec’s contractual agreements. Items are ranked in order from highest to lowest precedence.

1. Purchase Order and Accompanying Terms & Conditions
2. Samtec’s prints and procedures
4. Supplier’s drawings, procedures, and requirements
1.5 Supplier Government Classification
We are committed to the economic growth of a diverse supply base. See Samtec’s Terms and Conditions for further information.

1.6 Environmental Compliance
Samtec requires all suppliers to meet the following requirements: EU-RoHs, WEEE, REACH, and China RoHS.

This information shall be supplied to Samtec in one of the following manners:

Documented in Samtec’s Inventory Suite associated with the part number selected from Samtec’s AML.
If the material is not located on the AML, a C of C shall be emailed to PEC@Samtec.com.

Once per year suppliers are required to complete an Environmental Survey concerning REACH, EU-RoHS, China RoHS, and WEEE.

Suppliers shall establish and implement an effective Environment, Health, and Safety management system and comply with all applicable legislations, regulations, and other requirements.

Supplier shall continue to improve Environment, Health, and Safety performance and operating conditions to protect the safety and health for all employees and interested parties.

1.7 Supplier Diversity
See Samtec’s Purchase Order Terms and Conditions on our Policies website for further information.

1.8 Code of Conduct
See Samtec’s Purchase Order Terms and Conditions on our Policies website for further information.

1.9 Social Responsibility and Ethics
Samtec believes in the highest level of integrity in its business dealings with both customers and suppliers alike. Samtec respects diversity of all cultures as defined in the United Nations Global Compact and Universal Declaration of Human Rights. If you feel that any unfair business practices have been engaged in by any Samtec associate, we encourage you to send your concerns to the following email address: ethics.report@samtec.com. Please include detailed information on the incident and those groups or individuals that were involved.

1.10 Conflict Minerals
Suppliers shall abide by Dodd-Frank Wall Street Reform and Consumer Protection Act Section 1502. They must insure that any minerals, identified as Conflict Minerals, are not sourced, or smelted by companies that source minerals from Democratic Republic of Congo “DRC” or associated countries. Statements of Conformity and Traceability must be provided to Samtec upon request.

2.0 General Supplier Requirements
2.1 Change Management
The continuous improvement philosophy encourages process improvements. The supplier shall notify Samtec to outline all verification testing prior to any modification including but not limited to component changes, material or chemical composition changes, process changes, or deviations being implemented. Samtec may require added safe guards such as safety stock or a Samtec person on site to review the change. The following are, but not limited to examples of process changes:

- A change in tooling, dies, jigs, or added cavities to current dies
- Duplicate molds or dies to support increased capacity
- A production location change. (Defined as a different building as previously approved)
- A sub-supplier change

Any process change requires the supplier to maintain records of the change and validation of the change. The following are examples but not limited to:

- A change in process equipment
- A production method or condition change
- An inspection process or method change

If during any engineering or process change, a defect or deviation affecting the part form, fit, or function is found, the supplier should follow the Engineering Change/Deviation Request Form CO-{EN-QA}-FRM-7000-M and SQAM as appropriate.

The supplier will inform Samtec in advance of any change to a product (ex. 6 months) in order to give Samtec adequate time to evaluate the change and incorporate customer requirements and approvals when required.

Initial shipment of this change should include the SQAM-14002 tag or equivalent form or label on each box/parcel.

### 2.2 Samtec Allotted Tools

Samtec tools must be identified by some permanent manner, which is not destructive to the tool, with Samtec name and/or tool identification number. Examples are an etched identification or a label container that is clearly identified.

Tools must be stored in the proper environment to ensure protection from the elements, traffic, etc. Maintenance of the steel is the responsibility of the supplier. No rust, contamination, or other harmful conditions are acceptable.

Maintenance logs should be kept on all tools. All preventative maintenance, predictive maintenance, repairs, etc. should be listed along with those responsible and the date.

Preventive maintenance should be scheduled and tracked to ensure the tools are kept in proper operation.

Tool modifications, not including preventive maintenance, shall not be performed without Samtec written approval.

Tooling should be easily identified as to their status. For example: red tag shows that the tool is unfit for production, yellow tag shows the tools needs to be approved (after PM or repair), and green tags shows the tools are ready for production.
These should be standard practices for tools in a production facility, not only Samtec supplied tools.

2.3 Business Continuity/Disaster Recovery Plan

The supplier should have a business continuity/disaster recovery plan in place to ensure no interruption in the supply of materials to Samtec. Samtec reserves the right to audit to the business continuity/disaster recovery plans that are covered in its Purchase Order Terms and Conditions.

2.4 Packaging

The supplier must ensure that all items are packaged and preserved adequately to guarantee that the content is delivered to Samtec undamaged. Unless otherwise specified, all contents shall be packaged and preserved in accordance with the drawing, applicable specifications, and purchase order requirements. All suppliers must meet ISTA-3A packaging requirements. The following additional requirements must be followed as appropriate.

- Must meet ISTA-3A Packaging Requirements
- ANSI/ESD S541 as appropriate
- EIA 481 as appropriate
- ANSI/EIA 960 as appropriate
- WEEE
- Comply and marked in accordance with ISPM 15 as appropriate

Pallets for stamped products should be 24” x 24” or 25” x 25”. The material and processing of the pallets must meet the guidelines of the country of destination.

All material shall fall within the footprint of the pallet.

Samtec prohibits any packaging material that carries static charge and/or is non-recyclable such as Styrofoam peanuts.

Mixing of multiple purchase orders, line/release numbers, lot dates/codes (See Section 2.7 for further information) and part numbers from one shipping container is prohibited, unless otherwise stated by Samtec.

For more information on what packaging materials and methods Samtec considers acceptable, contact

nasupplierquality@samtec.com

Samtec reserves the right to reject any packaging that does not meet the specifications above. Any deviations must be submitted to Samtec and approved prior to shipment.

All orders received must have evidence of the compliance prior to shipment, inspection reports, and raw material certifications. This can be done by emailing a PDF formatted inspection report to

incominginspectionreports@samtec.com

or other Samtec email addresses as specified. In the subject line of each email should have the Purchase Order number and then the part name. Example (PO# 123456-1 TSW-50-D). The inspection reports need to legible and easy to understand.

2.5 Weight Limitations

Hand held containers, including bundles are not to exceed 50 pounds (22.7 kg) gross weight.
Parcels in excess of 50 pounds shall be put on skids or pallets to permit mechanical handling.

Hand held containers may be skidded or palletized to consolidate a shipment, but containers must be properly identified, stacked, and secured to the pallet. Note, shipments not to exceed 39 inches in total height. Skipping skids/pallets or boxes shall not exceed 2,500 pounds (1,136 kg) gross weight, and have appropriately placed pallet jack compatible fork truck slots or openings to allow mechanical loading.

2.6 Exterior Shipping Container
The exterior shipping container shall be sufficiently strong and functional to ensure product delivery, packaging identification, and subsequent distribution and must withstand superimposed stack loads, both as present to the carrier and as may be expected during shipment. It is the supplier’s responsibility to designate items that cannot be stacked and provide a method to ensure it was not stacked during shipping.

2.7 Labeling
All labels at a minimum are to have the following information (Use of Samtec Inventory Suite meets the requirements). Any labels that will not meet these criteria must be communicated to Samtec prior to shipping.

- Samtec Part Number
- Quantity
- Supplier Lot Date or Lot Code
- P.O. Number/ Release Number
- Revision
- Reference piece weight in grams (if applicable)
- Base Material (if not covered on print or if applicable)
- Base Lot Number (if not covered on print or if applicable)

Suppliers not using Samtec’s Inventory Suite software must comply with the above requirements.

Suppliers may combine consecutive lot dates of material in the same container if and only if the material is from the same production run and the lots are individually packaged and labeled inside the container. The lot date referenced on the label described above should be the earliest lot date of material inside the container.

Non-certified material must be identified by the yellow SQAM-14002 tag or equivalent form or label.

The supplier shall define, mark, label, prepare for hazardous goods, dangerous material and/or dangerous equipment for shipment in accordance with local and international laws appropriate for the shipments destination.

2.8 Part Count Variance
Unless Samtec states otherwise, the below count accuracy shall be within the following limits for both PO releases, parcel quantities, and bagged quantities (if applicable):

- Reeled Material: ± 3%
- Weigh Count: +3%/-0%
- Packaging ± 3%
- Cable +/- 10%
2.9 ESD Control Plan
Suppliers of ESD sensitive components and/or devices shall at a minimum have a documented ESD control plan equivalent to the requirements found in the ANSI/ESD S20.20 standard.

3.0 Quality Management System Requirements

3.1 Quality System
The supplier shall employ a quality system documented in a manual or other suitable format to ensure that all final products meet the specified requirements of Samtec. This documentation should be made available to Samtec upon request. The system shall maintain stable quality at all times.

3.2 Quality Planning
The supplier shall have in place a system for performing quality planning.

3.3 Contract Review
The supplier is expected to have in place a system of contract review to ensure production feasibility. At a minimum, this review should consist of:
- Adequacy of requirement definition(s)
- The suppliers capability to meet production, quality, delivery, and contract requirements
- Any subcontractor’s ability to meet production, quality, delivery and contract requirements

3.4 Drawings and Specifications
The supplier will ensure that copies of all prints and specifications are to the current contract revision level and are available and fully understood by all personnel who are responsible for compliance to Samtec requirements. The supplier shall treat all documents generated by Samtec as “Proprietary” and are not to be shared with anybody outside of the company. Obsolete documents are to be disposed of in the appropriate manner (shredding). Any material supplied to Samtec must meet Samtec’s requirements. Any inspections are up to the supplier’s discretion as long as Samtec’s requirements are met.

3.5 Verification of Purchased Product
Where specified, Samtec may propose to verify purchased product at the supplier’s premise. In addition where specified Samtec’s customer may be afforded the right to verify product at the suppliers premises to assure product conforms to specified requirements.

3.6 Confidentiality
All suppliers are required to sign Samtec’s Non-Disclosure Agreement and shall ensure confidentiality of Samtec contracted products under development and related product information. The supplier shall require the same level of confidentiality of any subcontractor supplying product or services as related to a Samtec project.

3.7 Counterfeit Parts
“Counterfeit Part” is an unauthorized copy, imitation, or substitute part or material that has been misrepresented, identified, or marked as a genuine part of an original or authorized manufacturer.

Supplier shall not obtain or provide any part to Samtec from a source that is not the Original Equipment Manufacturer or other authorized source. The Supplier will have a documented process to ensure that...
parts are traceable to the original equipment manufacturer or other authorized sources and will provide such documentation to Samtec within 1 business day of Samtec’s request.

3.8 Lot Control
Suppliers are expected to have lot control procedures in effect when materials or processes require lot segregation and/or traceability for effective control. The procedure shall also include an effective system of positive recall of suspect materials.

3.9 Process Control
The supplier is expected to maintain documentation of process control. Suppliers shall comply with all Samtec requirements for designation, documentation, and control of any special characteristics. The supplier shall have in place the appropriate instruments needed for the control of processes and maintenance of the equipment.

3.10 Inspection and Test Control
At any time, the supplier’s quality system and control of records may be reviewed. For production orders, the supplier’s inspection and testing frequency and data must be documented to assure that the product conforms to Samtec requirements.

3.11 Measurement and Test Equipment
The supplier is responsible to provide all necessary measurement and test equipment unless otherwise agreed upon between the supplier and Samtec.

3.12 Corrective and Preventative Action
Suppliers are expected to have a documented procedure for problem solving to meet the requirements of the customer. The procedure should focus on prevention rather than detection.

3.13 Product Protection and Preservation
The supplier is responsible for providing controls, which will assure that products are adequately protected against damage, contamination, or corrosion at their facility as well as products shipped to Samtec.

3.14 Document and Data Retention and Control
Records must be retained for 3 years after shipment of the product. To ensure that the information needed to run and operation is available; the supplier shall identify and control its documentation through a designated system. All information paper, electronic, or other format shall be maintained in a safe environment so that doesn’t deteriorate during its needed lifetime. The supplier will make available any quality records requested by Samtec.

The required documents shall include but are not limited to the following:

- Documented control plan
- Samtec and customer prints shall be maintained for the life of the project.
- Production retains, start-up, and in-process inspections shall be maintained for a minimum of 2 years.
- Engineering retains, at an engineering change initiated by Samtec or the supplier must be kept indefinitely (until the next change). Only samples for the current engineering change need to be
maintained but having a small crossover time may be prudent should you need to review previous conditions.
- Inspection data should be maintained for a 1 year minimum.
- Government requirements, as specified by the government.
- Release data (final approval) for a tool or product, shall be maintained for the life of the product.
- Contracts should be maintained for the life of the product.
- Other items as required by Samtec on an individual basis.

The following items must be kept for 15 years:

- Traceability of material, lot, and revision levels
- C of C’s &/or C of A’s, as applicable

3.15 Personnel
The supplier’s system shall provide for the satisfactory qualifications and training of all personnel who can influence the quality of product provided to Samtec.

3.16 Statistical Techniques
Suppliers are expected to utilize appropriate statistical techniques for establishing, controlling, and verifying process capability for critical product characteristics.

3.17 Premium Freight
As a method of measuring production capability and capacity records of premium freight should be maintained. Samtec may audit this information as a means to understand capability of maintaining on-time deliveries.

3.18 Shelf Life
Suppliers are required to use a FIFO methodology of pulling and shipping materials / items to ensure shelf life requirements are met.

3.19 Supplier Production Approval Process
Samtec requires all products submitted to be built to the specifications given in its drawings and purchase orders to be met on each part. Items not in specification are the responsibility of the supplier (examples being sorted, rework, & recall of the components, materials, and assemblies at Samtec and its customers).

The following section illustrates the process for product approval to help limit issues at the supplier, Samtec, and its customers.

Samtec has a number of different classes / types of products that must be treated differently as described below:

Automotive – Projects intended for inclusion in an ACD or A- product and used automotive applications.
TCD – Tailored Customer Design – This is product that has specific quality requirements and may involve automotive practices and requirements as applicable.
Application Specific Product (ex – ASP, HDR, etc.) – Specialized product intended for specific customer applications (not catalog products)
Delta – A part that has been modified (as with an engineering change). Its data submission is limited to the modification point(s) and those elements that could have been impacted by the change.

Standard Products – This is a product that is intended for serial production and intended to be listed in Samtec’s catalog.

Submission Matrix:
This illustrates the information required for approval of the product and how &/or if it should be submitted to Samtec.

First Article Inspection:
First articles come in two types (as explained below). The types are called out in:
- Type 1 – 5 pieces per cavity or stamping out required all criticals per tool
- Type 2 – 5 pieces per dimension (whether tolerance or not) for each cavity or stamping out and 30 pieces per critical per tool for each cavity or stamping out along with SPC results on its performance.

<table>
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<tr>
<th>Submission by Product</th>
<th>Type 1 First Article Inspection</th>
<th>Type 2 First Article Inspection</th>
<th>Control Plan Flow Chart Gage R &amp; R Material Cert Run at Rate DFMEA</th>
<th>AIAG Level 3 PPAP See Below</th>
<th>Additional Samtec Requirements See Below</th>
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<tr>
<td>Automotive Component</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>A</td>
<td>-</td>
</tr>
<tr>
<td>Automotive Raw Material</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>C</td>
</tr>
<tr>
<td>MAP, MAC, MAS</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TCD</td>
<td>X</td>
<td>-</td>
<td>Y</td>
<td>-</td>
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<tr>
<td>Standard</td>
<td>X</td>
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</tr>
<tr>
<td>ASP</td>
<td>X</td>
<td>-</td>
<td>Y</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Changes to existing product</td>
<td>X</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

A = Must be completed in the AIAG Format. Must be submitted upon request from automotive group.
C = Samtec specific requirements. Must be submitted upon request from automotive group.
X = Must be performed and submitted to the product engineer prior to initial release shipment, unless otherwise noted by Samtec personnel.
Y = All items must be completed (in the supplier’s format) but not required for submission. Items must be readily available for review at Samtec’s request.

The Samtec engineer or Project Manager can request additional information for the submission but cannot reduce the requirements shown above. Submission of the information to Samtec is at discretion of the Samtec Engineer or Project Manager.

Data must be submitted on the first three shipments. The data must be enclosed in an envelope that protects it from damage or submitted electronically.

A yellow SQAM-14002 tag or equivalent form or label must be attached to the envelope to help identify the data’s intent.

Approval Communication:
For Automotive and TCD projects the supplier will receive a signed PSW saying the product is ready for mass production.
For other project types the drawing revision is the indicator that the parts have been approved for production.

Labeling – Parts listed as NR (in the part number) or using a numeric REV (ex -01) require no special labeling. Other parts must use the SQAM-14002 tag or equivalent form or label on each box/parcel.

3.20 Sub-supplier Control
The supplier shall pass onto their suppliers the requirements of this manual as appropriate. This includes, as a minimum, areas of Quality Standards, Environmental Standards, Operational Controls, and Qualification of Suppliers.

A SQAM should be provided for your suppliers or pass along the Samtec SQAM. This provides guidelines and expectations for your suppliers.

Samtec reserves the right to carry out process approval at the sub-supplier on its own initiative in case of a major problem or risk.

3.21 Calibration
All measuring and test equipment including production tooling and fixtures used for the inspection and verification to conformance of final product must be calibrated at established intervals, in accordance with and traceable to recognized national or international standards. Calibration records must be maintained and available for review. They must at a minimum contain:

- Location
- Date
- Results of last calibration including the instruments “as received” condition.
- The date of the next calibration. The calibration of any Samtec supplied equipment must be maintained by the supplier. It is the supplier’s responsibility to return the equipment at the end of the project in a functioning condition.
4.0 Measurements, Analysis, and Improvement

4.1 Continuous Improvement

Samtec expects each supplier to support continuous quality and delivery improvement by forming and implementing continuous quality and delivery improvement plans. Improvement plans may be reviewed during periodic supplier meetings or audits. Suppliers should review Samtec’s Supplier Scorecard if provided and use it to review their performance and initiate corrective and preventive actions as needed.

4.2 Quality Problem Reporting

Suppliers shall not ship parts that do not meet Samtec’s requirements without Samtec’s documented approval. Product (which is defined as any material provided for Samtec’s BOM’s) that does not meet the requirements of Samtec, are considered deviant and as such subject to action. This action may include sorting, replacement, or financial penalties incurred by Samtec and/or its customers.

When defective parts are found at the supplier:

1. If defective parts are found in the supplier’s process and there is a possibility that some have already been shipped to Samtec, the supplier shall immediately inform the Samtec Supplier Quality Group by telephone and email. If the defects are found before Samtec uses them and no delays are caused with Samtec production a SCAR will be issued for documentation purposes requiring a corrective action. This will not count against your scorecard.

2. If non-confirming parts are found in the supplier’s process and the supplier to Samtec feels there is a possibility the parts can be still used because the overall fit, form, and function may not be affected, the supplier shall immediately inform the Samtec Supplier Quality Group by telephone and email. A limited number of evaluation samples must be shipped without a PO reference number to Samtec’s Supplier Quality Group for disposition if required by engineer. If approved, a written deviation must be given by Samtec’s Supplier Quality Group and a UAI QP must be documented by Samtec’s Supplier Quality Group. The quantity of parts accepted under the UAI QP will be recorded on the supplier scorecard as an FYI only. If multiple shipments will be affected a TEC should be entered instead. The parts cannot ship until the vendor has been notified by Samtec the ECR for the TEC has been approved. The remaining quantity of parts must then ship within a yellow SQAM-14002 tag or equivalent form or label with the UAI QP or TEC referenced on the label.

When defective parts are found at Samtec:

1. If defective parts are found at Samtec, Samtec’s Supplier Quality Engineering will inform the supplier. As soon as the supplier receives information from SQE, the supplier shall communicate a response and any containment actions with 24 hours. Containment actions should include parts in the supplier’s process, parts in transit to Samtec, and parts in Samtec’s process.

2. Samtec does reserve the right to debit suppliers for any rework and inspections that may have been incurred at Samtec due to the defective material. For component suppliers (excluding tooling), all rework and inspections performed at Samtec are subject to a $100 setup fee plus $40 for each inspection/rework hour performed. Tooling suppliers are subject to a $350 rejection fee.

A preliminary theoretical root cause shall be communicated to Samtec within 48 hours of receiving samples, photos, or a detailed description identifying the defect. The supplier must support Samtec in replacing, reworking and/or scrapping parts at Samtec.
Any box/parcel that has been sorted for the condition shall be identified with a SQAM-14002 tag or equivalent form or label.

Samtec SQE reserves the right at its discretion to issue a SCAR to the supplier for the situations described above. A SCAR may also be issued when a supplier’s monthly scorecard shows a score of 1 on Delivery and/or Deviations. Other instances of SCAR’s being issued may occur but will be explained on a case by case situation with the supplier.

The supplier shall investigate the problem and implement a corrective action addressing the issue and non-detection. The corrective actions shall be documented on the SCAR form (SQAM-1901) and returned to SQE within 10 business days. A supplier may submit their own 8D form if it includes the Samtec 8D requirements. Any late responses are subject to an additional SCAR for not responding. Labeling error SCARs requiring limited investigation shall be completed with 5 business days.

When a “Prevention of Recurrence” is taken, the preventive action shall be applied to similar processes and/or products. If the preventive action does not translate to other processes and/or products, the supplier shall state as such.

4.3 Request for Deviation

When the supplier produces a quantity of non-conforming parts (defective parts), and believe that these parts can be used without adversely affecting form, fit, function, or other product requirements, a limited quantity of these parts may be accepted.

- If approval is received from Samtec
- Submit information in Form CO-EN-QA-FRM-7000-M Supplier TEC Request Form or equivalent (and attach to the TEC).

When the supplier has identified an issue that requires a permanent change, a TEC should be made with the communication that the change is permanent so an ECR will be initiated. This should be communicated in the “Reason for Change” section.

Request made for Engineering Changes can take 6 months or more. As a supplier you must be prepared to support Samtec with current product until approved. Samtec typically doesn’t require that long and will its best effort to make changes in a timely manner as appropriate.

In the case of a TEC, the supplier must notify SQE of the investigated results. Then, after discussion with SQE, the supplier must submit a TEC by going into the Samtec Global Network. If a supplier is unable to enter a TEC, then they should discuss the deviation request with SQE and have them enter the TEC on the supplier’s behalf. Samtec may request samples to verify this item. The following is an example of the TEC and the information needed. No product to be shipped until the TEC is approved by Samtec personnel.
The TEC or request to SQE should be submitted along with the inspection data, material certifications as appropriate to the deviation.

If the request is approved by SQE, the approval will be communicated to the supplier. The parts can then be shipped along with the QP label or SQAM-14002 tag or equivalent form or label which is to be placed on the package. The SQAM-14002 tag or equivalent form or label option should reference the TEC number granted by Samtec or the QP number.

Verification: At the end of the TEC (or prior as appropriate) the supplier will submit data to SQE to support that the issue has been resolved (along with actions needed to resolve it if different from the original submitted). This data will be included in the Form CO-EN-QA-FRM-7000-M Supplier TEC Request Form.

4.4 Incoming Quality Assurance
Suppliers shall have a documented incoming inspection process to inspect, test, verify, and store data on raw material used for the manufacture of Samtec products. Inspection data, CoA, or CoC’s on sub supplier’s product must be available upon request within 1 business day of having been requested by Samtec.

4.5 In-Process Quality Assurance
Suppliers shall have in-process acceptance procedures to ensure that the in-process parts are controlled until the required inspection and tests or other verification activities have been completed, or necessary approvals are received. Suppliers must have a system for controlling and identifying in-process materials. All nonconforming material must be clearly identified and segregated and a clear process must be defined for dispositioning nonconforming material. Production retains, start-up, and in-process inspections shall be maintained for a minimum of 2 years.

4.6 Outgoing Quality Assurance
Suppliers shall have an outgoing acceptance procedure to verify that each finished product lot conforms to
5.0 Supplier Performance Monitoring

5.1 Supplier Approval

Suppliers will be approved to one of the following requirements as listed below. The requirement expectation is listed on the approved vendor list.

**Strategic** – Strategic suppliers are IATF 16949 certified or IATF 16949 compliant and approved for new product development, existing products, and custom products including automotive.

**Preferred** – Preferred suppliers must be minimally ISO 9001 certified and can be utilized for existing products, new product development, and custom products.

**Non-Preferred** – Suppliers that are not recommended for new product development or custom products but previously categorized as strategic or preferred.

**Niche** – Niche suppliers provide unique products, capability, patent, customer supplied, or proprietary product components for Samtec products. They may or may not be aligned well to Samtec’s business model but considered a valued and necessary supplier.

**Disqualified** – Suppliers that are not approved for new product development, existing products, or custom products.

**Other** – Suppliers that are approved and have not been assigned one of the above statuses but are approved for R & D.

**Probationary** –
To ensure that Samtec continues to meet the needs of our customers it is necessary to have a Probationary Status for suppliers. This status is given under the following conditions.

- Engineering, or another Samtec department, is testing a new supplier with samples products.
- A supplier has failed to meet Samtec’s performance requirements as outlined in Section 5.1.
- Samtec Sourcing has labeled as such, for reasons that will be discussed with the supplier. (ex. Failing to meet development goals.)

Consequences of probation could be the following:

- Requirement that all shipments have data submitted with them.
- Third party audit of products, at Samtec or the Supplier.
- Labeling of all product coming to Samtec with the yellow SQAM-14002 label with reference to Samtec QA.
- Freeze on any future projects and/or tools.
- On site audit by Samtec.
- May be required to hit specific short term goals as they work toward final solutions.
- Other items as specified by Samtec.
5.2 New Supplier Evaluation Process
All new suppliers will be evaluated to determine if they have the proper quality systems and manufacturing capabilities in place to adequately supply parts to Samtec.

A survey will be emailed to the supplier to evaluate the adequacy as a Samtec supplier. The perspective supplier should complete the survey in 10 working days from date of issue unless otherwise stated.

Samtec reserves the right to perform an on-site audit if deemed necessary. This will remain active until the supplier maintains 6 consecutive months of an overall scorecard of 3.0 or greater or as determined by Samtec’s SQE and Sourcing Management.

5.3 Probationary Status
This will remain active until the supplier maintains 6 consecutive months of an overall scorecard of 3.0 or greater or as determined by Samtec’s SQE and Sourcing Management.

5.4 Disqualified Status
If a supplier has 12 consecutive months of an overall scorecard score below a 3.0 or has poor financials that puts Samtec at risk, Samtec reserves the right to begin the necessary steps to move the supplier to a disqualified status. (Note: Suppliers are ineligible from receiving new opportunities if listed as non-preferred or on probation as well)

5.5 Supplier Scorecard
Samtec will evaluate a supplier’s overall total quality performance monthly. The evaluation program will measure each supplier’s ability as described below.

The supplier scorecard employs a 5 point system, 5 being the highest and 1 the lowest. Listed below is an explanation on the fields used.

Measurement items on the scorecard:
- PPM (Based on defects found at Samtec and the number of parts received within that month. Does not apply to tooling).
- Pieces Defective % (Based on the number of defective pieces sent divided by the total number pieces received in that month. Applies to tooling scorecards only).
- Delivery % (Based on the shipments, which miss the supplier’s own dock date commitment to arrive at Samtec).
- 3 Day Window % (Based on the number of shipments, which come in within three days; this is commit date plus two days)
- # of SCARs Issued (Based on the number of SCAR’s issued in a single month)

Note: OTD to Standard Delivery% (Based on the shipments, which hit supplier’s standard delivery date). These will be tracked but not scored on the scorecard. This is an attempt to measure a supplier’s ability to ship based on the standard lead time regardless of existing business levels. The goal is to measure the supplier’s ability to maintain their commit dates, and not change them frequently. (This is an indicator used by Samtec that will not show up on the scorecard but is used in the evaluation of supplier lead times only).

The data from above is placed into a 5 point system, based on the table at the end of this section.
The results are then calculated by adding the (Score) X for each measurement and dividing by 4 for Product. The Tooling Scorecard is calculated differently. OTD and Pieces Defective % are captured independently but are not averaged together.

Any BOM supplier who averages a rolling quarter total score below 3.0, will be reviewed to potentially receive a poor performance SCAR. Any non-BOM supplier who scores below a 3.0 for three consecutive months will be reviewed to potentially receive a poor performance SCAR. A poor performance score may also result in an audit or that supplier being put on probation. Any supplier who fails to meet these criteria for 6 consecutive months will be put on probation.

<table>
<thead>
<tr>
<th>Rank</th>
<th>PPM Range</th>
<th>ACD PPM Range</th>
<th>Delivery 3 Day Window Range</th>
<th>SCAR Range</th>
<th>Pieces Defective % Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0-450</td>
<td>0-10</td>
<td>98-100%</td>
<td>0 SCARs</td>
<td>0-0.5%</td>
</tr>
<tr>
<td>4</td>
<td>451-2250</td>
<td>11-75</td>
<td>95-97%</td>
<td>1 SCAR</td>
<td>0.5-1.0%</td>
</tr>
<tr>
<td>3</td>
<td>2251-6750</td>
<td>76-150</td>
<td>90-94%</td>
<td>2 SCARs</td>
<td>1.0-1.5%</td>
</tr>
<tr>
<td>2</td>
<td>6751-11250</td>
<td>151-300</td>
<td>80-89%</td>
<td>3 SCARs</td>
<td>1.5-2.0%</td>
</tr>
<tr>
<td>1</td>
<td>11251-Above</td>
<td>301-Above</td>
<td>79% and below</td>
<td>4 SCARs and above</td>
<td>2% and above</td>
</tr>
</tbody>
</table>

Appendix A: Special Requirements for Automotive Suppliers

As a manufacturer of automotive products Samtec must adhere to certain requirements that are now being rolled down to you as the supplier. The use of the prefix (ACD) Automotive Certified Design or A- should indicate that additional requirements are present and you as the supplier should make sure that you have the appropriate information prior to quoting the business. Samtec uses the Supplier PPAP Request Form (CO-QA-FRM-2031-M) to communicate both Samtec and Customer requirements (that are in addition to Samtec’s standard requirements). Other Supplier requirements include:

- As a requirement of IATF 16949 and the automotive industry our expectation is that suppliers will work towards a certification of ISO 14001 & IATF 16949 if building A- or ACD parts for Samtec or as otherwise requested.
- Annual layout required for all ACD and A- products and/or components
- Where special processes are being utilized a CQI audit is required on an annual basis
  - Example: CQI-23 audit for molding processes, CQI-9 for Heat Treated processes and CQI-11 for Plating Processes.
- An annual VDA audit should be performed internally at suppliers and Samtec reserves the right to perform the VDA audit on site.

Note: TCD (Tailored Customer Design) also have additional requirements that will be communicated during the early stages of a project.
Samtec is a manufacturer of Automotive grade products that use the prefix of ACD- or A- (hereafter referred to as “Automotive Parts”) to designate special requirements.

When supplying Automotive Parts, the following requirements are required unless agreed upon by both parties in writing using (CO-QA-FRM-2031-M). This form is also the document which will roll down Customer Specific Requirements as needed.

- IATF 16949 Certification – Companies that are building Automotive Parts shall be MAQMSR or IATF Compliant.
- ISO 14001 Certification – Companies that are building Automotive Parts shall have processes that are in compliance with ISO 14001.
- PPAP’s – Must be completed upon Samtec’s request to the standards set by the AIAG.
- Annual Layout – A review of the Automotive Part must be completed annually to insure there have been no changes and the process is still performing well. This is done by performing an FAI & SPC for critical dimensions for each cavity in the mold or die. For Automotive Parts, components with a representative cross section of the series are to be used. Note: In lieu of performing a layout on every part number configuration within a series, the supplier may elect to qualify a part number or a group of part numbers that represents a sufficient cross section of all available configurations. (example: alignment pins, guide posts, locking features, as appropriate). Reference IATF 16949 standard for details.
- Golden samples – Per IATF 16949 standards
- Process Setup Sheet – Documentation of the manufacturing process parameters necessary for the product to meet Samtec’s print requirements.
- Engineering changes – No changes to the Automotive Parts can be made without the written permission of Samtec’s Automotive department.
- IMDS – Must be completed upon Samtec’s request
- Customer specifics – In some cases, Samtec may flow down its customer’s requirements on a project. In those cases, they will be communicated through the Drawing and/or the PO.
- PPM Expectations – 10 PPM
- OTD Expectations – 100%

These requirements are in addition to Samtec’s other requirements. In areas of conflict, Automotive requirements will supersede Samtec’s standard requirements.

Any questions in regards to Automotive requirements and/or projects shall be sent to the autosales@samtec.com if you don’t have a specific contact for the project.

Appendix B: Special Requirements for ITAR Suppliers

What is Military / Aerospace Business?
Business where the product is designed / modified specifically for ultimate use in a military application (regardless of the country requesting, building, or paying for the project) or an Aerospace application that that may be non-military.

Commercial Off The Shelf (COTS): Products that are sold to a wide array of commercial applications and are commonly found in the catalog or on Samtec’s website.
How do I know if the part is Mil / Aero?
When one of your products falls under Mil / Aero it will use the prefix for MAP, MAC, &/or MAS. Similar to Samtec’s use of Application Specific Products (ASP)

MAP, MAC, &/or MAS Components:
Parts with this prefix will require an AS 9102 FAI to be submitted with the parts. These parts, like automotive parts, are frozen and cannot be changed without the prior notification of Samtec’s ITAR department. Note: Not all parts with this prefix are ITAR, but they have additional restrictions or requirements that need special controls for modifications or moves.

What is ITAR?
ITAR is a set of United States government regulations that control the export and import of defense-related articles and services on the United States Munitions List (USML). Its goal is to safeguard U.S. national security and further U.S. foreign policy objectives. ITAR regulations dictate that information and material pertaining to defense and military related technologies may only be shared with U.S. Persons unless authorization from the Department of State is received or a special exemption is used. U.S. Persons and corporations can face heavy fines if they have, without authorization or the use of an exemption, provided foreign (non-US) persons with access to ITAR-protected defense articles, services or technical data.

Requirements:
Projects that fall under ITAR will be identified by the attached box indicating ITAR is involved.

Drawings:
Drawings will only be shared through an encrypted communication device “ex. ShareFile”
Drawings must only be shared with US Persons (and those needed for completion of the project)
Drawings must be locked when not in use

Education:
Associates in your organization must be trained to understand what ITAR is and how this impacts their responsibilities within the organization.

Storage of ITAR products:
Parts identified as ITAR should be kept secluded from standard parts and should only be visible by US Persons (the same as the drawings)

Registration:
Upon Samtec’s request you will get Registration to the State Department for ITAR. If you are not able to comply then you must inform Samtec at the quote phase for any product that is ITAR. If you are a non-US owned company you must inform Samtec prior to quoting.

Records & Evidence Available:
Records of processes, training and due diligence will be available for audit by Samtec upon request.

Appendix C: Applicable Documents, Forms, and Reference Information
I. Applicable Documents
II. Forms
   a. SQAM 14002 Label

   This tag is to be placed on the packing slip and each box of all material that requires inspection. This is
   the responsibility of the supplier.

   The source below is the original manufacturer of the labels. The supplier shall if desired find and use
   their own supplier as long as the label is identical in size, color, and content which includes black
   lettering on a yellow background.
   Label Source: Louisville Label
   417 South 32nd Street
   Louisville, KY 40212
   Telephone No.: (502) 774-5776

III. Reference Information
   a. Control Plans, PPAP, and FMEA’s

   For additional information on completion of Control Plans, PPAP, and FMEA’s please contact:
   Automotive Industry Action Group (A.I.A.G.)
   Dept. 77839
   PO Box 77000
   Detroit, MI 48277-0839
   Telephone No.: (248) 358-3003
   Fax No.: (248) 799-7995
   Website: www.aiag.org
## Appendix C: Revision History

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>5/9/11</td>
<td>Complete re-release</td>
</tr>
<tr>
<td>5/15/12</td>
<td>Added Index, Modified Supplier Category listings, Section 1: Clarified, Section 2: Added 15C and 19, Section 3: Clarified, Combined sections 5, 6 and 9 to only 5, Section 6: Added CPC reference, Section 13: Added note; Updated PPM Charts for Scoring, Appendix A: Added fair practices reference</td>
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<tr>
<td>9/25/12</td>
<td>Updated Section 3, statement 2 which addresses the supplier survey link and deleted words in statement 3. Also added information to item #5 under section #9</td>
</tr>
<tr>
<td>10/24/13</td>
<td>Added point 2b on Section 11.</td>
</tr>
<tr>
<td>5/16/14</td>
<td>Modified section 9 and 11</td>
</tr>
<tr>
<td>6/5/14</td>
<td>Modified section 13/#3</td>
</tr>
<tr>
<td>6/26/14</td>
<td>Added point 1c and point 6 on Section 8.</td>
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<tr>
<td>9/2/14</td>
<td>Point 1 of Purpose and Scope Section, point 7 of section 11, and point 3 of section 15 have been modified</td>
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<tr>
<td>4/27/15</td>
<td>Added additional supplier requirements on page 8. Added note to first article inspection on page 13, Revised PPM Scale on Page 27.</td>
</tr>
<tr>
<td>5/7/15</td>
<td>Modifications on section 8.</td>
</tr>
<tr>
<td>6/16/15</td>
<td>Added ACD/A-PPM scale in section 13</td>
</tr>
<tr>
<td>7/6/15</td>
<td>Added Vendor consequences to section 15, point 2.</td>
</tr>
<tr>
<td>8/14/15</td>
<td>Point 3 at section 11 modified.</td>
</tr>
<tr>
<td>9/10/16</td>
<td>Complete re-write and re-release</td>
</tr>
<tr>
<td>12/8/2016</td>
<td>Update Order of Precedence and update Labeling information section 1.4. Update Product Protection and Preservation section 3.12. Update Document and Data Retention and Control section 3.13 to include required documents. Remove Automotive Requirements, Risk Assessment and Feasibility, Document and Data Control, Corrective and Preventative Action. Update Quality Problem Reporting section 4.2 and Request for Deviation Update Supplier Performance Monitoring section 4.3. Combine Supplier Scorecard tables section 5.3 Update Probationary Status Update Appendix A: Special Requirements for Automotive Suppliers information</td>
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<tr>
<td>12/16/2016</td>
<td>Section 3.18, under First Article Inspection: Deleted Type 3 FAI verbiage. Section 3.18, Table: Deleted Type 3 column. Section 3.18, Table: Shaded entire Type 2 FAI column. Section 3.18, Notes under the table: Changed note for shaded cells. Entire document: Changed every reference of TS 16949 to ISTF 16949</td>
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<tr>
<td>1/6/2016</td>
<td>Added Appendix for ITAR Requirements</td>
</tr>
<tr>
<td>4/28/2017</td>
<td>Section 4.2: Add “A supplier may submit their own 8D form if it includes the Samtec 8D requirements.” Section 5.1 Supplier Approval: Update definition of Strategic, Preferred, and Non-Preferred.</td>
</tr>
<tr>
<td>8/10/2017</td>
<td>Updated matrix in 3.18.</td>
</tr>
<tr>
<td>5/7/2018</td>
<td>Update Section 5.3 to reflect new tooling scorecard calculations. Change OD% in table to Pieces Defective % and update values. Change OD% definition to “Pieces Defective % (Based on the number of defective pieces sent divided by the total number pieces received in that month.” Add “The Tooling is calculated differently. OTD and Pieces Defective % are captured independently but are not averaged together.”</td>
</tr>
<tr>
<td>6/24/2018</td>
<td>Appendix A: Change “CQI” to “CQI-23”, Add Note about VDA requirement</td>
</tr>
<tr>
<td>7/12/2018</td>
<td>Adding instructions for shipping parts with a TEC in 4.2</td>
</tr>
<tr>
<td>8/28/2018</td>
<td>5.3: Change “score of 3.0 or below” to “score of below a 3.0” Appendix A: Add CQI-9</td>
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<td>Date</td>
<td>Changes</td>
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<tr>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
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<tr>
<td>10/11/2018</td>
<td>Appendix A, Annual Layout: Add &quot;This is done by performing an FAI &amp; SPC for critical dimensions for each cavity in the mold or die.&quot;</td>
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<tr>
<td>11/14/2018</td>
<td>Section 2.1: Add &quot;Supplier will inform Samtec in advance...&quot;; Section 5.3: Change 0-25 to 0-10. Add &quot;Any supplier who averages below a 3.0 for 6 consecutive months will be put on probation.&quot;</td>
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<tr>
<td>1/30/2019</td>
<td>Added Section 3.7 Counterfeit Parts which then shifted sections. In Appendix A added form number &quot;(CO-QA-FRM-2031-M)&quot; in three locations and Text in Paragraph 1 bullet 1” A- or ACD parts for Samtec or as otherwise requested “and Text in Paragraph 2 “This form is also the document which will roll down Customer Specific Requirements as needed” and Text in last sentence “for the project “</td>
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<tr>
<td>2/19/2019</td>
<td>Section 5.5: Update criteria for when non-BOM suppliers are reviewed to receive a SCAR.</td>
</tr>
<tr>
<td>4/23/2019</td>
<td>Delete all references to TS 16949 and replace with IATF 16949. Appendix A: Add note about process setup sheets; Forms: Update SQAM 14002 label to REV B.</td>
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<tr>
<td>10/23/2019</td>
<td>1.4 Order of Precedence: Change #2 to include procedures; 5.5 Scorecard: Update PPM Range in table by changing &quot;0-500, 501-2500, 2501-7500, 7501-12500, 12501+&quot; to &quot;0-450, 451-2000, 2001-6000, 6001-10000, 10001+&quot;</td>
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<tr>
<td>12/2/2019</td>
<td>5.5 Scorecard: Update PPM Range in table by changing &quot;451-2000, 2001-6000, 6001-10000, 10001+&quot; to &quot;451-2250, 2251-6750, 6751-11250, 11250+&quot;</td>
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<tr>
<td>9/15/2020</td>
<td>Added Section 2.9 on ESD</td>
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