

	Supplier Quality Manual	Page 1 of 14
	COR.103	Rev S

**TABLE OF CONTENTS**

TABLE OF CONTENTS ..... 1

1 PURPOSE & SCOPE ..... 2

2 DEFINITIONS & ACRONYMS ..... 2

3 ROLES & RESPONSIBILITIES ..... 3

4 REFERENCES ..... 4

5 POLICY ..... 5

6 SUPPLIER QUALITY SYSTEMS ..... 7

7 ADDITIONAL RECOMMENDATIONS ..... 12

8 METRICS ..... 12

9 RECORDS ..... 12

10 REVISION HISTORY ..... 12

	Supplier Quality Manual	Page 2 of 14
	COR.103	Rev S

## 1 PURPOSE & SCOPE

This manual defines the basic quality systems and business procedures required of suppliers who manufacture and/or supply production material and/or services to Qorvo and Qorvo International. This manual also defines quality requirements, expectations, and business practices for these suppliers to maintain their status as an approved supplier. This manual may be referenced in the Purchasing Agreement between the supplier and Qorvo, however, any supplier requirements explicitly called out in the Purchasing Agreement will supersede this document.

This document applies to Qorvo's and Qorvo International's current and prospective suppliers of critical materials, assembly, and turnkey services, and relevant mineral suppliers (as defined in SPE-001288). The document is applicable across all Qorvo Business units and all manufacturing and design sites.

## 2 DEFINITIONS & ACRONYMS

Term	Definition
8D	Eight Discipline Problem Solving Method/Report
CSR	Corporate Social Responsibility
DMR	Discrepant Material Request
DFMEA	Design Failure Mode and Effects Analysis
FMEA	Failure Mode and Effects Analysis
OFI	Opportunities for Improvement
OCM	Original Component Manufacturer
PCN	Process Change Notice
PCR	Process Change Request
PFMEA	Process Failure Mode and Effects Analysis
PO	Purchase Order
POC	Point of Contact
RBA	Responsible Business Alliance
RM	Responsible Minerals
RMA	Return Material Authorization
SDP	Supplier Document Portal
SCAR	Supplier Corrective Action Report

	Supplier Quality Manual	Page 3 of 14
	COR.103	Rev S

### 3 ROLES & RESPONSIBILITIES

Role			Responsibilities
Qorvo Director	Supplier Quality		<ul style="list-style-type: none"> <li>• Definition and Execution of the process for optimal performance</li> <li>• Define and ensure resources, competence, and training for the effective execution of the QMS</li> <li>• Periodic review and update of this specification</li> <li>• Drive continuous improvement to the QMS</li> </ul>
Qorvo Engineering Managers	Supplier Quality		<ul style="list-style-type: none"> <li>• Ensure requirements have been communicated to supplier and periodically review and update of the specification</li> <li>• Execution and Reporting of Process</li> <li>• Drive QMS Risk Assessment and Mitigation Plan</li> <li>• Manages the Process Systems required to execute the QMS</li> </ul>
Qorvo Engineer	Supplier Quality		<ul style="list-style-type: none"> <li>• Supplier’s POC for quality and technical issues</li> <li>• Execution and Reporting of Process</li> <li>• Monitor supplier compliance and resolve non-compliance issues via DMR, SCAR, or CSI</li> <li>• Owns Process Change Management</li> <li>• Support QMS systems and participate in QMS risk assessments and opportunities for improvement.</li> <li>• Audit suppliers</li> </ul>
Qorvo Sourcing, Manager, Buyer	Category		<ul style="list-style-type: none"> <li>• Supplier’s POC for commercial issues</li> <li>• Supplier Management including oversight or execution of all commercial work processes for selection, acquisition, inventory, planning, and supplier performance reporting for processes, products, materials, and services used in Qorvo operations.</li> <li>• Owns the supplier relationship and assurance of supply.</li> <li>• Reviews and aligns Risk Assessment and Mitigation Plans across company to calibrate priorities and allocate resources.</li> </ul>
Supplier’s Management and Management	Senior Quality		<ul style="list-style-type: none"> <li>• Drive robust Quality Management System (QMS) practices within the organization.</li> <li>• Work diligently and collaboratively with Qorvo to improve our product quality via Commitment to Quality, Change Management Excellence, Process Control, Continuous Improvement Culture, and Corrective Action Excellence.</li> <li>• Implementation of systems and resources to ensure Qorvo quality requirements are met.</li> <li>• Provide compliance evidence for quality requirements, upon request.</li> </ul>
CSR/RM			<ul style="list-style-type: none"> <li>• Partner with Supplier Quality to ensure CSR/RM requirements are communicated to suppliers.</li> </ul>

	Supplier Quality Manual	Page 4 of 14
	COR.103	Rev S

#### 4 REFERENCES

External Reference	Title
AS9100:D	Quality Management System – Requirements for Aviation, Space and Defense Organizations
IATF 16949:2016	Quality Management Systems – Automotive Quality Management System Standard - Requirements for automotive production and relevant service parts organizations
ISO 9001:2015	Quality Management Systems – Requirements
J-STD-046	Customer Notification Standard for Product/Process Changes by Electronic Product Suppliers
JESD50	Special Requirements for Maverick Product Elimination and Outlier Management
<b>4.1</b> AIAG Manuals	Automotive Industry Action Group
1) APQP	Advanced Product Quality Planning and Control Plan
2) PPAP	Production Part Approval Process
3) MSA	Measurement System Analysis
4) SPC	Statistical Process Control
<b>4.2</b> AIAG/VDA Manual	Verband der Automobilindustrie - German Association of the Automotive Industry
1) FMEA	Failure Mode Effects Analysis

	Supplier Quality Manual	Page 5 of 14
	COR.103	Rev S

## 5 POLICY

### 5.1 Communication to Supplier

Qorvo suppliers have access to this Quality Manual via the following systems:

- The document may be provided directly by Sourcing, Purchasing or the Supplier Quality Engineer.
- The document may be included in a purchasing agreement or other business contract.
- The document is available for select suppliers and sub-contractors in the Supplier Documentation Portal (<https://qorvo.service-now.com/csm>)

Specifications pertaining to supplier's business with Qorvo are accessible 24/7 via the SDP. Supplier Quality Engineering creates personalized supplier accounts on an as-needed basis. Suppliers will have access to only those specifications required for compliance. Suppliers will receive real-time notification for all new revisions and are solely responsible for ensuring timely dissemination and compliance within the supplier's Quality System.

- Qorvo may require suppliers to formally acknowledge that they have read the Quality Manual and understood the requirements.
- Qorvo shall flow down applicable Qorvo customer requirements to the suppliers. Suppliers will be responsible for implementing the Qorvo customer requirements as stated.

### 5.2 Periodic Review of Supplier Quality Manual

The Qorvo Supplier Quality Director, or designee, is responsible for reviewing the Supplier Quality Manual on a periodic basis and making appropriate revisions.

The supplier is encouraged to provide feedback to Qorvo regarding the content of the manual for the purpose of continuous improvement and to ensure an effective working document.

### 5.3 Supplier's Point of Contact

For commercial issues, the supplier's point of contact at Qorvo is the Commodity Manager or Buyer. The supplier shall not accept any changes to the purchasing agreement, contract, quantity, pricing, or due dates for the materials or services to be delivered unless authorized via PO change notice or a revised PO issued by the Qorvo Buyer.

For quality or technical issues, the supplier's point of contact is the Supplier Quality Engineer, unless otherwise specified. The supplier shall not accept any changes to the technical requirements, revision levels and/or quality requirements for the materials or services to be delivered unless authorized via a Qorvo specification change, Qorvo specification waiver, PO change notice, or a revised PO issued by the Qorvo Buyer.

### 5.4 Supplier Qualification Process

Qorvo follows a formal qualification process for new suppliers and materials. Supplier qualifications are based on, but are not limited to, one or more of the following techniques: survey information, an on-site assessment, a self-assessment, product evaluation, product testing, and product reliability. The actual assessment will be performed by Qorvo personnel or their authorized agents.

### 5.5 Supplier On-Site Assessment

Qorvo, or their authorized agent, reserves the right to perform on-site assessments/audits of supplier's facilities to determine capabilities and compliance with Qorvo Quality Management System requirements. Assessment will be based on a formal agenda that will be issued in advance of the audit.

A formal audit report will be issued to the supplier which will include any gaps and opportunities for improvement (OFI) identified. Formal corrective actions are required for the gaps identified during the audit. Responses to OFI are required but formal corrective actions are not necessary.

	Supplier Quality Manual	Page 6 of 14
	COR.103	Rev S

A written response to the corrective action request will be required within (30) thirty days from the notification of finding, unless otherwise indicated by Qorvo.

#### 5.6 Supplier Performance

Supplier performance will be periodically monitored by Qorvo, and scorecards will be issued to select suppliers in accordance with COR.102.

Suppliers will be rated for performance against elements such as Quality, Cost, Delivery, Responsiveness, Compliance and Risk. Suppliers are expected to review the scorecards and work on continual improvement projects as requested in the scorecard.

#### 5.7 Supplier Development Process

Qorvo will determine the priority, type, extent, and timing of required supplier development actions, with emphasis on strategic suppliers, suppliers with highest risk, and suppliers with lowest quality performance records.

Qorvo's goal is to identify opportunities for improvement and assist the supplier with continual improvement plans to ensure zero defect products, materials, and services.

#### 5.8 Corporate Policies and Objectives

It is the policy of Qorvo that materials and services used in the design and production of Qorvo products be procured in a professional and ethical manner that results in achieving the lowest total cost of ownership for Qorvo and for our customers.

Furthermore, all purchased materials and services must comply with agreed upon requirements, be delivered on time, and have competitive lead times and prices.

#### 5.9 Supplier Statutory and Regulatory Requirement

Suppliers shall ensure their organizations comply with all statutory and regulatory requirements for the country of manufacture, the country of receipt, and the Qorvo-identified country of destination, if provided.

#### 5.10 Supplier Ethics Policy

At Qorvo we have built our reputation on unquestionable ethical behavior and consider this belief to be a key contributor to our success. Qorvo expects that all Qorvo employees and suppliers comply with Qorvo's Code of Conduct regardless of local business practices or social customs.

#### 5.11 Supplier Social Responsibility Expectations

Qorvo declares its support of Corporate Social Responsibility and is actively pursuing conformance to its standards in accordance with our management system described in this document.

It is important to note that Qorvo is a member of the Responsible Business Alliance (RBA) and follows the RBA membership requirements as well as utilizing the RBA Code of Conduct.

	Supplier Quality Manual	Page 7 of 14
	COR.103	Rev S

## 6 SUPPLIER QUALITY SYSTEMS

### 6.1 Quality Management System

Suppliers are expected to have an effective Quality Management System in place that assures consistent quality and on-time delivery of conforming product. For strategic suppliers and suppliers to Qorvo automotive programs, registration to ISO 9001:2015 by an accredited third-party certification body is required at a minimum and conformity to IATF 16949:2016 is encouraged as the long-term goal. For all approved suppliers, conformity to ISO 9001:2015 is required and certification is strongly encouraged.

Suppliers to Qorvo automotive programs that are not IATF 16949:2016 certified shall have a plan in place to attain certification to the automotive standard. Supplementary information for development of a plan can be found in section 8.4.2.3 of the IATF 16949:2016 Automotive Quality Management System Standard.

The supplier is required to inform Qorvo immediately if, for any reason, their certification is not renewed or is revoked. In addition, the supplier shall inform Qorvo if there is a change in the registrar or registration status.

The supplier shall notify Qorvo when there are any mergers, acquisitions or affiliations associated with the supplier. Qorvo will verify the continuity of the supplier's Quality Management System and its effectiveness.

### 6.2 Risk Management Policy

The supplier shall have an up-to-date documented Business Continuity Plan including Supply Chain Risk Management Plan ensuring that in the event of disaster or inability to perform the supplier can take the necessary actions to minimize and/or eliminate such risk to Qorvo.

### 6.3 Manufacturer's Representatives, Distributors & Brokers

Manufacturer's Representatives and Distributors accepting Qorvo POs must recognize that all procurement documentation requirements apply to them as well as to the material manufacturer. As the direct supplier to Qorvo and as a representative of the manufacturer, it is the supplier's responsibility to assure that the manufacturer's part supplied meet all Qorvo procurement documentation requirements.

For the suppliers of discrete electronic components and integrated electronic assemblies that are intrinsic to Qorvo's end product the Qorvo Buyer shall ensure that the supplier is an OCM or authorized distributor with the legal right or authority to sell a component. Qorvo Buyers will ensure compliance with suppliers as per internal Qorvo specifications.

### 6.4 Responsibility of Test and Inspections

The supplier is responsible for the performance of all tests and inspection requirements as specified in the procurement documentation. The supplier may use his own or other suitable facilities. Qorvo reserves the right to witness or perform any of these tests and inspections set forth in the procurement documentation and to audit the data resulting from the supplier's performance of these tests and inspections. Suppliers agree that any incoming inspections performed by Qorvo or its subcontractors resulting in a nonconformance to specification and confirmed by the supplier, will be rejected.

### 6.5 Product Packaging and Protection

Components are to be packaged to prevent part damage during shipping for the applicable transportation mode and utilizing materials friendly to the environment and easy to dispose of or recycle at the receiving facility. No packing or packaging material that is used shall crumble, flake, powder or shed. The supplier shall also assure that any special packaging and preservation considerations

	Supplier Quality Manual	Page 8 of 14
	COR.103	Rev S

contained within the product specification, such as for ESD sensitive parts are met. Wooden pallets used in shipments should be heat treated. Recyclable containers are encouraged where appropriate and we encourage our suppliers to develop these approaches with Qorvo where the practice makes business sense. We encourage the use of the supplier's standard techniques to minimize costs.

## 6.6 Notification of Product Quality or Delivery Issues

### 6.6.1 Deviations

When it is known by the supplier prior to the start of production that there is some product feature that may have a requirement that is desirable to deviate from, either because of manufacturing ease, lead-time or cost reduction, or some other benefit either to the supplier or to Qorvo, the supplier must obtain written approval for such deviation from the Qorvo purchasing representative, identified on the PO, prior to implementing any change. The request must be in writing and contain (as a minimum) the following:

**6.6.1.1** PO number and line-item number.

**6.6.1.2** SAP Material number, and description.

**6.6.1.3** Specification or drawing requirement (include page number or print location) and revision level.

**6.6.1.4** Actual deviated condition that is being proposed.

**6.6.1.5** Material Deviation Requests will not be accepted after receipt of material.

### 6.6.2 Nonconforming Product

Delivery of product to Qorvo which does not meet the supplier's internal manufacturing specifications for measurements as identified on the control plan, acceptance criteria, outlier limits, Maverick limits, and/or Qorvo specifications requires the following:

**6.6.2.1** Supplier review of each non-conformance through a cross-functional Material Review Board (MRB) to determine acceptability of shipping material to Qorvo.

**6.6.2.2** Issuance of a Discrepant Material Report (DMR) or a Material Waiver Request to the Qorvo Supplier Quality Engineer specifying nature of non-conformance, along with the associated data and supplier's MRB explanation of why the supplier believes the non-conformance will not impact Qorvo product performance, quality, or yield.

**6.6.2.3** Qorvo Supplier Quality Engineer approval of the DMR or Waiver is required prior to the lot being released from hold.

**6.6.2.4** Supplier to include a statement referencing Waiver approval with supplier delivered documentation, including a copy of the released waiver.

## 6.7 Product and Process Changes

The supplier shall have a process to manage and track changes in requirements and product data. This shall include revision of historical documentation of the resulting changes in engineering documentation.

For products that have been qualified by Qorvo, the supplier shall provide a formal PCR to Qorvo outlining any product/process changes in accordance with J-STD-046. This requirement does not extend to products in development stages.

Suppliers that have Qorvo Connect Accounts shall submit PCRs in accordance with QAL-21-1022 and website <https://connect.rfmd.com/sites/SQ/default.aspx> login access. All other suppliers shall submit PCRs via email to Supplier\_PCN@Qorvo.com or by directly contacting the responsible Supplier Quality Engineer.

	Supplier Quality Manual	Page 9 of 14
	COR.103	Rev S

The following are some of the change notification criteria but are not limited to the list below. Commodity-specific requirements may apply.

- Site location change.
- Design changes driven by the supplier.
- Packaging change.
- Process flow change including addition or removal of a process/inspection step, change in sequence of operation, which affects product performance, reliability, quality, or safety.
- Process input parameter changes exceeding 10% of qualified process.
- Material source change or BOM change.
- Changes to test system, test plan or test code.
- Changes that affect current compliance to Environmental Standards such as RoHS and lead-free requirements, corporate “green” programs, or CSR/RM compliance.

At minimum, a 180-day notification with supporting data is needed prior to the implementation of the change but requires the earliest possible notification to accommodate any necessary testing or qualification. Qorvo may request samples to perform internal evaluations if needed. A formal notification will be sent to the supplier accepting or rejecting the PCR.

## 6.8 Product Discontinuance Notices

If supplier intends to classify any product for any reason as a discontinued product, supplier shall provide Qorvo with a minimum of two (2) years prior written notice and shall include a suggested replacement part if one exists. Qorvo will have a period of two (2) years to take shipment of any purchase orders placed by the last time buy date. Purchasing may contact the supplier to negotiate last time buy (LTB) quantities and last time ship (LTS) requirements. Qorvo requires the earliest possible notification to allow any necessary testing or qualification.

## 6.9 Sub-Supplier Procurement Requirements

Suppliers shall manage their commodity. Suppliers and sub-contractors for any outsourced process shall use a structured supplier management process that includes, but is not limited to, the following:

- Sub-Supplier selection and qualification
- Sub-Supplier compliance with government, environmental, and CSR/RM requirements
- Sub-Supplier monitoring
- Sub-Supplier capacity planning and allocation
- Sub-Supplier performance evaluation through periodic assessments and audits

Suppliers shall flow down Qorvo specific requirements and control their sub-suppliers to ensure compliance with any applicable specifications provided by Qorvo. The supplier shall also flow down process requirements outlined in this document. Qorvo reserves the right to perform on-site assessments/audits of sub-supplier's facilities to determine capabilities and compliance with Qorvo QMS requirements.

## 6.10 Qorvo Designated Sources

Where specified in the Qorvo purchasing specification, the supplier shall purchase products, materials, or services from Qorvo designated sources. The supplier is responsible for ensuring that items procured from such sources meet all applicable technical and quality requirements. If the Qorvo designated sources do not meet the supplier's price, performance, and quality criteria, and/or conflict with the supplier's existing source relationships, then Qorvo and the supplier must conclude a negotiated

	Supplier Quality Manual	Page 10 of 14
	COR.103	Rev S

sourcing agreement.

#### 6.11 Supplier Multi-Sourcing of Raw Materials

In the event the supplier is sourcing raw materials to produce fab-related material (e.g., chemicals) from multiple sources, supplier shall ensure the qualified sources must be used at least once per year in the making of the products sold to Qorvo. This is to ensure the qualified sources remains active.

Any product that is ordered by Qorvo with a total annual quantity of one (1) will be exempt from this requirement.

#### 6.12 Product Identification

The supplier shall have a system of manufacturing control such as a route card, run card, control software, etc., used for the identification of products regarding type, lot or serial number, and their status during all stages of production and test. Shipments containing finished products shall be labeled per relevant Qorvo specifications. In case of discrepant material, supplier will provide all traceability and identification information as required by Qorvo.

#### 6.13 Product Traceability

The supplier shall have a system for ensuring finished product traceability back to the factory, date code and lot or serial number as specified by Qorvo. The supplier shall also have a system for identifying and tracing critical raw materials back to the source. All received lots shall be traceable back to their corresponding inspection lot and shall be clearly identified upon receipt.

#### 6.14 Process Flow Diagram

The supplier is encouraged to develop a process flow diagram that clearly describes the production process steps and sequence and meets the specified needs, requirements, and expectations of Qorvo. Process flow diagrams for families of devices are acceptable.

Suppliers of products to automotive programs shall have a process flow diagram.

#### 6.15 Manufacturing Process and Design Risk Analysis

The supplier is strongly recommended to develop, document, and maintain a manufacturing process risk analysis (such as PFMEA) and if applicable a design risk analysis (such as DFMEA). The results to be used to determine the appropriate test and inspection points as well as appropriate control methods.

A single design or process risk analysis may be applied to a process manufacturing family of similar parts or materials if reviewed for commonality by the supplier. The Manufacturing Process and Design Risk Analysis is a living document and should be updated when new risks are identified.

Suppliers of products to Qorvo automotive programs shall have a risk assessment which aligns with the AIAG/VDA FMEA Manual.

#### 6.16 Process Control Plan

Suppliers shall develop a Process Control Plan. The intent of a Process Control Plan is to control the product characteristics and the associated process variables to ensure capability and stability of the product over time. The Process Control Plan is a living document and must be updated to reflect the addition/deletion of controls based on experience gained by producing parts.

Development of family Process Control Plans are acceptable for similar parts using a common manufacturing process and for bulk material.

The Control Plan, for products supplied to Qorvo automotive programs, shall show linkage to and incorporate information from the process flow diagram and manufacturing process risk analysis outputs.

Suppliers may use their own format, but the Control Plan must include all applicable items contained in the AIAG APQP Manual.

	Supplier Quality Manual	Page 11 of 14
	COR.103	Rev S

### 6.17 Statistical Process Control

Suppliers are required to apply effective statistical process controls where applicable and monitor critical to quality parameters using appropriate SPC techniques. When requested by Qorvo, suppliers should provide control charts for specific parameters and/or make the charts available during audits.

Supplementary information can be found in the AIAG SPC Manual.

### 6.18 Capability Indices

Suppliers should have a procedure in place to calculate process capability indices such as Cp and Cpk using appropriate statistical techniques. Qorvo specifications identify the Critical to Quality (CTQ) requirements. Qorvo requires Cpk on critical processes and/or product parameters to be above 1.33 ( $4\sigma$ ). The supplier shall develop an improvement plan to achieve this goal for parameters with Cpk below 1.33. Cpk < 1.33 is allowed when available industry metrology is insufficient, supplier processes are inherently non-normal distributions, or Qorvo's CTQs are intentionally tighter than 1.33. The supplier and Qorvo Supplier Quality Engineer shall jointly address all Cpk < 1.33 as needed.

When requested by the Supplier Quality Engineer, the supplier shall report Cpk metrics on critical to quality parameters on a periodic basis.

Suppliers should have improvement efforts in place to target a Cpk > 1.67 ( $5\sigma$ ).

For suppliers providing products to the automotive business Cpk shall be greater than 1.67. The supplier shall develop an improvement plan to achieve this goal for parameters with Cpk less than or equal to 1.67.

### 6.19 Measurement System Analysis (MSA)

Equipment used for test, inspection, and measurement of Qorvo product shall be calibrated and deemed fit for use.

Qorvo recommends the use of MSA studies which look at Gauge Repeatability & Reproducibility (GR&R), bias, linearity, and stability of all new or modified gauges, measurement, and test equipment to demonstrate the capability of the equipment and measuring process.

Gage R&R studies shall be performed by suppliers that are providing products to Qorvo automotive programs.

For details on how to perform a MSA, please refer to the AIAG Measurement System Analysis Manual.

### 6.20 Production Part Approval Process (PPAP)

PPAP shall apply to suppliers supplying automotive production parts and production material. It is not required for bulk material (e.g., chemicals, adhesives, sealants, coatings, etc.) unless otherwise specified. Submission of PPAP shall apply to new parts or product, correction of discrepancies on submitted parts, or change to specifications or materials. The PPAP shall meet all specified requirements in sections 6.14 through 6.19 and any additionally specified customer requirements. Supplementary information can be found in the AIAG PPAP Manual.

### 6.21 Corrective Action and Failure Analysis

Qorvo will use a Supplier Corrective Action Request (SCAR) as the trigger to engage the supplier for a request for containment, root cause analysis, corrective action, and effectiveness verification. All responses from the supplier shall be in an 8 Disciplines of Problem Solving (8D) format.

For all events supporting Automotive Business or for critical line down situations or field returns, the initial containment response (3D) shall be delivered within 1 business day of receipt of the SCAR. The final report/analysis (8D) shall be delivered to Qorvo within 10 business days.

For all non-critical events, the initial containment response (3D) and the final report/analysis (8D) shall be delivered to Qorvo as negotiated with the Supplier Quality Engineer. Supplier Quality Engineer will determine the appropriate timeframe based on production impact and problem complexity.

	Supplier Quality Manual	Page 12 of 14
	COR.103	Rev S

For CSR/RM non-conformances, the SCAR will be delivered to the supplier through the SupplierSoft platform. Supplier is responsible for updating and managing the SCAR through to completion.

## 6.22 Reports

The supplier may be requested to provide periodic reports or summary reports of inspection or test results. The Qorvo Supplier Quality Engineer may review the metrics and reporting formats and frequency. Performance reporting requirements are documented in the supplemental commodity specific documentation. Additionally, the supplier may be requested by the Qorvo Supplier Quality Engineer or CSR/RM to provide periodic summary reports of Failure Analysis and evaluation results on SCAR's / RMA's. Suppliers shall maintain a summary of all key measurements, definitions, reporting frequency, goals, and continuous improvement targets.

## 7 ADDITIONAL RECOMMENDATIONS

In addition to the above requirements, suppliers are encouraged to implement the following processes. Qorvo reserves the right to make any of these processes a requirement in future releases of this manual. These recommendations may be requirements for select material and service commodities and would therefore be noted in the associated commodity management specifications. Supplier-initiated, proactive implementation of these programs will positively affect supplier scorecard ratings and thereby affect supplier market share allocation.

### 7.1 Maverick Lot Program

Qorvo encourages suppliers to have a Maverick Lot Program in place in compliance with JESD50 requirements.

### 7.2 Ship to Control (STC) Program

It is strongly recommended that suppliers providing chemicals, gases, photo-processing materials, sputtering targets, evaporation metals, plating chemistries, grind/lap/polish materials, wafer carriers, CMP Materials have a Ship to Control program. The STC program is outlined in section 7 of COR.108, General Specification for Direct and Critical Indirect Process Materials.

## 8 METRICS

Metric	Frequency	Responsible Area
8.1 Supplier Scorecards – Quality Section	Determined by Commodity Manager (Strategic Suppliers Only)	Sourcing/Purchasing
8.2 Supplier Quality Scorecards for Strategic Suppliers	Determined by Supplier Quality Engineer	Supplier Quality

## 9 RECORDS

Unless specified otherwise, records pertaining to production processes, in-process inspections, screening and quality conformance inspections shall be retained by the manufacturer for a minimum of ten years after date material shipped to Qorvo.

	Supplier Quality Manual	Page 13 of 14
	COR.103	Rev S

## 10 REVISION HISTORY

Revision	Create Date (mm/dd/yyyy)	Description of Change	Initiator of Change
K	08-09-2016	Add Section 5.9 on CSR. Add references to Qorvo CSR Policies and Handbook. Add Reference to QAL-21-1022. Change Spec ownership from Bo Abney to Sita Balasubramanian. Added ref to conflict Minerals Compliance in the PCN section. Fixed Formatting errors. Update the PCN email address to @qorvo.com. Add the RFMD Legacy PCR Website link. Note that some recommendations in Section 7 may re be requirements for some commodities. Add SCAR, PCR, and PCN to Definitions Table. Ensure all fab suppliers in Doc Portal are linked to spec.	Angela Franklin
L	08/29/2016	Update Section 5.1 for the Supplier Doc Portal System with info on new access from www.qorvo.com/portals webpage and add the SAF link.	Angela Franklin
M	05/1/17	Replace Supplier Tier References to comply with COR.101 use of Strategic and Approved suppliers instead of Tier 1, 2, or 3. Change TS to IATF. Change QI Scorecard Spec and Ref to PRO-000512. Add COR.102 to Ref Table. Add Sections Supplier Statutory and Regulatory Requirement and Supplier Development Process as per IATF 16949 Readiness. Expand 6.15 Capability Indexes to clarify that CpK 1.33 is not always reasonable or possible and exceptions will be managed by the supplier and the SQE (prevents supplier deviations to this spec wording).	Angela Franklin
N	04/2/2018	Annual Review and Update. Update to newest Qorvo template. Expand wording in PCN section to emphasize earliest possible notifications. Add more details to roles and responsibilities to align with MAN-000318. Add Ref to AS9100 and new CSR MAN docs. Add supplier R&R to align with CEO message. Update the CSR and PC spec references. Update Additional Recommendations section to note supplier proactive implementation affects scorecard and market allocation. Clarify that 8D effectiveness must be validated. Clarify CpK <1.33 allowed under select circumstances.	Angela Franklin
O	05/27/2020	Modify Section 6.7 PCR from 90 days to 180 days advance notice (to match Long-term Agreement), clarify applicability to qualified products (not development), and update PCR submission instructions. Modify Section 6.8 from Obsolescence to Product Discontinuation, and from 6 months to 2 years advance notice (to match Long-Term Agreement). Add CSR/RM requirements. Add Section 6.11 for supplier multi-sourcing of raw materials to supply material using each source annually. Update to current template and references to PRO-000307.	Jennifer Gray

	Supplier Quality Manual	Page 14 of 14
	COR.103	Rev S

Revision	Create Date (mm/dd/yyyy)	Description of Change	Initiator of Change
P	02/07/2021	<p>multiple changes to reflect requirements for suppliers of automotive product. Move to latest template, Rev M. Made significant format changes.</p> <p>4. References            External References - Changed Automotive Definition and updated J-STD-046 name. Added VDA Manual            Internal Reference – Removed MAN-000320/MAN-000339/MAN-000340 as they are not referenced in body. Added PRO-000307 and SPE-001288</p> <p>5.3. Removed “or Advanced Sourcing Engineer”.</p> <p>6.1. Added “and suppliers to Qorvo automotive programs” and development plan requirement.</p> <p>6.12 Added clarification that this requirement pertains to fab material</p> <p>6.14. Moved Process Flow Diagram to here from section</p> <p>7.1. Reworded and made it a requirement for suppliers to automotive business.</p> <p>6.15. Moved FMEA from 7.3 to here and renamed as Manufacturing Process and Design Risk Analysis. Reworded and made it a requirement for suppliers to automotive business.</p> <p>6.16 Added acceptability of family control plans. Added linkage to process flow diagram and risk analysis. Made it a requirement for suppliers to automotive business.</p> <p>6.17. Changed title to Process Capability. Added Cpk &gt; 1.67 for automotive.</p> <p>6.19. Moved MSA from 7.2. Made it a requirement for suppliers to automotive business.</p> <p>6.20. Added PPAP section as requirement for suppliers to automotive business.</p> <p>7.5. Added Ship to Control Program.</p> <p>8.2 Added Supplier Scorecard Metric.</p>	Mike Allison
Q	4/25/2022	<p>Purpose &amp; Scope: Remove the word "Process" as a description of types of materials.</p> <p>Definitions: Remove reference to SAF and replace with SDP</p> <p>External References: Correct document number for AS9100</p> <p>External References: Correct title for J-STD-046 standard</p> <p>Section 5.1 - Remove reference to SAF and Doc Portal and replace with reference to new Supplier Document Portal, including hyperlink</p> <p>Section 6.6.2.3 - Reword for clarity.</p> <p>Section 6.6.2.4 - Added requirement to include reference statement on supplier's provided paperwork.</p> <p>Removed Controlled Distribution Table.</p>	Brian Pulley
R	2/7/2023	Updated section 5.6 to remove reference to PRO-000512	Jerry Ferr
S	9/27/2023	Updated section 9 to replace reference to a Qorvo internal document to actual requirement. Removed table with internal document references in Section 4.	Yan Boutin