Quality Manual
Revision 24
**Approvals**

The CEO, President and Vice President of Operations have electronically approved this manual within the document control database. Changes to this manual must be approved by these same functions.
### Revisions

<table>
<thead>
<tr>
<th>Rev</th>
<th>Name</th>
<th>Change</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Abdul Popalzai</td>
<td>Initial Release</td>
<td>01/17/03</td>
</tr>
<tr>
<td>2</td>
<td>Abdul Popalzai</td>
<td>Modified section 2.0 Skyworks Quality Policy and updated Referenced Documents under sections 7.2.3, 7.3.7, 7.4.2, 7.5.3, 8.5.4</td>
<td>03/03/03</td>
</tr>
<tr>
<td>3</td>
<td>Abdul Popalzai</td>
<td>Expanded the sub clauses under Table of Contents. Updated References: SQ02-0010 title (Competency and Training) and SQ02-0008 document number. Removed reference to SQ02-0007. Changed management review minimum interval terminology from biannual to twice a year under section 5.6.1</td>
<td>04/12/03</td>
</tr>
<tr>
<td>4</td>
<td>Abdul Popalzai</td>
<td>Included section 8.6 Interaction Between the Processes of the Quality Management System</td>
<td>05/01/03</td>
</tr>
<tr>
<td>5</td>
<td>Abdul Popalzai</td>
<td>Modified the Introduction section to include the following: Mexicali, design centers and current BU grouping, Quality Policy snapshot, reference to “applicable” Level 2 “quality” documents, statement that VP of Quality is the backup electronic approver for the President &amp; CEO. Added SQ02-0031 under section 6.2. Included SQ02-0015 &amp; SQ02-0017 in the 8.6 flow chart. Replaced most of the “should” with more affirmative “is” and are”.</td>
<td>12/01/03</td>
</tr>
<tr>
<td>6</td>
<td>Abdul Popalzai</td>
<td>Removed reference to SQ02-0031 Competency and Training for Indirect Labor, an obsolete document. Added notation to Skyworks Quality Policy such that sites whose primary language is something other than English may translate the Quality Policy accordingly.</td>
<td>06/07/04</td>
</tr>
<tr>
<td>7</td>
<td>Abdul Popalzai</td>
<td>Updated Introduction and 3.0 Organizational Chart: changed WD to LP (Linear Products). Reworded sections 7.3.6, 7.3.7, and 7.4.1.1 to reflect current practices. Deleted 7.5.1.1.</td>
<td>06/17/05</td>
</tr>
<tr>
<td>8</td>
<td>Abdul Popalzai</td>
<td>Deleted reference to SQ02-0017 (obsolete) under section 7.4.1.1.</td>
<td>07/22/05</td>
</tr>
<tr>
<td>9</td>
<td>Abdul Popalzai</td>
<td>Updated section 3.0 Organizational Chart to reflect major entities under Business Units: Mobile Platforms and Linear Products</td>
<td>01/20/06</td>
</tr>
<tr>
<td>10</td>
<td>Abdul Popalzai</td>
<td>Updated the formatting on pages 15-17, 20-22, and 25 to hide the tracking of the changes.</td>
<td>02/16/06</td>
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<tr>
<td>11</td>
<td>Daniel Le Saux</td>
<td>Complete rewrite to incorporate ISO/TS 16949 requirements.</td>
<td>11/28/06</td>
</tr>
<tr>
<td>12</td>
<td>Daniel Le Saux</td>
<td>Modified <strong>1.2 Scope</strong> to define responsibilities and ownership of processes at different locations. Modified <strong>5.4.1 Quality and business objectives</strong> to indicate that quality objectives are established at relevant functions within the organization. Modified <strong>5.5.2.1 Customer representative</strong> to add that the customer quality managers, manufacturing quality managers and quality system managers promote the awareness of customer requirements throughout the organization. Changes language in <strong>5.6.1 Management review general</strong> to clearly specify that management reviews take place at planned intervals and that these reviews assess improvement opportunities, identify required changes to the management system, quality objectives or the quality policy. Rewrote <strong>6.2.2 Competency, awareness and training</strong> to clearly address requirements outlined in the</td>
<td>01/22/07</td>
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</tbody>
</table>

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standard. Modified **7.2.2 Review of requirements related to the product** to clearly state that reviews are always performed and that changes are handled in the same manner as the original review. Added requirements for product approval, relevant procedures, standards, special processes or equipment, qualification of personnel and quality management system requirements in **7.4.2 Purchasing information**. Added pre-launch control plans to **7.3.3.1 Product design output** and **7.5.1.1 Control plans**.

<table>
<thead>
<tr>
<th>No.</th>
<th>Author(s)</th>
<th>Changes Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Daniel Le Saux</td>
<td>Amended section <strong>1.2.2 ISO 9001 management system</strong> and <strong>1.2.3 ISO/TS 16949 management system</strong> to include certification scope descriptions. Added missing sections <strong>7.5.1.7 Feedback of information from service</strong> and <strong>7.5.1.8 Service agreement with customers</strong>. Changed title of SQ04-0102 to <strong>Quality Management System Processes - ISO 9001 ISO/TS 16949 Element / Function / Standard Operating Procedure Matrix</strong>. Added reference to SQ04-0104 <strong>Skyworks Quality Management System Processes – Sequence and Interactions</strong>. Updated section <strong>7.4.1.2 Supplier quality management system development</strong> to incorporate IAOB sanctioned interpretation.</td>
</tr>
<tr>
<td>14</td>
<td>Fernanda Barraza</td>
<td>Updated <strong>quality policy</strong> for continuing suitability. Modified section <strong>1.2.2 ISO 9001 management system</strong> and <strong>1.2.3 ISO/TS 16949 management system</strong> to redefine the scope of ISO 9001 and ISO/TS 16949 management system in order to include the core processes of the organization as described in SQ04-0104 - Skyworks Quality Management System Processes - Sequence and Interactions.</td>
</tr>
<tr>
<td>15</td>
<td>Daniel Le Saux / Fernanda Barraza</td>
<td>Updated <strong>1.2.3 ISO/TS 16949 management system scope</strong> to include customer quality in Irvine. Also added Trans-Tech and Mexicali locations. Updated section <strong>2 associated documents</strong>.</td>
</tr>
<tr>
<td>16</td>
<td>Daniel Le Saux</td>
<td>Remove Trans Tech from scope (i.e. Trans Tech will manage their own Quality manual). Complete rewrite of <strong>1.2 Scope</strong> due to business unit restructuring. Added requirement to include the regular reporting and evaluation of the cost of poor quality (e.g. cost of scrap) in section <strong>5.6.1 General</strong>.</td>
</tr>
<tr>
<td>17</td>
<td>Daniel Le Saux</td>
<td>Removed reference to ISO 9001 and ISO/TS 16949 release dates (i.e. 2000 and 2002 respectively). Added External Manufacturing as a core business process. Extensive rewrite of <strong>1.2 Scope</strong>. Complete rewrite of section <strong>6.2.2 Competency awareness and training</strong>. Added reference to SQ02-0047 <strong>External Manufacturing</strong> in section <strong>2.0 Associated Documents</strong>. Added section <strong>4.1.1 Outsourced processes</strong>.</td>
</tr>
<tr>
<td>18</td>
<td>Daniel Le Saux</td>
<td>Modified section <strong>1.2 Scope</strong> to outline the scopes of the five separate certificates. Also added RF/Microwave Ceramics to Mexicali ISO 9001 scope.</td>
</tr>
<tr>
<td>19</td>
<td>Daniel Le Saux / Fernanda Lares</td>
<td>Updated cover page and added justification for exclusions under section <strong>1.2 Scope</strong>. Added references to AIAG MSA and FMEA manuals as well as customer specific requirements in section <strong>2.0 Associated Documents</strong>. Simplified section <strong>1.2 Scope</strong> to clearly differentiate ISO 9001 and ISO/TS 16949 certification schemes and added supplier quality and FA/Reliability to Singapore location.</td>
</tr>
</tbody>
</table>

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Added Management core business process to Andover scope under section 1.2 Scope. Updated section 1.2 Scope to include ISO/TS 16949 core business process interactions to FA/Reliability in Newbury Park. Added Business Planning and Human Resources core business process to Cedar Rapids and Ottawa in section 1.2 Scope.

Updated section 1.2 Scope core business process matrix as follows:
- added Santa Clara site
- added Business Planning to Greensboro
- added Customer Quality to Ottawa
- added External Manufacturing to Singapore
- removed Customer Quality from Honk Kong
- added Chupei and Santa Rosa

Added “necessary for the planning and operation of the quality management system” to section 4.2.3.1 Documents of external origin. Updated organizational chart in 5.1 Management commitment. Added “statutory” to section 4.2.4.1 Record retention and section 7.4.1.1 Statutory and regulatory conformity. Added “information services” to section 6.3 Infrastructure. Replaced product quality with “conformance to product requirements” in section 5.5.1 Responsibility and authority, 5.5.1.1 Responsibility for quality, 6.2.2.3 Training, 6.2.2.3 Training on-the-job, 6.4.1 Personnel safety to achieve conformance to product requirements, 7.4.3.1 Incoming conformity to requirements, 7.4.3.2 Supplier monitoring and 7.5.1.2 Work instructions. Changed “devices” to “equipment” and replaced third bullet with “identification in order to determine the calibration status to be determined” in section 7.6 Control of monitoring and measurement equipment. Replaced last bullet in section 8.5.3 Preventive action with “application of controls to ensure that preventive action is taken and that it is effective”.

Updated section 1.2 Scope core business process matrix as follows:
- Removed Santa Rosa site

Removed text regarding annual second party surveillance audits (of suppliers) from section 7.4.1.2 Supplier Quality Management System Development, since this is already addressed in SQ03-0138, section 5.2.1.3 Specially Designated Suppliers.

Updated the Organizational Structure in section 5.1.

Updated section 1.2 Scope core business process matrix to reflect Supply Chain (shipping/receiving) as a core function at Ottawa. Removed Management as applicable core business process at Andover. Changed External Manufacturing scope from ISO 9001 to TS16949 at Singapore. Added Human Resources to Singapore TS16949 scope. Removed Sales and Marketing from Santa Clara ISO9001 scope. Added Statutory and Regulatory Compliance as a core business process of the organization. Update Mexicali Scope to include Design and Development interaction associated to prototype development.
Added section **1.2.1 Automotive linkages and interfaces with remote sites** per MX-CAR-3174.

Updated section **8.2.3 Monitoring and Measurement** to indicate that correction/corrective action is to be taken when key metrics targets are not achieved. Also added language stating that when despite missing a target a decision is made to take no action, this decision needs to be recorded.

Updated section **1.1 Purpose** to include statutory and regulatory requirements and added reference to SQ02-0048 Statutory and Regulatory Requirements. Added SQ02-0048 Statutory and Regulatory Requirements to section **2.0 Reference Documents**.

Added references to internal procedures and work instructions to section **4.1.1 Outsourced Processes, 5.2 Management, 7.4.3.2 Supplier Monitoring, 7.5.5.1 Storage and Inventory, 7.6.3.1 Internal Laboratories**

Verbiage was updated in sections **7.5.1.1 Control Plans and 8.5 Improvement**.

Updated Senior Management Organizational Structure in section **5.1 Management Commitment**

Simplified Table **1.2.1** to indicate applicability of core business processes to automotive scope

Incorporated Wafer and Package Technology Development as a core business process of the organization in section **1.2 Scope, 2 Associated documents and 7.3 Design and Development**

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**Fernanda Lares**

Updated Senior Management Organizational Structure in section **5.1 Management Commitment and Approvers** of this manual

Modified Section **1.2 Scope** to reflect latest management system

Revised **1.2.1 Linkages and interfaces with remote sites** in order to show current automotive business.
# Table of contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approvals</td>
<td>1</td>
</tr>
<tr>
<td>Table of contents</td>
<td>6</td>
</tr>
<tr>
<td>Skyworks Quality Policy</td>
<td>10</td>
</tr>
<tr>
<td><strong>1 Scope and purpose</strong></td>
<td>10</td>
</tr>
<tr>
<td>1.1 Purpose</td>
<td>10</td>
</tr>
<tr>
<td>1.2 Scope</td>
<td>10</td>
</tr>
<tr>
<td>1.2.1 Automotive linkages and interfaces with remote sites</td>
<td>11</td>
</tr>
<tr>
<td><strong>2 Associated documents</strong></td>
<td>11</td>
</tr>
<tr>
<td><strong>3 Acronyms, terminology, description and definition</strong></td>
<td>13</td>
</tr>
<tr>
<td><strong>4 Quality management system</strong></td>
<td>13</td>
</tr>
<tr>
<td>4.1 General requirements</td>
<td>13</td>
</tr>
<tr>
<td>4.1.1 Outsourced processes</td>
<td>13</td>
</tr>
<tr>
<td>4.2 Documentation requirements</td>
<td>13</td>
</tr>
<tr>
<td>4.2.1 General</td>
<td>13</td>
</tr>
<tr>
<td>4.2.2 Quality Manual</td>
<td>14</td>
</tr>
<tr>
<td>4.2.3 Document control</td>
<td>14</td>
</tr>
<tr>
<td>4.2.3.1 Documents of external origin</td>
<td>14</td>
</tr>
<tr>
<td>4.2.4 Record control</td>
<td>14</td>
</tr>
<tr>
<td>4.2.4.1 Record retention</td>
<td>14</td>
</tr>
<tr>
<td><strong>5 Management responsibility</strong></td>
<td>15</td>
</tr>
<tr>
<td>5.1 Management commitment</td>
<td>15</td>
</tr>
<tr>
<td>5.2 Customer focus</td>
<td>15</td>
</tr>
<tr>
<td>5.3 Quality policy</td>
<td>16</td>
</tr>
<tr>
<td>5.4 Planning</td>
<td>16</td>
</tr>
<tr>
<td>5.4.1 Quality and business objectives</td>
<td>16</td>
</tr>
<tr>
<td>5.4.1.1 Business plan</td>
<td>16</td>
</tr>
<tr>
<td>5.4.2 Quality management system planning</td>
<td>16</td>
</tr>
<tr>
<td>5.5 Responsibility, authority and communication</td>
<td>16</td>
</tr>
<tr>
<td>5.5.1 Responsibility and authority</td>
<td>16</td>
</tr>
<tr>
<td>5.5.1.1 Responsibility for quality</td>
<td>16</td>
</tr>
<tr>
<td>5.5.2 Management representative</td>
<td>16</td>
</tr>
<tr>
<td>5.5.2.1 Customer representative</td>
<td>16</td>
</tr>
<tr>
<td>5.5.3 Internal communication</td>
<td>17</td>
</tr>
<tr>
<td>5.6 Management review</td>
<td>17</td>
</tr>
<tr>
<td>5.6.1 General</td>
<td>17</td>
</tr>
<tr>
<td>5.6.2 Management review input</td>
<td>17</td>
</tr>
<tr>
<td>5.6.3 Review output</td>
<td>17</td>
</tr>
<tr>
<td><strong>6 Resource management</strong></td>
<td>18</td>
</tr>
<tr>
<td>6.1 Provision of resources</td>
<td>18</td>
</tr>
<tr>
<td>6.2 Human resources</td>
<td>18</td>
</tr>
<tr>
<td>6.2.1 General</td>
<td>18</td>
</tr>
<tr>
<td>6.2.2 Competency, training and awareness</td>
<td>18</td>
</tr>
<tr>
<td>6.2.2.1 Product design skills</td>
<td>18</td>
</tr>
</tbody>
</table>
6.2.2.2 Training
6.2.2.3 Training on-the-job
6.2.2.4 Employee motivation and empowerment

6.3 Infrastructure
6.3.1 Plant, facility and equipment planning
6.3.2 Contingency plans

6.4 Work environment
6.4.1 Personnel safety to achieve conformance to product requirements
6.4.2 Cleanliness of premises

7 Product realization
7.1 Planning of product realization
7.1.1 Customer requirements
7.1.2 Acceptance criteria
7.1.3 Confidentiality
7.1.4 Product / process change control

7.2 Customer related processes
7.2.1 Determination of Requirements Related to the Product
7.2.1.1 Customer designated special characteristics
7.2.2 Review of Requirements Related to the Product
7.2.3 Customer communication

7.3 Design and development
7.3.1 Design and development planning
7.3.2 Design and development inputs
7.3.2.1 Product design input
7.3.2.2 Manufacturing process design input
7.3.2.3 Special characteristics
7.3.3 Design and development outputs
7.3.3.1 Product design output
7.3.3.2 Manufacturing process design output
7.3.4 Design and development review
7.3.4.1 Monitoring
7.3.5 Design and development verification
7.3.6 Design and development validation
7.3.6.1 Supplemental
7.3.6.2 Prototype program
7.3.6.3 Product approval process
7.3.7 Control of design and development changes

7.4 Purchasing
7.4.1 Purchasing process
7.4.1.1 Statutory and regulatory conformity
7.4.1.2 Supplier quality management system development
7.4.1.3 Customer approved sources
7.4.2 Purchasing information
7.4.3 Verification of purchased product
7.4.3.1 Incoming conformity to requirements 25
7.4.3.2 Supplier monitoring 25
7.5 Production and service provision 25
  7.5.1 Control of production and service provision 25
    7.5.1.1 Control plans 25
    7.5.1.2 Work instructions 25
    7.5.1.3 Verification of job set-up 26
    7.5.1.4 Preventive and predictive maintenance 26
    7.5.1.5 Management of production tooling 26
    7.5.1.6 Production scheduling 26
    7.5.1.7 Feedback of information from service 26
    7.5.1.8 Service agreement with customers 26
  7.5.2 Process validation 26
  7.5.3 Identification and traceability 26
    7.5.3.1 Inspection and test status 27
  7.5.4 Customer property 27
    7.5.5 Preservation of product 27
      7.5.5.1 Storage and inventory 27
      7.5.5.2 Handling 27
      7.5.5.3 Packaging and Labeling 27
  7.6 Control of monitoring and measurement equipment 27
    7.6.1 Measurement system analysis 28
    7.6.2 Calibration records 28
    7.6.3 Laboratory requirements 28
      7.6.3.1 Internal laboratories 28
      7.6.3.2 External laboratories 28
  8 Measurement, analysis and improvement 29
  8.1 General 29
    8.1.1 Statistical tools 29
    8.1.2 Knowledge of basic statistical concepts 29
  8.2 Monitoring and measurement 29
    8.2.1 Customer satisfaction 29
    8.2.2 Internal audit 29
      8.2.2.1 Quality systems audit 29
      8.2.2.2 Manufacturing process audit 30
      8.2.2.3 Product audit 30
      8.2.2.4 Audit plans 30
      8.2.2.5 Auditor qualification 30
    8.2.3 Monitoring and measurement of quality management system processes 30
      8.2.3.1 Monitoring and measurement of manufacturing processes 30
      8.2.4 Monitoring and measurement of product 30
        8.2.4.1 Dimensional and functional testing 31
  8.3 Control of nonconforming product 31
    8.3.1 Unidentified or suspect status 31
8.3.2  Control of reworked product  31
8.3.3  Customer notification  31
8.4  Analysis of data  31
8.5  Improvement  31
  8.5.1  Manufacturing process improvement  31
  8.5.2  Corrective action  32
  8.5.2.1  Problem solving  32
  8.5.2.2  Error proofing  32
  8.5.2.3  Impact on similar processes  32
  8.5.2.4  Returned product verification and failure analysis  32
  8.5.3  Preventive action  32
Skyworks Quality Policy

Skyworks is committed to the never ending quest for perfect quality:

- No field failures
- No customer returns
- No reliability failures
- No yield loss

**Note:** Skyworks sites whose primary language is other than English, have translated the Skyworks Quality Policy accordingly.

1 Scope and purpose

1.1 Purpose

Reference: SQ02-0048 Statutory and Regulatory Requirements

This manual defines the Skyworks Solutions, Inc. (Skyworks) approach to and assignment of responsibilities for, the company quality system. This quality system manual is the foundation of the Skyworks quality system. This manual is based on ISO 9001 and ISO/TS 16949 and follows the same section numbering format.

The Skyworks quality system strives to:

- consistently provide product that meets customer and applicable statutory and regulatory requirements
- enhance customer satisfaction through the effective application of this system
- continually improve this system
- assure conformity to customer requirements
- assure conformity to applicable statutory and regulatory requirements

Changes to this manual are approved by the President / CEO, Vice President of Operations, Vice President of Quality (backup to the President / CEO) and Business Unit Vice Presidents.

1.2 Scope

This manual applies to all Skyworks sites listed below. Sections in *italic* apply to the ISO/TS 16949 management system only. Exclusion to element 7.3 is taken when design and development activities are not performed by a particular site.

The table below indicates the core processes applicable to the sites that are managed under ISO 9001 and ISO/TS 16949 management systems.

<table>
<thead>
<tr>
<th>Business Planning</th>
<th>Design and Development</th>
<th>Failure Analysis / Reliability</th>
<th>Supplier Quality</th>
<th>Wafer Fabrication</th>
<th>Assembly</th>
<th>Test, Tape and Reel</th>
<th>External Manufacturing</th>
<th>Human Resources</th>
<th>Supply Chain</th>
<th>Inside Sales</th>
<th>Customer Quality</th>
<th>Management</th>
<th>Audit / Continuous Improvement</th>
<th>Legal / Regulatory Compliance</th>
<th>Technology Development</th>
<th>Water</th>
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<td></td>
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<td>Cedar Rapids, IA</td>
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<td></td>
</tr>
</tbody>
</table>
### 1.2.1 Linkages and interfaces with remote sites

<table>
<thead>
<tr>
<th>Support Site</th>
<th>Type of Support Functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newbury Park</td>
<td>Laboratory</td>
</tr>
<tr>
<td>Singapore</td>
<td>Packaging, Warehousing, Logistics, Supplier Control</td>
</tr>
<tr>
<td>Mexicali</td>
<td>Testing, Packaging, Warehousing, Assembly, Laboratory</td>
</tr>
</tbody>
</table>

| • ISO 9001           |
| © ISO/TS 16949       |
| • ISO/TS 16949 support function activity only |
| *Limited to automotive products |

2 **Associated documents**

The following documents contain provisions which, through reference in this document, constitute provisions of this manual. The listed editions of the documents referred to apply.

**External Documents**

<table>
<thead>
<tr>
<th>Document</th>
<th>Edition</th>
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</thead>
<tbody>
<tr>
<td>ISO 9001</td>
<td>2008</td>
<td>Quality management systems - Requirements</td>
</tr>
<tr>
<td>ISO/TS 16949</td>
<td>2009</td>
<td>Quality management systems - Particular requirements for the application of ISO 9001 for automotive production and relevant service part organizations</td>
</tr>
<tr>
<td>ISO/IEC 17025</td>
<td>2005</td>
<td>General requirements for the competence of testing and calibration laboratories</td>
</tr>
<tr>
<td>ISO 19011</td>
<td>2011</td>
<td>Guidelines for quality and/or environmental management systems auditing</td>
</tr>
<tr>
<td>APQP</td>
<td>2nd Edition</td>
<td>Automotive Industry Action Group</td>
</tr>
<tr>
<td>PPAP</td>
<td>4th Edition</td>
<td>Production Part Approval Process</td>
</tr>
<tr>
<td>FMEA</td>
<td>4th Edition</td>
<td>Potential Failure Mode Effects Analysis</td>
</tr>
</tbody>
</table>
Internal Documents

MX-0064  Proceso para la calibración de equipo de medición y pruebas
SQ02-0001  Managing Product and Process Changes and Customer Notifications
SQ02-0002  Management Procedure
SQ02-0003  Supply Chain Management
SQ02-0004  Document And Data Control
SQ02-0005  Inspection and Test Procedure
SQ02-0006  Product Control Procedure
SQ02-0007  Technology Department - Management Responsibility and Technology/Process Qualification Procedures
SQ02-0008  Product Realization Process - PRP
SQ02-0009  Sourcing
SQ02-0010  Competency and Training
SQ02-0011  Calibration
SQ02-0012  Internal Audits
SQ02-0013  Qualification Standard
SQ02-0014  Continuous Improvement / Corrective and Preventive Action
SQ02-0015  Skyworks World Wide Facilities
SQ02-0016  Statistical Process Control
SQ02-0018  Customer Satisfaction
SQ02-0020  Supplier Quality Manual
SQ02-0029  Technology Reliability Standard
SQ02-0035  Business Continuity / Disaster Recovery Planning
SQ02-0043  Wafer Fabrication
SQ02-0044  Assembly
SQ02-0045  Test, Tape & Reel
SQ02-0047  External Manufacturing
SQ02-0048  Statutory and Regulatory Requirements
3 Acronyms, terminology, description and definition

For the purposes of this manual, the terms and definitions given in ISO 9001 and ISO/TS 16949 apply. In addition to these definitions, the following terms have been defined:

**Process Interaction**
A process linkage whereas the output of one process becomes the input of the next process.

**Communication Interaction**
A process interaction where no process output and input linkages exist but where information is exchanged on an ad hoc basis.

**Automotive products**
Devices that are classified as automotive and are sold directly to active automotive customers.

4 Quality management system

4.1 General requirements
Skyworks has established, documented, implemented and maintains a quality management system and continually improves its effectiveness in accordance with the requirements of ISO 9001 and ISO/TS 16949.

4.1.1 Outsourced processes
Reference: SQ02-0047 External Manufacturing, SQ03-0138 Supplier Qualification and Monitoring
Skyworks exercises control (e.g. supplier qualification, monitoring and development) over outsourced manufacturing processes and maintains responsibility of conformity to all customer requirements.

4.2 Documentation requirements
Reference: SQ02-0004 Document and Data Control

4.2.1 General
Reference: SQ04-0104 Skyworks Quality Management System Processes - Sequence and Interactions of Processes
This manual outlines the quality system designed to ensure continual improvement through the dedicated efforts of all employees in the ongoing pursuit of achieving customer satisfaction.

This manual is a part of a hierarchy of documentation that is established to ensure uninterrupted quality from all levels of Skyworks. The sequence and interaction of the quality management system processes is outlined in **SQ04-0104 Skyworks Quality Management System Processes - Sequence and Interactions of Processes**.

**Level II - Standard Operating Procedures**
Skyworks policies and procedures that define the different tasks that make up the processes needed to meet the requirements of the Quality Systems Manual, the ISO 9001 and ISO/TS 16949 standards. The scope of Standard Operating Procedures impacts all sites, business units, and organizations.

**Level III - Work Instructions**
Site, business unit or organizational procedures that define how the tasks referenced in the Level II documents are performed.
Level IV - Forms
Site, business unit or organizational document that provides a means to record results achieved or evidence of activities performed.

Note: A form becomes a record after information has been recorded onto it.

4.2.2 Quality Manual
This level I quality manual defines the scope of the Skyworks Quality Management System (SQMS), establishes the documented procedures that are part of the SQMS, and describes the interaction between the processes of the SQMS. There is only one Level I document in the SQMS, and applicable Level II quality system documents are referenced in this manual.

4.2.3 Document control
Reference: SQ02-0004 Document and Data Control
Documents are reviewed and approved for adequacy by authorized personnel prior to issue. A system of document control and release, together with a readily available master list is used to ensure that:

- Pertinent current issues of documents are available at all locations where operations essential to the effective functioning of the quality system are performed
- Changes and the current revision status of documents are identified
- Invalid and/or obsolete documents are promptly removed from all points of issue or use, or otherwise assured against unintended use
- Documents are legible and are readily identifiable
- Any obsolete documents retained for legal or knowledge/preservation purposes are suitably identified

4.2.3.1 Documents of external origin
Documents of external origin necessary for the planning and operation of the quality management system (i.e. customer specifications, drawings, industry standards) are controlled and distributed as described in section 4.2.3 above. Updates to these documents are reviewed within two working weeks and the implementation date is recorded. If the document change affects the production part approval process, an update of the customer production part approval record occurs.

4.2.4 Record control
Skyworks establishes and maintains a documented procedure for identification, collection, storage, retention, maintenance and disposition (disposal) of quality records to ensure that:

- conformance to specified requirements and the effective operation of the quality management system are demonstrated
- quality records are legible, readily retrievable, and stored in a suitable environment to prevent damage or deterioration and prevent loss
- quality records retention times are in compliance with government and/or customer requirements. All specified retention times are considered “minimums”, but records are eventually disposed.
- when contractually agreed, the customer or the customer’s representative makes quality records available for evaluation.

4.2.4.1 Record retention
The control of records satisfies statutory, regulatory and customer requirements.
5 Management responsibility

5.1 Management commitment

The President and Chief Executive Officer of Skyworks have overall responsibility to customers for the quality of Skyworks’ products. This commitment transcends all levels of senior management, who develop and implement the quality management system and ensure its effectiveness by:

- communicating to the organization the importance of meeting customer as well as statutory and regulatory requirements
- establishing the quality policy
- ensuring that quality and business objectives are established
- conducting management reviews
- ensuring the availability of resources
- reviewing the product realization process and support processes to assure their effectiveness and efficiency

Senior Management Organizational Structure

5.2 Customer focus

Reference: SQ02-0008 Product Realization Process, SQ03-0093 Order Entry Process, SQ02-0004 Document and Data Control, SQ02-0018 Customer Satisfaction, SQ02-0014 Continuous Improvement / Corrective and Preventive Actions

Skyworks senior management ensures that customer requirements are determined and are met with the aim of enhancing customer satisfaction as follows:

- Product Requirements are determined during the Design and Development process
- Non product-specific requirements are determined during contract review and specification review
- Customer satisfaction is determined through scorecard review
- Customer dissatisfaction is monitored through the customer complaint process

This requirement is supported further in sections 7.2.1 and 8.2.1.
5.3 **Quality policy**

The Skyworks Quality Policy is stated in the Quality Policy section of this manual. Skyworks Quality Management has the responsibility for reviewing the quality policy to ensure that it is reviewed for suitability and remains consistent with the purpose of the organization.

All levels of management and other support departments ensure that this policy is communicated, understood, implemented, and maintained throughout the organization.

The Skyworks Quality Policy may be translated to facilitate communication to those individuals whose primary language is not English.

5.4 **Planning**

5.4.1 **Quality and business objectives**

Senior management establishes quality, business and operational performance objectives that are measurable and consistent with requirements of products, customers and the quality policy. These objectives are established at relevant functions within the organization (i.e. business unit, operations and support functions). These objectives are compared with actual performance and lead to decision-making activities, long-term planning and continual improvement.

5.4.1.1 **Business plan**

*The senior management from the Business Unit includes these quality objectives in their business plan.*

5.4.2 **Quality management system planning**

Refer to section 7.1 of this manual.

5.5 **Responsibility, authority and communication**

5.5.1 **Responsibility and authority**

The senior management of each Business Unit, Manufacturing and Support Organization defines and documents the responsibility, authority, and interrelation of personnel who manage, perform, and verify work that affects quality. The achievement of "Customer Satisfaction" is the primary responsibility of every employee. All employees are empowered to represent the needs of the customer in internal functions in addressing ISO 9001 and ISO/TS 16949 requirements (e.g., setting quality objectives, training, corrective & preventive actions and process development).

Personnel responsible for conformance to product requirements have the authority to stop production, if necessary to correct quality problems.

5.5.1.1 **Responsibility for quality**

*Managers with responsibility and authority for corrective action are promptly informed of products or processes which do not conform to requirements. Production operations across all shifts are staffed with personnel in charge of, or delegated responsibility for, ensuring conformance to product requirements.*

5.5.2 **Management representative**

The Quality System Managers are designated as the management representatives for their respective sites and areas of responsibility and are responsible for ensuring that the processes needed for the quality management system are established, implemented, and maintained in accordance with this manual. The Quality Directors, Managers and their designated representatives report on the performance and effectiveness of the quality management system for review and as a basis for improvement.

5.5.2.1 **Customer representative**

*The customer quality managers, manufacturing quality managers and quality system managers are designated as the customer representatives for their respective sites and are responsible for ensuring*
that customer requirements are being addressed and to promote the awareness of customer requirements throughout the organization. This includes selection of special characteristics, setting quality objectives and related training, corrective and preventive actions, product design and development.

5.5.3 Internal communication
Each department manager ensures that systems are in place to facilitate communication, manage organizational interfaces and other appropriate activities during product and process design, development, manufacturing, delivery and the execution of an effective quality management system. A multi-disciplinary approach for decision-making is used.

All employees promptly inform management with responsibility and authority for corrective action when products or processes become noncompliant with specified requirements.

5.6 Management review
Reference: SQ02-0002 Management Procedure

5.6.1 General
The quality management system is reviewed at planned intervals to ensure it continuing suitability and effectiveness in satisfying the requirements of this manual, its customers and the quality policy. These reviews assess improvement opportunities; identify required changes to the management system, quality objectives or the quality policy. Also included is the regular reporting and evaluation of the cost of poor quality (i.e. cost of scrap).

- The quality management system is reviewed by Business Unit and Manufacturing organizations at Operations Reviews. Systemic issues found at the business and manufacturing levels are communicated to the appropriate department management representative(s) for appropriate action(s).
- Information from business unit and operations reviews is rolled up into an executive level review. Systemic issues found at this executive review are communicated to the appropriate executive level leader(s) for appropriate action(s).

Records of management reviews are maintained and retained.

5.6.2 Management review input
The input to management review includes but not limited to information on:

- results of audits
- customer feedback
- process performance and product conformity
- status of preventive and corrective actions
- follow-up actions from previous management reviews
- changes that could affect the quality management system
- recommendations for improvement
- analysis of actual and potential field failures and their impact on quality, safety or the environment

5.6.3 Review output
The output of management reviews includes any decisions and actions related to:

- improvement of the effectiveness of the quality management system and its processes
- improvement of the product related to customer requirements
6 Resource management

Reference: SQ02-0010 Competency and Training

6.1 Provision of resources

The management of each Business Unit, Manufacturing and Support Organization identifies and provides adequate resources, including the assignment of trained personnel (see 6.2) for the management, the performance and the verification of work affecting quality, and implementation of the quality management system.

6.2 Human resources

6.2.1 General

It is the policy of Skyworks to continually upgrade the skills and value of all employees.

6.2.2 Competency, training and awareness

Each Business Unit, Manufacturing and Support organization establishes competency needs for personnel performing activities affecting quality. Training or other actions are taken as required to satisfy these needs. The effectiveness of these actions is evaluated. Appropriate records of training, education, skills and experience are maintained and retained.

6.2.2.1 Product design skills

Personnel with design responsibility are competent to achieve design requirements and are skilled in appropriate tools and techniques that have been identified by Skyworks.

6.2.2.2 Training

Skyworks maintains a documented procedure for identifying training needs and providing training to personnel at all levels of the organization performing activities affecting conformance to product requirements. Customer satisfaction is emphasized.

6.2.2.3 Training on-the-job

Skyworks maintains an employee certification program that includes on-the-job training for jobs affecting conformance to product requirements. This includes temporary or contract personnel. These employees are informed about the consequences to the customer when procedures are not followed.

6.2.2.4 Employee motivation and empowerment

Skyworks maintains a process to motivate employees to:

- achieve quality objectives
- make continual improvements
- create an environment to promote innovation

This process includes the promotion of quality and technological innovation.

Skyworks measures the extent to which personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of quality objectives.

6.3 Infrastructure

Reference: SQ02-0015 Skyworks World Wide Facilities, SQ02-0003 Supply Chain Management

It is the policy of Skyworks to determine, provide and maintain the infrastructure needed to achieve conformity to product or customer requirements including all:
• buildings, workspaces and utilities
• process equipment (both hardware and software)
• supporting services such as transportation, communication and information services

6.3.1 Plant, facility and equipment planning
Skyworks uses a multidisciplinary approach for developing plant, facility and equipment plans. To the extent possible, plant layouts optimize material travel, handling and value-added use of real estate and facilitates synchronous flow. The effectiveness of existing operations is evaluated and monitored.

6.3.2 Contingency plans
Reference: SQ02-0035 Business Continuity / Disaster Recovery Planning
Skyworks has prepared a business continuity / disaster recovery plan to satisfy customer requirements in the event of an emergency.

6.4 Work environment
Reference: SQ02-0015 Skyworks World Wide Facilities
Skyworks senior management manages all work environments, clean rooms, laboratories and workstations needed to achieve conformity to product requirements.

6.4.1 Personnel safety to achieve conformance to product requirements
Safety is paramount at Skyworks. As a result, processes are developed and maintained that minimize potential risks to all employees while still meeting quality requirements.

6.4.2 Cleanliness of premises
Skyworks maintains all work environments, clean rooms, laboratories and workstations in a state of order, cleanliness and repair consistent with the product and manufacturing process needs.

7 Product realization

7.1 Planning of product realization
Reference: SQ02-0008 Product Realization Process - PRP
Each Business Unit, Manufacturing and Support Organization with responsibility for defining product requirements documents new and changed product and process introduction requirements.
Consideration is given to activities from product design, development, incoming materials, manufacturing, shipping and warehousing, as appropriate, in meeting the specified requirements.
The Skyworks new product development and introduction process is based on the concepts outlined in the AIAG Advanced Product Quality Planning manual.

7.1.1 Customer requirements
Where applicable, customer requirements (i.e. technical specifications) are imbedded within the product realization process.

7.1.2 Acceptance criteria
Acceptance criteria are an output of the new product development and introduction process. Where attribute sampling is used, the acceptance level is zero defects.

7.1.3 Confidentiality
Skyworks enters into a non-disclosure agreement with the customer during the new product development and introduction process to ensure the confidentiality of data.
7.1.4  Product / process change control
Reference: SQ02-0001 Product / Process Change Notification; JESD46

Skyworks manages product and process change proposals within a cross functional change control board process. The effects of the change, including changes caused by a supplier, are assessed, verified and validated before being implemented in order to minimize the impact to our customers. A product / process change notification is provided to those customers that may be impacted by the change.

7.2  Customer related processes

7.2.1  Determination of Requirements Related to the Product
Each Business Unit, Manufacturing and Support Organization together with engineering and other technical support groups determines the performance and manufacturing requirements (including availability, delivery and support) related to the product or customer. These may include unstated requirements by the customer but are necessary for the specified or intended use of the product by the customer. Examples of these unstated requirements are:

- codes and standards from industry and/or government regulatory bodies
- applicable government, environmental regulations applied to the acquisition, storage, handling, recycling elimination or disposal of product.

To assure customer satisfaction it is necessary that these requirements be ascertained with the customer (on custom designs), internally understood, internalized into process, material or procedural documentation, agreed to and confirmed as achievable by Skyworks Business Unit and Manufacturing Organizations.

7.2.1.1  Customer designated special characteristics

Skyworks conforms to customer requirements for the designation, documentation and control of special characteristics.

7.2.2  Review of Requirements Related to the Product

Before planning and committing factory resources or the acceptance of an order from a customer, the appropriate Planning and Manufacturing organization reviews such orders to ensure that:

- the manufacturing order requirements are adequately defined, documented and agreed to internally before acceptance
- all product or customer requirements (if applicable) are met
- any differences between the manufacturing order requirements and the factory’s capacity plan are resolved
- the manufacturing organization has the capacity to meet the manufacturing order requirements
- the manufacturing organization has investigated the manufacturing feasibility of the product including a risk analysis

These reviews are always performed and records of these reviews are maintained. Changes to the original customer order are reviewed in the same manner as the original review.

7.2.3  Customer communication

All Business Unit, Manufacturing and Support Organization managers and designated personnel involved in design and manufacturing planning for Skyworks provides the appropriate communications to Marketing, Quality or directly to the end customer on any technical, capacity, post delivery and other manufacturing planning and completion details to meet customer requirements. Skyworks communicates information, including data, in the customer specified language and format.
7.3 Design and development


7.3.1 Design and development planning

Each Business Unit has developed a phase gate new product development and introduction process that describes:

- the different phase gate stages
- the activities associated with each stage (i.e. opportunity management, planning, design, verification, validation)
- the roles, responsibilities and authorities

The responsible Business Unit manager provides adequate resources for this activity. The plans are updated as product design evolves.

A multidisciplinary approach is used during the product design and development activity including:

- the identification, finalization and monitoring of special characteristics
- the development of FMEAs and associated actions
- the development of control plans

7.3.2 Design and development inputs

Each Business Unit identifies, documents, and reviews product design input requirements for adequacy. Applicable statutory and regulatory requirements are included. Incomplete, ambiguous, or conflicting requirements are resolved with those responsible for imposing these requirements. Results of contract review activities are taken into consideration by the responsible design activity. Device and process simulation model robustness are validated periodically by the function responsible for maintaining the model.

7.3.2.1 Product design input

Skyworks identifies documents and reviews product design input requirements including:

- customer requirements (i.e., special characteristics, identification and traceability and packaging)
- information gained from previous designs
- competitor analysis
- supplier feedback
- field data

7.3.2.2 Manufacturing process design input

Skyworks identifies documents and reviews manufacturing process design input requirements including:

- productivity targets, process capability and cost
- customer requirements if applicable
- experience from previous developments

7.3.2.3 Special characteristics

Skyworks identifies special characteristics and incorporates these special characteristics in applicable process control documents (e.g. FMEA, control plan, process control instructions). Customer specified symbols are used when mandated.
7.3.3 Design and development outputs

Each Business Unit documents product design output and expresses the output in terms that can be verified and validated against design input requirements.

Design output documents are reviewed by the appropriate cross-functional team before release. Each Business Unit/Manufacturing Organization produces data demonstrating that each product has been characterized to the corners of the process or per customer requirements/applications. Each Business Unit produces data demonstrating device packaging and transportation packaging meets requirements.

7.3.3.1 Product design output

Skyworks identifies, documents and reviews product design outputs including:

- design FMEA
- pre-launch control plans
- reliability results
- product special characteristics and specifications
- product error proofing, if applicable
- drawings
- phase gate review data

7.3.3.2 Manufacturing process design output

Manufacturing process design output includes:

- specifications and drawings
- process flowcharts and layout
- process FMEAs
- process control plans
- work instructions
- process acceptance criteria
- quality and reliability data
- results of error proofing activities, if applicable
- rapid detection and feedback methods of process non-conformities

7.3.4 Design and development review

Each Business Unit plans and conducts formal documented reviews of the product design results at appropriate stages. All appropriate personnel are included in each review. Records of design reviews are maintained and retained.

7.3.4.1 Monitoring

The effectiveness and efficiency of the design and development process is measured at specified stages of the phase gate process. The results are analyzed and reported with summary results as input to the business unit management review (e.g. quality risks, costs, lead-times, critical paths and others, as appropriate).

7.3.5 Design and development verification

Design verification is performed by each Business Unit at appropriate stages of product design to ensure that the design stage output meets the design stage input requirements. Design verification results are recorded and retained.
7.3.6 Design and development validation
Reference: SQ02-0013 Qualification Standard, SQ02-0029 Technology Reliability Standard

Each Business Unit coordinates the performance of design validation on all product designs to ensure that product conforms to specified product or customer requirements. Subsequent validations are performed if deemed necessary. Design rule modification results when the design is no longer robust under current process conditions, or alternatively, the process is modified to allow the continued use of existing design rules.

Design failures are documented in the validation records. Procedures for corrective and preventive action are followed in addressing such design failures.

7.3.6.1 Supplemental
Validation is performed in accordance with customer requirements if applicable, including program timing.

7.3.6.2 Prototype program
A prototype program and control plan is used when required by the customer. In this case Skyworks uses the same suppliers, tooling and manufacturing processes as will be used in production. Performance-testing activities are monitored for timely completion and conformity to requirements. If services are outsourced, Skyworks maintains responsibility for the outsourced services, including technical leadership.

7.3.6.3 Product approval process
If requested by the customer, Skyworks conforms to the AIAG Production Part Approval Process manual. Suppliers may also be expected to conform to this product approval process.

7.3.7 Control of design and development changes
Reference: SQ02-0004 Document and Data Control

Once the design has been validated, each Business Unit ensures subsequent design changes are identified, documented, reviewed and approved by authorized personnel before their implementation.

Each Business Unit determines whether a proposed design change requires customer approval. If required or when contractually agreed, the Business Unit ensures that all changes to designs which impact form, fit, function, performance, and/or reliability are communicated and agreed to, with the customer, so that all effects can be properly evaluated.

7.4 Purchasing
Reference: SQ02-0009 Sourcing

It is the policy of Skyworks to continually develop business partnerships with suppliers. Together, the Quality and requesting department ensures that purchased material, process equipment and services directly affecting product quality conform to specified requirements. Documented procedures are established and maintained to ensure implementation and compliance to product and manufacturing requirements.

7.4.1 Purchasing process
Appropriate Quality, Purchasing, and/or Engineering departments or groups:

- evaluate and select suppliers on the basis of their ability to meet purchase requirements including any specific quality assurance requirements;
- establish criteria for selection, evaluation and re-evaluation of existing suppliers
- define the type and extent of control over suppliers considering factors such as type of material or service, impact of supplied material or service on the quality of Skyworks’ product, and where
applicable, prior quality audit reports and/or quality records of previously demonstrated capability
and performance of suppliers

- establish and maintain quality records of approved suppliers and retain those records

7.4.1.1 Statutory and regulatory conformity
Skyworks ensures that materials used in product conform to applicable statutory and regulatory
requirements.

7.4.1.2 Supplier quality management system development
Reference: SQ02-0020 Supplier Quality Manual
Appropriate Skyworks Quality and Manufacturing personnel perform supplier development. Criteria for
supplier selection, evaluation and re-evaluation are established. Supplier audits are performed on an as-
needed basis by Skyworks representatives as part of supplier or subcontractor development. More in-
depth supplier development reviews may also be conducted as part of the supplier development process.
Skyworks has developed a supplier quality manual that describes expectations for those suppliers that
provide materials or services that affect customer requirements.
Suppliers are expected to have an effective quality system in place that assures consistent on-time
delivery of conforming product.

Skyworks performs supplier quality management system development with the goal of supplier conformity
to ISO/TS 16949. The prioritization of suppliers for development depends upon the supplier’s quality
performance and the importance of the product supplied.

Conformity with ISO 9001 (i.e. demonstrated by certification by an accredited third party
certification/registration body or through a second party audit process) is the first step in achieving this
goal.

When supplier audits are performed, the audit process is consistent with the automotive process
approach, including evidence of planning, supplier readiness and supplier performance (reference
principles outlined in ISO 19011 Guidelines for quality and/or environmental management systems
auditing sections 5, 6 and 7). Records of the audits are maintained.

Skyworks has developed decision criteria for determining “specially designated suppliers” wherein certain
specified elements of ISO 9001 or ISO/TS 16949 are waived. Records of the established criteria and
decision taken are maintained.

Registration to ISO/IEC 17025 is required for calibration and testing laboratories.

7.4.1.3 Customer approved sources
Skyworks purchases materials and services from customer approved sources when mandated by
contractual agreement. When this is the case, Skyworks is ultimately responsible for the quality of these
materials and services.

7.4.2 Purchasing information
Purchasing documents contain data clearly describing the material, process, specification, equipment or
service ordered. Where appropriate, the purchasing document also references requirements for:

- product approval, relevant procedures, standards, special processes or equipment
- qualification of personnel
- quality management system requirements

The purchasing department reviews and approves purchasing documents for adequacy of specified
requirements prior to release.
7.4.3 Verification of purchased product
Reference: SQ02-0005 Inspection and Test Procedure

Purchased materials, process equipment or services requiring inspection or qualification prior to release to production are inspected and qualified by trained and responsible Skyworks personnel to ensure that they meet specified purchase requirements.

Where purchased material, process equipment or service is verified by Skyworks personnel at the supplier’s or subcontractor’s premises, verification arrangements are specified in the purchasing documents.

7.4.3.1 Incoming conformity to requirements

Skyworks assures the quality of purchased product using one or more of the following methods:

- receipt and evaluation of statistical data
- receiving inspection and/or testing
- second or third-party assessments of supplier sites coupled with records of acceptable delivered product quality (i.e. certificate of conformance or certificate of analysis)
- part evaluation by an approved laboratory

7.4.3.2 Supplier monitoring
Reference: SQ02-0020 Supplier Quality Manual, SQ03-0138 Supplier Qualification and Monitoring

Supplier performance is monitored using the following indicators:

- conformance to product requirements on-time delivery including unplanned use of premium freight
- customer complaints caused by poor supplier product quality (i.e. field failures and special status notifications)

7.5 Production and service provision
Reference: SQ02-0043 Wafer Fabrication, SQ02-0044 Assembly and SQ02-0045 Test, Tape and Reel

7.5.1 Control of production and service provision

Departments or groups directly responsible for manufacturing plan and ensure that production processes that directly affect product quality are carried out under controlled conditions that include:

- the availability and compliance to information that describes the characteristics of the product, reference standards/codes, control plans and/or documented procedures
- the availability and use of work instructions, as necessary
- the use of suitable equipment and working environment

7.5.1.1 Control plans

Skyworks develops and maintains pre-launch control plans for automotive projects and process control plans with input from design and/or process failure mode effects analysis. Manufacturing control plans are updated as needed when changes occur affecting the manufacturing process and/or measurement.

7.5.1.2 Work instructions

Skyworks develops and maintains documented work instructions for employees having responsibility for processes that affect conformance to product requirements. These instructions are referenced within the standard operating procedures or manufacturing execution system and are available at their point of use.
7.5.1.3 Verification of job set-up
Verification is performed after job set-up in accordance with documented instructions.

7.5.1.4 Preventive and predictive maintenance
Skyworks identifies key process equipment and provides resources for machine/equipment maintenance. A documented total preventive maintenance system is in place that includes the following:

- planned maintenance activities
- packaging and preservation of equipment, tooling and gauging
- availability of replacement parts for key manufacturing equipment

The system is continuously evaluated and monitored in order to improve overall equipment effectiveness. Predictive maintenance methods are also used to continually improve the effectiveness and the efficiency of production equipment.

7.5.1.5 Management of production tooling
Skyworks provides resources for tool and gauge design, verification and as applicable, fabrication. A system is implemented for tooling management that includes:

- maintenance and repair facilities and personnel (internal or external)
- tool identification, storage, recovery and set-up
- provisions for perishable tool exchange
- tool documentation with revision control

7.5.1.6 Production scheduling
Reference: SQ02-0003 Supply Chain Management

Skyworks maintains an order-driven production scheduling system in order to meet customer requirements. Production scheduling is supported by an enterprise and manufacturing execution system that provide access to information at key stages of the process.

7.5.1.7 Feedback of information from service
Reference: SQ02-0014 Continuous Improvement / Corrective and Preventive Action

Skyworks captures and communicates service concerns from customers (e.g. customer complaint processing) to appropriate functions within the organization and takes actions accordingly.

7.5.1.8 Service agreement with customers
Skyworks does not currently maintain any service agreements with customers.

7.5.2 Process validation
Skyworks validates all manufacturing processes. The process validation arrangements include:

- defined criteria for review and approval of the process
- the generation of records
- defined criteria and requirements for revalidation

7.5.3 Identification and traceability
Reference: SQ02-0006 Product Control Procedure

Each department or group directly responsible for product manufacturing:

- identifies product by suitable means from receipt and during all stages of production and delivery including traceability information (e.g. raw material, tool, shift, process)

Skyworks proprietary and confidential information. Electronic versions of this document are uncontrolled except when accessed directly from Skyworks Document Control database. Printed versions are uncontrolled. User must verify correct revision before use.
• establishes and maintains documented procedures for unique identification of individual product or batches and maintains identification records

7.5.3.1 Inspection and test status
Each department or group responsible for product manufacturing maintains the identification and test status of product and material throughout the production flow as defined by documented procedures. Identification and test status of product is identified by suitable means indicating the conformance or nonconformance with regard to inspection and tests performed and are recorded as quality records for traceability purposes. Only product and material that have passed the required inspections and tests or accepted under approval is released for further processing.

7.5.4 Customer property
If applicable the quality department establishes and maintains documented procedures for the control of storage, verification and maintenance of customer property provided to Skyworks for use in meeting contractual requirements whether used into the product or not.

Any customer property that is lost, damaged or is otherwise unsuitable for use is recorded, reported to the customer, and records of reporting retained.

7.5.5 Preservation of product
Departments or groups responsible for product or material handling establish and maintain documented procedures for handling, storage, packaging, preservation, and delivery of product or material.

7.5.5.1 Storage and inventory
Reference: SQ02-0036 Distributor Quality Manual

Appropriate storage methods and designated areas or stock rooms are used to prevent damage or deterioration of product or material, pending use or delivery. The condition of product in stock is assessed at a predefined frequency.

In order to maximize inventory turns and optimize stock rotation, Skyworks utilizes a first-in-first-out (i.e. FIFO) inventory management system.

Appropriate methods for authorizing receipt to, and dispatch from such areas are specified. The condition of product or material in stock is assessed at appropriate intervals to detect deterioration.

Appropriate methods of safeguarding, preservation and segregation are used while the product or materials are under Skyworks control.

7.5.5.2 Handling
Methods of handling product or material prevent damage or deterioration. Proper ESD control (i.e. equipment, personnel, and product movement media) are established and maintained.

7.5.5.3 Packaging and Labeling
Packing, packaging, and labeling processes (including materials used) are controlled to the extent necessary to ensure conformance to Skyworks requirements. This requirement applies to transfers between Skyworks and its subcontractors, between operations organization and business groups, as well as to the customer. Transportation packaging meets ESD requirements, makes appropriate use of dry pack / desiccant and prevents product physical damage. When contractually agreed, customer unique packaging and labeling requirements are met.

7.6 Control of monitoring and measurement equipment
Reference: SQ02-0011 Calibration

In order to provide evidence of conformity to requirements, Skyworks identifies the monitoring and measurements to be taken and acquires the devices needed to perform these measurements. In order to ensure valid results, these devices are:
• calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to national measurement standards (where no such standards exist, the basis used for calibration is recorded).
• adjusted or re-adjusted as necessary
• identification in order to determine the calibration status to be determined
• safeguarded from adjustments that would invalidate the measurement results
• protected from damage and deterioration during handling, maintenance and storage

When the equipment is found not to conform to requirements, Skyworks assesses and records the validity of previous measurement results and takes appropriate action on the device and any product affected.

Test software used in the monitoring and measurement of specified requirements is validated before use and revalidated when updated. Records of test software validation are maintained.

7.6.1 Measurement system analysis
Skyworks conducts statistical studies using customer approved analytical methods and acceptance criteria on measurement and test equipment systems referenced in the control plans (i.e. pre-launch and production).

7.6.2 Calibration records
Skyworks generates and maintains calibration records that indicate the following:
• equipment identification number
• measurement standard used
• as-received condition (including any out-of-tolerance results)
• assessment of validity of previous measurement results / notification to customer if suspect material has been shipped (if applicable)
• statement of conformity to specification after calibration

7.6.3 Laboratory requirements

7.6.3.1 Internal laboratories
Reference: SQ02-0013 Qualification Standard, MX-0064 Proceso para la calibración de equipo de medición y pruebas
Skyworks laboratories have a defined scope that includes its capability to perform required measurement and test. Technical requirements are specified and implemented including:
• adequacy of laboratory procedures
• competency of laboratory personnel
• product measurement and testing
• capability to perform the measurement and tests traceable to a relevant standard (i.e. internal or industry standard)
• review of reports and records

7.6.3.2 External laboratories
Where Skyworks does not possess the capabilities, external laboratories used to perform calibration, measurement or testing are accredited to ISO/IEC 17025.

If a qualified testing laboratory is not available, customer waiver is obtained. If a qualified calibration laboratory is not available, calibration services may be performed by the original equipment manufacturer.
8 Measurement, analysis and improvement

8.1 General

Each Business Unit, Manufacturing and Support Organization plans and implements the measurement, monitoring, analysis and improvement activities used to assure conformance to product and customer requirements and continual improvement of the quality management system.

Measurement, monitoring, analysis and improvement activities are supported by the best available methodologies for data recording and analysis (statistically based whenever applicable) and fact based decision-making and communication techniques.

8.1.1 Statistical tools
Reference: SQ02-0016 Statistical Process Control

Skyworks establishes and maintains a documented procedure to implement and control the application of statistical techniques. Skyworks determines the appropriate statistical tools during the planning process and includes these in the control plans.

8.1.2 Knowledge of basic statistical concepts

*Skyworks employees are aware of basic statistical concepts and apply these where appropriate.*

8.2 Monitoring and measurement

8.2.1 Customer satisfaction
Reference: SQ02-0018 Customer Satisfaction

Each Business Unit, Manufacturing and Support Organization monitors and documents key indicators of internal (as well as external if applicable) customer satisfaction and dissatisfaction. These indicators are based on customer related information, such as meeting needs and expectations, requirements, pricing and delivery performance. Additional information on survey results, competitive benchmark, direct customer complaints, etc. are used as applicable.

Measurement and monitoring of these “voice of the customer” indicators are reviewed and used by top management for continual product and process improvement.

*Skyworks monitors customer satisfaction using the following performance indicators:*

- delivered part quality
- field returns
- customer disruptions
- on-time delivery including unplanned use of premium freight
- special status notifications

8.2.2 Internal audit
Reference: SQ02-0012 Internal Audits

Skyworks maintains a dynamic audit program to provide feedback to management on the effectiveness of the quality management system. Records are maintained and prompt corrective action is taken to eliminate nonconformities detected during the audits. Follow up activities take place to verify the effectiveness of these corrective actions.

8.2.2.1 Quality systems audit

Skyworks conducts quality system audits to ensure conformity to the requirements of ISO 9001 and ISO/TS 16949. The audit process compares actual practice to these standards and internal system
Additional (i.e. customer specific) quality management system requirements are deployed within the quality system documentation and assessed as a result of the audit process.

8.2.2.2 Manufacturing process audit
Skyworks audits each manufacturing process to determine its effectiveness.

8.2.2.3 Product audit
Product audits are conducted at a defined frequency at appropriate stages of production to verify conformity to specified requirements. (e.g., dimensions, functionality, packaging, labeling).

8.2.2.4 Audit plans
An audit plan is developed that covers all processes, activities related to the quality management system across all shifts. The plan considers the status and importance of these processes and activities and increases audit coverage if warranted. The audit plan defines:

- type (system, process or product)
- area to be audited
- date
- scope (applicable elements)
- criteria (checklists)
- auditor name ensuring independence and impartiality
- auditee names

The plan covers all elements of the quality management system annually.

8.2.2.5 Auditor qualification
Skyworks trains internal auditors to ensure their qualification and competency.

8.2.3 Monitoring and measurement of quality management system processes
Each Business Unit, Manufacturing and Support Organization identifies and uses process metrics in the review and continual improvement of all manufacturing processes and the quality management system. Metrics are used in the control, evaluation and management of daily operations as well as long-term projects, critical to the achievement of this organization’s strategic objectives.

When key metric targets are missed, correction/corrective action is taken, as appropriate. If despite a missed target a decision is made to take no action, this decision shall be recorded.

8.2.3.1 Monitoring and measurement of manufacturing processes
Reference: SQ02-0016 Statistical Process Control

Skyworks performs process studies on all new manufacturing processes to ensure the process is capable. The results of these studies are used to enhance process controls (e.g. work instructions, acceptance criteria, and preventive maintenance instructions).

Manufacturing process capability specified by customer part approval requirements is maintained. The manufacturing organization adheres to the process control plan. Significant process events such as tool change or machine repair are recorded.

When a process becomes statistically unstable or incapable, the reaction plan prescribed in the control plan is followed.

8.2.4 Monitoring and measurement of product
Reference: SQ02-0005 Inspection and Test Procedure
Departments or groups directly responsible for manufacturing perform inspection and testing according to documented procedures to ensure conformance to product requirements. Records of product inspection and testing are appropriately maintained.

Product release does not proceed without the completion of planned processes and requirements unless otherwise approved by the relevant authority or by the customer.

8.2.4.1 Dimensional and functional testing
Reference; SQ02-0013 Qualification Standard

Skyworks performs dimensional and functional verification of product in accordance with customer engineering requirements in accordance with applicable industry standards.

8.3 Control of nonconforming product
Reference: SQ02-0006 Product Control Procedure

Each department establishes and maintains documented procedures to ensure that product or material that does not conform to specified requirements is prevented from unintended use. Responsibilities for authorizing disposition of nonconforming product or material are defined. The system provides for identification, documentation (record keeping), evaluation, segregation (when practical), disposition of nonconforming product or material, and for notification of the functions concerned. Nonconforming product or material is removed from production and immediately placed in a status that prevents reintroduction into the production flow.

Visual identification of nonconforming or suspect material or product, and any quarantine areas are provided.

8.3.1 Unidentified or suspect status
Product with unidentified or suspect status is classified as nonconforming product.

8.3.2 Control of reworked product
Instructions for rework are generated and utilized. These instructions include re-inspection requirements.

8.3.3 Customer notification
Customers are promptly notified in the event nonconforming product has been inadvertently shipped.

8.4 Analysis of data

Skyworks believes in the importance of data analysis and the application of such analysis towards continual improvement. Each department or group identifies and analyzes appropriate data (from various internal and external sources) and assesses performance against plans, objectives and other goals in order to drive continual improvement. This analysis leads to actions that support prioritization and longer term planning of customer related problems.

Information arising from product usage issues is reported and compared with those of competitors.

8.5 Improvement
Reference: SQ02-0014 Continuous Improvement / Corrective and Preventive Action

Skyworks is committed to a policy of continual improvement to support customer satisfaction. This policy involves all employees and encompasses all aspects of its business, including process, product, quality and cost. Skyworks uses various continual improvement tools (e.g. 8D, 5 Phase, Drill Deep and Wide, Six Sigma, Ishikawa, etc.)

8.5.1 Manufacturing process improvement
Manufacturing process improvement continually focuses on process control, product and process variation reduction.
8.5.2 Corrective action
Skyworks establishes and maintains a documented procedure for implementing corrective and preventive action. Corrective or preventive action taken is commensurate with the magnitude of the problem and/or associated risk. Changes to documented procedures resulting from corrective and preventive action are implemented and recorded. The procedure for corrective action includes:

- the effective handling of customer complaints and reports of product nonconformities
- investigation of the cause of nonconformities relating to the product, the process, and/or the quality system
- determination of the corrective action needed to eliminate the cause of nonconformities
- application of controls to ensure that corrective action is taken and that it is effective.

The system tracks problem analysis completion time and uses this data for continuous improvement.

8.5.2.1 Problem solving
Skyworks has a defined process for problem solving leading to the identification and elimination of root cause. When requested, the customer prescribed problem solving format is used.

8.5.2.2 Error proofing
Skyworks emphasizes error proofing when developing corrective actions.

8.5.2.3 Impact on similar processes
Skyworks assesses the impact on similar processes when developing corrective action.

8.5.2.4 Returned product verification and failure analysis
Skyworks ensures that:

- product returned from the customer is effectively analyzed
- records of these analyses are recorded, made available upon request, and retained
- where appropriate, corrective action is initiated and process changes made to prevent recurrence
- adequate failure analysis facilities are provided
- verification and failure analysis cycle times are monitored and minimized

8.5.3 Preventive action
Reference: SQ02-0014 Continuous Improvement / Corrective and Preventive Action

Skyworks has procedures for preventive action which include:

- the use of appropriate sources of information such as processes reviews audit results, quality records, and customer complaints to detect, analyze, and eliminate potential causes of nonconformities
- determination of steps needed to effectively resolve problems requiring preventive action
- application of controls to ensure that preventive action is taken and that it is effective