

Supplier Product / Process Change, Waiver, and Supplier Alert Notification Requirements

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Revision History

Rev	Name	Change	Date
1	Daniel Le Saux	Initial Release	03/20/2012
2	Fernanda Lares	Removed reference to generic e-mail supplier.pcn@skyworkdinc.com due to lack of activity	04/14/2016
3	Jenny Phua	Update Section 7 for details on Change Approval / Rejection	10/02/2018
4	Jenny Phua	Update Section 7 to include format to reply suppliers after CCB review as per SG ICAR 167	04/01/2019
5	Jenny Phua	Update Section 8 for Change monitoring as per CAR 1045	
6	Jenny Phua	Corrected typo and align specification revision	8/10/2021
7	Monica Morales Major updates across sections 2, 3 4.2, 4.3, 5, 7 and 8 to align to best practices and IATF Requirements.		1/10/2022



1 Purpose and Scope

1.1 Purpose

The purpose of this specification is to formally establish requirements for communicating and managing process or product changes, Waivers and Supplier Alerts that may potentially affect products or services being provided to Skyworks.

1.2 Scope

This specification applies to all Skyworks suppliers of Level 1 and Level 4.

2 Acronyms / Terminology and Description / Definition

Change

An alteration to a product or process.

Process

A combination of people, procedures, methods, machines, materials, measurement equipment, and/or environment for specific work activities to produce a given product or service.

PCN

Product/Process Change Notification - a document sent to Skyworks describing a proposed product or process change, the reasons for the change, and the projected impact of the change

Supplier Waiver Request

Communication initiated by the supplier seeking approval to ship product in spec, but with a known deviation that has been evaluated as not having an impact on product performance (i.e. something in the manufacturing process did not go as expected, or a non-spec parameter shows a difference). The deviation affects a limited quantity of product not yet shipped to Skyworks.

Supplier Alert Request

Communication received from supplier that provides notification of a deviation affecting product <u>already shipped</u> to Skyworks.

Fit

The external dimensions and associated tolerances of the product.

Form

The visual appearance including shape, color, marking and surface finish of the product.

Function

The electrical, mechanical, thermal and performance characteristic of the product.

Reliability

The ability of a product to perform a required function at or below a stated failure rate for a given period if time.

TRB

Technical Review Board

CCB

Change Control Board



3 Associated Documents

Access to Skyworks documentation is enabled through our **Supplier Web Site**.

SQ04-0070 Skyworks Notification Form **SQ02-0020** Supplier Quality Manual

SQ03-0267 Managing Supplier Change, Waiver or Supplier Alert Request

SQ02-0001 Managing Product and Process Changes and Customer Notifications

4 General

4.1 Change Management System

The supplier shall have a formally documented change management system in place that reviews, verifies and validates change proposals <u>before</u> implementation, as well as cover waiver request and supplier alert notifications. This system shall include customer notification as outlined in section **5 Communication of a Proposed Change**.

If a change is approved, the supplier shall ensure that all associated documents and records are updated to formally deploy the change within their organization including, but not limited to:

- Procedures, work instructions, drawings, and specifications
- Process FMEAs, process flowcharts and process control plans
- Floor layouts
- Measurement system analysis
- SPC charts and capability studies
- Preventive maintenance instructions
- Training instructions and records
- Approved supplier list
- Environmental, health and safety impacts
- Qualification plans and reports

4.2 Change Approval

The supplier shall not make any changes to their products or processes without prior written consent and approval from Skyworks.

- New / Additional Manufacturing or Assembly Location
- New / Additional Manufacturing Equipment or Tooling
- New / Additional / Changes in Equipment, Tools or Testing Technology
- New / Additional Test Facility
- New / Additional / Changes in Testing, Measurement Process or Equipment
- Supplier / Sub Supplier Changes
- Material / Components / Sub-components Changes
- Design Changes
- Process Changes
- Changes in Data Sheet parameters or electrical specifications
- Changes in Packaging / Shipping Including Tube, Reels, Trays, etc.
- Appearance Changes
- Marking Changes
- Changes in process sequence (route), including temporarily off-loading a process to a different manufacturing location within the network, even if the process and equipment are identical.



- Change in Process Parameters beyond the defined process window (e.g., Shift on nominal target value or loosened tolerance) and wafer diameter conversions.
- Change in test or inspection method.
- Change in process input materials or change in source of process input materials.
- Change in equipment, including test or inspection equipment, tool hardware/firmware changes and equipment relocations.
- Change in manufacturing location.
- Change resulting in the outsourcing a process to a supplier even if the process and equipment are identical.

This also includes <u>any other</u> change that may affect product form, fit, function or adversely affect reliability, quality, safety (e.g. Layout changes, Wafer vendor changes, chemistry changes, new materials, etc.) or any changes that impact the agreed upon technical specification or contract.

4.3 Review Period

Skyworks will acknowledge the receipt of the PCN and provide initial feedback of the proposed change within 60 days; the approval / rejection timeline for the proposed change will depend on multiple factors and Skyworks will continue communication with the supplier thru this process.

The supplier shall not deploy a change unless Skyworks has communicated its final approval.

4.4 Skyworks Notification Policy Communication and Flow Down

Requirements set forth in this specification shall be communicated to all affected personnel within the supplier's organization. Supplier shall also flow down these requirements to their suppliers and sub-suppliers.

5 Communication of a Proposed Change, Waiver, or Supplier Alert.

Supplier shall utilize **SQ04-0070 Skyworks Notification Form** to request Skyworks review and approval of proposed change, waiver request, or supplier alert and should include the following information:

- Supplier Notification number
- Supplier contact information such as name, address, telephone, e-mail and fax number.
- Type of Notification
- Title
- Notification date
- Proposed first ship date.
- Description and scope of notification
- Products and Part Numbers affected
- Parameters that may be affected
- Method for identifying product impacted by change / waiver / alert
- Anticipated (positive and negative) impact on form, fit, function, reliability, quality or safety
- Qualification or validation plan summary and results
- Launch / Implementation plan (PCN Only)
- Recovery Plan (Waiver/Alert Only)
- Description of supporting documentation attached
- Last date of manufacture of the unchanged product (PCN Only)
- Qualification samples availability date (PCN Only)
- Statement, if applicable, that device material declaration will be updated due to material change (PCN Only)



Skyworks Notification Form for PCN shall be forwarded to the Supplier Quality Engineer <u>minimum 180 days</u> before the proposed first ship date.

If a submitted PCN does not have a direct effect on a Skyworks production released product, Skyworks may elect not to act on the submission. The Supplier will receive the feedback from the Supplier Quality Engineer.

Skyworks Notification Form for Waivers and Supplier alerts shall be forwarded to the Supplier Quality Engineer as soon the issue is detected.

6 Change Qualification

The supplier shall take all necessary steps to fully characterize and qualify the proposed change and provide quantitative evidence indicating that the change would have no detrimental effect on form, fit, function, reliability, quality or safety. Skyworks may elect to conduct its own characterization and/or qualification activities to further corroborate the data.

7 PCN and Waiver Approval / Rejection

All supplier PCN are reviewed by Skyworks Technical Review Board & Change Control Board as needed. Approval for production products requires TRB/CCB approval.

PCN approvals or rejections on mass production devices are communicated to the supplier from Skyworks Supplier Quality Engineer in the last section of SQ04-0070 form. The supplier must receive written approval from Skyworks Supplier Quality Engineer before proceeding with the launch/implementation plan. Verbal approvals are not admissible.

The supplier quality engineer will save the Skyworks Notification Form approval / rejection evidence at the Supplier PCN located in Supplier Management database.

Waiver Request will be evaluated by Skyworks subject matter experts based on the details provided, The decision to approve or reject the waiver will be communicated back to the supplier by the SQE.

Skyworks to Complete								
Final Disposition	☐ Approved	☐ Rejected	TRB/CCB Number					
Date			SQE Signature					

Suppliers will be responsible to measure the effectiveness of the change with the initial evaluation data.

For foundry or OSAT suppliers, Skyworks preproduction data, Skyworks Clean Launch, or min of 10 lots data post change must be evaluated. Data collected must be provided to SQE for review.

If the change is denied, the supplier will be expected to continue providing products or services using the current production approved process and/or design. Suppliers will be held accountable for changes made to their process without prior notification and approval that adversely impact form, fit, function, reliability, quality or safety of Skyworks' or our customer's products. Supplier will reimburse Skyworks for all additional costs, reasonably incurred including but not limited to scrap, rework, testing, repair, replacement, shipping and/or labor costs.

8 Change Monitoring

Suppliers will be responsible to measure the effectiveness of the change with the initial evaluation data. For foundry or OSAT suppliers, Skyworks preproduction data, Skyworks Clean Launch, or min of 10 lots data post change must be evaluated. Data collected must be provided to the SQE for review. The information will be kept in the Supplier PCN Section located in the Supplier Management database.