Supplier Guideline

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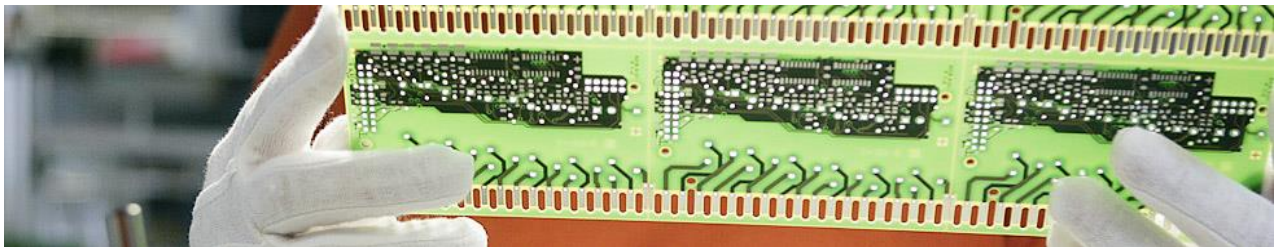
1 Guideline



Schweizer Electronic – more than PCB's. Every day this maxim drives us to make innovative products that not everyone can. *We are* the No. 1 in innovative solutions, reliability and consulting with an unbeatable worldwide partner network.

Very few companies can look back to more than 170 years of company tradition. In all that time reliability has always been the value we stand for. In addition, customers appreciate us for our excellent consulting service and product quality.

To offer the entire value chain, we have partnered with the best companies in their fields: now we supply the full range, from the fastest prototypes to high volume cost-optimized products. Our headquarters in Schramberg, Germany, is the center of our innovative strength. From here, we also ensure that product ramps continue to reflect our very high quality and process know-how.

According to this philosophy, we will maintain the highest quality level together with our suppliers. Therefore, we created this guideline, which enables you to understand our supplier evaluation better.

2 Purpose

Global competition, customer expectations and product demands require constant improvement of all products, processes and business operations.
The continuous improvement of products and processes and the sustainable provision of quality, costs affect the entire supply network, in which you play an important role as a supplier.
This guideline shows our supplier the expectations, requirements, conditions and methods necessary to achieve our common targets.
This policy is applicable to all products delivered and all services provided to SCHWEIZER.

The product quality is of decisive importance for the competitiveness. All suppliers are an integral part of our final product, the directly influence the product quality. Therefore, the reliability of the supplier, the product quality and the price has to correspond to the world market level.

In order to constantly meet the demands of the market our supplier and we have to cooperate as partners. Only the use of approved methods of quality assurance with their "zero defect philosophy" makes it possible to reach this aim.

This document is valid for Schweizer Electronic AG, Schweizer Electronic Singapore Pte. Ltd. and Schweizer Electronic (Jiangsu) Co., Ltd. Both companies are referred to in the document as "Schweizer".

3 Code of business ethics

SCHWEIZER expects its suppliers to conduct their business according to the ethics principles based on the international human rights designations, especially the abandonment of child labor.

4 Legal requirements, environment and energy

SCHWEIZER stands up for legal requirements, common industry standards and environmental protection. This commitment is also expected from our suppliers and is also valid for a sustainable use of energy.

The contractual relationship with Schweizer Electronic AG for deliveries shall be subject to German material law.

The contractual relationship with Schweizer Electronic Singapore Pte. Ltd. for deliveries shall be subject to Singapore material law.

The contractual relationship with Schweizer Electronic (Jiangsu) Co., Ltd. for deliveries shall be subject to Chinese material law.

Furthermore the supplier commits to follow all relevant legal and regulatory requirements. These requirements must be passing down to the complete supply chain including the requirement to pass down the requirement to the complete supply chain. This is valid for all special characteristics which are passed down from Schweizer.

Furthermore all relevant legal and regulatory requirements from the country of receipt and the country of shipment must be followed from the supplier. Furthermore, the supplier must comply with all relevant statutory and governmental requirements of the country of delivery, the recipient country and the country of destination (of the product), if known.

Particular must be followed the relevant requirements like Electrical and Electronic Equipment Act (ElektroG), Ordinance on the restriction of the use of certain hazardous substances in electrical and electronic equipment (ElektrostoffV), WEEE, end of live vehicle directive (AltfahrzeugV), REACH, RoHs, Act on the Protection Against Hazardous Substances (ChemG), GADSL in the actuals revision. Additional country-specific requirements must be also followed.

5 Responsibility for the product quality

The supplier is responsible for the quality of his products. The product quality has to be assured by systematic prevention of defects during all phases of the product cycle. All characteristics mentioned in specifications, drawings, supply specifications and other documents have to be observed.

The quality characteristics are defined by:

- the procurement specifications or/and
- separate supply and acceptance specifications or/and
- Samples

In general, we expect a 0 ppm / 0 PLKZ delivery qualities. Each deviation from the speciation will be claimed. The actual yearly target can be found in Guideline for supplier evaluation on our home page (http://schweizer.ag/en/terms.html)

6 Proof of quality capability

The supplier must maintain a quality assurance system with a certification at least DIN EN ISO 9001: (actual release). He is requested to carry out an active further development of the QM system in relation to IATF 16949 (current change level), when delivered to the Aerospace EN / AS / JISQ 9100: (current updated revision).

The supplier shall guarantee the right of access for SCHWEIZER, its customers and regulatory authorities to enter the relevant areas of all facilities, at any level of the supply chain involved in the contract and to all relevant records. The Supplier grants

SCHWEIZER and also his customers the right to review the quality system with audits. An audit does not relieve the supplier of his sole responsibility for quality.

7 Requalification

The supplier shall re-qualify its components according agreed order documentation (L&A, Specification sheet, etc.) once a year. He has to maintain a qualification-monitoring program for reliability and environmental tests in order to ensure and demonstrate that the delivered components meet all the agreed requirements. Re-qualification documentation shall be archived by supplier and shall be made available to SCHWEIZER upon request.

8 Preventive quality assurance

8.1 Contract review

The supplier has to review our order documents carefully and to decide on the manufacturability of the product on basis of his production equipment and capabilities. This applies not only to new products but also to revisions of current products. If the supplier is not able to meet the requirements or the delivery does not comply to the specifications of the purchase order a written approval by SCHWEIZER must be obtained.

The supplier is bound to inform SCHWEIZER about all order documents, specifications or drawings, which seem to be ambiguous or faulty. This also includes the clarification of any diversity of interpretation. In any case of doubt, the interpretation of the purchaser is valid. The supplier is obliged to submit suggestions to facilitate a resolution.

8.2 Quality planning

Upon request, SCHWEIZER may examine the planned production and control processes. All corresponding production and control equipment and all raw materials are part of this examination.

8.3 FMEA (failure mode and effects analysis)

Prior to start of any production process failure mode and effects analyses are to be carried out wherever useful and necessary (refer to VDA volume 4, part 3). If the product ordered is developed or designed by the supplier, they are obliged to follow corresponding design failure mode and effects analyses.

8.4 Capability analyses

Where useful and applicable, machine and process capability analyses and statistical process control have to be applied (refer VDA volume 4, part 3). Specified characteristics have to reach a value of > 1.67, or appropriate actions (e.g. 100 % inspection) have to be implemented to guarantee an accurate delivery. Upon request the supplier has to present appropriate verifying documentation.

8.5 Development

Should products be developed for or together with us, the development process must be based on APQP or RGA. The corresponding releases have to be forwarded unsolicited to the respective contact person at Schweizer. In General, the Purchasing Department or the responsible Project Manager the contact person. The defined milestones by Schweizer and the milestones defined by the supplier have to be planned

9 Initial sample (of mass production)

If specified in the order documents and unless otherwise stipulated, initial sample test reports have to be established with new products or modifications according to VDA volume 2 PPF 3 submission level 3 or PPAP submission level 3.

Initial samples are products, which were manufactured with standard production means as well as under standard production conditions. The initial sample test report has to correspond to the VDA document “Quality assurance of deliveries to the automotive industry, supplier rating, initial sample submission”. The initial sample inspection report “ISIR” has to be submitted in accordance with a sufficient number of samples as agreed with the purchasing department.

The series supply can only be started with the written agreement by SCHWEIZER.

10 Quality assurance during mass production

10.1 Procurement

The supplier assures that the products obtained from his suppliers correspond to the quality specified. Furthermore the supplier take care that the personal is trained and competent to full fill their tasks in good manner. Also the supplier take care about that the personal knows their influence to the product quality, product safety and Code of business ethics. Initial sample approvals, incoming inspection records, supplier ratings and visits have to be documented in an appropriate manner.

10.2 Process capability

Appropriate procedures shall be applied for quality control and timely introduction of corrective actions. Among others, SPC belongs to such methods. The test severity and test frequency have to be determined according to the process control. The process capability has to reach a value of ≥ 1.67 in accordance to the quality characteristics of the final product.

In case of non-conformance to the required process capabilities, appropriate actions like 100 % inspections have to be taken, to ensure the compliance of the required quality characteristics

Systematic recording and evaluation of quality data and procedures (failure mode and effects analysis, control charts, records of process parameters, records of tooling life cycle, audit results) are to be used to implement corrective actions in order to obtain quality improvements.

10.2.1 Test equipment

Using suitable test procedures, combined with an appropriate monitoring of test equipment, the supplier assures that the equipment used to control the product quality has sufficient accuracy. This means that the value % R&R must reach ≤ 30 % when estimating the combined repeat accuracy and the reproducibility (2-10 pieces, 2-3 testers, 2-3 repetitions). Test systems must be set at cpk ≥ 1.67

Defective products have to be made unusable, so that further use is not possible.

10.3 Non-conforming products

If the supplier detects deviations between the actual quality characteristics or a decline in quality, the must immediately inform SCHWEIZER ELETRONIC in writing and submit a proposal detailing corrective measures

In the event of impending delays in delivery the supplier must inform SCHWEIZER as soon as possible, detailing the cause and expected duration of the delay. Notification does not prevent action against the supplier.

If non-conforming products have been delivered, SCHWEIZER has to be informed immediately in writing. Rework of non-conforming products is acceptable if the rework meets or exceeds the product quality of the standard product. Reworked batches have to be marked accordingly.

10.4 Information / Changes (PCN)

Changes within the agreed system or agreed process for quality assurance or of substances, manufacturing processes, production sites, vendor parts, specifications of material respectively product data sheets, security data sheets (in general maximum after 24 months) or other documents such as e.g. released quality certificates (COC respectively COA / test reports / certificates) have to be immediately communicated to SCHWEIZER.
Such information must reach in a timely and complete manner (at least 12 months in advance). A discontinuation of a product must reach in a timely and complete manner (at least 24 months in advance). The information must reach so that SCHWEIZER may be in a position test it for scope and to object prior to the introduction of such revisions.

Changes will only be deemed acceptable when SCHWEIZER has granted a written approval. For the final release of the change an actual PPAP or EMPB must be available

All changes including the complete documentation should be send to following E-Mail address: PCN@Schweizer.ag

Supplier may be required to cover any re-qualification costs at SCHWEIZER or Customer site as a result of product changes initiated by supplier.

10.5 Marking

The packing units have to be marked according to the order respectively in the supply specifications in order to guarantee traceability.
Furthermore, labelling / product stickers / labels on outer and inner packaging – have to identify those products / materials faultlessly and at any time which have been ordered by SCHWEIZER according to order documentation / possibly concurrently valid technical delivery and acceptance terms as well as data sheets respectively product specifications with accordingly valid revision status

10.6 Certificate of conformance according to DIN EN 10204 / DIN EN ISO 17050-1

If not otherwise agreed to in writing, a certificate of conformance according to DIN EN 10204, preferably based on Article Art 3.1 acceptance test certificate, or - for justified exceptions according to Article 2.2 – a factory certification has to accompany the goods. We presuppose that on delivery of the products the manufacturer's certificate of performance matches our order. Supplier from outside Europe can use DIN EN ISO 17050-1.

This refers particularly to the matching of quality certificates / certificate of conformance for order documentation / possibly concurrently valid technical delivery and acceptance terms as well as data sheets respectively product specifications with accordingly valid revision.

In the context of initial sampling to our customers based on PPAP respectively VDA the certificate of conformance has to be attached, depending on customer requirement, by us. Thus a certificate of conformance, if not otherwise agreed in writing, is not part of our incoming inspection.

Due to high quality standards of our suppliers, SCHWEIZER only perform an incoming inspection by means of a plausibility check of the order compared to the delivery documentation (quantity, type). Should – from the supplier's point of view - further tests be necessary, then those have to be advised in writing to SCHWEIZER, department Quality Management, Supplier Support / Supplier Quality Assurance. Schweizer reserves the right to perform additional incoming inspection (physical, chemical, etc.) if seen necessary from Schweizer.

SCHWEIZER reserves the right to bill lump-sum operating cost in case of a delay in submitting the certificate of conformance (either physically or electronically) at the latest by time of delivery

10.7 Counterfeit parts

The supplier commits to deliver only non-counterfeit parts to Schweizer.
Furthermore the supplier ensures that all sub suppliers ensure also the delivery only non- counterfeit parts. If there are any doubts about originality of the delivered parts the originality of the parts must be proofed.
If the raw materials used in the production are purchased through the agent or trader rather than directly from the original manufacturer, the COC report submitted for the batch must be issued by the original manufacturer rather than the agent or trader.

These requirements must be as appropriate passed down to the supply chain.

11 Sub-contractors

The supplier is fully responsible for all products supplied by sub-contractors. This means that he has to assure that the sub-contractor will also observe the quality assurance methods agreed upon.

If Schweizer define source of supply, supplier or service provider theses must be used from the supplier. If they will be not used a written approval from Schweizer must be available. A definition of supplier from the customer did not release the supplier from their responsibility for their supplier.

12 Claims (8D) / Control of non-conforming products

Products with deviations to the purchasing documents may only be delivered with the previous written approval by SCHWEIZER quality department

If products or services are not conforming to their specification, a complaint will be submitted by SCHWEIZER. The supplier shall reply with a written statement within 5 working days. When a 8D report is requested, the following timeline has to be applied unless otherwise agreed:
Items 1.0-3.1: within 24 hours
Item 4.0 within 3 working days
Item 5.0-8.0 within 5 working days.
Completion should be within 10 working days
The 8D report has to express a complete conclusive and all-encompassing statement of fact.

If requested, the conformity of the product quality to the required specifications must be verified within 1 working day

Procedures for the 8D process can be extracted from the Internet by following the appropriate links

If there are claims, SCHWEIZER reserves the right to bill the incurred administrative processing costs with a lump-sum fee.

SCHWEIZER further reserves the right, to bill a lump-sum fee for our administrative efforts caused by delayed or incomplete 8D reports.
(https://www.schweizer.ag/en/terms.html)

13 Supplier rating

Each delivery is part of the supplier rating. Recorded data are evaluated and communicated to the supplier. Once a supplier has reached C-classification on two subsequent occasions, he will be eliminated of the “approved vendor list”.

14 Privacy

All documents and knowledge the supplier receives due to the business relation with SCHWEIZER are to be kept secret from third parties.
The collection, processing and use of personal data shall be admissible only if permitted or prescribed by German “Federal data protection act” or comparable national law of supplier country. In case of doubt please refer to data protection official of SCHWEIZER via purchasing department.

The supplier is to take all necessary precautions. This obligation does not apply to commonly known or standard industrial information.

This agreement begins with the first inquiry and shall end 5 years after termination of the business relationship, at minimum according to legal requirements and common industry standards (refer also VDA volume 1).

15 Quality records

The supplier shall keep records of all quality assurance procedures, especially those relating to measured values and test results. These records as well as product samples shall be kept in an appropriate and accessible manner for at least for 5 years. Archive of important quality related documents should be in minimum 15 years after end of delivery according to the automotive industry requirements (refer also VDA volume 1) , in minimum according legal requirements. Archive deviation should be agreed by SCHWEIZER purchasing department.

On request, the supplier will provide SCHWEIZER copies of all relevant production information, quality records and product samples.

In reasonable circumstances, the purchaser may be denied access to, and inspection of, classified manufacturing methods and other industrial secrets.

Applicable document:
VDA volume 1 “Quality evidence – Guidelines for the Documentation and Archiving for Quality Records”

16 Right of object

Changes or additions to this agreement are valid only in written form and when released by SCHWEIZER quality department

17 History

20.04.21: Add Singapore and update