

## **SCHWEIZER Quality Standard**

(This is valid provided that no other explicitely agreed specification/agreement is in place)

## 1. Management System

- a. Quality Management System: certified following TS 16949: 2009
- b. Business Language is German, documentation in foreign language will be charged according to expenditure.
- c. Product-related requalifications are being executed once per year regarding technology families. For these requalifications test panels and PCB are being used that are technologically comparable.
- d. If requested, PPAP/PPF is done following submission level 2. Statistical proofs only when drawings related to articles are being shown. The application of evaluations of test panel process capabilities is admissible. One PCB is being measured.
- e. Quality features are only reported when they are shown on the customer's product-related drawing. Quality features from cross references and general references to standards are not part of the obligation to produce proof. Requirements beyond this are being charged according to expenditure.
- f. Documentation (FMEA, Control Plan, Flow Charts) is being done related to technology, based on product families. Documentation related to articles are being charged according to expenditure.
- g. Audits of our customers are possible upon agreement. Audits of our customers at our suppliers are subject to our supplier's approval.
- h. Change management: Customer information in case of changes are done according to our "Regulation for customer information about product or process changes (PCN) of electronic components for the automotive market. Edition December 2006" issued by ZVEI e.V. (the German electrical and electronic manufacturers' association).
- i. Contract verification constitutes a test for producibility of PCBs in the context of our processes. A complete test of the correctness of the order specification is not part of the contract verification and and remains the responsibility of the ordering party.
- j. Specifications via Internet are only valid upon our explicit agreement.

## 2. Technical Specifications

- a. Quality features of IPC 6012 –B-AM class 2 as well as the corresponding IPC A 600 G class 2 apply. Proofs for IPC are being charged according to expenditure. Unless specified differently in the offer, tests accompanying a series are being executed according to SCHWEIZER's control plan, valid at the time of manufacturing. During the annual requalification the usal Q-features of the PCB industry are being verified.
- b. Regarding manufacturing tolerances, the SCHWEIZER PCB standard (LPS) applies. Upon request, we will gladly provide you with further technical details regarding LPS.
- c. Storage condition according to IPC/JEDEC J-STD 020 C class 2a do apply. Further storage conditions have to be agreed upon separately.
- d. Processing conditions: as the PCB's layout specified by the customer has a strong influence, the processing conditions have to be adapted to the PCB by the buyer. The maximum temperature in the PCB during processing must not exceed 260 °C.
- e. In case of drilling diameters < 0,3 mm, the drilling might be closed by solder resist for technical reasons. The same applies in case of hot air levelling of the surface. This occurs due the layout reasons and does not constitute a defect.
- f. Changes in customer-related technical specifications are only valid for articles to be newly set-up.
- g. Chemical tin layer thickness is 0.8 μm, measured by X-ray fluorescence at a density of 6.15; max. soldering temperature on the PCB: 260 °C, 10 sec; for lead-free applications the tin layer thickness has to be released by the user. Article related adaptations of soldering profiles to the PCB fall to the processing party.
- h. Article related adaptations of the soldering profiles to the PCB fall to the user independant of generally agreed soldering profiles.
- i. Repair works are being executed according to IPC 7721 A durchgeführt.

## 3. Complaint Management

- a. Complaints are being responded to using the SCHWEIZER 8D report within 10 working days. Should a response not be feasible within this period of time, an interim report will be sent.
- b. Measure that affect the know-how of the company are not being portrayed.

Page 1 von 1 Status: April 2010