Guideline for suppliers

Production Process and Product Approval (PPAP Requirements Vendor Parts)

Implementation of Requirements under IATF 16949

E-T-A Elektrotechnische Apparate GmbH

Guideline for suppliers
for production process and product approval

ENGINEERING TECHNOLOGY

Content:

1 Preface

To meet the requirements of IATF 16949, E-T-A uses the procedure for production process release and product approval (PPPPA) on the basis of VDA Quality Management in Automotive Industry, vol. 2 “Quality Assurance of Deliveries”, for purchased parts to be used in automotive applications (passenger cars and utility vehicles). We demand the same procedure from our suppliers. In case of procurement parts, we already point this out with the enquiry.

2 Purpose

The serial part release procedure must be carried out by the supplier and is intended to ensure that material and products meet the requirements of E-T-A and/or their customers. This includes production parts and materials which are going to be a part of our products.
For catalog and standard parts, the PPF procedure is reduced to a cover sheet sampling with IMDS database entry.

3 Activities for production process and product approval

The planning, development and introduction of controlled and capable processes are an essential part of the activities for launching new or changed products and/or processes.
In the serial part release procedure, the execution of these activities is documented and recorded. This includes e.g. system FMEA, product/process FMEA, process flow charts, production control plan and test plans and results of process capability investigations.

3.1 First piece samples

The submission of initial samples is generally required:

- New parts which have not been supplied to E-T-A before
- Design changes affecting dimensions, material or function of a series product
- Remedy of fault parts, after tool repairs
- Relocation of production, production transfer of tools, machinery or equipment
- Change of subcontractors or service providers, e.g. heat treatment or coating
- Process changes
- Introduction or change of released test methods

With the presentation/delivery of the initial samples, the evidence according to point 4 E-T-A must be presented or submitted.

3.2 Preparation of First Sample Inspection Reports by Suppliers

The supplier has to make sure before delivery that the first samples meet the requirements with regard to all stipulated characteristics. This has to be proved by means of a First Sample Inspection Report.
Characteristics which cannot be verified by the manufacturer, will either be confirmed by a test certificate with specific test results or by test certificates issued by accredited test institutes, e.g. to DIN EN 10204 or DIN 55350-18.
The First Sample Inspection Report has to hold a declaration that the materials and their substances meet the legal requirements or the customer's requirements with regard to eco-friendliness, safety and recycling capabilities or it has to include a reference to the documentation in a material data base (e.g. IMDS).

The test report have to be submitted together with the Initial Samples. Unless agreed otherwise with our Quality Management, the actual values must allow to be referenced to the related numbered sample part by means of a table.
Unless requested otherwise by E-T-A, at least 5 random parts, in the event of multi-cavity tools at least one part per cavity have to be tested according to customer drawing and the actual values have to be recorded in the corresponding form. Special procedures in the event of a customer request require a previous agreement in writing.
Verification of process capabilities (CpK value >= 1.33) is done with the help of a few essential functionality measurements. These are stipulated by our QM or are especially marked in our drawing (KEY symbol). The CpK value is determined by at least 125 parts (25 spot checks with 5 parts each) which have been taken from a batch size representative for the process. In case of multi-cavity tools parts must be selected homogeneous from each cavity.

3.3 Identification of First Samples

Each First Sample shipment has to be clearly marked with “Erstmuster / Initial Sample”. Parts out of multi-cavity tools have to be kept separately per cavity and have to be clearly marked.

3.4 Evaluation and release of First Samples for series deliveries

After submittal of First Samples including the First Sample Inspection Report E-T-A can carry out additional tests at one’s own discretion. E-T-A can also do cross-checks on the site of the supplier.
Based on the First Sample Inspection Reports and the tests carried out by us one of the following decisions will be taken:

a) release
b) reject
c) release on condition

4 Documentation for E-T-A vendor parts

The release process has to be internally documented completely in compliance with VDA2 “Quality Assurance” or PPAP (Production Part Approval Process to QS9000).

Documents listed below and marked with “X” have to be handed over to E-T-A Quality Supplier Support (QML) together with the delivery of initial samples.

	Requirement	
1	Cover sheet for PPF/PPAP report (Part Submission Warrant)	X
2	Test and measurement reports (e.g. dimensions, function, material, appearance, surface, reliability, transportation, etc.). Process capability verification for required key dimensions	X
3	Samples, quantity and/or batch size upon agreement (Sample Product)	X
4	Technical specification, e.g. customer drawings, CAD data, specifications, approved design changes etc. (Design Records)	X
5	Product FMEA (only necessary in case of design responsibility is at supplier site). To confirm the execution, pls. send us the cover sheet and specify revision level	X
6	Design and development approvals from the supplier at design responsibility	X
7	Proof of compliance with legal requirements (e.g. environment, RoHS, ReACH, etc.)occupational safety, recycling, compliance, etc.)	X
8	The material must be entered in the IMDS database under E-T-A Ident-No.5423)	X
9	Software audit report	X

10	Process FMEA (as confirmation of the execution pls. send cover sheet and result	X
11	Process flow diagram (with all manufacturing and test steps, which are necessary for production of the product. For plastic parts made of E-T-A tools, the machine setting parameters must also be submitted	X
12	Production control plan or test plan Content at least our inspection specifications. Test equipment must be related to the measurements (a separate list is possible)	X
13	Test equipment capability study At least according to measurements with process capability request	X
14	Verification Protection of special features	X
15	Inspection equipment list with characteristic reference	
16	Test equipment capability study, where appropriate (result)	
17	Overview of tools used (with number of pieces/number of cavities) and information of the toll concept	X X
18	Proof of achievement	X
19	Written self-assessment of the criteria according to Matrix Assessment Series Ready for product and process (according to VDA2)	X
20	Parts history (documentation of product and process changes)	X
21	Confirmation of compliance with logistic and packaging regulations requirements	X
22	PPF statistic supply chain (supplier parts, set parts and house parts)	X
23	Approval of coating systems according to customers requirements	X

In case of re-submittal of samples documents must submit which are affected by the changes. If need by consulting our Quality Dept. (QML).

5 Evaluation of series process (production trial run)

The supplier has to evaluate his serial process on his own responsibility. In some cases it may be required to verify in the presence of E-T-A.

This serves to determine

- whether the actual production process is capable of manufacturing products which meet the quality requirements by using the guaranteed/offered tools and manufacturing capacity for a stipulated period of time
- whether the actual production process is in accordance with the production and test plan.

In order to account for the planned performance, the entire production tools or the production means on site have to be in operation in full capacity by simultaneously using the regular staff and all supporting systems.
Date and scope of the evaluation will be agreed between supplier and E-T-A.
The supplier is responsible for preparation and execution with the collaboration of and subsequent evaluation by E-T-A.

6 Revision Index

Date	Revision	Initiated by
30.04.2009	first edition	G. Wittmann
01.11.2011	item 3.3 Evaluation of manufacturing item 4: revision	G. Wittmann
22.03.2013	item 5 change number of requirement to 11, admission of E-T-A IMDS ID.-Nummer and revision	M.Frank/ G.Wittmann
01.11.2014	Corporate Design	G.Wittmann
01.12.2014	Re. item 2: modification regarding catalog and standard parts.	G. Wittmann
14.12.2017	TS 16949 changed into IATF 16949	M. Frank
01.02.2019	Revision of the requirements matrix in accordance with IATF16949:2016	C.Lack, M.Wamser