不知道哪位好事者将该手册扫描的，扫描技术真的是太差，很多页面扫描不清晰，有的页面简直就等于没有。
另外，官方的翻译水平也真的是差劲的狠，和这个扫描的水平有的一拼。很多地方翻译错位，了哇就是前后相同的英文翻译不一致。

如需要了解该扫描版本中缺失和不清晰的部分到底都写了啥，可扫码报名在线课程。

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Qualitäts Management Center
im Verband der Automobilindustrie

2

Quality Management in the Automotive Industry
汽车行业的质量管理

Securing the Quality of Supplies
供货质量保证

Production process and product approval (PPA)
生产过程和产品批准

6th revised edition, April 2020
第 6 版，2020 年 4 月

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生产过程和产品批准 (PPA)

第 6 版，2020 年 4 月

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Preface

In the course of the globalization and digitization of the working world, a standardized PPA procedure has become a key field of activities in quality management. The constantly rising cost pressure with a simultaneously increasing risk for scopes of supply, with respect to the level of maturity and quality of the products, therefore require an efficient interplay between production process and product approval.

The objective of realizing a standardized procedure for production process and product approval in the supply chain is to minimize friction loss at the interfaces between suppliers and customers by means of cooperative partnership.

The publication of the previous fifth edition in 2012 saw the fundamental restructuring of the PPA procedure with the goal of describing the requirements for new or modified scopes of supply of external and in-house origin.

This sixth 2020 edition reinforces the PPA agreement with the objective of aligning on the scope, content, and schedule of the PPA procedure between the organization and the customer.
The elimination of the submission levels accounts for the individual expectations of the customers, the diversity of the products, and the number of possible documents.
Based on experiences from the past, the executive responsibility of the organization for the preparation of applicable documents has received increased emphasis. In addition, the self-assessment of the organization regarding product and production process reduces the amount of documents to be submitted.
The modification of the approval levels, the integration of software, and the harmonization of the deliverables for the PPA procedure with the PPAP process of the AIAG represent further fundamental changes in this volume.

前言

在全球化和数字化的背景下，生产过程和产品批准已经成了质量管理工作中的核心任务。随着组织的成本压力不断增长，同时交货周期，相关的成熟度水平和产品质量的风险也随之增加，因此需要生产过程和产品批准有机结合。

通过采用标准化的生产过程和产品批准（PPA）程序，供应链中的供应商和顾客间可以减少或避免由于彼此之间的“摩擦”带来的相应损失。

随着 2012 年第五版PPA的出版，该流程已经发生了根本性的变化，用以应对外部相关方和组织间不断变化的交付周期的要求。

本 2020 年第六版PPA，强化了相关方之间的PPA协议，旨在强调组织与顾客之间关于PPA程序的范围、内容和时间安排上保持一致。

考虑顾客的不同期望、产品的多样性以及可能的文档数量取消了提交等级的定义。

根据过去的经验，组织准备相关文件时的执行责任受到更多的重视。此外，强调了组织对产品和生产过程的自我评估过程，进而减少了提交的文件数量。

变更的批准等级、集成软件以及PPA 程序交付物与 AIAG 的 PPAP 流程进行了统一，也是本次换版的重要变化。

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1 Introduction

The increasingly close cooperation between customers and organizations in the supply chain, shorter development periods, and increasing product diversity and complexity have given crucial importance to ensuring more intensive coordination between customers and organizations in the automotive industry.

This is documented by standardized deliverables implemented along the entire supply chain within the framework of the production process and product approval process (PPA procedure) in order to ensure interference-free delivery

- in the agreed quality
- at the scheduled time
- in the demanded quantity
- by means of a coordinated production process

1.1 Procedure for production process and product approval (PPA)

The PPA procedure is subdivided into approval of processes for the production of products and product approval (see table 1).

Samples for the PPA (initial samples) are products that have been manufactured entirely with series production equipment under series conditions (see 6.1) as part of the PPA.

Other samples (DIN 55350, Part 15) are products that have not been manufactured entirely under series conditions. Other samples cannot be used for the PPA.

1 简介

为了确保应对汽车行业开发周期的不断缩短，产品多样性和复杂性不断增加的需求，汽车供应链中顾客和组织之间更加紧密的协调和合作是至关重要的。

通过执行生产过程和产品批准程序（PPA程序）的框架要求，旨在整个供应链中实现标准化的文件记录，从而确保无干扰交付

- 符合约定的质量
- 在计划的时间
- 按要求的数量
- 特定的生产过程

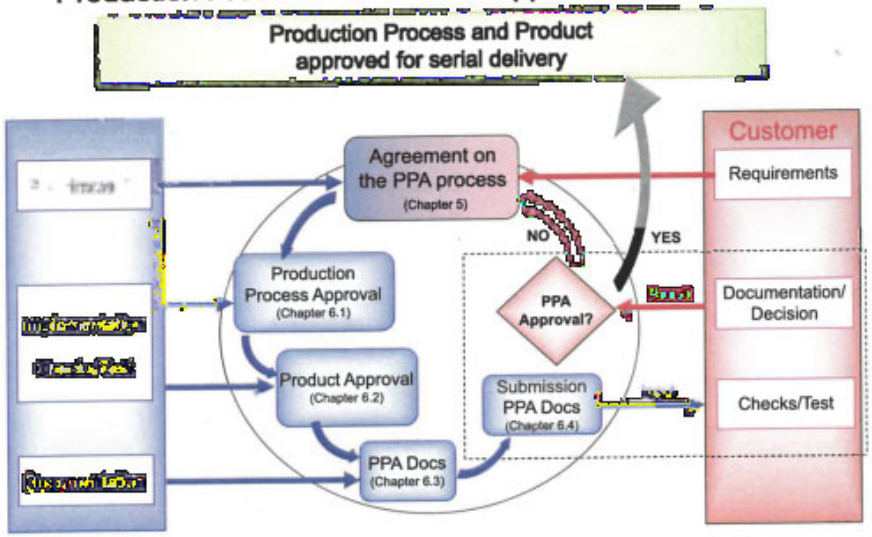
1.1 生产过程和产品批准程序（PPA）

PPA 程序可分解为产品生产过程批准和产品批准（参见表 1）。

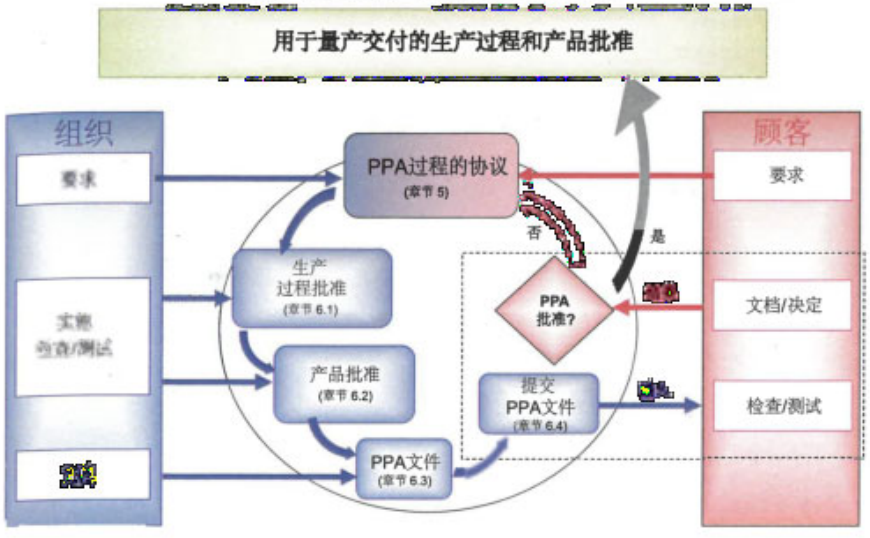
PPA样品（初始样品）是PPA 的一部分，它是在量产条件下完全由序列化的生产设备制造出来的产品（参见 6.1）。

其它样品（DIN 55350，第 15 部分）是未完全在序列化条件下生产的产品。其它样品不能用于 PPA。

Production Process and Product Approval VDA Volume 2



生产过程和产品批准VDA卷2





The PPF procedure (1.-3.) from tier n to tier n-1 is based on the results of a separate PPF procedure (I.-III.) from tier n+1 to tier n.

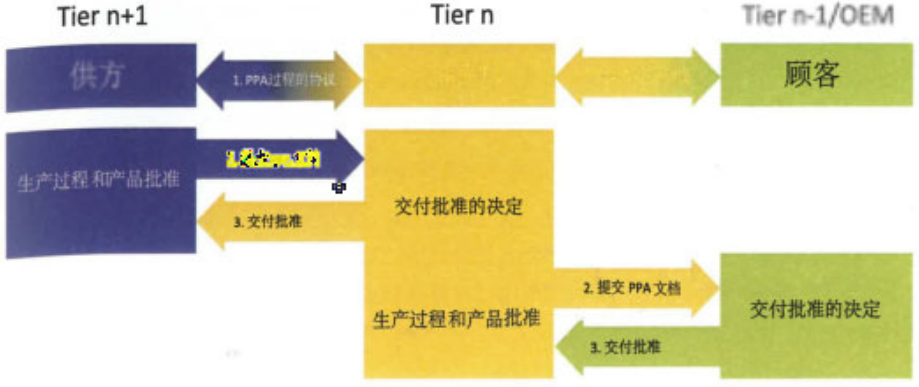
Figure 2: PPA in the supply chain

1.2 Objective of the PPA procedure

The PPA procedure furnishes proof that the requirements for the production process and the product are being met. This allows the documentation of the assurance of the quality capability of the production processes and products under series conditions.

The corresponding requirements may include:

- Legal, official, and approval-related requirements (e.g. type approval process, EU directives, CE marking, etc.)
- General standards
- Customer-specific requirements
- Technical specifications, e.g. drawings, requirements specifications, customer standards, packaging instructions, reference samples in its applicable revision status
- Contractual agreements between the organization and the customer, e.g. capacities and flexibility



从 tier n到tier n-1 的PPA程序（1 - 3）是基于分开的tier n+1到tier n.的PPA程序(I. - III.) 的结果

图 2: 供应链的PPA

1.2 PPA程序的目标

PPA程序提供证明，生产过程的要求和产品是符合的。这许可在量产条件下生产过程和产品的质量能力保证的文件。

相应的要求可能包括:

- 法律、官方和批准相关要求(如型式批准流程、欧盟指令、CE标记等)
- 通用标准
- 顾客特定要求
- 技术规范，例如图纸、要求规范、顾客标准、包装说明、可应用版的参考样品
- 组织和顾客之间的合同协议，如能力和灵活性

The approval encompasses the evaluation of the production process and the product on the basis of documents, records and samples for the PPA. This ensures that the requirements for the delivery of specification-compliant products are fulfilled by the organization.

The customer grants delivery approval depending on his/her evaluation.

If the customer dispenses with the verifications from the PPA procedure, this does not release the organization from the duty of documenting the verifications for meeting the requirements for the production process and the produc

批准包括基于PPA文档、记录和样品的生产过程和产品的评估。这确保组织满足了交付符合规范的产品的要求。

顾客根据他/她的评估批准交付。

如果顾客免除了PPA程序中的验证，这并不免除组织为满足生产过程和产品要求而记录验证的责任。

2 Range of application of the PPA procedure

The process is to be applied for the products (systems, modules, parts, components) listed below:

- Finished parts
- Spare parts
- Raw parts
- Production materials
- Software (SW) as a product and/or part of a product

The result of external services and outsourced processes that cannot be approved by mean of a PPA procedure must be approved in the scope of a higher-level PPA procedure.

Standardized products (e.g. DIN parts, liquids acc. to DIN or SAE) and raw materials (e.g. granulates, steels) are not subject to their own PPA procedur unless otherwise agreed upon between the organization and the customer. These are approved in the scope of the PPA procedure of the higher-level product.
Standardized products with modified specification are subject to the PPA procedure.

Capital goods such as production lines and process materials (e.g. auxiliary and operating materials for machines) are not subject to the PPA procedure.

2 PPA程序的应用范围

该过程适用于产品(系统、模块、零件、组件)如下:

- 成品零件
- 备件
- 毛坯
- 生产材料
- 软件(SW)作为产品和/或产品的一部分

不能通过PPA程序批准的外部服务和外包流程的结果，必须在上一更高级别的PPA程序范围内得到批准。

标准化产品(例如DIN零件，按DIN或SAE标准的液体) 和原材料(例如颗粒、钢材)，除非组织和顾客之间另有约定，不适用于其自身的PPA程序。

这些是在上一更高级别产品的PPA程序范围内批准的。
已变更规格的标准化产品应遵循PPA程序。

资产物资如生产线和加工材料(如机器的辅助材料和设备操作材料)不适用于PPA程序。

3 Initiation of the PPA procedure

The PPA procedure is initiated for
a) New parts
b) Changes
c) Re-use
d) Customer-specific agreements (e.g. requalification)

Initiation of the PPA agreement:

	Customer	Organization
New parts	must initiate	can initiate
Changes	must initiate in case of design changes implemented by the customer	must initiate acc. to Trigger Matrix or customer agreement
Reuse	/	must initiate acc. to Trigger Matrix or customer agreement
Customer-specific agreement	can initiate (depending on agreement)	can initiate (depending on agreement)

The organization always executes an internal PPA procedure. The initiation vis-à-vis the customer is carried out according to the Trigger Matrix (Append 8) or customer-specific agreements.

For electronic components, the PPA procedure is initiated according to the "Change Assessment Matrix" in "Guideline for Customer Notifications of Product and /or Process Changes (PCN) of Electronic Components for Automotive Market" available at the ZVEI homepage: www.zvei.org/PCN.

3 PPA程序的启动

PPA程序启动用于
a) 新零件
b) 变更
c) 重新使用
d) 顾客特定协议（例如资质再认证）

启动PPA协议：

	顾客	组织
新零件	必须启动	能够启动
变更	当顾客执行设计变更时必须启动	必须按触发矩阵或顾客协议启动
重新使用	/	必须按触发矩阵或顾客协议启动
顾客特定协议	能够启动 (根据协议)	能够启动 (根据协议)

组织始终执行内部PPA程序。执行面对面的顾客根据触发矩阵（附录 8）或顾客特定协议启动。

对于电子元器件，PPA程序是根据《汽车电子元器件产品和/或工艺变更(PCN)的顾客通知指南》中的“变更评估矩阵”启动的，该指南可在ZVEI主页获取：www.zvei.org/PCN。

4 Basic sequence of the PPA procedure

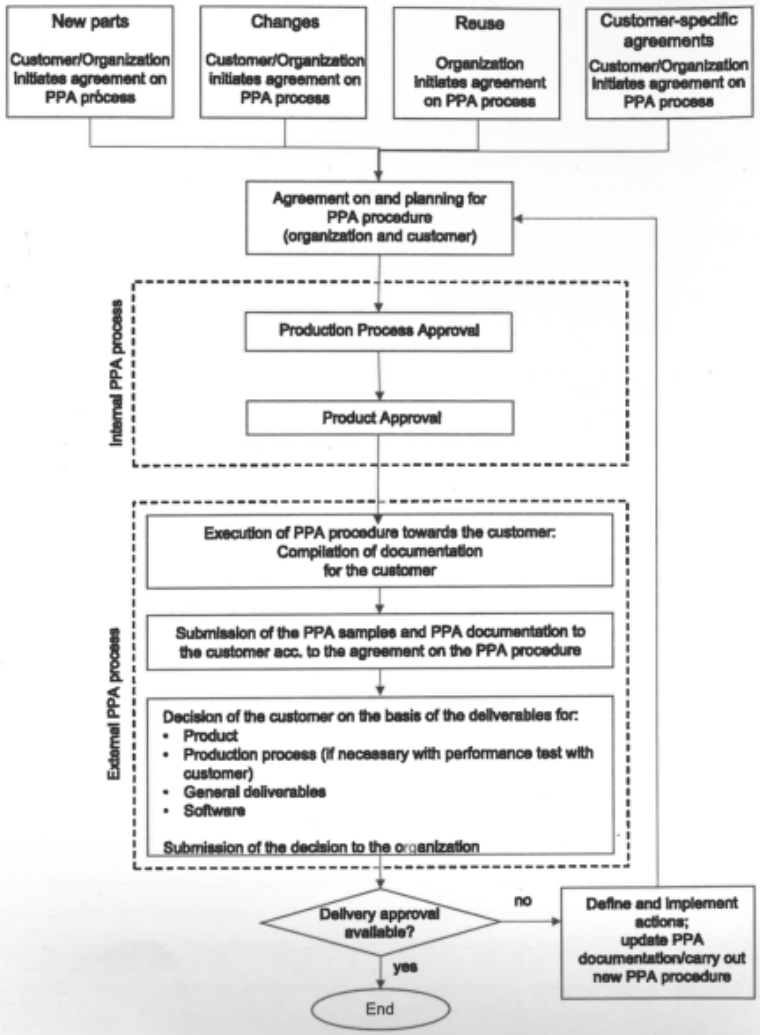


Figure 3: Basic sequence of the PPA procedure

4 PPA程序的基本顺序

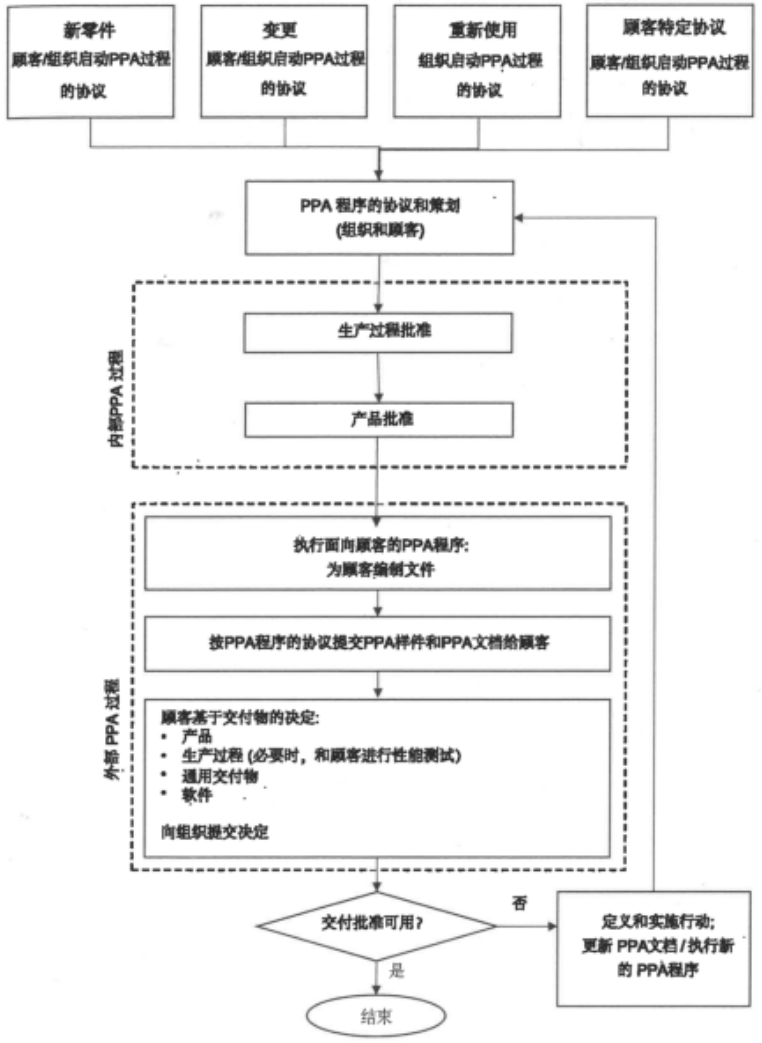


图 3: PPA程序的基本顺序

5 Agreement on the PPA procedure

For each PPA procedure, an agreement must be achieved between the organization and the customer. The objective is an agreement on the scope, content, and schedule of the PPA procedure.

It is recommended to agree upon the following content in the PPA agreement (see Appendix 2):

- Initial requirements, e.g. approved specifications (including statutory provisions), specification sheet, drawings, standards, packaging instructions, revision status, color sample charts
- Deadlines and timelines
- Definition of the number of products to be tested and delivered (per tool, cavity, variants, colors, etc.)
- Range of application of customer approval (receiving points, factories, etc.)
- Points of delivery for samples for the PPA
- Product scope (e.g. formation of product families)
- Verifications for software (see Appendix 5)
- Handling of directed parts (e.g. responsibility for their approval)
- Measurement / test methods, measurement tuning
- Product and process characteristics for capability studies
- Execution of the PPA procedure, if necessary, jointly at the production site
- Definition of performance test / process validation (including batch size) – see Chapter 6.1.2.
- Documentation requirements
- Handling of deviations
- Layout inspection and functional testing (see also VDA volume "Robust Production Process (RPP)")
- Process for filed failure analysis (if necessary including SW components)
- Complaints processing (See also VDA volume "8D - Problem-Solving in 8 Disciplines")

5 PPA程序的协议

对于每个PPA程序，组织和顾客之间必须达成协议。目的是就PPA程序的范围、内容和进度达成一致。.

建议就PPA协议中的以下内容达成一致（见附录 2）：

- 初始要求，例如经批准的规格（包括法定条款）、规格表、图纸、标准、包装说明、修改状态、颜色样品图
- 最后期限和时间表
- 定义需要测试和交付的产品数量 （每个工具、腔体、变体、颜色等）
- 顾客批准的应用范围（收货地点、工厂等）
- PPA样品的交付点
- 产品范围（如产品族的型式）
- 软件验证（见附录 5）
- 指定部件的处理（例如，批准的责任）
- 测量/测试方法，测量调整
- 用于能力研究的产品和过程特性
- 如有必要，在生产现场共同执行PPA程序
- 定义性能测试/过程验证（包括批次大小）—— 见第 6.1.2 章。
- 文档要求
- 偏差处理
- 全尺寸检查和功能测试（另见VDA卷“稳健生产过程(RPP)”）
- 失效分析处理 （必要时包括软件组件）
- 投诉处理（参见VDA卷“8D — 8 步问题解决方法”）

The result of the agreement on the PPA procedure must be documented. An example of a form for the PPA agreement can be found in Appendix 2.

For PPA relevant scopes capable of sampling, the application of the VDA volume "Field Failure Analysis of Defective Parts" is to be verified in suitable form if agreed upon with the respective customer. Details must be specifically arranged with the customer, e.g. in the scope of the PPA agreement.

If the same product is manufactured at different production locations, with different production equipment, and/or using different manufacturing methods, a PPA procedure must be executed for each case. Information about this must be noted in the PPA documentation accordingly.

If so agreed upon, the organization allows the customer access to all necessary product-specific test equipment for cross-checks.

The PPA agreement must be carried out for new parts in accordance with the VDA volume "Maturity Level Assurance for New Parts" for the corresponding levels of maturity.

An essential requirement for the successful execution of the PPA procedure is the verification of the capability of the production process (qualitative and quantitative) under series conditions (series tool(s), series location, series process conditions).

Process capability is verified statistically on the basis of agreed product and production process characteristics.

In case of a renewed PPA procedure due to changes, re-use, or the expansion of a product family, the reference to documents from past PPA whose contents have not changed is allowed.

PPA程序的协议结果必须形成文件。PPA协议的表格示例在附录 2 中可以找到。

对于PPA相关范围有能力采样，如果与顾客达成一致，应以适当的形式验证VDA卷“现场失效分析”的应用。细节必须和顾客详尽安排，例如在PPA协议的范围内。

如果同一产品在不同的生产地点、使用不同的生产设备和/或使用不同的生产方法生产，则必须对每种情况执行PPA程序。有关这方面的信息必须在PPA文档中相应地注明。

如果同意，组织允许顾客使用所有必要的产品专用测试设备进行交叉检查。

对于新零件，PPA协议必须按照VDA卷“新零件成熟度保障”执行相应的成熟度等级。

PPA程序成功执行的一个基本要求是在量产条件下（量产工具、量产场地、量产工艺条件）对生产过程的能力（定性和定量）进行验证。

过程能力在商定的产品和生产过程特性基础上统计验证。

如果PPA程序因变更、重新使用或产品族扩展而更新，则允许参考过去的未发生内容变化的PPA文件。

Table 1: PPA deliverables (see Appendix 1 for details)

VDA No.	Deliverables insofar as they are applicable to the product	Organi-zation	PPA-A
0.1	Cover sheet for PPA report/PPA evaluation	D	S
0.2	Self-assessment for product, production process, and if appl. software	D	S
1. Deliverables of the product development			
1.1	Technical specifications	D	A
1.2	Approved design changes	D	A
1.3	Design, engineering approvals	D	A
1.4	Material data via IMDS	D	S
1.5	Design FMEA	D	A
2. Deliverables of the production process development			
2.1	Process flowchart	D	A
2.2	Process FMEA	D	A
2.3	Control Plan (CP)	D	A
3. Deliverables of the product verfication *Exclusively for the requirements from the technical specifications agreed upon with the customer.*			
3.1	Geometry, dimensions	D	A
3.2	Material (strength, physical properties, etc.)	D	A
3.3	Function	D	A
3.4	Haptics	D	A
3.5	Acoustics	D	A
3.6	Odor	D	A
3.7	Appearance	D	A
3.8	Surface requirement	D	A

表 1： PPA 可交付物（细节见附录 1 ）

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
0.1	PPA 报告和 PPA 评估的封面	D	S
0.2	对产品，生产过程以及软件（如适用）的自我评估。	D	S
1. 产品开发的可交付物			
1.1	技术规范	D	A
1.2	批准的设计变更	D	A
1.3	设计，工程批准	D	A
1.4	通过IMDS的材料数据	D	S
1.5	设计FMEA	D	A
2. 生产过程开发的可交付物			
2.1	过程流程图	D	A
2.2	过程FMEA	D	A
2.3	控制计划（CP）	D	A
3. 产品确认的交付物 *专门满足与顾客达成协议的技术规范要求。*			
3.1	几何属性，尺寸	D	A
3.2	材料（强度，物理性能等）	D	A
3.3	功能	D	A
3.4	触觉特性	D	A
3.5	声学特性	D	A
3.6	气味	D	A
3.7	外观	D	A
3.8	表面要求	D	A

VDA No.	Deliverables insofar as they are applicable to the product	Organi-zation	PPA-A
3.9	Technical cleanliness	D	A
3.10	Reliability	D	A
3.11	Resistance to electrostatic discharge (ESD)	D	A
3.12	Electrical safety / high-voltage safety	D	A
3.13	Electromagnetic compatibility (EMC)	D	A
4. Deliverables of the production process validation			
4.1	Assurance of Special Characteristics; according to technical specifications and agreed characteristics (e.g. poka-yoke, 100% inspection, process capabilities, etc.)	D	A
4.2	Laboratory qualification	D	A
4.3	Samples incl. labeling (e.g. identification of series, production lot etc. that allow conclusions to be made about the documentation accompanying production)	D	A
4.4	Master sample	D	A
4.5	Production capacity	D	A
4.6	Tools	D	A
5. General deliverables			
5.1	Evidence of compliance with legal requirements	D	S
5.2	PPA status of supply chain	D	A
5.3	Test equipment list for product and production process	D	A
5.4	Measurement equipment analysis studies product and production process	D	A
5.5	Part history	D	S
5.6	Evidence of suitability of the employed load carriers including storage	D	A

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
3.9	技术清洁度	D	A
3.10	可靠性	D	A
3.11	抗静电释放（ESD）	D	A
3.12	电气安全/高压安全	D	A
3.13	电磁兼容性（EMC）	D	A
4. 生产过程验证的可交付物			
4.1	根据技术规范和协议特性的特殊特性保证 （例如，防错，100%检查，过程能力等）	D	A
4.2	实验室资质	D	A
4.3	包括标签的样品 （例如，批量，生产批次等的标识，以便可以对生产随附的文档做出结论）	D	A
4.4	标准样品	D	A
4.5	生产产能	D	A
4.6	工具	D	A
5. 一般交付物			
5.1	符合法规要求的证据	D	S
5.2	供应链的PPA状态	D	A
5.3	产品和生产过程的测试设备清单	D	A
5.4	产品和生产过程的测量设备分析研究	D	A
5.5	零件历史	D	S
5.6	所使用的负载载体（包括存储）是否适合的证据	D	A

	A
	A
	A
	S
	S
	S
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	S
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6 Execution of the PPA procedure

Independently of the PPA procedure towards the customer, the organization carries out an internal PPA procedure and documents the results. Thereby, the organization executes the deliverables according to the requirements in Table 1.

In order to verify towards the customer that the requirements have been met, those documents must be submitted as aligned in the PPA agreement.

The organization verifies that the requirements of the specification have been met on the basis of samples manufactured under series conditions.

The samples are clearly marked in order to ensure correlation to the individual measured values. The cavity must be specified for machines, devices, and multi-cavity molds.

The organization and the customer agree upon the timeline and the involvement for planned production process inspections.

6.1 Production process approval

For the approval of the production process, deliverables of process quality and process performance (performance test) must be provided by the organization.

The following requirements (see also VDA volume: "Robust Production Process (RPP)") must be fulfilled:

- Product specifications are aligned and approved
- Delivery approvals in the supply chain are available (PPA status "customer-ready", see Chapter 6.4)
- The production of the scope as aligned in the PPA agreement will take place under series production conditions. This includes:
  - Production location
  - Production facilities
  - Use of series tools
  - Compliance with logistics processes

6 PPA程序的执行

独立于针对顾客的PPA程序之外，组织实施内部PPA程序并将结果归档。因此，组织执行可交付物可根据表 1 中的要求。

为了向顾客验证要求已得到满足，必须按照PPA协议的要求提交那些文件。

组织在量产条件下生产的样品基础上验证规范的要求已被满足。

样品被清楚地标记，以确保与单个测量值的相关性。多型腔模具、机器和设备的型腔必须指明。

组织和顾客同意时间表和参与策划的生产过程检查。

6.1 生产过程批准

为了生产过程的批准，组织必须提供过程质量和过程性能（性能测试）的可交付物。

必须满足以下要求（见 VDA 卷：“ 稳健生产过程(RPP) ”）：

- 产品规格符合要求并得到批准
- 供应链中的交货批准可行 （PPA 状态 “顾客就绪”，见第 6.4 章）
- PPA 协议中规定范围的生产将在量产生产条件下进行。这包括::
  - 生产地点
  - 生产设施
  - 使用量产工具
  - 符合物流流程

- Qualified personnel
- Required output
- Planned process sequence

The organization and the customer agree upon the time and scope of the execution of the deliverables of process quality and process performance (performance test).

The organization carries out the inspection of the production process in consideration of the contents agreed upon. In addition, the customer determines whether he/she wishes to accompany the production process inspection carried out by the organization and subject it to a joint evaluation. In this case, it is recommended to the organization to carry out an internal inspection prior to the production process inspection carried out jointly with the customer.

The production process inspection can be combined with the execution of the PPA procedure by the customer on site.

In case of changes to the product or the production process or relocations, the organization assesses the effect on the production process and its performance and carries out a production process inspection.

Note: In case of changes subject to approval according to the Trigger Matrix (see Appendix 8), the organization and the customer decide whether another joint production process inspection is necessary.

6.1.1 Process quality

In the course of the approval process, the quality capability of the entire production process must be verified under series conditions.

Assurance can be provided, for example, using the following methods:

- Poka-yoke
- 100% inspection (e.g. end-of-line test)
- Process capabilities
- First / last part approval

- 有资质的人员
- 需要的输出
- 已策划的加工顺序

组织和顾客就过程质量和过程性能（性能测试）可交付物的执行，在时间和范围上达成一致。

组织根据商定的内容对生产过程进行检查。此外，顾客决定他/她是否愿意陪同组织进行生产过程检验，并接受联合评价。在这种情况下，推荐组织在与顾客共同进行生产过程检验之前进行内部检查。

生产过程检验可与顾客在现场执行PPA程序相结合。

当产品或生产过程发生变化或搬迁时，组织评估其对生产过程及性能的影响，并进行生产过程检验。

注：如需根据触发矩阵批准变更（见附录 8），组织和顾客决定是否必须进行另一次联合生产过程检验。

6.1.1 过程质量

在批准过程中，整个生产过程的质量能力必须在量产条件下得到验证。

例如，可以使用以下方法提供保证：

- 防错
- 100%检验 （例如生产线终端测试）
- 过程能力
- 首件/末件批准

For characteristics for which the verification of process capabilities has been agreed upon between the organization and the customer, test methods and characteristic capability values must also be agreed upon.
If not otherwise specified, the requirements of ISO 22514 and successor standards apply.

Note: Verifications of long-term capabilities are the responsibility of the organization and are not a part of the PPA procedure towards the customer.

6.1.2 Process performance / performance test

The objective of the performance test is to provide evidence of being capable of manufacturing for the customer

- with the use of the resources employed
- the agreed quantity
- in the specified time
- according to specifications

(see also VDA volume "Maturity Level Assurance for New Parts").

When defining the framework conditions for process validation, among others the following aspects must be taken into account:

- Production duration and/or quantity
- Variants (if existing and relevant)
- Production concept (shift models, break times, shift change)
- Set-up and maintenance times / shifts
- Tool concept (e.g. single / multiple cavity molds)
- Number of production lines
- Scrape rate
- Emergency concept

对于已经在组织和顾客之间达成一致的验证过程能力的特性，测试方法和特性能力值也必须达成一致。
如果没有其他规定，则适用ISO 22514 和后续标准的要求。

注：长期能力的验证是组织的责任，不是面向顾客PPA程序的一部分。

6.1.2 过程性能 / 性能测试

性能测试的目的是为顾客提供有制造能力的证据

- 利用所雇用的资源
- 约定数量
- 在指定时间
- 根据规范

（参见VDA卷“新零件成熟度保障”）。

在定义过程验证的框架条件时，必须考虑以下几个方面:

- 生产周期和/或数量
- 变体（如果存在并且相关的话）
- 生产观念（换班模式、休息时间、换班）
- 设置和维护时间/班次
- 工具理念（如单腔/多腔模具）
- 生产线数量
- 报废率
- 应急理念

- Production duration and/or quantity
- **生产周期和/或数量**
- Variants (if existing and relevant)
- **变型(如果存在且相关)**
- Production concept (shift models, break times, shift change)
- **生产方案(官方翻译：生产观念） （班次模式、休息时间、换班)**
- Set-up and maintenance times/shifts
- **作业准备和维护时间/班次**
- Tool concept (e.g. single/multiple cavity molds)
- **工装方案（官方翻译：工装理念） （如单腔/多腔模具)**
- Number of production lines
- **生产线数量**
- Scrape rate
- **报废率**
- Emergency concept
- **应急方案（官方翻译：应急理念)**

6.2 Product approval

The product requirements (see section 1.2) are defined in the technical specifications. Their fulfillment must be verified by the organization.

The product approval is based on the approval of the PPA samples and the deliverables for product development and product verification (see Table 1).

The PPA samples are taken from the production process under series production conditions.

6.3 PPA documentation and procedure for deviations

The organization prepares the complete PPA documentation on the basis of the approved technical specifications. This documentation contains evidence for all the specified characteristics. Test, measurements, and inspections carried out on the product must be traceable.

The document submission to the customer encompasses all contents specified with the customer in the scope of the PPA agreement, but at least the documents identified in Table 1 as within the minimum scope.
The test results are documented either by the lines of the forms from Appendix 4 or according to the requirement of the customer. The organization and the customer agree upon the type of submission.

In case of deviations, the organization is obligated to make a suitable written agreement (e.g. in the form of a deviation permit) with the customer in advance and to attach this document to the PPA documentation. If it is agreed that deviations must be eliminated, an action plan must be enclosed.

If no agreement can be made about the procedure in the case of deviations, the products may not be delivered.

6.2 产品批准

产品要求（参见第 1.2 节）在技术规格中定义。技术要求的实现必须得到组织验证。

产品放行基于 PPA 样品、产品开发和产品验证的可交付成果的放行（参见表 1）。

PPA 样品取自批量生产条件下的生产过程。

6.3 PPA 偏差文档和程序

技术规范

特定特性

组织根据批准的技术参数准备完整的PPA文件。本文档包含所有指定特征的证据。对产品进行的测试、测量和检查必须是可追溯的。

向顾客提交的文档包含PPA协议范围内与顾客指定的所有内容，至少在表 1 中标识为最小范围内的文件
实验结果的记录按照附件 4 的格式或者按照顾客要求。组织与顾客商定提交类型。

当出现偏差的情况，组织有义务与顾客事先达成书面的一致（如，通过偏差批准）以及PPF文件存档。只要商定一致，要解决偏差问题，就要附上措施计划。

如果无法就出现偏差的程序达成一致，则产品可能无法交付。

6.4 Customer decision on the PPA procedure

The organization sends the customer the PPA documents and, if necessary, PPA samples as agreed in the PPA agreement. The customer evaluates the submitted or presented documents and, if necessary, conducts crosschecks of the PPA samples. The results are documented by the customer and evaluated as follows for the delivery approval. If there is no decision from the customer, the PPA procedure is not concluded. The organization may not delivery any products.

Results

Customer-ready / Ready for series production, the serial delivery of the products of the organization has been approved:

- The agreed customer requirements are completely fulfilled.
- As an alternative, deviations are accepted permanently by the customer following a joint risk assessment carried out by the organization and the customer. A separate deviation approval is not necessary.

▸ The PPA procedure towards the customer is closed.

- The agreed customer requirements are not completely fulfilled. Deviations are accepted by the customer for a limited time or quantity following a joint risk assessment carried out by the organization and the customer. A separate deviation approval is not necessary if not otherwise agreed between the organization and the customer.

▸ After the implementation of the agreed actions, the updated PPA documentation must be submitted.

Not customer-ready / Not ready for series production, the serial delivery approval is not granted:

- Legal requirements have not been met.
- The agreed customer requirements have not been fulfilled.
- A deviation permit may not be granted.

▸ A new PPA procedure is necessary.

6.4 顾客对 PPA 程序的决定

组织将按照PPA程序商定协议行程的文件发送给顾客。顾客评估提交及展示的文件，并且在PPA样件上进行交叉检查。结果会被顾客存档并且用于交付放行的评估。如果顾客没有任何决定，则PPF程序并未结束。组织不可以交付任何产品。

结果

符合顾客要求/批量要求，已批准组织批量供货：

- 商定的顾客要求完全得到满足。
- 由组织和顾客共同进行风险评估后发现偏差，如果顾客一直可以接受代替方案，则没必要另行进行偏差批准

▸ 针对顾客的 PPA 程序已关闭。

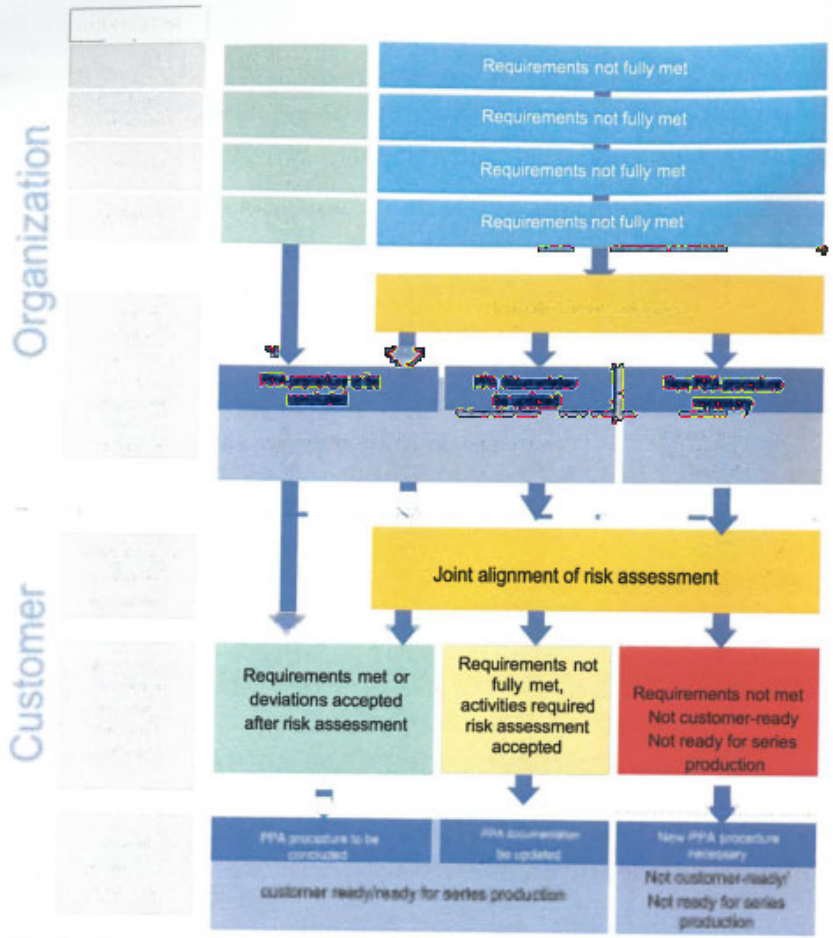
- 所协定的顾客要求没有完全满足，在组织和顾客共同进行风险评估后，针对一定时间范围和数量范围内，用户接受偏差。除非组织和顾客间另行商定了其他内容，否则没必要进行单独的偏差批准。

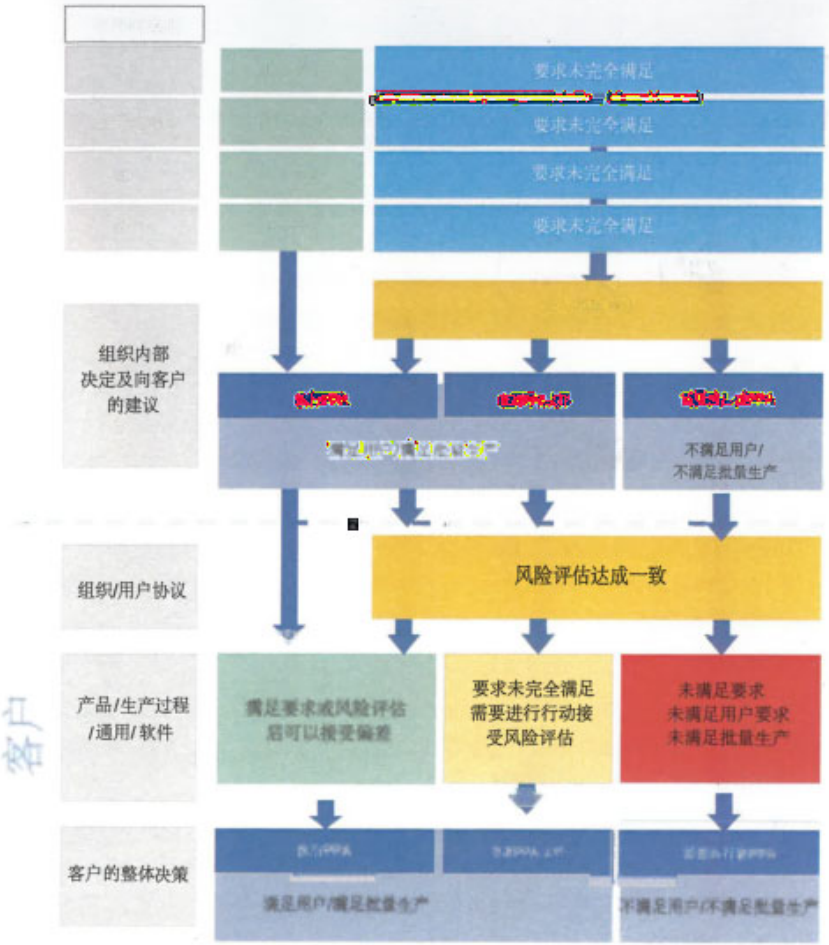
▸ 在实施商定的行动后，必须提交更新的文档。

不符合顾客要求/批量要求的，不会进行批量放行：

- 法律要求尚未得到满足。
- 商定的顾客要求尚未得到满足。
- 不得授予偏差许可证。

▸ 需要进行新的 PPF 程序





单项评估的最差结果决定整体结果。
不符合法律要求的结果为 "不满足用户/不满足批量生产"。
需要决定是否更新PPA 文件，由客户来决定。
参数的调整须由客户在放行文件中进行记录。

Sequence

Organization:

- The organization checks the degree of fulfillment of the deliverables from Table 1 under the aspect:
  - Requirements met (assessed individual deliverable meets the respective specification)
  - Requirements not met (assessed individual deliverable does not meet or only partially meets the respective specification)

- The individual assessments are consolidated at the level of the categories "product/production process/general/software"; the worst single result determines the result for the respective category:
  - If the requirements are met, the organization assesses the deliverables of the category as verified
  - If requirements are not met, a risk assessment is carried out and corrective actions are planned and initiated

- The organization prepares a recommendation for the overall result on the basis of the assessments regarding the categories and the available risk assessments:
  - Customer-ready / ready for series production:
    - PPA procedure towards the customer must be concluded or
    - Updated PPA documentation must be submitted to the customer
  - Not customer-ready / Not ready for series production:
    - A new PPA procedure towards the customer must be carried out

Organization and customer:

- The organization presents the deliverables according to the PPA agreement and aligns potential deviations and corrective actions with the customer
- Joint risk assessment and definition of necessary actions to be taken by the organization

序列

组织：

- 组织在以下方面检查表 1 中可交付成果的实现程度：
  - 满足要求（评估的单个可交付成果符合相应的规范）
  - 未满足要求（评估的单个可交付成果不符合或仅部分满足相应的规范）

- 单一的评估基于产品/生产过程/通用内容/软件各层级范围。最差的结果决定各自相应范围的结果：
  - 对于已经满足的要求，组织将评估所提供类别的证据
  - 对于未满足的要求要进行风险评估，并且规划以及引入改进措施

- 组织基于范围评估及当前的风险评估给出关于总结果的建议：
  - 符合顾客要求/符合批量：
    - 结束PPF程序或者
    - 提交给顾客最新的PPF文件
  - 不符合顾客要求/不符合批量：
    - 执行新的PPF过程

组织和顾客：

- 组织按照PPF程序的商定展示证据，与用户商定可能存在的偏差及纠正措施
- 共同进行风险评估并且由组织来定义必要的措施

- In case of acceptance of deviations: If no adjustments are made to the requirements in the original customer documents (e.g. drawing, specification sheet, etc.), the customer may confirm the deviations and the new limit values in the PPA documentation, as well
- Deviations in the PPA procedure between the organization and the supplier that affect interface-relevant specifications between the organization and the customer require the customer's approval for inspection

Customer:

- Based on the risk assessment, the customer decides and informs the organization:
  - PPA procedure towards the customer is concluded
  - An updated PPA documentation must be submitted to the customer
- A new PPA procedure towards the customer must be carried out

- 偏差的接受：如果在顾客最初的文件（如，图纸、设计任务书等）中没有任何标准的调整更新，用户可以在PPF文件中确认偏差和新的极限值。
- 如组织与供应商PPF程序中的存在偏差，且偏差涉及组织与顾客间的接口技术规范参数，须征得顾客的同意

顾客：

- 基于风险评估做决策并且通知组织：
  - 结束PPF程序
  - 提交给顾客最新的 PPF 文件
- 执行新的 PPF 过程

7 Special processes

7.1 Stepped PPA procedure

The PPA procedure can be carried out in multiple steps, e.g. approval of the material including all weathering tests separated from the approval of the dimensional inspection. The details must be agreed upon in the PPA agreement.

Reference may be made to the results of the prior step if the production process conditions and the product properties did not change.

7.2 PPA procedure for the approval of variants

Multiple variants of a product may be approved in a common PPA procedure. The details must be agreed in the agreement on the PPA procedure.

Possible scope may include, for example:

- Bumpers, trims, center consoles with various colors / finishes
- Cable / wire sets with various lengths and connections
- Seats, door panels in various equipment variants
- Assemblies with various material options
- Software variants

The fulfillment of requirements for variant-independent characteristics can be verified based on one variant. The verification generally applies to all variants.

The approval of variants may not be applied if there is no common basis in the product or production process (e.g. different tools, multiple cavities, etc.).

Approvals of variants can also be carried out in a stepped PPA procedure.

7 特殊程序

7.1 PPA分步程序

PPA 程序可以分多个步骤进行，例如材料的放行，包括所有气候实验与尺寸检测放行分开进行。具体细节必须在PPA协议中达成一致。

如果生产过程条件和产品属性没有变化，则可以参考上一步骤的结果。

7.2 批准变型的PPA 程序

可以通过通用的PPA程序批准产品的多种变体。 必须在PPA程序的协议中约定细节

可能的范围可能包括，例如：

- 保险杠、装饰条、具有各种颜色/饰面的中控台
- 具有各种长度和连接的线束/线束套件
- 各种配置的座椅、门板
- 具有各种材料选择的组件
- 软件变体

可以根据一个变体来验证是否满足与变体无关的特性的要求。 验证通常适用于所有变体。

如果产品或生产过程中没有共同的基础（例如不同的工具、多个腔等），不得采用多个变型的批准。

变体的放行也可以在分步的PPA程序中进行。

7.3 Low volume productions

Low volume productions are generally characterized by the fact that production and assurance processes are adapted to smaller production volumes as agreed upon with the customer and that they cannot be evaluated statistically.

If the deliverables of a process capability for agreed characteristics is not possible due to the agreed quantity, the assurance of the production process is carried out in the form of a 100% inspection of these characteristics.

The requirements for the PPA procedure for low volume productions must be agreed upon between the organization and the customer and may deviate from the standard specifications. The scope of the approval must be defined in consideration of qualitative, quantitative, and risk-oriented aspects.

Note: The term "low volume production" is not only defined by the production volume (e.g. low volume productions in the sense of special equipment, special vehicles / products of any kind, limited quantity, limited life cycle, one-off production and spare parts not originating from the normal series production process.)

7.3 小批量产品

小批量产品的一般特征是，生产和保证流程根据与顾客商定的较小生产量进行调整，无法进行统计评估。

如果由于商定的数量而无法实现具有商定特性的过程能力，则以对这些特性的100%检查的形式来执行生产过程的保证。

小批量生产的PPA 程序要求必须由组织与顾客之间商定，并可能偏离标准规范。批准的范围必须考虑到质量、数量及风险导向方面。

注："小批量生产"一词不仅由产量定义（例如，特殊设备，任何类型的特种车辆/产品，数量有限，生命周期有限，一次性生产以及并非来自正常的批量生产过程下的备件）

8 Retention periods

For retention periods for documents and reference samples, please refer to VDA volume 1 "Documented Information and Retention" and IATF 16949 unless otherwise agreed upon with the customer.

In general, the retention periods must conform at least with the legal requirements.

8 保留期

有关文件和参考样本的保留期，请参阅 VDA卷 1"记录信息和保留"和 IATF 16949，除非与顾客另有约定。

一般来说，保留期至少必须符合法律要求。

9 Declaration of constituent materials

The constituent materials of products (including original spare parts) must be documented in the material data sheet. The material data is collected and transferred along the supply chain. The international material data system (IMDS) represents an electronic documentation and reporting tool for constituent materials.

Binding and detailed requirements are defined in the applicable IMDS recommendations and can be called up by any registered IMDS user.

The approval criteria for an IMDS record meet the criteria at the time of the last customer approval in the scope of the PPA procedure, unless constituent materials are no longer allowed by the current legislation. Formal deviations (e.g. changes to records of the IMDS Steering Committee) must be agreed upon between the organization and the customer where necessary.

Within the framework of the PPA procedure, the material data sheet ID no. is required as evidence of the declaration of material data using the IMDS. A new material data sheet must be submitted with any PPA procedure containing a change of part number (see VDA 231-200).

If it is not possible to create an IMDS record in justified exceptional cases (e.g. spare parts, stockpiled components), a substitute process must be agreed upon between the organization and the customer.

Any additional country-specific rules and requirements for providing information about constituent materials must be complied with.

Note: Prohibited pure substances and those subject to specific declaration requirements with their associated declaration limits are set out in the "Global Automotive Declarable Substance List (GADSL)" (VDA 232-101).

9 组成材料声明

产品（包括原始备件）的成分材料必须记录在材料数据手册中。物料数据必须在供应链收集和传输。国际材料数据系统是组成材料的电子存档和报告工具。

绑定和详细要求在适用的 IMDS 建议中定义，并且可以由任何注册的 IMDS 用户调用。

IMDS记录的批准标准符合PPA程序范围内最后一个顾客批准时的标准，除非现行法律不再允许构成材料。必要时，组织和顾客之间必须就正式的偏差（例如，IMDS指导委员会记录的变更）达成一致。

在PPA 过程的框架内，材料数据表 ID 号需要作为使用 IMDS 声明材料数据的证据。零件号变更的PPA程序须提交新的材料数据页（请参阅 VDA 231-200）。

如果在合理的特殊情况下（例如备件，库存零件）无法创建IMDS记录，则组织和顾客之间必须就替代流程达成一致。

在提供有关组成材料的信息时，必须遵守任何具体国别的规则和要求。

注："全球汽车可申报物质清单（GADSL）"（VDA 232-101）中列出了被禁止的纯物质以及受特定申报要求约束的纯物质。

10 Layout inspection and functional testing

In the course of the PPA procedure, the organization has verified that all product and process requirements have been met before the start of production.

In order to continue to assure the fulfillment of these requirements during the period of series production, regular repeated layout inspections and functional testing are required (see also IATF 16949, VDA volume "Robust Production Process (RPP)", and if applicable customer-specific requirements). The formation of product families for this purpose is allowed.

The frequency, form, type, and scope must be agreed upon between the organization and the customer and documented in the PPA procedure.

Deviations detected during layout inspection and functional testing must be pointed out to the customer.

10 全尺寸检查和功能测试

在 PPA 过程中，组织在开始生产之前验证所有产品和工艺要求都已满足。

为了在批量生产期间继续确保满足这些要求，需要定期进行重复的全尺寸检查和功能测试（另请参阅IATF 16949，VDA卷"稳健的生产过程（RPP）"，以及适用的特定顾客 要求）。允许为此目的组建产品族。

频率、形式、类型和范围必须在组织与顾客之间达成一致，并在PPA 过程中记录在案。

在布局检查和功能测试过程中检测到的偏差必须指出顾客。

11 Terms

For this volume, the terms (titles and definitions) from DIN EN ISO apply.

Supplementary notes and explanations:

Auxiliary materials	Consumables used during production that do not become an integral part of the product (e.g. drawing and cutting oils).
Customer-ready / Ready for series production	A summary term for the decision on the PPA that includes usability and producibility.
Delivery approval	Customer approval confirming that the PPA procedure is completed and the delivery of the specified products can begin at the agreed time.
Directed parts	Parts (products, components, individual parts or software) to be used by an organization in its products whose procurement source (supplier) is defined by the customer.
DUNS® number	The DUNS® number (Data Universal Numbering System) is a 9-digit numerical code used internationally as a standard for the unique identification of companies / production locations. DUNS® numbers are issued and managed centrally by Dun&Bradstreet.

11 术语

对于本标准，请使用DIN EN ISO中的术语（标题和定义）。

补充说明和解释：

辅助材料	生产过程中使用的消耗品不会成为产品的组成部分（例如，拉伸润滑液和切削油）。
顾客就绪/批量生产就绪 正文中官方翻译多处翻译为： **符合顾客要求/符合批量生产**	PPA决策的摘要术语，包括可用性和可生产性。
交付批准	顾客批准，确认PPA程序已完成，指定产品可以在约定的时间开始交付。
指定零件	组织在其产品中使用的零件（产品，组件，单个零件或软件），其采购来源（供应商）由顾客定义。
邓白氏编号（DUNS®编号）	DUNS®编号（通用数据编号系统）是 9 位数的数字代码，在国际上用作唯一标识公司/生产地点的标准。 DUNS®编号由Dun&Bradstreet集中发布和管理。

EMC	Electromagnetic Compatibility refers to the capability of a technical device not to impair unexpectedly the functioning of other devices in its vicinity, unintentionally through electric or electromagnetic effects or not to be disturbed itself by other devices. Based on Directive 2014/30/EU.
ESD	Electrostatic Discharge, e.g. unwanted, rapid charge transfer. See also DIN EN 61340-5-1.
Function	Within the technical context of a product / system, this term refers to a task to be performed, an activity / action to be executed or a result to be delivered (within a system) by an object (e.g. device, software) or the mode of action of the object (relationship between input and output).
IMDS	International Material Data System of the automotive industry. The IMDS is used for the collection, management, analysis, and archiving of data on all materials used in a vehicle.
Low volume productions	Production volume that cannot be controlled by statistical means.

EMC	电磁兼容性（Electromagnetic Compatibility）是指技术设备不会意外地通过电或电磁效应意外破坏其附近其他设备的功能或不会被其他设备自身干扰的能力。 根据指令2014/30 / EU。
ESD	静电释放（Electrostatic Discharge），例如， 有害的快速电荷转移。 另请参见DIN EN 61340-5-1。
功能	在产品/系统的技术范围内，该术语是指要通过对象（例如，设备，软件）或对象的动作模式（输入和输出之间的关系）执行的任务，执行的活动/行动或交付的结果（在系统内）。
国际材料数据系统（IMDS）	汽车行业的国际材料数据系统。 IMDS用于收集，管理，分析和存档车辆中使用的所有材料的数据。
小批量生产	无法通过统计手段控制的生产量。

Manufacturing and test equipment (with a mobile design)	Manufacturing and test equipment with a mobile design are facilities that can be additionally integrated into the existing production process (e.g. additional test station) and/or whose "relocation" does not affect quality characteristics due to the new position. These cannot be machines / production equipments whose manufacturing process and product are "sensitive" to all possible disturbance variables.
Master sample	Master sample (retained sample) from the organization for later quality comparison. This is assigned to a PPA procedure and a production lot. Not identical to "master part" (limit sample), which is used for checking measurement and test processes.
New PPA procedure	New sampling / new submission
Operating materials	Materials used during production that do not become an integral part of the product but are required for the functioning of the production facilities (e.g. hydraulic oil, compressed air, etc.).
Organization	The organization refers to the company that delivers to the customer; the supplier is one tier below in the supply chain.
Outsourced process	A process that an organization requires but arranges to be executed by an external party. The organization is responsible for quality assurance. See also IATF 16949.

制造和测试设备（带有移动设计）	具有移动设计的制造和测试设备是可以附加集成到现有生产过程中的设备（例如，额外的测试站）和/或由于新的位置，其"重新布置"不会影响质量特性。 这些设备不能是对其制造过程和产品所有可能的干扰变量"敏感"的机器/生产设备。
标准样品	来自组织的标准样品（保留的样品），用于以后的质量比对。 这将分配给PPA程序和生产批次。它与用于检查测量和测试过程的"标准部件"（极限样品）不同。
新PPA程序	新取样/新递交
运行材料	生产过程中使用的材料不是产品的组成部分，而是生产设施的功能所必需的（例如，液压油，压缩空气等）。
组织	组织是指交付给顾客的公司； 供应商在供应链中位于下一级。
外包流程	组织需要的但由外部公司执行的过程。 该组织负责质量保证。 另请参阅IATF 16949。

操作材料，第二章中为操作材料，此处却为运行材料，这翻译呀，到处是坑。

Part number	Classification number for a product, such as an assembly, scope of delivery, individual part, raw part, material, etc.
Product	Intended output of a production process, which may be hardware and/or software / processed product (e.g. oils, lubricants, etc.).
Product family (part family)	Products that are manufactured using the same production processes and production equipments, and have the same product characteristics.
Production materials	Materials that become integral parts of the product.
Production process inspection	Release of the production process by the organization and/or customer.
Process performance index	Qualitative index for assessing process performance. See also DIN ISO 22514-1.
Pure substance	Chemical elements or mixtures as integral parts of materials or preparations.
Relocation (of production)	Complete or partial change of location of production.
Re-use	The use of lines, facilities, machines, tools, cavities, and molds after a standstill of 12 months or more or non-use for the specific product.

产品料号	产品的分类号，例如，组装，交货范围，单个零件，零件毛坯，原材料等。
产品	生产过程的预期输出，可以是硬件和/或软件/过程产品（例如，油，润滑剂等）。
产品族（零件族）	使用相同生产工艺和生产设备制造的，具有相同产品特性的产品。
生产材料	成为产品组成部分的材料。
生产过程检查	由组织和/或顾客批准生产过程。
过程绩效指标	用于评估过程性能的定性指标。 另请参见DIN ISO 22514-1。
纯净物	化学元素或混合物作为材料或制剂的组成部分。
（生产的）迁址	全部或部分更改生产地点。
重新使用	对于特定产品，停产 12 个月或更长时间或未使用后，将使用生产线，设施，机器，工具，型腔和模具。

过程性能指数，硬是翻译成过程绩效指标，真不知道VDA这个翻译的人对SPC是不懂呢还是不懂呢！

Risk assessment	Contains a risk analysis along the lines of IATF 16949 plus an assessment of the effects on the part of the organization and the customer.
Series production (series condition)	Production process in which products are manufactured continuously or in batches (of identical products). See also DIN EN 55014-2.
Service, external	A service that an organization requires but arranges to be executed by an external party. The service provider is responsible for quality assurance. See also DIN EN ISO 9000.
SOP	Start of series production / serial application.
Spare part	Replacement part (product, assembly or individual part) that is produced according to the specification of the customer in the scope of series or after-series production and approved by the customer.
Special Characteristics	Characteristics requiring increased care, compliance with which requires separate verification. See also IATF 16949. Note: Special Characteristics may have an effect, for example, on safety, relevance for approval, installation, and/or functionality.
Specification	A document in which requirements are defined. See ISO 9000.

风险评估	包含根据IATF 16949 进行的风险分析，以及对组织和顾客方面的产品影响的评估。
批量生产（量产条件）	产品连续生产或批量生产（相同产品）的生产过程。 另请参见DIN EN 55014-2。
外部服务	组织需要的但安排由外部公司执行的服务。 服务提供商负责质量保证。 另请参见DIN EN ISO 9000。
生产启动（SOP）	开始批量生产/批量应用。
替换件	根据顾客要求在批量生产或批量生产后范围内生产并经顾客认可的替换零件（产品，组件或单个零件）。
特殊特性	需要特别关注的特性，需要单独进行验证以确认符合要求。 另请参阅IATF 16949。 注意：特殊特性可能会影响安全性，批准相关，安装和/或功能。
规范	定义要求的文档。 参见ISO 9000。

Standardized products (standard parts)	Technical components that are described in detail in generally accepted norms (e.g. for electrical/mechanical engineering) and that are interchangeable.
Tier	"Tier" describes the level/rank of suppliers in the supply chain.
Updated PPA documentation	Re-sampling / Re-submisison
Variants	Products with similar form and/or function with a large proportion of identical compo-nents and/or characteristics.

标准产品 （标准件）	在普遍接受的规范中详细描述的技术组件去并且是可以互换的（例如，用于电气/机械工程的组件）。
层级	"层级"描述了供应链中供应商的级别/等级。
更新的PPA文档	重新取样/重新递交
变型	具有相似形式和/或功能的产品，且大部分具有相同的组件和/或特性。

注意：在正文官方翻译中多处翻译成变体，文中的变体与此处的变型同义

12 Appendices and downloads

The appendices are available free of charge for download in PDF format.

Access data:

http://www.vda-qmc.de/downloads
Username: vda2ppf2020
Password: 2020anlagenvda2

The templates are optional; content must be verified in a suitable form. The procedure must be agreed upon between the organization and the customer.

Appendix 1 – Notes on PPA deliverables (Table 1)

Appendix 2 – Agreement on the PPA procedure

Appendix 3 – Self-assessment on the product and production process

Appendix 4 – Cover sheet for PPA report and PPA evaluation

Appendix 5 – Cover sheet PPA software

Appendix 6 – Part history

Appendix 7 – Explanation of the use of the Trigger Matrix

Appendix 8 – Trigger Matrix

Appendix 9 – Comparison PPA PPAP

12 附录和下载

附录可免费以PDF格式下载。

资料获取：

http://www.vda-qmc.de/downloads
用户名：vda2ppf2020
密码：2020anlagenvda2

模板是可选的； 内容必须以适当的形式进行验证。 流程必须在组织和顾客之间达成一致。

附录 1 – PPA可交付物的注释（表 1）

附录 2 –关于PPA程序的协议

附录 3 –产品和生产过程的自我评估

附录 4 – PPA报告和PPA评估的封面

附录 5 –PPA软件封面

附录 6 –零件历史

附录 7 –触发矩阵的使用说明

附录 8 –触发矩阵

附录 9 –PPA PPAP对照

Appendix 1 – Notes on PPA deliverables (Table 1

VDA No.	Deliverables insofar as they are applicable to the product	Organ-ization	PPA-A
0.1	Cover sheet for PPA report and PPA evaluation "Cover sheet for PPA report" and "PPA evaluation" acc. to Appendix 4	D	S
0.2	Self-assessment for product, production process, and if appl. software With the self-assessment, the organization confirms the degree of fulfillment of the product and production process requirements (acc. to Appendix 3).	D	S
1. Deliverables for product development			
1.1	Technical specifications The technical specifications include e.g. customer drawings, CAD data, short-circuit resistance requirements, voltage protection, functional safety.	D	A
1.2	Approved design changes Additional documents for design changes not covered by 1.1.	D	A
1.3	Design, engineering approvals If the organization is responsible for design as per agreement. Additional documents for design and engineering approvals not covered by 1.1.	D	A
1.4	Material data via IMDS Evidence of the non-use of legally banned substances (see chapter 9). The IMDS number must be entered on the cover sheet of the PPA report.	D	S
1.5	Design FMEA The organization responsible for product development carries out the D-FMEA. Only the cover sheet must be provided to the customer. The customer has a right to inspect the FMEA documents.	D	A

附录 1 – PPA可交付物的注释（表 1）

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
0.1	PPA报告和PPA评估的封面 " PPA报告封面"和" PPA评估"根据附录 4	D	S
0.2	对产品，生产过程以及软件（如适用）的自我评估。 通过自我评估，组织可以确认产品和生产过程要求的满足程度（根据附录 3）。	D	S
1. 产品开发的可交付物			
1.1	技术规范 技术规范包括例如，顾客图纸，CAD数据，短路电阻要求，电压保护，功能安全。	D	A
1.2	批准的设计变更 未包含在 1.1 中设计变更的其他文件。	D	A
1.3	设计，工程批准 如果组织按照协议负责设计。未包含在 1.1 中设计和工程批准的其他文件。	D	A
1.4	通过IMDS的材料数据 不使用合法禁用物质的证据（请参阅第 9 章）。 必须在PPA报告的封面上输入IMDS编号。	D	S
1.5	设计FMEA 负责产品开发的组织执行D-FMEA。 仅封面必须提供给顾客。 顾客有权检查FMEA文件。	D	A

VDA No.	Deliverables insofar as they are applicable to the product	Or-gani-zation	PPA-A
2. Deliverables of the production process development			
2.1	**Process flowchart** **Graphic representation of the production process steps (including logistics processes) within the organization.**	D	A
2.2	**Process FMEA** **The organization carries out the P-FMEA. Only the cover sheet must be provided to the customer. The customer has a right to inspect the FMEA documents.**	D	A
2.3	**Control Plan (CP)** **The organization prepares a control plan that describes the control of processes for production and for inspection of a product. Only the cover sheet must be provided to the customer. The customer has a right to inspect the CP. The findings from the FMEAs are taken into account when preparing the CP**	D	A
3. Deliverables of the product validation. *Exclusively for the requirements from the technical specifications agreed upon with the customer.*			
3.1	**Geometry, dimensions**	D	A
3.2	**Material (strength, physical properties, etc.)**	D	A
3.3	Function	D	A
3.4	Haptic	D	A
3.5	Acoustic	D	A
3.6	Odor	D	A

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
2.生产过程开发的可交付物			
2.1	**过程流程图** **组织内生产过程步骤（包括物流过程）的图形展示。**	D	A
2.2	**过程FMEA** **组织执行P-FMEA。 仅封面必须提供给顾客。 顾客有权检查FMEA文件。**	D	A
2.3	**控制计划（CP）** **组织准备控制计划，该计划描述对生产和产品检验过程的控制。 仅封面必须提供给顾客。 顾客有权检查控制计划。 在准备控制计划时考虑到来自FMEA的发现。**	D	A
3.产品确认的交付物。 *专门满足与顾客达成协议的技术规范要求。*			
3.1	**几何属性，尺寸**	D	A
3.2	**材料（强度，物理性能等）**	D	A
3.3	**功能**	D	A
3.4	**触觉特性**	D	A
3.5	**声学特性**	D	A
3.6	**气味**	D	A

VDA No.	Deliverables insofar as they are applicable to the product	Organ-ization	PPA-A
3.7	Appearance	D	A
3.8	Surface requirement Technical surfaces: For surface-coated components, complete systems composed of a substrate (if required) and surface coating are approved according to customer requirements (e.g. assurance of adhesion, resistance, roughness, free of grease, etc. according to the customer drawing).	D	A
3.9	Technical cleanliness See VDA volume 19 "Technical cleanliness".	D	A
3.10	Reliability For reliability indicators, e.g. service life, overload, etc., see VDA volume 3 part 02 "Reliability Assurance of Car Manufacturers and Suppliers".	D	A
3.11	Resistance to electrostatic discharge (ESD)	D	A
3.12	Electrical safety / high-voltage safety	D	A
3.13	Electromagnetic compatibility (EMC)	D	A
4. Deliverables of the production process validation			
4.1	Assurance of Special Characteristics according to technical specifications and agreed characteristics (e.g. poka-yoke, 100% inspection, process capabilities, etc.) See section 6.1.1.	D	A

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
3.7	外观	D	A
3.8	表面要求 技术表面：对于表面涂层的组件，根据顾客要求（按照顾客图纸，例如，确保附着力，表面防护性，粗糙度，无油脂等），可以批准由基材（如果要求）和表面涂层组成的完整系统	D	A
3.9	技术清洁度 请参见VDA第 19 卷"技术清洁度"。	D	A
3.10	可靠性 对于可靠性指标，例如 使用寿命，过载等，请参见 VDA第 3 卷第 2 部分"汽车制造商和供应商的可靠性保证"。	D	A
3.11	抗静电释放（ESD）	D	A
3.12	电气安全/高压安全	D	A
3.13	电磁兼容性（EMC）	D	A
4.生产过程验证的可交付物			
4.1	根据技术规范和协议特性的特殊特性保证（例如，防错，100%检查，过程能力等） 参见 6.1.1 节。	D	A

VDA No.	Deliverables insofar as they are applicable to the product	Organ-ization	PPA-A
4.2	Laboratory qualification Acc. to IATF16949 requirements for test laboratories. Results from internal laboratories for PPA procedures in the supply chain continue to be used for subse-quent PPA procedures. External, commercial or independent test laboratories must be accredited according to either ISO/IEC 17025 or a comparable national standard.	D	A
4.3	Samples incl. labeling (e.g. identification of series, production lot etc. that allow conclusions to be made about the documentation accompanying production) Amount / delivery quantity as per agreemen.t	D	A
4.4	Master sample The organization must retain a master sample for the same period as for the documentation of the PPA pro-cedure. Procedures deviating from this must be agreed upon between the organization and the customer	D	A
4.5	Production capacity As part of process validation, a verification is done un-der series conditions that the required quality and quantity can be assured in accordance with the con-tractually agreed max. capacity (see also section 6.1.2.). This can be one-day production or an agreed deviating time period.	D	A

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
4.2	实验室资质 符合IATF16949 对测试实验室的要求。 供应链中PPA程序内部实验室的结果继续用于后续PPA程序。 外部，商业或独立测试实验室必须经过ISO / IEC 17025 或类似国家标准的认可。	D	A
4.3	包括标签的样品（例如，批量，生产批次等的标识，以便可以对生产随附的文档做出结论） 数量/交货数量（按协议）	D	A
4.4	标准样品 组织必须在与PPA程序文档记录相同的时间内保留一个标准样品。 组织和顾客之间必须商定偏离标准样品的程序	D	A
4.5	生产产能 作为过程验证的一部分，在批量生产条件下进行确认，以确保可以按照合同约定的最高产能保证要求的质量和数量。 产能（请参阅第 6.1.2 节）。 这可以是一日生产，也可以是约定的时间段。	D	A

VDA No.	Deliverables insofar as they are applicable to the product	Organ-ization	PPA-A
4.6	Tools The organization specifies how many tools (molds, forming dies), devices (e.g. welding and mounting devices), etc. (see chapter 5) are used to manufacture the respective product or how many cavities a multi-cavity mold (e.g. injection molding) contains. The reference between the tools and the production line must be represented.	D	A
5. General deliverables			
5.1	Evidence of compliance with legal requirements E.g. country-specific certificates, test numbers, permits, etc. for the environment, safety, recycling, etc. acc. to the specifications agreed upon with the customer.	D	S
5.2	PPA status of supply chain List of component numbers (incl. index), component names, and the associated PPA status.	D	A
5.3	Test equipment list for product and production process List of test equipments for the characteristics according to the customer drawing and allocation of test equipments to the characteristics.	D	A
5.4	Measurement equipment analysis studies product and production process Product: Capabilities of the test equipments for the characteristics according to the customer drawing (see VDA volume 5 or comparable). Production process: Calibration certificate or adequate capability studies in cases in which test equipment capability verification cannot be provided.	D	A

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
4.6	工具 该组织指定使用多少工具（模具，成型模具），设备（例如，焊接和结合设备）等（请参阅第 5 章）来制造相应的产品，或者多少腔体的多腔模具（例如，注塑成型）。 工具和生产线之间的关系必须展示。	D	A
5.一般交付物			
5.1	符合法规要求的证据 例如，按照顾客同意的规规范，针对环境，安全，回收等方面的国家特定证书，测试编号，许可证等。	D	S
5.2	供应链的PPA状态 组件编号（包括版本信息），组件名称和相关联的PPA状态的清单。	D	A
5.3	产品和生产过程的测试设备清单 根据顾客图纸编制的特性测试设备清单，并根据特性分配测试设备。	D	A
5.4	产品和生产过程的测量设备分析研究 产品：根据顾客图纸定义的特性的测试设备的能力（请参阅VDA第 5 卷或类似要求）。 生产过程：校准证书或在无法提供测试设备能力验证情况下充足的能力研究。	D	A

VDA No.	Deliverables insofar as they are applicable to the product	Organi-zation	PPA-A
5.5	Part history The organization documents all changes (see also the Trigger Matrix in Appendix 8, ISO 9001, and IATF 16949) to the product and the production process in the part history (acc. to Appendix 6).	D	S
5.6	Evidence of suitability of the employed load carriers including storage The organization verifies that the provided storage and the load carriers used for the product to be delivered will not cause any damage.	D	A
5.7	Documentation of the agreements regarding the diagnosis and analysis process: - Complaints handling (e.g. 8D) - Field failure analysis See VDA volume "8D – Problem-Solving in 8 Disciplines" and VDA volume "Field Failure Analysis".	D	A
5.8	Documentation of the agreements regarding Layout inspection and functional testing See chapter 10.	D	A
5.9	Other	D	A
6.1	SW release (e.g. Appendix 5 "Cover sheet PPA software")	D	S

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
5.5	零件历史 组织应在零件历史记录中归档对产品和生产过程的所有变更（另请参见附录 8 的触发矩阵，ISO 9001 和IATF 16949）（根据附录 6）。	D	S
5.6	所使用的负载载体（包括存储）是否适合的证据 组织验证所提供的存储和用于交付产品的负载载体不会造成任何损害。	D	A
5.7	有关诊断和分析过程的协议文档： -投诉处理（例，8D） -现场失效分析 请参见VDA卷" 8D – 问题解决法"和VDA卷"现场失效分析"。	D	A
5.8	有关全尺寸检验和功能性试验的文件 请参阅第 10 章。	D	A
5.9	其他	D	A
6.软件交付物			
6.1	软件批准 （例如，附录 5"PPA软件封面"）	D	S

VDA No.	Deliverables Insofar as they are applicable to the product	Organi-zation	PPA-A
6.2	Definition of the scope of the SW product, e.g. - Share of in-house development of organization - Integrated software without in-house development (reuse, directed part SW, 3rd-party SW, FOSS) - Use of legacy software, reuse of software that does not fully meet customer quality - Additional points in which the fulfillment of customer quality requirements for this software scope cannot be verified or only to a limited extent.	D	S
6.3	Reference to contractually stipulated quality requirements List of applicable standards, e.g. coding guidelines (MISRA, etc.), code metrics (cyclomatic complexity, number of code lines, etc.), test coverage (specification of test levels and degrees of coverage, etc.).	D	S
6.4	Documentation of technical SW specifications (functional and non-functional) The technical SW specification contains the agreed scope of contract volume incl. agreed changes. The degree of detail of the documentation must agreed upon between the organization and the customer. Evidence can also be provided in the form of a reference to the agreed software specification, approved customer document, or similar documentation.	D	A

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
6.2	软件产品范围的定义，例如， -组织内部开发的份额 -无需内部开发的集成软件（重复使用，指定的产品软件，第三方软件，FOSS） -使用旧版软件，重复使用不完全满足顾客质量要求的软件 -无法验证或仅在有限的程度满足此软件范围的客户质量要求的其他要点	D	S
6.3	参照合同规定的质量要求 适用标准清单，例如，编码指南（MISRA等），代码指标（循环复杂度，代码行数等），测试覆盖率（测试级别和覆盖度的规范等）。	D	S
6.4	技术软件规范文件 （功能性和非功能性） 软件技术规范包含合同条款的商定范围，包括商定的更改。 文档的详细程度必须在组织和顾客之间达成一致。 证据也可以通过引用协议的软件规范，批准的顾客文档或类似文档的形式提供。	D	A

VDA No.	Deliverables insofar as they are applicable to the product	Organi-zation	PPA-A
6.5	Implementation of the requirements from 6.3 and 6.4, especially the Special Characteristics The type of evidence must be agreed upon between the organization and the customer. In addition to the general requirements, this might include: - Traceability of FUSI requirements (ISO 26262) up to testing - Evidence of the fulfillment of the agreed requirements concerning security - Evidence of the fulfillment of the legal and official requirements in the agreed area of application - Failure analysis concept for SW components.	D	A
6.6	Documentation of FOSS (free and open-source software) Documentation of the FOSS modules used incl. the license terms and customer approvals.	D	S
6.7	List of known errors	D	S
6.8	Documentation of development tools This includes the documentation of the configuration of the development tools used in the creation of the executable software and the verification of the status at the time of the SW approval. Examples of development tools (incl. parameterizations): - Compilers - SW libraries - Hardware configuration Documentation of the version management tools (e.g. Doors, CVS, etc.) is not required here.	D	A

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
6.5	实施 6.3 和 6.4 的要求，尤其是特殊特性 证据的类型必须在组织和顾客之间达成一致。 除一般要求外，可能还包括： -到测试时的功能安全要求（ISO 26262）的可追溯性 -满足有关安全性的商定要求的证据 -在商定的应用领域中满足法律和官方要求的证据 -软件组件的失效分析概念。	D	A
6.6	FOSS的文档 （免费和开源软件） 包括许可条款和顾客批准的FOSS模块的文档。。	D	S
6.7	已知错误的清单	D	S
6.8	开发工具的文档 这包括在创建可执行软件时使用的开发工具配置的文档，以及在软件批准时对状态的验证。 开发工具示例（包括参数设置）： -编译器 -软件库 -硬件配置 这里不需要版本管理工具（例如，Doors，CVS等）的文档。	D	A

VDA No.	Deliverables insofar as they are applicable to the product	Organization	PPA-A
6.9	Documentation of testing tools This includes the development-accompanying documentation of the test tools used at the time at the respective software creation and verification of the status at the time of the SW approval of the test implementation.	D	A
6.10	Documentation of version management Documentation of the product baseline, configurations, and change history with respect to the software modules and components used. Documentation of compatibility with hardware variants.	D	A
6.11	Documentation of a process evaluation (e.g. Automotive SPICE®) The minimum scope is a self-assessment by the organization for the relevant project. In addition, an assessment might be made by the customer and/or an external assessor. Documentation of the implementation of the project-specific actions derived from the self-assessment/assessment is available. Evidence of the effectiveness of actions is provided.	D	A

PPA-A	PPA Agreement
S	Submission to customer
D	If applicable: Execution, documentation, and archiving by the organization (if appl. for inspection by the customer)
A	All submission items that go beyond the minimum scope must be agreed upon between the organization and the customer in the PPA agreement.

VDA 编号	可交付物 在适用于产品的范围内	组织	PPA 协议
6.9	测试工具的文档 这包括在相应软件创建时使用的测试工具的开发随附文档，以及软件测试批准软件实施时的状态验证。	D	A
6.10	版本管理文档 关于使用的软件模块和组件的产品基准，配置和更改历史记录。 与硬件变型的兼容性的文档。	D	A
6.11	过程评估文档 （例如，AutomotiveSPICE®） 最小范围是组织对相关项目的自我评估。 另外，顾客和/或外部评估者可以进行评估。 从自我评估/评估得出的具体项目行动的执行情况的文档可供使用。 提供行动有效性的证据。	D	A

PPA-A	PPA 协议
S	递交给顾客
D	如适用：组织的执行，文档编制和归档（如适用，则由顾客检查）
A	所有超出最小范围的递交项目，必须由组织和顾客在 PPA 协议中同意。

Appendix 2 – Agreement on the PPA procedure

PPA Agreement	Part Number Organization	Version / Date

Contact information			
Information about the organization		Information about the customer	
Name of organization		Name of customer	
Production location		Recipient location	
Address		Address	
Delivery location		Unloading point	
Address		Address	
Supplier number/ DUNS Code:		Order Number/PPA samp	
Report number		Report number	
Report version		Report version	

Contact person			
Customer	Name	Telephone	E-mail
Quality management			
Purchasing (optional)			
Project manager (optional)			
Engineering (optional)			
Production (optional)			
Measuring department (optional)			
Material department (optional)			
Organization	Name	Telephone	E-mail
Quality management			
Sampling representative (optional)			
Project manager (optional)			
Engineering (optional)			
Production (optional)			
Measuring department (optional)			
Material department (optional)			

附录2－关于PPA程序的协议

PPA协议	零件号 组织	版本/日期

联系信息			
有关组织的信息		有关客户的信息	
组织名称		客户名称	
生产场所		收件人地点	
地址		地址	
交货场所		卸货场所	
地址		地址	
供应商编号/ 邓氏号码：		订单号/ PPAP 样品	
报告编号		报告编号	
报告版本		报告版本	

联系人			
客户	名字	电话	电子邮件
质量管理			
采购（可选）			
项目经理（可选）			
工程（可选）			
生产（可选）			
测量部门（可选）			
材料部门（可选）			
组织	名字	电话	电子邮件
质量管理			
抽样代表（可选）			
项目经理（可选）			
工程（可选）			
生产（可选）			
测量部门（可选）			
材料部门（可选）			

PPA Agreement

Part number

Organization

Version/Date

Component information

Information about the organization		Information about the customer	
Name		Name	
Part Number		Part Number	
Drawing number		Drawing number	
Version / Date		Version / Date	
Customer-specific part status (e.g. part (safety, legal, function)		Special characteristics (safety, legal, function)	

Bauteil mit besonderer Archivierungspflicht | Special archiving requirements

Part grouping / Product families

PPA procedure for product family — Use Appendix for list of all relevant part numbers if necessary

Name	Part Number	Version / Date	Part name customer	Part Number	Version / Date

Variant PPA

Variant PPA for PPA procedure already submitted

organization	Report version	Date	Reference report number of customer	Report version	Date

Directed parts

Directed parts with Q-responsibility of organization — Use Appendix for list of all relevant part numbers if necessary

Part name organization	Part Number	Version / Date	Part name customer	Part Number	Version / Date

Directed parts with Q-responsibility of customer — Use Appendix for list of all relevant part numbers if necessary

Part name organization	Part Number	Version / Date	Part name customer	Part Number	Version / Date

PPA协议

零件号

组织

版本/日期

组件信息

有关组织的信息		有关客户的信息	
名字		名字	
零件号		零件号	
图纸编号		图纸编号	
版本/日期		版本/日期	
		客户特定的零件状态（例如零件生成版本/生产状态/质量状态等）	
特殊特性（安全、法律、功能）		特殊特性（安全、法律、功能）	

特殊存档要求（左边为选择项）

零件分组/产品系列

产品系列的 PPA 程序 — 如有必要，使用附录列出所有相关零件号

零件名称	零件号	版本/日期	零件名称（客户）	零件号	版本/日期

变体PPA

已提交 PPA 程序的变体 PPA

组织参考报告编号	版本	日期	客户参考报告编号	版本	日期

定向零件

组织质量责任的定向部件 — 如有必要，使用附录列出所有相关零件号

零件名称组织	零件号	版本/日期	零件名称客户	零件号	版本/日期

客户质量责任的定向零件 — 如有必要，使用附录列出所有相关零件号

零件名称组织	零件号	版本/日期	零件名称客户	零件号	版本/日期

PPA Agreement	Part Number	Version / Date
	Organization	

Reason for report creation

Reason for report creation		Trigger of PPA procedure	
	Report on production process and product approval (PPA)		Sample presentation
	Report on other samples		New part
	Requalification		Changes to product
Submission of PPA documents			Changes to production process
	PDF format	Original	Change to supply chain
	Portal	Paper form	Re-use > 12 months standstill
	Other		Updated PPA documentation

PPA procedure submission language

Stepped PPA procedure

Step PPA procedure (please arrange below, specify the dates of the individual PPA steps, and plan the necessary documents for each operation)

Reason for stepped PPA procedure

Confirmation of organization:

With regards to the features to be verified, the samples presented were produced with serial equipment under serial conditions, at the series production location or, for "other samples", according to the agreement between the organization and the customer (agreement to be attached). No changes are known or planned regarding these features. The results obtained in our tests can be re-used for an updated PPA documentation. Should changes to the part and/or production process still be necessary, we will indicate this in the updated PPA documentation.

Scheduling

PPA date		Stepped PPA procedure			
PPA procedure		Step 1		Step 3	
Variants		Step 2		Step 4	
		PPA procedure due date			
IMDS ID of customer		IMDS previous			

The customer waives the submission of documents.
The implementation and documentation of the PPA procedure take place exclusively within the organization.
The customer follows the approval recommendation of the organization.

Date		Signature	

PPA协议	零件号	版本/日期
	组织	

创建报表的原因

创建报表的原因			PPA程序的触发准则
	生产过程和产品批准报告 （PPA）		样品展示
	其他样品报告		新零件
	重新鉴定		产品的更改
提交PPA文件			生产过程的更改
	PDF 格式	初始的	供应链变更
	端口	纸质表格	再启用>12个月停用
	其他		更新了 PPA 文档

程序提交语言

阶段式 PPA 程序

阶段PPA 程序（请安排在下面，指定各个 PPA 阶段的日期，并规划每个操作的必要文档）

阶段式 PPA 程序的原因

组织的承诺：

关于要验证的特性，所提供的样品是在量产串行条件下用量产设备生产的，
在批量生产地点，或"其他样品"，根据组织和客户之间的协议
（协议要附加），对于这些特性，没有变更通知或计划
可重新用于更新的 PPA 文档。如果仍有必要更改零件和/或生产流程，
我们将在更新的 PPA 文档中指出这一点。

计划

PPA日期		阶段式PPA程序			
PPA程序		步骤1		步骤3	
变体		步骤2		步骤4	
		PPA 程序到期日期			
IMDS ID		IMDA 提供			

客户放弃提交文件。
PPA 程序的实施和文档仅在组织内进行。
客户遵循组织的批准建议。

时间		签名	

PPA Agreement	Part number / Organization	Version/Date

	Applicable documents for the PPA procedure			
Applic	Documents	Document number	Issue/ Status/Date	Remark/Description
	Technical customer documents			
	Zone definition for optical assessment			
	Definition of boundary samples			
	Definition of pore classes			
	Acceptance guidelines			
	Test regulations			
	Standards			
	List with dates for color / variant PPAs			

	Variants		
Applic	Contents	Description	Consideration in the scope of the PPA procedure
	Are deviating machines or processes planned		
	Are alternative deliveries provided for		

PPA协议	零件号 / 组织	版本/日期

	PPA 程序的适用文件			
应用	文件	文件编号	发行/状态/日期	备注/说明
	客户技术文件			
	光学评估的区域定义			
	极限样品的定义			
	隙类的定义			
	验收指南			
	测试规则			
	标准			
	颜色/变体具有时间的列表			

	变体		
应用	内容	描述	PPA 程序范围内的考虑
	偏离的设备或过程计划了吗?		
	替代交货提供了吗?		

PPA Agreement	Part number	Version/Date
	Organization	

Agreement on PPA content and submission

Order number	Test area (if applicable for the product)	Requirement existing	Submission required	PPA procedure	Variant PPA	procedure Step 1	Step 2	Step 3	Step 4	Requalification	Remark
0.1	PPA cover sheet/evaluation	Yes	Yes	X	X	X	X	X	X	Yes	
0.2	process, SW (if appl.)	Yes	Yes								
	Hardware approval required										
1.	**Deliverables of product development**										
1.1	Technical specifications										
1.2	Approved design changes										
1.3	by organization in case of										
1.4	Material data via IMDS										
1.5	Design FMEA										
2.	**Deliverables of production process development**										
2.1	Process flowchart										
2.2	Process FMEA										
2.3	Control plan (CP)										
3.	**Deliverables of the validation of the product**										
3.1	Geometry, dimensions			Number of parts per cavity/mold							
3.1.1	Raw part measurement										
3.1.2	Single part measurement										
3.1.3	report (all drawing										
3.1.4	Standard gage report										
3.1.5	3D record measurement										
3.1.6	Sections										
3.1.7	Other										
3.2	Material (strength, physical properties, etc.)										
3.2.1	Evidence of compliance with material related customer										
3.2.2	Sample extraction plan										
3.2.3	Metallography										
3.2.4	Chemical analyses										
3.2.5	Single part approval										
3.2.6	Auxiliary and operating material approval										
3.2.7	Mechanical measures										
3.2.8	Raw part approval										
3.2.9	Corrosion test										
3.2.10	Other										
3.3	CRS/specification/functional										
3.4	Haptics										
3.5	Acoustic										

PPA协议	零件号	版本/日期
	组织	

关于 PPA 内容和提交的协议

订单号	测试区域（适合应用于产品）	现有要求	需要提交	PPA程序	变体PPA	阶段式PPA程序步骤 步骤1	步骤2	步骤3	步骤4	重新认证部分	备注
0.1	PPA 封面/评估	Yes	Yes	X	X	X	X	X	X	Yes	
0.2	产品、过程、软件的自我评估（如果适用）	Yes	Yes								
	需要硬件批准										
1.	**产品开发的产出**										
1.1	技术规格										
1.2	已批准的设计更改										
1.3	根据协议负责开发责任，组织进行设计、工程审批										
1.4	通过 IMDS 的材料数据										
1.5	设计 FMEA										
2.	**生产过程开发的产出**										
2.1	流程图										
2.2	过程FMEA										
2.3	控制计划（CP）										
3.	**产品验证的产出**										
3.1	几何，尺寸			根据模穴/模具的零件编号							
3.1.1	原始零件测量										
3.1.2	单零件测量										
3.1.3	标准测量报告（所有图纸特性）										
3.1.4	标准量具报告										
3.1.5	3D测量记录										
3.1.6	截面										
3.1.7	其他										
3.2	材料（强度、物理特性等）										
3.2.1	符合材料相关客户标准的证据										
3.2.2	样品提取计划										
3.2.3	金相										
3.2.4	化学分析										
3.2.5	单零件审批										
3.2.6	和操作材料批准										
3.2.7	机械测量										
3.2.8	原始零件批准										
3.2.9	腐蚀测试										
3.2.10	其他										
3.3	符合 CRS/规范/功能法规的功能测试										
3.4	触觉										
3.5	声										

PPA Agreement		Part number Organization										Version/Date
3.6	Odor											
3.7	Appearance											
3.8	Surface requirement											
3.8.1	visual self-assessment											
3.8.2	Color-dependent properties											
3.9	Technical cleanliness											
3.10	Reliability											
3.11	Resistance to electrostatic discharge (ESD)											
3.12	safety											
3.13	Electromagnetic compatibility (EMC)											
4.	**Deliverables of the validation of the production process**											
4.1	characteristics according to technical specifications and											
4.2	Laboratory qualification											
4.3	documentation											
4.4	Master sample											
4.5	Production capacity											
4.6	cavities and information about tool concept)											
5.	**General deliverables**											
5.1	Evidence of compliance with statutory requirements											
5.2	PPA status of supply chain											
5.3	Test equipment list for product and production process or acceptance test reports											
5.4	Measurement equipment analysis studies product and production process											
5.5	Part history											
5.6	Evidence of suitability of the employed load carriers including storage											
5.7	regarding the diagnosis and											
5.8	requalification agreement											
5.9	Other											

PPA协议		零件号 组织										版本/日期
3.6	气味											
3.7	外观											
3.8	表明要求											
3.8.1	颜色测量和视觉自我评估											
3.8.2	颜色相关的属性											
3.9	技术清洁度											
3.10	可靠性											
3.11	抗静电放电 （ESD）											
3.12	电气安全/高压安全											
3.13	电磁兼容性（EMC）											
4.	**生产过程验证的输出**											
4.1	根据技术规格和商定的特性（例如 poka-yoke、100% 检测、过程能力等）保证特殊特性											
4.2	实验室资格认证											
4.3	样品，包括生产文件											
4.4	主样品											
4.5	生产能力											
4.6	模具（数量/穴位的编号以及有关模具概念的信息）											
5.	**通用输出**											
5.1	遵守法规要求的证据											
5.2	PPA 供应链状况											
5.3	产品和生产过程测试设备列表 量具的测试/测量报告或验收测试报告											
5.4	产品和生产过程测量设备分析研究											
5.5	零件历史记录											
5.6	已雇佣员工（包括储备）的工作负荷的适用性证据											
5.7	有关诊断和分析过程协议文件 - 投诉处理（例如8D） - 现场故障分析											
5.8	重新鉴定协议文件											
5.9	其它											

PPA Agreement	Part number / Organization	Version/Date

6.	Deliverables for software												
	Software approval required												
6.1	Software release (e.g. Appendix 5 "Cover sheet for PPA software")												
6.2	Definition of scope of the software product												
6.3	Reference to contractually stipulated quality requirements												
6.4	Documentation of technical SW specifications												
6.5	requirements from 6.3 and 6.4,												
6.6	Documentation of FOSS (free and open-source software)												
6.7	List of known errors												
6.8	Documentation of development tools												
6.9	Documentation of testing tools												
6.10	management												
6.11	Documentation of a process evaluation (e.g. VDA Automotive Spice)												

PPA协议	零件号 / 组织	版本/日期

6.	软件的输出												
	需要软件批准												
6.1	软件版本（例如附录 5"PPA 软件的封面"）												
6.2	软件产品范围的定义												
6.3	参考合同规定的质量要求												
6.4	技术软件规格文件												
6.5	执行 6.3 和 6.4 的要求，特别是特殊特性												
6.6	FOSS软件（自由和开放源码软件）的文件												
6.7	已知错误列表												
6.8	开发工具文件												
6.9	测试工具文件												
6.10	版本管理文件												
6.11	过程评估文件（例如 VDA ASPICE）												

PPA Agreement

Part number

Version/Date

Organization

Process acceptance required (see above)

Customer participation desired for process acceptance	Ja	Agreed procedure (e.g. duration, test quantity)

Tests by customer

Applic	Tests by customer	Number of samples	Duration in weeks	PPA procedure	Variant PPA	procedure						Bestandteil Regular	Customer contact
						Step 1		Step 2		Step 3			
	Dimension												
	Function												
	customer acceptance granted												
	Material												
	Corrosion												
	Paint technology												
	Color												
	Surface, graining												
	Process												

Interface components and auxiliary materials to be made available

To be provided by the organization — Use Appendix for list of all relevant part numbers if necessary

Name	Part Number	Version / Date	Date of provision	Duration of provision	Comment

To be provided by the customer — Use Appendix for list of all relevant part numbers if necessary

Name	Part Number	Version / Date	Date of provision	Duration of provision	Comment

PPA协议

零件号

版本/日期

组织

需要过程验收（见上文）

客户需要参与过程验收		商定的程序（例如持续时间、测试数量）

客户测试

应用	客户测试	样件数量	工作日的持续时间	PPA程序	变体PPA	阶段式 PPA程序的步骤				重新认证部分	客户联系人
						步骤1	步骤2	步骤3	步骤4		
	维度										
	功能										
	客户授予认可										
	材料										
	腐蚀										
	油漆技术										
	颜色										
	表面，颗粒										
	过程										

提供接口组件和辅助材料

由组织提供 — 如有必要，使用附录列出所有相关零件号

名称	零件号	版本/日期	提供日期	提供期限	备注

由客户提供 — 如有必要，使用附录列出所有相关零件号

名称	零件号	版本/日期	提供日期	提供期限	备注

PPA Agreement	Part number Organization	Version/Date

Alignment "Requalifikation" (L.I. & funct. test)

Interval "Requalifikation" (L.I. &					
Forward to customer		Customer contact			
Evidence only		Name		Department	
Documentation		E-mail/Fax			

Liegen bei der Requalifikation Abweichungen zu den Spezifikationen vor, ist der Kunde in jedem Fall zu informieren.

To be provided by the customer

Confirmation of organization

Name		Remark	
Department			
Telephone			
E-mail/Fax		Signature	
Date			

Comment of customer

Confirmation of customer

Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

PPA协议	零件号 组织	版本/日期

对标“重新鉴定”（全尺寸及功能测试）

“重新鉴定”间隔					
转发给客户		客户联系人			
仅证据		名称		部门	
文件		电子邮件/传真			

如果在重新鉴定期间有任何偏离规格的情况，在任何情况下都必须通知客户。

由客户提供

组织确认

名字		备注	
部门			
电话			
电子邮件/传真			
日期		签名	

客户意见

客户确认

名字		备注	
部门			
电话			
电子邮件/传真			
日期		签字	

Appendix 3 – Product and production process self-assessment

Self-assessment product		Organization			
Information about the organization		**Information about samples**		**Information about the customer**	
Report number		Delivery note number		Customer	
Report version		Delivery quantity			
Delivery location		Batch number		Order Number/PPA sam	
Production location		Sample weight [kg]		Unloading point	
Part Number		Hardware version		Part Number	
Name		Diagnosis status		Name	
Drawing number		Software version		Drawing number	
Version / Date		Identification/DUNS		Version / Date	

Bauteil mit besonderer Archivierungspflicht

Category	Requirements met	Requirements not fully met	Requirements not met	Not applicable	Remarks/actions + date (if not OK selected) (5)
Dimension	Dimensionally OK no rework	Dimensionally OK with rework or uncritical values NOK	Dimensionally NOK		
Material	Series material acc. to specification	No series material or other processing customer acceptance	No series material specification not met/not verified		
Function / EMC / ESD	Function fulfilled meets specification	Deviation from specification customer acceptance granted	Function NOK or function not verified specification not met		
Surface / structure color / graining	OK	Does not correspond to series status, customer acceptance granted	Does not correspond to series status customer acceptance not granted		
PPA status of supply chain	Customer-ready (requirements met or deviations accepted after risk analysis)	Customer-ready after risk assessment Updated PPA documentation required	Not customer-ready or not approved yet		
Assembly capability (at customer site)	Capable for assembly with no additional expenditure	Capable for assembly with additional expenditure customer acceptance granted	Not capable for assembly		

Self-assessment of organization	Entry incorrect, please check

Confirmation of organization			
Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

附录 3 – 产品和生产过程自我评价

自我评价 产品		组织			
组织相关信息		样件相关信息		客户相关信息	
报告编号		交货单编号		客户	
报告版本		交付数量		PPA样件订单号	
交付地点		批次号		下料点	
生产地点		样件重量[kg]		零件号	
零件号		硬件版本		名称	
名称		诊断状态		图纸编号	
图纸编号		软件版本		版本 / 日期	
版本 / 日期		DUNS编号			

有特殊存档要求的零件

类别	满足要求	部分满足要求	不满足要求	不适用	备注/行动 + 日期 (如果选择了not OK) (5)
尺寸	尺寸OK 无返工	返工后尺寸OK或 非重要尺寸NOK	尺寸NOK		
材料	量产材料 符合规范	非量产材料或其他情况 但客户同意接受	非量产材料 要求未满足或未验证		
功能 / 电磁兼容 / 防静电	功能符合 规范要求	存在偏差 但客户同意接受	功能 NOK 或 功能未验证 不满足规范要求		
表面/ 结构颜色/ 皮纹	OK	不符合量产条件，但客户同意接受	不符合量产条件，客户不同意接受		
供应链内的 PPA状态	客户已完成 (要求已满足或风险分析后被批准)	客户已完成 (风险评估后，需提交新PPA文件)	客户未完成/ 尚未批准		
在客户现场的装配能力	能够装配 无额外花费	能够装配 有额外花费 但是客户同意接受	不能装配		

组织的自我评价	输入不正确，请检查

组织确认			
姓名		备注	
部门			
电话			
邮件/传真			
日期		签字	

Self-assessment production process	Organization

Information about the organization		Information about samples		Information about the customer	
Report number		Delivery note number		Customer	
Report version		Delivery quantity		Order Number/PPA string	
Delivery location		Batch number		Unloading point	
Production location		Sample weight [kg]		Part Number	
Part Number		Hardware version		Name	
Name		Diagnosis status		Drawing number	
Drawing number		Software version		Version / Date	
Version / Date		Identification/DUNS			

Bauteil mit besonderer Archivierungspflicht

Category	Requirements met	Requirements not fully met	Requirements not met	Not applicable	Remark/actions + date (if not OK selected) (5)
Production location	Production at production location approved by the organization (Production layout set up, linking between production equipment realized)	Production at production location not approved by the organization yet; No negative quality impacts expected in series production	Production not at production location; Negative quality impacts possible		
Tools	Series tool accepted	Series tool / small series tool available, optimization(s) still necessary, but no negative quality impacts expected in series production	Tool not ready for series production; negative quality impacts expected in series production		
Logistics *1	According to process sequence	Not according to process sequence but no negative quality impacts expected in series production	Negative quality impacts possible		
Special and agreed characteristics assured	Characteristics assured	Assurance not fully verified additional measures installed customer acceptance granted	Assurance not fully verified		
Test equipment	Completely available / accepted capability verified	Only partially available / accepted suitable substitute test equipment available	Not available / not accepted		
Agreed production quantity	All production facilities accepted *2	At least one production unit accepted *2	Production facilities not accepted *2		
	Production quantity reached / verified	Production quantity permanently reachable with special measures	Production quantity not reachable with special measures		
Human Resources	Required personnel available and trained work and test instructions complete	Only limited personnel available / trained, no negative quality impacts expected *3	No trained personnel or not enough personnel available negative quality impacts possible *4		

Self-assessment of organization	Entry incorrect, please check

Confirmation of organization			
Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

自我评价 生产过程	组织

组织相关信息		样件相关信息		客户相关信息	
报告编号		交货单编号		客户	
报告版本		交付数量			
交付地点		批次号		PPA样件订单号	
生产地点		样件重量[kg]		下料点	
零件编号		零件版本		零件号	
名称		诊断状态		名称	
图纸编号		软件版本		图纸编号	
版本 / 日期		DUNS编号		版本 / 日期	

有特殊存档要求的零件

类别	满足要求	部分满足要求	不满足要求	不适用	备注/行动 + 日期 (如果选择了not OK) (5)
生产地点	在组织已批准的生产场地生产 (已经完成系列生产设备，流程生产布局)	在组织未批准的生产场地生产; 量产中，不会有负面质量影响	不是在生产场地生产; 可能会有负面质量影响		
模具	量产模具 已验收	量产模具 / 小批量模具 已就位 但是还需优化，对量产不会有负面的质量影响	量产模具未准备就绪 会对量产带来负面的质量影响		
物流 *1	按照流程图顺序	不是按照流程图顺序 但是，对量产不会有负面的质量影响	可能带来负面的质量影响		
特别特性和商定特性的保证情况	保证了相关特性	是否保证没有被充分验证 建立了额外的措施 客户同意接受	是否保证没有被充分验证		
测试设备	完全就位/ 能力可接受已验证	部分到位/ 替代测量设备已到位且可接受	未到位/ 不能接受		
商定的生产数量	所有生产设施 可接受 *2	至少一个生产单元 可接受 *2	生产设施 不可接受 *2		
	生产数量已满足/ 已验证	采取特殊措施后生产数量可满足	即便采取特殊措施，生产数量也不能满足		
人力资源	所需人员已就位并已培训，工作和检验指导书完整	人员数量有限/ 已培训，不会有负面的质量影响 *3	无培训过的人员或数量不足 可能会有负面的质量影响 *4		

组织的自我评价	输入不正确，请检查

组织确认			
姓名		备注	
部门			
电话			
邮件/传真			
日期		签字	

Instruction how to fill in the form:	
(1)	Logistics: If applicable evaluate: - towards customer - within the organization - from supplier (e.g. transport, packaging specification created; serial packaging in agreed quantity available, no negative quality impacts to expect)
(2)	Agreed production quantity: Production equipment refers to lines / equipments / machines / tools / jigs / cavities
(3)	Only limited personnel available/qualified, no negative quality impacts expected: - number and qualification still have to be optimized - work and inspection instructions completely available
(4)	Not enough qualified personnel available: negative quality impacts possible work and/or inspection instructions not completely available
(5)	Input mandatory, if other evaluation then "Requirements met"

表格填写指南：	
(1)	物流：如果适用： - 发往客户 - 组织内部 - 来自供应商 （比如：运输和包装规范已创建，商定数量的量产包装已到位，不会产生负面质量影响）
(2)	商定的生产数量： 生产设备是指的生产线 / 设备 / 机器 / 模具 / 制具 / 模穴
(3)	人员数量有限/已具备资质，不会产生负面的质量影响： - 数量和资质还必须优化 - 作业和检验指导书都已到位
(4)	没有足够的有资质的人员： 可能会有负面的质量影响 作业和/或检验作业指导书尚未完成
(5)	必须填写，可以写"要求满足"或其他评价结论

Appendix 4 – Cover sheet for PPA report and PPA evaluation

Cover sheet PPA report	Organization		
Organization		Reason for report creation	
			Report on production process and product approval (PPA)
			Report on other samples
			Requalification
Customer (recipient)		Trigger of PPA procedure	
			Sample presentation
			New part
			Changes to product
			Changes to production process
			Change to supply chain
			Re-use > 12 month's standstill
			Updated PPA documentation

Information about the organization		Information about samples		Information about the customer	
Report number		Delivery note number		Customer	
Report version		Delivery quantity			
Delivery location		Batch number		Order Number/PPA samp	
Production location		Sample weight [kg]		Unloading point	
Part Number		Hardware version		Part Number	
Name		Diagnosis status		Name	
Drawing number		Software version		Drawing number	
Version / Date		Identification/DUNS		Version / Date	
Bauteil mit besonderer Archivierungspflicht		Hardware approval		Software approval	

Confirmation of organization

It is hereby confirmed that the PPA procedure was carried out in accordance with the agreements made in the PPA agreement and the specifications of VDA Volume 2.

The IMDS record was created under the IMDS ID No.:

Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

Customer decision

Customer-ready/Ready for series production		Not customer-ready / Not ready for series production	
PPA procedure towards customer closed		New PPA procedure required	
Update of PPA documentation required			
Report number/version Customer			

Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

附录 4 – PPA报告和PPA评价表封面

PPA报告的封面	组织	
组织		生成报告的原因
		生产过程和产品批准报告 (PPA)
		其他样品的报告
		再鉴定
		触发PPA过程
客户（接收方）		样件提交
		新零件
		产品的变更
		生产过程的变更
		供应链的变更
		暂停生产超过12个月，重启
		更新的PPA文件

组织相关信息		样件相关信息		客户相关信息	
报告编号		交货单编号		客户	
报告版本		交付数量			
交付地点		批次号		PPA样件订单号	
生产地点		样件重量[kg]		下料点	
零件号		硬件版本		零件号	
名称		诊断状态		名称	
图纸编号		软件版本		图纸编号	
版本 / 日期		DUNS编码		版本 / 日期	
有特殊存档要求的零件		硬件批准		软件批准	

组织确认

在此确认，已按照PPA协议里面的条款要求以及VDA2的标准要求落实了PPA过程。

MDS记录已生成，MDS 识别编号：

姓名		备注	
部门			
电话			
邮件/传真			
日期		签字	

客户决定

客户就绪 / 已具备量产条件		客户未就绪 / 不具备量产条件	
面向客户端的PPA流程关闭		需要重新走PPA流程	
需要重新走PPA流程			
报告编号/版本 客户			

姓名		备注	
部门			
电话			
邮件/传真			
日期		签字	

PPA evaluation

Report

Organization

Information about the organization		Information about samples		Information about the customer	
Report number		Delivery note number		Customer	
Report version		Delivery quantity			
Delivery location		Batch number		Order Number/PPA samp	
Production location		Sample weight [kg]		Unloading point	
Part Number		Hardware version		Part Number	
Name		Diagnosis status		Name	
Drawing number		Software version		Drawing number	
Version / Date		Identification/DUNS		Version / Date	

Bauteil mit besonderer Archivierungspflicht

Individual evaluation by organization

Order number	Test area (if applicable for new parting)	Submission required	Requirements fully met	Requirements not fully met	Deliverable	Version / Date	Remark
0.1	PPA cover sheet/evaluation	Yes			-	-	
0.2	Self-assessment for product, process, SW (if appl.)	Yes					
	Hardware approval required						
1.	**Deliverables of product development**						
1.1	Technical specifications						
1.2	Approved design changes						
1.3	Design, development approvals						
1.4	Material data via IMDS						
1.5	Design FMEA						
2.	**Deliverables of production process development**						
2.1	Process flowchart						
2.2	Process FMEA						
2.3	Control plan (CP)						
3.	**Deliverables of the validation of the product**						
3.1	Geometry, dimensions						
3.2	Material (strength, physical properties, etc.)						
3.3	Function						
3.4	Haptics						
3.5	Acoustics						
3.6	Odor						
3.7	Appearance						
3.8	Surface requirement						
3.9	Technical cleanliness						
3.10	Reliability						
3.11	Resistance to electrostatic discharge (ESD)						
3.12	Electrical safety / high-voltage safety						
3.13	Electromagnetic compatibility (EMC)						

PPA评价

报告

组织

组织相关信息		样件相关信息		客户相关信息	
报告编号		交货单编号		客户	
报告版本		交付数量			
交付地点		批次号		PPA样件订单号	
生产地点		样件重量[kg]		下料点	
零件编号		硬件版本		零件号	
名称		诊断状态		名称	
图纸编号		软件版本		图纸编号	
版本 / 日期		DUNS编码		版本 / 日期	

有特殊存档要求的零件

组织实施的自我评价

订单编号	测试区域 (如果对客户适用)	必须提交	完全满足要求	部分满足要求	可交付物	版本 / 日期	备注
0.1	PPA 封面/评价	Yes			-	-	
0.2	产品、过程和软件的自我评价 (如果适用)	Yes					
	必要的硬件批准						
1.	**产品开发的可交付物**						
1.1	技术规范						
1.2	批准的设计变更						
1.3	设计、开发批准						
1.4	IMDS材料数据						
1.5	设计FMEA						
2.	**生产过程开发的可交付物**						
2.1	过程流程图						
2.2	过程FMEA						
2.3	控制计划(CP)						
3.	**产品确认的可交付物**						
3.1	几何结构，尺寸						
3.2	材料（强度，物理性能等）						
3.3	功能						
3.4	触觉						
3.5	声学						
3.6	气味						
3.7	外观						
3.8	表面要求						
3.9	技术清洁度						
3.10	可靠性						
3.11	防静电 (ESD)						
3.12	电气安全 / 高压安全						
3.13	电磁兼容 (EMC)						

PPA evaluation

Report

Organization

Information about the organization		Information about samples		Information about the customer	
Report number		Delivery note number		Customer	
Report version		Delivery quantity			
Delivery location		Batch number		Order NumberPPA samp	
Production location		Sample weight [kg]		Unloading point	
Part Number		Hardware version		Part Number	
Name		Diagnosis status		Name	
Drawing number		Software version		Drawing number	
Version / Date		Identification/DUNS		Version / Date	
Part with special archiving requirement					

4.	**Deliverables of the validation of the production process**							
4.1	characteristics according to technical specifications and agreed characteristics (e.g.							
4.2	Laboratory qualification							
4.3	Sample including production documentation							
4.4	Master sample							
4.5	Production capacity							
4.6	Tools							
5.	**General deliverables**							
5.1	Evidence of compliance with statutory requirements							
5.2	PPA status of supply chain							
5.3	Test equipment list for product and production process							
5.4	analysis studies product and production process							
5.5	Part history							
5.6	employed load carriers							
5.7	regarding the diagnosis and analysis process - Complaints handling (e.g. 8D)							
5.8	Documentation of the requalification agreement							
5.9	Other							

PPA评价

报告

组织

组织相关信息		样件相关信息		客户相关信息	
报告编号		交货单编号		客户	
报告版本		交付数量			
交付地点		批次号		PPA样件订单号	
生产地点		样件重量[kg]		下料点	
零件编号		硬件版本		零件号	
名称		诊断状态		名称	
图纸编号		软件版本		图纸编号	
版本 / 日期		DUNS编码		版本 / 日期	
有特殊存档要求的零件					

4.	**生产过程确认的可交付物**							
4.1	来自技术规范的特殊特性和商定特性的保证(比如：防错，100%检验，过程能力等)							
4.2	实验室资质							
4.3	生产文件中的样件（图片）							
4.4	标准样件							
4.5	产能							
4.6	模具							
5.	**通用的可交付物**							
5.1	法律法规要求的符合性证明							
5.2	供应链内的PPA状态							
5.3	产品和生产过程							
5.4	产品和生产工艺的测量系统分析							
5.5	零件履历							
5.6	使用的负荷载体的适用性证明（包括存储区域）							
5.7	诊断和分析过程的协议文件： - 客诉处理 (e.g. 8D) - 现场失效分析							
5.8	再鉴定协议文件							
5.9	其他							

PPA evaluation		Report / Organization						
6.	Deliverables for software							
	Software approval required							
6.1	Software release (e.g. Appendix 5 "Cover sheet for PPA software")							
6.2	Definition of scope of the software product							
6.3	Reference to contractually stipulated quality requirements							
6.4	Documentation of technical SW specifications							
6.5	Implementation of the requirements from 6.3 and 6.4, especially the Special Characteristics							
6.6	Documentation of FOSS (free and open-source software)							
6.7	List of known errors							
6.8	Documentation of development tools							
6.9	Documentation of testing tools							
6.10	Documentation of version management							
6.11	Documentation of a process evaluation (e.g. VDA Automotive Spice)							

PPA评价		报告 / 组织						
6.	软件的可交付物							
	需要软件批准							
6.1	软件放行(可以参考附录5"软件PPA封面")							
6.2	软件产品的范围定义							
6.3	参考合同中规定的质量要求							
6.4	软件技术规范文件							
6.5	6.3和6.4相关要求的落实，尤其是对特殊特性							
6.6	FOSS文件 (免费和开源软件)							
6.7	已知错误清单							
6.8	开发工具文件							
6.9	测试工具文件							
6.10	版本管理文件							
6.11	过程评价文件 (比如： VDA Automotive Spice)							

PPA evaluation	Report	
	Organization	

Part grouping / Product families

PPA procedure for product family

Use Appendix for list of all relevant part numbers if necessary

Name	Part Number	Version / Date	Name	Part Number	Version / Date

PPA评价	报告	
	组织	

零件组 / 产品族

产品族的PPA程序

必要时，可使用附件列举所有涉及的零件号

名称	零件号	版本/日期	名称	零件号	版本/日期

PPA evaluation

Report

Organization

Information about the organization		Information about samples		Information about the customer	
Report number		Delivery note number		Customer	
Report version		Delivery quantity			
Delivery location		Batch number		Order Number/PPA samp	
Production location		Sample weight [kg]		Unloading point	
Part Number		Hardware version		Part Number	
Name		Diagnosis status		Name	
Drawing number		Software version		Drawing number	
Version / Date		Identification/DUNS		Version / Date	
Part with special archiving requirement					

Overall evaluation by organization

Deliverable category	Submission required	Requirements fully met	Requirements not fully met	PPA procedure towards customer closed	Updated PPA documentation required	New PPA procedure required	Risk assessment	Version / Date
Assessment	Yes							
Deliverables of product	No							
Deliverables of production process	No							
General deliverables	No							
Deliverables for software	No							

To be provided by the customer

Recommendation by the organization

Customer-ready/Ready for series production		Not customer-ready / Not ready for series production	

Confirmation of organization

Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

PPA评价

报告

组织

组织相关信息		样件相关信息		客户相关信息	
报告编号		交货单编号		客户	
报告版本		交付数量			
交付地点		批次号		PPA样件订单号	
生产地点		样件重量[kg]		下料点	
零件编号		硬件版本		零件号	
名称		诊断状态		名称	
图纸编号		软件版本		图纸编号	
版本 / 日期		DUNS编码		版本 / 日期	
有特殊存档要求的零件					

组织整体评价

可交付的类别	必须提交	完全满足要求	部分满足要求	面向客户端的PPA过程已关闭	需要更新PPA文件	需要重新走PPA流程	风险评估	版本 / 日期
PPA封面 / PPA评价 / 自我评价	Yes							
产品的可交付物								
生产过程的可交付物								
通用的可交付物								
软件的可交付物								

客户提供

组织建议

客户就绪 / 已具备量产条件		客户未就绪 / 不具备量产条件	

组织确认

姓名		备注	
部门			
电话			
邮件/传真			
日期		签字	

PPA evaluation	Report	
	Organization	

nformation about the organizatior		Information about samples		Information about the customer	
Report number		Delivery note number		Customer	
Report version		Delivery quantity			
Delivery location		Batch number		Order NumberPPA samp	
Production location		Sample weight [kg]		Unloading point	
Part Number		Hardware version		Part Number	
Name		Diagnosis status		Name	
Drawing number		Software version		Drawing number	
Version / Date		Identification/DUNS		Version / Date	
Part with special archiving requirement					

Customer decision

Customer-ready/Ready for series production		Not customer-ready / Not ready for series production	
PPA procedure towards customer closed		New PPA procedure required	
Updated PPA documentation required			

Customer evaluation deviating from that of the organization	

Subsequent requirement Documents to be submitted about open test areas	Test area	Subsequent requirement / reason

Acceptance of deviations (without adjusting other documents)	Test area	New specification

Deviation approval	Test area	Deviation approval	Validity

Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

Optionales Template: Die Inhalte können auch in geeigneter Form auf andere Art nachgewiesen werden, die spezifischen Inhalte sind zwischen Organisation und Kund

PPA评价	报告	
	组织	

组织相关信息		样件相关信息		客户相关信息	
报告编号		交货单编号		客户	
报告版本		交付数量			
交付地点		批次号		PPA样件订单号	
生产地点		样件重量[kg]		下料点	
零件编号		硬件版本		零件号	
名称		诊断状态		名称	
图纸编号		软件版本		图纸编号	
版本 / 日期		DUNS编码		版本 / 日期	
有特殊存档要求的零件					

客户决定

客户就绪 / 已具备量产条件		客户未就绪 / 不具备量产条件	
面向客户端的PPA流程关闭		需要重新走PPA流程	
需要更新PPA文件			

客户评价和组织自我评价的偏差	

后续要求 对测试区域开口项即将提交的文件	测试区域	后续要求 / 原因

偏差的允收 (且不调整其他文件)	测试区域	新规范

偏差批准	测试区域	偏差批准	有效性

姓名		备注	
部门			
电话			
邮件/传真			
日期		签字	

可选的版板：可以添加其他合适的内容，具体客户和供应商可以协商制定。

Product-related deliverables

Report

Sheet of

Organization

Information about the organization		Information about samples		Information about the customer	
Report number		Delivery note number		Customer	
Report version		Delivery quantity			
Delivery location		Batch number		Order Number/PPA samp	
Production location		Sample weight [kg]		Unloading point	
Part Number		Hardware version		Part Number	
Name		Diagnosis status		Name	
Drawing number		Software version		Drawing number	
Version / Date		Identification/DUNS		Version / Date	

Part with special archiving requirement

	3.1	Geometry, dimensions		3.5	Acoustics		3.9	Technical cleanliness
	3.2	Material		3.6	Odor		3.10	Reliability
	3.3	Function		3.7	Appearance		3.11	Resistance to electrostatic discharge (ESD)
	3.4	Haptics		3.8	Surface requirement		3.12	Electrical safety / High-voltage safety
							3.13	Electromagnetic compatibility (EMC)

No.	Requirements/ Specification	Actual values of organization					Specification met		Remark
		Part 1	Part 2	Part 3	Part 4	Part 5	Yes	No	
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Confirmation of organization

Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

- Organisation u Organisation und Kunde abzustimmen.

Optionales Template: Die Inhalte können auch in geeigneter Form auf andere Art nachgewiesen werden, die spezifischen Inhalte sind zwischen Organisation und Kunde abzustimmen.

产品相关交付物

报告

第 页 共 页

组织

组织信息		样品信息		客户信息	
报告号		发货单号		客户	
报告版本		交货数量			
交货地点		批号		订单号-PPA样品	
生产地点		样品重量 [kg]		卸货点	
零件号		硬件版本		零件号	
零件名称		诊断状态		零件名称	
图纸号		软件版本		图纸号	
版本/日期		识别码/唯一标号		版本/日期	

有特殊存档要求的零件

	3.1	几何尺寸		3.5	噪音		3.9	技术清洁度
	3.2	材料		3.6	气味		3.10	可靠性
	3.3	功能		3.7	外观		3.11	抗静电放电 (ESD)
	3.4	触觉		3.8	表面要求		3.12	电气安全/高压安全
							3.13	电磁兼容(EMC)

No.	要求/ 规格	组织的实际值					符合规格		备注
		零件 1	零件 2	零件 3	零件 4	零件5	是	否	
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
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18									
19									
20									
21									
22									
23									
24									

组织确认

姓名		备注	
部门			
电话			
邮箱/传真			
日期		签名	

可选模板：内容也可以通过其他方式以适当的形式证明。具体内容必须在组织和客户之间约定。

Productionprocess-related and general deliverables

Report

Sheet of

Organization

Information about the organization		Information about samples		Information about the customer	
Report number		Delivery note number		Customer	
Report version		Delivery quantity			
Delivery location		Batch number		Order Number/PPA sam	
Production location		Sample weight [kg]		Unloading point	
Part Number		Hardware version		Part Number	
Name		Diagnosis status		Name	
Drawing number		Software version		Drawing number	
Version / Date		Identification/DUNS		Version / Date	

Part with special archiving requirement

	2.1	Process flowchart		4.4	Master sample		5.4	Measurement equipment analysis studies product and production process
	2.2	Process FMEA		4.5	Production capacity		5.5	Part history
	2.3	Control plan (CP)		4.6	Tools		5.6	Evidence of suitability of the employed load carriers including storage
	4.1	Assurance of special characteristics according to technical specifications and agreed characteristics (e.g. poka-yoke, 100% inspection, process capabilities, etc.)		5.1	Evidence of compliance with statutory requirements		5.7	Documentation of agreements regarding the diagnosis and analysis process - Complaints handling (e.g. 8D) - Field failure analysis
	4.2	Laboratory qualification		5.2	PPA status of supply chain		5.8	Documentation of the requalification agreement
	4.3	Sample including production documentation		5.3	Test equipment list for product and production process		5.9	Other

No.	Requirement	Deliverable: Document	Deliverable: Version	Deliverable: Date	Remark
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					

Confirmation of organization

Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

生产过程相关的和一般的交付物

报告

第 页 共 页

组织

组织信息		样品信息		客户信息	
报告号		发货单号		客户	
报告版本		交货数量			
交货地点		批号		订单号-PPA样品	
生产地点		样品重量 [kg]		卸货点	
零件号		硬件版本		零件号	
零件名称		诊断状态		零件名称	
图纸号		软件版本		图纸号	
版本/日期		识别码/DUNS号		版本/日期	

有特殊存档要求的零件

	2.1	过程流程图		4.4	标准样品		5.4	产品和生产过程测量设备分析
	2.2	过程FMEA		4.5	产能		5.5	零件历史
	2.3	控制计划(CP)		4.6	工装模具		5.6	承运装置的合适性的证明，包括储存
	4.1	根据技术规范和商定的特性（如防错、100%检查、过程能力等）保证特殊特性		5.1	法规符合性的证明		5.7	关于诊断和分析过程的协议文件 -投诉处理（如8D） -现场失效分析
	4.2	实验室资质		5.2	供应链的PPA状态		5.8	再评定协议文件
	4.3	样品包括生产文件		5.3	产品和生产过程试验设备清单		5.9	其他

No.	要求	交付物: 文件	交付物: 版本	交付物: 日期	备注
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					

组织确认

姓名		备注	
部门			
电话			
邮箱/传真			
日期		签名	

Appendix 5 – Cover Sheet PPA software

Optionales Template: Die Inhalte können auch in geeigneter Form auf andere Art nachgewiesen werden, die spezifischen Inhalte sind zwischen Organisation und Kunde abzustimmen.

6.1 Cover sheet for PPA software	Report	
	Organization	

Information about the organization		Description about Software		Information about the customer	
Report number		Parts list reference (customer) (optional)		Customer	
Report version				Order Number/PPA stamp	
Delivery location				Unloading point	
Production location				Part Number	
Part Number				Name	
Name				Drawing number	
Drawing number				Version / Date	
Version / Date		Identification/DUNS			

Bauteil mit besonderer Archivierungspflicht

Description of software

Product-specific identifier/key	Checksum

on about the software modules used (please list in-house and third-party components) Configuratio

Description	Independent software package	Assembled in following HW	Software version	Operating system	Diagnosis version	ASIL classification	Compatibility with specification		(6.6) FOSS-Approval			Remark
							Fulfilled	Not Fulfilled	Available	Not available	Not relevant	
Trigger		Initial PPA procedure										
		PPA procedure due to changes										

附录 5 – PPA软件封面

可选模板：内容也可以通过其他方式以适当的形式证明，具体内容必须在组织和客户之间约定。

6.1 软件PPA的封面	报告	
	组织	

组织信息		关于软件的说明		客户信息	
报告号					
报告版本		零件清单参考（客户）（可选的）		客户	
交货地点				订单号-PPA样品	
生产地点				卸货点	
零件号				零件号	
零件名称				零件名称	
图纸号				图纸号	
版本/日期		识别码/邓白氏号		版本/日期	
有特殊存档要求的零件					

软件说明

产品特定的标识符/密钥	校验和

有关使用的软件模块的信息（请列出内部和第三方组件）配置细节

说明	独立软件包	组装在以下的硬件中	软件版本	操作系统	诊断版本	ASIL分类	符合规格		(6.6) FOSS许可			备注
							符合	不符合	有	没有	不相关	
触发		首次 PPA										
		由于更改重新PPA										

6.1 Cover Sheet Report

Report

Organization

Self-assessment of organization

Specification and deliverables

Order number	Test area (if applicable for the product)	Submission required	Requirements fully met	Requirements not fully met	Requirements not met	Deliverable	Version / Date	Remark
6.2	Definition of scope of the software product	Yes						
6.3	Reference to contractually stipulated quality requirements	Yes						
6.4	Documentation of technical SW specifications							
6.5	requirements from 6.3 and 6.4, especially the Special							
6.6	Documentation of FOSS (free and open-source software)	Yes						
6.7	List of known errors	Yes						
6.8	Documentation of development tools							
6.9	Documentation of testing tools							
6.10	Documentation of version management							

Order number	Test area (if applicable for the product)	Submission required	Requirements fully met	Requirements not fully met	Requirements not met	Process evaluation method	Date of last evaluation	Process evaluation result
6.11	Documentation of a process evaluation (e.g. VDA Automotive Spice)							

Details for usage of software modules

Details for usage of software modules

SW-PNR	Release name (customer)	Designation of organization	Test report		Freigabestatus		Remark
			Available	Not available	Available	Not available	

6.1 软件PPA的封面

报告

组织

组织的自我评估

规范和交付物

订单号	测试区域（如果适用于产品）	需要提交	完全满足要求	未完全满足要求	未满足要求	交付物	版本/日期	备注
6.2	定义软件产品范围	是						
6.3	参考合同规定的质量要求	是						
6.4	软件规格文件							
6.5	实施6.3和6.4的要求，尤其是特殊特性							
6.6	FOSS文档（免费和开源软件）	是						
6.7	已知错误列表	是						
6.8	开发工具的文档							
6.9	测试工具的文档							
6.10	版本管理文档							

订单号	测试区域（如果适用于产品）	需要提交	完全满足要求	未完全满足要求	未满足要求	过程评价方法	上次评估日期	过程评价结果
6.11	过程评估文件（如VDA A-SPICE）							

软件模块使用细节

软件模块使用细节

SW-PNR	放行者（客户）	组织名称	测试报告		批准状态		备注
			有	没有	有	没有	

6.1 Cover Sheet Report

Report

Organization

Usage recommendation of organization

(To use the software for the intended application by an authorized person with the organization thorough permission granted via legally binding signature (handwritten, electronic))

Deliverable category	Submission required	Requirements fully met	Requirements not fully met	PPA procedure towards customer closed	Updated PPA documentation required	New PPA procedure required	Risk assessment	Version / Date
Deliverables for software	Yes							

To be provided by the customer

Recommendation by the organization

Customer-ready/Ready for series production		Not customer-ready / Not ready for series production	

Confirmation of organization

Name			
Department		Remark	
Telephone			
E-mail/Fax			
Date		Signature	

6.1 软件PPA的封面

报告

组织

组织的使用建议

（组织中的授权人员通过具有法律约束力的签名[书面，电子形式]允许将软件用于预期目的）

交付物类别	需要提交	完全满足要求	未完全满足要求	针对客户的PPA程序已关闭	需要更新PPA文件	需要新的PPA程序	风险评估	版本/日期
软件交付物	是							

由客户提供

组织的建议

客户就绪/批量生产就绪		客户未就绪/批量生产未就绪	

组织确认

姓名			
部门		备注	
电话			
邮箱/传真			
日期		签名	

6.1 Cover Sheet Report

Report

Organization

Customer decision

(To use the software for the intended application by an authorized person with the customer company thorough permission granted via legally binding signature (handwritten, electronic))

Customer-ready/Ready for series production		Not customer-ready / Not ready for series production	
PPA procedure towards customer closed		New PPA procedure required	
Updated PPA documentation required			

Customer evaluation deviating from that of the organization	

Subsequent requirement Documents to be submitted about open test areas

Test area	Subsequent requirement / reason

Acceptance of deviations (without adjusting other documents)

Test area	New specification

Deviation approval

Test area	Deviation approval	Validity

Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

6.1 软件PPA的封面

报告

组织

客户决策

（客户处的授权人员通过具有法律约束力的签名[书面的，电子的]，允许将软件用于预期目的）

客户就绪/批量生产就绪		客户未就绪/批量生产未就绪	
针对客户的PPA程序已关闭		需要新的PPA程序	
需要更新PPA文件			

顾客评价与组织评价不一致	

后续要求 后续提交未关闭测试问题的文件

测试区域	后续要求/原因

接受偏差（不调整其他文件）

测试区域	新规范

偏差批准

测试区域	偏差批准	有效期

姓名		备注	
部门			
电话			
邮箱/传真			
日期		签名	

Optionales Template: Die Inhalte können auch in geeigneter Form auf andere Art nachgewiesen werden, die spezifischen Inhalte sind zwischen Organisation und Kunde abzustimmen.

6.1 Cover sheet for PPA software

Report

Organization

nformation about the organizatior		Description about Software		Information about the customer	
Report number		Parts list reference (customer) (optional)		Customer	
Report version					
Delivery location				Order NumberPPA samp	
Production location				Unloading point	
Part Number				Part Number	
Name				Name	
Drawing number				Drawing number	
Version / Date		Identification/DUNS		Version / Date	
Bauteil mit besonderer Archivierungspflicht					

Tests completed

General information about hardware (minimum requirement)

Microcontroller	1.		2.		3.	
Microcontroller frequency	1.		2.		3.	
Quartz frequency	1.		2.		3.	

Memory utilization (measurement)

Component information	Used [kB]	Available [kB]	Used [%]	Specification met	Remark
ROM					
RAM					
EEPROM					
Harddisc					

Processor utilization (measurement)

Component infor	Processor load Initial	Processor load Operation	Processor load Peak	Specification met	Remark
Processor utilization					

6.9 Documentation of testing tools

Reference to documentation	Aligned configuration / baseline	Status of documentation	Review and approval, last status

6.10 Documentation of version management

Reference to documentation	Aligned configuration / baseline	Status of documentation	Review and approval, last status

可选模板：内容也可以通过其他方式以适当的形式证明，具体内容必须在供应商和客户之间约定

6.1 软件PPA的封面

报告

组织

组织信息		关于软件的说明		客户信息	
报告号		零件清单参考（客户）（可选的）		客户	
报告版本					
交货地点				订单号-PPA样品	
生产地点				卸货点	
零件号				零件号	
零件名称				零件名称	
图纸号				图纸号	
版本/日期		识别码/邓白氏号		版本/日期	
有特殊存档要求的零件					

测试完成

有关硬件的一般信息（最低要求）

微控制器	1.		2.		3.	
微控制器频率	1.		2.		3.	
石英频率	1.		2.		3.	

内存利用率（测量）

组件信息	已使用[kB]	可用[kB]	使用[%]	符合规格	备注
只读存储器ROM					
随机存储器RAM					
电可擦编程只读存储器EEPROM					
硬盘					

处理器利用率（测量）

组件信息	处理器初始加载	处理器运行中负载	处理器负载峰值	符合规格	备注
处理器利用率					

6.9 测试工具的文档

参考文件	基本配置/基线	文件状态	审核批准，最新状态

6.10 版本管理文档

参考文件	基本配置/基线	文件状态	审核批准，最新状态

6.1 Cover sheet for PPA software

Report

Organization

Information about the organization		Description about Software		Information about the customer	
Report number		Parts list reference (customer) (optional)		Customer	
Report version					
Delivery location				Order NumberPPA samples	
Production location				Unloading point	
Part Number				Part Number	
Name				Name	
Drawing number				Drawing number	
Version / Date		Identification/DUNS		Version / Date	
Part with special archiving requirement					

Function tests

Tested according to test specification	Deliverable		Version / Date	
All test sequences passed successfully?		All regression tests passed successfully?		
List of tests not passed and risk assessment	Deliverable		Version / Date	
Verification of effectiveness of implemented measures	Deliverable		Version / Date	
Which special approvals have been granted?	Deliverable		Version / Date	

Confirmation of organization

Deliverables can be inspected by the customer at any time.

Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

6.1 软件PPA的封面

报告

组织

组织信息		关于软件的说明		客户信息	
报告号		零件清单参考（客户）（可选的）		客户	
报告版本				订单号-PPA样品	
交货地点				卸货点	
生产地点				零件号	
零件号				零件名称	
零件名称				图纸号	
图纸号				版本/日期	
版本/日期		识别码/邓白氏号			
有特殊存档要求的零件					

功能测试

根据测试规范测试	交付物		版本/日期	
所有测试序列都成功通过？		所有回归测试都成功通过？		
未通过的测试清单和风险评估	交付物		版本/日期	
实施措施的有效性验证	交付物		版本/日期	
已获得哪些特别批准？	交付物		版本/日期	

组织确认

客户可以随时检查可交付成果

姓名		备注	
部门			
电话			
邮箱/传真			
日期		签名	

Appendix 6 – Part history

Optionales Template: Die Inhalte können auch in geeigneter Form auf andere Art nachgewiesen werden, die spezifischen Inhalte sind zwischen Organisation und Kunde abzustimmen

Part history	Organization	Sheet of

Information about the organization			Information about the customer		
Lieferstandort		Sachnummer	Customer		Sachnummer
Produktionsstandort		Benennung			Benennung
Identification/DUNS		Drawing number			Drawing number

No.	Version, organization	Change number organization	Version, customer	Change number customer	Application: Test use	Application: Product change	Application: Production process change	Description of change	Production date	Date of first delivery	Delivery identification	Responsible person	Remark
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													

Confirmation of organization			
Name		Remark	
Department			
Telephone			
E-mail/Fax			
Date		Signature	

附录 6 –零件历史

可选模板：内容也可以通过其他方式以适当的形式证明，具体内容必须在组织和客户之间约定。

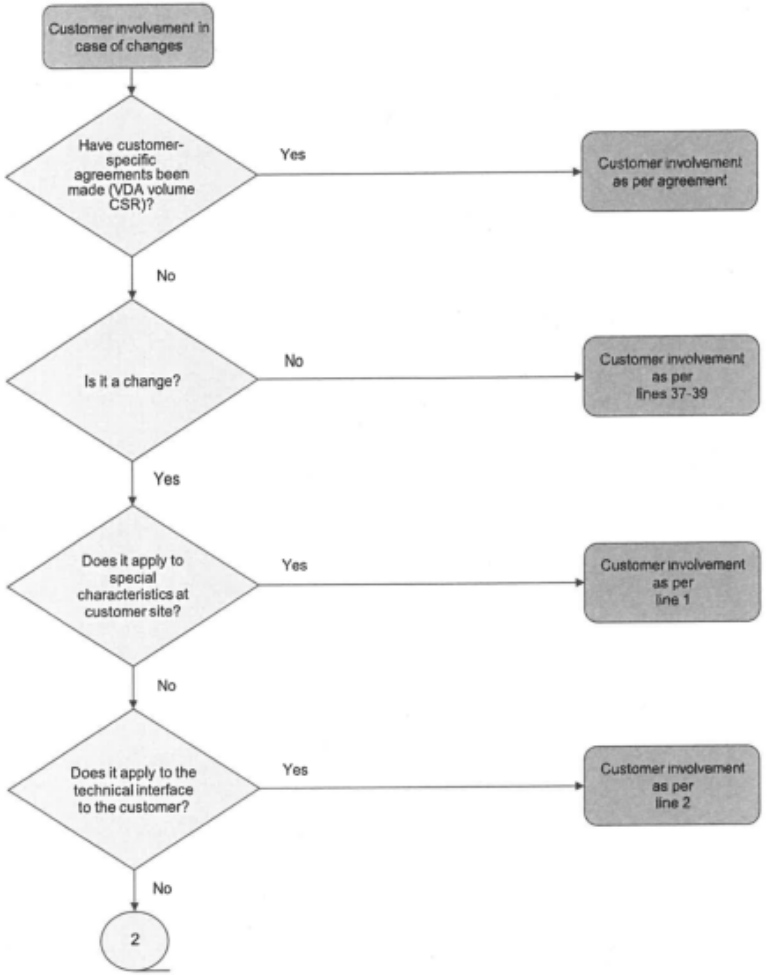
零件历史	组织	第 页 共 页

组织信息			客户信息		
装运地点		零件号	客户		零件号
生产地点		名称			名称
识别码/邓白氏号		图纸号			图纸号

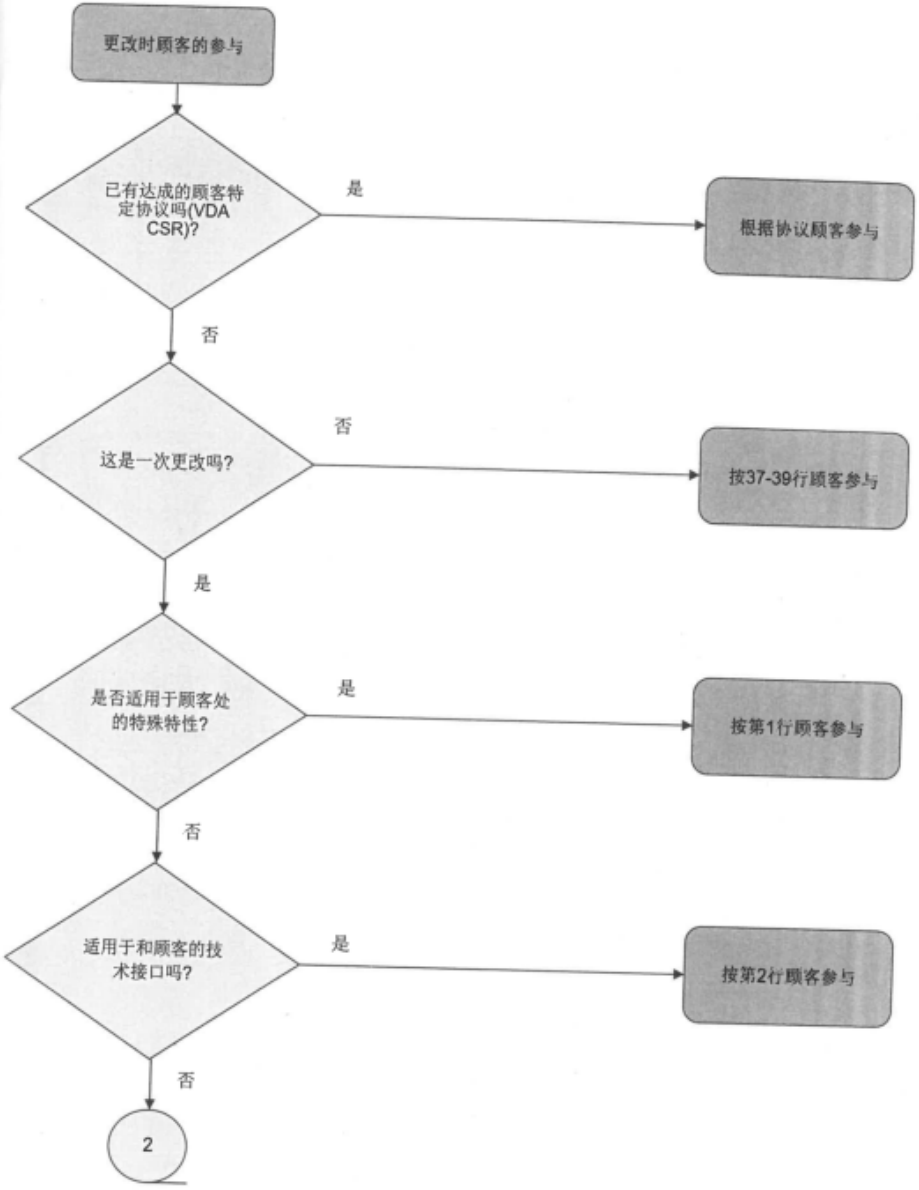
No.	组织版本号	组织的变更号	客户版本号	客户变更号	应用: 首次使用	应用: 产品变更	应用: 生产工艺变更	变更描述	批量生产日期	首次交货日期	交货标识	责任人	备注
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													

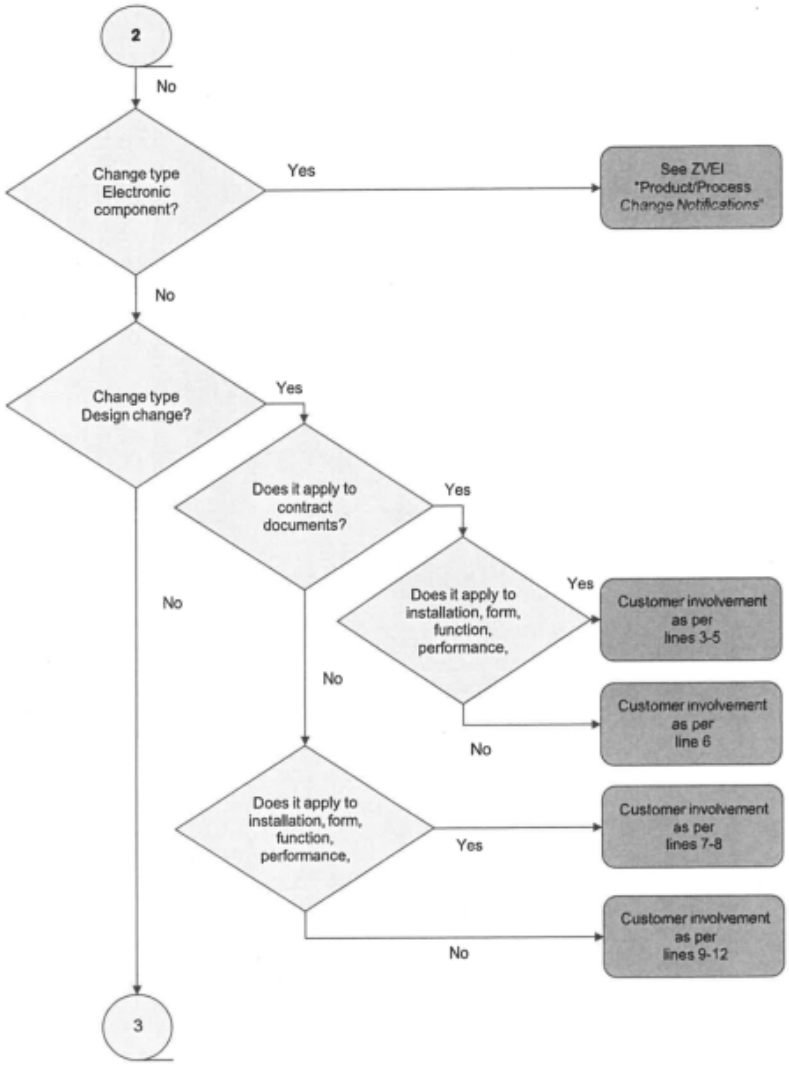
组织确认			
姓名		备注	
部门			
电话			
邮箱/传真			
日期		签名	

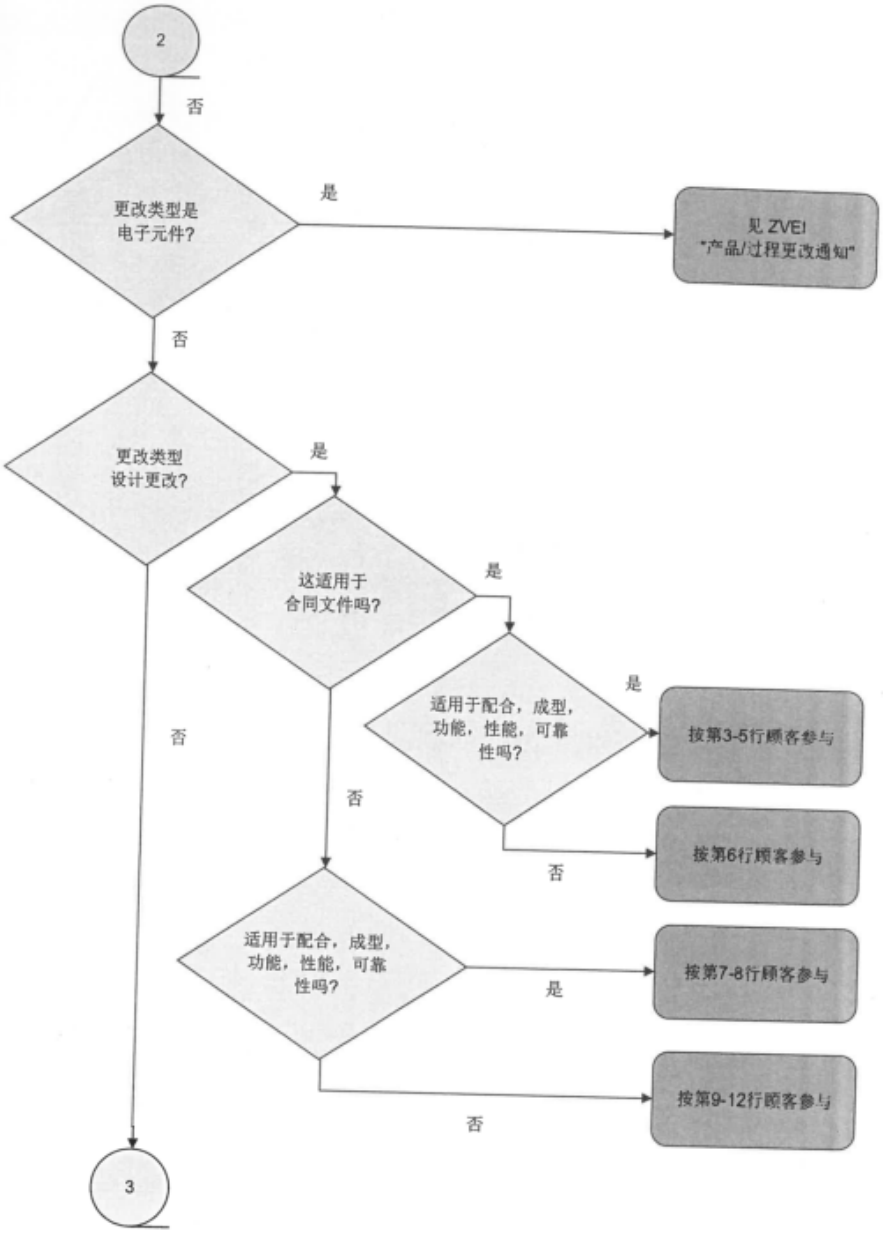
Appendix 7 – Explanation of the use of the Trigger Matrix

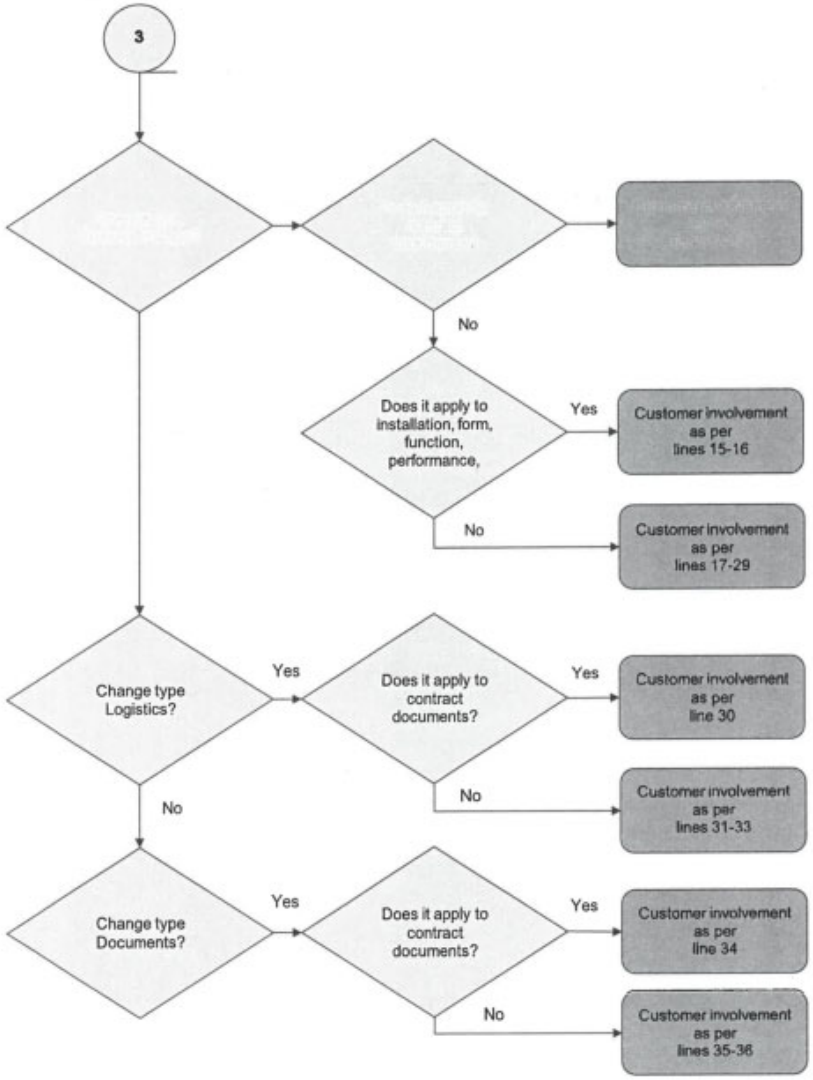


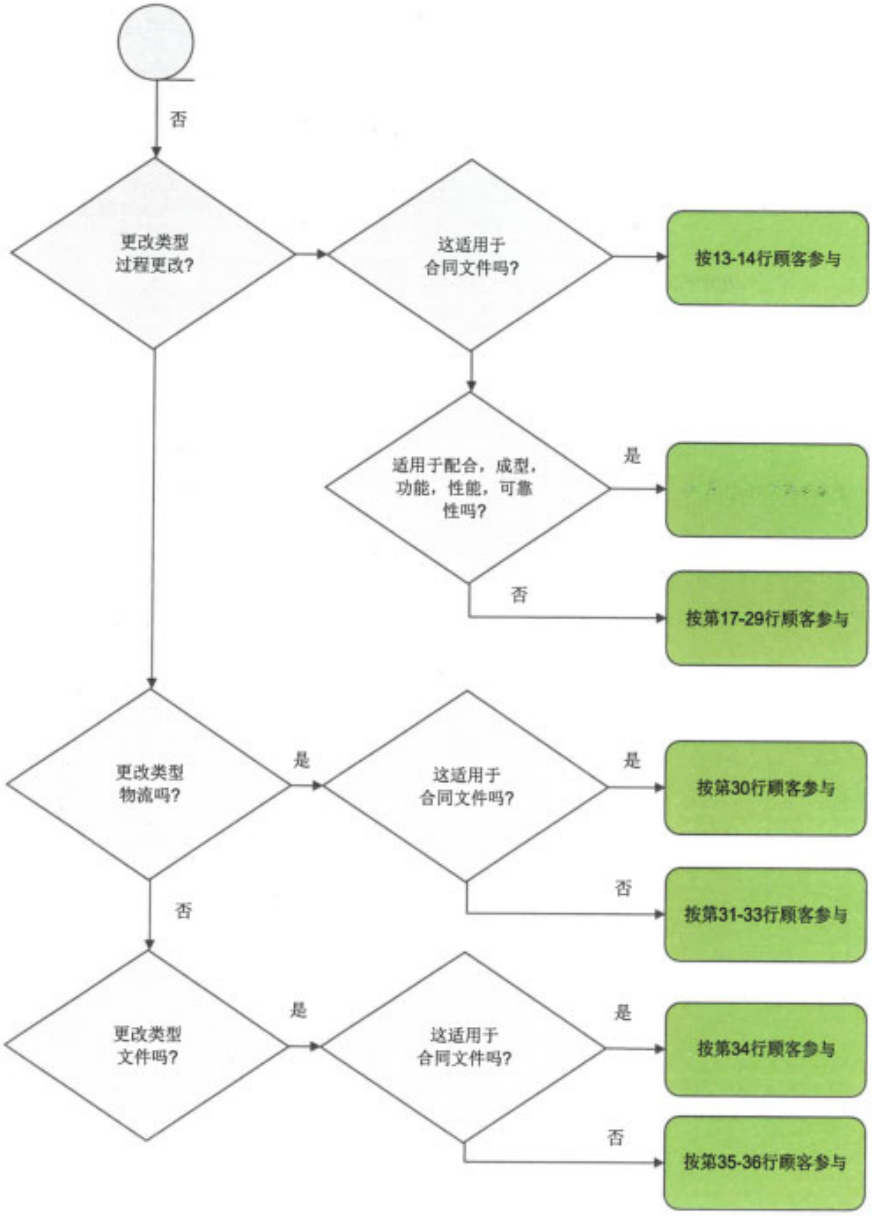
附录 7 – 使用触发矩阵的说明




2
No
Change type Electronic component?
Yes
See ZVEI "Product/Process Change Notifications"
No
Change type Design change?
Yes
Does it apply to contract documents?
Yes
Does it apply to installation, form, function, performance,
Yes
Customer involvement as per lines 3-5
No
Customer involvement as per line 6
No
Does it apply to installation, form, function, performance,
Yes
Customer involvement as per lines 7-8
No
Customer involvement as per lines 9-12
No
3


2
否
更改类型是电子元件?
是
见 ZVEI "产品/过程更改通知"
否
更改类型设计更改?
是
这适用于合同文件吗?
是
适用于配合，成型，功能，性能，可靠性吗?
是
按第3-5行顾客参与
否
按第6行顾客参与
否
适用于配合，成型，功能，性能，可靠性吗?
是
按第7-8行顾客参与
否
按第9-12行顾客参与
否
3


3
No
Does it apply to installation, form, function, performance,
Yes
Customer involvement as per lines 15-16
No
Customer involvement as per lines 17-29
Change type Logistics?
Yes
Does it apply to contract documents?
Yes
Customer involvement as per line 30
No
Customer involvement as per lines 31-33
No
Change type Documents?
Yes
Does it apply to contract documents?
Yes
Customer involvement as per line 34
No
Customer involvement as per lines 35-36


否
更改类型过程更改?
这适用于合同文件吗?
按13-14行顾客参与
适用于配合，成型，功能，性能，可靠性吗?
是
否
按第17-29行顾客参与
更改类型物流吗?
是
这适用于合同文件吗?
是
按第30行顾客参与
否
按第31-33行顾客参与
否
更改类型文件吗?
是
这适用于合同文件吗?
是
按第34行顾客参与
否
按第35-36行顾客参与

Appendix 8 - Trigger Matrix

1) Is it a change?	2) Does it apply to special characteristics at customer site?	3) Does it apply to the technical interface to the customer? (e.g. connection to customer component/assembly with respect to geometry, optics, haptics, functionality, software, etc.)	4) Change type?	5) Does it apply to contract documents (e.g. specification sheet, customer drawing, records, specifications,..)?*	6) Does it apply to installation, form, function, performance, reliability?	If customer-specific agreements have been made, they must be complied with!	Line
Y	Y	Y/N	All	Y/N	Y/N	Ch in the special characteristics of the product, component (electric/mechanical), production process, etc. specified with the customer, ...	A 1
	Y	Y	All	Y/N	Y/N	e.g. attachment to vehicle, electron. connections, electron. components, ...	A 2
		N	N	Electron. components (see ZVEI "Product/Process Change Notifications - Guideline for Automotive Electronic Components")			
			Des	Y	Y	e.g. Ch in design, tools, ...	A 3
						e.g. Ch in product software through (modified) functional software requirements	A 4
						e.g. Ch in product software through (modified) non-functional software requirements	I 5
					N	e.g. Ch in sealing material, Ch in an EMC capacitor, ...	A 6
				N	Y	e.g. Ch of dimension not contained in the customer drawing	A 7
						Ch of substance/material	A 8
					N	Ch in requirements of internal specs or tolerance change, outside of customer spec	A 9
						Ch in requirements of internal specs or tolerance change, still within customer spec	- 10
						Ch of name/designation of parts/materials with same composition	- 11
						Ch in roughing levels (e.g. pre-roughing dimension of a shaft, reception of wafers, ...)	- 12
				Y	Y/N	e.g. Ch in the process chain (including supplier, duplication of production lines, ...)	A 13
						e.g. Ch of test, test flow or other reasons, ...	A 14
				N	Y	e.g. Ch in curing parameters, injection temperature, ...	A 15
						e.g. Ch in the process chain (including supplier, duplication of production lines, ...)	A 16
					N	Manufacturing/Assembly: Ch in number of cavities in tool, follow-on/enhancement tools	I 17
						Manufacturing/Assembly: Duplication of prod. and test equipment within an existing line	I 18
						Manufacturing/Assembly: Procurement and use of a new machine type	I 19
						Manufacturing/Assembly: Ch to existing tool, new device, new poka-yoke	- 20
						Manufacturing/Assembly: Ch to process including roughing levels (as in no.12)	- 21
						Manufacturing/Assembly: Ch of setting parameters, operating equipment, injection temperature, ...	- 22
						Testing: Ch in test method, risk higher	NA
						Testing: Ch in test method, risk unchanged/lower, same process sequence	I 24
						Testing: Expansion of testing without method change (e.g. increase in samples)	- 25
						Testing: Reduction/elimination of test not relevant to customer (e.g. sampling)	- 26
						Production relocation: Tools from line to line, equivalent lines	- 27
						Production relocation: Relocation of facilities with mobile design to a production plant without changing process chain	- 28
						Production relocation: Location Ch: relocation of facilities, parallel prod. (not for roughing levels as in no.12)	A 29
			Doc. ch	Y		Ch of supplier, new second supplier, supplier changes subcontractor	A 30
				N		New forwarder or ESP, SLC	I 31
						Packaging at customer site, shipping, invoicing	A 32
						Internal packaging (e.g. plant-plant, in-house, ...) and sub-suppliers	- 33
				Y	Y/N	Document adaptation to condition of approved product	A 34
				N		Doc. adaptation to condition of approved product or correction of formal errors	- 35
						Ch in non-product-related documents (e.g. work instructions, ...)	- 36
N	Reuse of lines, facilities, machines, tools, cavities, and molds after a standstill of 12 months or more**						A 37
	Maintenance/servicing of existing tools, tools subject to rapid wear (e.g. lathe tools, honing mandrels)						- 38
	Replacement of identical or functionally equivalent machine, replacement of identical test equipment						- 39

The table must be edited in the direction of the arrow

Y Yes
N No
NA Not allowed
- Customer involvement not required
I Customer must be informed. In accordance with IATF 16949, the customer must be granted a term of 2 weeks to provide a statement.
A Customer agreement required, execution of PPA process
Ch Change
ESP External service provider
SLC Supplier logistics center (also applies to warehousing)
* or other authorized series production documents made available to the customer (e.g. proposal drawing, control plan)
** No consent of the customer is required for recommissioning; all PPA-relevant activities must be carried out according to an A

附录 8 – 触发矩阵

1) 这是更改吗?	2) 这是否适用于针对顾客的特殊特性?	3)适用于和顾客的技术接口吗?(如：连接到顾客的几何、光学、触觉、功能、软件等方面的元件/总成。)	4) 更改类型?	5)其是否适用于合同文件(如：规格表单、顾客图纸、记录、规范,...)?*	6) 其是否适用于配合，成型，功能，性能，可靠性?	如果有与顾客达成的特定协议，则必须遵守!	行数
Y	Y	Y/N		Y/N	Y/N	在产品、元器件(电气/机械)、生产过程特殊特性等方面与顾客约定，.....	A 1
	Y	全部		Y/N	Y/N	如，车辆附件、电子连接器、电子元件...	A 2
		N	N	电子元器件(见ZVEI《产品/过程更改通知-汽车电子元器件指南》)			
			..	Y	Y	如，设计、工装的更改 ...	A 3
						如，通过(更改的)功能软件要求，对产品软件进行更改	A 4
						如，通过(更改的)非功能软件要求，对产品软件进行更改	I 5
					N	如，密封材料更改，EMC电容器的更改， ...	A 6
				N	Y	如，顾客图纸中未包含的尺寸更改	A 7
						物质/材料的更改	A 8
					N	内部偏差或公差要求的更改，超出顾客规范	A 9
						内部偏差或公差要求的更改，仍在顾客规范内	- 10
						具有相同成分的零件/材料的名字/名称的更改	- 11
						在粗加工阶段的更改(例如，轴的粗加工尺寸，晶圆的接收，...)	- 12
				Y	Y/N	如，过程链的更改(包括供方，复制的生产线，...)	A 13
						如，检测、检测流程或其他原因的更改，...	A 14
				N	Y	如，固化参数，注射温度等的更改...	A 15
						如，过程链的更改(包括供方，复制的生产线，...)	A 16
					N	制造 / 装配: 工具的空腔数更改，后续/增强的工具	I 17
						制造 / 装配: 在现有生产线中复制生产和检测设备	I 18
						制造 / 装配: 采购和使用一种新型机器	I 19
						制造 / 装配: 对现有的工具更改，新装置，新功能	- 20
						制造 / 装配: 更改过程，包括粗加工阶段(如第12行)	- 21
						制造 / 装配: 参数设置、操作设备、注射温度等的更改... ...	- 22
						检测: 检测方法中的更改，风险较高	NA
						检测: 检测方法更改，风险不变/较低，相同的过程顺序	I 24
						检测: 在不改变方法的情况下扩大检测范围(例如增加样本)	- 25
						检测: 减少/取消与顾客无关的检测(例如抽样)	- 26
						生产重新布局: 工具从一条生产线转移到另一条生产线，等效生产线	- 27
						生产重新布局: 在不改变过程链的情况下，在生产工厂内搬迁具有可移动设计的设施	- 28
						生产重新布局: 场所更改，平行生产的设施重新布局(不适用12行的粗化水平)	A 29
			物流	Y	Y/N	供方更改，新第二供方，供方更改分供方	A 30
				N	Y/N	新的货运代理或ESP, SLC	I 31
					Y/N	面向顾客的包装，运输，开发票	A 32
					Y/N	内部包装(如工厂-工厂，内部，...)和下级供方	- 33
			文件更改	Y	Y/N	已批准产品状态的文件的改编	A 34
				N	Y/N	已批准产品状态或纠正正式错误的文件的改编	- 35
						与产品无关的文件的更改(如作业指导书，...)	- 36
N	停机12个月或以上后，生产线、设施、机器、工具、模穴和模具的再次使用**						A 37
	维护/保养现有工具、易磨损工具(如车刀、珩磨芯轴)						- 38
	更换相同或功能相同的机器，更换相同的检测设备						- 39

该表格必须按照箭头的方向编辑

Y 是
N 否
NA 不允许
- 不需要顾客参与(注意，PPA文件必须在内部存档)
I 必须通知顾客。根据 IATF16949，顾客必须被授予2周的期限来提供一份声明。
A 顾客协议的要求，执行PPA程序。
Ch 更改
ESP 外部服务供方
SLC 供方物流中心(也适用于仓库)
* 或提供给顾客的其他经授权的批量生产文件(如方案图、控制计划)
** 重新使用不需要顾客同意; 所有与PPA相关的活动必须按照A执行

Appendix 9 – Comparison PPA ⇔ PPAP

VDA No.	Deliverables insofar as it is applicable to the product	AIAG No.
0.1	Cover sheet for PPA report and PPA evaluation	18
0.2	Self-assessment for product, production process, and if appl. software	–
1. Deliverables of the product development		
1.1	Technical specifications	1
1.2	Approved design changes	2
1.3	Design, development approvals	3
1.4	Material data via IMDS	1.1
1.5	Design FMEA	4
2. Deliverables of the production process development		
2.1	Process flowchart	5
2.2	Process FMEA	6
2.3	Control Plan (CP)	7

Appendix 9 – Comparison PPA ⇔ PPAP

VDA 编号	适用于产品的输出	AIAG 编号
0.1	PPA 报告的封面和PPA评价	18
0.2	对产品、生产过程和适用时，软件的自我评估	–
1.产品开发的输出		
1.1	技术规范	1
1.2	批准的设计更改	2
1.3	设计、开发批准	3
1.4	通过 IMDS 获取的材料数据	1.1
1.5	设计 FMEA	4
2. 生产过程开发的输出		
2.1	过程流程图	5
2.2	过程 FMEA	6
2.3	控制计划 （CP）	7

VDA No.	Deliverables insofar as it is applicable to the product	AIAG No.
3. Deliverables of the product verification		
3.1	**Geometry, measurements**	9
3.2	Material (strength, physical properties, etc.)	10
3.3	Function	10
3.4	Haptics	–
3.5	Acoustics	–
3.6	Odor	–
3.7	Appearance	13
3.8	Surface requirement	–
3.9	Technical cleanliness	–
3.10	Reliability	–
3.11	Resistance to electrostatic discharge (ESD)	–
3.12	Electrical safety / high-voltage safety	–
3.13	Electromagnetic compatibility (EMC)	–

VDA 编号	适用于产品的输出	AIAG 编号
3.产品验证的输出		
3.1	几何属性，测量结果	**9**
3.2	材料（强度、物理性能等）	10
3.3	功能	10
3.4	触觉特性	–
3.5	声学特性	–
3.6	气味	–
3.7	外观	13
3.8	表面要求	–
3.9	技术清洁度	–
3.10	可靠性	–
3.11	静电释放 （ESD）	–
3.12	电气安全/高压安全	–
3.13	电磁兼容性 （EMC）	–

VDA No.	Deliverables insofar as it is applicable to the product	AIAG No.
4. Deliverables of the production process validation		
4.1	Assurance of Special Characteristics according to technical specifications and agreed characteristics (e.g. poka-yoke, 100% inspection, process capabilities, etc.)	11
4.2	Laboratory qualification	12
4.3	Samples incl. labeling (e.g. identification of series, production lot etc. that allow conclusions to be made about the documentation accompanying production)	14
4.4	Master sample	15
4.5	Production capacity	–
4.6	Tools	–
5. General deliverables		
5.1	Evidende of compliance with legal requirements	–
5.2	PPA status of supply chain	–
5.3	Test equipment list for product and production process	16
5.4	Measurement equipment analysis studies for product and production process	8
5.5	Part history	–
5.6	Evidence of suitability of the employed load carriers including storage	–
5.7	Documentation of the agreements regarding the diagnosis and analysis process	–
5.8	Documentation of the agreements regarding Layout inspection and functional testing	–
5.9	Other	17

VDA 编号	适用于产品的输出	AIAG 编号
4.生产过程确认的输出		
4.1	根据技术规范和约定的特性保证特殊特性（如：防错、100% 检验、过程能力等。）	11
4.2	实验室资质	12
4.3	样件，包括标签 （如：系列标识、生产批次等，以便对伴随生产的文件得出结论）	14
4.4	标准样件	15
4.5	产能	–
4.6	工具	–
5. 一般的输出		
5.1	符合法律要求的证明	–
5.2	供应链PPA状态	–
5.3	产品和生产过程的检测设备清单	16
5.4	产品和生产过程的测量设备的分析研究	8
5.5	零件历史	–
5.6	使用的承载器具，包括仓储，的适宜性证据	–
5.7	关于诊断和分析过程的协议文件	–
5.8	关于全尺寸检验和功能测试的协议文件	–
5.9	其他	17

VDA No.	Deliverables insofar as it is applicable to the product	AIAG No.
6. Deliverables for software		
6.1	SW release (e.g. Appendix 5 "Cover Sheet PPA software)	–
6.2	Definition of the scope of the SW product	–
6.3	Reference to contractually stipulated quality require-ments	–
6.4	Documentation of technical SW specifications (functional and non-functional)	–
6.5	Implementation of the requirements from 6.3 and 6.4, especially the Special Characteristics	–
6.6	Documentation about FOSS (free and open-source software)	–
6.7	List of known errors	–
6.8	Documentation of development tools	–
6.9	Documentation of test tools	–
6.10	Documentation of version management	–
6.11	Documentation of a process evaluation (e.g. Automotive SPICE®)	–

VDA 编号	适用于产品的输出	AIAG 编号
6. 软件的输出		
6.1	软件放行 （如：附录 5 "PPA 软件封面）	–
6.2	定义软件产品的范围	–
6.3	参照合同规定的质量要求	–
6.4	技术性软件规范文件（功能性和非功能性）	–
6.5	执行 6.3 和 6.4 的要求，尤其是特殊特性	–
6.6	FOSS 文件 （免费和开源软件）	–
6.7	已知错误列表	–
6.8	开发工具的文档	–
6.9	检测工具的文档	–
6.10	版本管理文件	–
6.11	过程评估文件 （如： 汽车 SPICE®）	–

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