

Quality Assurance Guideline

for Suppliers QSL

Mandatory Agreement

Mass Production Products (Version 06/2004)



BOSCH

Invented for life



Quality Assurance Guideline for Suppliers QSL (Quality Assurance Agreement)

Mass Production Products (Version 06/2004)
Mandatory Agreement

Robert Bosch GmbH

Robert-Bosch-Platz 1
70839 Gerlingen
GERMANY

referred to as **“Bosch”**
and Supplier
(Address see company stamp on page 7)
referred to as **“Supplier”**

Contents:

	Preamble	4
1	Supplier’s Quality Management System	4
2	Subsupplier’s Quality Management System	4
3	Audits	4
4	Information and Documentation	4
5	Agreements on Product History Documentation	5
5.1	Development, Planning and Release	5
5.2	Mass Production, Product Identification and Traceability	5
5.3	Delivery, Incoming Inspection	6
5.4	Complaints, Corrective Actions	6
6	Quality Targets	6
7	Environmental Protection	6
8	Final Terms	7

Preamble

This Agreement is an integral part of the delivery agreement with **Bosch**. It shall apply correspondingly to the business relation between the **Supplier** and companies within the **Bosch** Group.

The subject of this Agreement is all products delivered by the **Supplier**.

This Quality Assurance Agreement consists of mandatory requirements for the **Supplier**. Individual quality assurance activities will be agreed by the **Bosch** business divisions or plants and the **Supplier** in an Individual Quality Agreement.

1 Supplier's Quality Management System

The **Supplier** agrees to introduce and maintain a quality management system based on the International Standards ISO 9000 ff. with the obligation to set a zero-defect goal and to continuously improve his performance.

In addition, sector-specific requirements (e.g. ISO/TS 16949) of the individual **Bosch** divisions apply for the quality management system (also refer to § 1 Individual Agreement).

2 Subsupplier's Quality Management System

The **Supplier** also requires his sub-suppliers to introduce and maintain a quality management system based on the International Standards ISO 9000 ff. with the obligation also for sub-suppliers to also set a zero-defect goal and to continuously improve their performance.

Bosch may demand documented evidence from the **Supplier** showing the effectiveness of the quality management system utilized by his sub-suppliers.

In the event quality problems should arise, the **Supplier** shall enable **Bosch** to conduct an audit at his sub-suppliers.

3 Audits

The **Supplier** shall authorize **Bosch** to determine through audits whether his quality assurance activities meet the requirements of **Bosch**.

After advance notification, an audit can be conducted as a system, process or product audit (also refer to § 4 Individual Agreement). The **Supplier** shall support even short-term audit date requests.

The **Supplier** shall grant **Bosch** – and its customers, to the extent necessary – access to all plant areas, test departments, warehouses and adjoining areas, as well as access to quality-relevant documents. Reasonable restrictions imposed by the **Supplier** to safeguard business secrets will be accepted.

Bosch shall communicate the result of this audit to the **Supplier**. If **Bosch** considers corrective actions to be needed, then the **Supplier** agrees to immediately prepare an action plan and implement it on schedule. The **Supplier** shall notify **Bosch** of all progress made.

4 Information and Documentation

If it becomes evident that agreements reached such as quality characteristics, schedules or delivered quantities cannot be met, the **Supplier** shall notify **Bosch** immediately. The **Supplier** shall also notify **Bosch** immediately of any deviations detected after delivery. To support a rapid solution, the **Supplier** shall disclose all necessary data and facts.

The **Supplier** agrees to seek approval of **Bosch** prior to

- ▶ changing the production methods, sequence and materials (also at sub-suppliers)
- ▶ changing of sub-suppliers
- ▶ changing test methods/equipment
- ▶ relocating production sites
- ▶ relocating production equipment at the same site

and to furnish the quality documentation agreed upon in this connection.

The first three deliveries to each **Bosch** site after SOP and after changes listed above must be identified in the delivery papers/packaging slips (also refer to § 2 Individual Agreement).

All changes made on the product and in the process chain shall be documented by the **Supplier** in a product history, and shall be submitted to **Bosch** upon request.

The **Supplier** must have procedures for control of documents and data, and shall implement them effectively. This includes documents of external origin, such as standards and customer drawings, to the extent needed.

Documents must be retained for at least 7 years. Documents with special archiving must be retained for at least 15 years.

Records of incoming inspection (concerning purchased parts and other raw materials from subsuppliers), reliability and endurance testing, end of line testing and defect analysis, if applicable, must be retained by the **Supplier** at least 24 months. The **Supplier** shall grant **Bosch** the right to inspect records upon request. In individual cases, **Bosch** may require a longer retention period.

5 Agreements on Product History Documentation

5.1 Development, Planning and Release

If the order placed with the **Supplier** includes development tasks, the requirements shall be set forth in writing by the signing parties to the Agreement, e.g. in the form of specifications. The **Supplier** agrees to conduct project management starting with the planning phase of products, processes and other cross functional tasks in the form of quality management plans, and to grant **Bosch** the right of inspection upon request.

During contract review, the **Supplier** shall examine all technical documentation, such as specifications, drawings, parts lists, CAD data, for feasibility upon receipt; the **Supplier** shall notify **Bosch** promptly of any defects and risks as well as improvement possibilities identified.

During the development phase the **Supplier** shall apply suitable preventive methods of quality planning, such as a manufacturing feasibility analysis, reliability studies, FMEA, etc. The

Supplier shall take into account experience (process flows, process data, capability studies, etc.) from similar projects.

Characteristics with special archiving requirements shall be determined by **Bosch** and the **Supplier**.

The **Supplier** shall coordinate and document the manufacturing and test conditions with **Bosch** for prototypes and pre-production parts. The goal is to build prototypes and pre-production parts under conditions similar to mass production.

For all characteristics the **Supplier** shall perform process planning (work plans, test plans, operating supplies, tooling, machinery, etc.). For function and process critical characteristics the **Supplier** shall review the suitability of the manufacturing facilities according to statistical criteria and shall document the results. Product quality is monitored with periodic audits.

Prior to starting mass production, the **Supplier** shall submit initial samples of the product built under mass production conditions in agreed quantities and on schedule (also refer to § 5.2 Individual Agreement). Mass production may not be started until it is released by **Bosch**.

5.2 Mass Production, Product Identification and Traceability

In the case of process disruptions and quality deviations, the **Supplier** shall analyze the causes, shall initiate improvement measures and review their effectiveness.

If, in exceptional cases, the **Supplier** is unable to supply products conforming to the specification, he must obtain a concession from **Bosch** prior to delivery (also refer to § 5 Individual Agreement).

The **Supplier** agrees to implement comments and ideas from **Bosch** to improve product quality by modifying production and quality assurance activities, to the extent possible.

The **Supplier** agrees to identify the products, parts and the packaging in accordance with

agreements reached with **Bosch**. He must ensure that identification of the packaged products will also remain legible during shipping and storage.

The **Supplier** agrees to ensure the traceability of the products supplied by him. Measures must be instituted to ensure that if a defect is detected, the defective parts/products/batches, etc., are traceable and contained.

If **Bosch** makes production and test equipment available to the **Supplier**, especially equipment and fixtures related to deliveries, then they must be labeled as **Bosch** property. The **Supplier** is responsible for protecting this property from damage and ensuring proper function, maintenance and repair.

5.3 Delivery, Incoming Inspection

The **Supplier** shall deliver products in suitable shipping containers – approved by **Bosch** if this was agreed – in order to prevent damage and quality impairments, e.g. contamination, corrosion, chemical reactions (also refer to § 2 Individual Agreement).

Bosch shall limit incoming inspection to externally apparent shipping damage and to confirmation of the quantity and part number of the ordered products, at least according to the shipping papers. Discrepancies are reported without delay.

The **Supplier** must adapt his quality management system and his quality assurance activities to this limited incoming inspection.

5.4 Complaints, Corrective Actions

The delivered products are inspected by **Bosch** in the normal course of business, and the **Supplier** shall be notified promptly of any defects detected in the process. To this extent the **Supplier** waives his objection to a delayed notification of defect.

The **Supplier** then analyzes the defects without delay, with support from **Bosch** to the extent necessary and possible.

Agreed quantities of the defective parts shall be returned to the **Supplier**. He agrees to analyze each deviation and to notify **Bosch** promptly of the cause of the deviation, initiated corrective and preventive measures, as well as their effectiveness (also refer to § 5.1 and § 5.4 Individual Agreement).

If the supply of components not conforming to specifications should threaten to cause a production interruption at **Bosch** or its customers, the **Supplier**, in consultation with **Bosch**, must seek a remedy through suitable immediate actions for which the **Supplier** is responsible (substitute deliveries, sorting, rework, special shifts, rush shipment, etc.).

6 Quality Targets

The **Supplier** is committed in the same way as **Bosch** towards its customers to the zero-defect goal in business with **Bosch**. If the zero-defect goal is not attainable in the short term, **Bosch**, together with the **Supplier**, shall set temporary upper limits for defect rates as an interim goal. The **Supplier** shall propose and agree with **Bosch** on improvement actions. If the defect rate is below the upper limit, this does not release the **Supplier** from his responsibility to process all complaints and to proceed with continuous improvement activities.

The **Supplier's** liability for defects or compensation claims due to defective deliveries is not affected by this Agreement.

7 Environmental Protection

The **Supplier** commits himself to comply with all legal regulations regarding the environment, health and occupational safety, and to strive to avoid all negative effects on humans and environment by an adequate organization and realization of environmental protection in the company. For this, the implementation and further development of an Environmental Management System (EMS) according to ISO 14001 is expected. The Bosch Standard N 2580 "Prohibition and Declaration of Substances" (Internet: www.bosch.com) is part of each delivery agreement.

Bosch reserves the right to assess the level of implementation in the course of audits (also refer to § 3).

8 Final Terms

Modifications and additions to this Agreement must be made in writing.

If terms of this Agreement should be entirely or partially invalid, then the applicability of the

remaining terms is not affected; in this case, the partners will agree on applicable terms that as closely as possible fulfill the commercial intent of the invalid terms. This also applies accordingly to possible omissions.

This Agreement is subject to German law excluding the rules on conflicts of laws. Place of jurisdiction is Stuttgart.

Stuttgart, 30 June 2006

Gerlingen, 1 March 2007

City _____

Date _____



Robert Bosch GmbH
Dr. E. Hellwig
Senior Vice President
Robert Bosch GmbH
Corporate Quality Management



Robert Bosch GmbH
Dr. K. Nowak
President
Corporate Sector Purchasing
and Logistics

Supplier
Company stamp

Robert Bosch GmbH
Corporate Department
Quality Management
Postfach 30 02 20
70442 Stuttgart
GERMANY

Robert Bosch GmbH
Corporate Sector Purchasing
and Logistics
Postfach 10 60 50
70049 Stuttgart
GERMANY