ON Semiconductor

ON Semiconductor Quality Profile

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Products: Semiconductors:

Web Page Address: www.onsemi.com

Leadership

Keith Jackson, President & Chief Executive Officer
Bill George, Senior Vice President & Chief Manufacturing Officer
Donald Colvin, Senior Vice President, Chief Financial Officer & Treasurer
William R. Bradford, Senior Vice President, Sales & Marketing
Keenan Evans, Vice President & Director of Quality

Quality Policy **"We will exceed Customer Expectations with our Superior Products and Services"**

Quality Statement *"Every ON employee is personally responsible for ensuring the highest Quality in the products and services delivered to internal and external customers. Continuous improvement in the quality of our processes, products and service is fundamental to the achievement of customer satisfaction."*

ON Semiconductor

1.0 Business Information:

1.1 Company status; Public, With a Total of 46 years (5.5 as ON) remainder as a part of Motorola SPS.
1.2 Company Size; Medium Size With approximately 7,200 employees.
1.3 Multiple facilities;

Locations	Americas	EMEA	Asia Pacific
Design Operations	Arizona- Phoenix & Chandler	France-Grenoble & Toulouse	China- Hong Kong & Shanghai
	Rhode Island	Czech Republic-Roznov	
Manufacturing	Arizona	Czech Republic	China
		Slovakia	Japan
			Malaysia
			Philippine

2.0 Certifications

2.1 Quality System; registrar & certificate number
LRQA QS & ISO9001:2000

TS16949:2002 certificate # 111880

2.2 Safety/Regulatory
UL QVGQ2.E210057 Isolated Loop Circuit Protectors - Component

2.3 Environmental
All manufacturing sites are certified to ISO 14001.

3.0 Safety Program

3.1 Hearing conservation program, respiratory protection program, laser program, RF program, ionizing radiation program, PPE program, ladder safety, fall protection, asbestos safety, confined space program, lock out tag out program, electrical safety, laboratory safety program, hazard communication program.

4.0 Product Portfolio

4.1 Main product lines:
4.1.1 Power management and standard analog integrated circuits (amplifiers, voltage references, interfaces and comparators)
4.1.2 High-performance logic (application specific products, communication integrated circuits, clocks, translators and drivers)
4.1.3 Standard semiconductors that include active discrete and MOSFET devices

5.0 Customers

5.1 ON Semiconductor sells its semiconductors to customers around the world including original equipment manufacturers, such as Alcatel, Cisco Systems, DaimlerChrysler, Delphi, Huawei, Motorola, Sony, Sun Microsystems and Visteon; electronic manufacturing service providers, such as Celestica, Flextronics, SCI and Solectron; and global distributors, such as Arrow, Avnet and Future Electronics.

6.0 International Joint Ventures

6.1 Leshan, China

7.0 Preferred Shipper

7.1 Exel
7.2 UPS Custom Brokerage
7.3 Schenker
7.4 NNR
7.5 FedEx

ON Semiconductor

QUALITY ASSURANCE SURVEY

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Section 1: Quality System Management Commitment

1.1 Management has a defined, documented, and communicated company quality objectives

- Company quality objectives are documented, signed and dated.
- Quality objectives are committed to continuous quality improvements.
- Quality objectives are communicated, understood and maintained throughout the organization.
- Quality objectives are regularly reviewed and revised by management
- Achievement of quality objectives is a high priority in overall performance reviews.

1.2 Management defines the organizational structure which supports the quality system

- Organizational charts exists which reflects the current reporting structure.
- Job descriptions include responsibilities for supporting quality objectives.
- Qualified technical personnel are available for design, process, product and service support.
- Cross-functional teams are used in the quality planning process.
- There is management support with defined authority and responsibility for meeting customer requirements

1.3 Management ensures internal quality audits are performed and corrective actions implemented.

- Internal audits are conducted or scheduled on the basis of status and importance of activity.
- There is a documented procedure for conducting internal quality audits.
- Internal audit results are documented and brought to the attention of management.
- Corrective actions are recorded and evaluated for effectiveness
- Internal audits evaluate effectiveness of activity as well as conformance to procedures.

1.4 Management provides a comprehensive training program to all employees.

- Training program exists for training at all levels of the organization in quality philosophies and techniques.
- Records are kept, by individual, that indicate type and extent of training
- Qualification for jobs includes identification of appropriate education, training needs and experience.
- Training effectiveness is periodically evaluated.
- Refresher courses are available as required.

1.5 Continuous Improvement goals

- We select and drive our improvement activities through management by fact and data, i.e.,
- Scrap yield improvement activities
- PPM reduction activities
- Customer incident reduction/corrective action activities
- Cycle time reduction in reliability/failure analysis labs
- Achieving cycle time efficiency in New Product development activities.

1.6 Quality Improvement Program

- We have a Process Architecture team that is responsible for ensuring ON Semiconductor's core business process efficiency/viability and managing change. Based on our strategic agenda and other criteria, senior management selects the target processes to focus on. The Process Architecture team members are the 'stewards' of process.
- ON Semiconductor has a Process Based Quality System.

Section 2: Quality System Overview

2.1 The Quality System

- The Quality System has been developed which detail policies, procedures and acceptable standards.
- Written procedures and instructions define the methods of performing work-affecting quality.
- The Quality System is regularly reviewed, revised and communicated throughout the organization.
- All employees are aware of and have access to the Quality Policy and Quality System documentation.

2.2 Procedures designed to record and document customer orders (contracts)

- Procedures for documenting and reviewing order requirements identified during customer communications are established to ensure that:
- Customer requirements and expectations are communicated clearly and accurately with all appropriate areas.
- Any requirements differing from those in the quote/order are addressed.
- Capability to meet these requirements is verified.
- All records are completed and are maintained

2.3 Corrective Action Program maintained to eliminate the root causes of non-conformances

- Written Corrective Actions procedures address:
- Analyzing data to determine root cause of non-conformance
- Documenting and reporting corrective actions
- Non-conformance reports (e.g. product quality deviation, audit results, quality records etc.) are used to develop preventive actions.
- ON Semiconductor uses a disciplined problem solving methodology, (i.e. 8D)
- Returned product from customer is analyzed and corrective actions initiated as appropriate.
- A historical database is maintained for all corrective actions.

2.4 Cost of Quality

- Monitoring of the production performance as well as the cost of non-standard operations in other areas.
- Data are analyzed and used to drive process improvement plans
- The results are consolidated and reviewed at corporate level through all management levels

Section 3: Design and Document Control

3.1 Planning, documenting, and assigning responsibility for design and development activities for new products.

- Functional responsibilities are defined and documented.
- Project plans and objectives are reviewed, revised and communicated.
- Formal documented design reviews are conducted.
- Design FMEAs are utilized in our New Product development process
- During the Initial Design Review activity of the Feasibility phase we will obtain recommendations from equipment and material suppliers regarding new designs.

3.2 Controlled documentation procedures.

- Written procedures have been developed and implemented for controlling design and document control.
- Procedures address the handling of obsolete documents.
- A readily available master list (WWCM) identifies the current revision status of all documents to preclude the use of invalid and/or obsolete documents.
- Currently released editions of these documents are readily available on-site to the appropriate Business Division, Manufacturing and Support Organizations
- Procedures are periodically reviewed in accordance with continuous quality improvement goals.
- Document historic revisions are maintained.

3.3 Quality records are kept and easily accessible.

- Quality documentation is retained and easily accessible to verify the achievement of required quality and the effective operation of the quality system.
- Written procedures document types of records to be retained and the specific length of time required.
- Timely and periodic purging of the file system takes place to keep record keeping system up to date with current information.

3.4 Customer Notification of Product/Process Changes

- Customers will be informed about product/process changes in two stages of communication.
  - Initial Product/Process Change Notification (IPCN) is the first, formal notification distributed to customers at least 120 days from the effective date of the change.
  - Final Product/Process Change Notification (FPCN) completes the notification process and will be distributed at least 60 days from the effective date of the change.
- Customers will be notified any major change which will affect the Form, Fit, Specified Function or Reliability of the end product.
- Notifications will include qualification plans, reliability test results, or other appropriate evaluations, which demonstrates continued design compliance.

Section 4: Manufacturing

4.1 Processes are documented and quality procedures have been developed and implemented.