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QUALITY POLICY

Renesas Electronics Group

Quality Policy

We aim to deliver customer satisfaction and enhance society by providing highly reliable and high-quality products and services.

We abide by the following principles in all stages of our business activities—including sales, design, development and manufacturing—in accordance with our corporate quality management system. We will:

- Comply with all applicable legal and regulatory requirements
- Enhance product safety and trust
- Commit to continuously improve the quality of products and services
- Strive to continually improve our quality management system
### COMPANY PROFILE

<table>
<thead>
<tr>
<th><strong>Company Name</strong></th>
<th>Renesas Electronics Corporation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Headquarters</strong></td>
<td>TOYOSU FORESIA, 3-2-24 Toyosu, Koto-ku, Tokyo 135-0061, Japan</td>
</tr>
<tr>
<td><strong>Capital Stock</strong></td>
<td>10 billion yen</td>
</tr>
<tr>
<td><strong>Established</strong></td>
<td>November 1, 2002 (Started Operation on April 1, 2010)</td>
</tr>
<tr>
<td><strong>Major Operations</strong></td>
<td>Research, development, design, manufacture, sale, and servicing of semiconductor products</td>
</tr>
<tr>
<td><strong>Employee</strong></td>
<td>21,190 (Consolidated, as of March 31, 2019)</td>
</tr>
</tbody>
</table>
| **Representative Director** | Tetsuya Tsurumaru, Representative Director, Chairman  
Hidetoshi Shibata, Representative Director, President and CEO |
| **Stock Code** | Tokyo Stock Exchange, First Section (Since July 24, 2003, TSE:6723) |
| **Website** | www.renesas.com |
RENESAS GROUP CORPORATE VISION AND MISSION

VISION

Renesas creates leading semiconductor solutions that spark innovation for a connected world, building a trusted brand we can be proud of.

MISSION

1. Drive progress toward a safer, healthier, greener, and smarter world.
2. Deliver creative semiconductor solutions and support that meet and exceed customer expectations.
3. Strengthen our offering to customers in focus segments through strategic partnerships, alliances and acquisitions.
4. Develop a global culture that encourages open communication, collaboration, and respect for diversity.
5. Seek continuous improvement in everything we do.
LEADERSHIP AND ORGANIZATION STRUCTURE
EFFECTIVE JULY 1, 2019

Tetsuya Tsurumaru
Representative Director, Chairman

Hidetoshi Shibata
Representative Director, President and CEO

Outside Director: Tetsuro Toyoda, Jiro Iwasaki, Kyoko Okumiya, Yukiko Nakagawa
Outside Corporate Auditor: Kazuki Fukuda, Kazuyoshi Yamazaki (part-time), Noboru Yamamoto (part-time), Takeshi Sekine (part-time)

Automotive Solution Business

Shingo Yamamoto
EVP

Olav Schulte
SVP *1

Shinichiro Yoshioka
SVP

Hirotaka Yamanami
EVP
Organization Development

Manabu Kawashima
EVP
Supply Chain Management

Masahiko Nozaki
EVP
Production and Technology

Tomomitsu Maoka
SVP *3
Production and Technology

IoT and Infrastructure Business

Sailesh Chittipeddi
EVP *2

Hiroto Nitta
SVP

Chris Allexandre
SVP

Roger Wendelken
SVP

CEO: Chief Executive Officer / EVP: Executive Vice President / SVP: Senior Vice President

*1: President, Renesas Electronics Europe / *2: President, Renesas Electronics America, President and CEO, IDT / *3: Chairman, Renesas Electronics (China)
GLOBAL SALES NETWORK
AS OF APRIL 1, 2019

- Global sales network operates in more than 20 countries
- Comprehensive R&D capabilities and support through the global network

![Map of global sales network with cities labeled such as Toyosu, Tokyo, Silicon Valley, Ottawa, Ontario, Duesseldorf, Dresden, Kuala Lumpur, Singapore, Beijing, Shanghai, Taipei, Hong Kong, Seoul, Bangalore, Malaysia, Singapore, and Japan.]
GLOBAL MANUFACTURING NETWORK
AS OF APRIL 1, 2019

- 14 manufacturing facilities owned in Japan, China, Southeast Asia, and the US
- Global partner’s sites such as TSMC and GLOBALFOUNDRIES

Manufacturing sites (Front-end: 7, Back-end: 7)
- Palm bay
- Dresden
- Beijing
- Suzhou
- Malaysia (2 plants)
- Naka
- Takasaki
- Shiga
- Ube
- Saijyo
- Kumamoto-Nishiki

Manufacturing and Engineering Service Companies
- Yonezawa
- Oita
- Kawashiri
ORGANIZATION OF QUALITY ASSURANCE DIVISION

Quality Assurance Division

- Strategic Quality Planning Dept.
- Quality Control Dept.
- Reliability & Failure Analysis Dept.
- Automotive MCU & SoC Quality Assurance Dept.
- Automotive Discrete Devices Quality Assurance Dept.
- Automotive Mixed Signal Quality Assurance Dept.
- Industry MCU & ASSP Quality Assurance Dept.
QUALITY ASSURANCE SYSTEM

We build quality into the products from the development stage, through continuous improvement of the production processes, in order for more competitive quality and reliability.

In addition to above, we have an established comprehensive quality assurance system with product quality monitoring and customer support on quality, serving for customer’s confidence in our products.

Customer Support
- Provision of Quality information
- Failure Analysis
- Qualification support
- Quality meetings with customer

Customer Support ensuring customer’s confidence through provision of easy-to-understand documents and technical information, engineering support activities and quality support for customer.

Development flow
Action flow
Information flow
Relation

Development
Design / Trial run
Production process
Test/inspection
Customer

Quality and Reliability improvement
- Failure analysis
- Reliability technology
- Reliability physics
- Data collection

Activities for preventing defective products from leaving the manufacturing plant by detecting unusual data trends and signs of abnormalities at an early stage.

Design Quality Control
- Reliability design
- Design Review
- Process/Packaging structure design
- Qualification system

Built-in quality and reliability with design methods optimized for micro-fabrication and large scaling and design review focusing on points of change.

Process Quality Control
- Document control
- Education
- Operator qual.
- Change control
- Environment management
- Parts/material management
- SPC
- Yield improvement
- Abnormality Control

Activities for built-in quality by process control using scientific and statistical methods and by 4M control. Activities for preventing defective products from leaving the manufacturing plant by detecting unusual data trends and signs of abnormalities at an early stage.

Product Quality Control
- Verification by quality assurance test
- Ongoing reliability test
- Warehousing and shipping control

Product quality and reliability level monitoring with sampling inspections and reliability testing.

We build quality into the products from the development stage, through continuous improvement of the production processes, in order for more competitive quality and reliability.

In addition to above, we have an established comprehensive quality assurance system with product quality monitoring and customer support on quality, serving for customer’s confidence in our products.
QUALITY ASSURANCE FLOW

- **Customer**: Market Research, Product Planning, Development Requirements, Marketing Strategy

- **Planning**:
  - Customer Requirement
  - Development Requirements

- **Development & Design**:
  - Design and Development
  - Design Review
  - Electrical Characteristics Approval

- **Trial Production**:
  - Quality Qualification
  - Trial Production
  - Release to Mass Production

- **Mass Production**:
  - Purchase Order
  - Sales Planning
  - Production Planning

- **Shipment**

- **Market & Customer**:
  - Occurrence of failure
  - Report

- **Quality improvement activity / quality information**

- **Incoming Inspection**
  - Production
  - Inspection

- **Failure analysis and corrective action**

- **Reception / Failure Analysis / Reporting**
CUSTOMER COMPLAINT HANDLING

Customer
- Complain (Product, Information)
  - Sales Dept.

Quality Assurance Dept.
- Failure Analysis
  - Production Dept.
    - Root Cause Analysis
    - Prevention of Reoccurrence
    - Countermeasures
  - Design Dept.
    - Countermeasures

Quality Assurance Dept.
- Report
  - Sales Dept.
    - Tracing and support for Countermeasure implementation
  - Customer
    - Reply
<table>
<thead>
<tr>
<th>Company</th>
<th>ISO 9001</th>
<th>IATF 16949</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renesas Electronics Corporation</td>
<td>Yes</td>
<td>(*)</td>
</tr>
<tr>
<td>Headquarters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Musashi Site</td>
<td>(*)</td>
<td></td>
</tr>
<tr>
<td>Takasaki Site</td>
<td>(*)</td>
<td></td>
</tr>
<tr>
<td>Yonezawa Factory</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Oita Factory</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Nishiki Factory</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Renesas Semiconductor Manufacturing Co., Ltd.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Naka Factory</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Takasaki Factory</td>
<td></td>
<td>Yes</td>
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<tr>
<td>Shiga Factory</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Yamaguchi Factory</td>
<td></td>
<td>Yes</td>
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<tr>
<td>Saijo Factory</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Kawashiri Factory</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Renesas Engineering Services Co., Ltd.</td>
<td>-</td>
<td>(*)</td>
</tr>
</tbody>
</table>

(*): Remote supporting function.
## ISO, IATF CERTIFICATION

### [Global]

<table>
<thead>
<tr>
<th>Company</th>
<th>ISO 9001</th>
<th>IATF 16949</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renesas Electronics America Inc.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Renesas Semiconductor (Beijing) Co., Ltd.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Renesas Semiconductor (Suzhou) Co., Ltd</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Renesas Semiconductor KL Sdn. Bhd.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Renesas Semiconductor (Malaysia) Sdn. Bhd.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Renesas Semiconductor (Kedah) Sdn. Bhd.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Renesas Semiconductor Design (Malaysia) Sdn. Bhd.</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>Renesas Design Vietnam Co., Ltd.</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>Renesas Semiconductor Design (Beijing) Co., Ltd.</td>
<td>Yes</td>
<td>(*)</td>
</tr>
<tr>
<td>Renesas Electronics Europe GmbH</td>
<td>Yes</td>
<td>(*)</td>
</tr>
<tr>
<td>Renesas Electronics (China) Co., Ltd.</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>Renesas Electronics (Shanghai) Co., Ltd.</td>
<td>Yes</td>
<td>(*)</td>
</tr>
<tr>
<td>Renesas Electronics Hong Kong Limited</td>
<td>Yes</td>
<td>(*)</td>
</tr>
<tr>
<td>Renesas Electronics Taiwan Co., Ltd.</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>Renesas Electronics Singapore Pte. Ltd.</td>
<td>Yes</td>
<td>(*)</td>
</tr>
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</table>

(*) Remote supporting function.