

Murata's Product Mission and Responsibility

Our Responsibility as an Electronic Component Manufacturer That Produces Tens of Billions of Parts Each Month

Murata's leading share of the chip monolithic capacitor market stands at 35%, with a production output of several billion parts per month. Many perform vital roles in such electronic equipment as personal computers and mobile phones. These include components of a fraction of a millimeter—smaller than a grain of sand. One flat-screen television includes more than 1,000 such components, and compact modern mobile phones in excess of 200, each fulfilling a role, such as suppression of malfunctions, poor reception or radiation noise.

A malfunction by one of Murata's



chip monolithic capacitors means problems for the manufacturers of the electronic equipment, who form our customer base, for electronic equipment users, and ultimately for a vast number of people worldwide.

Accordingly, Murata has formulated processes with built-in quality and reliability through all stages of the production process, spanning

development, design and manufacturing. In addition to thoroughness, such built-in processes ensure inspection of all manufactured products. Detected faulty components are analyzed, the causes identified and countermeasures systematically implemented.

As the top manufacturer of chip monolithic capacitors, we are ever aware of our product responsibility, that is, the huge social responsibilities we have for these miniscule components, and endeavor on a daily basis to raise the level of our activities.



Inspection process line



muRata

Chip Monolithic Capacitors—Indispensable for Digital Products

The role of capacitors is to store electricity and eliminate unnecessary noise. Capacitors with a stratified structure, called monolithic capacitors, are vital to a diverse range of electronic equipment. Murata's chip monolithic capacitors are created from raw materials in an integrated manufacturing systems.

In addition to our mother plant in Fukui, we conduct production activities in Shimane and Okayama in Japan, and overseas in Beijing and Wuxi in China and in Singapore. These multiple production bases ensure a stable supply system for our products.

Quality and Safety

We Develop Our Own Production Facilities and Maintain High-quality Products while Envisaging the End Use from the Development Stage

The basis for Murata's manufacturing is "absolute safety and quality first." In emphasizing this approach, we focus on establishing quality assurance systems for product and process design, that we deem key elements for safety and quality. Product design stresses determining materials and structures, which balances product functionality and safety, while process design focuses on determining production methods without disparities in quality.

In product design, we deploy quality assurance and other specialized staff to simulate the generation of malfunctions and formulate quality evaluation standards

by market. These processes are conducted from a variety of standpoints, including the production systems of customers and conditions of use by end users. The results are then used in daily design work. For example, we build in quality to the product design of components used in mobile phones by simulating such actual usage conditions as the intense heat of being shut in a car during summer and the humidity of being carried in a breast pocket.

Furthermore, in process design it is important to design and utilize production and inspection facilities equipped with functions that can realize to the greatest extent possible the quality targeted in product design. Accordingly, Murata does not outsource such production and inspection work; its product and manufacturing process expert technicians carry out almost all design on this front to facilitate built-in

product quality maintenance to production processes.

Information technology is pivotal in applying Murata's long years of accumulated expertise to its product and process design. For example, information on past raw materials and production lots, production facilities, operators, manufacturing conditions and other parameters is fed into a database, and this Murata "PRASS System" is used in the event of any malfunction as a reference for enquiries and swift detection and resolution for problems.

However, regardless of the systems that are in place and the IT technologies employed, final quality is determined by personnel. Therefore, in addition to establishing the systems, educating personnel is the crux of Murata's approach in focusing on educating the operating staff. Furthermore, we have cultivated a workforce of several hundred

Feature ① Murata's Product Responsibility

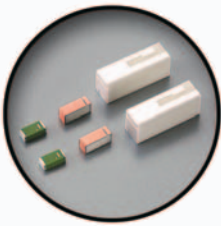
Small Electronic Components, a Big Sense of Responsibility

Murata's electronic components are at work in various electronic equipment—mobile phones, personal computers, home appliances, automobiles and industrial robots. Without these components, which range in size from a few tenths of a millimeter to several millimeters, the electronic equipment functions, safety and environmental performance called for by hundreds of millions of people around the world could not be realized. To ensure peace of mind for users of various electronic equipment worldwide, we maintain reliable quality for and strive to reduce the environmental burden of all our products. Small products, but a big sense of responsibility—Murata has every intention of continuing to fulfill this responsibility in the future.



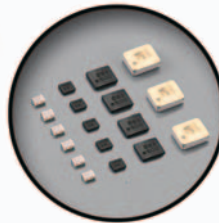
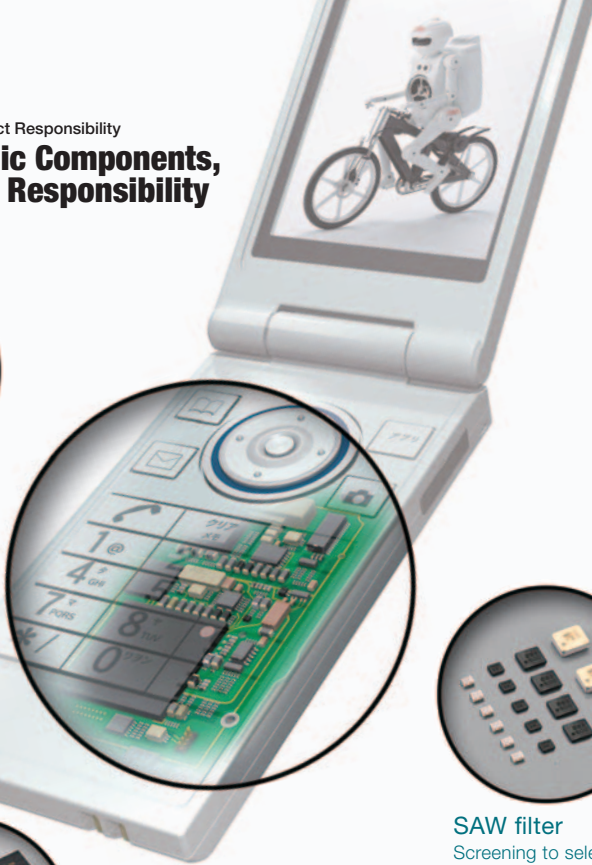
Feature 1 Murata's Product Responsibility

Small Electronic Components, a Big Sense of Responsibility



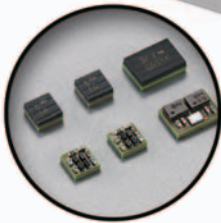
Chip dielectric antenna

An internal antenna with optimal reception of various radio signals



SAW filter

Screening to select required radio signals



SWITCHPLEXER®

A multifunctional component, featuring radio signal noise suppression and transmission/reception switching

end-usage conditions and actively propose methods of use to promote safety and optimize functionality of our products.

Moreover, we continually utilize feedback data from customers to improve and upgrade products. In particular, we have established a Failure Analysis Center, independent of the Automobile Reliability Section that is responsible for long-term reliability assurance technologies, to focus on components supplied to the automobile industry, where product malfunction has life-threatening potential. This body analyzes malfunction data to determine risk of failure and improve products. Identifying the root causes of failure can then be directly linked to quality assurance during development and mass production.

Environmental Consideration

specialists to maintain production facilities, who are deployed on our manufacturing lines.

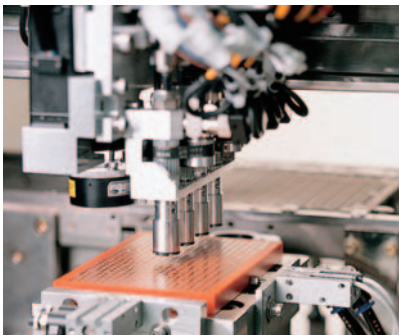
Through such initiatives, Murata has assembled an army of specialized technicians to manage all processes from development through to mass production, from the standpoint of quality, and is pursuing continually the introduction of new lines and improving existing facilities.

Proactively Providing Safety Information and Utilizing Malfunction Feedback for Quality Improvements

Murata's charge goes beyond supplying its customers with products that are all inspected to ensure they are free from faults. We consider the provision of various data to ensure safety during use as a part of its responsibilities as an electronic components manufacturer. To this end, we dispatch engineers from our Mounting Technologies Center to our customers to confirm intended

Quadruple-Checked to Eliminate Environmentally Detrimental Chemical Substances

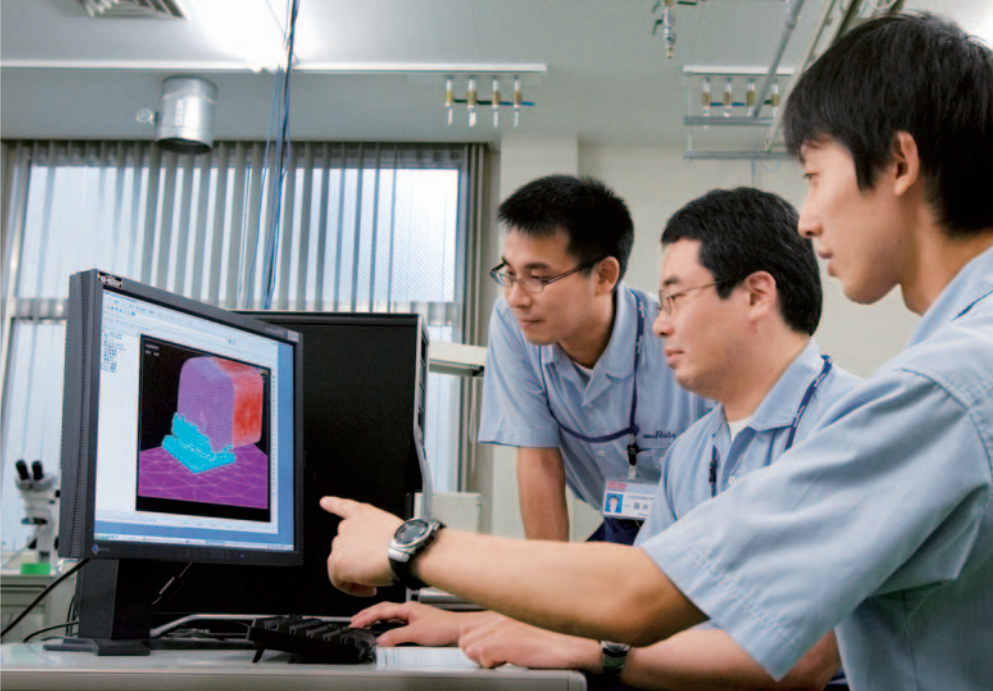
Chemical substances are necessary as raw materials for Murata's electronic components. Although the quantities included in each individual component are minute, end products may be mounted with hundreds or even thousands components. Inappropriately discarding the items along with the waste end product can significantly impact the global environment.



Production facilities are also developed in-house



Reliability testing



Accordingly, Murata aims to reduce its environmental impact throughout the product lifecycle, from procurement of raw materials for components through to disposal and recycling of end products, and is striving to reduce the content of hazardous chemical substances contained in its products.

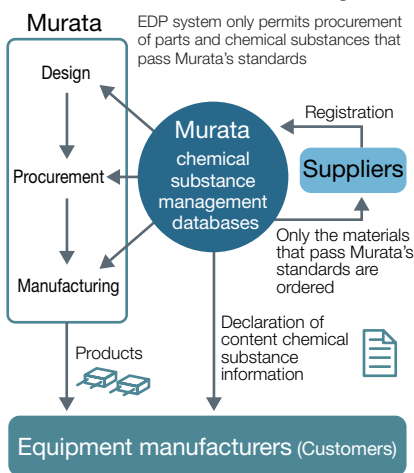
The EU Restriction of Hazardous Substances in Electrical and Electronic Equipment Directive (the "RoHS Directive") went into effect in July 2006. This restricts six substances used in electrical and electronic equipment. To ensure swift response to this and other global regulations, Murata formulated the "Regulation Program for Environmentally Hazardous Substances" to establish its own regulation in 1996, aiming for the reduction and abolition of hazardous chemical substances. Moreover, we

reviewed administrative processes throughout the Group's divisions to ensure compliance by relevant employees in their daily operations.

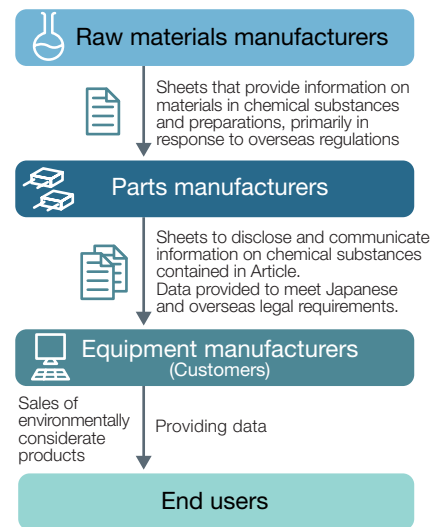
For example, production departments, as well as the Development Design Department, register in a Groupwide database all restricted substances and all chemical substances permitted for use in the Company, thus constructing a system to prevent the ordering of substances prohibited by legislation or in-house regulations. Furthermore, we implement a chemical substance management system for suppliers, with much care and cooperation to ensure its smooth application. At the production and shipment stages, we keep records of compliance with rules during manufacture, allowing confirmation that shipped products abide by the laws and regulations of their destinations.

Through such measures, Murata is eliminating regulated substances in the design development, materials procurement, production and shipment stages, ensuring consideration for the global environment throughout its overall production process.

Murata chemical substance management



Data communications in the supply chain



these new Regulations, every company must individually manage its own chemical substances. However, ultimately the best solution is the construction of a consistent industry-wide management system.

Accordingly, in September 2006 Murata and other like-minded corporations established the Japan Article Management Promotion-consortium (JAMP*). This body aims to establish of a standards system to facilitate smooth conveyance of data on chemical substances in various parts and materials from upstream industries that produce chemical materials to downstream industries manufacturing end products. For electronic components makers, positioned between these two extremes, this represents a policy of providing know-how and information.

In terms of quality and environmental consideration, Murata will continue to strive to realize a society with peace of mind for all people using electronic and electrical products.

Creating a Chemical Substance Management System in Cooperation with Industry Association

The EU Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulations, necessitating the registration of several tens of thousands of chemicals sold within the European Union, came into force in June 2007. To fully respond to

* JAMP: An active cross-industrial organization to formulate and spread concrete measures to facilitate proper management and smooth disclosure and communications throughout the supply chain of data on chemical substances contained in articles (parts and molded components).