

Reducing Environmental Impacts in Product Life Cycles



Murata is a manufacturer of electronic components that also supplies its products to electronics manufacturers. This makes it our important mission to reduce the environmental impact of our products. Here are a few examples of our initiative in fulfilling that mission.

Environmentally Conscious Design

A series of processes from product design to disposal to recycling is called the “product life cycle.” At Murata, we have implemented initiatives to clarify the issues that should be addressed at every stage of a product’s life cycle in order to minimize the environmental impacts imparted by the product. These initiatives are carried out not only by Murata, but also in cooperation with its suppliers.

First, in the procurement stage, based on Murata’s own examination system and database, we carry out management of chemical substances to ensure that environmentally hazardous substances will not be used, and that environmentally conscious materials will be purchased. In the development and design stages, we perform analysis of life cycle assessment (LCA) data to quantitatively grasp the impacts arising during the production process. Based on the analysis results, we conduct initiatives to reduce environmental impacts during the production process. Moreover, in the production process, through energy audits, we work to enhance energy efficiency and to conserve energy based on the “3R” principle (reduce, reuse, recycle).

Murata products are compact and have high performance. These features have helped electronics manufacturers to whom we deliver our products to save resources and electricity. On the other hand, though, our products are difficult to collect and reuse, because of their small size. Murata therefore strives to replace and reduce environmentally hazardous substances contained in its products, regarding this as one of the company’s top-priority tasks.

With regard to PPS resins used as materials to create some of our products, surplus resin materials generated during the product formation process are returned to the resin pellet suppliers for reuse. Through efforts like this, we promote resource recycling.

Aiming to Collect Data after Delivery

One of our future challenges is to quantitatively identify how much Murata’s products have contributed to reducing environmental impacts at electronics manufacturers to whom our products have been delivered.

Such electronics manufacturers allow for the resource- and energy-saving effects of Murata’s products due to their compactness and high performance. However, we have not identified the data to support these effects yet. It is therefore necessary for us to promote data identification in cooperation with our customer electronics manufacturers. In addition, concerning usage by end-users, it is very difficult to grasp the data on a single component alone since our products include so-called “passive components,” which begin functioning only when they are operated in conjunction with other equipment.

Nevertheless, we believe that addressing such difficult challenges one by one helps fulfill our corporate social responsibilities, and helps realize sustainable development. With this recognition, in the future we will promote initiatives to resolve these challenges in a phased manner.

Environmental considerations and product impacts in the product life cycle

| | Procurement | Production | Physical distribution | Assembly | Use | Disposal |
|---------------------------------|-------------|------------|-----------------------|----------|-----|----------|
| Controlled chemical substances | | ○ | | ○ | ○ | ○ |
| Reduction of main raw materials | | ○ | | | | |
| Downsizing | | | ○ | ○ | ○ | ○ |
| Power conservation | | ○ | | | ○ | |
| Green procurement | ○ | | | | | |