# Promoting Eco-Friendly Physical Distribution and Packaging

To minimize environmental impact during distribution and delivery of Murata products to customers, we are promoting modal shifts and reduced packaging and packing.

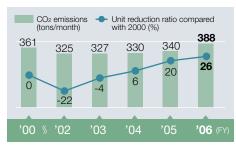
## Reduction of Environmental Impact Arising from Distribution

#### 

Collaboration with consigned distributors is indispensable to curtail CO<sub>2</sub> emissions during distribution. To foster such cooperation, Murata holds presentation meetings for contractors to encourage the routine application of energy-conscious driving. In addition, we are striving to make modal shifts from truck transportation to rail freight and shipping, which have relatively lower CO<sub>2</sub> emissions and have commenced joint deliveries for some transportation routes. As a result of these endeavors, in fiscal 2006 we exceeded targets by reducing CO<sub>2</sub> emissions per unit of net sales by 26% from fiscal 2000 levels.

Increasing load efficiency and expanding joint deliveries are important factors further to reduce emissions per truck. In fiscal 2006, we investigated reorganizing our domestic distribution network from scratch, culminating in the proposal of a definite concept. We will successively implement these measures in fiscal 2007.

## Reduction of CO<sub>2</sub> Emissions during Distribution



## Reducing Packaging by Downsizing Products

In recent years, we have downsized products through technological innovations, which in turn have reduced the use of packaging materials. For example, the miniaturization of chip monolithic ceramic capacitors, one of Murata's primary

## **Employee Perspective**

# Constructing the Optimal Distribution Network to Reduce CO<sub>2</sub> Emissions

Since starting to use Japan Rail (JR) freight in 2004, we have expanded the scope of goods transported by rail. However, last year we found that it would be difficult to expand further with JR's existing timetables, so we reconciled ourselves to the greater convenience of truck haulage.

This year, with the cooperation of its contractors, Murata is reconstructing its distribution network with a configuration optimized to the placement of its manufacturing plants. With many companies consolidating warehouses and transshipment centers, we boosted our number of transshipment sites as a measure to increase load efficiency. We aim further to reduce CO2 emissions by cutting the number of truck runs.



Yoshihide Toyama Logistics Control System Design Section, Manufacturing System Design Department

products, has helped to reduce packaging materials by approximately 22% over the past five years. Our target for fiscal 2006 to reduce packaging material use per unit of net sales by 20% compared with fiscal 2000 levels was achieved in fiscal 2005. We nudged this figure up to 23% in fiscal 2006.

Murata also focuses on promoting the use of returnable cardboard boxes for packaging. In fiscal 2006, we completed the conversion of delivery for taping reels between all of the Company's sites to returnable boxes. With the understanding and cooperation of our customers, we will extend this initiative to commercial deliveries in fiscal 2007. We are also focusing on innovations in packaging technologies for bulk cassettes.

## Reduction in Packaging Material Weight



## Ah

## **About Modal Shifts**

Modal shift is a switch from haulage of goods by truck to marine or rail transportation, which facilitates high-volume carrying, and thus reduces energy consumption during distribution.

## Changes in Packaging Materials

