

Microwave Application Products

Main Products

Microwave application products division covers the following products: satellite communications, terrestrial communications, and sensor modules. Microwave transmitter and low-noise down converter and transceiver are the main products. In the satellite communications field, the Ku-band (14 GHz) transmitter is the main product. There is also a wide range of frequency variations covering the C band (5 to 6 GHz) and Ka band (30 GHz). In the terrestrial communications field, transceiver for Fixed Wireless Access (FWA) is the main product. In the sensor module field, the X-band (10 GHz) direct-oscillation type Doppler sensor module is the main product.

[Business Results in Fiscal 2006]

Consolidated sales for this division were ¥6,210 million (25.2% increase from last year, of which 95% is overseas sales ratio). Sales of Very Small Aperture Terminal (VSAT) communications components were good.



NJT5121/22/23 are 14 GHz 16 W/20 W/25 W output power transmitters, can be used to high speed and high capacity application for VSAT (Very Small Aperture Terminal) system of satellite communication, launched as generic product.



NJT5117 is a brand-new model, 14 GHz 4 W output power transmitter for VSAT (Very Small Aperture Terminal) system of satellite communication, developed a generic product.

• Satellite Communications and Satellite Broadcasting Field:

Our VSAT communications components account for more than 50% share of the world market, and its sales ratio in this division is 85%. Ku-band transmitters for distance learning system in Central and South America contributed considerably to increased sales of this division. We will continue to broaden the product line of Out Door Unit (ODU) for VSAT, focusing on downsizing, low power consumption, high power, and high efficiency to achieve integration of transmitter and receiver.

• Terrestrial Communications Field:

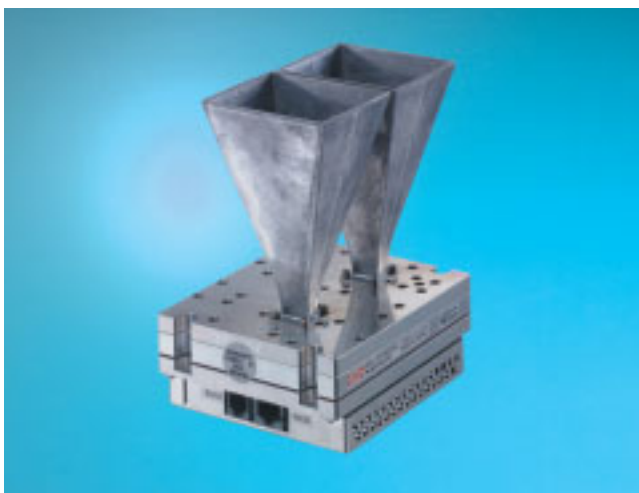
We intend to expand overseas sales of products for Wireless IP Access System (WIPAS). In fiscal 2007, we will work towards producing RoHS- and ETSI-compliant products and a series of RF units for terrestrial digital broadcasting transponder.

• Sensor Module Field

Based on the core technology in our experienced sensor field, instead of the existing direct-oscillation type Doppler sensor modules, we are now developing K-band (24 GHz) Frequency Modulated Continuous Wave (FMCW) radar modules to conform to Japan Radio Law. The existing Doppler sensor modules can be applied to various products including a security system for houses or vehicles, automatic doors, speed guns, and toys due to its capability to detect motion of a human body and objects. In contrast, the FMCW radar module is expected to be applied to various industrial products because it is capable of measuring the distance to a human body and an object and also detecting a state in which an object is stationary. From fiscal 2007, we pursue commercialization of not only industrial products but distance measurement modules for in-car applications.



NJR2835 is a downconverter, which can be covered at the frequency range of 12 GHz for VSAT (Very Small Aperture Terminal) system of satellite communication, developed as generic product.



NJR4222 is a 24 GHz "FMCW Radar" module which calculates the distance from the radar to object or human.

