

Microwave Application Products



NJS8487 is a downconverter that covers the range of 3 to 4 GHz frequency for VSAT (Very Small Aperture Terminal) system of satellite communications. It was developed as a generic product.

• Terrestrial Communications Field:

Sales decreased due to inventory adjustment of WIPAS (Wireless IP Access System). With the widespread use of optical lines, demand for "26-GHz point-to-multipoint FWA (Fixed Wireless Access) outdoor transceiver", which has been anticipated for several years, is uncertain. We will look for overseas markets in future.

In fiscal 2006, we plan to bring 25-GHz point-to-multipoint FWA outdoor receivers to the US market. In addition, products with 18-GHz bandwidth for public works projects are expected.

• Satellite Communications Field:

The US market grew rapidly and sales of 4-W output Ku-band transmitter introduced to the market remained well. This is because we succeeded in reducing the size and weight of the "Ku-band (14 GHz) outdoor transmitters" even with 4 W output, which was previously large sized, and even succeeded in delivering the required quantity as requested by customers.

From fiscal 2006, we will work towards the achievement of the following objectives:

- (1) Develop higher-power products than the existing ones:
Transmitters with output (20 W or more) exceeding 10-W type in C band (5 to 6 GHz) and transmitters with output (16 W or more) exceeding 8-W type in Ku band (14 GHz)
- (2) Develop small-sized and low-cost Ku-band 0.25/1-W type transmitters for consumers
- (3) Develop Ka-band (30 GHz) transmitters for high-speed transmission
- (4) Develop innovative products by technical collaboration with overseas companies



NJR4221 is a 24GHz "Standing Wave Radar" module to calculate the distance between the radar and object or human. To calculate, it uses frequency information changed by PLL circuit and phase information of standing wave occurred after the transmitting signal reaches target. High accuracy is achieved in detecting the distance; especially close range, compared to the other types of current radar such as Pulse Radar/FMCW Radar. It is expected to utilize as a distance measurement system for automotive.

• **Satellite Broadcasting Field:**

Sales of satellite broadcasting components increased due to global market growth.

• **Sensor Module Field:**

Based on the core technology in our experienced sensor field, we started selling "K-band (24 GHz) direct oscillation Doppler sensor modules" using dielectric resonators and FETs in accordance with the revision of the Radio Law.

This sensor module is expected to be applied to various products, such as 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.

From fiscal 2006, we plan to develop products focused on the large auto market. We expect sensors for collision avoidance, object and human body detection, etc., to be installed in a car in the future, so we will collaborate with auto manufacturers and electrical equipment manufacturers.

Microwave sensors are more reliable and suitable for integration into bumpers, etc. than the optical sensors, which are sensitive to environmental changes, and will attract attention from various fields.

We will be committed to "security & sensing" technology.

[General Overview]

In fiscal 2005, we achieved market competitiveness, with emphasis on improving lineup and developing high-performance products. In addition to achieving higher performance, we will have to offer products for consumers, including products for in-car applications by reducing costs.



NJT5667 is a 5 to 6 GHz 2W output power transmitter used for high-speed and high-capacity application for VSAT (Very Small Aperture Terminal) system of satellite communications. It was developed as a generic product.



NJT5034F is a new flagship model, 14 GHz 1 W output power transmitter for VSAT (Very Small Aperture Terminal) system of satellite communications. It was developed as a generic product.

