

September 15, 2011

Murata Manufacturing Co., Ltd.

Nissha Printing Co., Ltd.

Joint Production of Prototype Wireless Recharging Housing for Mobile Devices



[Overview]

Murata Manufacturing Co., Ltd. (Murata Manufacturing) and Nissha Printing Co., Ltd. (Nissha Printing) have jointly produced a prototype housing for conveniently and wirelessly recharging mobile devices.

The housing has a power receiving circuit for electric field coupling^{*1} wireless recharging (developed by Murata Manufacturing), while a decoration film (electrode) with antenna function (developed by Nissha Printing) is integrated into a smartphone battery cover.

The antenna film is thin and flexible and can be made transparent, making it possible to add a wireless recharging function to smartphones and other mobile devices without altering their appearance. Additionally, using Nissha Printing's in-mold decorating technology^{*2} to attach an electrode to the housing, it is possible to increase power transmission efficiency.

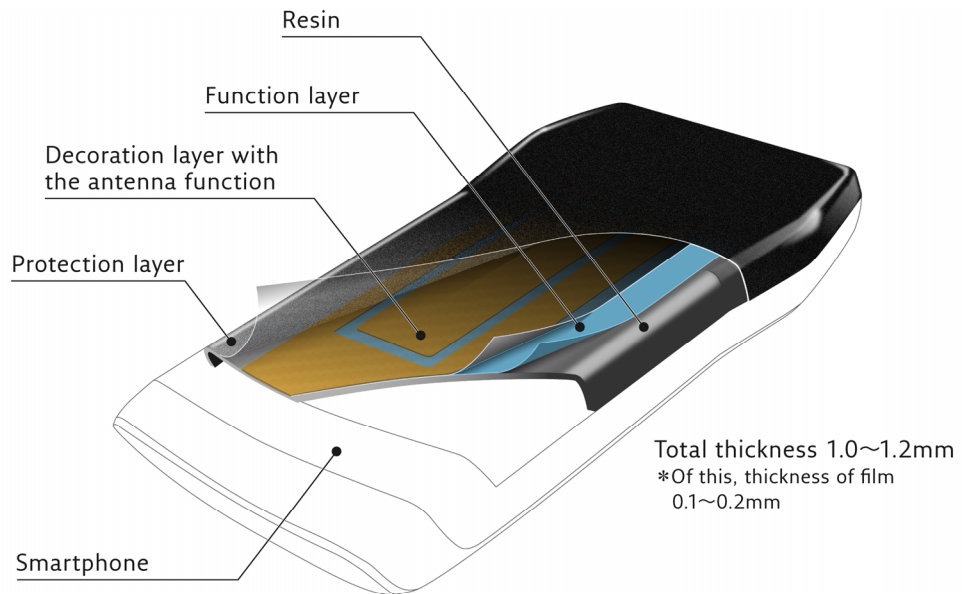
The prototype will be displayed and demonstrated at CEATEC JAPAN 2011.

[Background and Objectives]

The market increasingly demands mobile devices that are thinner and come with a wireless recharging function. The antennae that transmit power, however, affect device thickness, creating a major design problem for mobile devices. By combining Murata Manufacturing's electric field coupling wireless power transmission technology with Nissha Printing's in-mold decorating technology, a prototype was created of a housing with strong design potential and an embedded electrode.

[Features]

- About 5 - 10 W of power can be wirelessly transmitted with the prototype case
- Electrodes are only a few μm thick, giving a wireless power supply function to battery covers without altering their thickness. This can ensure products' high design potential.
- Electrodes have an insulating and protecting layer for safety



[Applications] Wireless recharging and power transmission for mobile devices (mobile phones, smartphones, portable music players, portable game machines, digital still cameras, tablet PCs, laptops, etc.) and lighting, decorative products, home products and more

[Terminology] *1 Electric field coupling: A method of transmitting energy by placing electrodes on the power transmitting and receiving sides and using the electric field created between the two. It is also known as capacitive coupling because capacity occurs between the electrodes.

*2 In-mold decorating technology: A technology that puts a film printed with a picture, etc. into a resin molding die so that the molded object is decorated with the picture as it is molded. This makes it possible to decorate complex 3D plastic products with vivid pictures.

[Electrical Characteristics] Power transmission: 1 - 10 W
Transmission efficiency: At least 90% for wireless transmitter only

[Patenting Information] One joint patent application has been submitted for the case construction and manufacturing method.

[About Murata Manufacturing] Trade name: Murata Manufacturing Co., Ltd.
Established: 1950 (originally founded 1944)
Head office: 1-10-1, Higashikotari, Nagaokakyo-shi, Kyoto

Representative: Tsuneo Murata, President and Statutory Representative Director

Capital: 69,376 million yen

Number of employees: 6,964 (Consolidated number of employees: 35,337) (as of March 31, 2011)

Business fields: Manufacturing and sales of monolithic ceramic capacitors, ceramic filters, ceramic resonators, SAW filters, multilayer devices, dielectric filters, isolators, circuit modules, power supplies, EMI suppression filters, sensors, coils, thermistors, pre-set variable resistors, resistor networks, high voltage resistors

Net sales: 566,805 million yen

Consolidated subsidiaries: 56 (23 in Japan, 33 overseas)

URL: <http://www.murata.com>

[About Nissha Printing] Trade name: Nissha Printing Co., Ltd.
Established: 1946 (originally founded 1929)
Head office: 3 Mibu Hanai-cho, Nakagyo-ku, Kyoto

Representative: Junya Suzuki, President and CEO

Capital: 5,684 million yen

Number of employees: 1,059 (Consolidated number of employees: 4,121) (as of March 31, 2011)

Business fields: Industrial materials (transfer foil printing and manufacturing of IMD molded goods using transfer foil), devices (manufacturing of touch panels), information and communication (designing communication strategies for customers using printing and digital technology)

Net sales: 114,054 million yen

Consolidated subsidiaries: 22 (12 in Japan, 10 overseas)

URL: <http://www.nissha.co.jp/english/index.html>

[Inquiries]

Murata Manufacturing Co., Ltd. Corporate Communications Section, Public Affairs Department
Tel: 81-75-955-6786

Nissha Printing Co., Ltd. Public Relations Department, Corporate Communications Business Unit
pr@nissha.co.jp