

Information Meeting 2011

December 9 2011

Murata Manufacturing Co., Ltd.



Mid-term Business Plan

Emerging Markets

Core Markets

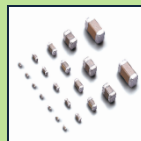
**New Markets /
Products**



**Expanding
production & sales
functions**



Wireless solution



MLCC Business



Automotive



Environment / Energy

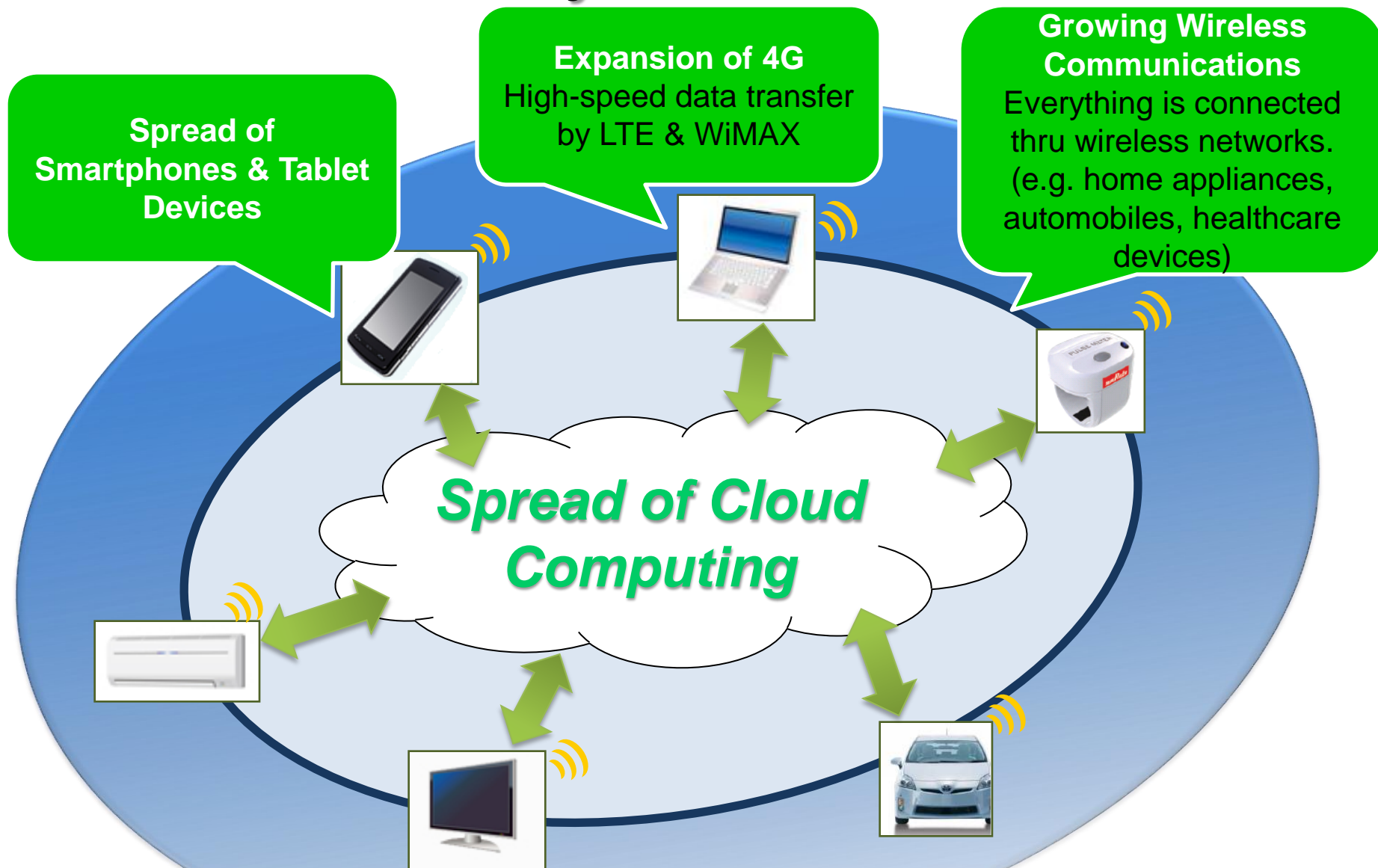


Healthcare

Core Markets

- ✓ ***Wireless Solution***
- ✓ ***MLCC Business***

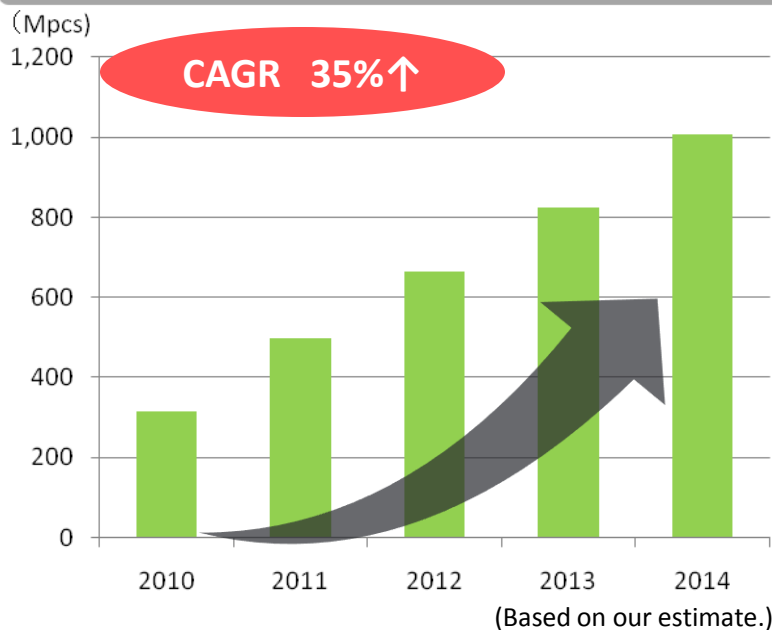
Present & Future of Wireless Communications



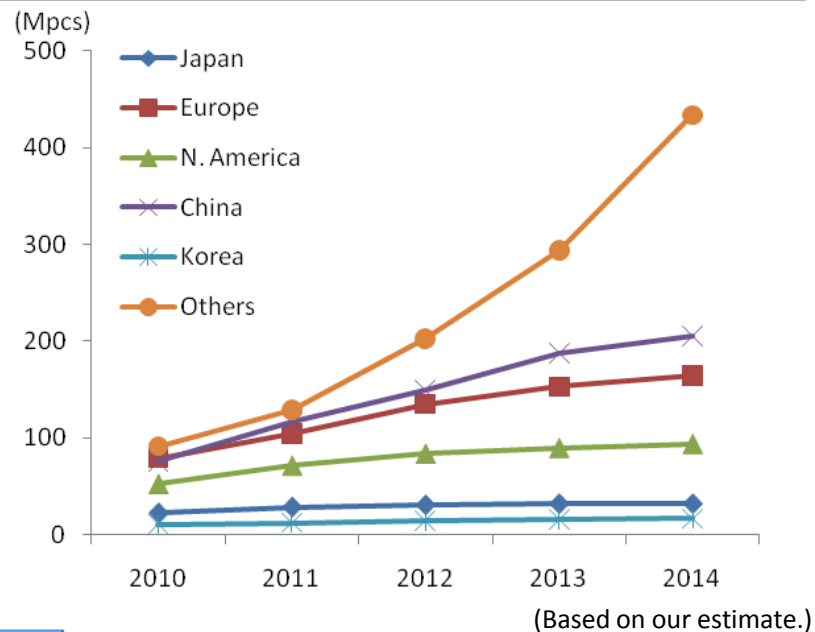
Demand Explosion for MuRata's Total Wireless Solution !

High Penetration of Smartphones

Smartphone Forecast



Smartphone Forecast by Region



Smartphones' contribution

- ✓ The composition ratio of smartphones will reach 50% in 2014.
- ✓ Smaller circuit area is the key for compact multi-functional devices with large battery life.
 - ⇒ Strong demand for ultra-compact and high value-added components such as ultra-compact MLCCs (0402 & 0603).
- ✓ Demand is shifting in emerging countries from feature phones to smartphones.
 - ⇒ Increasing demand for ultra-compact MLCCs and RF components (e.g. SAW filters and WiFi modules).
- ✓ Demand for NFC related components is growing for the mobile payment market.
- ✓ Expansion of 4G devices has been accelerated by mobile data traffic explosion.

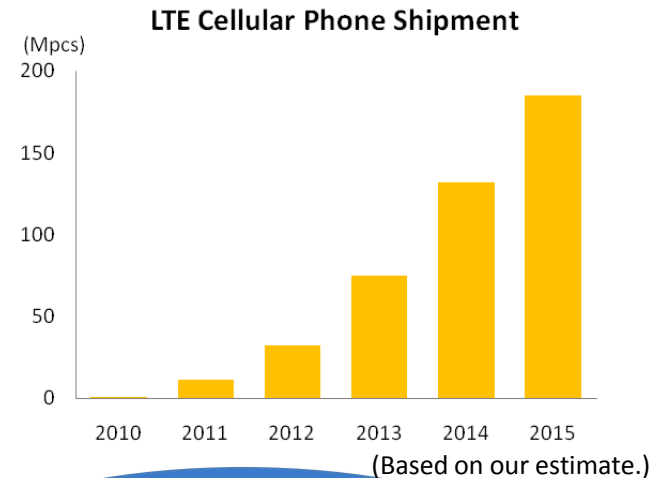
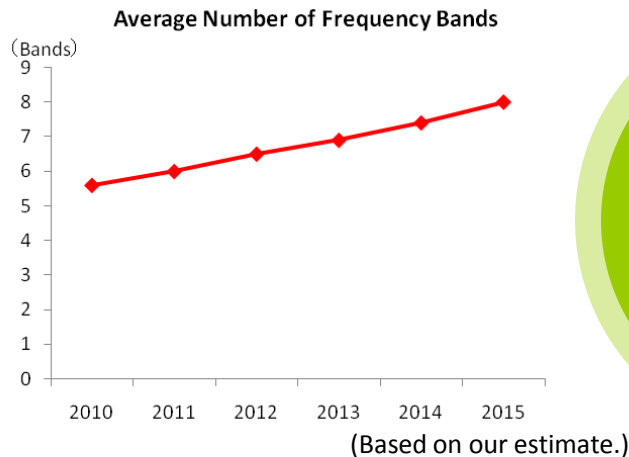


Fast-growing LTE Mobile Devices

Increase of frequency bands contributes to higher demand for SAW filters/duplexers and high-frequency chip inductors.
(e.g.) # of SAW devices
5x from 2G to LTE
1.5x from 3G to LTE

MIMO/diversity architecture contributes to higher demand for front end modules (FEMs) and connectors.

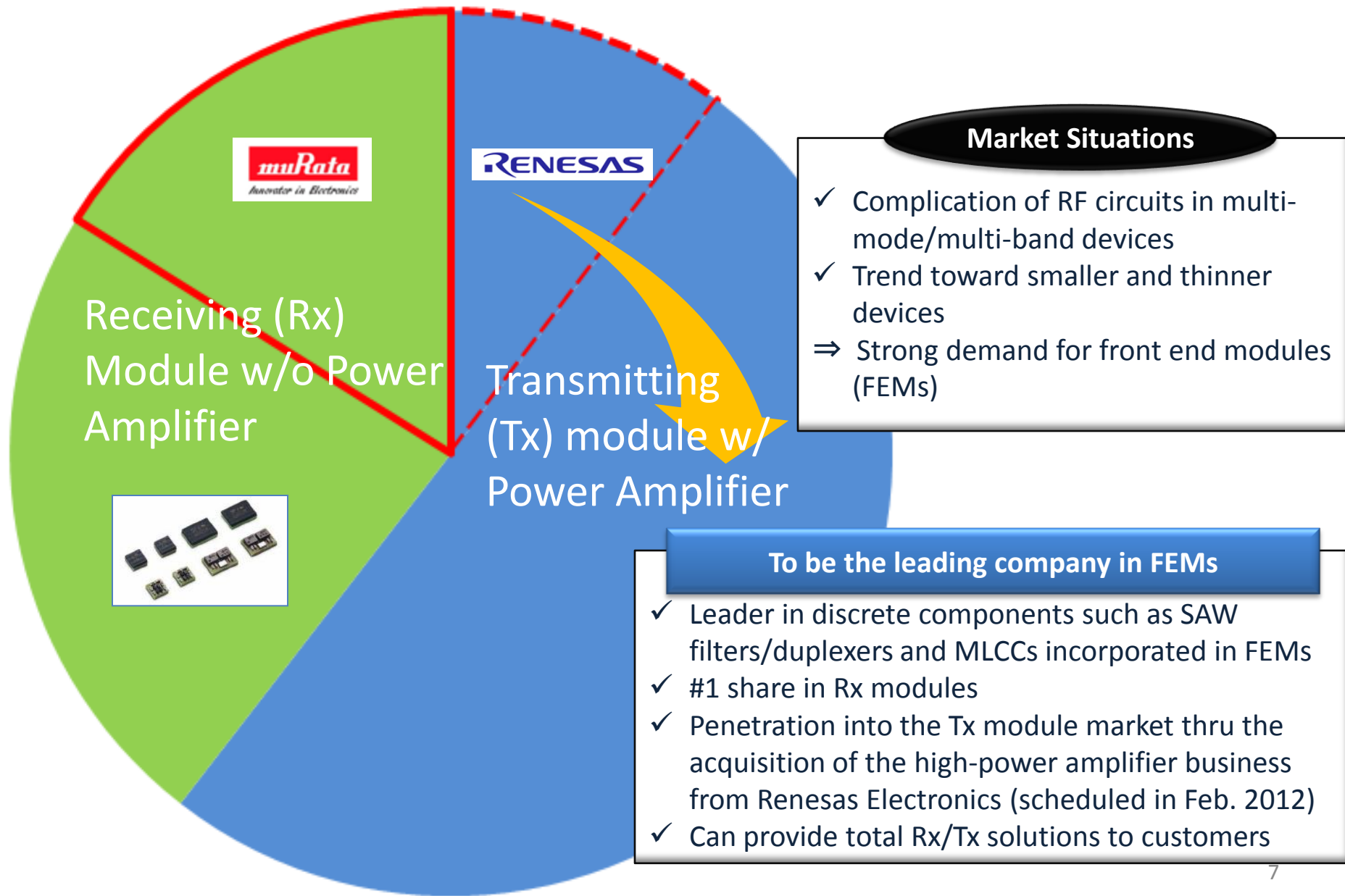
LTE



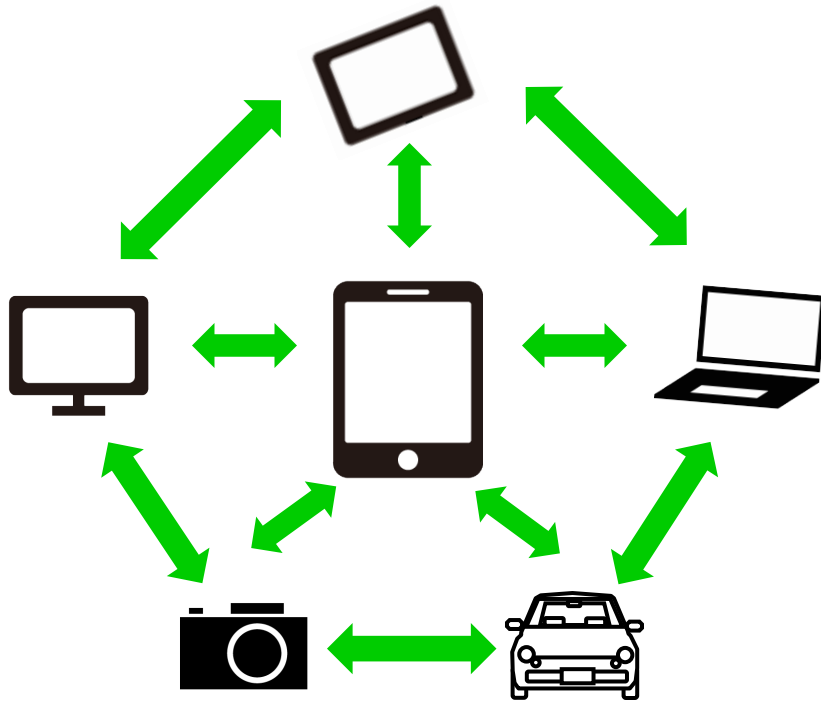
Complication and miniaturization of RF circuits in multi-mode/multi-band devices increase demand for our module products that incorporate a number of components in a compact package.

Explosion of mobile data traffic leads to demand for base stations (macrocell/microcell/picocell/femtocell).

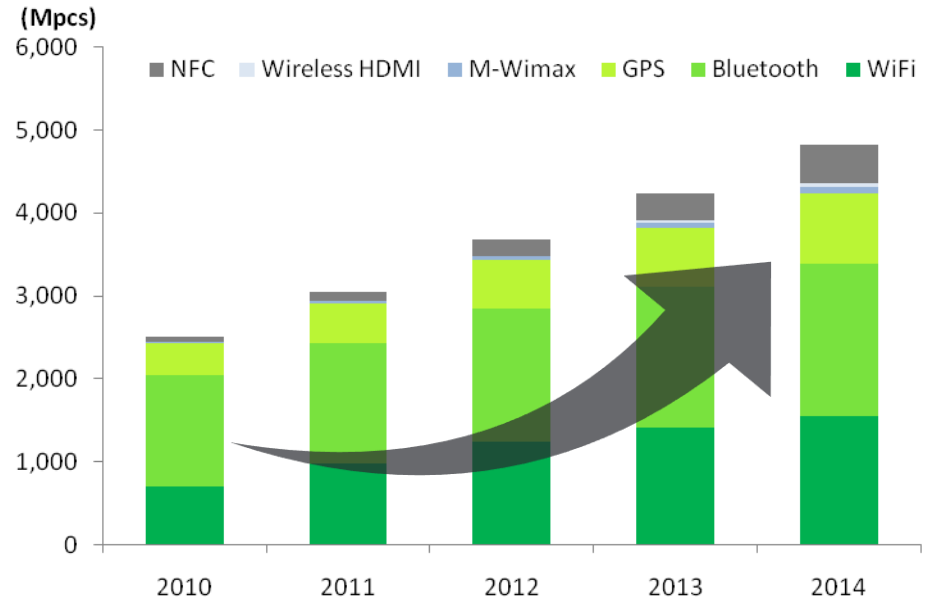
Expansion of Front End Module (FEM) Lineup



Growing Wireless Communication Market



Forecast for Wireless Connectivity Market

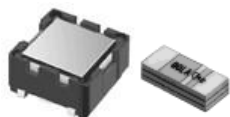


(Based on our estimate.)

Wireless communication market is continuously expanding

- ✓ Spread of wireless communications to reduce mobile data traffic
- ✓ Everything is connected thru wireless networks (e.g. home appliances, automobiles, healthcare devices).
- ✓ Increasing demand for wireless connectivity modules (WiFi, Bluetooth, GPS etc.)
- ✓ MuRata can provide total wireless solutions including sensors, wireless modules and software to customers.

Product Lineup



Sensors

Software

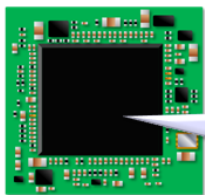
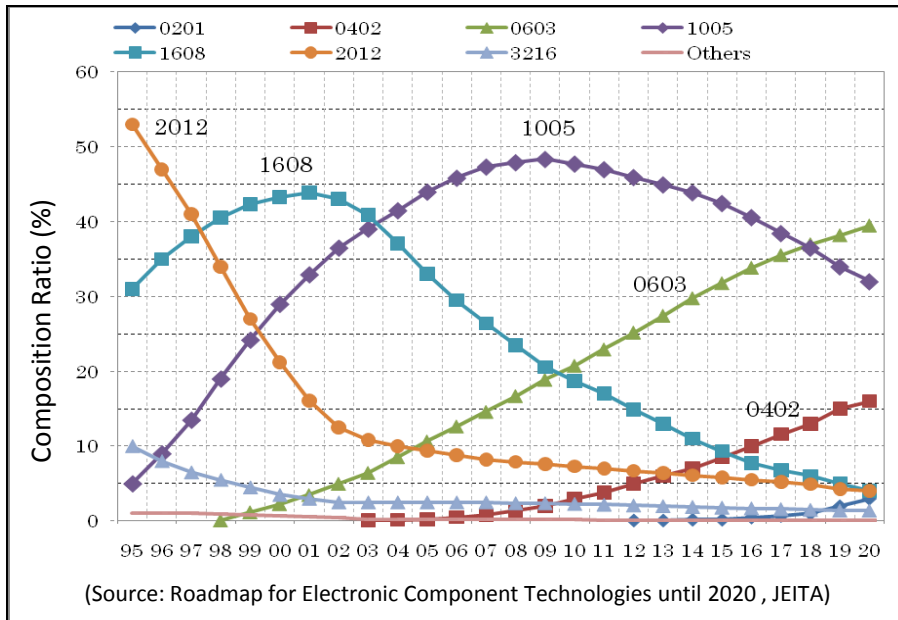


Wireless Modules

Spread of High Value-added MLCCs

- ✓ Trend toward more manifold and advanced functions in mobile devices results in intensive demand for ultra-compact and high-capacitance MLCCs.
- ✓ Development of higher-capacitance MLCCs accelerates replacements from non-ceramic capacitors.
- ✓ Lineup for application-specific MLCCs has been expanded (e.g. MLCCs for automotive electronics, substrate embedded MLCCs).

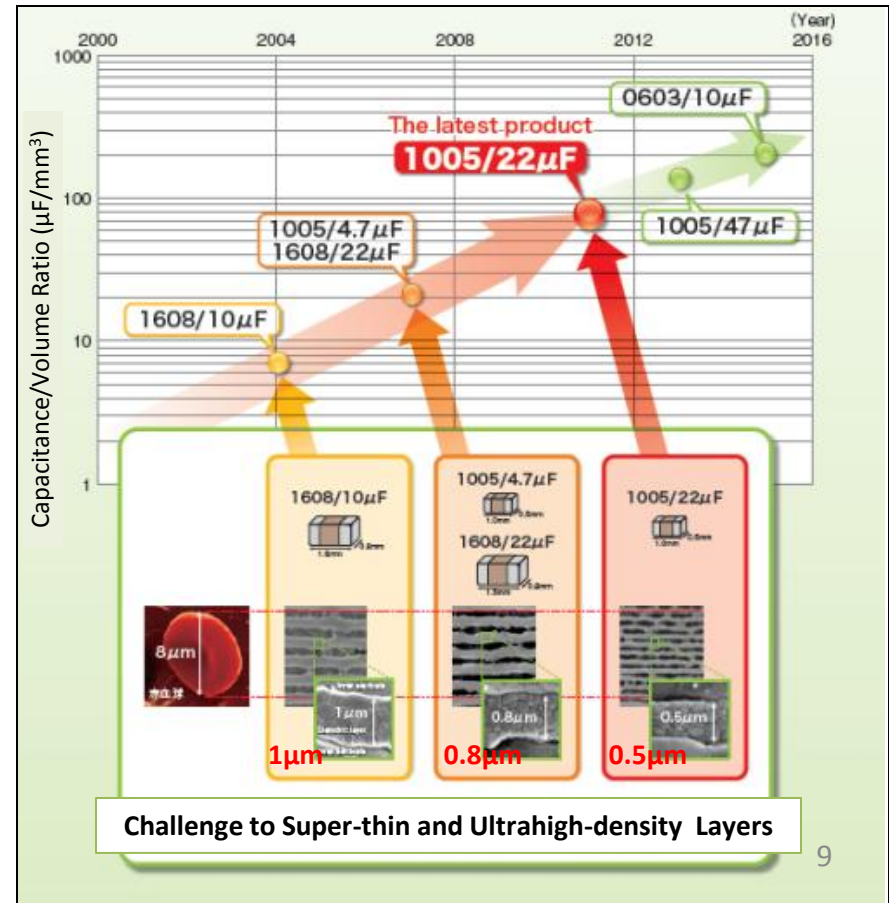
Size Trend in MLCC Industry



Substrate embedded capacitor



Murata's MLCC Roadmap



Sophistication of Devices \Rightarrow More Components Required



	2G Feature Phone	3G Feature Phone/ Low-end Smartphone	High-end Smartphone
MLCC	100 to 200	300 to 400	400 to 500
(Ultra-compact MLCC)	—	200	300 to 400
SAW Device	2 to 3	3 to 6	6 to 8
WiFi Module	—	Yes/No	Yes

(Based on our estimate.)

An Ultrabook PC is estimated to use 3x as many ultra-compact MLCCs as a conventional notebook PC.

An LTE mobile device is estimated to use 100 more MLCCs and 2 to 3 more SAW devices than a non-LTE device.



	Notebook PC	Tablet Device
MLCC	700 to 800	500 to 600
(Ultra-compact MLCC)	100	200 to 300
SAW Device	—	6 to 8
WiFi Module	Yes/No	Yes

(Based on our estimate.)

Expanding Business Opportunities through M&A



- ✓ To enhance our communication module business through the integrated technologies of our world-leading front-end modules (FEMs) and Renesas Electronics' market-proven high-power amplifiers.
⇒ **MuRata can provide total solutions for smartphones' RF circuits, which have been integrating manifold functions.**
- ✓ This acquisition is expected to close by February 2012.
- ✓ Sales amount was approx. ¥30 billion (FYE 3/31/2011).

[Advantages of Renesas' PAs]

1. Renesas has commercialized the world's first multi-mode/multi-band (MMMB) type PAs.
2. Renesas' silicon-based PA technology is superior in low cost production to GaAs-based technology.



- ✓ To add VTI's MEMS (Micro Electro Mechanical Systems) sensors for automotive, industrial and medical applications to our product lineup.
⇒ **Intensifying approaches to new markets (automotive and medical)**
- ✓ To expand sales of gyroscopes and acceleration sensors for the consumer market, utilizing the synergy between VTI's advanced MEMS technologies and products, and Murata's strong relationship with customers in the consumer market.
- ✓ This acquisition is expected to close by April 2012.
- ✓ Sales amount was €76 million (FYE 12/31/2010).

[Advantages of VTI's sensors]

1. Automotive market
Acceleration sensors and combo sensors (acceleration + gyro) for ESC (Electronic Stability Control), ABS etc.
2. Industrial and medical market
Inclination sensors for industrial machines
Acceleration sensors for medical equipment
3. Consumer market
3-axis gyroscopes, 3-axis acceleration sensors

Expand our business domain by acquiring technologies and markets unfamiliar to us through M&A ⇒ Performance in excess of market growth rate

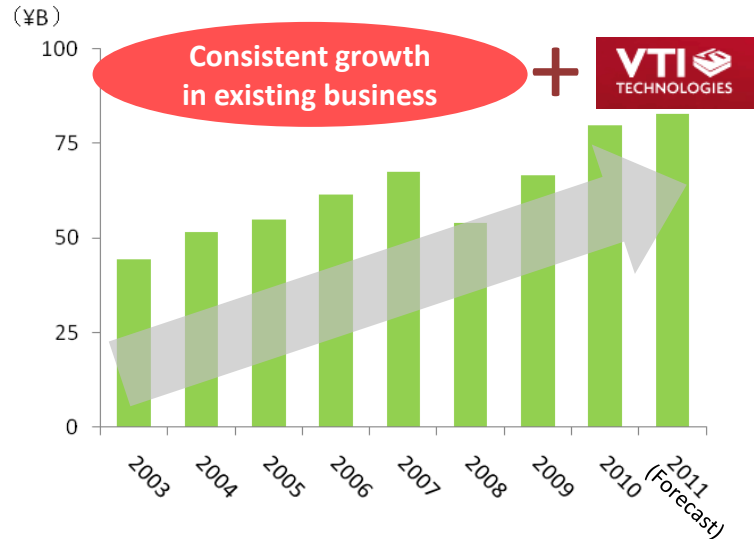
New Markets/Products

- ✓ ***Automotive***
- ✓ ***Environment / Energy***
- ✓ ***Healthcare***

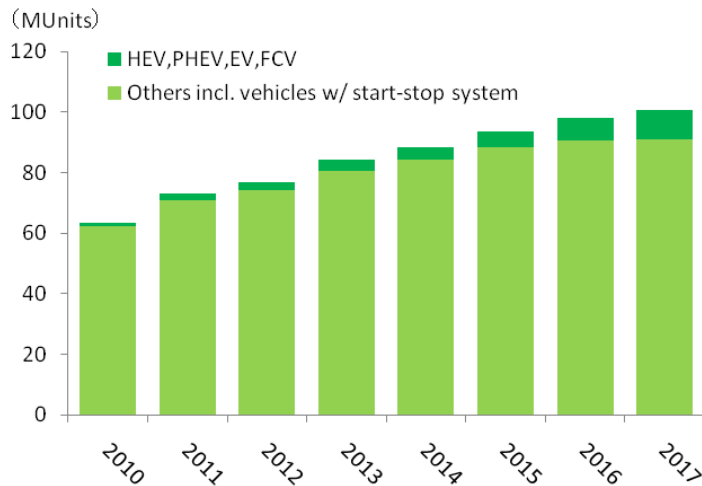
New Markets

Automotive Market

Murata's sales trend for Automotive



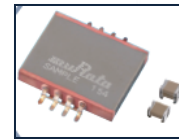
World-wide automobile forecast



(Source: IHS Automotive)



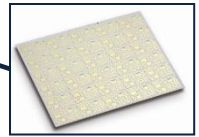
Ultrasonic Sensor



High Capacitance MLCC for Power Electronics



Insulated DC-DC Converter



LTCC Multilayer Substrate

Progress of Electrification in Automotive Market

- ✓ Automotive market is growing fast and stably.
- ✓ Demand for electronic components is increasing for HEVs/PHEVs/EVs and vehicles with regeneration system (e.g. start-stop system).
- ✓ Legislative mandate for ESC (Electronic Stability Control) accelerates demand for gyroscopes and acceleration sensors of VTI technology, which MuRata is to acquire by April 2012.
- ✓ Product lineup for automotive electronics is expanding.
 - ⇒ High Capacitance MLCCs for power electronics, insulated DC-DC converters, etc.

New Markets

Environment/Energy Market

Silver Paste for Solar Cells

MuRata's lead-free silver paste matches performance of leaded paste.

Energy Harvesting Devices

Transfer tiny energy around us (heat, vibration, pressure and light) to electricity.

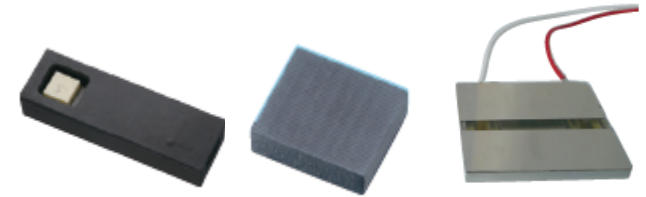
Wireless Solutions for HEMS (WiFi / Bluetooth / ZigBee)

Realize energy-saving smart houses by connecting each electronic device using wireless and sensor technologies.

Lithium Ion Rechargeable Batteries

Large battery for motors and storage that applies MLCC's multilayer technology

Product Lineup



Energy Harvesting Devices

Healthcare market

Vital Sign Sensors

Measure vital signs with ease and stability.

UV Sensors

Accurately measure UVA and UVB, which can lead to skin damage and cancer.

Micro Blowers

Discharge high-pressure air from ultra-compact and thin package by utilizing piezoelectric characteristics of ceramics.

VTI's MEMS Sensors for Medical Applications

#1 share in cardiac rhythm management (CRM)

New lineup for MuRata after the acquisition of VTI

Product Lineup



Vital Sign Sensor



Micro Blower

New Products

New businesses / New products

ESD Protection Devices

- ✓ Prevent ESD (electrostatic discharge) damages for antennas and terminals with broad product lineup and high durability.

RFID

- ✓ RFID (Radio Frequency Identification) read/write tags and modules for traceability

NFC Devices

- ✓ Small antenna and module solutions for mobile devices

Micro DC-DC Converters

- ✓ Individual power supply to each functional circuit in highly-functional mobile devices
- ✓ Reduce mounting space drastically compared with a discrete solution.

Wireless Power Transmission Modules

- ✓ Transmit 10W wirelessly using the capacitive coupling system
- ✓ High transmission efficiency, excellent positioning flexibility, and ultra-thin package ⇒ Easy to incorporate in low-profile devices

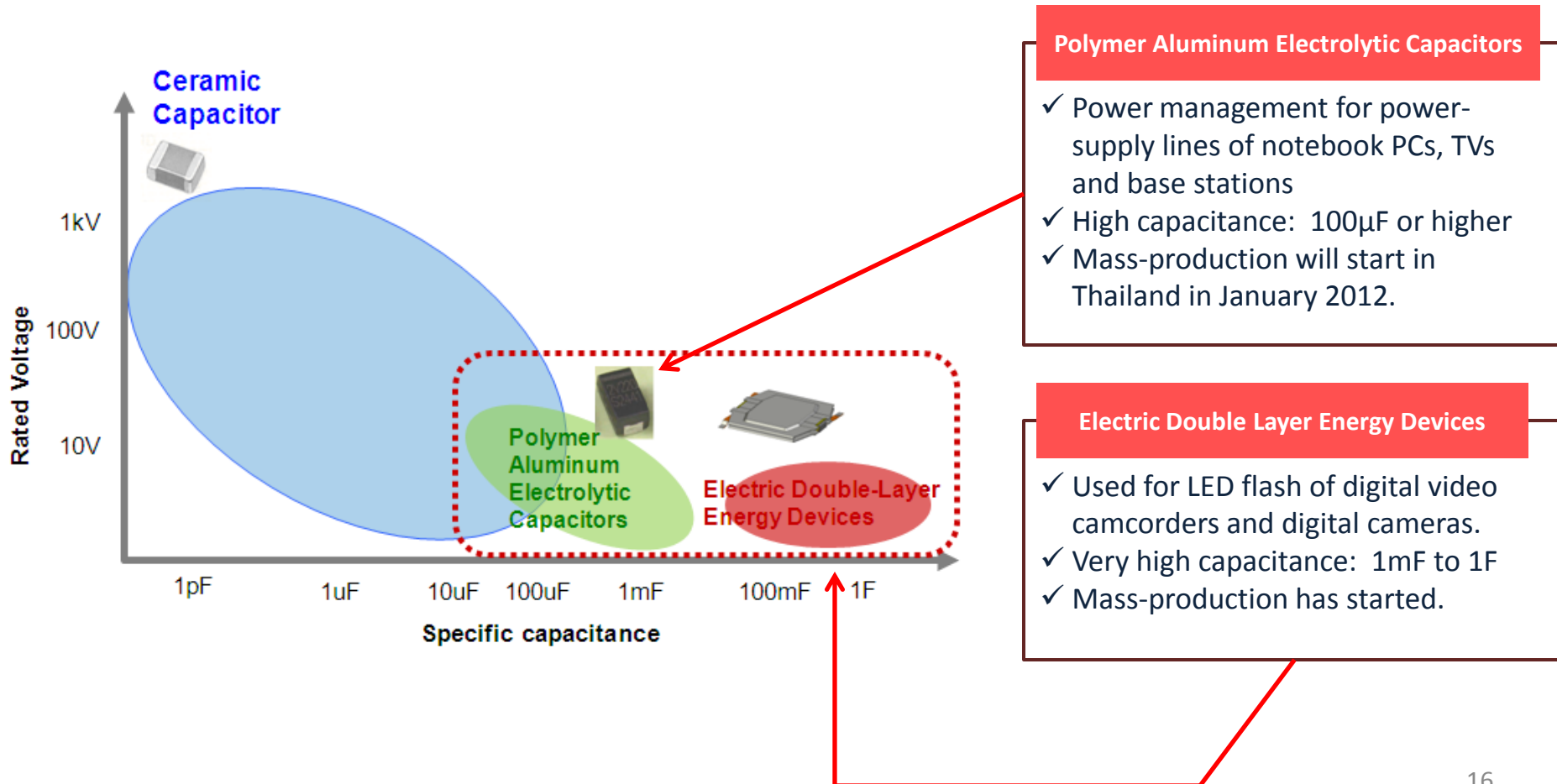


Wireless Power Transmission Module

New Products

Expansion of “Capacitor House”

Polymer aluminum electrolytic capacitors and electric double layer energy devices have been added to our wide-range capacitor lineup in addition to world’s #1 ultra-compact/high-capacitance MLCCs.



Emerging Markets

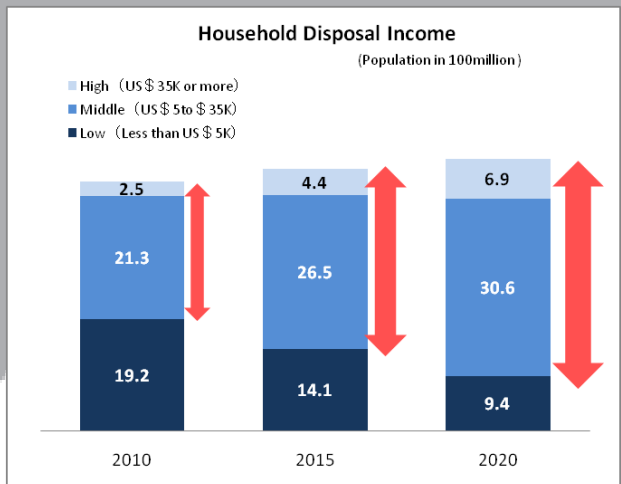
✓ ***Expanding Production & Sales Functions***

Response to Demand Growth in Emerging Markets

Demand Expansion in Emerging Countries

- ✓ Purchasing power is expanding due to increase in middle/wealthy classes in emerging countries.
- ✓ Production and design functions of device manufacturers are concentrated in Asia.

- ✓ Demand shift from low-end to middle/high-end devices
- ✓ Must localize sales and design functions.



(Source: Trade White Paper 2011, Ministry of Economy, Trade and Industry)

Sales

- ✓ Established sales companies in India and Vietnam.
- ✓ Established sales offices in inland China (Chengdo, Wuhan, Chongqing and Xian).

Production

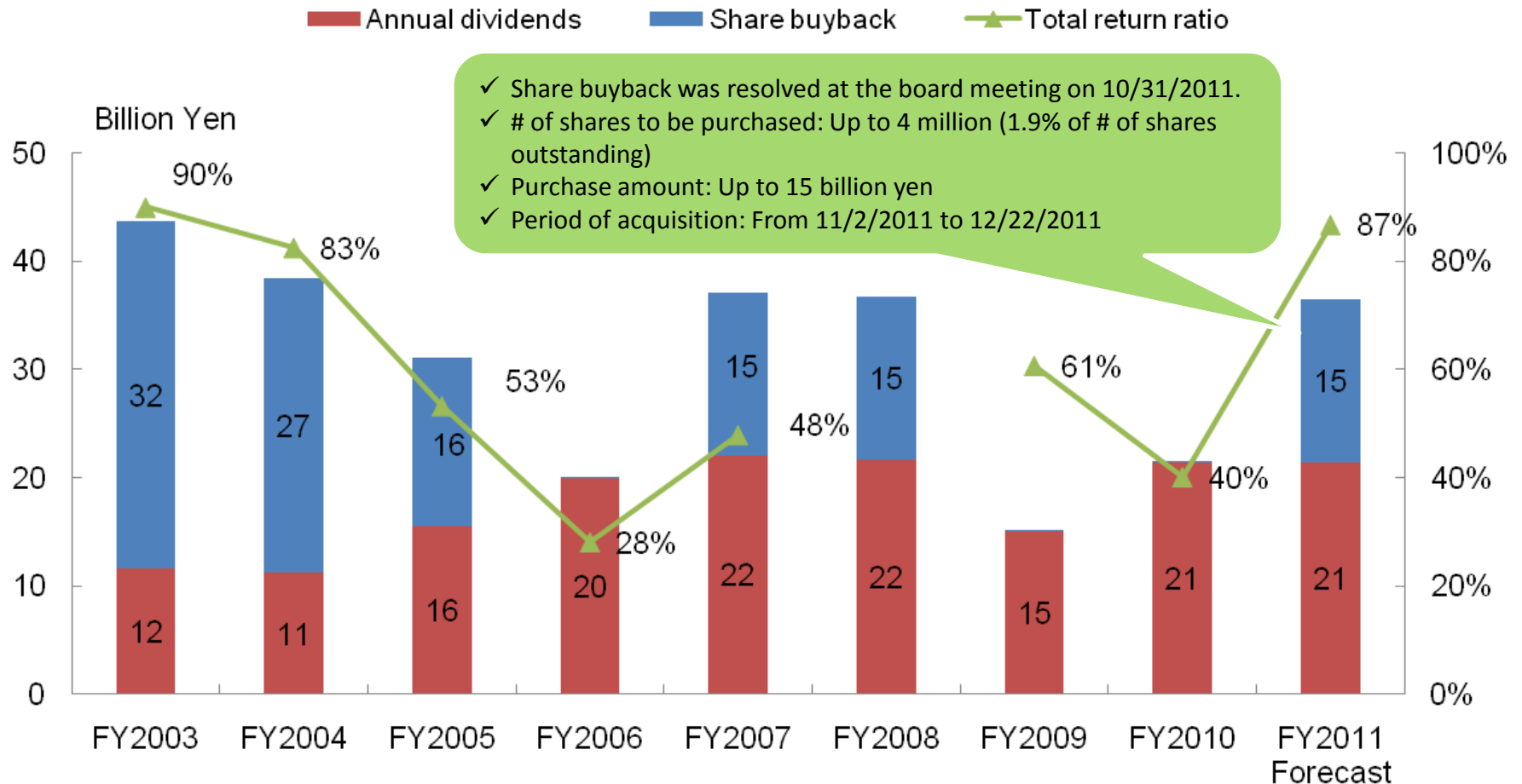
- ✓ Expansion of production outside Japan
Present 15% ⇒ **March 2013 30%**
 - Wuxi (China): Constructed a new building and started production in April 2011.
 - Shenzhen (China): Constructed a new building and started production in June 2011.
 - Philippines: Will establish a new subsidiary and start production in January 2013.
 - Thailand & Malaysia: Will expand production.

Design & Marketing

- ✓ Built an anechoic chamber for EMC (electromagnetic compatibility) support in Shanghai.
- ✓ Localized design function of wireless communication modules and power supplies.
- ✓ Accelerating marketing activities in emerging countries.

Return to Shareholders

Return to Shareholders



Our basic policy of profit distribution to shareholders is to prioritize the sharing of gains through payment of dividends, and to steadily raise them by increasing profit per share.

This report contains forward-looking statements concerning Murata Manufacturing Co., Ltd. and its Group companies' projections, plans, policies, strategies, schedules, and decisions. These forward-looking statements are not historical facts; rather, they represent the assumptions of the Murata Group based on information currently available and certain assumptions we deem as reasonable. Actual results may differ materially from expectations due to various risks and uncertainties. Readers are therefore requested not to rely on these forward-looking statements as the sole basis for evaluating the Group. The Company has no obligation to revise any of the forward-looking statements as a result of new information, future events or otherwise.

Risks and uncertainties that may affect actual results include, but are not limited to, the following: (1) economic conditions of the Company's business environment, and trends, supply-demand balance, and price fluctuations in the markets for electronic equipment and components; (2) price fluctuations and insufficient supply of raw materials; (3) exchange rate fluctuations; (4) the Group's ability to provide a stable supply of new products that are compatible with the rapid technical innovation of the electronic components market and to continue to design and develop products and services that satisfy customers; (5) changes in the market value of the Group's financial assets; (6) drastic legal, political, and social changes in the Group's business environment; and (7) other uncertainties and contingencies.

muRata