

# **INFORMATION MEETING** 2007



Murata Manufacturing Co., Ltd.

## **Electronic Equipment Market**

< Sales, Production, and Demand Assumptions (Murata's estimation) > (Million Units)

		FY2006	FY2007	Growth
Mobile Phones	Sales	914	1,012	+11%
	Component Demand	990	1,100	+11%
Personal Computers	Sales	230	256	+11%
	Component Demand	243	268	+10%
LCD-TV sets	Production	49	78	+59%
PDP-TV sets	Production	11	15	+35%
Digital Still Cameras	Production	111	123	+11%

## **Electronic Equipment Market**

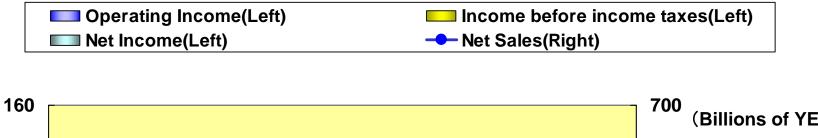
Mobile Phones	Full-scale diffusion of new 3G mobile phones, inclusion of more advanced functions					
	<ul> <li>The use of Murata components are 1.5 to 2 times higher per unit than in earlier phones</li> </ul>					
	Bluetooth <sup>®</sup> connectivity, digital terrestrial broadcast reception					
	•The shift to multi-band phones has led to the need for higher numbers of					
	SAW filters per phone					
	(Conventional mobile phones: two to three filters per phone;					
	Multi-band 3G phones: six to seven filters per phone)					
Digital AV	Flat-screen televisions					
equipment	A single 32-inch or larger flat-screen TV contains 700 to 1,400 ceramic capacitors					
	Digital Cameras					
	•The demand for GYROSTARs <sup>®</sup> used for image stabilization is growing					
PCs	The move to the use of multi-core MPUs in PCs					
	<ul> <li>Expansion of demand for large-capacitance and application-specific capacitors</li> </ul>					

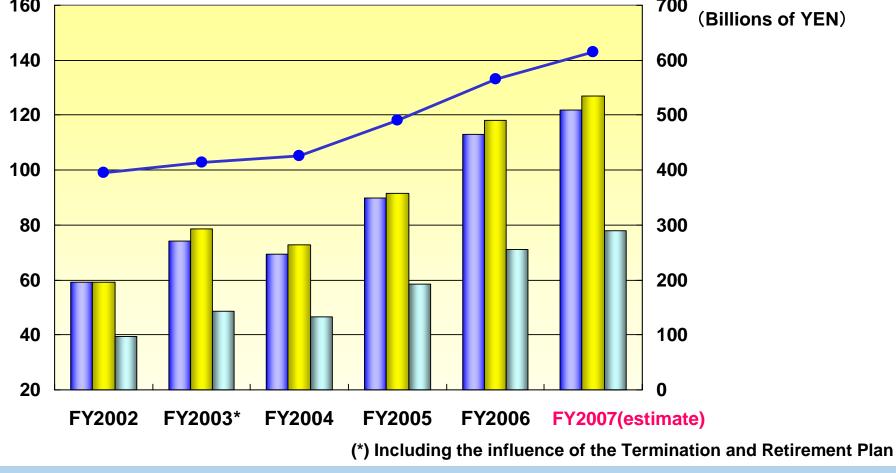
### **New demands for electronic components**

(Note) Bluetooth is trademark of Bluetooth SIG, Inc U.S.A

### **Business Performance Overview**

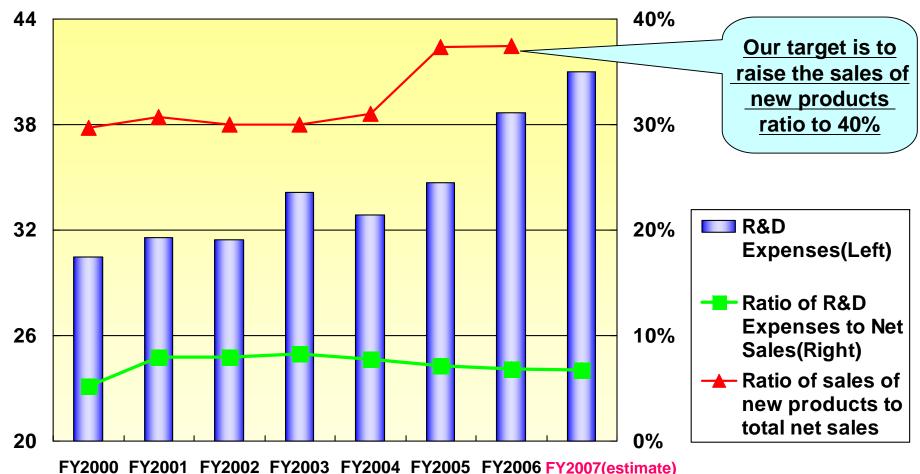
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**Billions of Yen** 

### Business Performance Forecast for FY2007 muRata

(Billions of YEN)

	FY2005 Actual	FY2006 Actual	Growth*	FY2007 Estimation	Growth*	
	Amount	Amount	%	Amount		
Net sales	490.8	566.8	+15.5	615.0	+8.5	
Operating income	89.8	113.4	+26.2	122.0	+7.6	
Income before income taxes	91.7	118.0	+28.7	127.0	+7.6	
Net income	58.4	71.3	+22.0	78.0	+9.4	

\* Growth ratio against the previous year

#### (Billions of YEN)

	FY2006 Actual	FY2007 Estimation	Growth
Production equipment	63.8	51.0	(12.8)
R&D equipment	7.0	10.0	+3.0
Land, buildings	20.8	29.0	+8.2
Others	8.1	10.0	+1.9
Total	99.7	100.0	+0.3

- (Major projects of buildings for FY2007)
  Production facility for capacitors in Izumo plant
  Production facility for Saw filters in Kanazawa plant
- R&D facility in headquarters

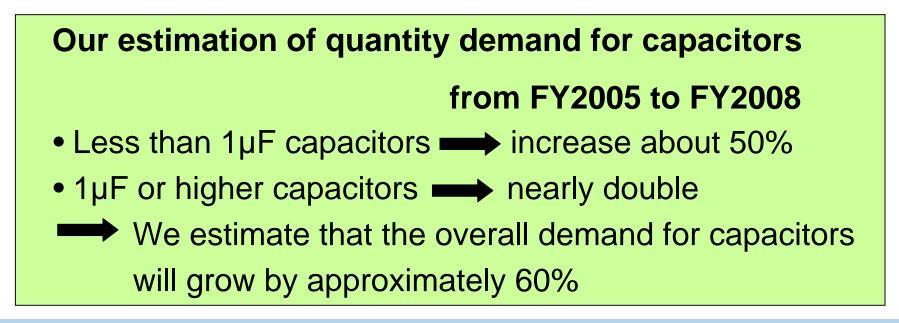
Production Capacity Increase and Expected Demand for Capacitors



### Production capacity increase for capacitors (based on quantity)

Increased capacity by approximately 40% in FY2006

Plan to increase a further 15% by September, 2007



## Capacitors

Large-capacitance ceramic capacitors whose sales are growing rapidly through miniaturization and larger capacitance

First company to mass-produce large-capacitance MLCCs using leading-edge 1.0µm thin-layer dielectrics -Sales of 1608-size 10µF products and 2012-size 22µF products are rapidly increasing -Commercialized 3216-size 100µF capacitors, 2012-size 47µF capacitors, and 1005-size 2.2µF capacitors

We have strengthened the lineup of compact and large-capacitance MLCCs

#### Net Sales in FY2006

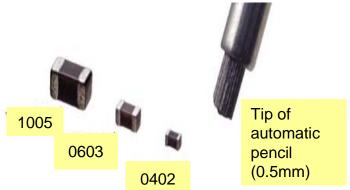
- Large-capacitance capacitors(1µF or higher): Year-on-year growth of 40%
- 22µF or larger capacitance: Year-on-year growth of nearly 100%

## Capacitors

#### Small size capacitors that contribute to functional sophistication

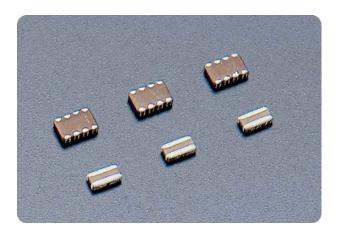
#### of electronics equipment

- 0603-size
  - -Growing demand due to the shift to smaller and more advanced electronic equipment
  - -Net sales in FY2006 increased 35% year-on-year -Increased use in power amplifier modules of mobile phones, mobile phones themselves, portable audio players, and game consoles
- 0402-size
  - First in the industry to commercialize
    Starting to be used in power amplifier modules of mobile phones



### Expansion of application-specific capacitors

- We hold a large share of the market for Low-ESL type capacitors
- As a result of the trend to dual core MPUs, demand for Low-ESL type and large-capacitance capacitors is expanding
- Sales of array (multiple-terminal) products, which enable high-density mounting in mobile devices, are also growing
- Net sales in FY2006 were up approximately 30% year-on-year



Chip Monolithic Ceramic Capacitors (Low-ESL type capacitors)

Expansion of large-capacitance capacitors, small-size products and application-specific capacitors

- These products accounted for 60% of our total capacitor revenues
- They serve to stabilize our average capacitor price since the unit price is high

Total net sales of capacitors in FY2007 are projected to grow by approximately 20 billion yen (10%) from a year earlier

## Noise Suppression Components



Demand growth driven by digitalization and increasing

functional sophistication in equipment

Growing importance of noise suppression due to digitalization and increasing functional sophistication in equipment



- Sales of our noise suppression components have grown steadily over the past few years, thereby offsetting the effect of price declines
- Highly profitable products, utilizing our ceramic materials and production technologies

## Noise Suppression Components

- Chip ferrite beads(BLM)
- Chip coils(LQW/LQG/LQP)
  - Growing sales due to the trend to digitalization and increasing functional sophistication of mobile phones
    Commercialized very compact versions of these components, down to 0603 and 0402 sizes
- Chip three-terminal capacitors (NFM)
  - -Special noise suppression characteristics for power supply lines of AV equipment
- Chip common-mode choke coils (DCC)
  - -Effectively removing noise generated by high-speed interfaces



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LQW/LQG/LQP Series



NFM21P Series



DLP/DLW31S Series

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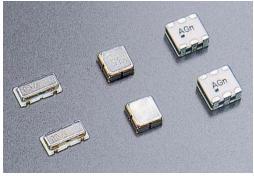
## **SAW Filters**

- Rise in production of mobile phones
- The diffusion of multi-band phones has led to the need for a greater number of SAW filters per phone (Conventional mobile phones: two to three filters per phone; Multi-band phones: six to seven filters per phone)
- Improved market share to 35%

**SAW Filters** 

Sales of SAW Filters in FY2006 rose approximately 40% over the previous term

• We plan revenues to increase 30% in FY2007

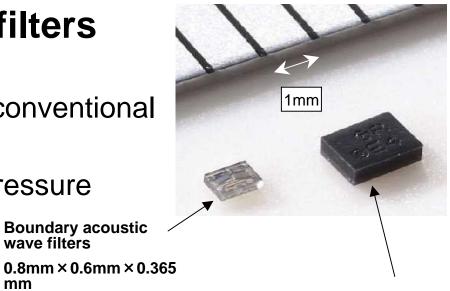




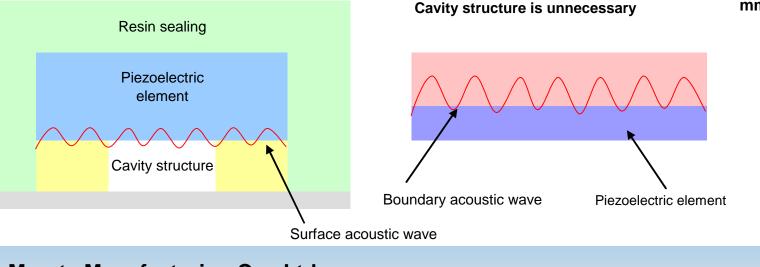
#### **Microwave Devices muRata** Boundary acoustic wave filters -Newly adopted structure 1mm -Surface area is about one-third of conventional SAW filters -Improvement in temperature and pressure resistance **Boundary acoustic** wave filters

mm

<Boundary acoustic wave filters>



#### SAW filters 1.35mm × 1.05mm × 0.5 mm



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<Saw filters>

## **Sensor-related Products**

### •GYROSTAR

- -Demand growth for image
- stabilization in digital still cameras
- -Used in the controllers of game consoles
- -Net sales in FY2006 grew 15% year-on-year

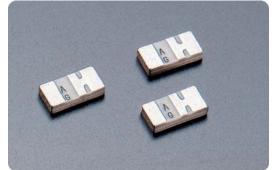
### Shock sensors

- -Used for vibration detection in HDDs
- -Increasing production of HDDs

#### **Expanding applications of sensor-related products**

• MEMS GYROSTAR<sup>®</sup> for car navigation systems







## Modules

•	Net sales o	f Bluetooth		Fall slightly as a
[			(Billions of Yen)	result of a shift to in-
	FY2005	FY2006	FY2007	house manufacturing
	Actual	Actual	Plan	by our customers
	45	56	52	

Sales of short-distance wireless communication modules including Bluetooth<sup>®</sup> modules and wireless LAN modules are expected to reach 60 billion yen in FY2007, same level as in the previous term

Expanding applications of module products
Multilayer ceramic devices for wireless LAN applications on PCs
Digital terrestrial broadcasting tuners for mobile phones
Power supply for flat screen TVs

#### Acquisition price: approx. 85 million US\$

# **Aim:** 1. Addition of a wide range of standard power supply products that Murata does not currently handle

- 2. Full-scale entry into overseas market
- 3. High market share for DC-DC converter
- 4. Strengthening of competitiveness by sharing our sales network,

production technology, and procurement of materials

**Net sales:** 185 million US\$ for the year ended January, 2007 (approx. 22.2 billion Yen; 1US\$=120yen)

Number of employees: 1,318 as of January 31, 2007



## Our long-term goal is to achieve net sales of <u>1 trillion yen in FY 2015</u>

Expansion of existing businesses

Strengthening of existing businesses as our foundation

Creation of new products

### **Cultivation of new business**

Focus on batteries, electronic components for the

biotechnology market, and antennas

## Strengthening of Existing Businesses muRata

### • MLCC

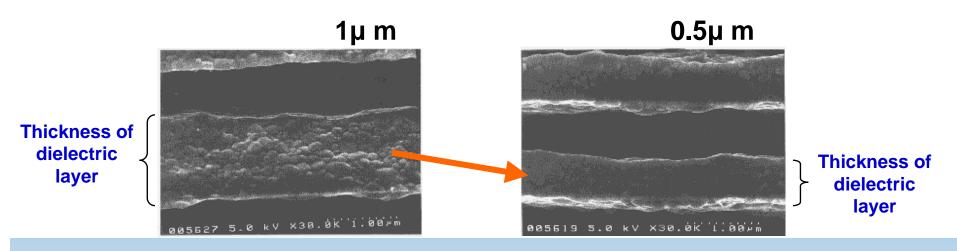
#### Planning to reduce the thickness of our dielectric layer to

#### $0.5\ \mu\text{m},$ by evolving our material and multilayer technologies

Small-size, large-capacitance capacitors, such as 2.0 x 1.2mm-size 100µF products

#### Developing capacitors of capacitance greater than 100 $\mu\text{F}$

We believe it is technically possible to use ceramics to produce super-large-capacitance capacitors of up to 1,000µF

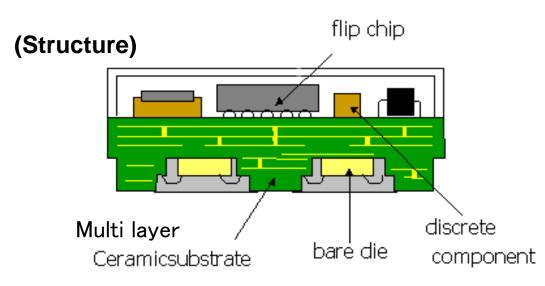


## Strengthening of Existing Businesses



### LTCC Technology

- -Applying the LTCC technology to the new field of wireless communications
- -Utilizing the software technology of SyChip, Inc.
  - To expand wireless communication modules of new communication technologies such as UWB, Zigbee, and WiMax



Strengthening of Existing Businesses



- -Actuators used in fuel injection systems of diesel engines
- -Actuators for camera modules
- -Speakers for mobile devices
- Noise suppression components
  - -Coil-type/multilayer-type power inductors
- Microfabrication technology
  - -Commercialized MEMS gyroscopes for car navigation systems

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## **Cultivation of New Business**

### •Batteries

- -Entering the lithium-ion secondary batteries market
- -Using the rich expertise in materials and production technology of ceramics

Lithium-ion secondary batteries

**Target application** 

Electric tools, electric bicycles

Ultimate target is hybrid cars





## **Cultivation of New Business**



### •Antennas

- -Increase of demand due to the diffusion of multi-band mobile phones
- -Commercialization of main antennas using CERABRID<sup>®</sup>, a composite dielectric material by mixing ceramic powder with heat-resistant organic materials

### •Electronic components for biotechnology market

- -Collaboration with a venture company
- -Development of component for diagnostic equipment applying the microwave technology

## **Financial Strategy**



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### Dividends per share

	Interim	Year-end	Annual
FY2005 Actual	30	40	70
FY2006 Actual	40	50	90
FY2007 Plan	50	50	100

### Share buy-back

Repurchased 22.33 million shares, for a total cost of 122.9 billion yen, in the three years from 2002 to 2005 (Most of the shares repurchased have already been retired.)

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