

# FY2017 Q2 Results Briefing

## Financial Results

Nov 16, 2017



**1**

# **FY2017 2Q Results**

**2**

**The prospect in the future**

**3**

**The new product development**

# FY2017 Q2 The settlement of accounts highlights

## Net sales

1. The sales are 53.2 billion yen of the year-on-year comparison increase by 16.3 %, changing smoothly.
  - It changes together for the loading, the smart phone solidly.
  - The build-up substrate increases substantially.

## Operating income

1. The operating profit is 3.86 billion yen of the year-on-year comparison increase by 1.2 billion yen.
2. The ordinary profit is 2.82 billion yen of the year-on-year comparison increase by 2.68 billion yen.
3. The net profit is 2.14 billion yen of the year-on-year comparison increase by 2.52 billion yen

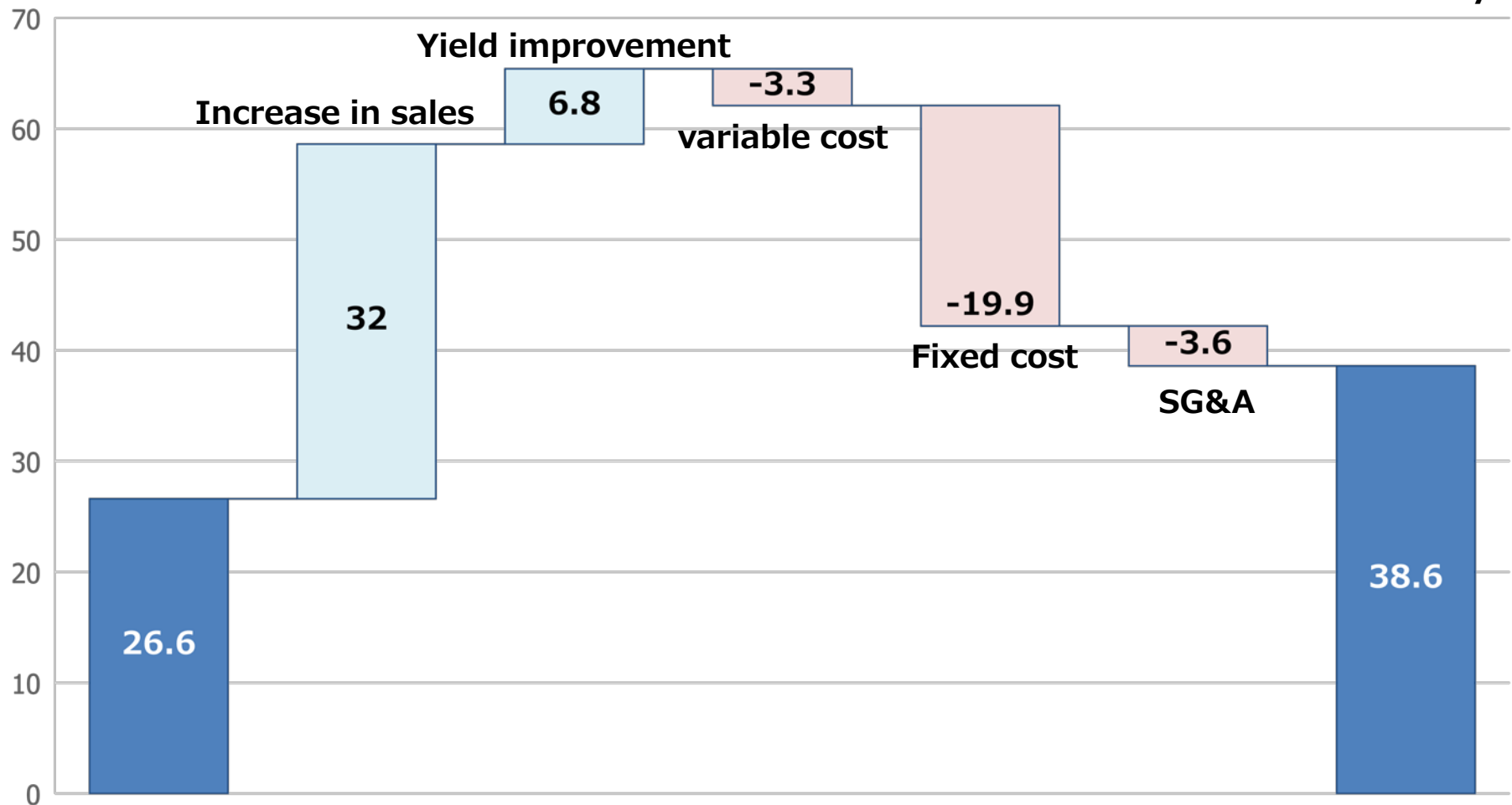
# FY2017 Q2 Consolidated Performance

(100million yen)

	FY2016 Q2	FY2017 Q2	Year-to-year	
			increase	%
<b>Net Sales</b>	457.4	532.1	+74.7	+16.3%
<b>Operating income</b>	26.6 5.8%	38.6 7.3%	+12.0	+45.1%
<b>Ordinary income</b>	1.4 0.3%	28.2 5.3%	+26.8	+1914.3%
<b>Net income</b>	▲3.8 ▲0.8%	21.4 4.0%	+25.2	-
<b>Exchange rate (Yen / USD)</b>	105.35	111.26		

# Analysis of operating profit change 2016 Q2→2017 Q2

(100million yen)



**FY2016 performance**  
(exchange rate 105.35 Yen/us\$)

**FY2017 performance**  
(exchange rate 111.26 Yen/us\$)

# Net Sales, Operating income

(100million yen)

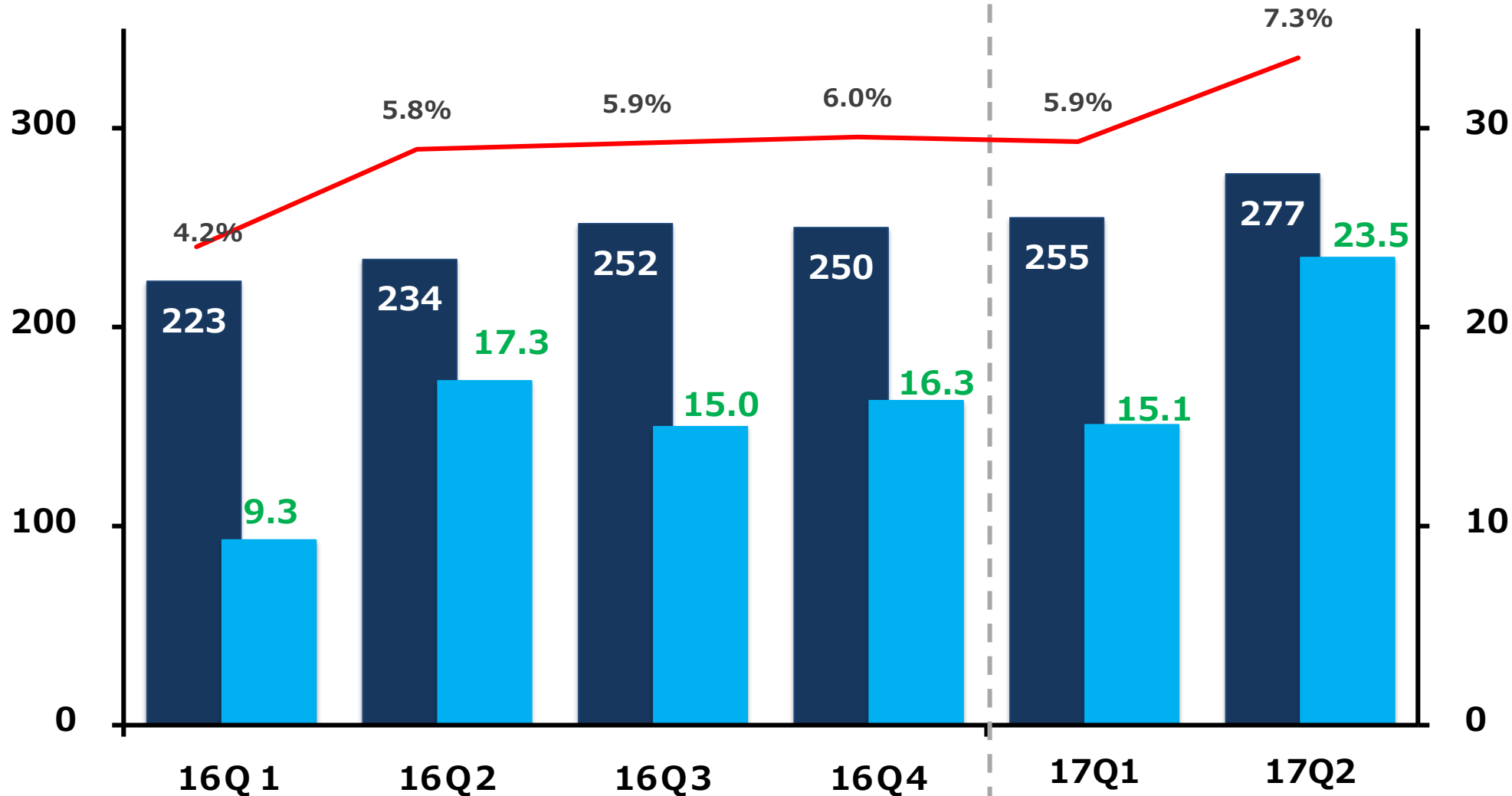
Net Sales

Net Sales

Operating income

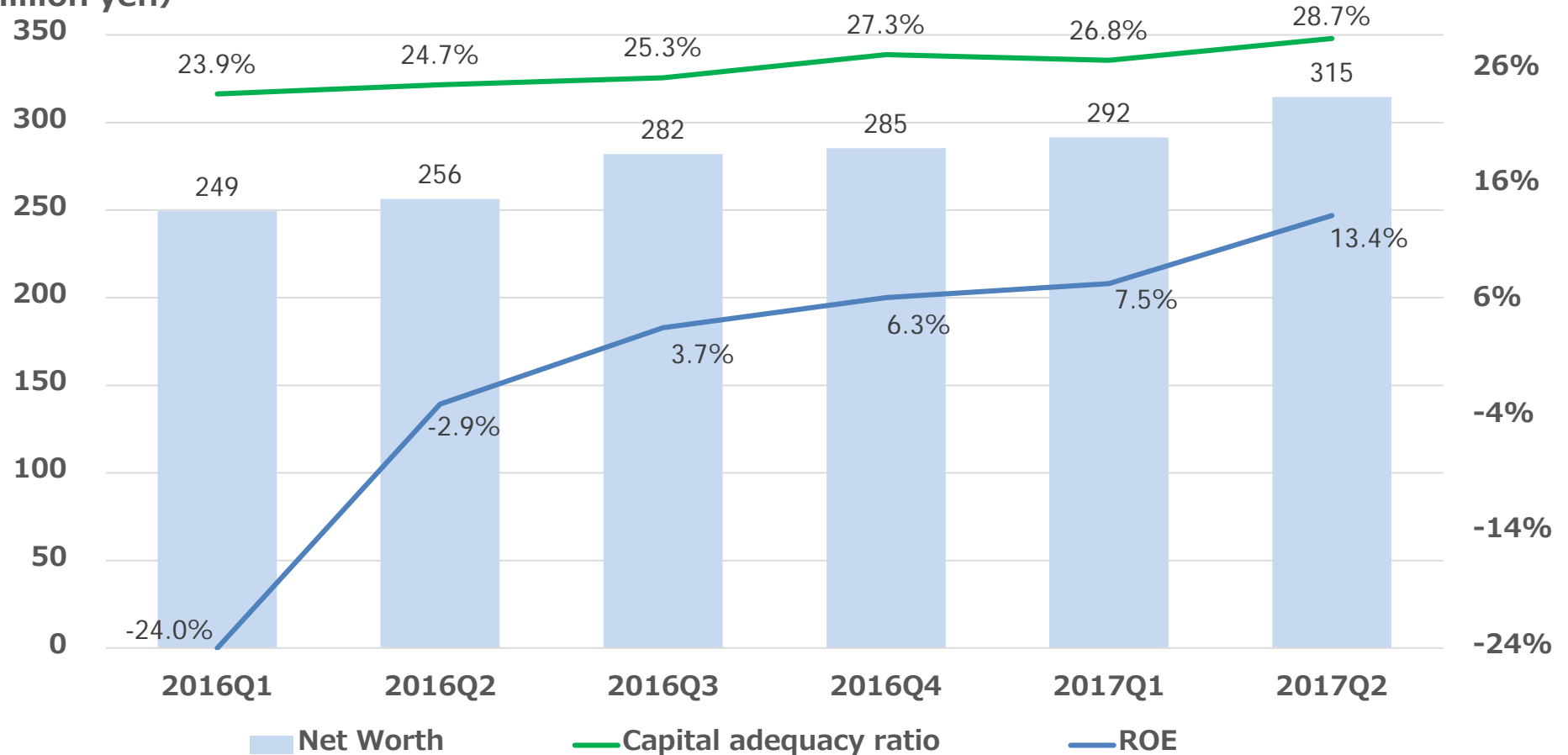
The operating profit ratio (total)

Operating income



# The management index

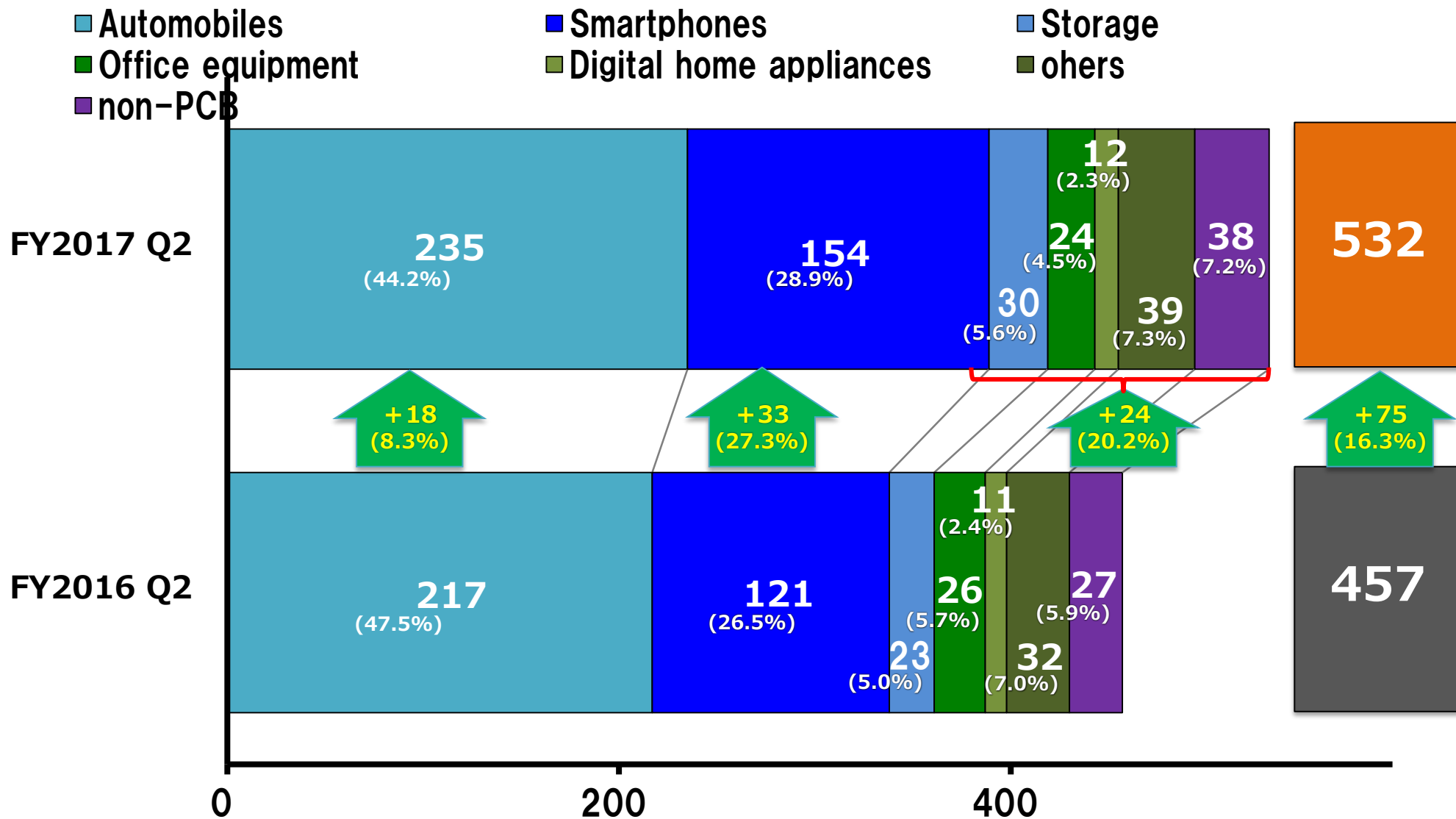
(100million yen)



Interest-bearing debt	<b>578</b>	<b>554</b>	<b>565</b>	<b>527</b>	<b>532</b>	<b>506</b>
D/E Ratio	<b>2.51</b>	<b>2.29</b>	<b>2.24</b>	<b>2.02</b>	<b>2.02</b>	<b>1.82</b>

# By product Application

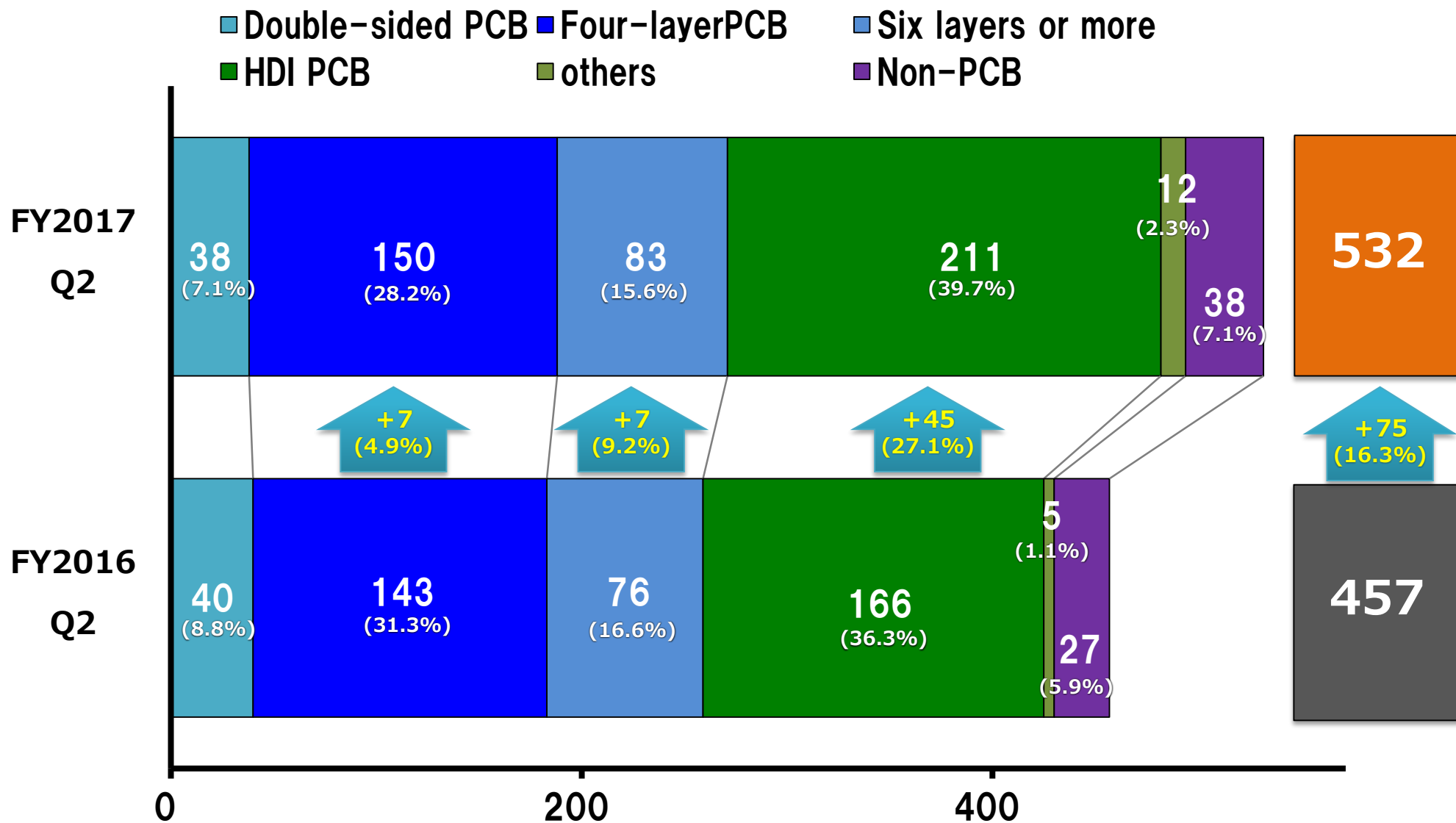
(100 million yen)





# By product specification

(100 million yen)



# FY2017 Q2 Product Revenue

(100million yen)

	FY2016Q2		FY2017Q2	
	Sales	Operating income %	Sales	Operating income %
Automotive	217.1	14.8 6.8%	235.4	16.1 6.8%
Smartphones	121.3	7.5 6.2%	153.7	15.7 10.2%
Storage Office equipment Digital home appliances	59.7	4.1 6.9%	66.0	4.2 6.4%
Others	59.3	0.2 0.3%	77.0	2.6 3.4%
Total	457.4	26.6 5.8%	532.1	38.6 7.3%

# Smartphone global market share(2017/4-9)

	Vendor	Shipment Volume	market share
1	SamSung	156.8	23.6%
2	Apple	86.9	13.1%
3	Huawei	68.3	10.3%
4	Oppo	59.4	9.0%
5	Vivo	48.8	7.4%
6	Xiaomi	41.5	6.3%
Total		663.8	

出典:Trendforce Smartphone Top6

**1**

**FY2017 2Q Results**

**2**

**The prospect in the future**

**3**

**The new product development**

# The prospect in the future

## Overview

- The good condition continues about Automotive and Smartphone.
- It does productivity up, yield improvement, continuing them.
- It reduces a fixed cost and SG&A expenses.
- It does manpower saving.

## Depreciation

- It accelerates the production which increased a domestic investment and used a high technique.
- It constructs a tip substrate factory for Automotive and Smart phone to Vietnam.

## Concerns

- The rise of the raw material price

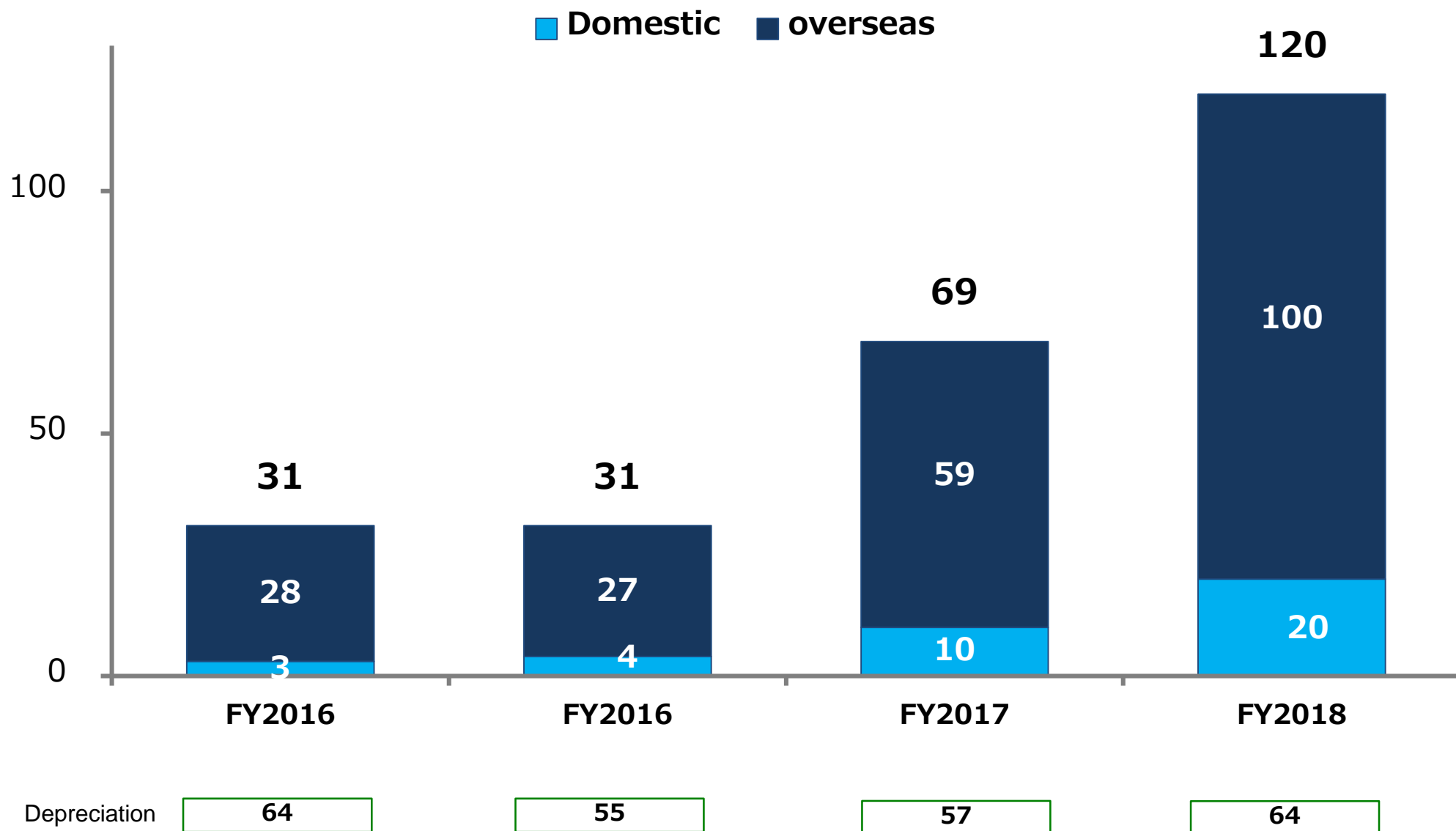
# FY2017 Full-year forecast

(100million yen)

	FY2016	FY2017		
		Original plan	Revised plan	Year-to-year (%)
Net Sales	<b>959.1</b>	1,030	<b>1,060</b>	+100.9 +10.5%
Operating income	<b>57.9</b> 6.0%	62 6.0%	<b>76</b> 7.2%	+18.1 +31.3%
Ordinary income	<b>29.8</b> 3.1%	46 4.5%	<b>56</b> 5.3%	+26.2 +87.9%
Net income	<b>17.7</b> 1.8%	36 3.5%	<b>45</b> 4.2%	+27.3 +154.2%
Exchange rate (Yen / USD)	<b>108.69</b>	110.00	<b>110.00</b>	

# 2018 Investments

( 100 million yen)



# FY2018 Foreign capital investment ~Vietnam Plant No. 3~

A factory to produce automotive and smartphone-friendly tip board, starts in April next year

Automotive

high frequency

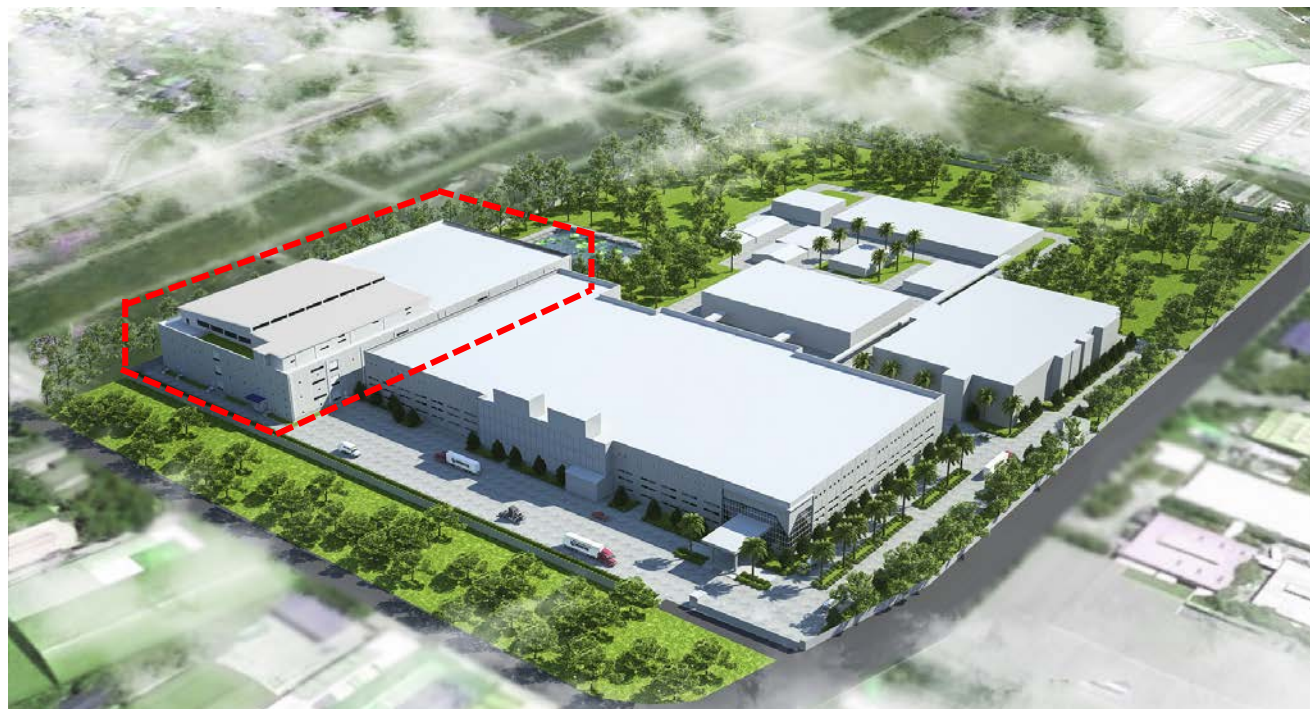
High current

High heat  
dissipation

Smartphone

MSAP

Impedance control



Construction Date	Completion Date	Investment	Total floor area
April 2018	April 2019	3-year total <b>120MUSD</b>	<b>46,000m<sup>2</sup></b>



## Accelerating the production using advanced technology

Field	Substrate type	Use
Automotive	high frequency	Millimeter-wave radar
	High current	LED lamp Power supply unit
	High heat dissipation	EV · PHV · Charging equipment
Smartphone	MSAP	High-precision substrate Impedance control substrate

## About the business alliance with Hokuriku Electric Industry Co., Ltd..

### Contents

**module implementing 、 sensor joint development**

(It effectively uses a mutual sales network, a manufacturing base, a technology)

### Customer

- The expansion of the customer approach
- The support for the request of Local production for local consumption
- The compatible with the new technical needs

### base

**It utilizes the base of the module implementing mutually.**

- Japan (Hokuriku Electric)
- China (Hokuriku Electric)
- Thailand (Hokuriku Electric)
- Vietnam (Meiko)

**1**

**FY2017 2Q Results**

**2**

**The prospect in the future**

**3**

**The new product development**

# The printed-board technology which is demanded from the Automotive & Smartphones



# The millimeter wave radar substrate (The automatic operation)

use

The forward-cardiac-failure-theory one detection sensor for a car.

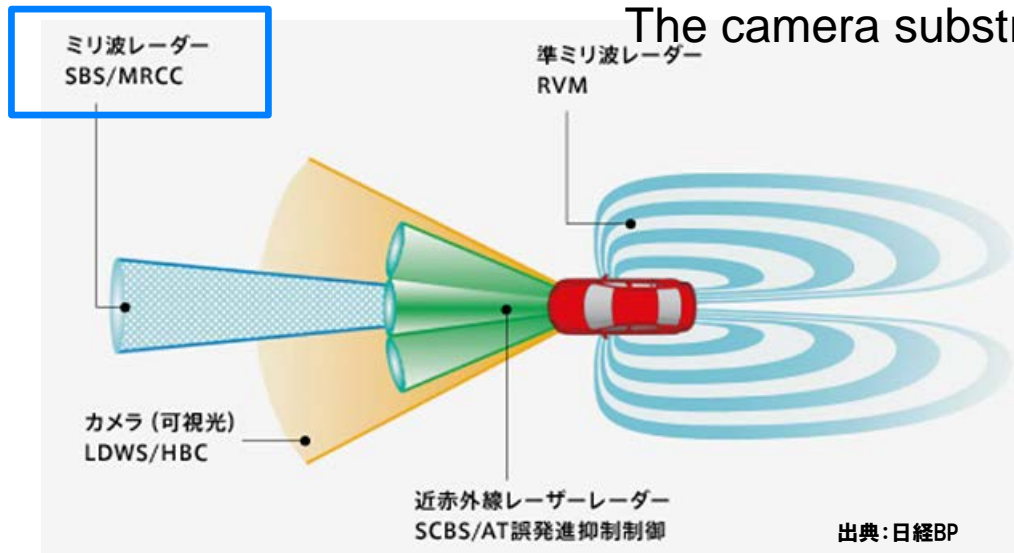
characteristic

The high frequency substrate of the hybrid structure.  
The high-precision pattern formation.

~ It produces at the Japanese factory of 2018 years.

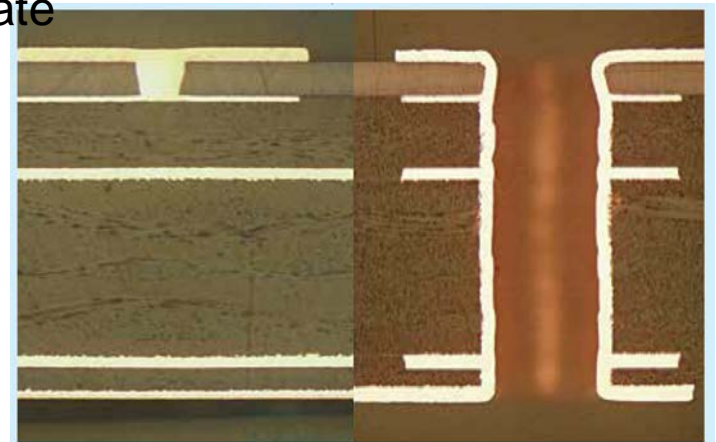
The overseas factory mass production schedule of 2020 years ~

## The millimeter wave radar substrate



## The camera substrate

## The millimeter wave radar substrate section



# The camera substrate (The automatic operation)

use

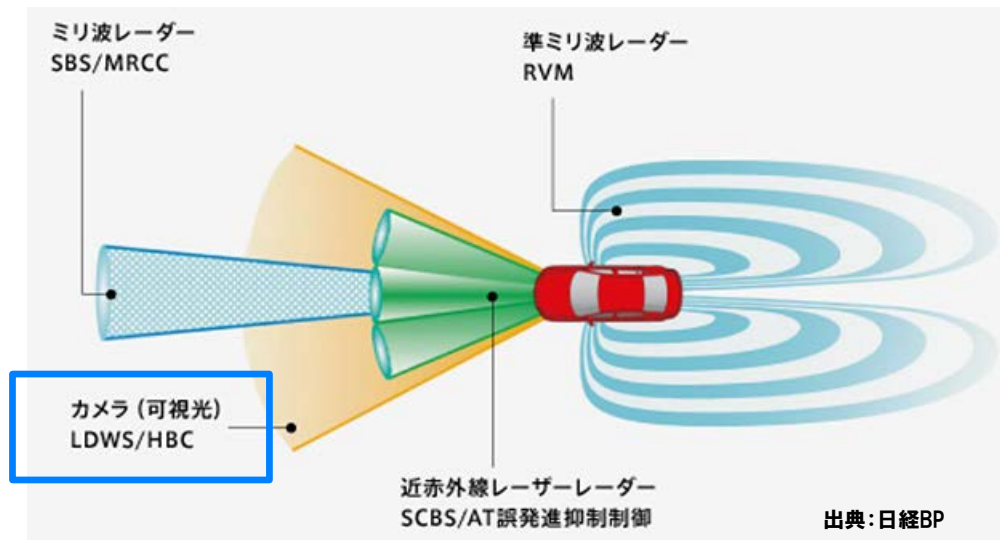
The outside world recognition sensor for the car

characteristic

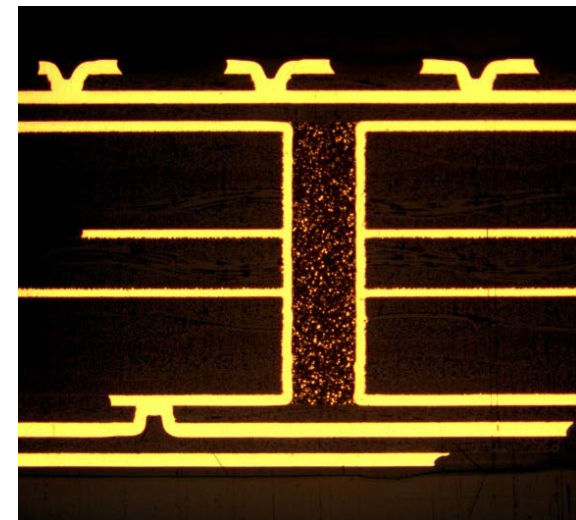
The high density build-up substrate .  
Further speeding-up support .

~ The mass production supports at the Japanese factory from 2013. ~

■ The ADAS camera



■ The ADAS camera substrate section



# Metal based High Dissipation PCB (EV)

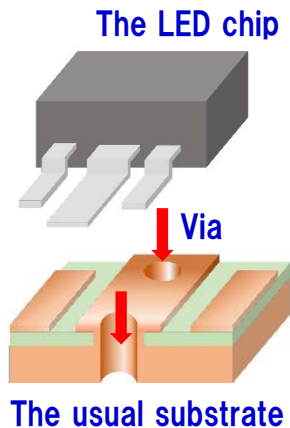
use

characteristic

## The LED headlamp for the car

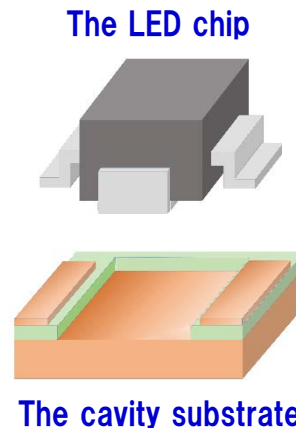
It makes high radiation by the direct LED chip implementing to the cavity substrate.  
~ It produces at the Japanese factory of 2017 years.  
The overseas factory mass production schedule of 2020 years ~

The usual structure image



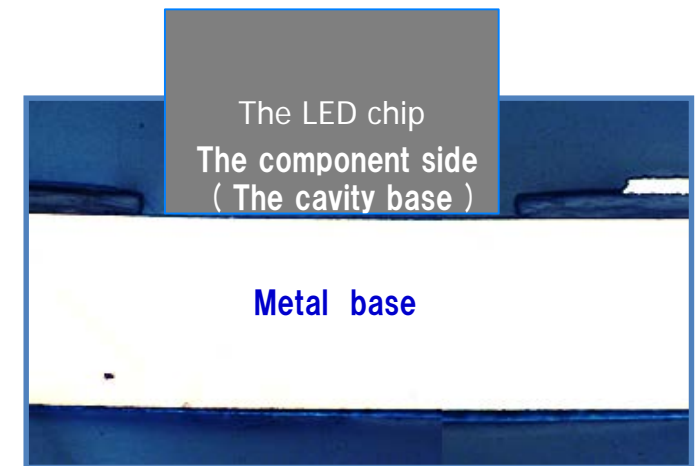
The radiation : LED ~ Via ~ metal base

The new structure image



The radiation : LED ~ metal base

The cavity substrate section



# Thick copper substrate (EV)

use

The junction box, the converter, the EV battery for the car

characteristic

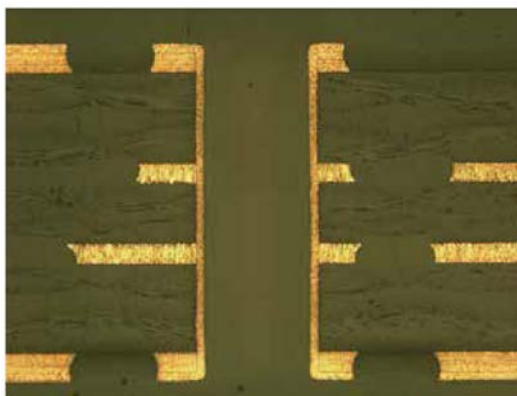
Thick copper substrate  
Heavy-current's making a high-power  
~ It produces at the Japanese factory &  
The overseas factory mass production schedule of 2013 years ~

## The heavy-current - high voltage unit



出所: 矢崎総業株式会社ホームページ

## Thick copper substrate section



## The development article section





# Power IC built-in substrate (EV)

use

## The power unit for the car

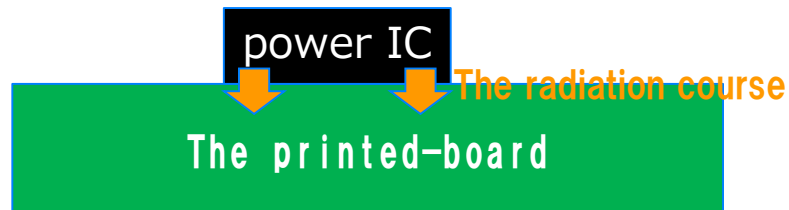
characteristic

The support by the the heavy-current - high radiation  
Small-sized - the lightening of an unit

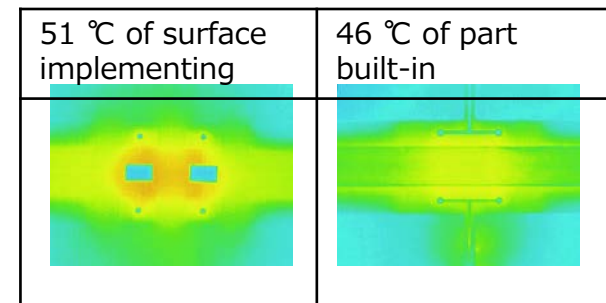
~ It is a mass production target since 2020 years.

The customer and the joint development ~

■ The usual structure ( The power IC surface implementing )



■ The power IC radiation effect



■ The new structure ( Power IC built-in substrate )



■ The power IC built-in substrate section



# The high density build-up substrate (Smartphone)

use

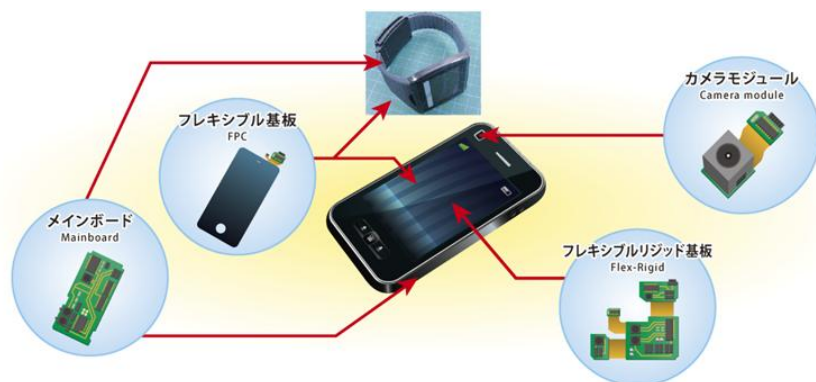
The main board, the module substrate of the next-generation smart phone

characteristic

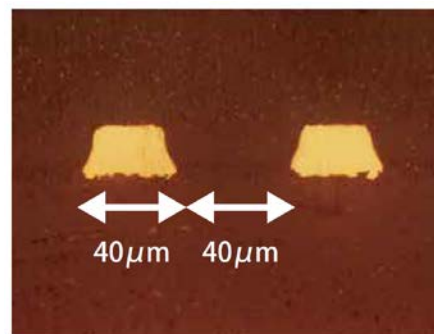
The main board, the module substrate of the next-generation smart phone  
~ It produces at the Japanese factory &

The overseas factory mass production schedule of 2018 years ~

## Smart phone built-in part

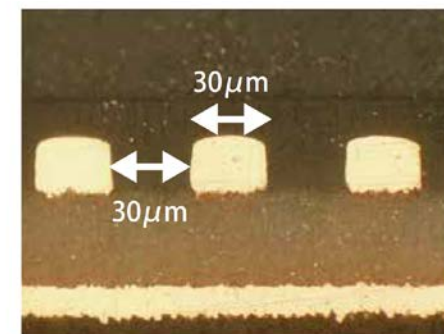


## The etcher method



L/S = 40 μm / 40 μm

## MSAP method



L/S = 30 μm / 30 μm (MSAP)



**MEIKO**

<http://www.meiko-elec.com/>