



Power Semiconductors' in our daily lives

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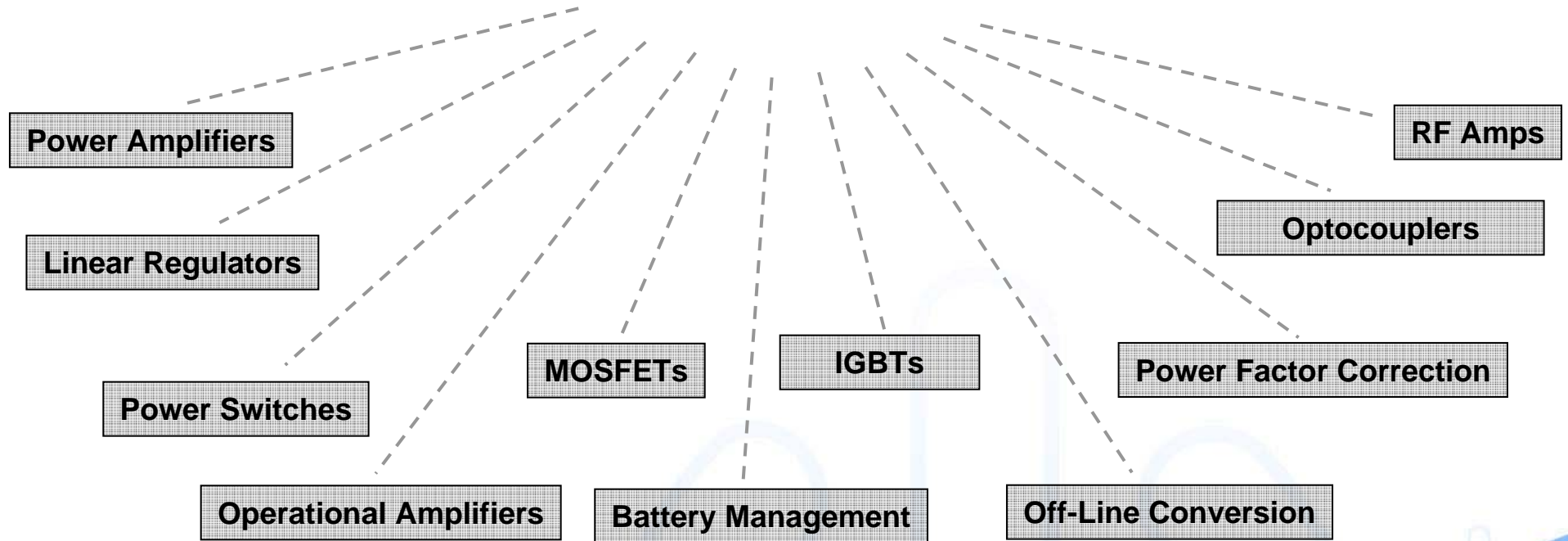
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Products for the Optimization of System Power

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2006 Q1 Sales by End Market Segment

Communications

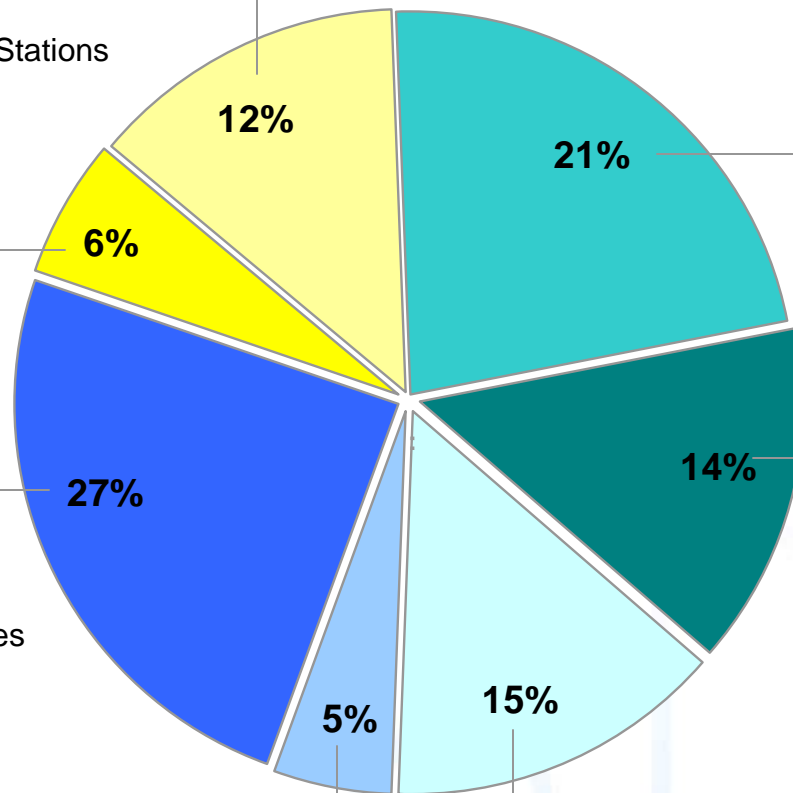
Cellular Handsets, Base Stations
Central Office Switches
Wireless Networking
Routers/Hubs

Displays

Flat Panel Displays
Monitors, CRTs

Computing

Desktops, Notebooks
Disk Drives, Printers,
Copiers, Memory Modules



Consumer

CD/DVD Players, Game Consoles
TV's, VCRs, Set Top Boxes,
PDA's, MP3's, Cameras,
White Goods, Appliances

Industrial: Power Supplies, Adapters

Power Supplies
DC-DC Power Bricks
Power Adapters
Voltage Regulator Modules

Auto

Ignition, Engine
Management, Entertainment
Body Electronics
Navigation, Safety

Industrial: Other

Factory Automation, ATE,
Instrumentation Lighting,
Medical, Motor Control

Source: Fairchild internal estimates



Our Customers are Industry Leaders

Communication

Automotive

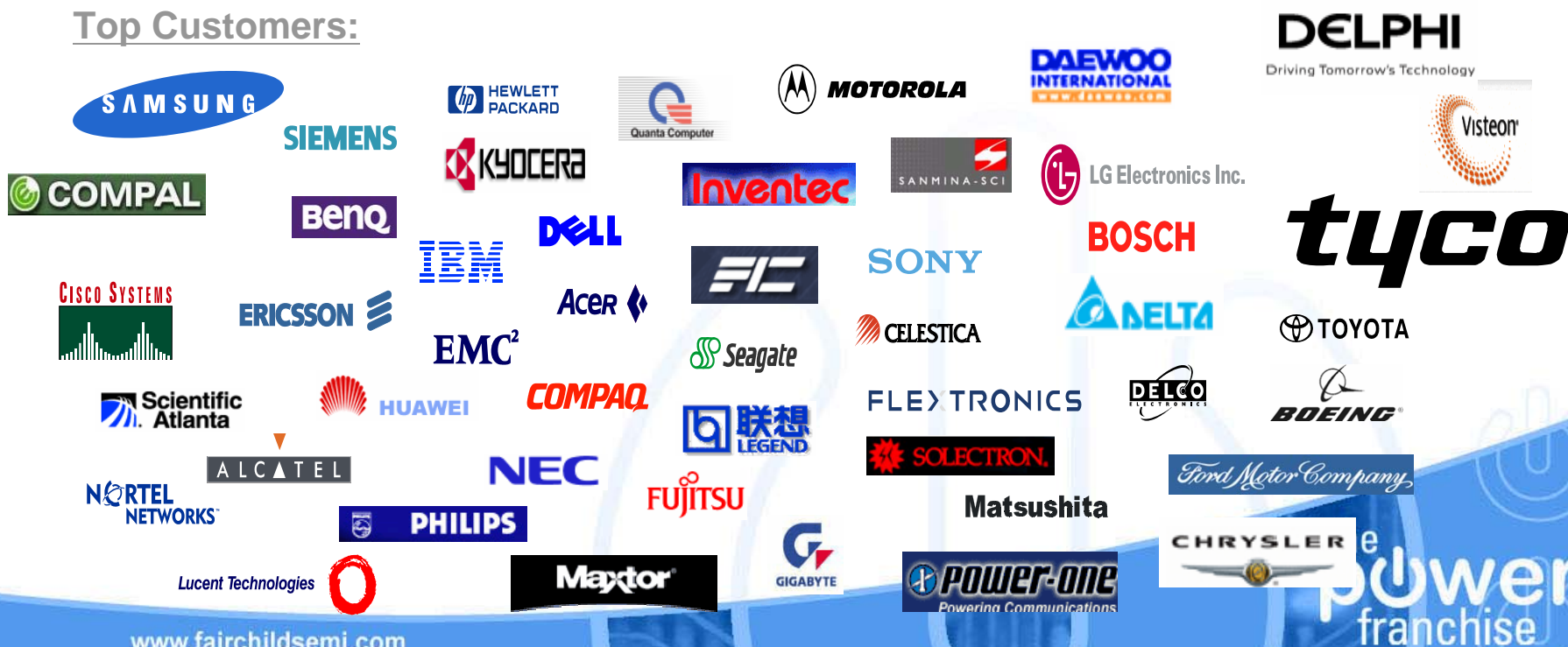
Computing

Consumer

Industrial



Top Customers:



Geographic Footprint Overview



Highlights

- 8,900 employees worldwide
- 8 production facilities and 5 regional sales headquarters
- 36 direct sales offices in 17 countries

The Industry Challenge: Addressing a Broad Range of Power Requirements

1Watt



100Watt

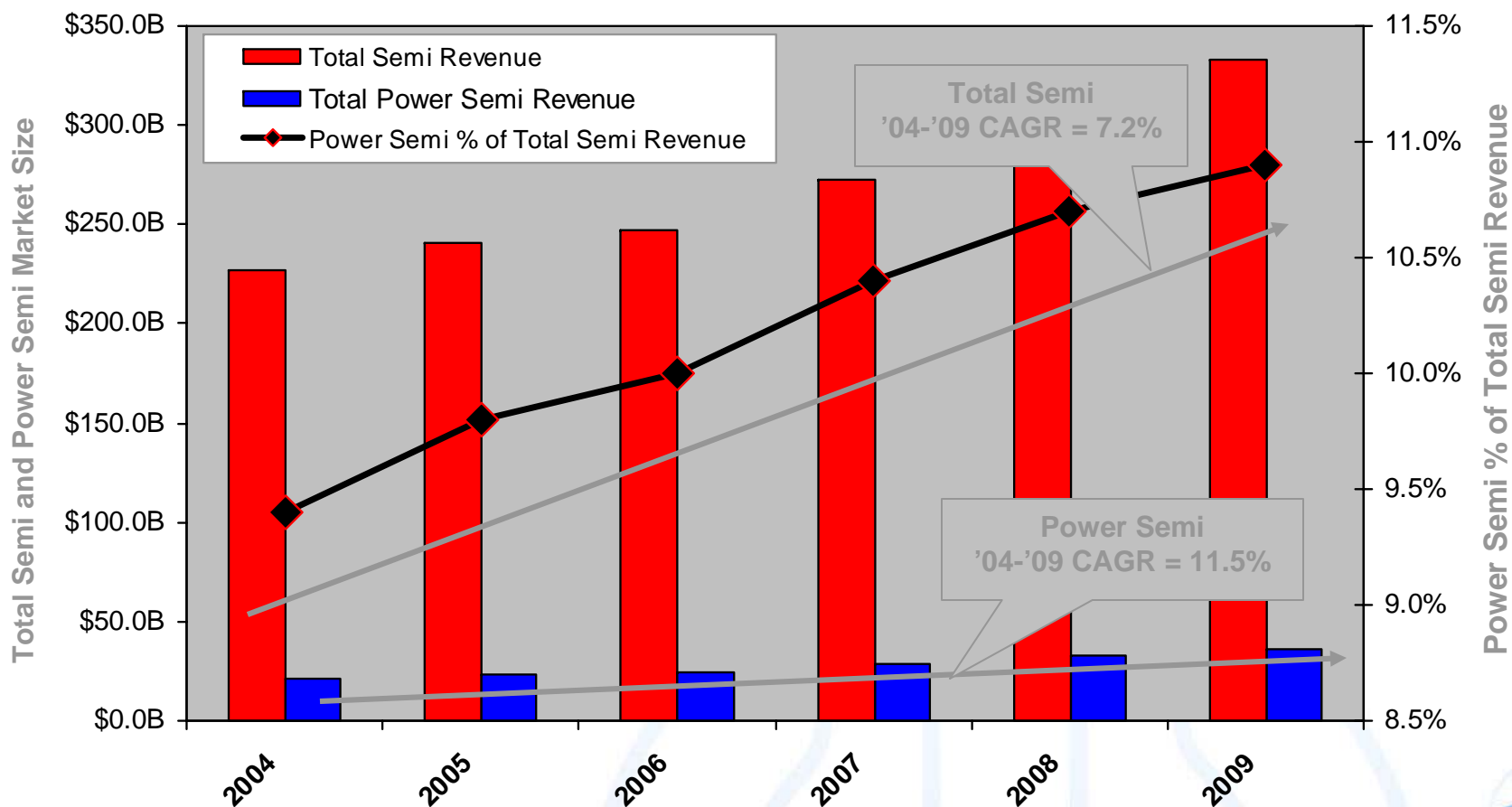


1KWatt





Total Semiconductor vs. Power Semiconductor Market Size and Growth Rate



Power Semi Growth Continues to Outpace the Broader Semiconductor Market

Source: iSuppli, 1Q'05

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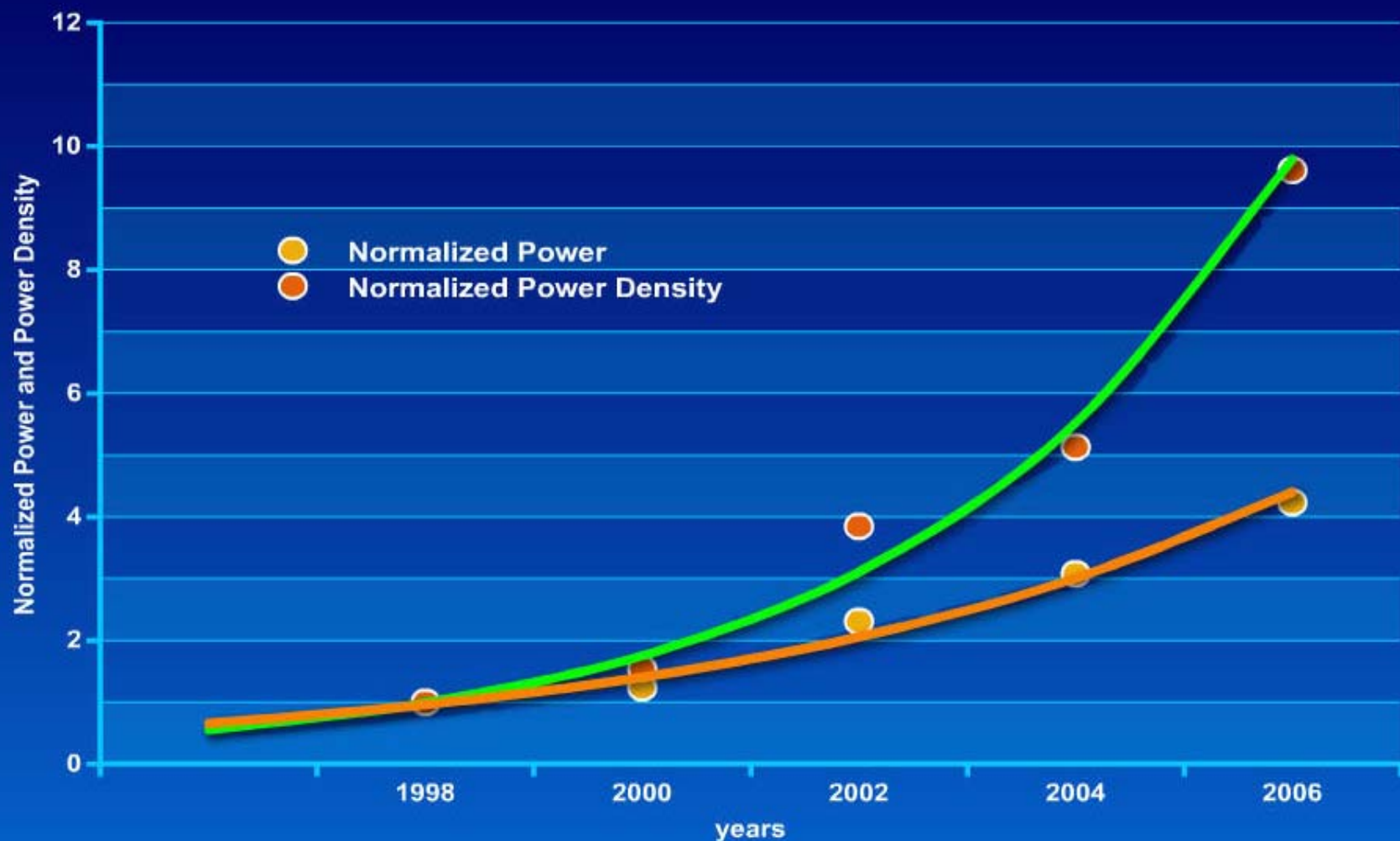
Introduction

The future of power semiconductors is driven by :

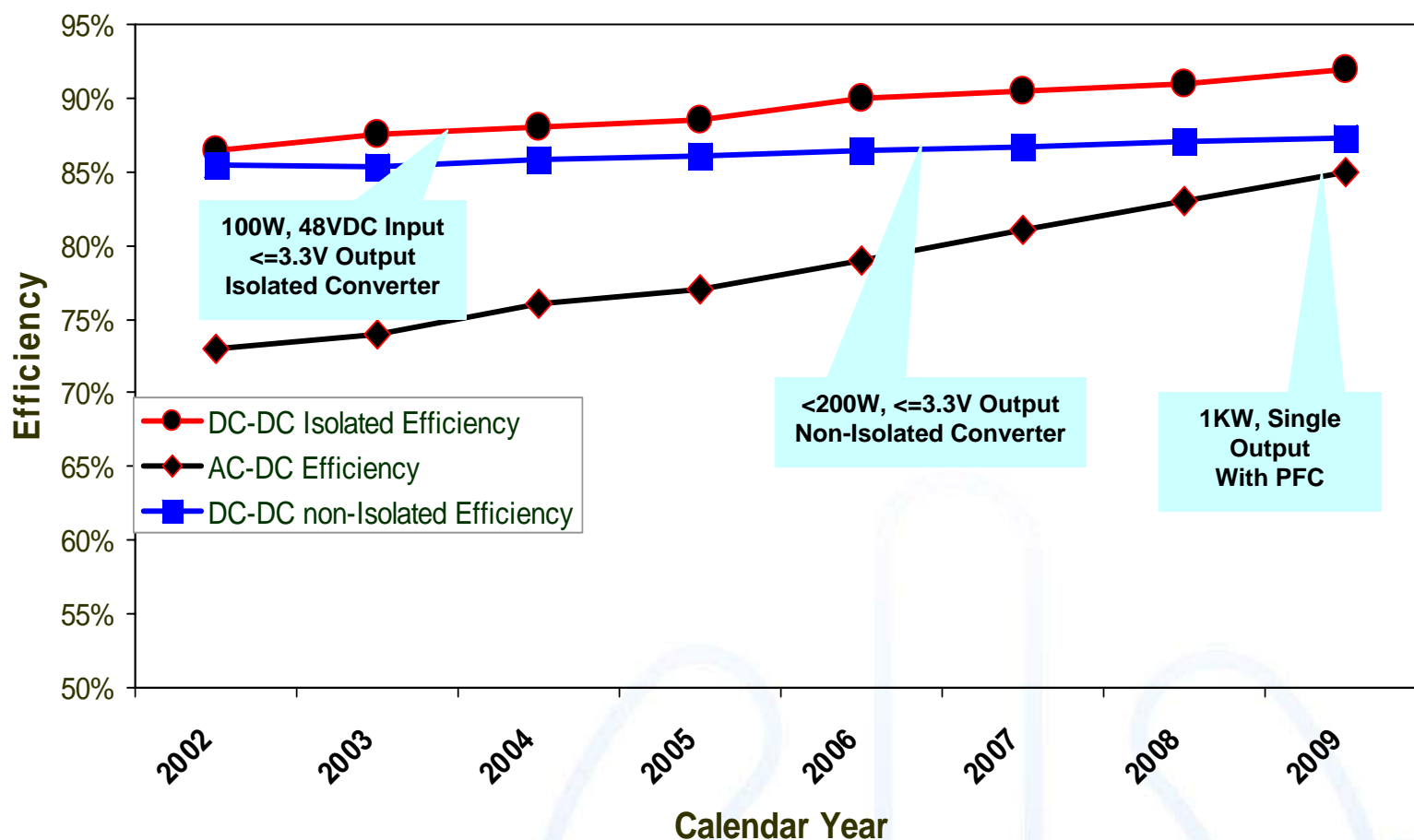
- The need for power efficient modern electronic appliances
- Governmental and agency regulations to improve power quality and power efficiency limits
- Semiconductor suppliers that increasingly provide power supply design expertise
 - Advanced semiconductor technologies with innovative concepts that yield improved performance, cost and reliability
 - Silicon integration and thermally advanced packaging techniques that offer increased power density, efficiency and value to the customer

Power Density Trends

Power Density Trends

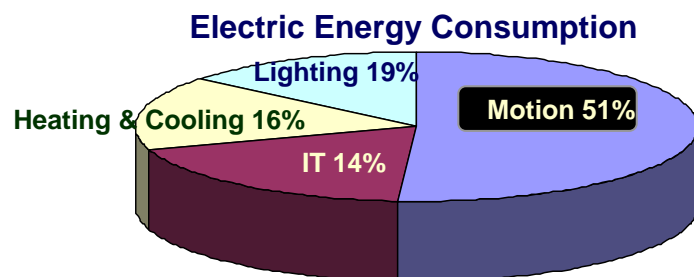


Average Power Supply Efficiency Projections



Source: PSMA, APEC'04 Conference Proceedings, Power Electronics Technology

White Goods Revolution



Potential savings when using Variable Speed Motor Controls in popular appliances in CY2003

Popular Appliances	Units / Yr	Estimated KWH/Yr	Energy Saved	KWH/Yr saved	Saving Cost / Yr [OECD Base]
Refrigerators	54 M	700	60 %	22.7 B	\$2.5B
Washing Machines	46 M	929	64 %	27.3 B	\$3.0B
Air-conditioners	36 M	750	60 %	16.2 B	\$1.8B
					\$7.3B

No. of years for equipment repayment: $750\text{KWH} \times 60\% \times \$0.11/\text{KWH} = \$49.5/\text{Yr} \rightarrow \$100 / \$49.5 = 2 \text{ years}$

"There are more than 33 million 'energy hog' refrigerators in the United States," said Dan Laughlin, SVP of Sears, Roebuck and Co. "If all 33 million were replaced with Energy Star products, we would save enough energy to light every household in Los Angeles for eight years." (PRNewswire Oct 10, 2003)

-California Announces Toughest Air-Conditioning Standards in Nation (30% improvement on the current standard and a 10% improvement on Federal Standards) : Estimates that Californians will save almost U.S. \$3.4 billion over a 10-year period. (California Energy Commission Feb 14, 2002)

-"This can avoid the construction of 150 power plants in 2020 when the new units are expected to be in wide use, said the Alliance to Save Energy, an advocacy group." (AP & Reuters May, 2004)

Source: Fuji Chemera Research, Appliance Magazine, Wall Street Journal, Fairchild Semiconductor
OECD = Organization for Economic Development and Cooperation – 30 Member Countries

White Goods' Applications

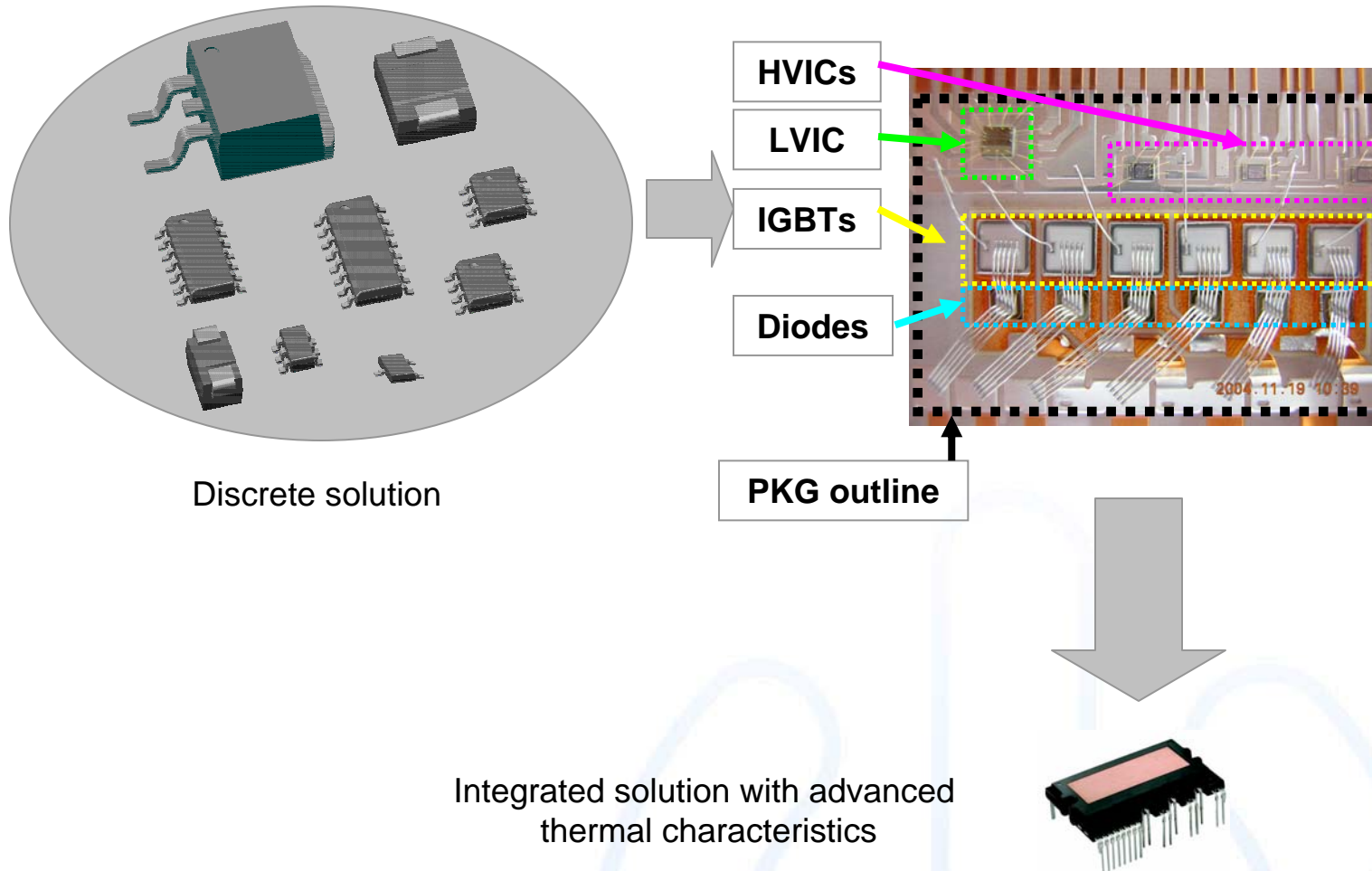
- According to the U.S. Department of Energy, typical house appliances consume roughly 20% of total energy bills
- Motors are the major source of energy consumption
 - Three-phase induction motors
 - Variable speed drive (VSD)
 - Inverter drive
 - Frequency – control
 - Starting current reduced
 - 50/60Hz line frequencies eliminated



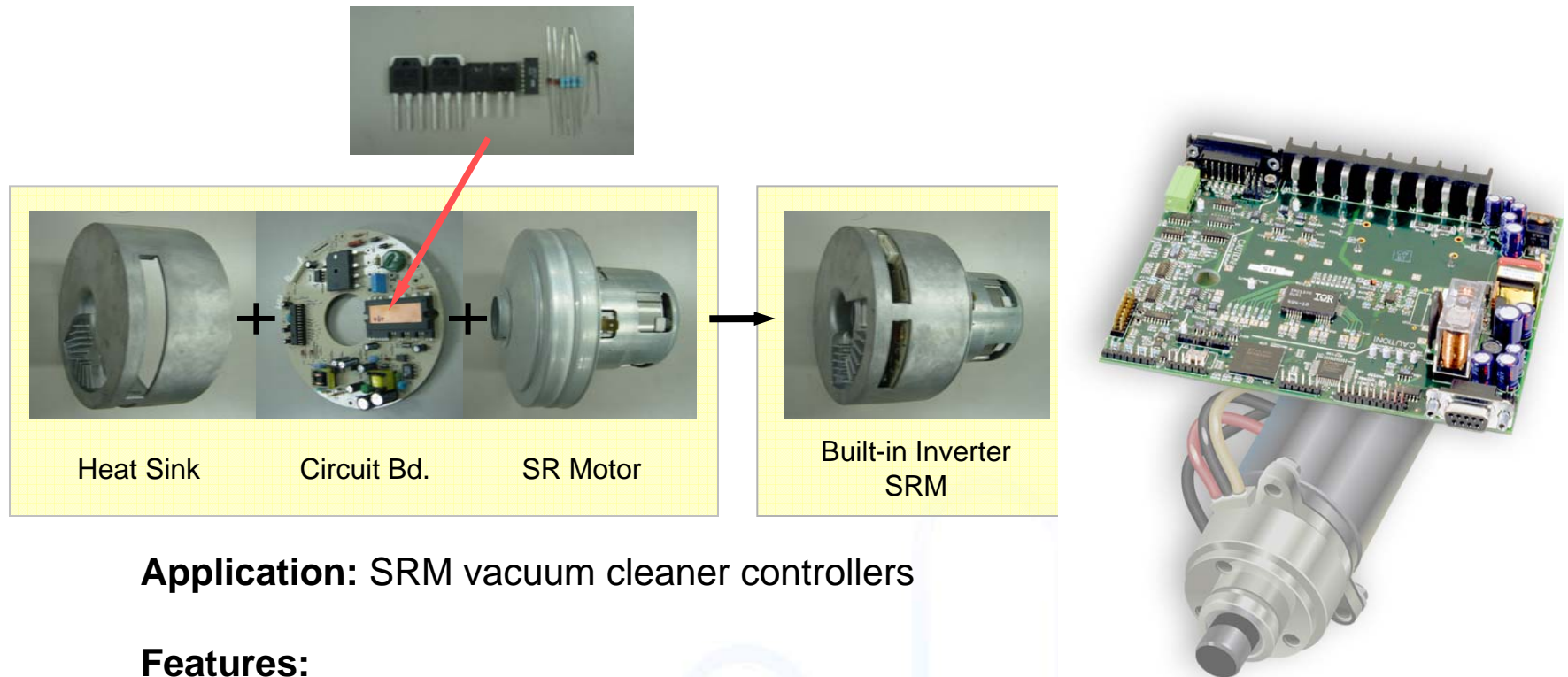
The Future Trends in Power Delivery

- The power delivery industry is going through a massive miniaturization and integration evolution in several target markets
 - Smart Power Module™ (SPM) and Dr MOS type products are core to this evolution
 - More functionality packed into one package allows the design engineer to concentrate on the overall system features
 - This allows the complex internal workings of integrated circuits to be fully transparent to the design engineer, while providing previously unattainable performance
 - Power modules reduce time-to-market

Multi-chip Integration



Switch Reluctance Motors (SRM) For Vacuum Cleaner Drivers



Application: SRM vacuum cleaner controllers

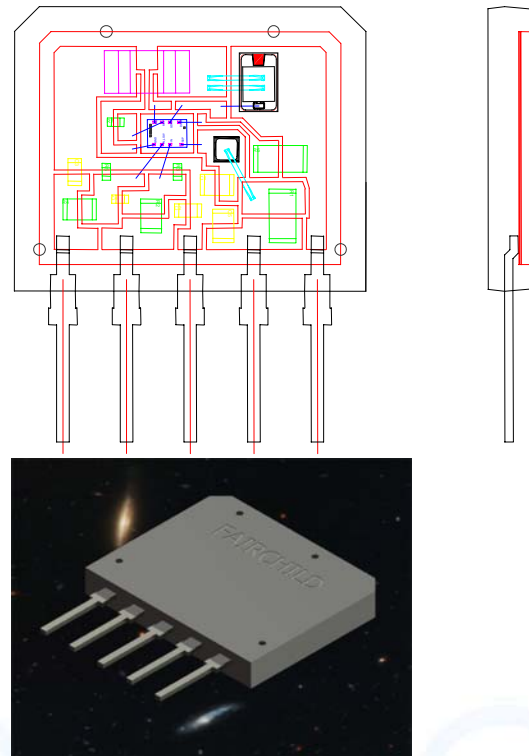
Features:

- SPM + micro-controllers
- High reliability and high performance
- High thermal characteristic, SC, UV protection functions

Automotive Smart Ignition Solution

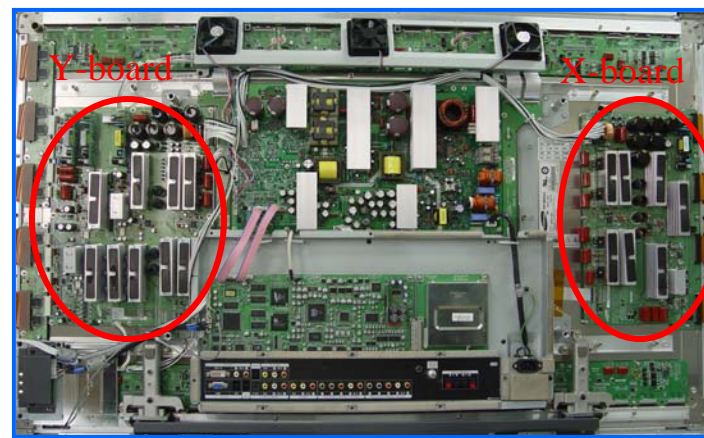
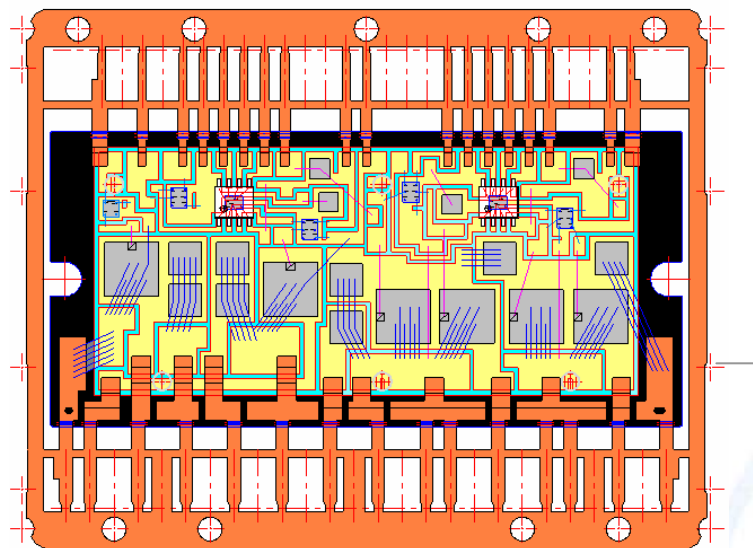


Coil and plugs for switch-on-coil applications

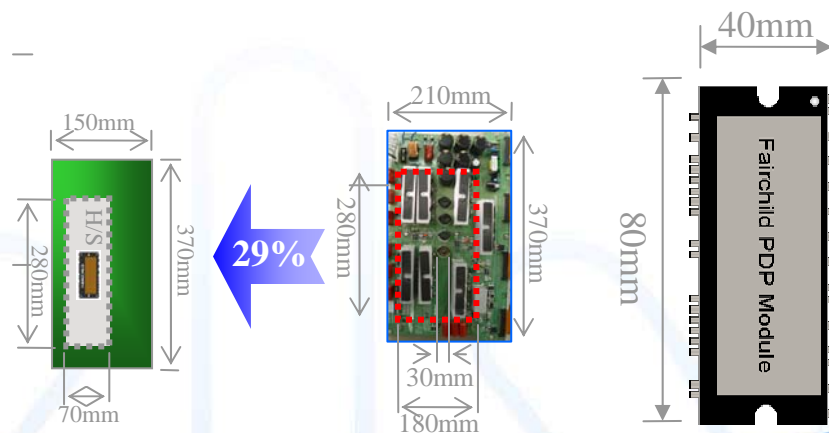


SIP package 21.0 x 17.0 x 3.0mm

Plasma Display Panel (PDP)



50" HD PDP



Advantages of Power Modules

- Power modules from the semiconductor industry
 - Liberates design engineers to concentrate on system performance
 - Reduces time to market
 - Optimizes development investment
 - Broadens the scope of performance potential
 - Uses the expertise of specialized and multidisciplinary semiconductor design groups