
The eGaN® FET
Journey Continues
CREDIT SUISSE
Efficient Power Conversion Corporation

Background for Strategy

- Power Management is a large and growing market
- Silicon has reached performance limits
- EPC has developed proprietary *enhancement-mode* GaN technology (*eGaN*®) that allows EPC's FETs to broadly replace power MOSFETs
- Manufacturing platform is inherently cost effective, and will quickly be less expensive to produce per area than silicon

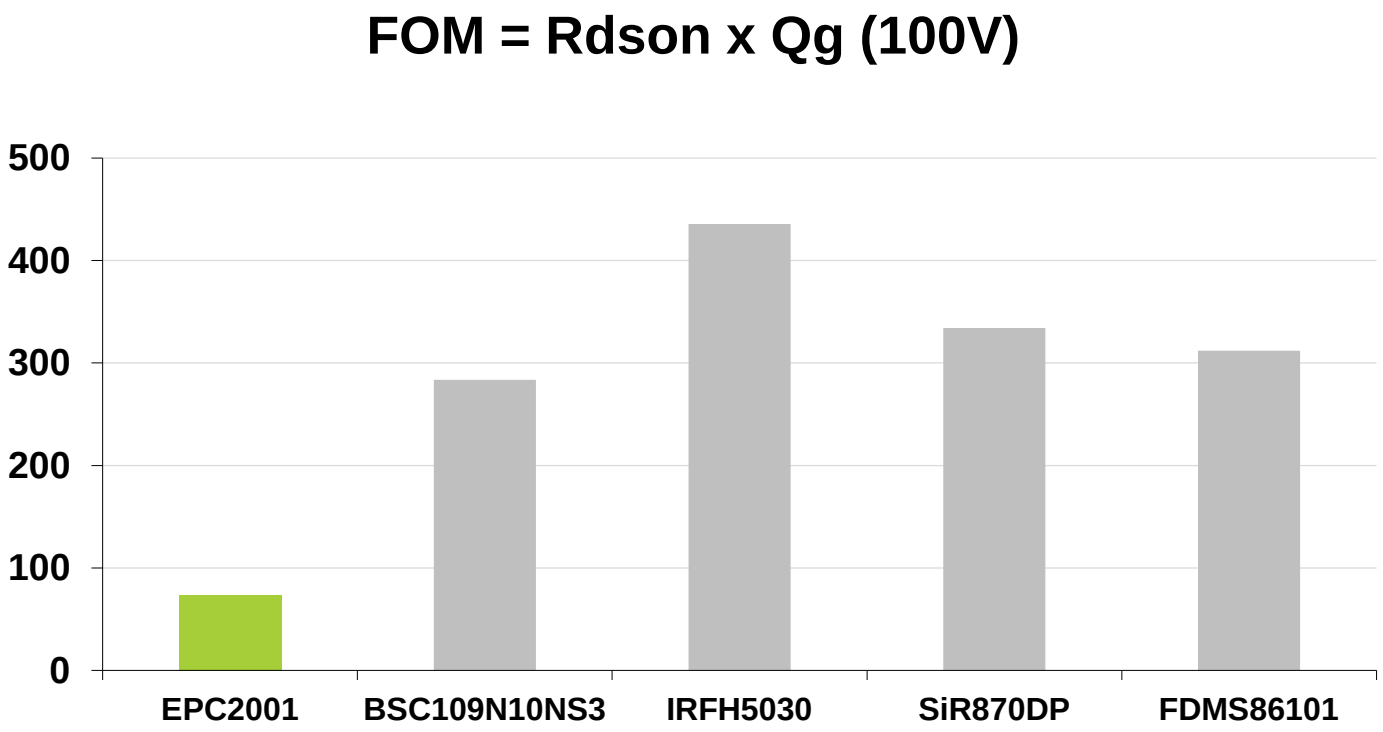
Why Gallium Nitride?

eGaN® FETs are Smaller

200V Silicon Device
(30 milli Ohms)

200V GaN Device
(25 milli Ohms)

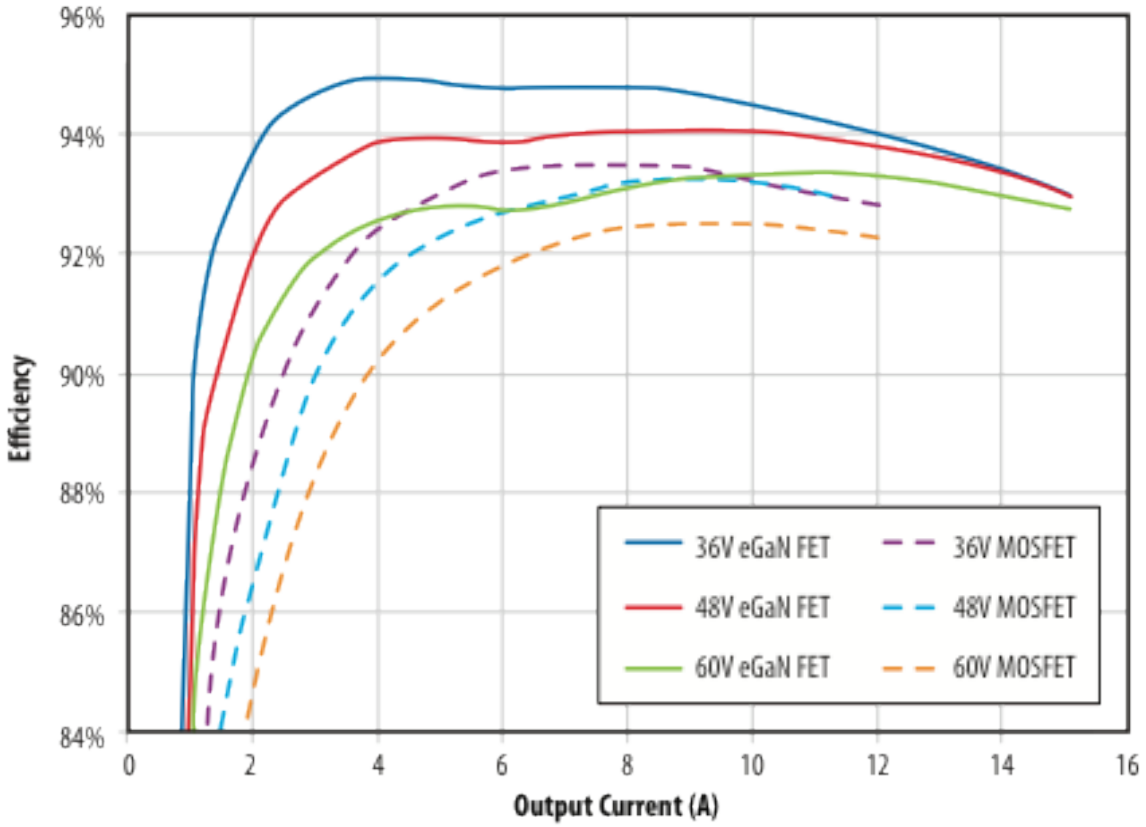
eGaN® FETs are Faster



Source: Infineon, International Rectifier, Siliconix, and Fairchild data sheets

eGaN® FETs are More Efficient

Efficiency comparison @ 12 V_{OUT}



Source: EPC and Ericsson

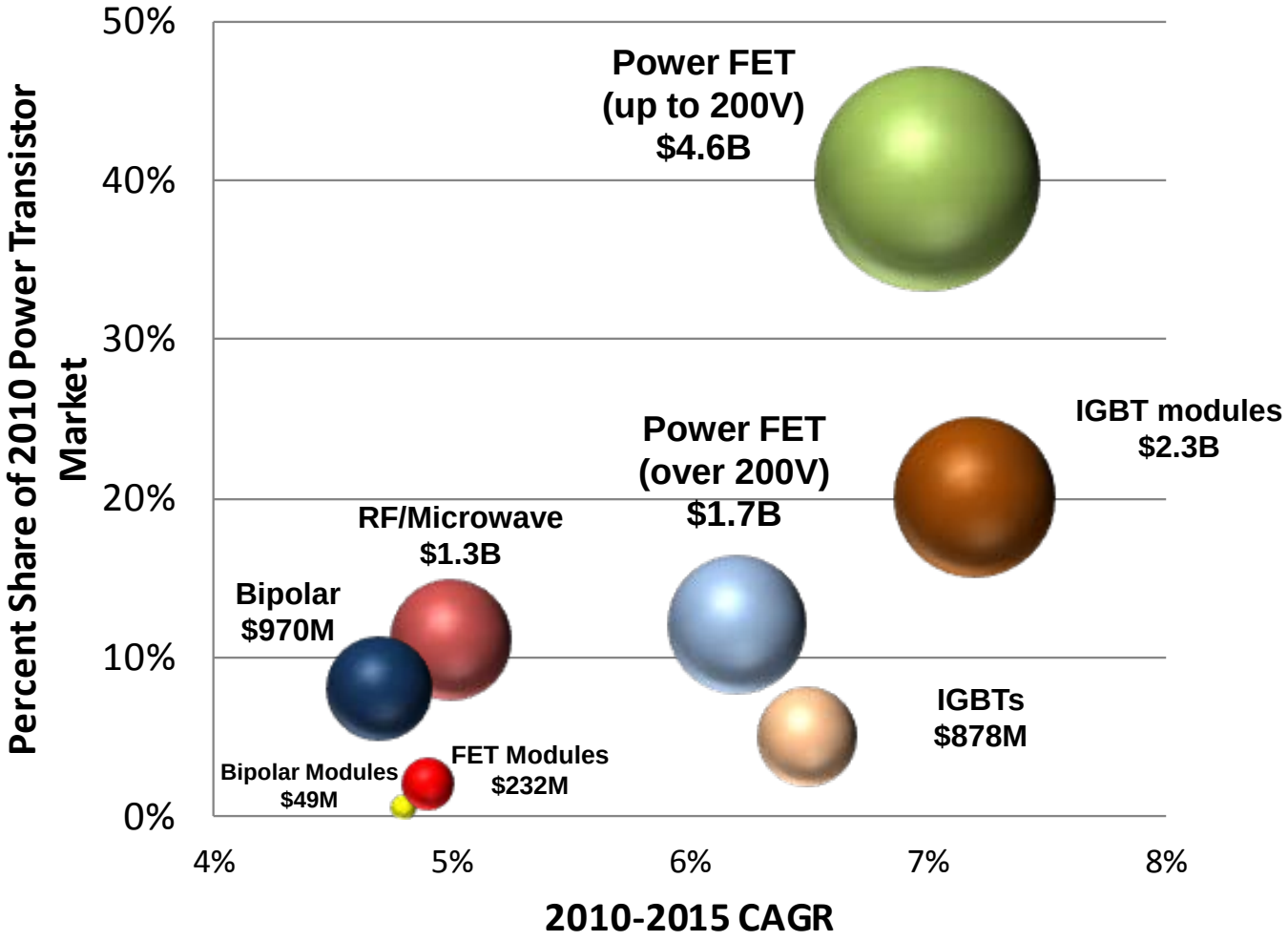
eGaN® FETs Can Be Cheaper

	2011	2015
Starting Material	same	same
Epi Growth	**higher**	**~same**
Wafer Fab	same	lower
Test	same	same
Assembly	lower	lower
OVERALL	**higher**	**lower**

Source: EPC

Market Forecasts

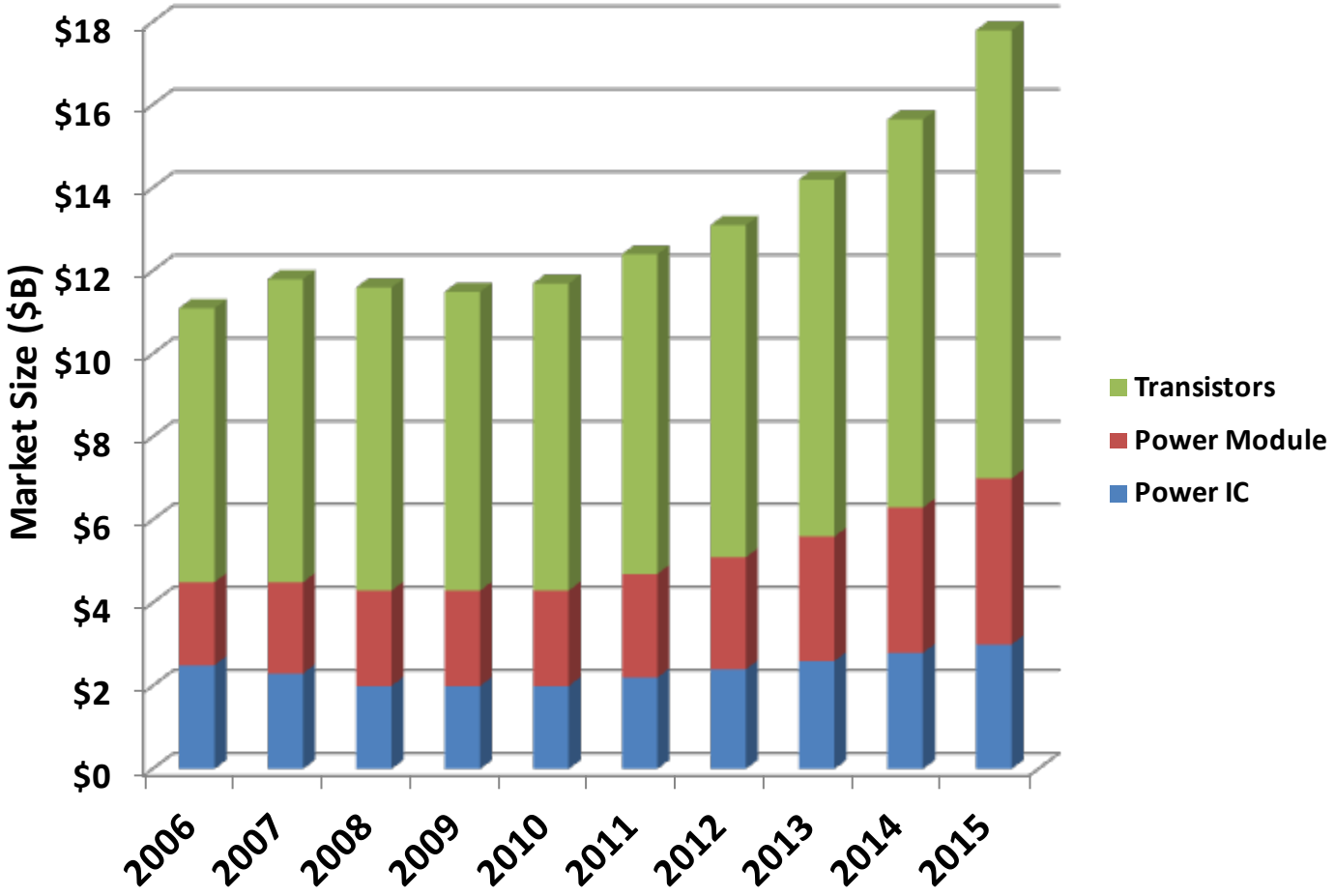
Served Available Market (SAM)



Source: IC Insights

Total = $12B in 2015

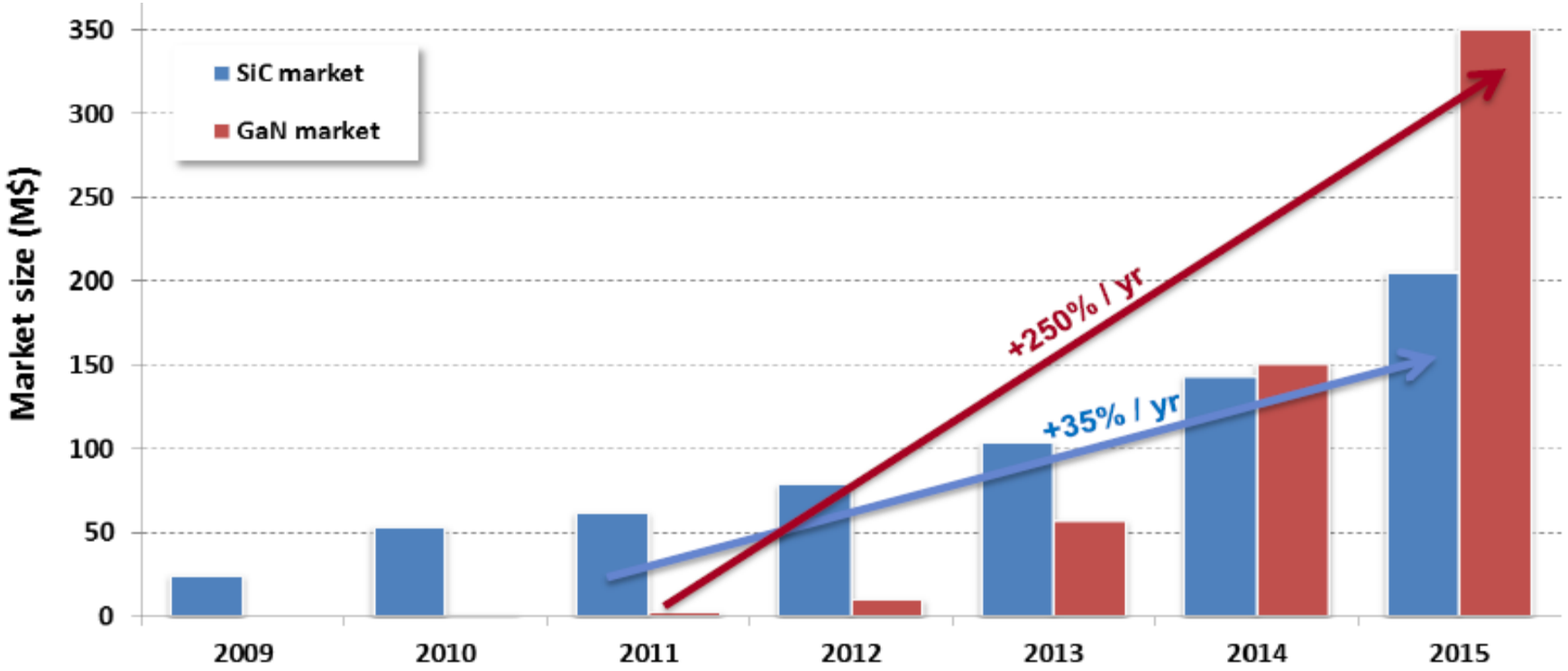
Power ICs Add to the SAM



Source: Yole Development

Total = $18B in 2015

GaN Market Projection



Total = $350M for GaN in 2015

Source: Yole Development

Key Applications 2011-2013

- Wireless Power Transmission
- RF DC-DC “Envelope Tracking”
- Power Over Ethernet
- RF Transmission
- Network and Server Power Supplies
- Power Factor Correction
- Point of Load Modules
- Solar Microinverters
- Energy Efficient Lighting
- UPS Systems
- Class D Audio
- RadHard

Key Applications 2013-2016

- PC and Notebook Power Supply
- Appliance and Industrial Motor Drive
- Cell Phones
- Electric Bicycle
- Hybrid and Electric Vehicles

Efficient Power Conversion

EPC Leadership Team

Alexander Lidow Ph.D:
PhD Stanford 1977
Co-Inventor of HEXFET Transistor
CEO of International Rectifier 1995-2007

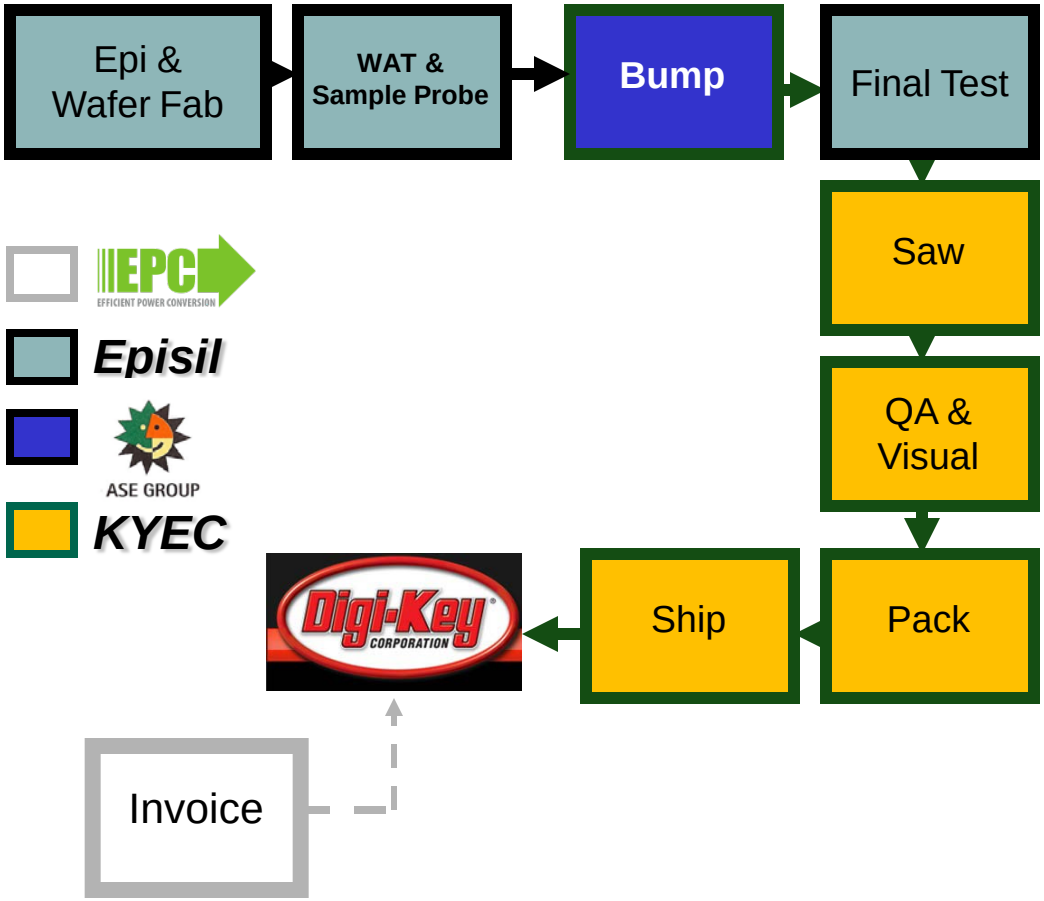
Joe Cao Ph.D:
PhD Berkeley 1996
Power MOSFET and GaN Experience at International Rectifier

Robert A. Beach Ph.D:
PhD Caltech 2001
Co-Founded GaNRose to produce gallium nitride transistors
Sold GaNRose to International Rectifier in 2003

EPC has a total of 20 full time employees, 10 of whom have PhDs in closely related fields

EPC Supply Chain

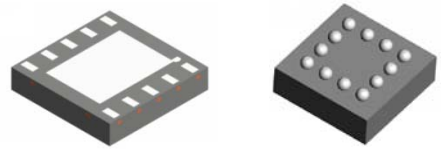
EPC has designed a supply chain that is mature, efficient, responsive, and can ramp quickly



Strategic Partners

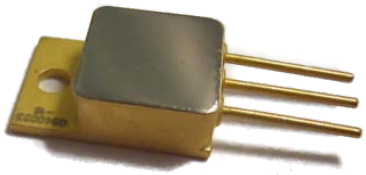
Texas Instruments

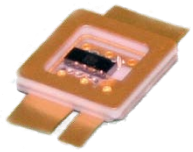
- Driver ICs

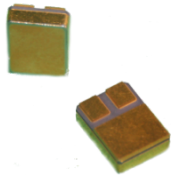


Microsemi

- Hi Rel and Radiation Hard Transistors



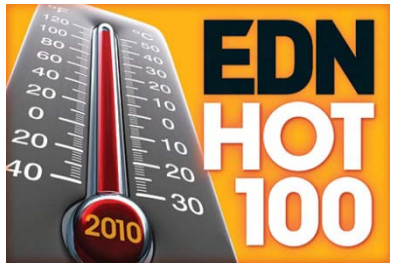




Competitive Strategy

Silicon Power MOSFETs	GaN Devices
Infineon	IR
Vishay	Transphorm
International Rectifier (IR)	MicroGaN
Fairchild	GaN Systems
Renasas	Fujitsu
Ciclon/TI	

Selected Awards



LM5113

EE Times 2010 Green Technology ACE Award

Summary

- EPC is privately funded and just concluded a D-Round of financing
- eGaN® technology is disruptive
- Management is the most experienced in the power industry
- EPC's supply chain is mature
- TI and Microsemi are helping to establish EPC's eGaN FETs as industry standards
- EPC is now shipping eGaN FETs to > 500 customers worldwide

EFFICIENT POWER CONVERSION

The end of the road for silicon…..

is the beginning of the eGaN FET journey!