

# Automotive

PCIM 2014, Nuremberg



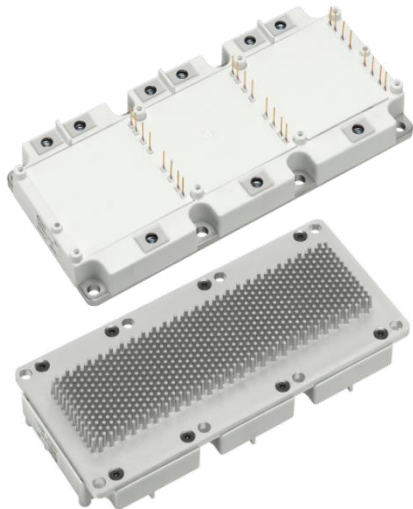
# The HybridPACK™ 2 family further improved with Regards to Reliability, User Friendliness and System Cost Saving



## HybridPACK™ 2

FS800R07A2E3

FS600R07A2E3



**+25°C  $T_{j,max}$**

**+30V  $V_{ces}$**

**Up to +30% more  
peak power**

**+15k PC cycles**

**Same mounting and size!**

## HybridPACK™ 2 enhanced

FS800R07A2E3\_B31

FS600R07A2E3\_B31



**Available  
Now!**

# HybridPACK™ Light is the very compact Six-Pack Module (705V 200A) for Mild Hybrid Vehicles



**HybridPACK™ 1**  
FS200R07A1E3



**70% lighter**

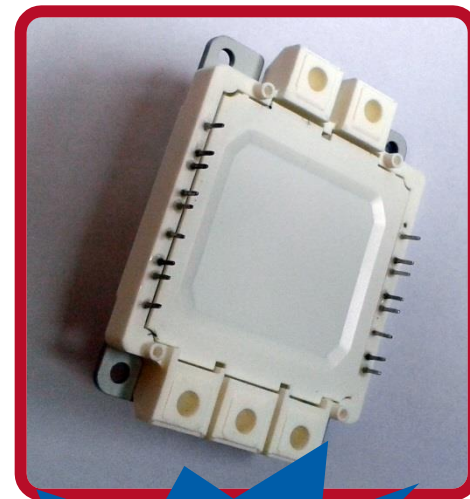
**35% smaller**

**Evolution step  
size reduction**

**+55V Vces**

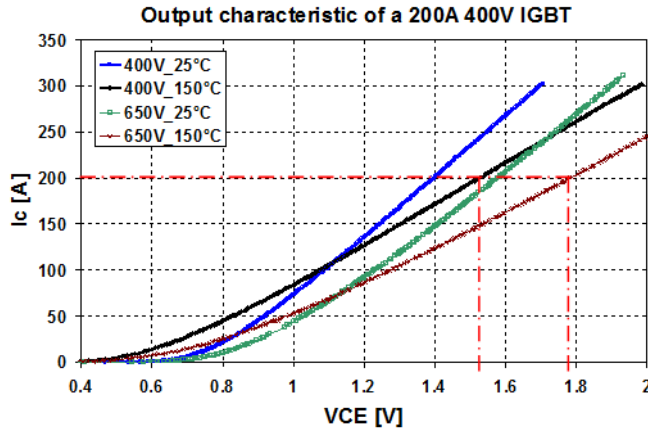
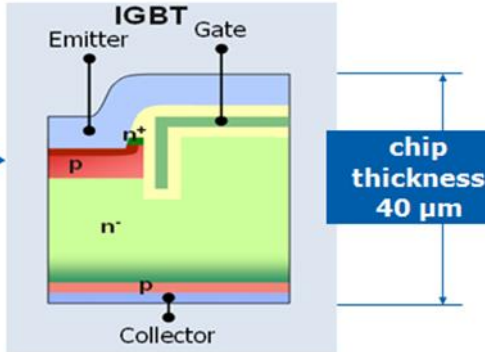
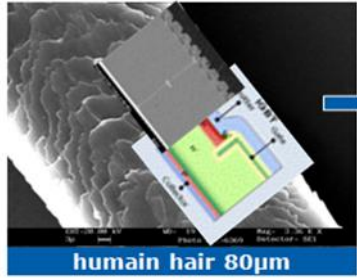
**Same system assembly!**

**HybridPACK™ Light**  
FS200R07A5E3\_S6



**In  
develop-  
ment**

# The 400V IGBT Module FS215R04A1E3D enables improved Efficiency for Mild Hybrid Vehicles



**V<sub>cesat</sub> reduced by 200mV**

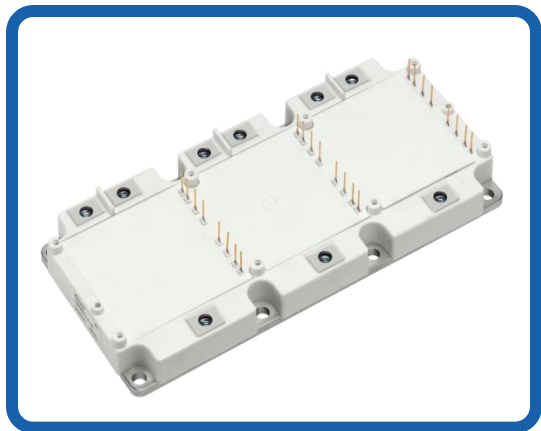


**Available  
Now!**

# HybridPACK™ Drive FS660R08A6P2 enables very compact Inverter Designs



## HybridPACK™ 2 FS600R07A2E3



**Next gen silicon**

**New power  
terminals**

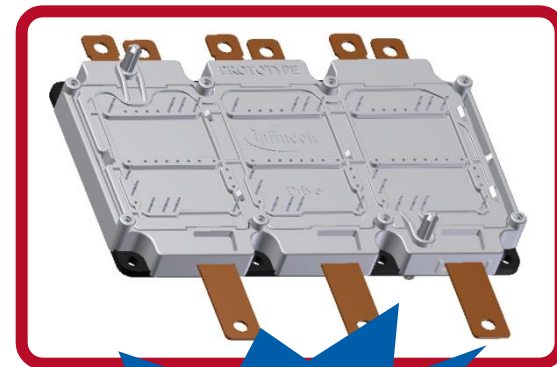
**Power Density  
Efficiency**

**PressFIT  
signal terminals**

**Same 6Pack and PinFIN cooling!**

## HybridPACK™ DRIVE FS660R08A6P2

**Focus application  
80kW Inverter**

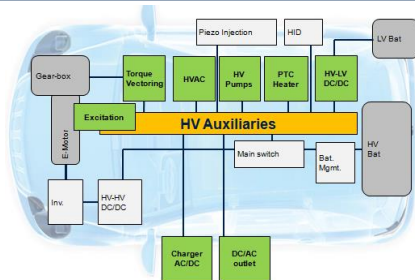


**In  
develop-  
ment**

# F4-50R07W1H3\_B11A and F4-75R07W1H3\_B11A enables higher Output Power, efficient and compact DCDC Designs

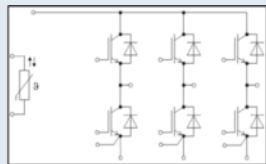


## Module Solutions for HV Auxiliary Applications



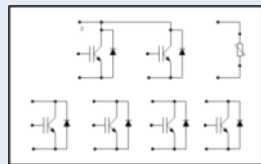
## Provided Topologies

### AUX Drives



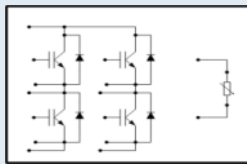
- IGBT3
- Diode
- B6-Bridge

### PTC Heater



- IGBT3
- Diode
- Special configuration

### HV-LV DC/DC



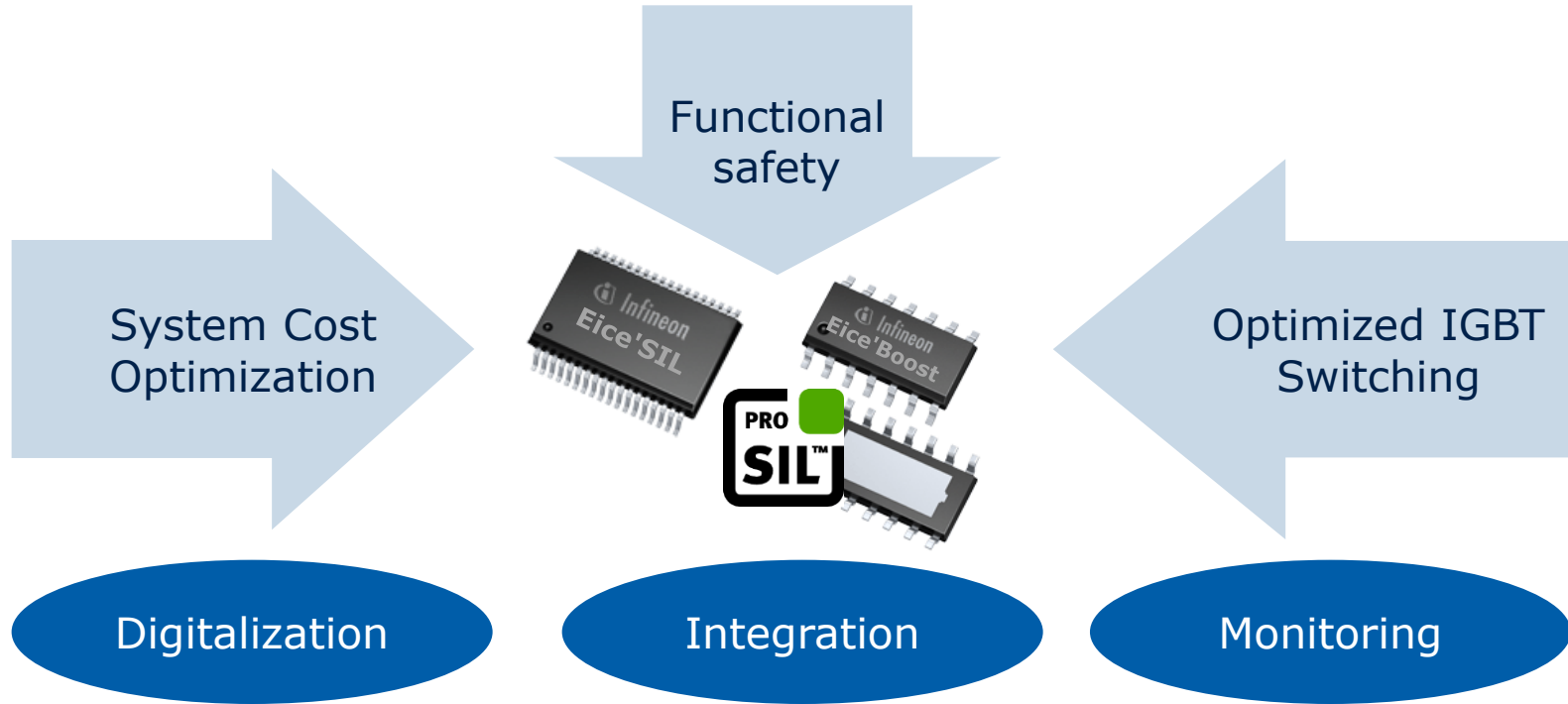
- IGBT3 HS
- Rapid Diode
- H-Bridge

## EASY 1B & 2B Modules



- Reliable isolation up to 2.5kV
- Low Stray Inductance
- Automotive quality and reliability
- Compact design
- Easy mounting process
- PressFIT technology for assembly

# Gate Drivers optimized for the Requirements of Hybrid and Electric Vehicle Applications



**Target Application: Inverter (5-120kW) for 400V, 600V & 1200V IGBT**



# ENERGY EFFICIENCY MOBILITY SECURITY

Innovative semiconductor solutions for energy efficiency, mobility and security.

