

Electrification and Power Semiconductors

Opening Remarks

U. Hansen
VP Power Component Development
Robert Bosch GmbH, Stuttgart, Germany



Abstract

Coming Soon

Biography

Uwe Hansen received his PhD in Physics at the Technical University from Munich. He specialized in theoretical semiconductor physics. Uwe started his career at Bosch as a process engineer in the Bosch automotive Waferfab, held various functions within Bosch related to semiconductors and was responsible for advanced packaging for CE and automotive MEMS. Since 2018 he is heading the department for power component and module development at Bosch.

References

The evolvement of the largest and most complex structure built by humans and its influence on Power Semiconductors

T. Keller
Vice President, Head of global Product
Management, Portfolio & Marketing
Hitachi Energy Ltd, HESEM, Lenzburg, Switzerland

HITACHI

Abstract

The electrical power grid has been built up over decades and many previously isolated sub-grids are connected to each other. The integration of renewable energy sources now leads to a sharp increase in power semiconductors in the distribution network with technologically very interesting prospects.

Biography

Tobias Keller graduated in 2004, from University of applied science Aargau, the Electrical Engineering Faculty, with a degree in power electronics, thermodynamics and electrical machines. At the end of 2004, he joined ABB Excitation systems and Synchronizing equipment business (Turgi, Switzerland) and held various engineering position until 2008. He holds the first patent on MEGATROL, ABB's smart power package solution for reliable starts of gas turbines or any synchronous machine and another patent quenching arc faults in excitation systems. In 2008 he became the Head of global Technology and Support for ABB's Excitation systems and Synchronizing equipment business. Between 2009 and 2015 he was the Vice President global Products and Marketing ABB Excitation systems and Synchronizing equipment and High Power Rectifier business. Starting from 2016 until 2019 he held the Vice President position for Vehicle Integration Engineering business in ABB railway traction. Since April 2019, he is the Vice President of global Product Management in ABB Semiconductors (Lenzburg, Switzerland) now HITACHI ENERGY Semiconductors and a strong supporter of SiC used in power electronics based on his application know how from traction and industrial applications. Tobias is responsible for the global Product Management and Marketing of any Power Semiconductor from Hitachi Energy as well as responsible for BIMOS power semiconductors R&D (Chips and packages, Si and SiC). Tobias Keller is a senior member of IEEE (20127) and co-author of various papers.

References

Powering AI - Infineon's Smart PowerFab

N. Thyssen
Senior Director R&D Technology
Infineon Technologies Dresden AG & Co.KG, PS
CRD TIE DPI, Dresden, Germany

Abstract

The Power Management application field is driven by several market changes. AI-Server do develop new power bus configurations and independant electrical machines, e.g. cars and humanoids need smart power configurations. Giving some insight on these developments and the consequences on technology needs will be connected to the newest Smart Power Fab in Dresden of Infineon, shwing how this will contrinute. The talk tries to show how dynamic and fast market changes search for a supply chain set-up that is able to deliver solutions.

Biography

- PhD in Physics (Diplom: RWTH Aachen / PhD: Research Center Jülich and University of Erlangen)
- 28 years of experience in semiconductor technologies with focus in Research & Development & Innovation in a manufacturing environment on 200mm and 300mm
- experienced in custoer partnership and joined projects with many partners in the European context
- Technology Knwoledge: DRAM. embedded Flash, BCD, MEMS, Optics, Sensors, Power, Smart Power, embedded Poser)

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