Press Release

Smaller, more efficient energy-saving chips “made in Europe”: Research project led by Infineon successfully completed.

Joint press information from the partners in the European research project “Enhanced Power Pilot Line”

Villach, 28 September 2016 – In view of climate change, the environmentally-friendly and efficient use of energy is a central challenge for our highly-developed societies. In its strategy “Europe 2020”, the European Commission has set itself ambitious goals in respect of innovation, energy efficiency and reindustrialisation. The European research project “Enhanced Power Pilot Line” (EPPL) supports this agenda with the development of energy- and cost-efficient semiconductor technologies and state-of-the-art production methods. This will enable the industrial mass production of power electronics in Europe as a production location, with costs that are competitive worldwide.

The EPPL project, coordinated by Infineon Technologies Austria, has now been successfully completed. EPPL started in April 2013 with a term of 42 months, and involved a total of 31 technology partners from six European countries. The total budget was € 74 million, which was co-financed with funding from Austria (BMVIT), Germany (BMBF), the Netherlands, France, Italy, Portugal and the ENIAC (European Nanoelectronics Initiative Advisory Council) joint undertaking.

“The research project EPPL in association with several successful public-private partnership cooperation activities is of strategic importance for Infineon. Together with the best partners, over the last few years we have been able to extend Europe’s worldwide lead in the development and manufacturing of power electronics”, said Sabine Herlitschka, CEO of Infineon Technologies Austria AG. “We are involved in this research cooperation as coordinator, in order to strengthen the global competitiveness of the European electronics industry.”

Infineon Technologies Austria AG
Communications
Mag. Alexander Tarzi
Tel.: +43 51777-2954
alexander.tarzi@infineon.com

Sustainable technologies soon to be market-ready

An important goal of the research project was the further development of manufacturing technologies for energy-saving chips, produced on particularly thin silicon wafers 300 millimetres in diameter. Within the framework of EPPL, a new generation of high-performance semiconductors was developed using 300-millimetre thin wafer production technology, such as ACD7, IGBT, CoolMOS™ and SFET. Pilot lines were successfully used to ensure rapid readiness for series production. Work on automating the complex production also ensured that the planned manufacture of the new technologies can take place in line with quality and cost standards both in Villach and at the partner factory in Dresden.

Successful application tests demonstrate higher energy efficiency

The efficiency of the energy-saving chips developed during the EPPL project was successfully demonstrated in four selected areas of application. The tests were carried out on inverters for photovoltaics applications, in automotive energy systems and LED lights, and in medical technology on mobile X-ray equipment. Clear savings were achieved in these areas, in terms of both the energy costs and also the size and weight of the chips used. The new power semiconductors exhibit up to 15 percent less energy loss, and depending on the application are between 15 and 50 percent smaller than previously.

EPPL research partners

In total 239 scientists and 20 PhD students were involved in the EPPL, and 124 scientific papers were published. The EPPL partners come from the six European countries Germany, France, Italy, the Netherlands, Austria and Portugal. They include Adixen Vacuum Products, Air Liquide electronics Systems, ams AG, Carinthian Tech Research (CTR), CEST Kompetenzzentrum für elektrochemische Oberflächentechnologie GmbH, the French Alternative Energies and Atomic Energy Commission, Entegris Cleaning Process, EV Group E. Thallner GmbH, University of Applied Sciences of Stralsund, Fraunhofer E.V. IISB, Fronius International GmbH, Heliox BV, Infineon Technologies AG (with branches in Germany, Italy and Austria), International Iberian Nanotechnology Laboratory, Ion Beam Services, KAI, Lear, Max-Planck-Institut für Eisenforschung, Montanuniversität Leoben, NANIUM S.A., Philips Healthcare (with branches in Germany and the Netherlands), Plansee SE, SPTS Technologies SAS, TU Dresden, Eindhoven University of Technology and Graz University of Technology.

Infineon Technologies Austria AG
Communications
Mag. Alexander Tarzi
Tel.: +43 51777-2954
alexander.tarzi@infineon.com

About Infineon Austria
Infineon Technologies Austria AG is a group subsidiary of Infineon Technologies AG, a world-leading provider of semiconductor solutions that make life easier, safer and greener. Microelectronics from Infineon reduce the energy consumption of consumer electronics, domestic appliances and industrial facilities. They make a major contribution to the convenience, security and sustainability of vehicles, and enable secure transactions in a connected world.

Besides Germany, Infineon Austria is the only subsidiary within the group that pools competencies for research and development, production as well as global business responsibility. The head office is in Villach, with further branches in Graz, Klagenfurt, Linz and Vienna. With around 3,500 employees from around 60 countries (including 1,300 in research and development), in the financial year 2015 (ending in September) the company achieved a turnover of € 1.4 billion. An R&D expense rate of 25 percent of total sales makes Infineon Austria the strongest industrial research company in Austria.

Further information can be found at www.infineon.com/austria

Contact and further information

Mag. Alexander Tarzi
Tel.: 051777-2954
Email: alexander.tarzi@infineon.com

Infineon Technologies Austria AG
Communications
Siemensstraße 2
9500 Villach