

Ascatron raises 4 M€ in international financing

Company enables large energy savings in next generation power electronics

Stockholm, Sweden
18 May 2016

Ascatron develops power semiconductors based on Silicon Carbide (SiC) that radically reduce losses in electrical transformers. Losses can be up to 20% when electricity is converted to adjust voltage and frequency with conventional technology. Ascatron focuses on high voltage applications where the energy savings will be very large by using SiC.

Ascatron has now completed the A-round financing intended for the final development of its first own SiC semiconductor products. The total of 4 M€ is shared between 3 M€ in equity capital, and 1 M€ in an innovation grant.

“We have started to implement our advanced material technology in a production equipment for SiC epitaxy”, says Adolf Schöner, CTO of Ascatron. “The next step is to optimize our device design and outsource the remaining manufacturing of the chip to a foundry with capacity for volume production”.

The A-round investors are from Italy and China, including the four venture capital investors Quadrivio, Como Venture, Rise Leader Investment and InteBridge Technology, together with the equipment producer LPE. The grant comes from the European Institute of Innovation and Technology (EIT) through KIC InnoEnergy. KIC supports innovation projects in the field of sustainable energy.

“Our investors have a good mix of understanding both the advanced material technology needed for high performance SiC power devices, and how to address volume markets for semiconductors”, says Christian Vieider, CEO of Ascatron. “40% of the market for power electronic components is in China, and there is a lot of interest in SiC for energy saving”.

About Ascatron

Ascatron develops next generation Silicon Carbide (SiC) power semiconductors radically reducing electrical conversion losses. Target applications are process industry, data center, traction, wind power and grid transformers. With the 3DSiC® technology Ascatron makes doped device structures based on epitaxy, enabling device performance with very low losses and capacity to handle very high voltage. Ascatron started the operation in 2011 as a spin-out from the Swedish R&D institute Acreo, and has 10 employees in Sweden. www.ascatron.com

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FACTS FOR THE EDITOR

- There is a very clear trend in power electronics to replace the conventional silicon technology with “wide-bandgap” materials which permit devices to operate at much higher voltages, frequencies and temperatures. Such materials as Silicon Carbide (SiC) for higher voltages and Gallium Nitride (GaN) for lower voltages, are allowing for electrical transformers to be built which are cheaper and more energy efficient.
- The SiC power semiconductor market is growing rapidly with main applications in power supplies, solar power, motor drives and electrical vehicles (source: Yole Développement and IHS Technology).
- Major players in the global power electronics market are e.g. Infineon (Germany), Cree (U.S), Rohm (Japan), ST Microelectronics (Italy/France) and ABB (Sweden/Switzerland).

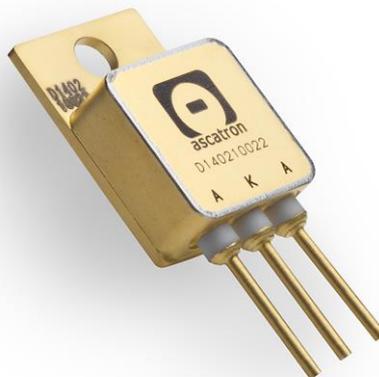
Pictures



Picture 1: 150 mm SiC epi wafer for high voltage power semiconductors.



Picture 2: New PE106 epi reactor from LPE installed at Ascatron production fab in Kista – Stockholm.



Picture 3. 1200V SiC power diode for high temperature operation at 250°C.

Picture files can be downloaded at www.ascatron.com