PRESS RELEASE

Latest news reports on the IPDiA-Leti Common Lab results

Leti and IPDiA are proud to unveil a new worldwide record in capacitance density

GRENOBLE, France – April 10, 2012 – CEA-Leti and IPDiA report to overcome a crucial step toward market deployment of a new generation of 3D high-density capacitor achieving 550nF/mm^2.

In less than two years, CEA-Leti and IPDiA are successfully developing a new process based on deposition of atomic medium-K dielectric layers into the aggressive architectures of IPDiA's 3D dimensional metal-insulator-metal capacitors. The atomic layer deposition (ALD) is a key process technology to enable conformal coating of high aspect ratio surfaces and to enable exact thickness control on atomic level. A capacitance density of 550nF/mm2 has been obtained by keeping leakage current and parasitic levels as low as in the 250nF/mm^2 PICS3 product.

The "PICS" high-density capacitors are using the third dimension to substantially increase the capacitor surface and thus its capacitance without increasing the capacitor footprint. This technology demonstrates inherent good performance with very high stability (temperature, voltage, ageing), superior reliability and very low parasitic elements (ESR, ESL). It is an excellent alternative to discrete component (MLCC and tantalum capacitors) as it shows better performance in a much smaller volume.

The high performance, stability and reliability, combined with very high capacitance density provide lots of interest for customers in High Reliability applications such as the medical, harsh environment, automotive, communication, industrial, and defense/aerospace markets. Targeted applications are for instance DC/DC converter and decoupling functions within limited space: IC decoupling, Mems, Sensors, Memory stick, Smartcard.

IPDiA and CEA-Leti are continuing their developments to stabilize the process and to fasten the market deployment; the next step is now to achieve the ambitious 1µF/mm2.

IPDiA unveiled its results at the Device Packaging Conference in Scottdale (USA) last month.

About CEA-Leti

Leti is an institute of CEA, a French research-and-technology organization with activities in energy, IT, healthcare, defence and security. Leti is focused on creating value and innovation through technology transfer to its industrial partners. It specializes in nanotechnologies and their applications, from wireless devices and systems, to biology, healthcare and photonics. NEMS and MEMS are at the core of its activities. An anchor of the MINATEC campus, CEA-Leti operates 8,000-m² of state-of-the-art clean room space on 200mm and 300mm wafer platforms. It employs 1,400 scientists and engineers and hosts more than 190 Ph.D. students and 200 assignees from partner companies. CEA-Leti owns more than 1,700 patent families.

For more information, visit ***www.leti.fr***.

About IPDiA

Founded in June 2009, IPDiA is a leader in passive-components integration on silicon with a global offer for miniaturization that features high-level technological and economic performance. The company is mainly focused on the following fields: healthcare, lighting, communication, defence, aerospace, industry and automotive.

The company is based in Caen, France:

For more information, visit www.ipdia.com

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