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PRESS RELEASE

CEA-Leti Announces Major Improvement in 200mm RF MEMS Switch Manufacturing Process

SAN FRANCISCO, California – July 12, 2011 – CEA-Leti announced today that its RF MEMS switch technology has reached a new level of maturity, allowing it to provide customers with a significantly improved manufacturing process.

A major advance has been achieved in the reliability of the devices' electrostatic actuators. CEA-Leti's new switch design uses a dielectric-less solution in which an air gap prevents contact between the electrodes when the bridge is down, thanks to small dielectric dots placed under the mobile electrode. As a result, long-term tests show a drastic improvement in reliability and no pull-down voltage drift has been observed during the tests.

Contact reliability has been improved by replacing the gold-based contacts that exhibited poor reliability and high sensitivity to stiction with better-performing ruthenium-based contacts. A hermetic thin-film packaging process also has been developed to prevent organic contamination and to maintain low contact resistance.

The new switch-manufacturing process has been demonstrated on 200mm silicon wafers at the MINATEC dedicated MEMS fabrication platform. Yields close to industrial standards have been achieved, providing thousands of working devices per wafer.

CEA-Leti's RF MEMS switches – which offer excellent RF performance, low power consumption, small size and light weight – offer numerous opportunities to increase the functionality and reconfigurability of microwave telecommunication systems. Leti's industrial partners are currently evaluating samples of these switches for use in efficient reflect-array antennas and redundancy switching matrices.

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.

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