



## **SOITEC ANNOUNCES HIGH-VOLUME MANUFACTURING OF NEW eSI™ SUBSTRATES FOR 4G/LTE ADVANCED SMART PHONES**

### **New product enables cost-effective and high-performance RF devices**

**Bernin (Grenoble), France, December 3, 2013** — Soitec (Euronext), a world leader in generating and manufacturing revolutionary semiconductor materials for the electronics and energy industries, today announced it has reached high-volume manufacturing of its new *Enhanced Signal Integrity™* (eSI) substrates, enabling cost-effective and high-performance radio-frequency (RF) devices. Soitec's innovative eSI products, based on Smart Cut™ technology, are the first 'trap-rich' type of material in full production. They are already used in manufacturing by most of the leading RF foundries and have been adopted as the preferred substrates for 4G and LTE mobile computing and communication applications.

These substrates, on which devices are manufactured, have a significant impact on the final devices' performance. Soitec's eSI substrates are designed by introducing an innovative material (a trap-rich layer) between the high-resistivity handle wafer and the buried oxide. This layer limits the parasitic surface conduction present in standard high-resistivity silicon-on-insulator (HR-SOI) substrates, boosting the performance of RF devices. Because this layer is built into the substrate, it reduces the number of process steps and relaxes design rules, leading to a lower cost process and possibly a smaller die area per function. RF designers can therefore integrate diverse functions such as switches, power amplifiers and antenna tuners with excellent RF isolation, good insertion loss, better thermal conductivity and better signal integrity than other technologies.\*

*“Our proprietary eSI product, developed and fine tuned during the past few years, is now qualified by several key customers and is already being used in volume production of mobile handsets on today's market,”* said Bernard Aspar, Senior Vice President and Soitec's Communication & Power Business Unit General Manager. *“As we are continuing to pioneer innovation in RF-engineered substrates, we are very pleased to deliver a technology that enables market-leading companies to be successful with a cost-effective RF device solution addressing stringent 4G and LTE requirements.”*

The new eSI product is part of the Soitec Wave SOI™ product family, and it complements the company's well-established HR-SOI product line. These HR-SOI substrates are already used today in the majority of smart phones, making them the mainstream engineered substrates for switches. While standard HR-SOI is capable of meeting 2G and 3G requirements, eSI substrates achieve much higher linearity and isolation, allowing designers to address some of the most advanced LTE requirements at a competitive cost.

\* The eSI substrate shows RF losses below 0.15 dB/mm at 2 GHz, improved second harmonic by more than 20 dB and improved crosstalk by 20 dB at 1 GHz compared to standard HR-SOI. (Data from the Université catholique de Louvain (UCL), Belgium)

**About Soitec:** Soitec is an international manufacturing company, a world leader in generating and manufacturing revolutionary semiconductor materials at the frontier of the most exciting energy and electronic challenges. Soitec's products include substrates for microelectronics (most notably SOI: Silicon-on-Insulator) and concentrator photovoltaic systems (CPV). The company's core technologies are Smart Cut™, Smart Stacking™ and Concentrix™, as well as expertise in epitaxy. Applications include consumer and mobile electronics, microelectronics-driven IT, telecommunications, automotive electronics, lighting products and large-scale solar power plants. Soitec has manufacturing plants and R&D centers in France, Singapore, Germany and the United States. For more information, visit: [www.soitec.com](http://www.soitec.com).

**International Media Contacts**

(trade press)

Camille Darnaud-Dufour

+33 (0)6 79 49 51 43

[camille.darnaud-dufour@soitec.com](mailto:camille.darnaud-dufour@soitec.com)

(business press)

Marylen Schmidt

+33 (0) 4 76 92 87 83

[marylen.schmidt@soitec.com](mailto:marylen.schmidt@soitec.com)

**Investor Relations**

Olivier Brice

+33 (0)4 76 92 93 80

[olivier.brice@soitec.com](mailto:olivier.brice@soitec.com)

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