



Soitec and Resonac announce the signing of a joint development agreement in SmartSiC™ to accelerate high-performance silicon carbide adoption in next-generation electric vehicles

Tokyo (Japan) and Bernin (France), September 24th, 2024 — Resonac Corporation (formerly Showa Denko K.K.) and Soitec (Euronext Paris - Tech Leaders), a leader in the design and manufacture of innovative semiconductor materials, have signed an agreement to develop 200mm (8-inch) SmartSiC™ silicon carbide (SiC) wafers using Resonac substrates and epitaxy processes, in a major step for the deployment of Soitec's high-yielding silicon carbide technology in Japan and other international markets.

SmartSiC™ silicon carbide is a disruptive compound semiconductor material providing superior performance and efficiency over silicon in high-growth power applications for electric mobility and industrial processes. It allows for more efficient power conversion, lighter and more compact designs and overall system cost savings – all key factors for success in automotive and industrial systems.

Christophe Maleville, Chief Technology Officer at Soitec, commented: *"Silicon carbide is being adopted for EV and industrial applications, where it brings a significant system cost advantage. To further accelerate this adoption, silicon carbide yield and productivity must be improved. Associating Resonac premium quality SiC materials with Soitec's unique 200mm (8-inch) SmartSiC™ technology will support volume availability of record quality epi-ready substrate. The combination of our respective technologies and products will optimize these substrates using Resonac's high-quality epitaxy. Soitec is proud and excited to be partnering with Resonac to develop a best-in-class combined SiC product offering for Japan and the world."*

Makoto Takeda, General Manager of Device Solutions Business Unit at Resonac, commented: *"We are delighted to announce this partnership with Soitec, which is fully aligned with our broader commitment to sustainable and energy-efficient semiconductor solutions. By combining Resonac's*

high quality monocrystalline silicon carbide wafers with Soitec's unique SmartSiC™ technology, we will deliver improved production efficiency of 200mm (8-inch) silicon carbide wafers and diversify the epi-wafer supply chain."

Soitec's SmartSiC™ silicon carbide wafers, or engineered substrates, are produced using the company's proprietary SmartCut™ technology to bond an ultra-fine layer of high-quality mono-SiC 'donor' wafer to a low-resistivity polycrystalline (poly-SiC) 'handle' wafer. The resulting engineered substrate delivers significantly improved device performance and manufacturing yields. By allowing multiple re-uses of the prime quality mono-SiC wafer, the process also reduces overall energy consumption during wafer manufacturing.

Soitec has a new fabrication plant at its headquarters in Bernin, France, primarily dedicated to the production of SmartSiC™ wafers for electric vehicles, renewable energy and industrial equipment component applications.

About Soitec

Soitec (Euronext - Tech Leaders), a world leader in innovative semiconductor materials, has been developing cutting-edge products delivering both technological performance and energy efficiency for over 30 years. From its global headquarters in France, Soitec is expanding internationally with its unique solutions, and generated sales of 1 billion Euros in fiscal year 2023-2024. Soitec occupies a key position in the semiconductor value chain, serving three main strategic markets: Mobile Communications, Automotive and Industrial, and Edge and Cloud AI. The company relies on the talent and diversity of its 2,300 employees, representing 50 different nationalities, working at its sites in Europe, the United States and Asia. Soitec has registered over 4,000 patents.

Soitec, SmartSiC™ and Smart Cut™ are registered trademarks of Soitec.

For more information: <https://www.soitec.com/en/> and follow us on X: @Soitec_Official

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About the Resonac Group

The Resonac Group is a new company established as a result of the integration of the Showa Denko Group and the Showa Denko Materials Group (former Hitachi Chemical Group) in January 2023. The Group's annual sales of semiconductor and electronic materials amount to about 340 billion yen. The Group especially has global top share of semiconductor materials for packaging process. The integration of the two companies has enabled the Resonac Group to design functions of materials as well as to develop them in-house, going all the way back to raw materials. The new trade name "RESONAC" was created as a combination of two English words, namely, the word of "RESONATE" and "C" as the first letter of CHEMISTRY. The Resonac Group will make the most of its co-creative platform, and accelerate technological innovation with semiconductor manufacturers, material manufacturers, and equipment manufacturers inside and outside Japan.

For detail, please refer to the Website of Resonac Holdings Corporation: <https://www.resonac.com/>