

## Press release

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### **E-mobility boom in Japan requires best power electronics solutions from Heraeus with highest reliability and performance**

**New sintering solutions from Heraeus perfectly match the growing demand of high-performance power electronics in Japan. Innovative materials revolutionize chip contacting, yet they increase power density and lengthen the service life of components to meet Japan's top-quality standards. With its Die Top System, Heraeus now offers an efficient and flexible solution.**

Operating temperatures greater than 230 °C, durability requirements of more than 10 years, and everything as cost-effective as possible: New applications such as electromobility or renewable energy represent enormous challenges for power electronics. Soldered joints are reaching their limits. Sintering offers the solution by providing excellent conductivity, optimum heat management at elevated operating temperature without compromising reliability. High-performance electronic modules made of next generation materials and connected with sinter technology enable higher power densities and switching frequencies.

### **Heraeus Electronics – Your Sinter Expert**

As a leading provider of materials solutions for the semiconductor and electronic packaging industries, Heraeus Electronics demonstrates its sintering expertise with lead-free mAgic Sinter Paste, an effective die-attach solution. This patented technology allows manufacturers to unlock greater performance capabilities. Package performance is further enhanced with Heraeus innovative material portfolio, which includes a range of metal ceramic substrates, optimized copper wire and cutting-edge aluminum ribbons for automotive applications.

Heraeus also outperforms the competition by backing product innovation with unparalleled support - through comprehensive technical service, consulting and hands-on training in its application center in Hanau (Germany). Here, customers can explore sintering processes and attend seminars on this robust and reliable joining technology.

## **Systems Know How for Power Electronics**

Die top contact, mostly relying on aluminum wire bonding, remains a bottleneck to meet the requirements for higher operating temperatures and enhanced reliability. To address this issue, Heraeus developed the Die Top System (DTS), which is a material system for assembly and connection technology. The Heraeus Die Top System makes copper wire bonding possible without breaking the die and combines it with sinter technology. It significantly improves the electrical and thermal conductivity, the reliability of the die connection and optimizes the entire module performance. Its industrialization is straightforward thanks to the pre-applied sinter paste and the sintering of die and DTS together in one process. Profiting from the flexibility of the wire bonding technology, the same production equipment can cover all layout variances. Altogether, DTS maximizes profitability and helps to bring the next generation of power modules to market faster.

For more information please visit us at Power System Japan, April 17-19, booth #6D-43.

## **About Heraeus**

A globally leading technology group, Heraeus is headquartered in Hanau, Germany. Founded in 1851, it is a family-owned portfolio company which traces its roots back to a pharmacy opened by the family in 1660. Today, Heraeus combines businesses in the environmental, energy, electronics, health, mobility and industrial applications sectors. In the 2017 financial year, Heraeus generated revenues of € 21.8 billion. With approximately 13.000 employees in 40 countries, the FORTUNE Global 500-listed company holds a leading position in its global markets.

Heraeus is one of the top 10 family-owned companies in Germany. With technical expertise, a commitment to excellence, a focus on innovation and entrepreneurial leadership, we are constantly striving

to improve our performance. We create high-quality solutions for our clients and strengthen their long-term competitiveness by combining unique material expertise with leadership in technology

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