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ZF signs multi-year supply agreement with STMicroelectronics for silicon carbide devices

- *ZF gains a leading supplier for silicon carbide technology to reliably fulfil electromobility orders worth more than €30 billion*
- *ST's silicon carbide devices will be integrated in ZF's future modular inverter platform, going into series production in 2025*
- *In ST, ZF found a supplier whose experience with complex systems meets ZF's requirements and which can produce silicon carbide devices in exceptionally high quality and at the required quantities*

Friedrichshafen, Germany, and Geneva, Switzerland, April 13, 2023 - The technology group ZF will, from 2025, purchase silicon carbide devices from STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications. Under the terms of the multi-year contract, ST will supply a volume of double-digit millions of silicon carbide devices to be integrated in ZF's new modular inverter architecture going into series production in 2025. ZF will leverage ST's vertically integrated silicon carbide manufacturing in Europe and Asia to secure customer orders in electromobility.

"*With this strategically important step, we are strengthening our supply chain to be able to securely supply our customers. Our order book in electromobility until 2030 now amounts to more than thirty billion euros. For this volume, we need several reliable suppliers for silicon carbide devices*," says Stephan von Schuckmann, member of the ZF Board of Management responsible for electromobility as well as materials management. "*In STMicroelectronics, we now have a supplier whose experience with complex systems meets our requirements and who, above all, can produce the devices in exceptionally high quality and at the required quantities*." With this agreement, ZF has gained a world-class supplier for silicon carbide technology, in addition to ZF's existing partnership agreement on silicon carbide technology announced in February.

"*As a vertically integrated company, we are investing heavily to expand capacity and develop our silicon carbide supply chain to support our global and European customers across automotive and industrial sectors, as they pursue electrification and decarbonization targets*," says Marco Monti, President Automotive and Discrete Group of STMicroelectronics. "*The key to success in electric vehicle technology is greater scalability and modularity with increased efficiency, peak power, and affordability. Our silicon carbide technologies help deliver these benefits and we are proud to work with ZF, a leading automotive supplier for electrification, to help them differentiate and optimize the performance of their inverters*."

ST will manufacture the silicon carbide chips at its production fabs in Italy and Singapore with packaging of the chips into STPAK, an ST-developed advanced package, and testing at its back-end facilities in Morocco and China.

ZF can connect a variable number of such devices together to match customers' performance requirements

ST will supply ZF from 2025 with a volume of double-digit millions of third generation silicon carbide MOSFET devices. ZF can connect a variable number of such devices together to match customers' performance requirements without changing the design of the inverter. Among others, ZF will use the technology in inverters for vehicles of a European car manufacturer whose production start is planned for 2025.

The inverter is the brain of electric drivetrains. It manages the flow of energy from battery to e-motor and vice versa. Inverters have become more efficient and more complex with every development step. The combination of the inverter design and the semiconductors, like silicon carbide, is the key to improving electric vehicle performance. Silicon carbide devices significantly reduce power losses in electric car inverters, as well as in wind turbine and photovoltaic inverters. Devices made with silicon carbide have decisive advantages over conventional silicon-based products, such as higher efficiency, power density and reliability. At the same time, they enable smaller and more cost-effective system designs. Simply put, an electric vehicle charges faster, drives further and has more space when equipped with silicon carbide-based semiconductors.

About STMicroelectronics
At ST, we are more than 50,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An integrated device manufacturer, we work with more than 200,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and connectivity. ST is committed to becoming carbon neutral by 2027. Further information can be found at www.st.com.

About ZF
ZF is a global technology company supplying systems for passenger cars, commercial vehicles, and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains of Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive product and software solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies a wide range of vehicle types. With its products, the company contributes to reducing emissions, protecting the climate and enhancing safe mobility.

With some 165,000 employees worldwide, ZF reported sales of €43.8 billion in fiscal 2022. The company operates 168 production locations in 32 countries.

For further press information and photos, please visit: www.zf.com

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