

Global Trends in the Automotive SiC Power Semiconductor Industry (pre-order)

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Abstracts

The third-generation semiconductor industry has begun to gain momentum in 2022, despite challenges such as repeated outbreaks of the pandemic, economic instability, reduced investment and trades, and supply chain disruptions caused by geopolitical factors. SiC (Silicon Carbide) materials used in power devices have been grabbing market attention due to global efforts to achieve net-zero carbon emissions and the transition to green energy. Components associated with these semiconductors are rapidly moving from research and development to mass production. As EV (Electronic Vehicles) industry continues to boom, the demand for electric vehicle performance is also increasing. SiC devices characterized by low energy consumption and high performance are expected to be widely adopted in electric vehicles in the future, in line with the trends towards maximizing the performance of consumer electronics. The development of the third-generation semiconductor industry, represented by SiC, is thus likely to become a global trend. This report provides an overview of the global automotive SiC power semiconductor market and industry development and examines the key trends in the development of the global top-five SiC device suppliers, including STMicroelectronics, Infineon, Wolfspeed, Rohm, and Onsemi.

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