

Power Semiconductor Market Forecast Reveals Key Growth Factors Through 2032

Power Semiconductor Market Expected to Reach \$79.9 Billion by 2032 — Allied Market Research

WILMINGTON, DE, UNITED STATES, October 7, 2024 /EINPresswire.com/ -- The [power semiconductor market](#) is being driven by the increasing demand for energy-efficient electronic devices and the rapid expansion of the electric vehicle (EV) industry. However, a key restraint is the complex manufacturing process and high initial costs

associated with power semiconductors. On the other hand, the growing adoption of renewable energy sources and the development of smart grids present a significant opportunity for the market's further growth and technological advancement. Allied Market Research, titled, "Power Semiconductor Market, by Component, Product, Application, and Region: Global Opportunity

Analysis and Industry Forecast, 2023–2032," The power semiconductor market size was valued at \$48.9 billion in 2022, and is estimated to reach \$79.9 billion by 2032, growing at a CAGR of 4.9% from 2023 to 2032.

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Growing installation of solar photovoltaic panels for electricity generation, fueled by rising demand for technologies and government incentives, is accelerating the adoption of power semiconductors.”

Allied Market Research

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Power semiconductors are electronic devices that are specifically designed to handle high power levels in electrical circuits. They are essential components in various

applications where efficient energy conversion, control, and management are crucial. Power semiconductors play a significant role in power electronics, which encompasses a wide range of industries such as renewable energy, electric vehicles, industrial automation, consumer electronics, and more. Power semiconductors are typically made from semiconducting materials like silicon (Si) or silicon carbide (SiC), because of their unique electrical properties. These



POWER SEMICONDUCTOR MARKET

OPPORTUNITIES AND FORECAST, 2023-2032

Power semiconductor market is expected to reach **\$79.9 Billion** in 2032

Growing at a **CAGR of 4.9%** (2023-2032)

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Power Semiconductor Market Trends

materials allow for the control of electrical current under different conditions. The choice of material depends on the specific requirements of the application. For instance, silicon-based power semiconductors are widely used in low to medium-power applications, while silicon carbide and gan semiconductors, known as wide-bandgap semiconductors, are increasingly being used in high-power applications due to their superior electrical characteristics.

The development of power semiconductors has revolutionized various industries by enabling the efficient use of energy, reducing energy wastage, and promoting the adoption of clean energy sources. Power semiconductors have contributed to the growth of renewable energy systems, allowing for the conversion of solar and wind energy into usable electrical power. They have also played a significant role in the electrification of transportation through the use of power semiconductors in electric vehicles. Power semiconductors are critical components in power electronics, enabling efficient energy conversion, control, and management. They are made from semiconducting materials such as silicon or silicon carbide and come in various types, including diodes, transistors, and thyristors. Advances in power semiconductor technology have led to increased efficiency, reliability, and power density. These devices have revolutionized industries such as renewable energy and electric vehicles, promoting energy efficiency and sustainability.

More information on the Power Semiconductor Market:

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An increase in using solar photovoltaic panels to generate electricity along with a surge in demand for power semiconductor devices across various industry verticals are the factors that drive the power semiconductor market growth. However, the intricacy of the production network and planning cycle of SiC semiconductor innovation is hampering the market growth. Conversely, the government's HVDC and smart grid initiatives are expected to create lucrative power semiconductor market trends.

More information on the Power Semiconductor Market:

- In 2022, by-product, the Silicon Carbide (SiC) segment was the highest revenue contributor to the [power semiconductor market share](#), with \$28,602.3 million in 2022, and is estimated to reach \$45,977.9 million by 2032, with a CAGR of 4.8%.
- By component, the power discrete segment was the highest revenue contributor to the power semiconductor market analysis, with \$21,971.3 million in 2022, and is estimated to reach \$32,160 million by 2032, with a CAGR of 3.8%.
- By application, the IT and Telecom segment was the highest revenue contributor to the power semiconductor industry, with \$14,903.8 million in 2022, and is estimated to reach \$23,306.5 million by 2032, with a CAGR of 4.5%.
- By region, Asia-Pacific was the highest revenue contributor, accounting for \$21,444.2 million in 2022, and is estimated to reach \$37,843.9 million by 2032, with a CAGR of 5.7%.

More information on the Power Semiconductor Market: <https://www.alliedmarketresearch.com/purchase-enquiry/1602>

The power semiconductor market key players profiled in the report include [Infineon Technologies AG](#), [Rohde & Schwarz](#), [STMicroelectronics](#), [Siemens](#), [Infineon Technologies AG](#), [Rohde & Schwarz](#), [STMicroelectronics](#), [Siemens](#), [Infineon Technologies AG](#), [Rohde & Schwarz](#), [STMicroelectronics](#), [Siemens](#). Market players have adopted various strategies, such as product launch, collaboration & partnership, joint venture, and acquisition, to expand their foothold in the power semiconductor industry. For Instance, In May 2023, Infineon Technologies AG, the global leader in automotive semiconductors, and Hon Hai Technology Group (“Foxconn”), the world’s largest electronics manufacturing services provider, aimed to establish a long-term partnership in the field of electric vehicles (EV) to jointly develop advanced electromobility with efficient and intelligent features. The Memorandum of Understanding (MoU) focuses on silicon carbide (SiC) development, leveraging Infineon’s automotive SiC innovations and Foxconn’s know-how in automotive systems. In addition, In May 2023, Infineon Technologies AG announced the business expansion for a new plant in Dresden together with political leaders from Brussels, Berlin, and Saxony. EU Commission President Ursula von der Leyen, German Federal Chancellor Olaf Scholz, Saxony’s Prime Minister Michael Kretschmer, and Dresden’s Mayor Dirk Hilbert symbolically launched construction work together with Infineon CEO Jochen Hanebeck. With an investment volume of five billion euros, the new plant is the largest single investment in Infineon’s history.

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