Power Electronics Market Expected to Hit $71.8 Billion with a 5.8% CAGR From 2023-2033

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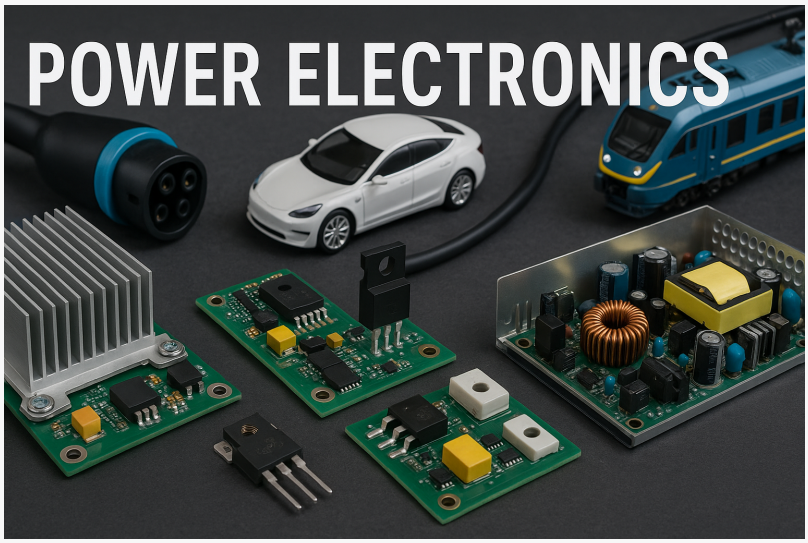

Power Electronics Market New

WILMINGTON, NEW CASTLE, DE, UNITED STATES, June 18, 2025 /EINPresswire.com/ -- According to a new report published by Allied Market Research, titled, "Power Electronics Market by Device Type (Power Discrete, Power Module, Power IC), by Material (Silicon Carbide, Gallium Nitride, Sapphire, Others), by Application (Power Management, Uninterruptible Power Supply, Renewable, Others), by End Use (Telecommunication, Industrial, Automotive, Consumer Electronics, Military and Defense, Energy and Power, Others): Global Opportunity Analysis and Industry Forecast, 2024-2033." The report offers a detailed analysis of the top winning strategies, evolving market trends, market size and estimations, value chain, key investment pockets, drivers & opportunities, competitive landscape and regional landscape. The report is a useful source of information for new entrants, shareholders, frontrunners and shareholders in introducing necessary strategies for the future and taking essential steps to significantly strengthen and heighten their position in the market. The power electronics market was valued at $41.2 billion in 2023, and is estimated to reach $71.8 billion by 2033, growing at a CAGR of 5.8% from 2024 to 2033.

> The power IC segment has dominated the power electronics market, in terms of revenue in 2023 and it is also expected to show fastest growth rate over the forecast period.”
>
> *Roshan Deshmukh*

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Power electronics is the field that deals with the control and conversion of electrical power using electronic circuits. It focuses on efficiently managing the generation, transmission, and distribution of power in various applications, such as electric vehicles, renewable energy systems, and industrial machinery. By enabling precise power control, power electronics improve the performance and efficiency of electrical systems, contributing to energy conservation and the development of advanced technologies in various sectors. Power electronics is the branch of electronics that deals with the control and conversion of electrical power. The characteristics of silicon carbide semiconductors such as higher breakdown electric field strength and wider band gap enable their usage in power electronics. For instance, these devices play a crucial role in controlling automotive electronics such as electric power steering, hydro electric vehicles main inverter, seat control, and braking system. Power resistors, power capacitors, and portable cell phone battery are essential components in the power electronics market, enabling efficient energy conversion, storage, and management in various electronic devices and systems.

SiC power electronics facilitate energy conversion in generators and actuators integrated in aircraft, which significantly contributes toward the growth of the global market. In addition, the growth of the power electronics market is driven by an increase in usage of power electronics in a wide range of applications such as industrial motor drives, electric grid stabilization, and consumer electronics. This is attributed to their effective power control and management features for industrial operations or functioning of electrical/electronic devices that make them suitable for different industry verticals, thereby augmenting the global market growth. Presently, electronics are equipped with numerous features to increase their sales. Thus, technological improvements in electronics such as computers, smartphones, and wireless communication & cloud systems are anticipated to provide lucrative opportunities for the market.

The power electronics market is segmented into device type, material, application, end use, and region. On the basis of device type, the market is classified into power discrete, power module, and power IC. By material, it is categorized into silicon carbide, gallium nitride, sapphire, and others. By application, the market includes power management, uninterruptible power supply (UPS), renewable, and others. By end use, the market is fragmented into telecommunication, industrial, automotive, renewable, consumer & enterprise, military & defense, energy & power, and others. Region wise, the market trends are analyzed across North America (U.S., Canada, and Mexico), Europe (UK, Germany, France, Italy, and rest of Europe), Asia-Pacific (China, Japan, India, South Korea, and rest of AsiaPacific), and LAMEA (Latin America, Middle East, and Africa). The analysis identified that Asia-Pacific contributed maximum revenue in 2023.

Based on device type, the power module segment accounted for more than two-fifths of the total revenue in the global power electronics market in 2022, and it is expected to continue its dominant position throughout the forecast period. The dominant position is sustained by its unparalleled work efficiency, cost-effectiveness, and its crucial role in various high-voltage industrial applications, meeting the surging demand for energy-efficient and reliable power solutions across multiple sectors. On the other hand, the power discrete segment is projected to exhibit the fastest CAGR of 6.6% from 2022 to 2032.

Based on material, the other segment emerged as the market leader in the global power electronics market in 2022, holding the highest market share, accounting for nearly one-third of the revenue. This segment, which includes materials such as gallium arsenide (GaAs), silicon germanium (SiGe), and indium phosphide (InP), is projected to maintain its leadership status throughout the forecast period due to its diverse application potential and superior performance characteristics in various electronic components and systems. However, gallium nitride is expected to portray the fastest CAGR of 7.0% from 2022 to 2032.

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Based on application, the other segment captured the highest market share in 2022, accounting for nearly one-third of the global power electronics market revenue. This leadership is projected to continue throughout the forecast period. The dominance of the other segment, which encompasses sectors including transportation, rail traction, utility systems, and drivers, is attributed to robust growth in transportation and utility systems that require advanced, efficient power conversion systems and the extensive use of drivers in diverse high-power applications. On the other hand, the uninterruptible power source (UPS) segment is expected to register the highest CAGR of 6.8% from 2023 to 2032.

Based on region, Asia-Pacific dominated the power electronics market in 2022, holding nearly half of the global market share. This dominance is attributed to the region's well-established telecommunication industry, significant growth in consumer electronics sales, governmental support for EVs and HEVs, and substantial investment in defense, collectively driving the demand for power electronics components across various sectors. However, the LAMEA region is expected to post the fastest CAGR of 7.1% from 2023 to 2032. This growth is attributed to escalating demand for advanced technology and electronic applications, increasing adoption of electric vehicles, and a shift towards renewable energy consumption, especially in the Middle East, all fostering the need for efficient power electronics components.

Competitive analysis and profiles of the major power electronics market players, such as ABB Group, Fuji Electric Co. LTD, Infineon Technologies AG, Microsemi Corporation, Mitsubishi Electric Corporation, Renesas Electronics Corporation, Rockwell Automation, Inc., STMicroelectronics, Texas Instruments Incorporated, and Toshiba Corporation, are provided in this report. Market players have adopted various strategies such as product launch, expansion, collaboration, partnership, innovation, investment, new product development, and acquisition to expand their foothold in the power electronics industry.

Key Benefits For Stakeholders:

 This report provides a quantitative power electronics market analysis of the market segments, current trends, estimations, and dynamics of the power electronics market forecast from 2023 to

2033 to identify the prevailing power electronics market opportunities. The power electronics market size is in $billion.
 The market research is offered along with information related to key drivers, restraints, and opportunities.
 Porter's five forces analysis highlights the potency of buyers and suppliers to enable stakeholders make profit-oriented business decisions and strengthen their supplier-buyer network. Power electronics market data, and power electronics market insights are covered in the report.
 In-depth analysis of the power electronics market segmentation assists to determine the prevailing market opportunities.
 Major countries in each region are mapped according to their revenue contribution to the global market.
 Market player positioning facilitates benchmarking and provides a clear understanding of the present position of the market players. Power electronics market share by key players is included in the report.
 The report includes the analysis of the regional as well as global power electronics market trends, key players, market segments, application areas, and market growth strategies.

Reasons to Buy This Power Electronics Market Report:

• Procure strategically important competitor information, analysis, and insights to formulate effective R&D strategies.
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