

# **Power Module Market Size and Forecast (2021 - 2034), Global and Regional Share, Trend, and Growth Opportunity Analysis Report Coverage: By Material (Silicon (Si), Silicon Carbide (SiC), Gallium Nitride (GAN), and Others), Industry Vertical (ICT, Automotive & Transportation, Consumer Electronics, Industrial, Education, Media & Entertainment, Government & Public Sector, and Others), and Geography (North America, Europe, Asia Pacific, Middle East and Africa, and South and Central America)**

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## **Abstracts**

The power module market size was valued at US\$22.34 billion in 2025 and is expected to reach US\$ 44.79 billion by 2034; it is estimated to record a CAGR of 8.3% during 2026–2034.

The Power Module market is segmented into five major regions—North America, Europe, Asia Pacific (APAC), the Middle East & Africa (MEA), and South & Central America. Asia Pacific dominated the market in 2025, followed by North America and Europe respectively. The strong presence of semiconductor manufacturing hubs, increasing adoption of electric vehicles, and rapid industrialization across countries such as China, Japan, South Korea, and India contribute significantly to the growth of the market in the Asia Pacific region. Additionally, government initiatives promoting energy efficiency and renewable energy integration further support the demand for Power Module devices. North America and Europe are also witnessing steady growth due to the increasing deployment of advanced automotive electronics, renewable power infrastructure, and

industrial automation technologies.

The automotive segment represents a major application area for Power Module devices. Modern vehicles increasingly rely on power electronics to manage battery systems, electric drivetrains, onboard chargers, and power control units. Power Module components such as diodes, MOSFETs, and IGBTs enable efficient power conversion and switching operations in electric vehicles (EVs) and hybrid electric vehicles (HEVs). As global automotive manufacturers accelerate the transition toward vehicle electrification and energy-efficient mobility solutions, the demand for high-performance Power Module components continues to rise. These devices help improve energy efficiency, enhance thermal performance, and support high-voltage operations required in advanced automotive systems.

The consumer electronics and industrial equipment segment also plays a vital role in driving the Power Module market. Power Module components are widely used in power supplies, adapters, motor drives, lighting systems, and home appliances to ensure efficient energy conversion and power regulation. Industrial automation systems, robotics, and manufacturing equipment increasingly rely on Power Module technologies to support high-current and high-voltage operations with improved reliability. The growing demand for compact, energy-efficient electronic devices and advanced industrial control systems is encouraging manufacturers to integrate high-performance Power Module components into their designs.

### **Power Module Market Future Trend:**

One of the key future trends shaping the Power Module market is the increasing shift toward electrification and energy-efficient power management technologies. The rapid growth of electric vehicles, renewable energy installations, and smart power infrastructure is driving the need for advanced semiconductor devices capable of handling higher power densities and faster switching speeds. Power Module components play a critical role in enabling efficient power conversion in solar inverters, wind energy systems, battery management systems, and electric vehicle charging infrastructure.

Infineon Technologies AG, Semiconductor Components Industries, LLC, STMicroelectronics, Mitsubishi Electric Corporation, Vishay Intertechnology, Inc., Fuji Electric Co., Ltd., ROHM CO., LTD., Renesas Electronics Corporation, Toshiba Electronic Devices & Storage Corporation, and Littelfuse, Inc are among the key players profiled during this market study. Several other essential market players were also

studied and analyzed to get a holistic view of the global power module market and its ecosystem.

The overall power module market size has been derived using both primary and secondary sources. Exhaustive secondary research has been conducted using internal and external sources to obtain qualitative and quantitative information related to the power module market size. The process also helps obtain an overview and forecast of the market with respect to all the market segments. Also, multiple primary interviews have been conducted with industry participants to validate the data and gain analytical insights. This process includes industry experts such as VPs, business development managers, market intelligence managers, and national sales managers, along with external consultants such as valuation experts, research analysts, and key opinion leaders specializing in the power module market.

### **Reason to buy**

Saves and reduces time required for identifying the market growth, size, leading players, and segments in the global Power Module market.

Highlights key business priorities to assist companies in realigning their business strategies

Emphasizes key findings and recommendations that uncover emerging industry trends in the global Power Module market, enabling stakeholders across the value chain to craft effective long-term strategies

Develop/modify business expansion plans by analyzing substantial growth prospects in mature and emerging markets

Scrutinizes in-depth global Power Module market trends, along with factors driving the market, as well as those hindering it

Enhances the decision-making process by understanding the strategies that underpin commercial interest with respect to client products, segmentation, pricing, and distribution

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