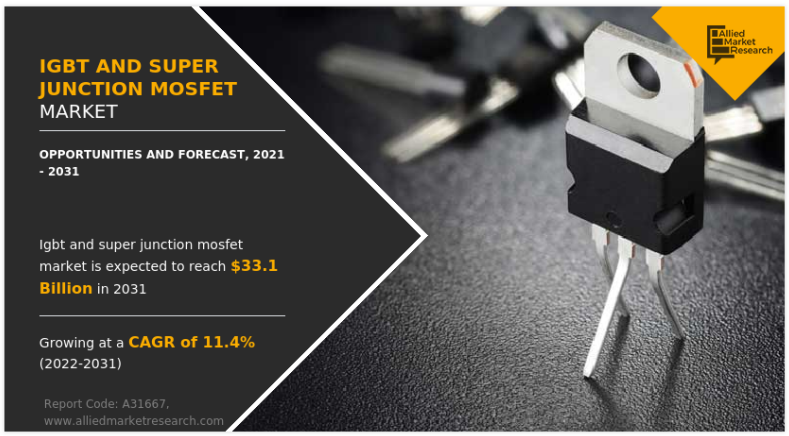
IGBT and Super Junction MOSFET Market Expected to Hit $33.1 Billion by 2031, Expand at 11.4% Annually

IGBT and Super Junction MOSFET Market was valued at $11.1 billion in 2021, is projected to reach $33.1 billion by 2031, grow at a CAGR of 11.4% from 2022-2031.



IGBT and Super Junction MOSFET Market 1

WILMINGTON, NEW CASTLE, DE, UNITED STATES, July 7, 2025 /EINPresswire.com/ -- According to a new report published by Allied Market Research, titled, "IGBT and Super Junction MOSFET Market, by Type (IGBT, Super Junction MOSFET), by Application (Energy and Power, Consumer Electronics, Inverter and UPS, Electric Vehicle, Industrial System, Others): Global Opportunity Analysis and Industry Forecast, 2021 – 2031." 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 IGBT and super junction MOSFET market was valued at $11.1 billion in 2021, and is estimated to reach $33.1 billion by 2031, growing at a CAGR of 11.4% from 2022 to 2031.

> The industrial robotics and electric vehicle segments collectively accounted for around 42.9% market share in 2021."
>
> *Roshan Deshmukh*

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An insulated-gate bipolar transistor (IGBT) is a three-terminal power semiconductor device primarily used in electronic switches and has evolved over time to combine high efficiency and

quick switching. Four alternating layers make up its structure, which is managed by a metal-oxide-semiconductor (MOS) gate mechanism. Further, a super junction MOSFET structure is an advanced structure in which multiple vertical pn junctions are arranged, as a result of which achieves low ON-resistance RDS(ON) and reduced gate charge Qg while retaining a high voltage.

The growth of the global IGBT and super junction MOSFET market size is majorly driven by increased dependence on electrical equipment and machinery coupled with the aggrandized need for high-voltage operating devices. Moreover, an increase in emphasis on power saving is expected to drive market growth. However, limited operations and the high overall cost is acting as prime restraint of the global market. On the contrary, the rise in government initiatives to establish HVDC and smart grids is anticipated to provide lucrative opportunities for the IGBT and super junction MOSFET industry during the forecast period.

The IGBT and super junction MOSFET market is segmented into Type and Application.

By type, the IGBT segment held the major share in 2021, garnering more than three-fourth of the global IGBT and super junction MOSFET market revenue. The same segment would also showcase the fastest CAGR of 10.8% during the forecast period. Increase in demand for power management chips in electronic applications such as air conditioners, and refrigerators, owing to their ability to switch faster from one mode to another is driving the market growth globally.

By application, the industrial system segment contributed to the highest share in 2021, accounting for around one-fifth of the global IGBT and super junction MOSFET market revenue. The same segment would also showcase the fastest CAGR of 12.3% throughout the forecast period. Rapid industrialization and increasing demand for power electronic systems are the prime growth factors for the market.

By region, Asia-Pacific garnered the highest share in 2021, holding nearly half of the global IGBT and super junction MOSFET market revenue in 2021, and is projected to retain its dominance by 2031. The same region would also portray the fastest CAGR of 12.5% during the forecast period. High demand for automated switching devices and power modules has propelled the market growth.

The key players profiled in the report include ABB Ltd., Infineon Technologies AG, STMicroelectronics, Toshiba Corporation, Fuji Electric Co. Ltd., Mitsubishi Electric Corporation, Renesas Electronics, NXP Semiconductors, Semikron International GmbH, IXYS Corporation. Market players have adopted various strategies such as product launch, collaboration, partnership, joint venture, and acquisition to expand their foothold in the IGBT and super junction MOSFET market.

Analyst Review

The global IGBT and super junction MOSFET market is highly competitive, owing to the strong presence of existing vendors. IGBT and super junction MOSFET vendors, who have access to extensive technical and financial resources, are anticipated to gain a competitive edge over their rivals, as they have the capacity to cater to the market requirements. The competitive environment in the market is expected to further intensify with an increase in technological innovations, product extensions, and different strategies adopted by key vendors.

The rise in demand for smart grid solutions across the industrial and commercial sectors globally is driving the need for the next generation to enhance IGBT and super junction MOSFET solutions. Moreover, prime economies, such as the U.S., China, Germany, and Japan, plan to develop and deploy next-generation IGBT and super junction MOSFET solutions across various sectors such as automotive, manufacturing, healthcare, and hospitality, which is anticipated to provide lucrative opportunities for market growth.

Among the analyzed geographical regions, Asia-Pacific exhibits the highest adoption of IGBT and super junction MOSFET and has been experiencing a massive expansion of the market. On the other hand, North America is expected to grow at a faster pace, predicting lucrative growth due to emerging countries such as U.S. and Mexico investing in these technologies. Regions such as the Middle East and Africa are expected to offer new opportunities for the growth of the IGBT and super junction MOSFET market in the future.

Key Finding of the Study:

• In 2021, the IGBT segment accounted for maximum revenue and is projected to grow at a notable CAGR of 10.8% during the forecast period.
• The electric vehicle segment was the highest revenue contributor to the market in 2021.
• The industrial robotics and electric vehicle segments collectively accounted for around 42.9% market share in 2021.
• Asia-Pacific acquired a major share in IGBT and super junction MOSFET Industry with an industry share of 12.5% in 2021.

Reasons to Buy This IGBT and Super Junction MOSFET Market Report:

• Procure strategically important competitor information, analysis, and insights to formulate effective R&D strategies.
• Recognize emerging players with potentially strong product portfolio and create effective counter-strategies to gain competitive advantage.
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• Develop tactical initiatives by understanding the focus areas of leading companies.
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