

Power Electronics Market: Segmented: By Device Type [Power Discrete {Diode, Transistors (Bipolar Junction Transistor, Field Effect Transistor, Insulated Gate Bipolar Transistor), Thyristor}, Power Module {Intelligent Power Module, Standard & Power Integrated Module (MOSFET Module, IGBT Module), Other Modules}}, Power IC]; By Material (Silicon, Silicon Carbide, Gallium Nitride); By Application {ICT, Consumer Electronics, Industrial (Energy & Power), Automotive & Transportation, Aerospace & Defense, Others}; and Region– Analysis of Market Size, Share and Forecast To 2019-2030

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Abstracts

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PRODUCT OVERVIEW

Power electronics play a vital role in electrified vehicle applications that offer compact and high-efficiency power conversion solutions. Power electronics is a circuitry system that effectively, compactly, and robustly transfers power from the source to the charge to ensure convenient utilization. Using diodes, transistors, and thyristors, this device is used to control the conversion of electric power from one form to the other. Using power electronics equipment, operations at high voltage or high current can be performed effectively, as they demonstrate faster switching speeds at higher output. Moreover, power electronics manage both bidirectional and unidirectional energy flow, depending on the use, and the regenerated energy can be returned for use. Power electronic devices are expected to serve as the key technologies of the future, which will be useful in increasing system efficiency and functioning in automotive and energy-saving applications.

MARKET HIGHLIGHTS

Power Electronics Market is expected to project a CAGR of 25.8% during the forecast period, 2020-2030

The worldwide power electronics market is expected to grow on the back of the increasing demand for energy-efficient and battery-powered devices. The rising focus on the use of renewable sources of energy worldwide, the increasing adoption of power electronics in electric vehicle manufacturing, and the rise in the use of power electronics in consumer electronics are the main factors driving the growth of the power electronics market. However, the COVID-19 pandemic is projected to impact the industry due to supply chain disturbances, production, and distribution around the value chain.

GLOBAL POWER ELECTRONICS MARKET: SEGMENTS

Power modules market to grow at the highest CAGR of xx% during 2020-2030

Global Power Electronics Market is segmented by device type into Power Discrete [Diode, Transistors {Bipolar Junction Transistor (BJT), Field Effect Transistor (FET), Insulated Gate Bipolar Transistor (IGBT)}, Thyristor], Power Modules {Intelligent Power Module, Standard & Power Integrated Module (MOSFET Module, IGBT Module), Other Modules}, and Power IC. Among these, the power modules segment held the largest share of around xx% in the year 2019. Modules are used in a range of applications, including motor control and drives; hybrid-electric solutions for building, industrial and agricultural vehicles; solar energy systems solutions; Uninterruptible Power Supply (UPS); room air conditioners; and many others.

The Silicon Carbide and Gallium Nitride segments to grow at high rates at a CAGR of xx% during 2020-2030

The worldwide power electronics market is segmented by material type into Silicon, Silicon Carbide, and Gallium Nitride. Among these, the Silicon Carbide (SiC) and Gallium Nitride (GaN) segments held the largest share of about xx% and yy% respectively, in the year 2019. SiC is mainly used in EV inverters, which increases system efficiency by up to 80% and helps reduce the global carbon footprint. SiC components have improved reliability, improved performance, high operating temperature, reduced size and high voltage capabilities, and many other applications. GiN is mainly used in applications like PV, EV, UPS, wireless charging, and power supply. The rapid adoption of wireless chargers for mobile devices is expected to fuel the growth of the semiconductor devices segment based on gallium nitride.

An automotive segment to grow the fastest at a CAGR of xx% during 2020-2030

Global Power Electronics Market is segmented by application into ICT, Consumer Electronics, Industrial (Energy & Power), Automotive & Transportation, Aerospace & Defense, and Others. Among these, the automotive segment held the largest share of around xx% in the year 2019. Rising concern about environmental pollution and sustainable development has increased policy support for boosting electric vehicle production in many regions, backed by incentives. This will most likely build up and extend the charging infrastructure and deliver business opportunities.

MARKET DYNAMICS

Drivers

Restraints

GLOBAL POWER ELECTRONICS MARKET: REGIONS

Asia Pacific to be the fastest-growing region at a CAGR of xx% between 2020 and 2030

GLOBAL POWER ELECTRONICS MARKET: KEY PLAYERS

Texas Instruments Inc.

Company Overview, Business Strategy, Key Product Offerings, Financial Performance, Key Performance Indicators, Risk Analysis, Recent Development, Regional Presence, SWOT Analysis

Developer Manufacturer Profiles

Renesas Electronics Corporation

Infineon Technologies

Microsemi Corporation

Maxim Integrated Products Inc.

BMW Group Co. Inc.

ON Semiconductors Inc.

Apple Inc.

Others

GLOBAL POWER ELECTRONICS REPORT ALSO CONSISTS OF ANALYSIS ON:

Power Electronics Market Segments

By Device Type

Power Discrete

Diode

Transistors

BJT

FET

IGBT

Thyristor

Power Module

Intelligent Power Module

Standard & Power Integrated Module

MOSFET Module

IGBT Module

Other Modules

Power IC

By Material Type

Silicon

Silicon Carbide

Gallium Nitride

By Application

IT

Consumer Electronics

Industrial

Power

Energy

Automotive & Transportation

Aerospace & Defense

Others

By Region

North America

Latin America

Europe

Middle East & Africa

Asia Pacific

Global Power Electronics Market Dynamics

Global Power Electronics Market Size

Supply & Demand

Current Trends/Issues/Challenges

Competition & Companies Involved in the Market

Value Chain of the Market

Market Drivers and Restraints

Reasons to Purchase this Report

Qualitative and quantitative analysis of the market based on segmentation involving both economic as well as non-economic factors

Provision of market value (USD Billion) data for each segment and sub-segment

Indicates the region and segment that is expected to witness the fastest growth as well as to dominate the market

Analysis by geography highlighting the consumption of the product/service in the region as well as indicating the factors that are affecting the market within each region

Competitive landscape which incorporates the market ranking of the major players, along with new service/product launches, partnerships, business expansions, and acquisitions in the past five years of companies profiled

Extensive company profiles comprising of company overview, company insights, product benchmarking, and SWOT analysis for the major market players

The current as well as the future market outlook of the industry with respect to recent developments which involve growth opportunities and drivers as well as challenges and restraints of both emerging as well as developed regions

Includes in-depth analysis of the market of various perspectives through Porter's five forces analysis

Provides insight into the market through Value Chain

Market dynamics scenario, along with growth opportunities of the market in the years to come

3-month post-sales analyst support.

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Consultant Recommendation

The above-given segmentations and companies could be subjected to further modification based on in-depth feasibility studies conducted for the final deliverable.

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