

Global Power Transistor Market Size study & Forecast, by Product (Low-Voltage FETs, IGBT Modules, RF and Microwave Transistors, High Voltage FETs, GBT Transistors), by Type (Bipolar Junction Transistor, Field Effect Transistor, Heterojunction Bipolar Transistor), By End-User (Consumer Electronics, Communication and Technology, Automotive, Manufacturing, Energy and Power) and Regional Analysis, 2022-2029

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Abstracts

The global Power Transistor Market is valued at approximately USD 15.07 billion in 2021 and is anticipated to grow with a healthy growth rate of more than 4.29 % over the forecast period 2022-2029. Signals are amplified and regulated using power transistors. They are constructed of high-performance semiconductor materials such as germanium and silicon. These transistors can amplify and regulate a specific voltage level, as well as handle specific ranges of high and low voltage ratings. The Power Transistor market is expanding because of factors such as the rising demand for electronic devices and increasing spending on power-efficient technologies.

According to India Cellular And Electronics Association (ICER) in 2021, India's electronics exports are rising rapidly and get doubled in the past five years. In 2019 the revenue generation reached approximately USD 15 billion from the export of electronic devices. The source also states that major export items include smartphones with increased growth of about USD 3.8 billion in the last five years. Whereas rising government support towards the adoption of smart devices and technological advancements and innovations create lucrative opportunities for the market. However,

limitations in operations due to various constraints hamper the market growth throughout the forecast period of 2022-2029.

The key regions considered for the Global Power Transistor Market study include Asia Pacific, North America, Europe, Latin America, and the Rest of the World. Asia Pacific dominated the market in terms of revenue, owing to the increasing demand from end-use industries, demand, and adoption of semiconductors, etc. Whereas the Asia Pacific is expected to grow with the highest CAGR during the forecast period, owing to factors such as increasing demand for electronic devices, rising consumer spending on electronics, and rising government regulations toward digitalization.

Major market players included in this report are:

Champion Microelectronics Corp

Fairchild Semiconductor International Inc.

Infineon Technologies AG

Renesas Electronics Corporation

NXP Semiconductors N.V.

Texas Instruments Inc.

STMicroelectronics N.V.

Linear Integrated Systems Inc.

Mitsubishi Electric Corporation

Toshiba Corporation

Recent Developments in the Market:

In April 2022, EPC introduced the EPC2050, a 350 V GaN transistor with a maximum RDS(on) of 80 m and a pulsed output current of 26 A. This small size allows for power solutions that take up ten times the space of comparable silicon solutions. The EPC2050's fast switching speed and small size benefit applications such as 120 V-150 V motor control for medical motors, DC-DC conversion from/to 120 V-160 V, such as in aerospace applications, DC-DC solutions converting 400 V input to 12 V, 20 V, or 48 V outputs, and DC-AC inverters, multi-level converters such as Totem Pole PFC.

In March 2022, Transphorm, Inc. and TDK-Lambda, a TDK group company, are expanding the PFH500F AC-DC GaN-based product line. TDK's 500-watt AC-DC power supplies include the PFH500F-12 and PFH500F-48. Transphorm's 72 m, 8x8 PQFN GaN FETs (TP65H070LDG) are used in this series. The high power density of the power transistors allowed TDK to cool the GaN power supplies via thin baseplates. In parallel, TDK developed a slimmer, more tightly contained power module capable of supporting a wide range of industrial applications operating in harsh environments. Custom fanless power supplies, laser, 5G communication, signaling, commercial off-the-

shelf (COTS) power supplies, digital signage/displays, and other applications are among those supported.

Global Power Transistor Market Report Scope:

Historical Data 2019-2020-2021

Base Year for Estimation 2021

Forecast period 2022-2029

Report Coverage Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered Product, Type, End-user, Region

Regional Scope North America; Europe; Asia Pacific; Latin America; Rest of the World

Customization Scope Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Product:

Low-Voltage FETs

IGBT Modules

RF and Microwave Transistors

High Voltage FETs

IGBT Transistors

By Type:

Bipolar Junction Transistor

Field Effect Transistor

Heterojunction Bipolar Transistor

Others

By End-user:

Consumer Electronics
Communication and Technology
Automotive
Manufacturing
Energy and Power

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

RoLA

Rest of the World

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