

Power Transistors Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Report description:

Market Overview:

The global power transistors market size reached US\$ 16.3 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 21.1 Billion by 2028, exhibiting a growth rate (CAGR) of 4.42% during 2023-2028.

Power transistors are electronic components that are used as switches or amplifiers for high-power applications. They comprise three semiconductor terminals, known as base, emitter and collector, which aid the transistor in acting as an insulator or a conductor. These semiconductor terminals can either be of NPN or PNP polarity and are available in different power and switching speed ratings. Nowadays, power transistors are gaining rapid traction across the world as they assist in improving the switching efficiency and increasing the power efficacy of electronic products.

Power transistors help in quickly dissipating heat, which aids in avoiding overheating as well as lowering CO2 emissions and electricity costs. Owing to these benefits, they form a primary component of various electronic products. Moreover, on account of the growing global population and increasing consumption of fossil fuels, there has been a rising demand for power-efficient electronic devices. Apart from this, manufacturers are investing in various research and development activities to improve the performance parameters of power transistors and launching new semiconductor materials besides silicon and germanium. For instance, the emerging demand for silicon carbide (SiC) and gallium nitride (GaN) transistors is anticipated to catalyze the market growth in the upcoming years. Another major market trend is miniaturization in product design using the latest processes, such as technology computer aided design (TCAD) and device simulations, which have enabled manufacturers in designing miniature and highly efficient power transistors.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global power transistors market report, along with

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forecasts at the global, regional and country levels from 2023-2028. Our report has categorized the market based on product, type, end-use and application.

Breakup by Product:

- Low-Voltage FETs
- IGBT Modules
- RF/ Microwave Transistors
- High Voltage FETs
- IGBT Transistors
- Others

Breakup by Type:

- Bipolar Junction Transistor
- Field Effect Transistor
- Heterojunction Bipolar Transistor
- Others

Breakup by End-Use:

- Consumer Electronics
- Communication and Technology
- Automotive
- Manufacturing
- Energy and Power
- Others

Breakup by Application:

- OEMs
- Aftermarket

Breakup by Region:

- North America
 - United States
 - Canada
- Asia Pacific
 - China
 - Japan
 - India
 - South Korea
 - Australia
 - Indonesia
 - Others
- Europe

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Germany
France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined with some of the key players being Champion Microelectronic Corp., Diodes Incorporated, Infineon Technologies AG, Linear Integrated Systems, Mitsubishi Electric Corporation, NXP Semiconductors N.V., Semiconductor Components Industries, LLC, Renesas Electronics Corporation, SEMIKRON International GmbH, STMicroelectronics International N.V., Texas Instruments Incorporated, Torex Semiconductor Ltd., Toshiba Corporation, and Vishay Intertechnology Inc.

Key Questions Answered in This Report:

How has the global power transistors market performed so far and how will it perform in the coming years?

What are the key regional markets?

What has been the impact of COVID-19 on the global power transistors market?

What is the breakup of the market based on the product?

What is the breakup of the market based on the type?

What is the breakup of the market based on the end-use?

What is the breakup of the market based on the application?

What are the various stages in the value chain of the industry?

What are the key driving factors and challenges in the industry?

What is the structure of the global power transistors market and who are the key players?

What is the degree of competition in the industry?

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