

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

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Abstracts

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 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

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?

Contents

1 PREFACE

2 SCOPE AND METHODOLOGY

- 2.1 Objectives of the Study
- 2.2 Stakeholders
- 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
- 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
- 2.5 Forecasting Methodology

3 EXECUTIVE SUMMARY

4 INTRODUCTION

- 4.1 Overview
- 4.2 Key Industry Trends

5 GLOBAL POWER TRANSISTORS MARKET

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact Of COVID-19
- 5.4 Market Forecast

6 MARKET BREAKUP BY PRODUCT

- 6.1 Low-Voltage FETs
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
- 6.2 IGBT Modules
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast
- 6.3 RF/ Microwave Transistors

- 6.3.1 Market Trends
- 6.3.2 Market Forecast
- 6.4 High Voltage FETs
 - 6.4.1 Market Trends
 - 6.4.2 Market Forecast
- 6.5 IGBT Transistors
 - 6.5.1 Market Trends
 - 6.5.2 Market Forecast
- 6.6 Others
 - 6.6.1 Market Trends
 - 6.6.2 Market Forecast

7 MARKET BREAKUP BY TYPE

- 7.1 Bipolar Junction Transistor
 - 7.1.1 Market Trends
 - 7.1.2 Market Forecast
- 7.2 Field Effect Transistor
 - 7.2.1 Market Trends
 - 7.2.2 Market Forecast
- 7.3 Heterojunction Bipolar Transistor
 - 7.3.1 Market Trends
 - 7.3.2 Market Forecast
- 7.4 Others
 - 7.4.1 Market Trends
 - 7.4.2 Market Forecast

8 MARKET BREAKUP BY END-USE

- 8.1 Consumer Electronics
 - 8.1.1 Market Trends
 - 8.1.2 Market Forecast
- 8.2 Communication and Technology
 - 8.2.1 Market Trends
 - 8.2.2 Market Forecast
- 8.3 Automotive
 - 8.3.1 Market Trends
 - 8.3.2 Market Forecast
- 8.4 Manufacturing

- 8.4.1 Market Trends
- 8.4.2 Market Forecast
- 8.5 Energy and Power
 - 8.5.1 Market Trends
 - 8.5.2 Market Forecast
- 8.6 Others
 - 8.6.1 Market Trends
 - 8.6.2 Market Forecast

9 MARKET BREAKUP BY APPLICATION

- 9.1 OEMs
 - 9.1.1 Market Trends
 - 9.1.2 Market Forecast
- 9.2 Aftermarket
 - 9.2.1 Market Trends
 - 9.2.2 Market Forecast

10 MARKET BREAKUP BY REGION

- 10.1 North America
 - 10.1.1 United States
 - 10.1.1.1 Market Trends
 - 10.1.1.2 Market Forecast
 - 10.1.2 Canada
 - 10.1.2.1 Market Trends
 - 10.1.2.2 Market Forecast
- 10.2 Asia Pacific
 - 10.2.1 China
 - 10.2.1.1 Market Trends
 - 10.2.1.2 Market Forecast
 - 10.2.2 Japan
 - 10.2.2.1 Market Trends
 - 10.2.2.2 Market Forecast
 - 10.2.3 India
 - 10.2.3.1 Market Trends
 - 10.2.3.2 Market Forecast
 - 10.2.4 South Korea
 - 10.2.4.1 Market Trends

- 10.2.4.2 Market Forecast
- 10.2.5 Australia
 - 10.2.5.1 Market Trends
 - 10.2.5.2 Market Forecast
- 10.2.6 Indonesia
 - 10.2.6.1 Market Trends
 - 10.2.6.2 Market Forecast
- 10.2.7 Others
 - 10.2.7.1 Market Trends
 - 10.2.7.2 Market Forecast
- 10.3 Europe
 - 10.3.1 Germany
 - 10.3.1.1 Market Trends
 - 10.3.1.2 Market Forecast
 - 10.3.2 France
 - 10.3.2.1 Market Trends
 - 10.3.2.2 Market Forecast
 - 10.3.3 United Kingdom
 - 10.3.3.1 Market Trends
 - 10.3.3.2 Market Forecast
 - 10.3.4 Italy
 - 10.3.4.1 Market Trends
 - 10.3.4.2 Market Forecast
 - 10.3.5 Spain
 - 10.3.5.1 Market Trends
 - 10.3.5.2 Market Forecast
 - 10.3.6 Russia
 - 10.3.6.1 Market Trends
 - 10.3.6.2 Market Forecast
 - 10.3.7 Others
 - 10.3.7.1 Market Trends
 - 10.3.7.2 Market Forecast
- 10.4 Latin America
 - 10.4.1 Brazil
 - 10.4.1.1 Market Trends
 - 10.4.1.2 Market Forecast
 - 10.4.2 Mexico
 - 10.4.2.1 Market Trends
 - 10.4.2.2 Market Forecast

10.4.3 Others

10.4.3.1 Market Trends

10.4.3.2 Market Forecast

10.5 Middle East and Africa

10.5.1 Market Trends

10.5.2 Market Breakup by Country

10.5.3 Market Forecast

11 SWOT ANALYSIS

11.1 Overview

11.2 Strengths

11.3 Weaknesses

11.4 Opportunities

11.5 Threats

12 VALUE CHAIN ANALYSIS

13 PORTERS FIVE FORCES ANALYSIS

13.1 Overview

13.2 Bargaining Power of Buyers

13.3 Bargaining Power of Suppliers

13.4 Degree of Competition

13.5 Threat of New Entrants

13.6 Threat of Substitutes

14 PRICE INDICATORS

15 COMPETITIVE LANDSCAPE

15.1 Market Structure

15.2 Key Players

15.3 Profiles of Key Players

15.3.1 Champion Microelectronic Corporation

15.3.1.1 Company Overview

15.3.1.2 Product Portfolio

15.3.1.3 Financials

15.3.2 Diodes Incorporated

- 15.3.2.1 Company Overview
- 15.3.2.2 Product Portfolio
- 15.3.2.3 Financials
- 15.3.3 Infineon Technologies AG
 - 15.3.3.1 Company Overview
 - 15.3.3.2 Product Portfolio
 - 15.3.3.3 Financials
 - 15.3.3.4 SWOT Analysis
- 15.3.4 Linear Integrated Systems
 - 15.3.4.1 Company Overview
 - 15.3.4.2 Product Portfolio
- 15.3.5 Mitsubishi Electric
 - 15.3.5.1 Company Overview
 - 15.3.5.2 Product Portfolio
 - 15.3.5.3 Financials
 - 15.3.5.4 SWOT Analysis
- 15.3.6 NXP Semiconductors N.V.
 - 15.3.6.1 Company Overview
 - 15.3.6.2 Product Portfolio
 - 15.3.6.3 Financials
 - 15.3.6.4 SWOT Analysis
- 15.3.7 Semiconductor Components Industries, LLC
 - 15.3.7.1 Company Overview
 - 15.3.7.2 Product Portfolio
 - 15.3.7.3 Financials
 - 15.3.7.4 SWOT Analysis
- 15.3.8 Renesas Electronics
 - 15.3.8.1 Company Overview
 - 15.3.8.2 Product Portfolio
 - 15.3.8.3 Financials
 - 15.3.8.4 SWOT Analysis
- 15.3.9 Semikron
 - 15.3.9.1 Company Overview
 - 15.3.9.2 Product Portfolio
 - 15.3.9.3 Financials
- 15.3.10 STMicroelectronics
 - 15.3.10.1 Company Overview
 - 15.3.10.2 Product Portfolio
 - 15.3.10.3 Financials

- 15.3.11 Texas Instruments
 - 15.3.11.1 Company Overview
 - 15.3.11.2 Product Portfolio
 - 15.3.11.3 Financials
 - 15.3.11.4 SWOT Analysis
- 15.3.12 Torex Semiconductor
 - 15.3.12.1 Company Overview
 - 15.3.12.2 Product Portfolio
 - 15.3.12.3 Financials
- 15.3.13 Toshiba Corporation
 - 15.3.13.1 Company Overview
 - 15.3.13.2 Product Portfolio
 - 15.3.13.3 Financials
 - 15.3.13.4 SWOT Analysis
- 15.3.14 Vishay Intertechnology Inc.
 - 15.3.14.1 Company Overview
 - 15.3.14.2 Product Portfolio
 - 15.3.14.3 Financials
 - 15.3.14.4 SWOT Analysis

List Of Tables

LIST OF TABLES

Table 1: Global: Power Transistors Market: Key Industry Highlights, 2022 and 2028

Table 2: Global: Power Transistors Market Forecast: Breakup by Product (in Million US\$), 2023-2028

Table 3: Global: Power Transistors Market Forecast: Breakup by Type (in Million US\$), 2023-2028

Table 4: Global: Power Transistors Market Forecast: Breakup by End-Use (in Million US\$), 2023-2028

Table 5: Global: Power Transistors Market Forecast: Breakup by Application (in Million US\$), 2023-2028

Table 6: Global: Power Transistors Market Forecast: Breakup by Region (in Million US\$), 2023-2028

Table 7: Global: Power Transistors Market: Competitive Structure

Table 8: Global: Power Transistors Market: Key Players

List Of Figures

LIST OF FIGURES

Figure 1: Global: Power Transistors Market: Major Drivers and Challenges

Figure 2: Global: Power Transistors Market: Sales Value (in Billion US\$), 2017-2022

Figure 3: Global: Power Transistors Market: Breakup by Product (in %), 2022

Figure 4: Global: Power Transistors Market: Breakup by Type (in %), 2022

Figure 5: Global: Power Transistors Market: Breakup by End-Use (in %), 2022

Figure 6: Global: Power Transistors Market: Breakup by Application (in %), 2022

Figure 7: Global: Power Transistors Market: Breakup by Region (in %), 2022

Figure 8: Global: Power Transistors Market Forecast: Sales Value (in Billion US\$), 2023-2028

Figure 9: Global: Power Transistors (Low-Voltage FETs) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 10: Global: Power Transistors (Low-Voltage FETs) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 11: Global: Power Transistors (IGBT Modules) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 12: Global: Power Transistors (IGBT Modules) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 13: Global: Power Transistors (RF/ Microwave Transistors) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 14: Global: Power Transistors (RF/ Microwave Transistors) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 15: Global: Power Transistors (High Voltage FETs) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 16: Global: Power Transistors (High Voltage FETs) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 17: Global: Power Transistors (IGBT Transistors) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 18: Global: Power Transistors (IGBT Transistors) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 19: Global: Power Transistors (Other Products) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 20: Global: Power Transistors (Other Products) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 21: Global: Power Transistors (Bipolar Junction Transistor) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 22: Global: Power Transistors (Bipolar Junction Transistor) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 23: Global: Power Transistors (Field Effect Transistor) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 24: Global: Power Transistors (Field Effect Transistor) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 25: Global: Power Transistors (Heterojunction Bipolar Transistor) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 26: Global: Power Transistors (Heterojunction Bipolar Transistor) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 27: Global: Power Transistors (Other Types) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 28: Global: Power Transistors (Other Types) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 29: Global: Power Transistors (Consumer Electronics) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 30: Global: Power Transistors (Consumer Electronics) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 31: Global: Power Transistors (Communication and Technology) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 32: Global: Power Transistors (Communication and Technology) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 33: Global: Power Transistors (Automotive) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 34: Global: Power Transistors (Automotive) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 35: Global: Power Transistors (Manufacturing) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 36: Global: Power Transistors (Manufacturing) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 37: Global: Power Transistors (Energy and Power) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 38: Global: Power Transistors (Energy and Power) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 39: Global: Power Transistors (Other End Uses) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 40: Global: Power Transistors (Other End Uses) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 41: Global: Power Transistors (OEMs) Market: Sales Value (in Million US\$),

2017 & 2022

Figure 42: Global: Power Transistors (OEMs) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 43: Global: Power Transistors (Aftermarket) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 44: Global: Power Transistors (Aftermarket) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 45: North America: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 46: North America: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 47: United States: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 48: United States: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 49: Canada: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 50: Canada: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 51: Asia Pacific: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 52: Asia Pacific: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 53: China: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 54: China: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 55: Japan: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 56: Japan: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 57: India: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 58: India: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 59: South Korea: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 60: South Korea: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 61: Australia: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 62: Australia: Power Transistors Market Forecast: Sales Value (in Million US\$),

2023-2028

Figure 63: Indonesia: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 64: Indonesia: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 65: Others: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 66: Others: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 67: Europe: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 68: Europe: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 69: Germany: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 70: Germany: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 71: France: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 72: France: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 73: United Kingdom: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 74: United Kingdom: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 75: Italy: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 76: Italy: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 77: Spain: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 78: Spain: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 79: Russia: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 80: Russia: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 81: Others: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 82: Others: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 83: Latin America: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 84: Latin America: Power Transistors Market Forecast: Sales Value (in Million

US\$), 2023-2028

Figure 85: Brazil: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 86: Brazil: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 87: Mexico: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 88: Mexico: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 89: Others: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 90: Others: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 91: Middle East and Africa: Power Transistors Market: Sales Value (in Million US\$), 2017 & 2022

Figure 92: Middle East and Africa: Power Transistors Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 93: Global: Power Transistors Industry: SWOT Analysis

Figure 94: Global: Power Transistors Industry: Value Chain Analysis

Figure 95: Global: Power Transistors Industry: Porter's Five Forces Analysis

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