

Semiconductor Rectifier Market Report by Product (Single Phase, Three Phase), Type (Low Current Rectifier, Medium Current Rectifier, High Current Rectifier), End Use Industry (Automotive, Consumer Electronics, Power and Utility, IT and Telecom, and Others), and Region 2024-2032

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Abstracts

The global semiconductor rectifier market size reached US\$ 4.7 Billion in 2023. Looking forward, IMARC Group expects the market to reach US\$ 8.0 Billion by 2032, exhibiting a growth rate (CAGR) of 5.9% during 2024-2032.

A semiconductor rectifier is a two-lead device that converts alternating current (AC) to direct current (DC) and enables the current to pass in one direction. It consists of a transformer, cabinet and stack and is commonly available in single-phase and three-phase variants. It is widely used in the power supply systems of electronic equipment for isolating signals from the source, rectifying the voltage, controlling the signal size and voltage reference. In comparison to the traditionally used vacuum tubes, semiconductor rectifiers do not require warm-up time for operation, are cost-effective, highly sensitive to radiation and consume lesser power. As a result, they find extensive application across various industries, such as automotive, consumer electronics, power, information technology (IT) and telecommunications.

Semiconductor Rectifier Market Trends:

The rising deployment of smart grids across the globe is one of the key factors driving the growth of the market. Semiconductor rectifiers are widely used as guards in the circuits to avoid accidental reversal of supply voltage in electronic components. Additionally, the widespread product utilization in consumer electronics, such as

laptops, smartphones, computers, for high-frequency rectification and enhanced energy efficiency is favoring the market growth. Moreover, various product innovations, such as the development of environmentally friendly semiconductor rectifiers that are manufactured using biocompatible and biodegradable materials, are providing a thrust to the market growth. In line with this, the increasing product utilization in automotive electronics, such as central body control, modern electric power steering, braking system and seat control, is positively impacting the market growth. Other factors, including the increasing miniaturization of electronic components, along with the implementation of various government initiatives on modern power distribution and generation infrastructure, are anticipated to drive the market toward growth.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global semiconductor rectifier market report, along with forecasts at the global, regional and country level from 2024-2032. Our report has categorized the market based on product, type and end use industry.

Breakup by Product:

- Single Phase
- Three Phase

Breakup by Type:

- Low Current Rectifier
- Medium Current Rectifier
- High Current Rectifier

Breakup by End Use Industry:

- Automotive
- Consumer Electronics
- Power and Utility
- IT and Telecom
- Others

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 along with the profiles of the key players being ABB Ltd., ASI Semiconductor Inc., Infineon Technologies AG, Microchip Technology Inc., Mitsubishi Electric Corporation, NXP Semiconductors N.V., Renesas Electronics Corporation, STMicroelectronics, Texas Instruments Incorporated and Toshiba Corporation.

Key Questions Answered in This Report

1. What was the size of the global semiconductor rectifier market in 2023?
2. What is the expected growth rate of the global semiconductor rectifier market during 2024-2032?
3. What are the key factors driving the global semiconductor rectifier market?
4. What has been the impact of COVID-19 on the global semiconductor rectifier market?
5. What is the breakup of the global semiconductor rectifier market based on the product?

6. What is the breakup of the global semiconductor rectifier market based on the end use industry?
7. What are the key regions in the global semiconductor rectifier market?
8. Who are the key players/companies in the global semiconductor rectifier market?

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