

Global Rectifier Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The Global Rectifier Market is expected to grow by registering a CAGR of 10.61% during the forecast period (2022-2027). The factors such as an increase in demand for rectifier diodes for various applications in the automotive sector, and a surge in public sector spending on modern power generation and distribution infrastructure, especially across the developing regions, are driving the growth of the studied market.

? Rectifiers are commonly used as circuit guards to prevent supply voltage reversal in electronic components due to human error. Furthermore, the increased use of high-frequency rectification and better energy efficiency in consumer devices such as laptops, cellphones, and PCs boosts market development.

? The increasing sales of consumer electronic products further support the studied market's growth. For instance, according to the Retailers Association of India, in the third quarter of FY21, sales of consumer electronics and appliances increased by 23.5%, as compared with the same period in the last fiscal year.

? The growing use of vehicle electronics such as automotive central body control, sophisticated electric power steering, brake systems, charging, and seat control is favorably boosting market development. Other factors, such as rising electronic component downsizing and the adoption of different government efforts on modern power distribution and generating infrastructure, are projected to drive the market forward.

? However, factors such as technical issues, including distorted input line current due to harmonic contents and high costs associated with semiconductor rectifiers, are challenging the growth of the studied market.

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? COVID-19 has impacted the global supply chain of major electronic brands. China is one of the largest producers and exporters of various electronics input supplies such as rectifiers, capacitors, diodes, etc. Due to the continuous production standstill in China, several electronic manufacturers in the United States and Europe have been compelled to halt production manufacturing of finished items, resulting in a demand-supply gap in electronic products.

Rectifier Market Trends

Automotive Segment to Hold Significant Market Share

? One of the major end-user for the rectifier industry is automotive. The rectifier market is being influenced by the automobile industry's rising technical improvements as cars using traditional IC engines require only a few electrical components.

? The majority of the market's vendors are boosting their investments in the automobile industry, owing to the rising adoption of electric vehicles (EVs) and autonomous vehicle technology. As rectifiers are increasingly being used in the On-Board Charging and Battery Management Systems (BMS) of electric vehicles (EVs), the demand is expected to grow. Additionally, government regulations for mandatory (Advanced Driver Assistant System) ADAS systems and the rising adoption of smart technologies for automotive manufacturing are also supporting the growth of the studied market.

? For instance, according to the IEA, worldwide sales of electric automobiles had reached 6.6 million in 2021. Electric vehicles accounted for 9% of all vehicle sales worldwide.

? While the number of Battery Electric Vehicles (BEV) sold worldwide is still small, technological advancements, charging infrastructure development, and the variety of BEV models available may continue to rise faster than the entire vehicle industry. Even if total car sales stay unchanged, this rise may drive rectifier usage.

? To respond to the growing demand for eco-friendly solutions, most countries are promoting the use of electric automobiles. For instance, the EU has set up an ambitious goal to become a climate-neutral continent by 2050. This is evident from the fact that the EU recently announced a EUR 750 billion stimulus package, including EUR 20 billion, to boost the sales of clean vehicles.

? Additionally, the EU is also planning to install about 1 million electric and hydrogen vehicle charging stations by 2025 as rectifiers play an important role in EV chargers. Such trends are expected to support the growth of the studied market.

Asia-Pacific Region to Witness Significant Growth

? The Asia-Pacific is among the fastest-growing rectifier market, owing to the significant rise in demand for rectifier-based electronic components and renewable energy products in the automotive industry across the region.

? With a significant presence of local enterprises, China is one of the leading manufacturers of rectifiers. Furthermore, Chinese rectifier producers have been quickly expanding during the past several years while focusing on the supply of consumer electronic products.

? According to the International Energy Agency, electric cars would account for 70% of global vehicle sales in 2030 and 42% in China, excluding two- and three-wheelers. Additionally, Japan will retain 21% of the EV market, followed by Europe with 26% and United Kingdom with 57%, by 2030.

? Various governments are framing several regulations across the Asia Pacific region to promote the use of electric vehicles, which is creating a favorable market scenario for the growth of the studied market. For instance, the Chinese government has already

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begun to phase out diesel fuel used in the latest commercial vehicles, such as trucks. By 2040, the country intends to eliminate all diesel and gasoline automobiles.

? Furthermore, according to Business Korea, the continuing trade war between China and the United States is affecting Korean rectifier manufacturers such as Samsung Electro-Mechanics, which relies on China for 40% of its revenues.

? Many businesses are establishing manufacturing facilities in Asia-Pacific in response to rising demand for rectifiers and other essential consumer electronics items from China, the Republic of Korea, India, and Singapore. The vast supply of raw materials and inexpensive startup and labor costs are supporting factors for enterprises in establishing manufacturing facilities in this region. ?

Rectifier Market Competitor Analysis

The Global Rectifier Market is competitive owing to the presence of several rectifier manufacturers providing the product. The vendors continuously invest in product and technology innovations to further expand their market presence. Additionally, the vendors are also acquiring other companies that specifically deal with these products to boost the market's share. Some of the major players operating in the market include Vishay Intertechnology, Inc., Semiconductor Components Industries, LLC, Diodes Incorporated, and STMicroelectronics.

? April 2022 - Diodes Incorporated launched a new set of high Schottky rectifiers in ultra-compact chip size packaging (CSPs). According to the company, the DIODES SDM5U45EP3 (5A, 45V), DIODESTM SDM4A40EP3 (4A, 40V), and DIODES SDT4U40EP3 (4A, 40V) reach the greatest current densities in their class in the industry and meet market needs for smaller and more powerful electronic systems.

? April 2022 - Diodes Incorporated launched The DIODES APR34910, a low secondary-side synchronous rectifier switch that can be found in power adaptors for cellphones, laptops, and set-top boxes. The APR34910 lowers secondary-side rectifier power losses, boosts efficiency, and delivers a high-performance solution with its low 10m² RDS(ON) and 100V N channel MOSFET.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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