

Global SiC MOSFET for PFC Circuits Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

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Abstracts

According to our (Global Info Research) latest study, the global SiC MOSFET for PFC Circuits market size was valued at US\$ 340 million in 2025 and is forecast to a readjusted size of US\$ 772 million by 2032 with a CAGR of 12.5% during review period.

SiC MOSFET for PFC Circuits is a silicon carbide power switching device designed for power factor correction circuits in high-density server power architectures, enabling high-speed switching, low-loss current regulation, and efficient front-end energy conversion. Compared with silicon-based switching devices or general rectifier devices, its advantages lie in lower switching loss, higher operating frequency, better thermal performance, higher power density, and stronger suitability for high-load server power supplies. In 2025, production was approximately 60 million units and the average price was USD 5.5 per unit. The industry's capacity utilization rate in 2025 was about 85% and the average gross margin was around 33%. Upstream, the key inputs include SiC MOSFETs and packaging materials, with representative suppliers such as Wolfspeed, Infineon Technologies, and Heraeus providing core silicon carbide power devices and advanced packaging materials. The midstream segment focuses on SiC MOSFET device structure design, wafer processing, chip fabrication, gate control optimization, packaging integration, electrical performance testing, thermal reliability verification, and PFC circuit application matching, which together determine switching efficiency, voltage and current endurance, heat dissipation, reliability, and cost competitiveness. Downstream, SiC MOSFET for PFC Circuits is mainly used in GPU server power supplies, general server power supplies, and storage server power supplies.

SiC MOSFET for PFC Circuits will be increasingly shaped by server power supplies that require higher efficiency, faster switching, and stronger thermal control. In GPU server

power supplies, its value is concentrated in reducing switching loss, supporting rapid load response, and sustaining high-power operation. In general server power supplies, it improves front-end conversion efficiency and system reliability. In storage server power supplies, stable switching behavior and long service life are more important for uninterrupted operation. As power architectures become more compact and high-frequency, competition will focus on device loss, voltage endurance, packaging reliability, gate-control optimization, and application validation. Suppliers with strong device engineering and server power matching capability can build deeper customer stickiness.

This report is a detailed and comprehensive analysis for global SiC MOSFET for PFC Circuits market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Type and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

Key Features:

Global SiC MOSFET for PFC Circuits market size and forecasts, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2021-2032

Global SiC MOSFET for PFC Circuits market size and forecasts by region and country, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2021-2032

Global SiC MOSFET for PFC Circuits market size and forecasts, by Type and by Application, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2021-2032

Global SiC MOSFET for PFC Circuits market shares of main players, shipments in revenue (\$ Million), sales quantity (K Units), and ASP (US\$/Unit), 2021-2026

The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for SiC MOSFET for PFC Circuits

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

This report profiles key players in the global SiC MOSFET for PFC Circuits market based on the following parameters - company overview, sales quantity, revenue, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include Wolfspeed (USA), ROHM (Japan), Infineon (Germany), onsemi (USA), STMicroelectronics (Switzerland), CRMICRO (China), Global Power Technology (China), Vishay (USA), BASiC (China), Microchip (USA), etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Market Segmentation

SiC MOSFET for PFC Circuits market is split by Type and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Type, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market segment by Type

600V

650V

1200V

Others

Market segment by Package

TO-220

TO-247

Others

Market segment by Current

Current

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