+357 96 030922
info@marketpublishers.com

Global SiC Gel-filled Power Modules Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

https://marketpublishers.com/r/G14144B7439FEN.html
Date: May 2026
Pages: 212
Price: US$ 3,480.00 (Single User License)
ID: G14144B7439FEN

Abstracts

According to our (Global Info Research) latest study, the global SiC Gel-filled Power Modules market size was valued at US$ 1702 million in 2025 and is forecast to a readjusted size of US$ 5287 million by 2032 with a CAGR of 16.0% during review period.

SiC gel-filled power modules refer to power modules built around SiC MOSFETs ? and, in some cases, companion SiC diodes ? in which the active area is protected by silicone-gel encapsulation or other liquid potting materials inside a conventional case-type housing. From a packaging standpoint, this is the classic case-type / housing-type module architecture, clearly differentiated from transfer-molded or overmolded solutions. Mitsubishi Electric explicitly states that power-module sealing technologies mainly include transfer molding, silicone-gel sealing, and liquid epoxy sealing, and identifies silicone-gel sealing as the typical approach for general case-type modules. onsemi likewise separates gel-encapsulated case modules from transfer-molded modules within its EliteSiC traction-inverter portfolio, while Infineon material declarations for its Easy3B and 62mm SiC module families explicitly list silicone gel. In commercial terms, the product category spans half-bridge, six-pack, buck/boost, chopper, 3-level, and industry-standard 62mm / EasyPACK / HybridPACK / SEMITRANS-type formats, while the main voltage classes remain concentrated at 750V, 1200V, and 1700V, with extensions into 2000V, 3300V and above for industrial, traction, and grid-class applications.

In terms of applications and market structure, SiC gel-filled power modules remain one of the mainstream solutions in medium-to-high power, high-current, and high-voltage power conversion. Their primary application domains include EV traction inverters,

+357 96 030922
info@marketpublishers.com

industrial motor drives, photovoltaic and storage converters, EV charging infrastructure, rail traction, grid equipment, and high-end power supplies. Infineon positions HybridPACK Drive with Si and SiC technology as a market-leading traction inverter module for electric vehicles; Hitachi Energy?s RoadPak SiC targets a broad range of e-mobility applications; Fuji Electric has commercialized 1200V and 1700V All-SiC modules for motor drives, renewable energy and traction; and Semikron Danfoss offers SiC module portfolios covering six-pack, half-bridge and buck/boost topologies. Based on public product positioning, the competitive landscape is led primarily by Infineon, onsemi, Semikron Danfoss, Mitsubishi Electric, Fuji Electric, Wolfspeed, and Hitachi Energy, with European and US suppliers retaining strong positions in automotive and industrial standard platforms, while Japanese suppliers remain particularly strong in high-reliability, high-voltage and traction-oriented applications.

From an industry-status and trend perspective, SiC gel-filled power modules are unlikely to be rapidly displaced by transfer-molded modules. The more probable trajectory is a dual-track market structure, in which parts of the automotive market migrate toward molded packages, while industrial, high-voltage and large-format power stages continue to rely heavily on gel-filled or potted case modules. The fact that onsemi simultaneously offers gel-encapsulated case modules and transfer-molded modules already demonstrates that both architectures coexist commercially. Mitsubishi Electric further notes that, from its fifth automotive generation onward, T-PM gradually replaced conventional silicone-gel potting in selected vehicle platforms, indicating that automotive miniaturization and power-density requirements are driving molded adoption. However, that does not eliminate the engineering value of silicone-gel sealing in larger, high-current, high-isolation modules. Mitsubishi also highlights that silicone-gel sealing offers strong heat resistance and insulation performance, and its low viscosity makes it well suited for filling narrow internal gaps. In practice, mainstream industrial and standard-housing platforms from companies such as Infineon, Wolfspeed and Semikron Danfoss remain commercially relevant. Overall, SiC gel-filled power modules continue to represent a key package form in industrial standard packages, rail, grid, high-power charging, and selected traction systems, while the market evolves from a single packaging route toward a more application-segmented coexistence model.

The long-term demand outlook for SiC gel-filled power modules remains well supported by structural growth drivers. First, EV adoption continues to be the single strongest demand engine: the IEA expects global electric-car sales to exceed 20 million in 2025, with first-quarter sales already up 35% year on year, sustaining demand for high-performance SiC modules in traction inverters, auxiliary high-voltage converters and charging systems. Second, renewable-power expansion remains a major source of

+357 96 030922
info@marketpublishers.com

medium- and high-voltage demand: the IEA projects almost 4,600 GW of additional renewable capacity between 2025 and 2030, with roughly 80% of that increase coming from solar PV, reinforcing the need for 1200V, 1700V and higher-voltage SiC modules in PV inverters, storage PCS and grid-side converters. Third, industrial drives, rail and grid equipment continue to require large-format, high-current, structurally mature and fully qualified module platforms. Fuji Electric explicitly positions its 1700V All-SiC modules for motor drives, renewable energy and traction, while Wolfspeed?s 62mm SiC module family directly addresses industrial test equipment, rail/traction and EV charging infrastructure. Accordingly, even as transfer-molded packaging gains ground in selected automotive platforms, SiC gel-filled power modules are expected to retain a central role in medium-to-high power, high-voltage and high-reliability applications for the foreseeable future.

This report is a detailed and comprehensive analysis for global SiC Gel-filled Power Modules market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Voltage Class 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 Gel-filled Power Modules market size and forecasts, in consumption value ($ Million), sales quantity (K Units), and average selling prices (US$/Unit), 2021-2032

Global SiC Gel-filled Power Modules 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 Gel-filled Power Modules market size and forecasts, by Voltage Class and by Application, in consumption value ($ Million), sales quantity (K Units), and average selling prices (US$/Unit), 2021-2032

Global SiC Gel-filled Power Modules 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:

+357 96 030922
info@marketpublishers.com

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

To assess the growth potential for SiC Gel-filled Power Modules

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 Gel-filled Power Modules 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 Infineon, Wolfspeed, Rohm, onsemi, BYD Semiconductor, Microchip (Microsemi), Mitsubishi Electric, Semikron Danfoss, Fuji Electric, Toshiba, etc.

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

Market Segmentation

SiC Gel-filled Power Modules market is split by Voltage Class and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Voltage Class, 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 Voltage Class

1200V Gel-filled SiC Module

650?900V Gel-filled SiC Module

1700V Gel-filled SiC Module

2000-2300V Gel-filled SiC Module

3300V and Above Transfer Molded SiC Module

+357 96 030922
info@marketpublishers.com

Market segment by Topology Type

Sixpack

Half-bridge

Full-Bridge

Others

Market segment by Package Type

HPD

DCM

T-PAK

Others

Market segment by Application

Automotive

Industrial

Household Appliances

PV/Wind Power/Energy Storage/Power Grid

UPS/Data Center/Communication

Rail Transit

Aviation and Military

Others

+357 96 030922
info@marketpublishers.com

Major players covered

- Infineon
- Wolfspeed
- Rohm
- onsemi
- BYD Semiconductor
- Microchip (Microsemi)
- Mitsubishi Electric
- Semikron Danfoss
- Fuji Electric
- Toshiba
- CETC 55
- WeEn Semiconductors
- BASiC Semiconductor
- SemiQ
- Bosch
- GE Aerospace
- Vishay Intertechnology
- StarPower

+357 96 030922
info@marketpublishers.com

Yangzhou Yangjie Electronic Technology

Guangdong AccoPower Semiconductor

Hangzhou Silan Microelectronics

United Nova Technology (UNT)

InventChip Technology (IVCT)

Leadrive Technology

HAIMOSIC (SHANGHAI)

Suzhou Xizhi Technology

Archimedes Semiconductor (Hefei)

Grecon Semiconductor (Shanghai)

Hebei Sinopack Electronic Technology

Denso

GeePak

Minebea Power Semiconductor Device

MacMic Science & Technolog

Market segment by region, regional analysis covers

North America (United States, Canada, and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

+357 96 030922
info@marketpublishers.com

South America (Brazil, Argentina, Colombia, and Rest of South America)

Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of Middle East & Africa)

The content of the study subjects, includes a total of 15 chapters:

Chapter 1, to describe SiC Gel-filled Power Modules product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of SiC Gel-filled Power Modules, with price, sales quantity, revenue, and global market share of SiC Gel-filled Power Modules from 2021 to 2026.

Chapter 3, the SiC Gel-filled Power Modules competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the SiC Gel-filled Power Modules breakdown data are shown at the regional level, to show the sales quantity, consumption value, and growth by regions, from 2021 to 2032.

Chapter 5 and 6, to segment the sales by Voltage Class and by Application, with sales market share and growth rate by Voltage Class, by Application, from 2021 to 2032.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value, and market share for key countries in the world, from 2021 to 2026.and SiC Gel-filled Power Modules market forecast, by regions, by Voltage Class, and by Application, with sales and revenue, from 2027 to 2032.

Chapter 12, market dynamics, drivers, restraints, trends, and Porters Five Forces analysis.

Chapter 13, the key raw materials and key suppliers, and industry chain of SiC Gel-filled Power Modules.

Chapter 14 and 15, to describe SiC Gel-filled Power Modules sales channel,

+357 96 030922
info@marketpublishers.com

distributors, customers, research findings and conclusion.

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

2 MANUFACTURERS PROFILES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

List Of Figures

LIST OF FIGURES

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Global SiC Gel-filled Power Modules Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

Product link: https://marketpublishers.com/r/G14144B7439FEN.html

Price: US$ 3,480.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/G14144B7439FEN.html