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# Radio Frequency Component (RFC) Market Research Report- Global Forecast 2030

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## Description:

### Global Radio Frequency Component (RFC) Market Overview:

Radio Frequency Component (RFC) Market Size was prized at USD 5.5 billion in 2022. The radio frequency component (RFC) market industry is projected to grow from USD 6.3 Billion in 2023 to USD 15.5 billion by 2030, exhibiting a compound annual growth rate (CAGR) of 16.00% during the forecast period (2023 - 2030). The development and deployment of 5G networks, as well as other technological breakthroughs in the cellular mobile and wireless communication areas, are motivated by the rising demand for broadband services, and quicker mobile internet connectivity is the key market driver enhancing the market growth.

[Global Radio Frequency Component \(RFC\) Market Overview](#)

Source: Primary Research, Secondary Research, MRFR Database and Analyst Review

### Radio Frequency Component (RFC) Market Trends

- Increased use of robotics in various applications to boost the market growth

The radio frequency components (RFC) market is expanding rapidly due to rising robot penetration. Robotics' widespread use contributes to quick industrial automation. Industrial robots incorporate RF components for wireless communication applications, including RF transistors, amplifiers, diodes, and filters. As a result, there will be a tremendous market for RF components. For instance, 3 million industrial robots were used in businesses worldwide in 2021, up 10% from the year before, according to the World Robotics 2021 report from the International Federation of Robots, a nonprofit organization headquartered in Germany. So an increase in robot usage is another factor driving the growth of the radio frequency component (RFC) market revenue.

Major players in the RF components industry are concentrating on creating cutting-edge products to strengthen their position. For instance, the US-based semiconductor company Qualcomm Technologies introduced its ultraBAW RF filter technology for bands up to 7 GHz in October 2021, enhancing its modem-to-antenna solution that powers high-performance 5G and connectivity systems in a variety of wireless product sectors. With access to spectrum up to 7 GHz made possible by the new Qualcomm ultraBAW RF filter technology, 5G and Wi-Fi solutions will work brilliantly at higher frequencies. Therefore, technological development has recently enhanced the radio frequency component (RFC) market CAGR globally.

### Radio Frequency Component (RFC) Market Segment Insights:

#### Radio Frequency Component (RFC) Component Insights

The Radio Frequency Component (RFC) Market segmentation, based on component, includes antenna switches, modulators & demodulators, filters, and amplifiers. In 2022, the amplifier market share was the largest with respect to the Radio Frequency Component (RFC) Market revenue. The segment will grow in the following year due to increased power amplifier applications in GSM, radar HDTV, LTE point-to-point microwave, 5G signal amplification, etc. Additionally, in 2022, the filters sector will witness the fastest growth rate. Since they are essential for achieving the expected high bandwidth, which is projected to be the driving force behind many 5G use cases, they are especially important in the realm of 5G. Hence, rising applications of filters for radio frequency components (RFC) positively impact market growth.

#### Radio Frequency Component (RFC) Material Insights

The Radio Frequency Component (RFC) Market data has been bifurcated by material into indium phosphide, nitride, silicon, and gallium arsenide. The silicon segment dominated the market in 2022. Due to silicone's ability to attach to glass and anodized aluminum and its electromagnetic shielding properties, the demand for silicone in consumer electronics has skyrocketed. Furthermore, the gallium arsenide sector is predicted to experience the fastest growth rate during the projected period. Gallium arsenide was selectively

produced on Gallium arsenide substrates patterned with SiO<sub>2</sub> using traditional molecular beam semiconductor device epitaxy, and it is increasingly used as a substitute for silicon due to its improved electrical characteristics.

**April 2021:** AXT, Inc., a leading manufacturer of compound semiconductor substrate wafers, has produced and shipped to a significant customer its first 8-inch diameter gallium arsenide (Gallium Arsenide) substrates. The 8-inch Gallium Arsenide substrates are silicon-doped, n-type substrates with low etch pit densities (EPD) and slip lines. This approval has further broadened the growth opportunity for the radio frequency component (RFC) industry.

**Figure 1: Radio Frequency Component (RFC) Market by Component, 2022 & 2030 (USD Billion)**  
**Radio Frequency Component (RFC) Market by Component, 2022 & 2030**

Source: Primary Research, Secondary Research, MRFR Database and Analyst Review

### Radio Frequency Component (RFC) End User Insights

Based on End Users, the global radio frequency component (RFC) industry has been segmented into consumer electronics, automotive, telecommunication, and military. The consumer electronics industry accounted for the largest share of the market in 2022. This could be attributed to rising disposable income and rising consumer electronics spending on products like smart wearable notebooks, smartphones, tablets, and laptops.

The automotive sector is the second fastest-growing segment in the radio frequency component (RFC) industry. The need for connectivity features like navigation systems, Bluetooth, position trackers, music systems, and central locking systems in vehicles is expected to increase, leading to a significant expansion in the automotive industry.

### Radio Frequency Component (RFC) Regional Insights

By Region, the report provides market insights into Europe, Asia-Pacific, North America, and Rest of the World. The North America Radio Frequency Component (RFC) market accounted for USD 2.5 billion in 2022 and is expected to exhibit a significant CAGR growth during the study period. High-speed internet access for all inhabitants, new oil and gas development opportunities, and strict regulations for radiofrequency systems are some of the main reasons driving the North American radio frequency component (RFC) market. For instance, the Federal Communications Commission (FCC) of the United States has implemented several regulations regarding the use of radio frequency equipment and how they affect the environment.

Further, the leading countries studied in the market report are Canada, U.S, Germany, France, UK, Italy, Spain, China, Japan, India, Australia, South Korea, and Brazil.

**Figure 3: Radio Frequency Component (RFC) Market SHARE BY REGION 2022 (%)**  
**Radio Frequency Component (RFC) Market SHARE BY REGION 2022**

Source: Primary Research, Secondary Research, MRFR Database and Analyst Review

Europe's radio frequency component (RFC) market accounts for the second-largest market share. The region has seen a notable increase in the construction of homes and businesses and a supportive policy environment for digitalizing structures. Germany completed the construction of 293,393 homes in 2021. Approximately 96.7 percent of responding households had broadband in the first quarter of 2021. Further, the German radio frequency component (RFC) market held the largest market share, and the UK radio frequency component (RFC) market was the fastest-growing market in the European region.

The Asia-Pacific Radio Frequency Component (RFC) Market is expected to grow at the fastest CAGR from 2022 to 2030. The development of consumer electronics, the rising demand for defense equipment, and the significant expansion of important emerging economies like China, India, and South Korea will increase demand for RF components. China is expected to have the highest rate of EV adoption over the projection period, with an estimated 57% proportion of EVs in new vehicle sales across all modes of road transportation (including two-wheelers, cars, buses, and trucks) by 2030. Moreover, the China radio frequency component (RFC) market held the largest market share, and the Indian radio frequency component (RFC) market was the fastest-growing market in the Asia-Pacific region.

### Radio Frequency Component (RFC) Key Market Players & Competitive Insights

Major market players are investing huge amounts of money in R&D to broaden their product offerings, which will spur further expansion of the radio frequency component (RFC) market. With significant market developments like introducing new products, contractual agreements, mergers and acquisitions, increased investments, and collaboration with other organizations, market participants are also undertaking various strategic initiatives to expand their global footprint. To grow and survive in a more cutthroat and competitive market climate, competitors in the radio frequency component (RFC) industry must provide reasonably priced goods.

One of the primary business strategies manufacturers use in the global radio frequency component (RFC) industry to assist consumers and expand the market sector is local manufacturing to reduce operational costs. The radio frequency component (RFC) industry has recently given medicine some of the most important advantages. The radio frequency component (RFC) market major players, including Vectron International, Inc. (U.S.), Mitsubishi Electric Corporation (Japan), Tsinghua Unigroup (China), and Skyworks Solutions, Inc. (U.S.), are aiming to increase market demand by funding R&D initiatives.

Qualcomm is a multinational firm founded in San Diego, California, in Delaware. It develops semiconductors, software, and wireless technology services. It possesses patents fundamental to the mobile communications standards 5G, 4G, CDMA2000, TD-SCDMA, and WCDMA. Qualcomm has moved into selling semiconductor goods using a fabless manufacturing model. In June 2022, Qualcomm Technologies Inc.

announced the release of Wi-Fi 7 front-end modules, which boost wireless performance in automotive and internet-connected devices. The RFFE modules were released in accordance with the company's goal of expanding its phone lineup with modem-to-antenna solutions for automotive and IoT.

Also, pSemi, or Peregrine Semiconductor, is a San Diego-based high-performance RF (radio frequency) CMOS integrated circuits manufacturer. Wireless radio frequency products, broadband radio frequency products, integrated circuits, power management devices, and sensor products are all available from the company. In February 2022, Peregrine Semiconductor, a radio frequency circuits maker based in the United States, announced the expansion of its millimeter wave radio frequency front-end portfolio for 5G wireless infrastructure. It now provides a full 5G millimeter wave radio frequency front-end solution.

### **Key Companies in the radio frequency component (RFC) market include**

- Tsinghua Unigroup (China)
- Skyworks Solutions, Inc. (U.S.)
- Danaher Corp. (U.S.)
- WIN Semiconductors Corp. (Taiwan)
- Mitsubishi Electric Corporation (Japan)
- Qorvo Inc. (U.S.)
- Murata Manufacturing Co., Ltd. (Japan)
- Broadcom Limited (U.S.)
- Vectron International, Inc. (U.S.)

### **Radio Frequency Component (RFC) Industry Developments**

**July 2022:** Linx Technologies was acquired for an unknown sum by TE Connectivity, a Swiss producer of connectivity and sensors. Linx Technologies' portfolio now complements TE's comprehensive connectivity range, including antennas and RF connectors for IoT.

**May 2021:** AMETEK, Inc. announced the acquisition of NSI-MI Technologies, a leader in radio frequency and microwave test and measurement products and services. NSI-MI was purchased for \$230 million and had around \$90 million yearly sales.

### **Radio Frequency Component (RFC) Market Segmentation:**

#### **Radio Frequency Component (RFC) Component Outlook**

- Antenna Switches
- Modulators & Demodulators
- Filters
- Amplifiers

### **Radio Frequency Component (RFC) Material Outlook**

- Indium Phosphide
- Nitride
- Silicon
- Gallium Arsenide

## **Radio Frequency Component (RFC) End User Outlook**

- Consumer Electronics
- Automotive
- Telecommunication
- Military

## **Radio Frequency Component (RFC) Regional Outlook**

- North America
  - US
  - Canada
- Europe
  - Germany
  - France
  - UK
  - Italy
  - Spain
  - Rest of Europe
- Asia-Pacific

- China
- Japan
- India
- Australia
- South Korea
- Australia
- Rest of Asia-Pacific
- Rest of the World
  - Middle East
  - Africa
  - Latin America

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