

Integrated Passive Device Market Forecasts to 2034 – Global Analysis By Passive Component Type (Integrated Resistors, Integrated Capacitors, Integrated Inductors, and Integrated Filters), Packaging Type, Technology, Frequency Range, Device Integration, Application, End Use Industry, and By Geography

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Abstracts

According to Statistics MRC, the Global Integrated Passive Device Market is accounted for \$1.8 billion in 2026 and is expected to reach \$3.7 billion by 2034 growing at a CAGR of 8.8% during the forecast period. Integrated Passive Devices (IPDs) are semiconductor components that integrate multiple passive elements such as resistors, capacitors, inductors, and baluns into a single chip or substrate. These devices offer significant advantages over discrete passive components, including reduced footprint, improved electrical performance, lower parasitic effects, and simplified assembly. The market is driven by the growing miniaturization of consumer electronics, the proliferation of wireless communication systems, and the increasing demand for high-frequency performance in 5G, Internet of Things (IoT), and automotive radar applications.

Market Dynamics:

Driver:

Rapid expansion of 5G and wireless communication infrastructure

The global rollout of 5G networks is creating unprecedented demand for high-frequency, high-performance passive components integrated into compact form factors. Base

stations, smartphones, and IoT devices require efficient filtering, impedance matching, and signal conditioning at millimeter-wave frequencies where traditional discrete passives introduce excessive parasitics. Integrated Passive Devices deliver superior performance by minimizing interconnect losses and providing precise component matching on a single die. As telecommunications operators continue deploying 5G infrastructure worldwide and handset manufacturers launch increasingly sophisticated devices, the need for IPD solutions across radio frequency and microwave frequency bands continues to accelerate market expansion significantly.

Restraint:

High initial design and manufacturing costs

The development and production of Integrated Passive Devices require specialized semiconductor processes such as thin-film deposition, photolithography, and wafer-level packaging, which involve substantial capital investment. Custom IPD designs often require non-recurring engineering expenses that can be prohibitive for smaller companies or lower-volume applications. Additionally, the fabrication facilities capable of producing high-quality IPDs are limited, leading to potential supply constraints and pricing pressures. These cost barriers can slow adoption in price-sensitive markets, particularly in regions where traditional discrete passive components remain economically attractive despite their larger footprint and inferior electrical performance characteristics.

Opportunity:

Growing demand for miniaturized medical and wearable devices

The healthcare and fitness industries are increasingly embracing miniaturized electronic devices such as implantable monitors, hearing aids, smart patches, and continuous glucose monitors that require ultra-compact component integration. Integrated Passive Devices enable significant size reduction while maintaining reliability and electrical performance, making them ideal for applications where space is extremely constrained. As the global population ages and remote patient monitoring gains traction, the medical wearable market is poised for rapid growth. This trend creates substantial opportunities for IPD manufacturers to develop application-specific solutions tailored to the unique frequency and power requirements of next-generation medical electronics.

Threat:

Intense competition from system-on-chip and advanced packaging alternatives

Emerging integration technologies, including system-on-chip (SoC) solutions that embed passive functions into active die designs and advanced fan-out wafer-level packaging that offers passive integration capabilities, pose competitive threats to standalone Integrated Passive Devices. Some semiconductor manufacturers are developing alternative approaches that combine passive and active functions in novel ways, potentially reducing the distinct value proposition of pure-play IPDs. If these competing technologies achieve cost parity or performance advantages, they could erode market share for traditional IPD products, particularly in high-volume consumer electronics where cost sensitivity is paramount and design cycles are extremely aggressive.

Covid-19 Impact:

The COVID-19 pandemic initially disrupted the Integrated Passive Device market through supply chain interruptions, factory shutdowns, and reduced consumer spending on electronics. However, the subsequent shift toward remote work, online learning, and digital entertainment drove unexpected demand for laptops, tablets, gaming consoles, and networking equipment, all of which incorporate IPDs for wireless connectivity. The pandemic also accelerated digital transformation across healthcare and industrial sectors, boosting long-term demand for connected devices. While near-term logistics challenges persisted, the overall impact proved moderately positive as semiconductor shortages highlighted the importance of compact, high-performance components in maintaining resilient electronics supply chains.

The Microwave Frequency segment is expected to be the largest during the forecast period

The Microwave Frequency segment is expected to account for the largest market share during the forecast period, driven by the widespread deployment of microwave-based communication systems, radar applications, and satellite technologies. Frequencies ranging from approximately 1 GHz to 30 GHz are critical for 5G sub-6 GHz bands, automotive radar for advanced driver-assistance systems, point-to-point wireless backhaul, and aerospace defense applications. Integrated Passive Devices operating in this range provide essential filtering, coupling, and matching functions with superior stability and low insertion loss. The ongoing expansion of 5G networks in the sub-6 GHz spectrum, combined with increasing radar content in vehicles, ensures this segment

maintains dominant market positioning throughout the forecast timeline.

The Multi-Passive Integration segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the Multi-Passive Integration segment is predicted to witness the highest growth rate, reflecting the industry's shift toward higher functional density and design simplification. This integration approach combines several passive components—such as multiple resistors, capacitors, and inductors—into a single device, reducing component count, board space, and assembly costs. Smartphones, wearables, and IoT sensors increasingly favor multi-passive solutions for complex filtering, impedance matching networks, and signal conditioning circuits where discrete passives would consume excessive area. As design engineers push for ever-smaller form factors without compromising electrical performance, multi-passive IPDs are becoming the preferred solution, driving their adoption at a substantially faster rate than simpler single-passive devices.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, driven by the concentration of consumer electronics manufacturing, semiconductor assembly, and telecommunications infrastructure deployment. Countries including China, South Korea, Japan, and Taiwan host the world's leading smartphone manufacturers, foundries, and packaging houses that are primary consumers of Integrated Passive Devices. The region's aggressive 5G rollout and rapidly expanding automotive electronics sector further fuel demand. Additionally, government support for domestic semiconductor production and the presence of major IPD suppliers within the region create a self-reinforcing ecosystem. These factors collectively position Asia Pacific as the undisputed market leader throughout the forecast period.

Region with highest CAGR:

Over the forecast period, North America region is anticipated to exhibit the highest CAGR, supported by strong innovation in wireless infrastructure, defense electronics, and medical device development. The United States maintains leadership in advanced communication technologies, including satellite internet constellations, next-generation radar systems, and high-performance computing, all of which demand sophisticated Integrated Passive Devices. Significant investment in domestic semiconductor manufacturing under the CHIPS Act is expected to expand local production capabilities.

Furthermore, the rapid adoption of connected healthcare devices and automotive radar for autonomous driving creates sustained demand. As North American companies increasingly prioritize supply chain resilience and advanced packaging solutions, the region's growth rate accelerates beyond other mature markets.

Key players in the market

Some of the key players in Integrated Passive Device Market include STMicroelectronics N.V., Infineon Technologies AG, Murata Manufacturing Co., Ltd., Taiyo Yuden Co., Ltd., Johanson Technology, Inc., 3D Glass Solutions, Inc., ON Semiconductor Corporation, Texas Instruments Incorporated, NXP Semiconductors N.V., Amkor Technology, Inc., ASE Technology Holding Co., Ltd., Broadcom Inc., Skyworks Solutions, Inc., Qorvo, Inc., Rohm Co., Ltd., Samsung Electro-Mechanics Co., Ltd., TDK Corporation, and Yageo Corporation.

Key Developments:

In March 2026, Murata released its smallest thin-film IPD diplexer to date, specifically designed for 5G mmWave smartphones, occupying 30% less space than previous ceramic-based iterations.

In February 2026, Infineon introduced a new series of silicon-based IPDs optimized for automotive radar systems, focusing on enhancing signal-to-noise ratios in 77GHz autonomous driving sensors.

In January 2026, STMicroelectronics announced the expansion of its IPD-on-Silicon technology to support ultra-wideband (UWB) applications, aiming to integrate complex matching networks and filters into a single die for the next generation of smart-home sensors.

Passive Component Types Covered:

Integrated Resistors

Integrated Capacitors

Integrated Inductors

Integrated Filters

Packaging Types Covered:

Wafer-Level Packaging

Chip-Scale Packaging

System-in-Package

Technologies Covered:

Silicon-Based IPD

Glass-Based IPD

Ceramic-Based IPD

Frequency Ranges Covered:

Low Frequency

Radio Frequency

Microwave Frequency

Device Integrations Covered:

Single Passive Integration

Multi-Passive Integration

Applications Covered:

RF Modules

Power Management

Signal Conditioning

EMI and RFI Filtering

Antenna Tuning

Sensor Modules

End Use Industries Covered:

Consumer Electronics

Telecommunications

Automotive Electronics

Healthcare Electronics

Aerospace and Defense

Industrial Electronics

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

Market share assessments for the regional and country-level segments

Strategic recommendations for the new entrants

Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)

Strategic recommendations in key business segments based on the market estimations

Competitive landscaping mapping the key common trends

Company profiling with detailed strategies, financials, and recent developments

Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL INTEGRATED PASSIVE DEVICE MARKET, BY PASSIVE COMPONENT TYPE

- 5.1 Integrated Resistors
- 5.2 Integrated Capacitors
- 5.3 Integrated Inductors
- 5.4 Integrated Filters

6 GLOBAL INTEGRATED PASSIVE DEVICE MARKET, BY PACKAGING TYPE

- 6.1 Wafer-Level Packaging
- 6.2 Chip-Scale Packaging
- 6.3 System-in-Package

7 GLOBAL INTEGRATED PASSIVE DEVICE MARKET, BY TECHNOLOGY

- 7.1 Silicon-Based IPD
- 7.2 Glass-Based IPD
- 7.3 Ceramic-Based IPD

8 GLOBAL INTEGRATED PASSIVE DEVICE MARKET, BY FREQUENCY RANGE

- 8.1 Low Frequency
- 8.2 Radio Frequency
- 8.3 Microwave Frequency

9 GLOBAL INTEGRATED PASSIVE DEVICE MARKET, BY DEVICE INTEGRATION

- 9.1 Single Passive Integration
- 9.2 Multi-Passive Integration

10 GLOBAL INTEGRATED PASSIVE DEVICE MARKET, BY APPLICATION

- 10.1 RF Modules
- 10.2 Power Management

- 10.3 Signal Conditioning
- 10.4 EMI and RFI Filtering
- 10.5 Antenna Tuning
- 10.6 Sensor Modules

11 GLOBAL INTEGRATED PASSIVE DEVICE MARKET, BY END USE INDUSTRY

- 11.1 Consumer Electronics
- 11.2 Telecommunications
- 11.3 Automotive Electronics
- 11.4 Healthcare Electronics
- 11.5 Aerospace and Defense
- 11.6 Industrial Electronics

12 GLOBAL INTEGRATED PASSIVE DEVICE MARKET, BY GEOGRAPHY

- 12.1 North America
 - 12.1.1 United States
 - 12.1.2 Canada
 - 12.1.3 Mexico
- 12.2 Europe
 - 12.2.1 United Kingdom
 - 12.2.2 Germany
 - 12.2.3 France
 - 12.2.4 Italy
 - 12.2.5 Spain
 - 12.2.6 Netherlands
 - 12.2.7 Belgium
 - 12.2.8 Sweden
 - 12.2.9 Switzerland
 - 12.2.10 Poland
 - 12.2.11 Rest of Europe
- 12.3 Asia Pacific
 - 12.3.1 China
 - 12.3.2 Japan
 - 12.3.3 India
 - 12.3.4 South Korea
 - 12.3.5 Australia
 - 12.3.6 Indonesia

- 12.3.7 Thailand
- 12.3.8 Malaysia
- 12.3.9 Singapore
- 12.3.10 Vietnam
- 12.3.11 Rest of Asia Pacific
- 12.4 South America
 - 12.4.1 Brazil
 - 12.4.2 Argentina
 - 12.4.3 Colombia
 - 12.4.4 Chile
 - 12.4.5 Peru
 - 12.4.6 Rest of South America
- 12.5 Rest of the World (RoW)
 - 12.5.1 Middle East
 - 12.5.1.1 Saudi Arabia
 - 12.5.1.2 United Arab Emirates
 - 12.5.1.3 Qatar
 - 12.5.1.4 Israel
 - 12.5.1.5 Rest of Middle East
 - 12.5.2 Africa
 - 12.5.2.1 South Africa
 - 12.5.2.2 Egypt
 - 12.5.2.3 Morocco
 - 12.5.2.4 Rest of Africa

13 STRATEGIC MARKET INTELLIGENCE

- 13.1 Industry Value Network and Supply Chain Assessment
- 13.2 White-Space and Opportunity Mapping
- 13.3 Product Evolution and Market Life Cycle Analysis
- 13.4 Channel, Distributor, and Go-to-Market Assessment

14 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 14.1 Mergers and Acquisitions
- 14.2 Partnerships, Alliances, and Joint Ventures
- 14.3 New Product Launches and Certifications
- 14.4 Capacity Expansion and Investments
- 14.5 Other Strategic Initiatives

15 COMPANY PROFILES

- 15.1 STMicroelectronics N.V.
- 15.2 Infineon Technologies AG
- 15.3 Murata Manufacturing Co., Ltd.
- 15.4 Taiyo Yuden Co., Ltd.
- 15.5 Johanson Technology, Inc.
- 15.6 3D Glass Solutions, Inc.
- 15.7 ON Semiconductor Corporation
- 15.8 Texas Instruments Incorporated
- 15.9 NXP Semiconductors N.V.
- 15.10 Amkor Technology, Inc.
- 15.11 ASE Technology Holding Co., Ltd.
- 15.12 Broadcom Inc.
- 15.13 Skyworks Solutions, Inc.
- 15.14 Qorvo, Inc.
- 15.15 Rohm Co., Ltd.
- 15.16 Samsung Electro-Mechanics Co., Ltd.
- 15.17 TDK Corporation
- 15.18 Yageo Corporation

List Of Tables

LIST OF TABLES

Table 1 Global Integrated Passive Device Market Outlook, By Region (2023–2034) (\$MN)

Table 2 Global Integrated Passive Device Market Outlook, By Passive Component Type (2023–2034) (\$MN)

Table 3 Global Integrated Passive Device Market Outlook, By Integrated Resistors (2023–2034) (\$MN)

Table 4 Global Integrated Passive Device Market Outlook, By Integrated Capacitors (2023–2034) (\$MN)

Table 5 Global Integrated Passive Device Market Outlook, By Integrated Inductors (2023–2034) (\$MN)

Table 6 Global Integrated Passive Device Market Outlook, By Integrated Filters (2023–2034) (\$MN)

Table 7 Global Integrated Passive Device Market Outlook, By Packaging Type (2023–2034) (\$MN)

Table 8 Global Integrated Passive Device Market Outlook, By Wafer-Level Packaging (2023–2034) (\$MN)

Table 9 Global Integrated Passive Device Market Outlook, By Chip-Scale Packaging (2023–2034) (\$MN)

Table 10 Global Integrated Passive Device Market Outlook, By System-in-Package (2023–2034) (\$MN)

Table 11 Global Integrated Passive Device Market Outlook, By Technology (2023–2034) (\$MN)

Table 12 Global Integrated Passive Device Market Outlook, By Silicon-Based IPD (2023–2034) (\$MN)

Table 13 Global Integrated Passive Device Market Outlook, By Glass-Based IPD (2023–2034) (\$MN)

Table 14 Global Integrated Passive Device Market Outlook, By Ceramic-Based IPD (2023–2034) (\$MN)

Table 15 Global Integrated Passive Device Market Outlook, By Frequency Range (2023–2034) (\$MN)

Table 16 Global Integrated Passive Device Market Outlook, By Low Frequency (2023–2034) (\$MN)

Table 17 Global Integrated Passive Device Market Outlook, By Radio Frequency (2023–2034) (\$MN)

Table 18 Global Integrated Passive Device Market Outlook, By Microwave Frequency

(2023–2034) (\$MN)

Table 19 Global Integrated Passive Device Market Outlook, By Device Integration

(2023–2034) (\$MN)

Table 20 Global Integrated Passive Device Market Outlook, By Single Passive

Integration (2023–2034) (\$MN)

Table 21 Global Integrated Passive Device Market Outlook, By Multi-Passive Integration

(2023–2034) (\$MN)

Table 22 Global Integrated Passive Device Market Outlook, By Application (2023–2034)

(\$MN)

Table 23 Global Integrated Passive Device Market Outlook, By RF Modules

(2023–2034) (\$MN)

Table 24 Global Integrated Passive Device Market Outlook, By Power Management

(2023–2034) (\$MN)

Table 25 Global Integrated Passive Device Market Outlook, By Signal Conditioning

(2023–2034) (\$MN)

Table 26 Global Integrated Passive Device Market Outlook, By EMI and RFI Filtering

(2023–2034) (\$MN)

Table 27 Global Integrated Passive Device Market Outlook, By Antenna Tuning

(2023–2034) (\$MN)

Table 28 Global Integrated Passive Device Market Outlook, By Sensor Modules

(2023–2034) (\$MN)

Table 29 Global Integrated Passive Device Market Outlook, By End Use Industry

(2023–2034) (\$MN)

Table 30 Global Integrated Passive Device Market Outlook, By Consumer Electronics

(2023–2034) (\$MN)

Table 31 Global Integrated Passive Device Market Outlook, By Telecommunications

(2023–2034) (\$MN)

Table 32 Global Integrated Passive Device Market Outlook, By Automotive Electronics

(2023–2034) (\$MN)

Table 33 Global Integrated Passive Device Market Outlook, By Healthcare Electronics

(2023–2034) (\$MN)

Table 34 Global Integrated Passive Device Market Outlook, By Aerospace and Defense

(2023–2034) (\$MN)

Table 35 Global Integrated Passive Device Market Outlook, By Industrial Electronics

(2023–2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

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