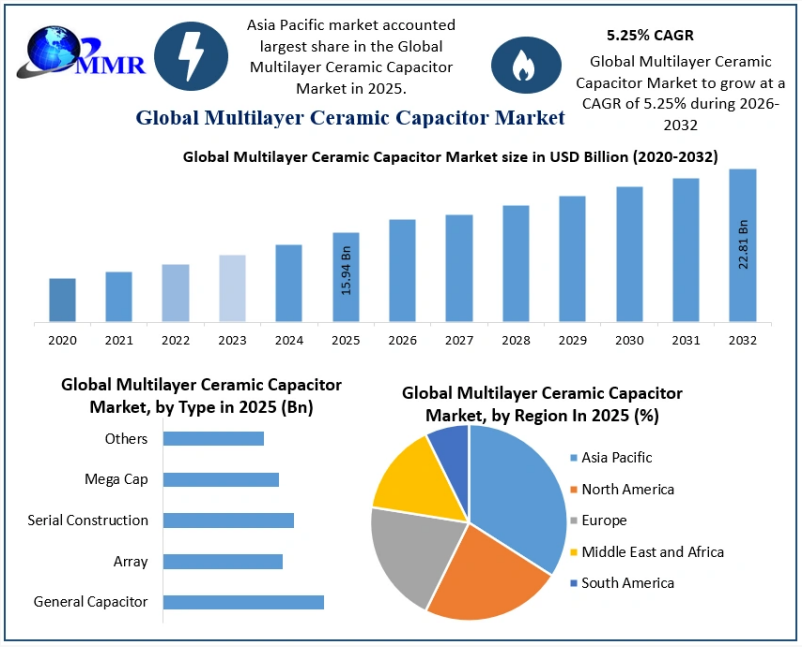
Multilayer Ceramic Capacitor Market to Reach USD 22.81 Billion by 2032 at 5.25% CAGR | Maximize Market Research

Multilayer Ceramic Capacitor Market is growing with rising demand for compact electronics, EVs, 5G infrastructure, and high-performance consumer devices.



Multilayer Ceramic Capacitor Market

ROCKVILLE , MD, UNITED STATES, May 7, 2026 /EINPresswire.com/ -- Multilayer Ceramic Capacitor (MLCC) Market valued at USD 15.94 Bn in 2025, projected to reach USD 22.81 Bn by 2032 at 5.25% CAGR, 5G device proliferation, automotive EV power electronics demand, and extreme component miniaturization are structurally reshaping global MLCC supply chains and technology roadmaps through 2032.

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Overview: The Invisible Backbone of Modern Electronics Is Becoming a USD 22.81 Billion Strategic Technology Market

> "Every EV needs 18,000 MLCCs. The auto industry just became the biggest capacitor customer on earth." - Maximize Market Research"
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The global Multilayer Ceramic Capacitor (MLCC) Market size was USD 15.94 billion in 2025 and is projected to reach USD 22.81 billion by 2032 at a 5.25% CAGR. Growth is driven by rising 5G, AI, and EV adoption. Every 5G smartphone uses over 1,000 MLCCs, while electric vehicles require 10,000–18,000 units, accelerating demand for miniaturized, high-performance ceramic capacitors globally.

Market Dynamics: Drivers, Restraints & Opportunities

Drivers: 5G Device Rollout, EV Power Electronics Demand, and IoT Component Miniaturization Create Structural MLCC Demand Growth

Rapid 5G deployment is increasing demand for high-capacitance, low-ESR MLCCs for millimeter-wave applications. Rising EV adoption is accelerating automotive-grade MLCC demand across inverters, DC-DC converters, and onboard chargers. Expanding IoT devices, wearables, and industrial sensors are further driving adoption of ultra-miniaturized 0201 and 01005 package ceramic capacitors globally.

Restraints: Geopolitical Supply Chain Concentration, Raw Material Volatility, and Taiwan Strait Risk Create MLCC Market Vulnerability

Over 70% of global MLCC production is concentrated in Japan, South Korea, Taiwan, and China, creating supply chain risks from geopolitical tensions and trade disruptions. Volatility in barium titanate and rare earth prices further impacts manufacturing costs. The 2021 component shortage exposed major vulnerabilities across automotive, consumer electronics, and industrial sectors despite ongoing capacity expansion by Murata, TDK, and Yageo.

Opportunities: Automotive-Grade High-Temperature MLCCs, AI Server Decoupling Capacitor Demand, and India's Make-in-India Electronics Push Create New Growth Frontiers

The shift to 800V EV architectures is driving demand for high-voltage, high-temperature MLCCs above 1,000V for advanced automotive power electronics. Growing AI server density is increasing demand for high-capacitance decoupling capacitors in GPU systems. India’s PLI scheme is also attracting MLCC manufacturing investment, helping diversify supply chains beyond Northeast Asia.

Key Market Trends: EV-Grade MLCCs, Supply Chain Diversification, and Ultra-Miniaturization Define the 2026-2032 MLCC Landscape

Murata Manufacturing Expands Automotive-Grade MLCC Production Capacity for 800V EV Power Electronics Applications
In 2023-2024, Murata expanded automotive-grade MLCC production in Japan and Thailand to meet rising demand for high-voltage components used in 800V EV architectures. With nearly 40% global market share, Murata is strengthening its position as a key supplier for automotive OEMs including Toyota, Hyundai, and Porsche.

TDK Corporation Launches Ultra-Thin High-Capacitance MLCC Series for Advanced 5G Smartphone and Wearable Applications
In 2023, TDK launched ultra-thin, high-capacitance MLCCs for 5G smartphones, smartwatches,

and wearables using advanced thin-layer ceramic dielectric technology. Its leadership in miniaturized 0402 and 0201 package MLCCs is driving adoption among major consumer electronics manufacturers across North Asia and North America.

Samsung Electro-Mechanics Invests KRW 1 Trillion in Next-Generation MLCC Fab Capacity Expansion for AI and EV Demand
In 2022, Samsung Electro-Mechanics invested KRW 1 trillion (USD 750 million) to expand MLCC manufacturing capacity for 5G devices, EV electronics, and AI servers. Supported by vertical integration and advanced dielectric technologies, the company is emerging as a major challenger to Murata's leadership in the global MLCC market.

MLCC Market Segmentation: General-Purpose Capacitors Lead While Automotive Segment Posts Fastest Growth

General-purpose MLCCs led the market by type with over 40% share in 2025, driven by electronics and telecom demand, while Mega Cap and 1,000V+ MLCCs are growing rapidly in EV and industrial applications. Japan dominates global production through Murata, TDK, and Taiyo Yuden. Electronics and telecommunications led end-use demand, while automotive is the fastest-growing segment due to increasing MLCC content in electric vehicles.

By Type

General Capacitor

Array

Serial Construction

Mega Cap

Others

By Dielectric Type

COG

X8G

U2J

X7R

X5R

Y5V

X7S

Others

By Rated Voltage

Low Range (Up to 50 V)

Mid-range (100 V - 630 V)

High Range (1000 V & above)

By End-User

Electronics and Telecommunication

Automotive

Aerospace and Defense

Consumer Electronics

Others

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Regional Insights: Asia Pacific Holds 40.55% Dominant Share While North America Accelerates on EV and ADAS Demand

Asia Pacific: Murata, TDK, Samsung, and Yageo Manufacturing Concentration Anchors 40.55% Global MLCC Market Leadership

Asia Pacific held a dominant 40.55% MLCC market share in 2025, led by Murata, TDK, Samsung Electro-Mechanics, Yageo, and Chinese manufacturers. Strong consumer electronics and EV production in China, along with government initiatives like China's Made in China 2025 and India's PLI scheme, are accelerating regional MLCC manufacturing and demand growth through 2032.

North America: EV Platform MLCC Intensity, ADAS Proliferation, and Reshoring Investment Drive

Accelerating Demand Growth

North America is the fastest-growing MLCC demand region, driven by rising EV production across Tesla, GM, Ford, and Stellantis platforms requiring 10,000 - 18,000 MLCCs per vehicle. The U.S. CHIPS Act is attracting domestic MLCC manufacturing investment, reducing dependence on Northeast Asian supply chains and strengthening procurement options for automotive and defense industries.

Key Recent Developments: Global MLCC Market Leaders (2021–2024)

Murata Manufacturing (FY2023-24): Murata announced targeted expansion of automotive-grade MLCC production capacity in Japan and Thailand, specifically engineering for 800V EV power electronics systems, responding to OEM demand from Toyota, Hyundai, and Porsche for next-generation high-voltage, high-temperature MLCC supply chain commitments.

Samsung Electro-Mechanics (2022): Samsung Electro-Mechanics committed KRW 1 trillion (approx. USD 750 million) in new MLCC fab capacity, one of the largest single MLCC capital investments in industry history — targeting simultaneous demand from 5G devices, EV automotive power electronics, and AI server infrastructure decoupling capacitor requirements.

Yageo Corporation - KEMET Acquisition (2021): Yageo Corporation completed its USD 1.8 billion acquisition of KEMET Corporation, creating the world's third-largest passive components manufacturer with comprehensive MLCC portfolio coverage across general-purpose, automotive-grade, and specialty high-voltage configurations, challenging Murata and TDK across global enterprise and automotive channels.

TDK Corporation (2023): TDK released its ultra-thin, high-capacitance MLCC series for 5G smartphones and wearables, achieving industry-leading capacitance density in 0402 and 0201 package sizes through proprietary thin-layer ceramic dielectric technology, securing design wins at leading smartphone OEMs across North Asia and North America.

Key Players;

Murata Manufacturing Co., Ltd.

TDK Corporation

Samsung Electro-Mechanics

Kyocera Corporation

Vishay Intertechnology Inc.

Yageo Corporation

KEMET Corporation

KYOCERA AVX Components Corporation

Taiyo Yuden Co., Ltd.

Rohm Co., Ltd.

Walsin Technology Corporation

Nippon Chemi-Con Corporation

Knowles Precision Devices

Cornell Dubilier Electronics

Samwha Capacitor Group

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Competitive Landscape of the Multilayer Ceramic Capacitor Market

The MLCC market is dominated by Murata, TDK, Taiyo Yuden, and Samsung Electro-Mechanics through advanced ceramic dielectric technology and precision manufacturing. Yageo-KEMET and Kyocera AVX compete in specialty and automotive segments, while Chinese manufacturers such as Chaozhou Three-Circle Group and Dalicap are expanding commodity-grade MLCC production, increasing price competition and improving global supply chain diversification for cost-sensitive electronics manufacturers.

Analyst Perspective: The MLCC Is the Most Critical Passive Component the Electronics Industry Has Never Prioritized - Until Now

The 2021 global MLCC shortage transformed capacitors from low-priority components into strategic supply chain assets for automotive and electronics manufacturers. Rising EV, AI, and miniaturized electronics demand has made MLCC supply security a boardroom-level concern, with companies investing heavily in automotive-grade and high-performance MLCC production to secure the future of electronics manufacturing globally.

FAQs:

What is the global Multilayer Ceramic Capacitor Market size and forecast?
The MLCC market size was USD 15.94 billion in 2025 and is projected to reach USD 22.81 billion by 2032 at a 5.25% CAGR, driven by 5G, EV, IoT, and AI demand.

Which type segment dominates the MLCC Market?
General-purpose MLCCs led with over 40% market share in 2025 across electronics and telecom applications. Mega Cap MLCCs are the fastest-growing segment, driven by EV power management and miniaturized high-capacitance requirements.

How is EV adoption changing demand for Multilayer Ceramic Capacitors?
Electric vehicles require 10,000–18,000 MLCCs across power electronics, ADAS, and infotainment systems. Growing adoption of 800V EV architectures is accelerating demand for high-voltage, high-temperature automotive-grade MLCCs globally.

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Global Ceramic Capacitor Market: https://www.maximizemarketresearch.com/market-report/ceramic-capacitor-market/250615/

Ceramic Capacitor Market by Type (Multi-Layer, Single-Layer), Application (Consumer Electronics, Automotive, Telecommunications, Industrial Equipment), Voltage Range, Dielectric Class and Region - Global Forecast to 2032

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Discrete Capacitor Market by Type (Ceramic, Film, Electrolytic, Tantalum), Voltage Range (Low, Medium, High), Application (Consumer Electronics, Automotive, Industrial, Telecom) and Region - Global Forecast to 2032

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About Maximize Market Research

Maximize Market Research is a leading global market research firm delivering specialized intelligence across electronic components, semiconductor materials, passive components, automotive electronics, and telecommunications hardware markets. Our research capabilities support MLCC manufacturers, electronics OEMs, automotive procurement teams, and

institutional investors with rigorous competitive intelligence, supply chain risk analysis, and technology adoption forecasting across the global passive electronic components ecosystem.

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