

# Low Voltage MLCC - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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## Abstracts

The Low Voltage MLCC Market size is estimated at 13.67 billion USD in 2024, and is expected to reach 36.25 billion USD by 2029, growing at a CAGR of 21.54% during the forecast period (2024-2029).

The demand for MLCCs is driven by the growing prevalence of chronic diseases and the growing popularity of compact and high-end 5G smartphones

0 201 case size emerged as the frontrunner, capturing the largest market share of 29.78%, followed by 0 402 with 28.21% and 0603 with 15.67% in terms of volume in 2022.

The case size of 0201 is among the most compact available, thus increasing the component density of the circuit board. These MLCCs are widely used in consumer electronics, telecom, and medical devices. The 0201 MLCCs of COG dielectric with low voltages of less than 500 volts are being used in medical devices. For instance, in Asia-Pacific countries like China, cardiovascular disease (CVD) poses a significant healthcare burden, with increasing prevalence and incidence rates. In 2022, the rates of CVD and associated mortality were 8.35 and 5.33 per 1,000 person-years, respectively. Notably, mortality rates were higher in the central and western regions compared to the eastern region. The demand for 0201 MLCCs is increasing as they play a crucial role in cardiovascular pacemakers, serving as energy storage capacitors.

In European countries like Germany, the demand for smartphones experienced significant growth in 2021, with sales volume reaching 22.2 million units, a notable

increase from the previous year's 20 million units. The increasing demand for compact and feature-rich smartphones has led to a critical need for miniaturized components like the 0402 MLCCs. The 0402-surface mount MLCCs play a crucial role in enabling the integration of multiple functionalities within a limited space, facilitating the development of smaller and sleeker smartphones.

The highly developing telecom sector and large customer base are expected to surge the demand for MLCCs in Asia-Pacific

Asia-Pacific emerged as the frontrunner, capturing the largest market share of 43.00%, followed by North America with 23.57% and Europe with 22.80% in terms of volume in 2022.

Asia-Pacific holds a significant share in manufacturing IT devices like laptops, desktop computers, and mobile phones. On the back of its excellent technological presence, China has a significant share of manufacturing and exporting IT devices to the rest of the world. It continues to be the major provider of desktop computers in Asia-Pacific in terms of volume. As a result, the demand for surface-mount MLCCs is expected to increase during the forecast period.

Due to their portability or implantation requirements, medical devices often have strict size limitations. MLCCs offer a combination of small size, high capacitance, reliability, and performance characteristics that make them well-suited for use in various medical devices, ranging from portable diagnostic equipment to implantable devices like pacemakers. North America is expected to dominate the medical devices market over the forecast period owing to factors such as the growing burden of chronic diseases, high healthcare expenditures, and the presence of key players. The growing number of people suffering from cardiovascular diseases is the key factor driving the demand for medical devices. For instance, as per the 2021 data published by the CDC, it was observed that every year, 805,000 people in the United States suffer from heart attacks. For instance, as per data published by the CDC in 2021, every year, 805,000 people in the United States suffer from heart attacks.

## Global Low Voltage MLCC Market Trends

The ongoing trend of miniaturization is propelling the demand for 0 1005 MLCCs

The lead time data for 0 1005 MLCCs highlights a stable and consistent demand for these components over the analyzed period. The lead time variations within a relatively narrow range of 15-18 weeks suggest a consistent availability and delivery of 0 1005 MLCCs. This stability in lead times indicates that suppliers have effectively managed the demand, ensuring a smooth supply chain for manufacturers relying on these components.

The usage of 0 1005 MLCCs spans diverse applications, particularly in compact electronic devices such as smartphones, wearables, and IoT devices. Their small form factor and high capacitance make them ideal for space-constrained designs. The demand for these MLCCs is driven by the ongoing trend of miniaturization and the need for higher component density. The usage of 0 1005 MLCCs extends to a wide range of applications in various industries. In the consumer electronics sector, these MLCCs are vital components in the production of smartphones, wearables, and IoT devices, enabling manufacturers to achieve sleek and compact designs without compromising performance. The automotive industry heavily relies on 0 1005 MLCCs for advanced driver assistance systems (ADAS), infotainment systems, and engine control units (ECUs), contributing to the overall functionality and connectivity of vehicles. Overall, the widespread usage of 0 1005 MLCCs across multiple industries underscores their significance in powering and enabling various electronic devices and systems.

The stability in lead times for 0 1005 MLCCs helps suppliers meet the demands and ensure a continuous flow of production for electronic devices that rely on these components. This, in turn, prevents potential delays in manufacturing and delivery timelines.

Uncertainties in the global economy and disruptions within the supply chain are impeding the copper prices

Copper, a raw material essential for the production of high-capacitance MLCCs, holds paramount importance. Mined in the form of ore, it transforms into nano-scale flakes or powder, ultimately finding application as a termination material in the manufacturing process of MLCCs, particularly when combined with nickel electrodes.

The demand for copper is heavily driven by China, which accounts for nearly 50% of global consumption. Consequently, fluctuations in copper prices are profoundly influenced by various factors, including the repercussions of the pandemic and

apprehensions surrounding a potential global economic collapse. European buyers' reluctance to engage with Russian products and the challenges faced in the mining supply from Chile and Peru contributed to a shortage in copper supplies in 2020.

The copper market remained susceptible to volatility, primarily influenced by a multitude of factors, such as the far-reaching impact of the COVID-19 pandemic, uncertainties prevailing in the global economy, and disruptions within the supply chain. Despite these formidable challenges, recent governmental relaxations about regulations within the mining sector have led to a surplus in copper production. Consequently, this surplus has significantly driven up copper prices, demonstrating a noteworthy increase in value.

### Low Voltage MLCC Industry Overview

The Low Voltage MLCC Market is moderately consolidated, with the top five companies occupying 62.07%. The major players in this market are Murata Manufacturing Co., Ltd, Samsung Electro-Mechanics, Taiyo Yuden Co., Ltd, TDK Corporation and Yageo Corporation (sorted alphabetically).

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