

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

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## **Abstracts**

The Mid Voltage MLCC Market size is estimated at 5.29 billion USD in 2024, and is expected to reach 14.04 billion USD by 2029, growing at a CAGR of 21.55% during the forecast period (2024-2029).

The increasing youth population's reliance on smartphones and increasing deployment of 5G networks are driving the demand

0 201 consumer electronics emerged as the frontrunner, capturing the largest market share of 31.57%, followed closely by 0 402 with 20.77% and 1 210 with 20.57% in terms of volume in 2022.

The case size of 0 201 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. For instance, telecom operators like Ofcom, EE, Vodafone, Three, and O2 plan to provide 5G coverage to the entire UK population. EE aimed to achieve this by early 2023 and plans to offer 5G nationwide by 2028. Vodafone had 5G available in 141 locations across the United Kingdom as of March 2022. The demand for 0201 MLCCs is increasing as the introduction of 5G networks offers high data speeds and low latency, enabling users to enjoy high-quality multimedia content on their smartphones. 5G, streaming 4 K and 8 K videos, virtual reality (VR), and augmented reality (AR) applications have become more accessible and enjoyable on 5G-enabled smartphones.

South Korea is still a major player in the smartphone industry. In the realm of consumer



electronics like smartphones, the 0 402-case size MLCC is a widely used component. Schoolkids in South Korea are getting more addicted to their phones. For instance, in 2021, almost all South Korean teenagers used smartphones. Around 50% of kids aged 10-19 were addicted to smartphones. Smartphones are getting smaller and sleeker, with more features, so there is a growing need for smaller electronic components like 0 402 MLCC.

The increasing usage of consumer electronics like 5G-enabled smartphones and rapid technological advancements in the automotive sector are driving the MLCC demand

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 encompasses several emerging economies characterized by lower consumer electronics ownership rates. This factor, coupled with a rising trend of consumer spending, presents substantial growth opportunities in the market. The increasing demand for premium smartphones priced over USD 400 in India is closely tied to the expansion of the 5G network. As 5G smartphones continue to evolve with new features and functionalities, there is a growing need for miniaturized MLCCs to cater to the diverse requirements of these devices. The compact design goals of 5G smartphones further drive the demand for miniaturized MLCCs as they enable the seamless integration of 5G capabilities within the limited space of a smartphone chassis.

In Europe, the German automotive industry is one of the biggest contributors to the country's economic growth. As a result, the demand for X7R MLCCs is on the rise. An engine-powered vehicle without an automatic driving feature typically needs around 3,000 MLCCs, whereas an electric vehicle (EV) typically requires 8,000-10,000 MLCCs. The current state of the automotive industry can be seen in the rapid technological development that is taking place in Germany. Additionally, the German government's regulations, incentives, and discounts, as well as the growing awareness of e-mobility, are encouraging consumers to purchase electric vehicles.

Global Mid Voltage MLCC Market Trends

The ongoing trend of miniaturization is propelling the demand for these 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 various applications in various industries. In the consumer electronics sector, these MLCCs are vital components in producing 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. The widespread usage of 0 1005 MLCCs across multiple industries underscores their significance in powering and enabling various electronic devices and systems [2]

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 factor, in turn, prevents potential delays in manufacturing and delivery timelines.

Uncertainties in the global economy and disruptions within the supply chain are impeding the market's growth

Copper, an essential raw material for the production of high-capacitance MLCCs, holds paramount importance. Mined in the form of ore, it undergoes a transformation into nanoscale 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 COVID-19 pandemic and apprehensions surrounding a potential global economic collapse. According to the World Bank, a significant decline in copper prices was witnessed in March 2020, with a staggering 20% drop compared to the same period in 2019. European buyers' reluctance to engage with Russian products and challenges faced in the mining supply from Chile and Peru contributed to a shortage in copper supplies in 2020.

The copper price witnessed a Y-o-Y growth of 2.74% in 2020, from 6,010.15 million metric tons in 2019 to 6,173.77 million metric tons in 2020. The copper market has 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, governmental relaxations pertaining to regulations within the mining sector have led to a surplus in copper production. Consequently, this surplus has significantly driven copper prices, demonstrating a noteworthy increase in value.

Mid Voltage MLCC Industry Overview

The Mid Voltage MLCC Market is fairly consolidated, with the top five companies occupying 67.95%. The major players in this market are Murata Manufacturing Co., Ltd, Samsung Electro-Mechanics, Taiyo Yuden Co., Ltd, TDK Corporation and Walsin Technology Corporation (sorted alphabetically).

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