

Multilayer Ceramic Capacitors

TDK offers MLCCs with the industry's highest capacitance at 100 V for commercial applications in the 1608 case size

- New 100-V product for commercial applications with 1 μF capacitance in 1608 case size (achieving large capacitance)
- Contributes to the reduction of component count and the miniaturization of sets

June 26, 2025

TDK Corporation (TSE: 6762) has expanded its C series for commercial multilayer ceramic capacitors (MLCCs) to 1 μF at 100 V in the 1608 size (1.6 x 0.8 x 0.8 mm – L x W x H), with X7R characteristics. This is the industry's highest capacitance* for a 100-V-rated product in this size and this temperature characteristic. Mass production of the product series began in June 2025.

In recent years, 48-V systems have become increasingly common for AI servers, energy storage systems, and a wide range of industrial equipment to improve system efficiency and reduce power loss. This has led to a growing demand for 100 V-rated MLCCs used as capacitors on power lines.

This new 100-V product of the C series achieves ten times the capacity of conventional products of the same size, thanks to optimized material selection and product design. Therefore, it makes it possible to reduce the number of MLCCs used and the mounting area, contributing to the reduction of component counts and miniaturization of sets. TDK will further expand its lineup to meet the needs of customers.

*Source: TDK, as of June 2025

Main applications

- Input capacitors for power supply ICs used in commercial and industrial 48-V systems, etc.

Main features and benefits

- Reduced component count and miniaturization of sets because the product offers a high capacitance of 1 μF in 1608 size

Type	Outer dimensions [mm]	Temperature characteristic	Rated voltage [V]	Capacitance [μF]
C1608X7R2A105K080AC	1.6 x 0.8 x 0.8	X7R	100	1

Samples may be purchased from the product page that is displayed after clicking Type.

About TDK Corporation

TDK Corporation is a world leader in electronic solutions for the smart society based in Tokyo, Japan. Built on a foundation of material sciences mastery, TDK welcomes societal transformation by resolutely remaining at the forefront of technological evolution. It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's comprehensive, innovation-driven portfolio features passive components such as ceramic, aluminum electrolytic and film capacitors, as well as magnetics, high-frequency, and piezo and protection devices. The product spectrum also includes sensors and sensor systems such as temperature and pressure, magnetic, and MEMS sensors. In addition, TDK provides power supplies and energy devices, magnetic heads, software and more. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics, and TDK-Lambda. TDK focuses on demanding markets in automotive, industrial and consumer electronics, and information and communication technology. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2025, TDK posted total sales of USD 14.4 billion and employed about 105,000 people worldwide.

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Further information on the products can be found under
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