

Ceramic capacitors

CeraLink™ in modular flex-assembly technology

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TDK Corporation (TSE:6762) has extended the lineup of proven CeraLink™ capacitors with CeraLink FA types in modular flex-assembly technology. This space-saving design connects two, three or ten identical capacitors in parallel over the same terminals in order to increase the capacitance. The new CeraLink FA types are available for rated voltages of 500 V DC, 700 V DC and 900 V DC. Depending on the voltage and number of capacitors, this results in rated capacitance values of between 0.5 μ F and 10 μ F. One particular feature of these capacitors based on PLZT (lead lanthanum zirconate titanate) ceramics is their high permissible operating temperature of 150 °C. The FA types have a width of 7.4 mm and a height of 9.1 mm; while the lengths are 6.3 mm, 9.3 mm or 30.3 mm. Despite their small size, they feature a ripple current capability of up to 47 A_{RMS} .

One major advantage of the parallel switching is the extremely low ESR values that are significantly below 10 m Ω at high frequencies in the range from 0.1 to 1 MHz. With a minimum of 3 nH, the ESL values are also extremely low. Thanks to their low parasitic effects, CeraLink capacitors are ideally suited for converter topologies on the basis of fast-switching semiconductors such as GaN or SiC. Voltage overshoots when switching are significantly lower than with conventional capacitor technologies. Special requirements in terms of size, current capability and temperature can also be met very easily with CeraLink capacitors.

Main applications

- DC link or snubber capacitors in fast-switching converters

Main features and benefits

- Rated voltages of between 700 V DC and 900 V DC
- Capacitance range from 0.5 μ F to 10 μ F
- Low parasitic effects
- Suitable for converter topologies based on fast-switching semiconductors such as GaN or SiC

About TDK Corporation

TDK Corporation is a leading electronics company based in Tokyo, Japan. It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's comprehensive 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 and more. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK focuses on demanding markets in the areas of information and communication technology and automotive, industrial and consumer electronics. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2018, TDK posted total sales of USD 12 billion and employed about 103,000 people worldwide.

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