CeraLink in modular flex-assembly technology

TDK Corporation 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 µF and 10 µF. 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 mΩ 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 µF to 10 µF
- Low parasitic effects
- Suitable for converter topologies based on fast-switching semiconductors such as GaN or SiC