NANOLAM™ CAPACITORS

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Our NanoLam™ capacitors represent a leap forward in the realm of power management for inverters, charging systems, and DC-DC conversion. These capacitors boast a higher capacity density and higher temperature stability with ideal package options while maintaining very low inductivity.

Positioned directly upstream of the inverter, our DC-Link Capacitor acts as a short-term energy buffer for the traction motor. This design is critical in managing the fluctuating current demands that the distant battery cannot promptly adjust to.

Furthermore, the versatility of our capacitors is underscored by their adaptability, being equally effective when utilized in on-board chargers, DC-DC converters, or auxiliary drives, thereby ensuring seamless and efficient energy conversion across various applications.

BENEFITS

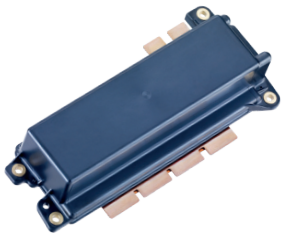
A novel production process, based on the parallel deposition of metal and dielectric system in situ, allows for ultra-thin layers with less restrictions, gaining direct advantages in terms of capacitance density and ohmic losses.

At the same time, this novel production process enables the use of thermoset plastic as dielectric material, which provides advantages in terms of dielectric constant (ε_R=3.2), breakdown voltage, temperature resistance, thermal conductivity and oxygen content for improved self-healing capabilities.

In addition, the rectangular shape achieves a high package utilization, and allows for busbar structures with favorable cooling properties and low parasitic loop inductances.

DESIGN OPTIONS

DISCRETE NanoLam™ capacitors are as catalogue parts in a range from 10µF to 150µF and rated from 48V to 900V



CUSTOMIZED NanoLam™ capacitors are available in customer specific designs and specification.

RHEINMETALL POWER SYSTEMS DIVISION

Within Rheinmetall the Power Systems Division is a system provider for high-quality and innovative (mobility) solutions, control technologies and digital applications for the automotive and energy industries, among others.

With its Business Units and Business Areas, the Division stands for outstanding expertise in the following areas: air management, thermal management, e-mobility and digitalization, hydrogen technology, metallic plain bearings, composite materials and lightweight construction. The Power Systems Division also represents Rheinmetall's global aftermarket activities through the Trade Business Unit.

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