

VITROPERM 550 HF cores for advanced EMC solutions in industrial applications

HANAU – VACUUMSCHMELZE (VAC) is expanding its product portfolio of EMC cores made of the new nanocrystalline material VITROPERM® 550 HF.



Compared to EMC ferrites and conventional nanocrystalline alloys, VITROPERM 550 HF has significantly improved high-frequency behavior without compromising the saturation behavior. Compared to previous nanocrystalline EMC solutions, VITROPERM 550 HF allows either a significant reduction in volume and weight (up to 60 %) or significant increase in high frequency attenuation (>100 kHz) for the same size.

With these new EMC cores, VAC offers an optimized solution for

- The ongoing request for more compact & lightweight systems.
- The use of SiC and GaN as wide bandgap semiconductors in power electronics. By using these semiconductors, interfering currents with higher amplitudes occur and the spectrum is shifted to higher frequencies. This change in electromagnetic interference confronts many manufacturers with new challenges which can be solved by innovative materials such as VITROPERM 550 HF.

The new VITROPERM 550HF EMC cores are available from 9.8 mm to 102 mm nominal outer diameter. Customized dimensions and permeability levels are available upon request. Furthermore, the new cores can also be used to quickly design suitable common mode chokes.

The plastic housings are suitable for direct winding and provide good mechanical protection for the nanocrystalline material. The plastic materials meet the requirements of UL94V-0 / HB (UL file number: E41871), Class B (130 °C).

"With these cores we offer our customers an innovative and quickly available solution for modern EMC filters," says Nico Schöniger, Product Manager for Industrial Solutions. "This enables the development of highly efficient systems and speed up product development".

VACUUMSCHMELZE (VAC) is among the world's most highly innovative developers of magnetic materials, inductive components and other related products. With a global network of Sales and Field Application Engineers, VAC designs and manufactures tailor-made solutions for a wide variety of industries, comprising renewable energies, automotive, industrial automation installation technology, and aviation.