

Setting New Standards in Speed, Efficiency, and Loss Reduction for the Future of Electronics

Revolutionizing SiC Applications: new Gate Drive Transformer

[Hanau] – VACUUMSCHMELZE (VAC), a leading manufacturer of high-quality inductive components, is excited to announce the launch of its latest gate drive transformer, the T60403-F5046-X102. This innovative component is specifically designed for silicon carbide (SiC) applications, setting new standards in speed, efficiency, and loss reduction.



Silicon carbide semiconductors are increasingly used in next-generation hardware developments due to their higher switching frequencies and lower losses. These advantages lead to volume reduction and increased efficiency. However, the demands for ultra-fast switching speeds and very high switching frequencies in excess of 100 kHz pose a challenge for component design. The new T60403-F5046-X102 gate drive transformer is engineered to meet these challenges, offering fast switching, high efficiency, and low losses.

The T60403-F5046-X102 gate drive transformer boasts several outstanding features that make it ideal for modern, high-performance applications. It offers lower coupling capacitance, with a value of less than 8 pF, minimizing interference and optimizing performance. Despite its compact design, the transformer provides high power density and insulation strength, making it suitable for space-saving designs. Additionally, it has a large voltage-time area, enabling effective handling of high voltages in compact configurations. The transformer also features lower leakage inductance, which enhances efficiency and reduces losses. Furthermore, the turns ratio of the transformer is adaptable, allowing it to be adjusted to meet specific requirements.

"With the new T60403-F5046-X102 gate drive transformer, we provide a tailored solution for the growing demands of SiC applications," said Simone Schwarz, Product Manager Energy Conversion & Automation at VAC. "Our innovations ensure that our customers benefit from faster, more efficient, and lower-loss switching operations."

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.