Ferrites

Distributed air gaps enable a 70 percent reduction in additional copper losses

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TDK Corporation presents the world's first ferrite cores that enable additional copper losses to be reduced by up to 70 percent. The core design using distributed air gaps permits higher operating frequencies and smaller inductive components to be used in power supply systems. By reducing electromagnetic emissions, the additional copper losses at high frequencies are also reduced. Thanks to the identical distributed gaps in the center posts, the magnetic field emission to the environment is effectively prevented.

Ferrite cores are available with distributed air gaps in E, EQ, ER, ETD, PM and PQ core designs, and with all EPCOS power materials. Solutions with three identical air gaps offer the best price/performance ratio for applications, in which 2 or 3 times the switching frequency is used in comparison with the original frequency. Apart from standard solutions, a customer-specific number of air gaps can also be implemented.

The main applications for the new cores are in storage chokes and transformers in switch-mode power supplies and inverters.

Main applications

- Storage chokes and transformers in switch-mode power supplies and inverters

Main features and benefits

- Reduction of additional copper losses by up to 70 percent
- Wide range of designs, sizes and materials

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 portfolio includes passive components, such as ceramic, aluminum electrolytic and film capacitors, ferrites and inductors, high-frequency products, and piezo and protection components, as well as sensors and sensor systems and power supplies. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK's further main product groups include magnetic application products, energy devices, and flash memory application devices. 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 2017, TDK posted total sales of USD 10.5 billion and employed about 100,000 people worldwide.

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