Inductors
TDK releases compact flat wire SMT high-current chokes

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TDK Corporation (TSE: 6762) has extended its portfolio of EPCOS ERU SMT power inductors with the ERU16 choke series, comprised of ten different types. The inductance values of the new B82559B*A016 series, which replaces the former B82559A*A016 series, extend from 1.0 µH to 30 µH, and their saturation currents range from 10.3 A DC to 40.4 A DC at 25 °C.

A key feature of these new power inductors is their compact design: With a footprint of just 17.3 x 16.5 mm, they take up 12 percent less space on the PCB than their predecessor. The low insertion heights of 7.55 mm (1.0 µH) to 11.1 mm (30 µH) vary depending on the type. This low-profile design is based on a flat rectangular helical winding technology, which also results in lower losses.

The DC resistances are between 1 mΩ and 15.4 mΩ. The new series of high-current chokes is designed for operating temperatures between -40 °C and +150 °C. Its additional third soldering pad results in high mechanical stability on the PCB. The new components can be used as output and storage chokes in a wide variety of power supply topologies including point-of-load (POL) converters, DC-DC converters, high-current switch-mode power supplies and inverters for photovoltaics systems and automotive applications. The components are RoHS-compatible and qualified to AEC-Q200.

Main applications

- Output and storage chokes for point-of-load (POL) converters
- DC-DC converters and high-current switch-mode power supplies
- Inverters for photovoltaics systems
- Automotive applications

Main features and benefits

- Compact dimensions due to flat rectangular helical winding
- High saturation currents of up to 40.4 A DC
- Qualified to AEC-Q200

About TDK Corporation

TDK Corporation is a world leader in electronic solutions for the smart society based in Tokyo, Japan. Built on a foundation of material sciences mastery, TDK welcomes societal transformation by resolutely remaining at the forefront of technological evolution and deliberately “Attracting Tomorrow.” It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's comprehensive, innovation-driven portfolio features passive components such as ceramic, aluminum electrolytic and film capacitors, as well as magnetics, high-frequency, and piezo and protection devices. The product spectrum also includes sensors and sensor systems such as temperature and pressure, magnetic, and MEMS sensors. In addition, TDK provides power supplies and energy devices, magnetic heads and more. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK focuses on demanding markets in automotive, industrial and consumer electronics, and information and communication technology. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2020, TDK posted total sales of USD 12.5 billion and employed about 107,000 people worldwide.

You can download this text and associated images from www.tdk-electronics.tdk.com/en/201208.

Further information on the products can be found under www.tdk-electronics.tdk.com/eru_chokes.

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