

Inductors

TDK offers compact high-current chokes for automotive and industrial applications

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TDK Corporation (TSE:6762) presents the B82559A*A033 series of new shielded EPCOS ERU33 high-current chokes for through-hole mounting. Designed for very high saturation currents from 32 A to 83 A at 100 °C, the six new types cover a range of inductance values from 3.2 µH to 10 µH. DC resistances are as low as 0.85 mΩ or 1.2 mΩ, depending on the type. Thanks to the flat wire winding, the chokes have very compact dimensions of only 33 x 33 x 15 mm. By thermally connecting the flat wire winding to the core, the large ferrite surface can be coupled to a heat sink for effective heat dissipation. In addition to the standard types, customized variants with other inductance values can also be realized.

The RoHS-compatible and AEC-Q200 REV D-qualified inductors are designed for operating temperatures from -40 °C to +150 °C. Typical automotive applications are buck-boost chokes for DC-DC converters (e.g. for 48 V on-board power supplies or differential mode chokes in the input filter of onboard chargers). In industrial electronics, they can be used as storage and output chokes in high-current supplies and PoL supplies.

Main applications

- Buck-Boost DC-DC converter for 48 V on-board power supplies
- Storage and output chokes in high current supplies

Main features and benefits

- High saturation currents from 32 A to 83 A
- Low DC resistances of 0.85 mΩ or 1.2 mΩ
- Very compact dimensions of only 33 x 33 x 15 mm

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 2022, TDK posted total sales of USD 15.6 billion and employed about 117,000 people worldwide.

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