

Inductors

TDK offers sample kit for the ERU 33 series of compact high-current chokes

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TDK Corporation (TSE:6762) presents a sample kit for the B82559A*A033 series of shielded EPCOS ERU 33 high-current chokes. The sample kit (ordering number: B82559X033) contains two pieces of each of the six standard types of this series. In addition to the standard types in the sample kit, customized variants of the chokes with other inductance values can also be realized.

Designed for very high saturation currents from 32 A to 83 A at +100 °C, these through-hole mountable components 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 components have very compact dimensions of only 33 x 33 x 15 mm. By thermally connecting the flat coils to the electrically insulated core, the choke can be attached to a heat sink to effectively dissipate the heat.

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 for 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 point-of-load (PoL) converters.

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 up to 83 A
- Low DC resistances down to 0.85 mΩ
- Very compact dimensions of only 33 x 33 x 15 mm
- Effective heat dissipation by directly attaching a heat sink

Ordering Code	Inductance L [μ H]	Rated Current I _R [A]	Saturation Current I _{sat,100 °C} [A]	DC Resistance (typ.) R _{DC} [Ω]
B82559A4322A033	3.2	58.0	83.0	0.85
B82559A4352A033	3.5	57.5	77.0	0.85
B82559A5472A033	4.7	45.5	71.0	1.20
B82559A5602A033	6.0	50.0	55.0	1.20
B82559A5682A033	6.8	47.5	47.0	1.20
B82559A5103A033	10.0	46.0	32.0	1.20

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 2023, TDK posted total sales of USD 16.1 billion and employed about 103,000 people worldwide.

You can download this text and associated images from www.tdk-electronics.tdk.com/en/231115
 Further information on the products can be found at www.tdk-electronics.tdk.com/en/ERU33_Samplekit

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