

Inductors

Compact dual inductors with high saturation current

April 30, 2020

TDK Corporation has extended its range of dual inductors to include the new EPCOS series B82477D6*. The seven series types cover an inductance range from 2 x 3.9 μH to 2 x 47 μH and are designed for maximum rated currents from 2.83 A to 7.05 A. A special feature of the inductors, which are certified according to AEC-Q200 and compatible with RoHS, are the high saturation currents of up to 16.1 A. The magnetically shielded inductors have dimensions of just 12.5 x 12.5 x 10.5 mm³ and are designed for a wide temperature range of -55°C to +150 °C. Depending on the type, the inductors offer very high coupling factors of the two windings from 97 to 99 per cent.

The fields of application of dual inductors are diverse: Indeed, they can be used as coupled inductors in SEPIC (Single-Ended Primary Inductance Converter) or 1:1 transformers in flyback topologies. A further application involves use as a common-mode inductor in power supply lines. The isolation voltage between the two windings is >500 V.

Main fields of application

- Common-mode inductors in power supply lines
- DC/DC converters in SEPIC topology
- Flyback converters

Main features and benefits

- High saturation currents of up to 16.1 A
- Low dimensions of just 12.5 x 12.5 x 10.5 mm³
- Wide temperature range of -55°C to +150°C
- High coupling factor of up to 99 per cent

Characteristics

Order number	Inductance L ₁ , L ₂ [µH]	Max. rated current [A]	Saturation current [A]	DC resistance L ₁ , L ₂ [mΩ]
B82477D6392M603	3.9	7.05	16.1	13.9
B82477D6682M603	6.8	6.40	11.8	17.0
B82477D6103M603	10	5.65	9.9	22.5
B82477D6153M603	15	4.92	8.7	29.6
B82477D6223M603	22	3.85	7.2	45.0
B82477D6333M603	33	3.22	5.6	60.5
B82477D6473M603	47	2.83	4.7	81.8

About the TDK Corporation

The TDK Corporation is a leading electronics company based in Tokyo, Japan. It was founded in 1935 to sell ferrites, which are key materials in the production of electronic and magnetic products. The extensive range of TDK products includes passive components such as ceramic, aluminium electrolytic and film capacitors, ferrites and inductors, high-frequency products, piezo elements and protective components. It also includes sensors and sensor systems such as temperature, pressure, magnetic-field and MEMS sensors. TDK also provides power supply units and components for the storage of electrical energy, as well as read/write heads and much, much more. Products are sold under the brand names TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK focuses on demanding markets in the field of information and communication technology, as well as the automotive, industrial and consumer electronics markets. The company has development and production sites as well as sales offices in Asia, Europe and North and South America. In the financial year 2019, TDK achieved a turnover of USD 12.5 billion and employed around 105,000 people worldwide.

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