

## Transformers

### Compact SMD push-pull transformers

October 27, 2015

TDK Corporation presents a new series of EPCOS SMD push-pull transformers featuring compact dimensions of just 9 mm x 8 mm x 5.7 mm. Windings with center taps are located on both the primary and secondary side. The series comprises five types with different transformation ratios ranging between 1:1 and 1:3.8. This enables voltage ratios of 5 V to 5 V or 3.3 V to 12 V to be implemented. Depending on the type, the inductance values of the primary winding are between 9.5  $\mu$ H and 94  $\mu$ H.

The transformers of the new B82805\* series are designed for a typical switching frequency of 250 kHz and operating temperature range of between -25°C and +125°C. The RoHS-compatible components are suitable, for example, for smaller switched-mode power supplies using push-pull technology and for electrical isolation in industrial automation and process engineering applications.

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#### Main applications

- Switch-mode power supplies using push-pull technology
- Electrical isolation in industrial automation and process engineering

#### Main features and benefits

- Compact dimensions of just 9 mm x 8 mm x 5.7 mm
- Five types with different transformation ratios for common voltages in industrial applications
- Typical switching frequency 250 kHz

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#### Key data

| Type            | Transformation<br>[N1:N2:N3:N4] | Sample voltages<br>[V AC] | Inductance<br>L (1 – 2) [ $\mu$ H] |
|-----------------|---------------------------------|---------------------------|------------------------------------|
| B82805A0363A250 | 1:1:1.7:1.7                     | 3.3:5                     | 36                                 |
| B82805A0773A250 | 1:1:1.1:1.1                     | 5:5                       | 77                                 |
| B82805A0943A250 | 1:1:1.1:1.1                     | 12:12                     | 94                                 |
| B82805A0952A250 | 1:1:3.8:3.8                     | 3.3:12                    | 9.5                                |
| B82805A0173A250 | 1:1:2.6:2.6                     | 5:12                      | 17                                 |

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## 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 electronic components, modules and systems\* marketed under the product brands TDK and EPCOS, power supplies, magnetic application products as well as energy devices, flash memory application devices, and others. TDK focuses on demanding markets in the areas of information and communication technology and consumer, automotive and industrial 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 2015, TDK posted total sales of USD 9.0 billion and employed about 88,000 people worldwide.

\* The product portfolio includes ceramic, aluminum electrolytic and film capacitors, ferrites, inductors, high-frequency components such as surface acoustic wave (SAW) filter products and modules, piezo and protection components, and sensors.

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