

Inductors

TDK offers shielded SMT power inductors with saturation currents of up to 80 A

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TDK Corporation (TSE: 6762) introduces the new PCM120T series of shielded SMT power inductors, optimized for high saturation currents and low DC resistances. The PCM120T product family includes 14 inductance values between 0.4 μH and 10 μH , whereby saturation currents of up to 80 A are reached depending on the L value. Optimal saturation properties are achieved through the use of an iron alloy core. Flat wire windings are used to keep losses as low as possible. This results in low ohmic resistance values (R_{DC}) of 0.72 m Ω (0.4 μH) to 9 m Ω (10 μH). The new inductors have an outstanding EMC performance due to closed housing made of ferrite material without an external gap. They are ideal for automatic solder joint inspection (AOI) and achieve a coplanarity of ≤ 0.1 mm due to their lead frame structure. The product's metal cores provide resistance against high voltage pulses in accordance with ISO7636. The components' dimensions are 12.7 x 15.8 x 11.5 mm (W x L x H). The powerful RoHS-compatible inductors are designed for a wide temperature range from -55 °C to +165 °C and are certified according to AEC-Q200.

Typical applications include primary DC/DC converters in automotive applications such as ADAS, power supplies for servers and base stations, and various types of DC/DC converters. The PCM120T components are also ideal for interference suppression, such as electric motors in vehicles.

Main fields of applications

- Primary DC/DC converters in automotive applications, e.g., for ADAS
- Power supplies for servers and base stations
- DC/DC converters
- Vehicle motor interference suppression

Main features and benefits

- High saturation currents of up to 80 A
- Wide range of inductance values from 0.4 μH to 10 μH
- Low R_{DC} of min. 0.72 m Ω
- Wide temperature range from -55°C to +165 °C
- AEC-Q200 compliant and RoHS-compatible
- AOI suitability
- Excellent EMC properties
- High withstanding voltage

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 2021, TDK posted total sales of USD 13.3 billion and employed about 129,000 people worldwide.

You can download this text and associated images from www.tdk-electronics.tdk.com/en/220318.

Further information on the products can be found under

www.tdk-electronics.tdk.com/en/power_inductors.

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