

Inductors

Compact multilayer power inductors in case size 1608

- Portfolio of TDK power inductors expanded with miniaturized series smaller than 2012
- New TDK MLP1608-V series already in mass production

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TDK-EPC, a group company of the TDK Corporation, has extended its portfolio of compact multilayer power inductors to include the TDK MLP1608-V series in size 1608. The miniaturized components are suited for use in the power supply circuitries of mobile devices such as smartphones, conventional mobile phones, digital cameras and similar products. Mass production of the new series has already begun.

The new TDK MLP1608-V series augment the existing 2520, 2016 and 2012 series (2.5 x 2.0 mm², 2.0 x 1.6 mm², 2.0 x 1.2 mm²) with a product that with a footprint of 1.6 x 0.8 mm² and an insertion height of as low as 0.75 mm is even smaller. This miniaturization was made possible thanks to a low-loss ferrite material that was developed by applying proprietary materials technology. When used in place of existing TDK MLP2012S components (1μH) as a power inductor in the power supply circuitry, a volume reduction of more than 50 percent can be achieved without lowering the power conversion efficiency at currents of up to 100 mA. The MLP1608-V thus helps to further reduce the size requirements for power supply circuitry in mobile devices.

Modern mobile devices integrate a great number of functions and are often operated for extended periods such as when playing games or using the camera. This places considerable strain on the battery and makes battery life a major concern. Because the new TDK power inductors help improve the efficiency of the power supply circuitry that performs voltage conversion they make an important contribution toward reducing power consumption and are thus highly suitable for use in mobile devices.

Glossary

- Power inductor: inductive components used for noise suppression, rectification and current smoothing in power supply circuitry such as in DC-DC converters.

Main applications

- Power coils in the power supplies of portable devices such as smartphones, conventional mobile phones, and digital cameras.

Main features and benefits

- Up to 50 percent volume reduction compared to 2012 series, while offering an equivalent power conversion efficiency.
- Suitable for a wide range of applications thanks to the low DC resistance and high rated current.

Key data

Type	Insertion height [mm]	Inductance [μ H]	DC resistance [Ω]	Rated current [mA]
MLP1608VR47D	0.75 max.	0.47 \pm 20%	0.22 \pm 30%	800
MLP1608V1R0D		1.0 \pm 20%	0.30 \pm 30%	700
MLP1608VR47B	0.95 max.	0.47 \pm 20%	0.20 \pm 30%	800
MLP1608V1R0B		1.0 \pm 20%	0.30 \pm 30%	700
MLP1608V2R2B		2.2 \pm 20%	0.36 \pm 30%	600

About TDK-EPC Corporation

TDK-EPC Corporation (TDK-EPC), a TDK group company, is a leading manufacturer of electronic components, modules and systems headquartered in Tokyo, Japan. TDK-EPC has emerged from the combination of the electronic components business of TDK and the EPCOS Group and markets its products under the product brands, TDK and EPCOS.

The product portfolio includes ceramic, aluminum electrolytic and film capacitors, ferrites and inductors, high-frequency components such as surface acoustic wave (SAW) filter products and modules, piezo and protection components, and sensors. With this product spectrum TDK-EPC offers a broad range of products and solutions of outstanding value from a single source and focuses on demanding markets in the areas of information and communication technology and automotive, industrial and consumer electronics. The company has design and manufacturing locations and sales offices in Asia, Europe, and in North and South America.

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Further information on the products can be found under www.tdk.co.jp/tefe02/e533_mlp.pdf.

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