

EMC components

Multilayer chip beads with high rated currents

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TDK Corporation (TSE:6762) has developed the new MPZ0603-H series of multilayer chip beads for power lines in an IEC 0603 package (EIA 0201) that feature twice the rated current and about half the DC resistance of the existing MPZ0603-C series. Thanks to a newly developed technology for the internal electrodes, TDK was able to reduce the DC resistance to as low as 36 mΩ, thus increasing the rated current to as high as 1900 mA. The MPZ0603-H series offers high impedance values ranging from 22 Ω to 120 Ω at 100 MHz. The new chip beads measure in with a miniature footprint of 0.6 mm x 0.3 mm and a low insertion height of just 0.3 mm. With their compact dimensions and excellent electrical specifications the ferrite beads are very well suited for a wide spectrum of noise suppression measures in the IC power supply lines of smartphones, audio players, PCs, and other devices. Mass production of the new series began in August 2018.

As the multifunctionality of portable devices such as smartphones continues to grow, high current ratings are becoming an increasingly important factor for components in the IC power supply lines. Thanks to their low DC resistance the MPZ0603-H chip beads not only offer a high rated current, but they also help lower the power consumption of devices.

Main applications

- Noise suppression in the IC power supply lines in smartphones, audio players, PCs, and other devices

Main features and benefits

- DC resistance as low as 36 mΩ approximately half that of existing products
- Rated current as high as 1900 mA approximately twice that of existing products

Key data

Type	Impedance at 100 MHz [Ω] ±25%	Max. DC resistance [mΩ]	Max. rated current [mA]
MPZ0603S220H	22	36	1900
MPZ0603S330H	33	50	1600
MPZ0603S800H	80	95	1200
MPZ0603S121H	120	130	1000

About 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 comprehensive 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 the areas of information and communication technology and automotive, industrial and consumer 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 2018, TDK posted total sales of USD 12 billion and employed about 103,000 people worldwide.

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www.global.tdk.com/corp/en/news_center/press/20180807_01.htm.

Further information on the products can be found under
product.tdk.com/info/en/catalog/datasheets/beads_commercial_power_mpz0603-h_en.pdf.

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