

## EMC components

### **TDK announces new automotive noise suppression filters for MF and HF bands**

- Demonstrates impedance in high MF and HF bands
- Employs newly developed high-loss, highly permeable ferrite
- Operates in temperatures up to 125°C
- AEC-Q200 compliant

September 15, 2020

TDK Corporation (TSE:6762) announces that it has developed the MHF1608 series of HF band\* noise suppression filters for automobiles, and will begin mass production in September 2020.

The noise suppression component will be inserted in signal lines for electronic control circuits in automotive applications including car audio, navigation, and battery monitoring systems. Signal transmission paths are often affected by conduction, radiation noise, or other impacts. To control these noises, a chip bead supporting a high frequency band from several dozens of MHz to several GHz is typically inserted.

The MHF series uses a newly developed high-loss, highly permeable ferrite material, which results in high impedance from 300 (kHz) to 30 (MHz), even lower than the frequency band above, while minimizing and controlling noise. Replacing conventional chip beads with this product enables manufacturers to reduce the number of parts used. It is wide temperature range from -55 °C to +125 °C and also qualified in accordance with AEC-Q200.

In the future, TDK will further expand the MHF series lineup to enable more compact electronic equipment and increased noise suppression across a broad range of automotive equipment.

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#### **Glossary**

- The MF frequency band is from 300 to 3000 kHz while the HF band is from 3 to 30 MHz.

#### **Main applications**

- Car audio, car navigation, battery monitoring systems (BMS), and various types of electronic control units for automobiles

#### **Main features and benefits**

- High impedance in the MF and HF bands, suppressing noise
- Newly developed high-loss and highly permeable ferrite material employed, resulting in reduction of noises up to 30 MHz
- Operating temperature range from -55°C to +125°C

## Key data

Type	Impedance [Ω] typ. @1MHz	Impedance [Ω] typ. @10MHz	Impedance [Ω] typ. @100MHz	DC resistance [Ω] max.	Rated current [mA] max.
MHF1608BAC352ATD25	380	3500	1600	1.8	170
MHF1608BAC252ATD25	280	2500	1800	1.6	200
MHF1608BAC182ATD25	220	1800	1800	1.4	250
MHF1608BAC601ATD25	80	600	1200	0.6	350

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## 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 2020, TDK posted total sales of USD 12.5 billion and employed about 107,000 people worldwide.

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Further information on the products can be found under

[https://product.tdk.com/info/en/catalog/datasheets/suppression-filter\\_automotive\\_mhf1608\\_en.pdf](https://product.tdk.com/info/en/catalog/datasheets/suppression-filter_automotive_mhf1608_en.pdf).

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