

## EMC components

### Compact noise suppression filters for LED lighting

- Suppression of spurious noise between 20 MHz and 100 MHz
- Noise suppression performance equivalent to that of larger wire-wound components
- Satisfies CISPR 15 standards for LED lighting

January 23, 2018

TDK Corporation has expanded the MAF series of noise suppression filters with the new MAF2520ASS600C type that is designed especially for LED lighting systems. The new multilayer filter has compact dimensions of just 2.5 mm x 2.0 mm x 0.85 mm and features a suppression of spurious noise between 20 MHz and 100 MHz that is equivalent with that of larger wire-wound components. The new component has a rated current of 500 mA and a low DC resistance of just 0.28  $\Omega$  (typical). Its impedance at 30 MHz is 3.4 k $\Omega$ . Thanks to its wide operating temperature range of -40 to +125 °C, the component is also suitable for use in high temperature environments. In addition, the new MAF2520ASS600C filter satisfies CISPR 15 standards for LED lighting. Mass production began in January 2018.

Thanks to their reduced energy consumption and long operating life, LED lighting systems have continued to become increasingly popular in a wide range of applications in homes and buildings. In order to offer additional enhanced value, manufacturers are developing intelligent solutions with networked illumination control systems. The new miniaturized MAF2520ASS600C noise suppression filter from TDK is designed to protect the controllers from the noise generated by the AC to DC LED power supplies. Moving forward, TDK will continue to develop filter products that offer high-performance noise suppression in even smaller dimensions.

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#### Main applications

- Networked LED lighting systems in homes and buildings

#### Main features and benefits

- Suppression of spurious noise between 20 MHz and 100 MHz
- Wide operating temperature range of -40 to +125 °C for use in high temperature environments
- Compact dimensions of 2.5 mm x 2.0 mm x 0.85 mm
- Satisfies CISPR 15 standards for LED lighting

## Key data

| Type           | Dimensions<br>[mm] | Impedance<br>[Ω] |        | DC resistance<br>[Ω] |      | Rated current<br>[mA] |
|----------------|--------------------|------------------|--------|----------------------|------|-----------------------|
|                |                    | 1 MHz            | 30 MHz | Typ.                 | Max. |                       |
| MAF2520ASS600C | 2.5 x 2.0 x 0.85   | 60               | 3400   | 0.28                 | 0.36 | 500                   |

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## 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 portfolio includes passive components, such as ceramic, aluminum electrolytic and film capacitors, ferrites and inductors, high-frequency products, and piezo and protection components, as well as sensors and sensor systems and power supplies. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK's further main product groups include magnetic application products, energy devices, and flash memory application devices. 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 2017, TDK posted total sales of USD 10.5 billion and employed about 100,000 people worldwide.

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