

Power supplies

TDK introduces 20 and 40A, 80Vdc board-mount EMI Filters, reducing differential mode conducted emissions for switching power supplies with high input current requirements

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TDK Corporation (TSE 6762) announces the introduction of the TDK-Lambda RGF board-mount EMI filters. Suitable for power supplies with high input current requirements, these 20 and 40A filters are designed to provide exceptional differential mode filtering. Leveraging advanced TDK component technology, these modules streamline system-level compliance to CISPR as well as other compliance standards.

The RGF filters are encapsulated for protection in harsh environments, measure 52.8 x 35.2 x 12.7mm in size, and feature a robust 5-sided metal case. The design includes two threaded and two non-threaded mounting holes, ensuring easy installation and enhanced cooling in both conduction and convection-cooled systems. Applications include harsh industrial, commercial-off-the-shelf (COTS), test and measurement, communications, broadcast, and robotics.

When used in conjunction with non-isolated DC-DC converter modules, the filters provide a significant amount of differential mode attenuation over a broad frequency range. This reduces overall system noise and simplifies compliance to typical EMI standards. The input voltage ranges from 0 to 80V and withstands input transients of up to 100V for 100ms durations.

The operating case temperature is between -40 to +120°C, with a qualified Thermal Cycling Test (TCT) of 700 cycles, or -40 to +125°C with a 60°C/minute ramp, and a 30minute dwell time. The RGF filters are compliant to MIL-STD-810G 516.6 Procedure I & IV for shock and MIL-STD-810G 514.6 Procedure I, Cat 10 for vibration.

Further information on the RGF series can be found at

https://product.tdk.com/system/files/dam/doc/product/emc/emc/power-line/catalog/rgf_e.pdf

Main applications

- Harsh industrial, COTS, test and measurement, communications, broadcast, and robotics.

Main features and benefits

- Exceptional differential mode filtering
- Encapsulated in 5-sided metal case
- Compact 2 x 1 inch package
- Low power loss

Key data

Model		RGF48020A-001	RGF48040A-001
Maximum Current	A	20	40

Maximum Rated Voltage	V	80
Size (LxWxH)	mm	52.8 x 35.2 x 12.7
Safety Marks	Hz	CE Mark and UKCA Mark
Operating Case Temperature	°C	-40 to +120

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. 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, software 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 2025, TDK posted total sales of USD 14.4 billion and employed about 105,000 people worldwide.

About TDK-Lambda Corporation

TDK-Lambda Corporation is a trusted, innovative leader and global supplier of highly reliable power conversion products for industrial and medical equipment worldwide.

TDK-Lambda Corporation is aligned for fast responses to any customer need with R&D, manufacturing, sales and service locations in five key geographic regions, namely Japan, EMEA, Americas, China and ASEAN.

For more details, please pay a visit to: www.jp.lambda.tdk.com/en/

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