



COSEL's very high reliability 40W DC/DC converter for demanding applications offers 10 year warranty

Press Release

2019-02-20

- 10 years warranty
- 40W in 1x1 inch industry standard footprint
- Efficiency up to 92%
- UL62368-1, C-UL [CSA62368-1] and EN62368-1 approved
- Ultra wide input voltage range covering in three series from 4.5V to 76V

Cosel Co, Ltd (6905: Tokyo) today announced the release of a very high reliability 40W DC/DC converter, the MGF40. Packaged in an industry standard 1x1 inch, six sided, shielded metallic case, the MGF40 series has been designed to Cosel's strict criteria for high performance and reliability, contributing to the company's world class quality with a failure rate of below 30 parts-per-million (ppm). To guarantee lifetime quality, the MGF40 does not include aluminum or tantalum capacitors. All components are selected for a very long lifetime, making the MGF40 one of the most reliable DC/DC converters in its category. The MGF40 series offers a long, confidence inspiring warranty period of 10 years.

Addressing a large range of demanding applications, the MGF40 series is available in three input voltages, 4.5V to 13V, 9V to 36V and 18V to 76V. A single output version MGFS40 is available in four output voltages, 3.3V, 5V, 12V, and 15V, and can be adjusted within a range of +/- 10% using a resistor bridge or potentiometer. A dual output MGF40 is available in two, factory trimmed, output voltages, +/- 12V and +/- 15V offering the possibility to provide respectively, 24V and 30V between the two ends.

In the event of low line input levels, the 4.5V to 13V MGFS and MGF40 4005 versions have their output power limited to 30W, and thanks to the synchronous rectification, the efficiency is up to 88% typical. The 9V to 36V MGFS and MGF40 4024 and the 18V to 76V MGFS and MGF40 4048 deliver up to 42W with an efficiency of up to 92% typically.



Designed to power demanding applications, the MGF40 series features a wide operating temperature range of -40C to +85C with a maximum case of +105C for the 4.5V to 13V input and +110C for the 9V to 36V, and 18V to 76V units.

The MGF40 includes overcurrent and overvoltage protection, and to protect against overheating it includes thermal protection that switches the unit off when the maximum allowable safe temperature is reached.

Negative logic is provided as standard, the unit is ON when the RC pin is at a low level and OFF when it is at a high. It is possible to order the MGF40 with positive logic, option-R. A control pin allows the user to turn the unit ON/OFF remotely. For applications requiring lower leakage current or no Y-capacitor connected between the input and the output, an option-G is available.

Calculated in accordance with the Telcordia reliability prediction procedure Issue 4 of SR-332, at 100% load and at +25C ambient temperature the MGF40 series has a very high MTBF of 3,153,843 hours, and 675,688 hours at +60C ambient. Calculations are at ground fixed, controlled (GB).

Built with robustness in mind, the MGF40 series has been tested to sustain rough conditions and has passed three axis vibration testing equivalent to 10G and shock testing of 50G.

Housed in a metallic six sided, shielded case with high attenuation input filter, the MGF40 series offers excellent EMI performance, with figures being far below the EN55032:2012 Class A in conduction and radiated emission at 3 meters. The brass, nickel plated housing measures an industry standard 25.4 x 25.4 x 9.9 mm (1 x 1 x 0.39 inch) and the unit uses lead-free plated copper pins. The product weighs just 30 grams.

The MGF40 has an input-output isolation of 1500VDC, an input and output to case isolation of 1000VDC, and is UL62368-1, C-UL [CSA62368-1) and EN62368-1 approved.

Combining high reliability, low conducted and radiated emission levels, high power performance levels and a wide range of products able to power from 4.5V up to 76V, the MGF40 series is the ideal power solution for industrial, IoT, mobile equipment and demanding applications.



Cosel's high reliability 40W DC/DC converters MGF40 series for demanding applications

Related links:

<https://en.cosel.co.jp/product/powersupply/MGFS/MGFS40/>

<https://en.cosel.co.jp/product/powersupply/MGF40/MGF40/>



About Cosel:

Established in Japan 1969, COSEL is one of the world's leading designers and manufacturers of high performance AC-DC Power Supplies, DC-DC Converters and EMI Filters. With quality, reliability & flexibility as our main focus, we pride ourselves on developing some of the highest quality and most reliable products seen anywhere in the world today. The Cosel Group is a \$284m global company employing some 790 staff with sales offices throughout Japan, Asia, Europe and North America. Our product range is aimed mostly at demanding applications within the Industrial, Factory Automation, Medical, Telecoms, Lighting, Audio/Broadcast & Renewable Energy sectors. A flexible approach with full in-house design means we deliver products using the very latest technology meeting the growing demands of our customers.

Note to the Editors:

The Cosel Group includes the European power specialist Powerbox International AB, which has been acquired June 25, 2018 by COSEL.

For more information contact:

Press and media relations

Patrick Le Fèvre

Phone: +46 (0) 158 703 00

E-mail: marcom@prbx.com

Reference :

COSEL PR-19:001-EN MGF40