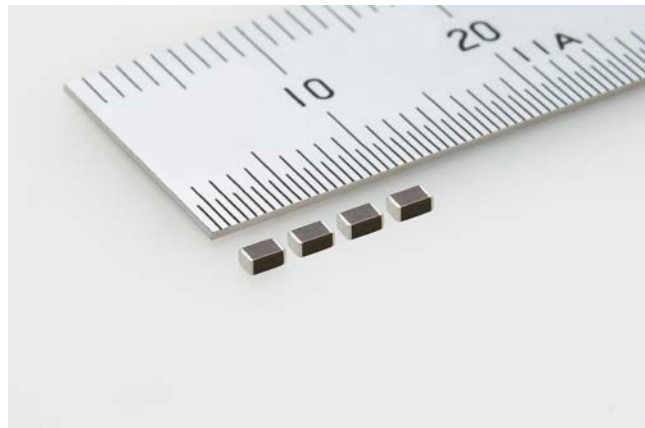


For Immediate Release

TAIYO YUDEN Starts the Commercialization of World's First Multilayer Metal Power Inductor

Providing a New Series of Metal Power Inductor MCOIL™ that is Smaller and Thinner than Wire-wound Inductors



TOKYO, December 19, 2013 – TAIYO YUDEN CO., LTD. announces the development of the world's first multilayer-type metal multilayer chip power inductor MCOIL™ MC series, which is a power inductor using a metallic magnetic material.

TAIYO YUDEN plans to start production of “MCKK2012” (2.0 x 1.2 x 1.0mm) in January 2014, followed by the production of “MCKK2016” (2.0 x 1.6 x 1.0mm) and “MCFK1608” (1.6 x 0.8 x 0.6mm, the maximum height value in each size). These power inductors products are best suited for choke coil applications developed for use in power supply circuits used on small mobile devices such as smartphones and wearable devices. By making full use of its proprietary, state of the art material technology, thin film technology, and multilayer technology, TAIYO YUDEN has successfully commercialized multilayer inductors. Our road map for these components will further take advantage of these technologies and develop even smaller and thinner sized multilayer inductors. The road map includes plans to develop products that are as small and thin as the EIA 0402 size.

Production of the metal multilayer chip power inductor MCOIL™ MC series will commence at our subsidiary company, Chuki Seiki Co., Ltd. in Japan's Wakayama prefecture from January 2014 at a production rate of 30 million units per month. TAIYO YUDEN plans a sequential production increase for MCOIL™ MC series and the total production rate is expected to reach 100 million per month in the first half of FY2014.

The sample price is 50 yen per unit.

Technology Background

In today's market for products like smartphones there is a strong demand for more and more technologies needed to solve critical requirements such as improved performance, better functionality, longer battery life and smaller size. In order to properly meet these market demands the development of multi-core application processors is being promoted, which requires a power supply circuit to be loaded in each core.

As we see an increase in power supply circuits resulting from the promotion of multi core products there is a need to offer high-efficiency power supply circuits that are small and thin, compatible with larger current values and make efficient use and control of the mounting area. This results in a longer battery life. Contrary to this, conventional ferrite power inductors used in power supply circuits are challenged and DC bias characteristics are at risk and the proper supply of high current is worsened when the size is reduced.

To address this critical market need, TAIYO YUDEN developed the metal power inductor MCOIL™ that has extremely high DC bias characteristics while having a small and thin structure, and started the production of wire-wound inductors in 2012. The new multilayer inductors that are currently being commercialized have a high flexibility in regards to their shape due to their structural characteristics, and are more advantageous than the wire-wound type because of their small and thin size. TAIYO YUDEN will continue to make further additions to its product lineup by aiming at development of products that are as small and thin as the EIA 0402 size

We will continue to actively promote the product development of the metal multilayer chip power inductor MCOIL™ MC series and similar products that will meet the demand of smaller size from the ever-expanding market of smartphones and wearable devices.

* “MCOIL” is a registered trademark or a trademark of TAIYO YUDEN CO., LTD. in Japan and other countries.

■ Application

Choke coil applications for power supply circuits of small mobile devices typified by smartphones and wearable devices.

[Metal Multilayer Chip Power Inductors (MCOIL™, MC series)]

An example of Characteristics of MCKK2012

Part number	Nominal inductance [μH]	DC resistance [mΩ] (typ)	Saturation current [A] (typ)	Temperature rise current [A] (typ)
MCKK2012TR47M	0.47	53	3.1	2.1