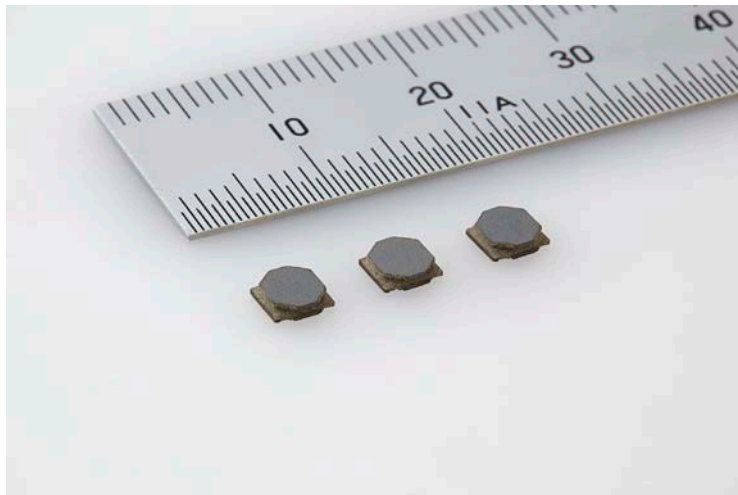


For immediate Release

TAIYO YUDEN Expands Its Lineup of the Metal Power Inductor MCOIL™

Achieving a Reduction in the DC Resistance by 20% of the Company's Previous Product, Thereby Preventing the Generation of Heat in Power Supply Circuits



Tokyo, May 15, 2014 — TAIYO YUDEN CO., LTD. today announced the addition of eight items including the “MDMK4040T1R0MM” (4.0 x 4.0 x 1.2mm, the maximum height value), which has an approximately 20% reduced DC resistance than the company’s previous product, to its metal core SMD power inductors (MCOIL™, MD Series).

This product is a power inductor for choke coil applications developed for use in power supply circuits of tablet devices as well as HDDs and SSDs. While this product retains the high DC bias characteristic, which is a key feature of the metal power inductor MCOIL™ using the company’s proprietary metallic magnetic materials, the DC resistance has been reduced by approximately 20% from 47 mΩ to 36 mΩ as compared to TAIYO YUDEN’s previous product “MDMK4040T1R0MF” (4.0 x 4.0 x 1.2mm, inductance value of 1.0 μH), and the temperature rise current has been increased by approximately 30% from the conventional 3.5 A to 4.5 A.

Production commenced in April 2014 at the company’s Nakanojo Plant in Gunma Prefecture, Japan at a production rate of 10 million units per month for the entire “MDMK4040 series”. The sample price is 50 yen per unit.

Technology Background

The metal power inductor MCOIL™, which is one of the super high-end products of TAIYO YUDEN, achieves an extremely high DC bias characteristic with a small and thin structure, and has gained popularity in choke coil applications developed for use in power supply circuits of smartphones as well as small and thin digital devices. The “MDMK4040” that has currently been added to the lineup is being adopted in tablet devices as well as HDDs and SSDs.

With continuing advancements in high-definition screens and thinner casing of tablet devices, the use of the metal power inductor, which is compatible with high current values, is being promoted as the power inductor in power supply circuits. Also, due to the fact that storages such as HDD and SSD are sensitive to heat, power supply circuits with low amounts of heat generation are required.

In view of this, TAIYO YUDEN has revised the core design of the “MDMK4040”, and has been able to prevent the generation of heat and improve the temperature rise current by reducing the DC resistance.

We will continue to actively promote the product development of the metal power inductor MCOIL™ and expand its lineup to address the ever-growing demand of the market.

* “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 tablet devices as well as HDDs and SSDs

The lineup of the currently commercialized metal core SMD power inductor “MCOIL™ MD Series” is as shown below.

Part number	Nominal inductance [μH]	DC resistance [mΩ] (max.)	Rated current [mA]			
			Saturation Current		Temperature Rise Current	
			max.	typ.	max.	typ.
MDMK4040TR68MM	0.68	29	6700	7800	5000	5700
MDMK4040T1R0MM	1.0	36	5000	6200	4500	5100
MDMK4040T1R5MM	1.5	65	4500	5600	3200	3600
MDMK4040T2R2MM	2.2	79	3800	4500	2800	3200
MDMK4040T3R3MM	3.3	130	3200	4000	2200	2500
MDMK4040T4R7MM	4.7	160	2500	3000	1900	2200
MDMK4040T6R8MM	6.8	230	1900	2200	1600	1800
MDMK4040T100MM	10	330	1700	2000	1400	1600