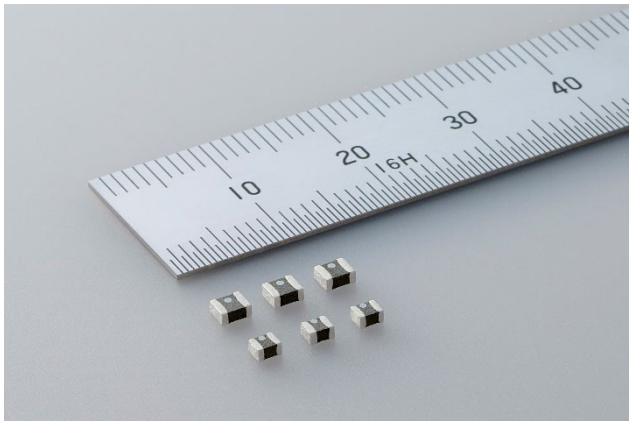
For immediate release

TAIYO YUDEN Launches Automotive Metal Power Inductor MCOIL™ LCEN Series

Achieving industry-leading DC superposition characteristics and a low DC resistance



TOKYO, June 27, 2022—TAIYO YUDEN CO. LTD. has announced today the launch of the wire-wound metal power inductor MCOIL™ LCEN series. Qualified for AEC-Q200 (reliability qualification test standard for automotive passive components), the series consists of 13 items in two sizes, including the LCENA2016MKTR24M0NK (2.0x1.6x1.2 mm, height is the maximum value).

This power inductor product is designed for use as a choke coil in power supply circuits for automotive body and information systems.

The AEC-Q200 qualified wire-wound metal power inductor MCOIL™ LCEN series is designed based on the metal power inductor MCOIL™ ME series, and maintains its advantages of a large current and a low DC resistance. The LCENA2016MKTR24M0NK (inductance: 0.24 μH) simultaneously features industry-leading DC superposition characteristics (saturation current at 6.8 A) and a low DC resistance (18 mΩ) (both are the maximum values), contributing to the downsizing and power consumption reduction of power supply circuits for ADAS units and instrument clusters, which are increasingly being upgraded with greater functionality and performance.

Production of the product commenced at our subsidiary company, FUKUSHIMA TAIYO YUDEN CO., LTD. (Date-shi, Fukushima prefecture, Japan) from May 2022 with a sample price of 50 yen per unit.

Technology Background

Vehicles produced recently are equipped with an ever greater number of electronic control units, typified by ADAS units. As a result, more power supply circuits are required, boosting the demand for power inductors used in those power supply circuits. In addition, instrument clusters and other information systems are increasingly being upgraded with greater functionality and performance, furthering the need for high-current electronics components capable of driving high-performance ICs.

In response to this requirement, TAIYO YUDEN has launched the AEC-Q200 qualified LCEN series based on the metal power inductor MCOIL™ ME series, which has been highly proven in the smartphone market, and maintains its advantages of a large current and a low DC resistance in a compact size.

TAIYO YUDEN focuses on the development of products that meet market needs, and will continue to expand its power inductor product lineup.

■Application

Choke coils in power supply circuits for automotive body systems as well as information systems, typified by ADAS units and instrument clusters

■Characteristics

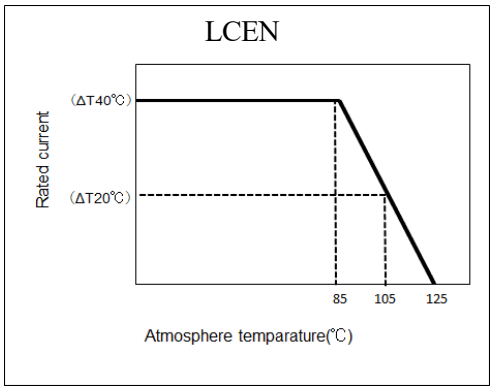
Part number	Size (LxW) [mm]	H [mm] max.	Nominal inductance [µH]	Inductance tolerance [%]	Rated current*3 [A] max.		DC resistance [Ω] max.	Operating Temp. Range [°C]
					Saturation current Idc1*1	Temperature rise current Idc2*2		
LCENA2016MKTR24M0NK	2.0x1.6	1.2	0.24	±20	6.8	5.5	0.018	-40～+125
LCENA2016MKTR33M0NK			0.33	±20	5.4	4.9	0.022	
LCENA2016MKTR47M0NK			0.47	±20	4.8	4.7	0.025	
LCENA2016MKT1R0M0NK			1.0	±20	3.1	3.2	0.045	
LCENA2016MKT2R2M0NK			2.2	±20	2.2	1.8	0.120	
LCENA2520MKTR15M0NK	2.5x2.0	1.2	0.15	±20	10.2	6.7	0.009	
LCENA2520MKTR33M0NK			0.33	±20	7.0	5.6	0.015	
LCENA2520MKTR47M0NK			0.47	±20	5.9	5.0	0.020	
LCENA2520MKT1R0M0NK			1.0	±20	4.4	3.2	0.042	
LCENA2520MKT1R5M0NK			1.5	±20	3.3	2.8	0.057	
LCENA2520MKT2R2M0NK			2.2	±20	3.0	2.4	0.077	
LCENA2520MKT3R3M0NK			3.3	±20	2.3	1.8	0.131	
LCENA2520MKT4R7M0NK			4.7	±20	2.1	1.5	0.185	

*1 The saturation current value (Idc1) is the DC current value having inductance decrease down to 30%. (at 20°C)

*2 The temperature rise current value (Idc2) is the DC current value having temperature increase up to 40°C. (at 20°C)

*3 The rated current is the DC current value that satisfies both of current value saturation current value and temperature rise current value.

* Derating of rated current is necessary depending on the ambient temperature. Derate the current to use by referring to the following graph.



For the detailed product lineup, refer to TAIYO YUDEN's Web site:
https://ds.yuden.co.jp/TYCOMPAS/ap/lineupDetail?cid=L&u=M&Seri=ME_C

* “MCOIL” is a registered trademark or a trademark of TAIYO YUDEN CO., LTD. in Japan and other countries.
*The names of series noted in the text are excerpted from part numbers that indicate the types and characteristics of the products, and therefore are neither product names nor trademarks.

Note: Products are tested based on the test conditions and methods defined in AEC-Q200. Please consult with TAIYO YUDEN for details of the product specifications and AEC-Q200 test results, etc., and please review and approve TAIYO YUDEN's product specifications before ordering.

TAIYO YUDEN CO., LTD. Product Inquiries: https://www.yuden.co.jp/ap/contact/