

For Immediate Release

TAIYO YUDEN Adds a Product to Its Automotive SMD Power Inductor Line-Up
Downsized, with a heat resistance of 150°C and mechanical strength against 30G vibrations maintained



TOKYO, May 1, 2018—TAIYO YUDEN CO., LTD. has announced today the mass-production of the AEC-Q200-compliant SMD power inductor EST0645 (6.3 x 6.1 x 4.5 mm).

This product is a power inductor for choke coils and filters in DC-DC converters, which are power supply circuits used in automotive powertrain components such as engines and transmissions.

By sophisticating material technology and structural design that we have nurtured over the years, TAIYO YUDEN has successfully downsized EST1060 (10.1 x 10.0 x 6.0 mm), which we commercialized in March 2017, to 6-mm square, with a heat resistance of 150°C and a mechanical strength against 30G vibrations maintained, realizing approximately 71% downsizing in volume. Furthermore, a unique Data Matrix code is printed on each unit, which allows individual traceability through processes.

Shipment of product samples started in April 2018, and commercial production will start at FUKUSHIMA TAIYO YUDEN CO., LTD. (Date-City, Fukushima Prefecture, Japan). The sample price is 80 yen per unit.

Technology Background

Vehicles produced recently are equipped with a greater number of electronic control units (ECUs) such as ADAS, which require more power supply circuits. This has resulted in increasing demands for power inductors used in such circuits. In particular, since more ECUs are installed in the engine room, subject to high temperatures, electronic components used in the ECUs must possess high heat and vibration resistance.

By sophisticating material technology and structural design we have nurtured over the years, TAIYO YUDEN has downsized EST1060 in our same product series to 6-mm square, with a heat resistance of 150°C and mechanical strength against 30G maintained as they are. Furthermore, we are promoting the visualization of manufacturing processes to strengthen quality control. As part of this activity, we print a unique Data Matrix code on the product, piece by piece, to ensure traceability of each unit during manufacturing.

TAIYO YUDEN focuses on the development of products that meet market needs, and will continue to improve the performance of SMD power inductors.

■ Applications

Choke coils for automotive powertrain components such as engines and transmissions

■ Characteristics of the SMD power inductor released on this occasion are shown below.

Product name	Inductance [μH]	Inductance allowance	DC resistance [mΩ] max.	Rated current [A] max.	
				DC saturation allowable current	Temperature rise allowable current
EST0645T1R0NDGA	1.0	±30	9	6.7	5.2
EST0645T1R5NDGA	1.5		10	5.5	5.0
EST0645T2R2NDGA	2.2		13	4.2	4.3
EST0645T3R3NDGA	3.3		15	3.5	4.0
EST0645T4R7NDGA	4.7		20	3.1	3.4
EST0645T6R8NDGA	6.8		29	2.5	3.0
EST0645T100MDGA	10	±20	38	2.0	2.6
EST0645T150MDGA	15		64	1.7	2.0
EST0645T220MDGA	22		79	1.3	1.8
EST0645T330MDGA	33		100	1.1	1.6
EST0645T470MDGA	47		135	0.85	1.4
EST0645T680MDGA	68		210	0.8	1.1
EST0645T101MDGA	100		320	0.55	0.85
EST0645T150MDGA	150		475	0.5	0.72
EST0645T221MDGA	220		670	0.44	0.6
EST0645T331MDGA	330		950	0.36	0.47

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

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