

## Inductors

### Miniaturized transponder coil with high sensitivity for tire pressure monitoring systems

- 30 percent smaller footprint than its predecessor
- High sensitivity of nearly 25 mV/μT despite miniaturization
- Qualified to AEC-Q200

March 13, 2018

TDK Corporation presents the miniaturized TPLC553030-592H automotive transponder coil for tire pressure monitoring systems (TPMS) that operate at a center frequency of 125 kHz. With its dimensions of just 5.5 mm x 3.0 mm x 3.0 mm, the new component features a footprint that is 30 percent smaller than its predecessor. Thanks to its optimized core geometry and material, the miniaturized component achieves a high sensitivity of nearly 25 mV/μT, which allows TPMS initialization at the same distance as its 8-mm predecessor. The new transponder coil has an inductance of 5.89 mH with a minimum Q value of 35 and a maximum DC resistance of 70 Ω. The AEC-Q200 qualified and RoHS-compatible component features a wide temperature range from -40 °C to +125 °C.

-----

#### Main applications

- Tire pressure monitoring systems (TPMS)

#### Main features and benefits

- 30 percent smaller footprint than its predecessor
- High sensitivity of nearly 25 mV/μT despite miniaturization
- Qualified to AEC-Q200

#### Key data

Type	Dimensions [mm]	Inductance [mH] @125 kHz	Q @125 kHz	DC resistance [Ω]
TPLC553030-592H	5.5 x 3.0 x 3.0	5.89 ±3%	35 (min.)	70 (max.)

-----

## About TDK Corporation

TDK Corporation is a leading electronics company based in Tokyo, Japan. It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's portfolio includes passive components, such as ceramic, aluminum electrolytic and film capacitors, ferrites and inductors, high-frequency products, and piezo and protection components, as well as sensors and sensor systems and power supplies. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK's further main product groups include magnetic application products, energy devices, and flash memory application devices. TDK focuses on demanding markets in the areas of information and communication technology and automotive, industrial and consumer electronics. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2017, TDK posted total sales of USD 10.5 billion and employed about 100,000 people worldwide.

-----

You can download this text and associated images from [www.global.tdk.com/corp/en/news\\_center/press/20180313\\_01.htm](http://www.global.tdk.com/corp/en/news_center/press/20180313_01.htm).

Further information on the products can be found under [https://product.tdk.com/info/en/catalog/datasheets/transpondercoil\\_automotive\\_tplc55\\_en.pdf](https://product.tdk.com/info/en/catalog/datasheets/transpondercoil_automotive_tplc55_en.pdf).

-----

## Contacts for regional media

Region	Contact		Phone	Mail
Japan	Mr. Yoichi OSUGA	TDK Corporation Tokyo, Japan	+813 6852-7102	<a href="mailto:pr@jp.tdk.com">pr@jp.tdk.com</a>
ASEAN	Ms. Jiang MAN Ms. Pei Lu LEE	TDK Singapore (Pte) Ltd. Singapore	+65 6273 5022	<a href="mailto:asean.inquiry@sg.tdk.com">asean.inquiry@sg.tdk.com</a>
Greater China	Ms. Clover XU	TDK China Co., Ltd. Shanghai, China	+86 21 61962307	<a href="mailto:pr@cn.tdk.com">pr@cn.tdk.com</a>
Europe	Mr. Frank TRAMPNAU	TDK Europe GmbH Duesseldorf, Germany	+49 211 9077 127	<a href="mailto:frank.trampnau@eu.tdk.com">frank.trampnau@eu.tdk.com</a>
America	Ms. Sara M. LAMBETH	TDK Corporation of America Irving, TX, USA	+1 972-409-4519	<a href="mailto:sara.lambeth@us.tdk.com">sara.lambeth@us.tdk.com</a>