



Toshiba drives next-generation automotive electrification with a cost-effective gate driver IC for three-phase BLDC motors

Delivers system design flexibility and robust operation, supporting single-shunt operation

Düsseldorf, Germany, 18th November 2025 – Toshiba Electronics Europe GmbH (“Toshiba”) announces commercial sample shipments of its innovative gate driver IC, the [TB9084FTG](#), tailored for three-phase brushless DC (BLDC) motors. These motors are indispensable for a variety of essential on-board functions across diverse automotive applications, including automotive body systems such as power sliding doors, power back doors (power tailgates), and power seats, as well as electric pumps, fans, and motor generators.

The automotive industry continues its rapid transition, electrifying numerous mechanical systems with electric motors to enhance the user experience. This shift has also accelerated the replacement of traditional brushed DC motors with quieter, more efficient and longer-lasting BLDC motors, a trend the TB9084FTG is specifically designed to support.

Based on the TB9083FTG, the new IC integrates essential functions for three-phase brushless motor drive, including a built-in charge pump circuit, a one-channel motor current sense amplifier, an oscillation circuit, an SPI communication circuit, and various sophisticated abnormality detection circuits.

The gate driver IC plays a crucial role in equipment miniaturisation. Its streamlined core functions enable the use of a compact 6 x 6mm VQFN36 package with a reduced pin count compared to TB9083FTG. This smaller package was made possible by a reduced chip size, achieved through an optimised circuit architecture.

The TB9084FTG also boasts exceptional robustness and quality, adhering to the rigorous AEC-Q100 Grade 0 reliability testing standards, with an operating ambient temperature range spanning from -40°C to +150°C. Enhancing mounting reliability, the package incorporates a wettable flank structure, which simplifies visual inspection to confirm the integrity of soldered joints.

Toshiba remains committed to advancing the electrification and safety of automotive equipment. The company will continue to expand its portfolio of gate driver ICs by continuously assessing market needs and optimising product functionalities.

Follow the link below for more on Toshiba's products for [Automotive Brushless Motor Driver ICs](#).

Follow the link for more on the new product [TB9084FTG](#).

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About Toshiba Electronics Europe

[Toshiba Electronics Europe GmbH](#) (TEE) offers European consumers and businesses a wide variety of hard disk drive (HDD) products plus semiconductor solutions for automotive, industrial, IoT, motion control, telecoms, networking, consumer and white goods applications. Next to HDDs, the company's broad portfolio encompasses power semiconductors and other discrete devices ranging from diodes to logic ICs, optical semiconductors as well as microcontrollers and application-specific standard products (ASSPs), amongst others.

In addition, TEE also offers SCiB™ battery cells and modules with lithium titanium oxide (LTO) for heavy-duty applications.

TEE has its headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services.

Visit Toshiba's websites at www.toshiba.semicon-storage.com, www.scib.jp/en and www.toshiba-tmat.co.jp/en/ for further company and product information.

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