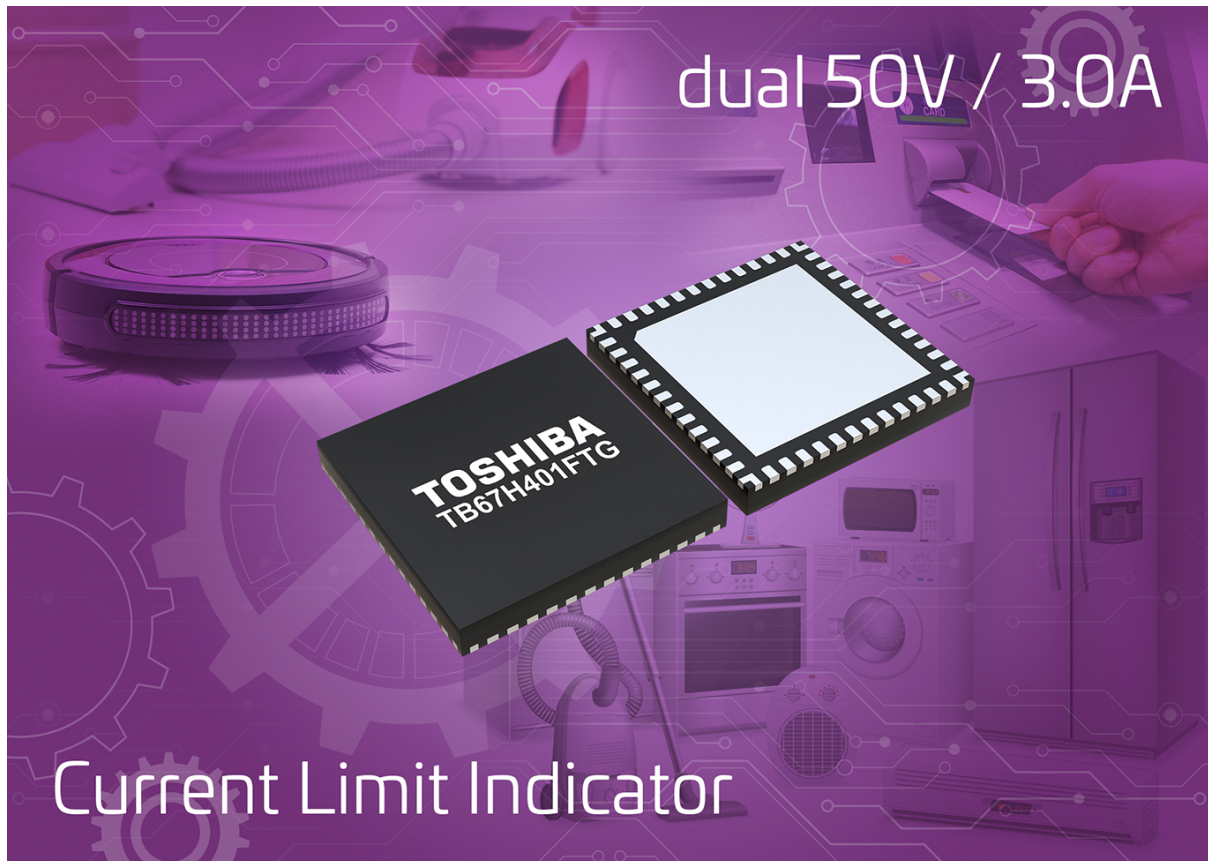


Toshiba releases DC brushed motor IC with current limit detection

Current limit signal enables feedback control



Düsseldorf, Germany, 27th September 2018 – Toshiba Electronics Europe (“Toshiba”) today announced the launch of an integrated dual H-bridge DC brushed motor driver IC that includes an output current limit function rated at 50V / 3.0A. The new TB67H401FTG device is suited to any application where monitoring and feedback of the motor state is necessary, including office equipment, ATMs, home appliances, robotic cleaners and more.

All of these devices have grown rapidly in popularity in recent years and usually incorporate DC brushed motors. Until now the safe control of DC brushed motors has been accomplished by limiting the upper value of the motor current through a constant current limit. The over current is generated by the motor lock and is read from an external resistor through external circuitry that consists of operational amplifiers and comparators, thereby increasing the component count and circuit complexity.

The highly integrated TB67H401FTG is fabricated with Toshiba’s BiCD process and has an inbuilt flag output circuit, which monitors the current state and indicates that the current has reached the upper threshold. As this function is now included, the external circuitry is no longer required and motor solutions are smaller, more efficient and have reduced BOM costs.

The TB67H401FTG supports a total of four drive modes; forward (CW), reverse (CCW), brake (short brake) and stop (off). The new driver IC also includes a mode switching function that extends the range of possible applications. The single-bridge mode supports a single channel current up to 6.0A and a dual-bridge mode allows the use of two motors with a single IC driving up to 3.0A per motor.

The low on-resistance MOSFETs incorporated into the H-bridge (High side + Low side = 0.49Ω typ.) ensure low losses and efficient operation. Due to an internal 5V regulator, the device can be driven from a single power supply.

The tiny device is housed in a 7mm x 7mm x 0.9mm QFN48 package and also includes thermal shutdown detection, over current protection and under voltage lockout. A general error detection signal enhances system safety by providing a warning to the main system controller.

The TB67H401FTG is ready for mass production.

Follow the link below for more information on the new product and to download the datasheet, please visit

<https://toshiba.semicon-storage.com/eu/product/linear/motordriver/detail.TB67H401FTG.html>

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About Toshiba Electronics Europe

[Toshiba Electronics Europe GmbH](#) (TEE) is the European electronic components business of [Toshiba Electronic Devices and Storage Corporation](#). TEE offers European consumers and businesses a wide variety of innovative hard disk drive (HDD) products plus semiconductor solutions for automotive, industrial, IoT, motion control, telecoms, networking, consumer and white goods applications. The company's broad portfolio encompasses integrated wireless ICs, power semiconductors, microcontrollers, optical semiconductors, ASICs, ASSPs and discrete devices ranging from diodes to logic ICs.

TEE has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing design, manufacturing, marketing and sales. Company president is Mr. Tomoaki Kumagai

For more company information visit TEE's web site at www.toshiba.semicon-storage.com.

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September 2018

Ref. 7172/A