



Toshiba releases new three-phase brushless fan motor driver IC

New device has a closed loop rotation speed control function

Düsseldorf, Germany, 22nd May 2018 – Toshiba Electronics Europe (“Toshiba”) today announced the launch of the TC78B025FTG, a three-phase brushless motor driver IC with a rotation speed control (closed loop control) function. The new device is intended for small fan applications in servers, home appliances and industrial equipment.

The cooling fans used in servers and other must be small and rotate at high speeds with uniform accuracy. Uniformity is best achieved by using a speed-feedback method to suppress fluctuations in rotation speed caused by changes in the power supply voltage and load. Until now, this has required the use of microcomputers, but Toshiba’s new solution achieves flexible rotation speed control without external microcomputers by incorporating a non-volatile memory (NVM). This allows easy system configuration and supports motor speeds from hundreds to tens of thousands of rotations per minute (RPM) especially as Toshiba’s intelligent phase control (InPAC) motor drive technology realizes efficient driving across a wide rotation range without requiring adjustment.

The device operates from a power supply in the range 4.5V to 16V and provides a sine-wave drive with 150-degree commutation. Industry-leading low ON resistance of 0.2Ω (typ.) (total of high and low sides) reduces the IC’s self-heating during operation, thereby extending support

to large current drives. Speed is controlled by a simple PWM signal or an analog voltage input. In built protections include thermal shutdown, over current protection and motor lock detection. The device is housed in a VQFN24 package measuring just 4mm x 4mm x 0.9mm.

In addition, the TC78B025FTG implements a 1-Hall drive system and current sense resistor-elimination system (Advanced Current Detection System - ACDS) to reduce the number of external components and contribute to space saving on PCBs.

Mass production started in April.

###

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.

Formed in 1973 in Neuss, Germany, TEE has headquarters in Düsseldorf, Germany, with branch offices in Germany, France, Italy, Spain, Sweden and the United Kingdom providing design, manufacturing, marketing and sales. Company president is Mr. Akira Morinaga.

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

Contact details for publication:

Toshiba Electronics Europe GmbH, Hansaallee 181, D-40549 Düsseldorf, Germany

Tel: +49 (0) 211 5296 0 Fax: +49 (0) 211 5296 79197

Web: www.toshiba.semicon-storage.com/eu/company/news.html

E-mail: solution-marketing@toshiba-components.com

Contact details for editorial enquiries:

Michelle Shrimpton, Toshiba Electronics Europe GmbH

Tel: +44 (0)193 282 2832

E-mail: MShrimpton@teu.toshiba.de

Issued by:

Birgit Schöniger, Publitek

Tel: +44 (0) 20 8429 6554

Web: www.publitek.com

E-mail: birgit.schoeniger@publitek.com

May 2018

Ref. 7139/A