2-Phase Stepping Motor Driver IC from Toshiba Fully Addresses Automotive Sector Requirements

Featuring mixed decay mode in order to maintain current waveform stability

Düsseldorf, Germany, 16 July 2020 – Toshiba Electronics Europe GmbH ("Toshiba") has introduced the TB9120AFTG. This constant-current 2-phase bipolar stepping motor driver, which is designed for automotive use, can significantly streamline motor system implementations. It delivers a sine-wave output signal (with up to 1/32 incremental steps supported) while requiring only a simple clock input. The need for a sophisticated microcontroller unit (MCU) or dedicated software is thereby avoided.

Each of the AEC-Q100-compliant TB9120AFTG driver ICs incorporates low on-resistance DMOS FETs, and can deliver a 1.5A (maximum) current. Thanks to the large number of micro-steps they support, motor noise can be significantly reduced, with smoother operation and more precise control being benefited from. The built-in mixed decay mode helps to stabilize the current waveforms. Numerous protection mechanisms are incorporated, these include over-current and over-temperature detection, plus thermal shutdown. There is also a stall detection function.

These devices are supplied in compact VQFN packages (with 6.0 mm x 6.0mm dimensions) featuring wettable flanks to allow the use of automated optical inspection (AOI) for ensuring the quality of solder joints. They support an operational temperature range covering -40°C to 125°C. Key applications include battery management systems, or refrigeration circuit expansion valves for air conditioning.

For more information on the new TB9120AFTG, please visit:

https://toshiba.semicon-storage.com/eu/semiconductor/product/automotive-devices/detail.TB9120AFTG.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 (Toshiba). 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, 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. The 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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