

TMC246

Microstep Driver for
up to 1.5A
with stallGuard™

INFO The TMC246 is a smart power microstepping driver for bipolar stepper motors. The integrated unique sensorless stall detection stallGuard™ makes it a good choice for applications where a reference point is needed, but where a switch cannot be used. The ability to predict an overload makes the TMC246 an optimum choice for drives, where a high reliability is desired. It provides an SPI™ interface as well as the classical analog / digital control. A full set of protection and diagnostic features makes this device very rugged. The integrated low-RDS-ON TrenchFET® power MOSFETs give an extremely high efficiency and allow driving of a high motor current of up to 1.5A per phase without cooling measures even at high environment temperatures.

The small footprint and high efficiency make the device a perfect solution for embedded motion control and even for battery powered designs.

MAIN CHARACTERISTICS

- sensorless stall detection StallGuard™
- full protection and diagnostics
- low power dissipation
- 16 times microstepping via SPI, 64 times using additional shift register, even more via analog control
- mixed decay for smooth operation
- programmable slope control for low EME
- internal or external chopper clock
- standby and shutdown mode

INTERFACE

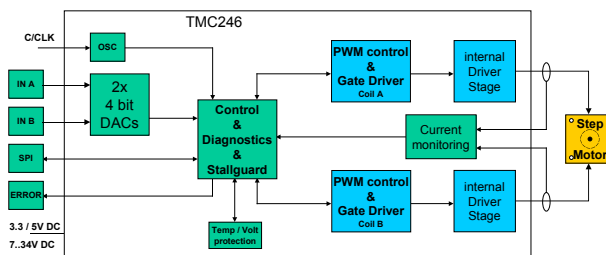
- easy-to-use SPI™ interface
- classical analog interface

ELECTRICAL DATA

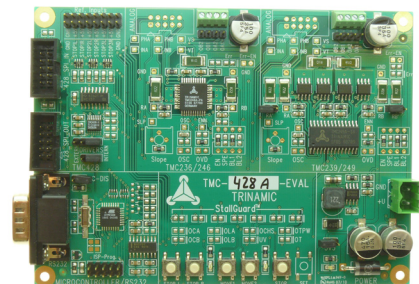
- up to 1500 mA coil current (peak)
- 7V to 34V motor supply (TMC246A)
- 3.3V or 5V operation for digital part

PACKAGE

- standard PQFP-44 package
- RoHS compliant



1.0 mm



ORDER CODE	DESCRIPTION
TMC246A-PA	1.5A driver with stallGuard™, PQFP-44
TMC428A-EVAL	Evaluation board for TMC428, TMC246A and TMC249A with stallGuard™