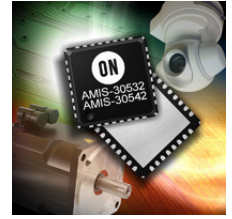


Product Overview

AMIS-30532: Microstepping motor driver

For complete documentation, see the data sheet.



The AMIS-30532 is a micro-stepping stepper motor driver for bipolar stepper motors. The chip is connected through I/O pins and an SPI interface with an external microcontroller. It has an on-chip voltage regulator, reset-output and watchdog reset, able to supply peripheral devices. The AMIS-30532 contains a current-translation table and takes the next micro-step depending on the clock signal on the NXT input pin and the status of the DIR (=direction) register or input pin. The chip provides a so-called speed and load angle output. This allows the creation of stall detection algorithms and control loops based on load-angle to adjust torque and speed. It is using a proprietary PWM algorithm for reliable current control. The AMIS-30532 is implemented in I2T100 technology, enabling both high-voltage analog circuitry and digital functionality on the same chip. The chip is fully compatible with the automotive voltage requirements. The AMIS-30532 is ideally suited for general-purpose stepper motor applications in the automotive, industrial, medical, and marine environment. With the on-chip voltage regulator it further reduces the BOM for mechatronic stepper applications.

Features

- Dual H-Bridge for 2-phase stepper motors
- Programmable peak-current up to 1.6 A continuous (3.0 A short time) using a 5-bit current DAC
- On-chip current translator
- SPI interface
- Speed and load angle output
- Seven step modes from full-step up to 32 micro-steps
- Fully integrated current-sense
- PWM current control with automatic selection of fast and slow decay
- Low EMC PWM with selectable voltage slopes
- Active fly-back diodes

For more features, see the data sheet

For more information please contact your local sales support at www.onsemi.com.

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