STEVAL-SPMD250V2

1.5 A bipolar stepper motor drive module (SPMD150STP) demonstration board

Data brief

Features

- Ready-to-use board for SPMD250STP demonstration
- Easy interfacing with PractiSPIN™ software
- Simulates:
  - Normal/half-step sequence and microstepping
  - Fast/slow decay
  - Forward/reverse
  - Enable
- Phase current selectable for acceleration/deceleration ramp, running and stop mode
- Possibility to program moving and waiting time sequences
- RoHS compliant

STEVAL-SPMD250V2

Description

This STEVAL-SPMD250V2 demonstration board is designed for evaluating the performance and the features of the SPMD250STP module. The board works in conjunction with the PractiSPIN™ HW and the PractiSPIN™.spmd SW, which allow the user to operate with the SPMD250STP module.

The SPMD250STP is part of the EASY POWER™ series of fully integrated modules designed to drive bipolar permanent-magnet stepper motors.

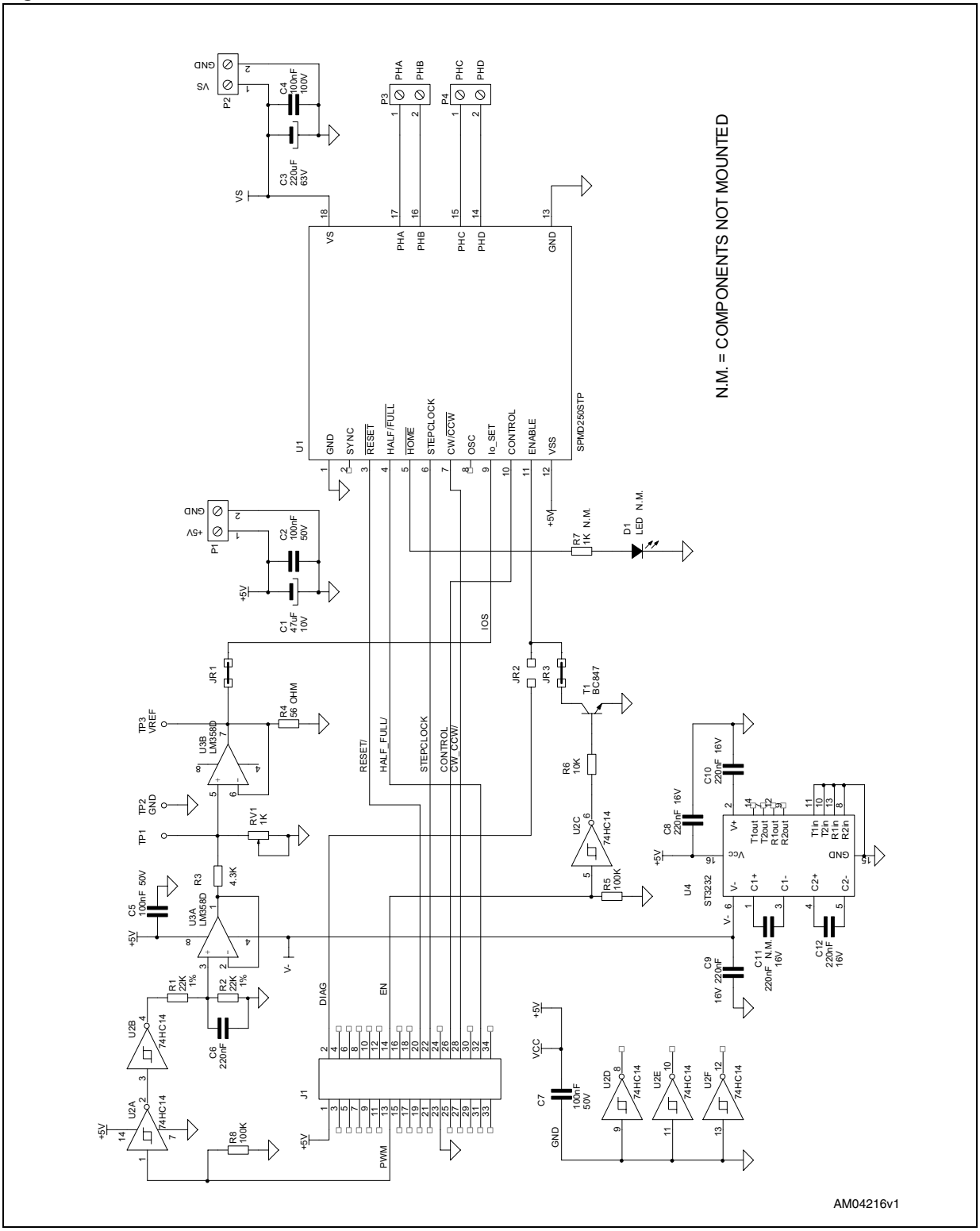
All EASY POWER modules offer an easy-to-use, fully-protected solution to implement precise position control, with high torque at rest, and without the need for external components. The module operates over a wide 12 V to 40 V input voltage range and supports an output maximum current of 2.5 A.

The SPMD250STP implements full/half-step drive capability, working at a fixed chopper frequency of 17 kHz. It is possible to select between fast and slow decay current. Home position indication is available, as well as synchronization for multi-motor applications. The module internally generates the phase sequence, significantly reducing the burden of the controller. Integration of a power MOSFET stage significantly reduces both commutation and conduction losses. The SPMD250STP offers complete output protection against all types of short conditions. The metal package acts as an integrated heatsink, with no ventilation or additional components required. The metal case also isolates the inner circuit from external agents, making the module suitable for operation in harsh environments. The STEVAL-SPMD250V1 supports the following measurements and demonstrations: full/half-step, CW/CCW, control behavior, motor current waveforms and measurements, movement sequences.

For further information contact your local STMicroelectronics sales office. www.st.com

1 Circuit schematic

Figure 1. Circuit schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
24-Nov-2010	1	Initial release.

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