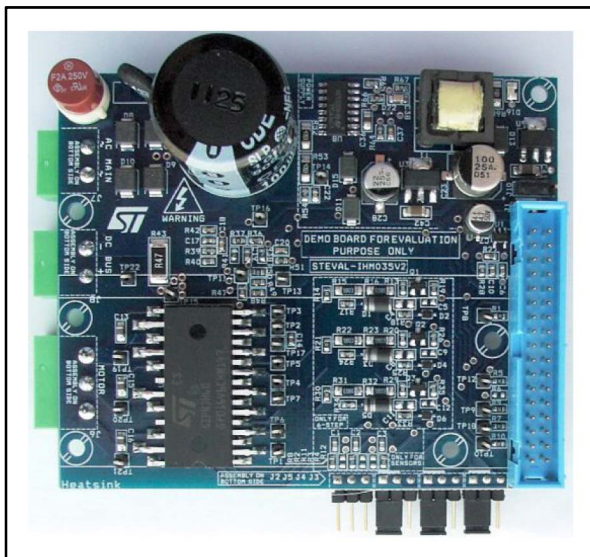


3-phase high voltage inverter power board for FOC and scalar motor control based on the STGIPN3H60 (SLLIMM™-nano)

Data brief



Description

The STEVAL-IHM035V2 is designed to drive a high voltage/low power 3-phase brushless motor, either synchronous or asynchronous (PMSM and ACIM). It provides a compact solution in terms of size and efficient power dissipation, thanks to the ST IPM STGIPN3H60 (SLLIMM™-nano). With the on-board MC-connector, the demonstration board can also be interfaced with any ST MCU control board in order to implement a complete motor drive.

Features

- Nominal power: up to 100 W
- Compatible with 3.3 V and 5 V control board
- Single shunt resistor for current reading
- On-board temperature sensor
- Overcurrent protection with boost/disabling capability
- For six-step drives:
 - Current limitation/regulation network
 - BEMF detection network
- MC connector
- Compatible with sinusoidal and trapezoidal control
- RoHS compliant

1 Schematic diagrams

Figure 1: STEVAL-IHM035V2 circuit schematic

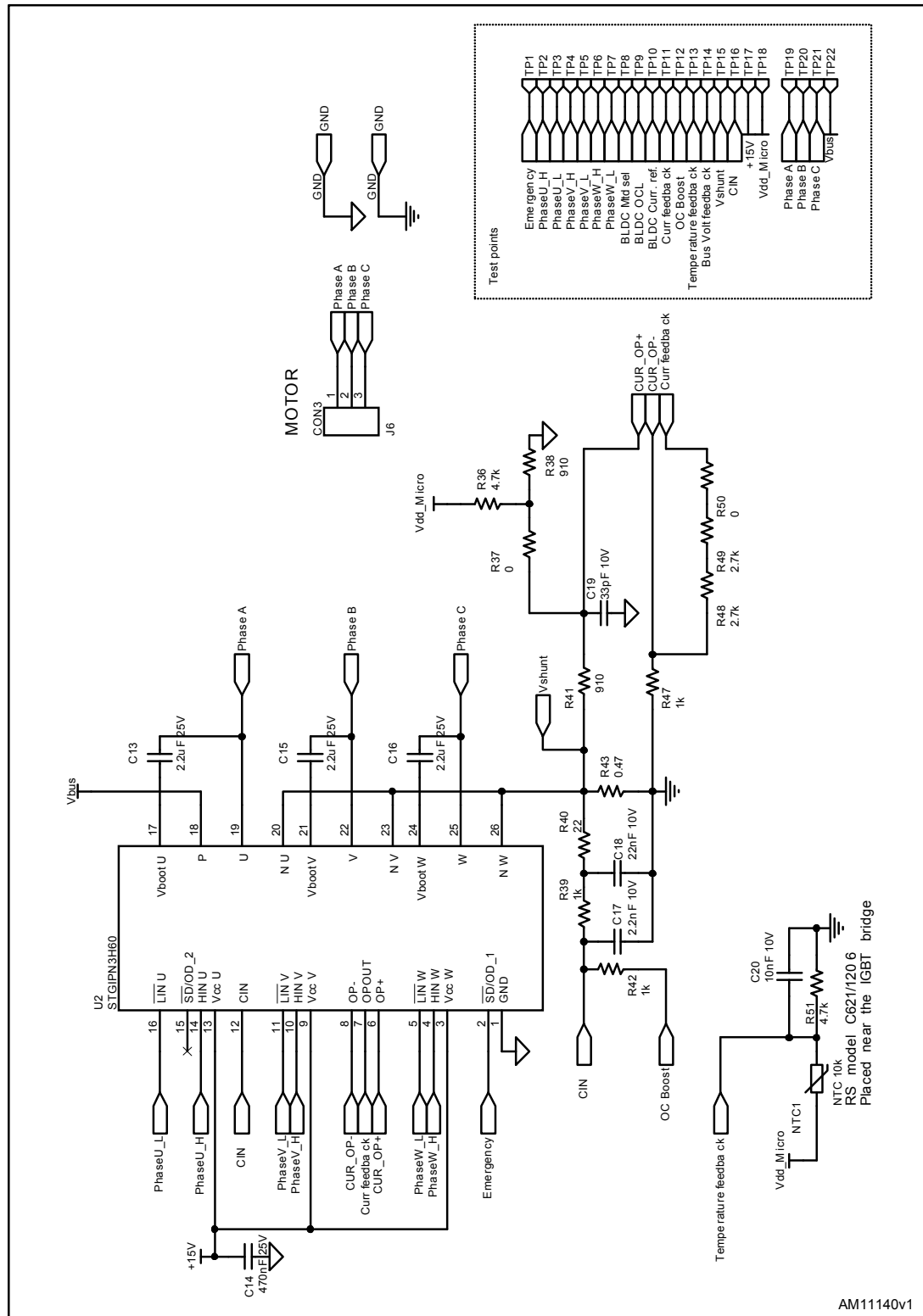
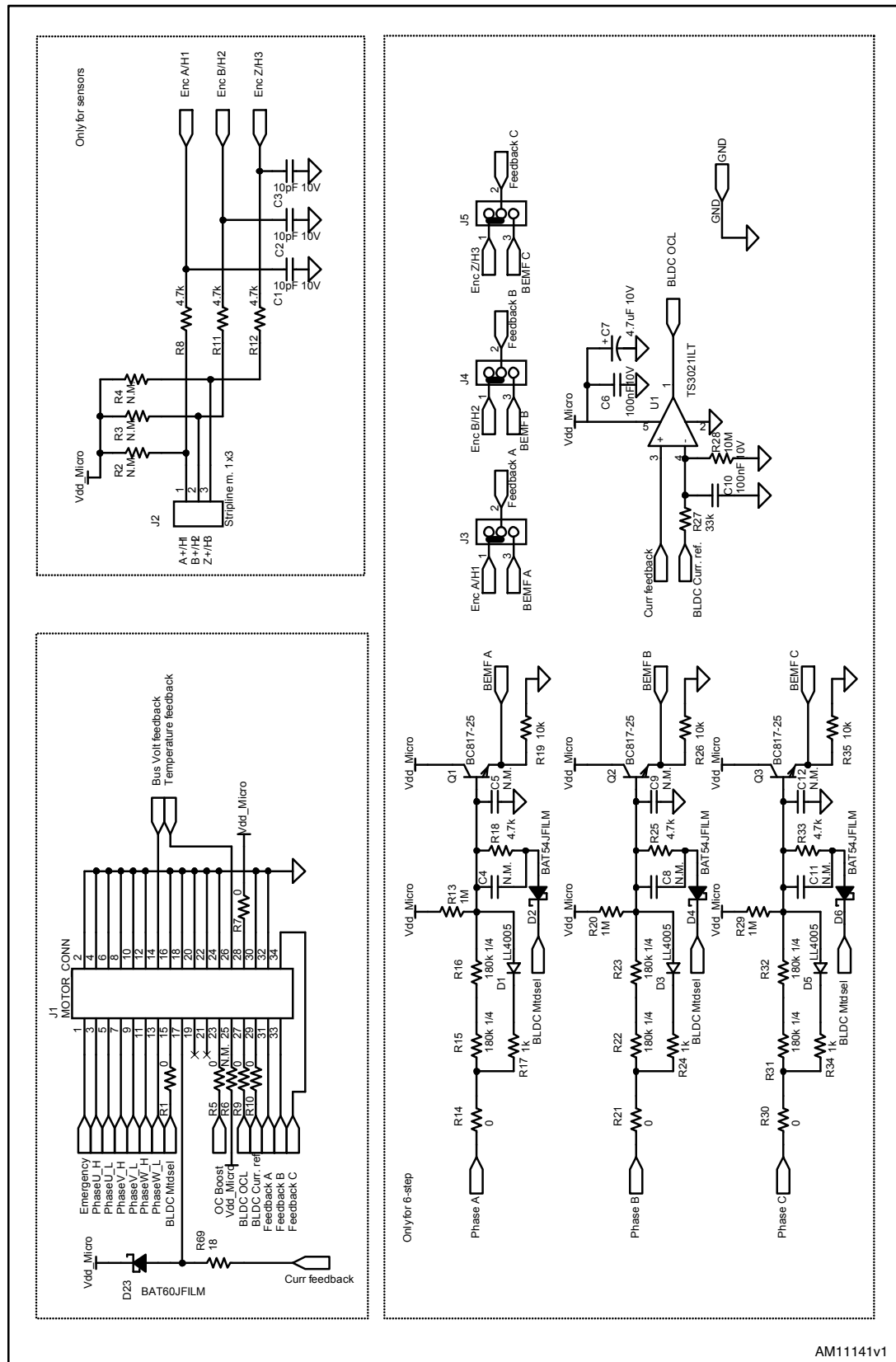
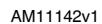


Figure 2: Sensor inputs, BEMF detecting network, motor control connector



AM11141v1

Figure 3: Power supply schematic



2 Revision history

Table 1: Document revision history

Date	Revision	Changes
22-Aug-2012	1	Initial release.

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