STEVAL-IHM035V2 schematic diagrams

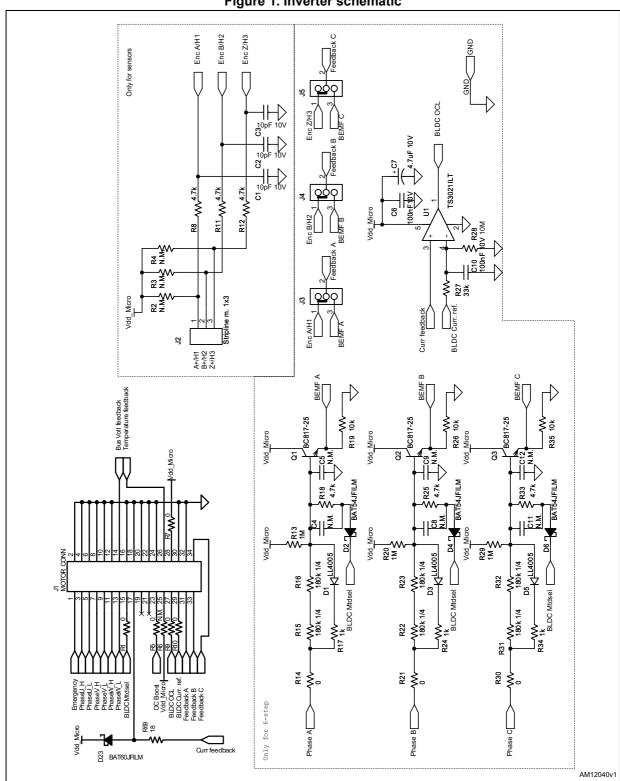


Figure 1. Inverter schematic

Vdd_Micro +5V Bus Volt feedback + + 041 10uF 3 7 D16 GREEN LED SMD LD1117 S33TR / Vin Vout 2 GND U9 LD1117 S50TR +C22 + 7.71F 10V 7.5k 1.5k 1/4W Vout P ۸ : R52 : 470k 1/4W : R53 - 470k 1/4W +C23 100uF 25V \$R54 \$8.2k + C28 22uF 25V || || C21 100uF 450V Д _{D13} STTH1L06A 1.5mH D11 STTH1L06A Vbus . D8 STTH1R04U ф _{D10} |STTH1R04U C38 220nF 225V \$ 78. \$ 58. 756 157 ф _{D7} | STTH1R04U D22 1N4148WT Д D9 |STTH1R04U C37 C37 ... 8.8 8.8 D15 STTH1L06A 1¹ C38 NTC2 50hm COMP FB / COMP / 2 A Έ 8 AC MAINS 5 snq∧ ⊢ AM12042v1

Figure 2. Power supply schematic

Figure 3. Sensor inputs, BEMF detecting network, motor control connector OC Boost OC Boost Temperature feedback Bus Volt feedback V_dd Phase A Phase B Phase C PhaseV_L PhaseW_H PhaseW_L BLDC Mtdsel BLDC OCL BLDC Curr. re Curr feedback /shun CIN Test points MOTOR %88 918 → 918 R36 4.7k Vdd_Micro R37 0 C19 =33pF 10V Vshunt R41 C13 C15 C16 R43 0.47 R40 20 23 26 Vboot U Vboot V > Z Vboot W ≥ z R39 RS model C621/1206 Placed near the IGBT bridge C20 10nF 10V U2 STGIPN3H60 SD/OD_2 HIN U Vcc U SD/OD_1 GND OP-OPOUT OP+ ¥24 ¥2√ S 16 13 4 5 OC Boost S Vdd_Micro T NTC1 Temperature feedback PhaseU_H__ CUR_OP-Curr feedback Emergen cy [S +15V AM12041v1