STEVAL-IHM034V2

Schematic diagram

Figure 1. Schematic diagram (1 of 9) 1M_SHUNT_V M_SHUNT_W 1M_ISD 1M_SHUNT_U 1M_1SHUNT 1M_ISD 1M_SHUNT_W 1M_SHUNT_V 1M_SHUNT_U 1M_1SHUNT VACrect PFC_SHUNT INVERTER SIGNAL 1M_1SHUNT/Ua 1M_SHUNT_Wa 1M_SHUNT_Va 1M_HEATa 1M_!L_W 1M_!SDd PFC_ISDd 1M_H_M 1M_!L_U 1M_H_V 1M_!L_V 1M_H_U V_BUSa PFC_Zd PFC_la VPFC+ **▶**OCPoff +3.3V +15V GND +3.3V +15V GND GND 1M_!L_V 1M_!L_W 1M_HEATa OCPoff 1M_SHUNT_Va 1M_SHUNT_Wa 1M_SHUNT_Wa USART3_TX / I2C2_SCL 1M_H_V 1M_H_W 1M_!L_U PFC_la V_BUSa 1M_1SHUNT/Ua▲ PFC_iSDd SPI1_MISO PFC_PWM SPI1_SCK cntrl1&2MC GND Relay VDC+ +15V Relay GND VAC_1 GND +15V +3.3V +3.3V PFC_PWM +3.3V USART3_RX / I2C2_SDA SPI1_MOSI GND USART3_TX / I2C2_SCL SPI1_SCK SPI1_MISO COMMUNICATION conv1 PFC_SHUNT POWER SUPPLY PFC_la VACrect com1 AM12392v1

Figure 2. Schematic diagram (2 of 9)

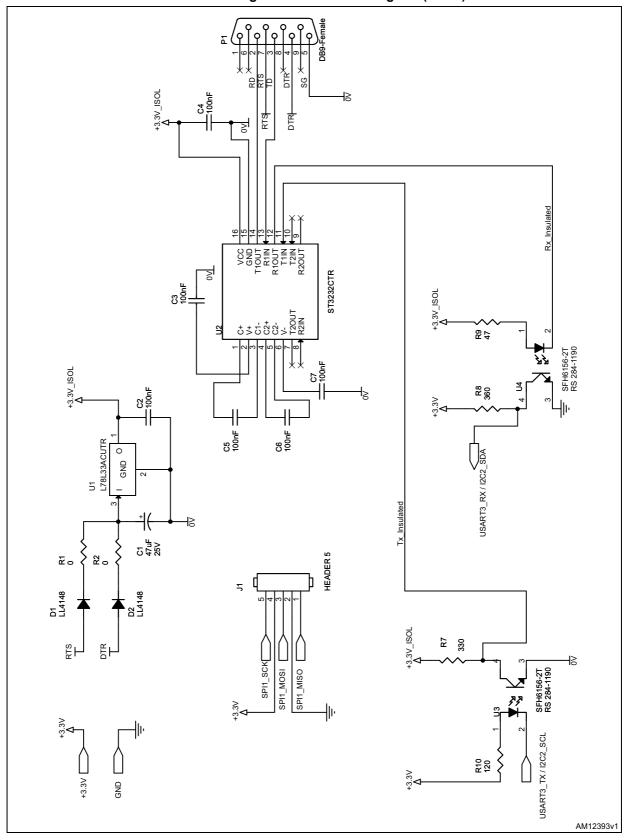
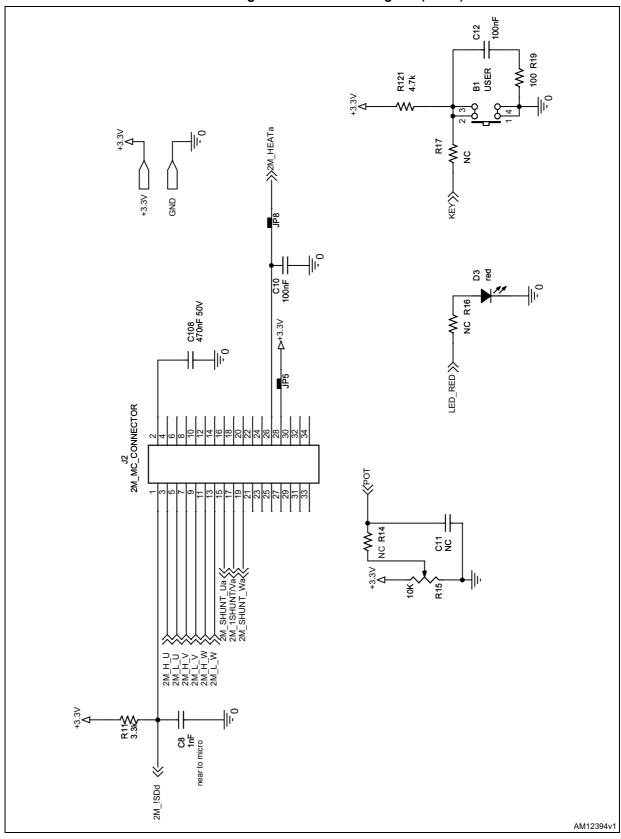


Figure 3. Schematic diagram (3 of 9)



|| |-C63 :100nF 0 R80 ⋛ C64 100nF SWO 읡튵 C69 100nF SWDIO JSART3_RX / I2C2_SDA SUSART3_TX / I2C2_SCL JTDI +3.3V 0 R76 Ħ O PB10 ->LED_RED OPB11 R97 NC SWCLK PA14 PA15 PC10 PC11 PC12 PD2 PB3 PB4 PB5 PB6 PB7 BOOT0 PB8 PB9 VSS_3 VDD_3 VDD_1 VSS_1 PB11 PB10 PB2 PB1 PB0 PC5 PC4 PA7 PA6 PA5 PA4 VDD_4 VSS_4 PA3 74 19 19 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 2M_L_W 2M_L_V 1M_HEATa V_BUSa PFC_PWM < +3.3V A C71 100nF #²⁵4 . 100nF 11 TP15 TP14 PB8 O-1M_1SHUNT/Ua 1M_SHUNT_Va 1M_SHUNT_Wa PFC_Ia 252 242 1 2M_SHUNT_Ua 2M_1SHUNT/Va 2M_SHUNT_Wa POT« 2M_HEATa << 8MHz (with socket) as close as possibleto uC pins C65 X1 RESET A SHUNT Va M_TSHUNT/Ua M_SHUNT_Wa PFC_la V_BUSa PFC_Zd PFC_ISDd IM_ISDd PFC_PWM 1M_!L_W 1M_!L_V 1M_!L_V Z2 23 168 1⊾F C72 100nF L1 BEA GND C66 22pF C67

AM12395v1

Figure 4. Schematic diagram (4 of 9)

PFC_OUT VPFC+ 7 R26 10k ₹ ‡ -|||-D5 GF1M C74 2.2uF 450V 0.1uF / RS 622-4943 D7 LL4148 Single ground point on the board 8.88. ≸ O1 + C22 STGW35HF60WD 220uF 450V WW R120 0.033/3W 7 R21 0.033/3W SEND NC GND GND J9 PFC B<u>OOST IN</u>DUCTOR 1N5406 PFC_PWM PFC SHUNT C26 + 470nF D25 +15V< C21 0.22uF 630V D6 8A/400V VAC_2 VAC_1 RELAY_A C56 2.2nF Y1 FINDER 4031-12 S RELAY_B NTC1 D8 LL4148 Q2 BC847 R22 160 RELAY_A F1 Fuse/10A Single ground point on the board R29 100k 727 104 C25 130

Figure 5. Schematic diagram (5 of 9)

Figure 6. Schematic diagram (6 of 9)

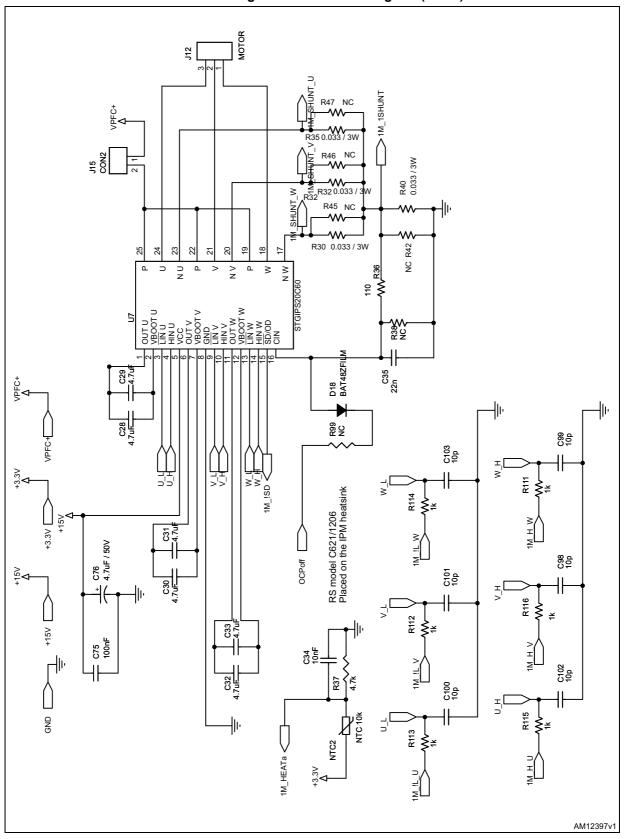


Figure 7. Schematic diagram (7 of 9)

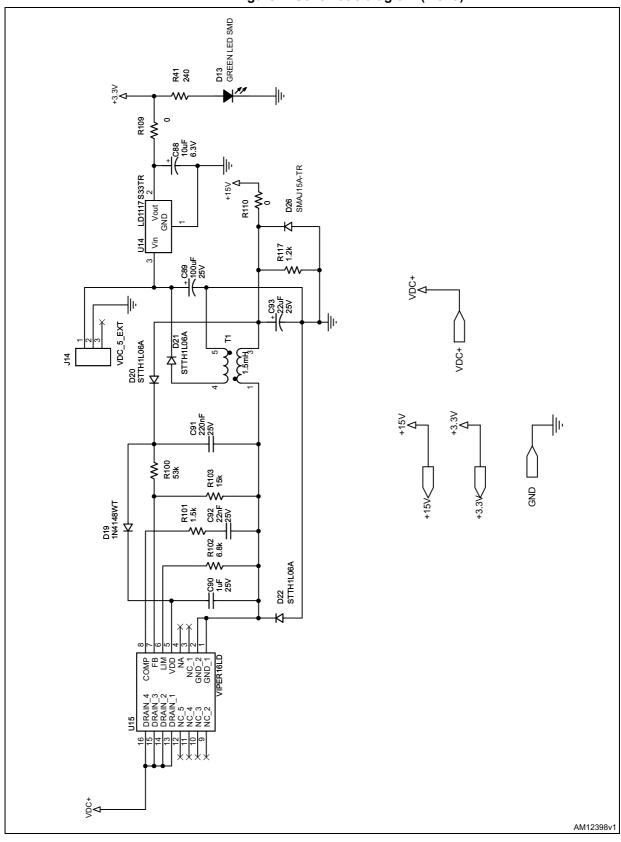


Figure 8. Schematic diagram (8 of 9)

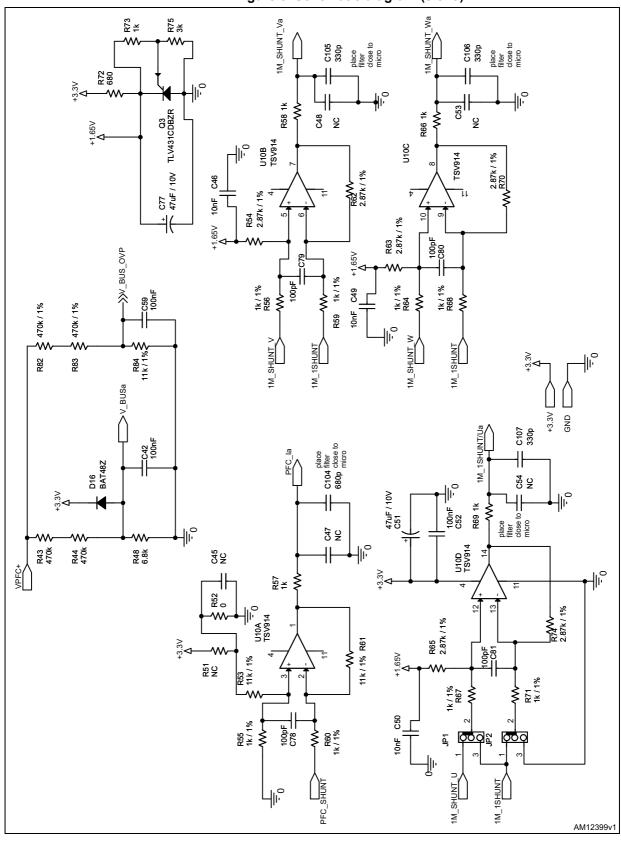


Figure 9. Schematic diagram (9 of 9)

