



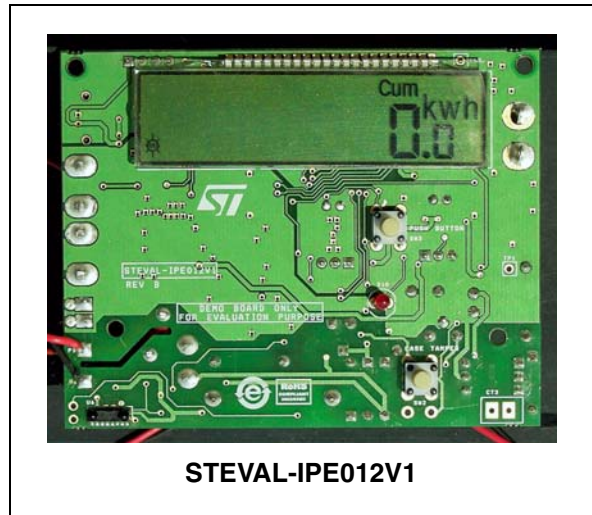
STEVAL-IPE012V1

Single-phase energy meter demonstration board using the STPM01 and STM8L15

Data brief

Features

- Accuracy: Class 1 with dynamic range 200:1
- Nominal voltage: 240 V
- Nominal current : 5 A (I_{TYP})
- Maximum current: 45 A (I_{MAX})
- Operating range: 0.6 V_{BAT} to 1.2 V_{BAT}
- Meter constant: 3200 impulses / kWh
- Power frequency range: 45 Hz to 65 Hz
- Sensor: primary side CT and secondary side shunt
- Communication interface: IrDA
- RoHS compliant



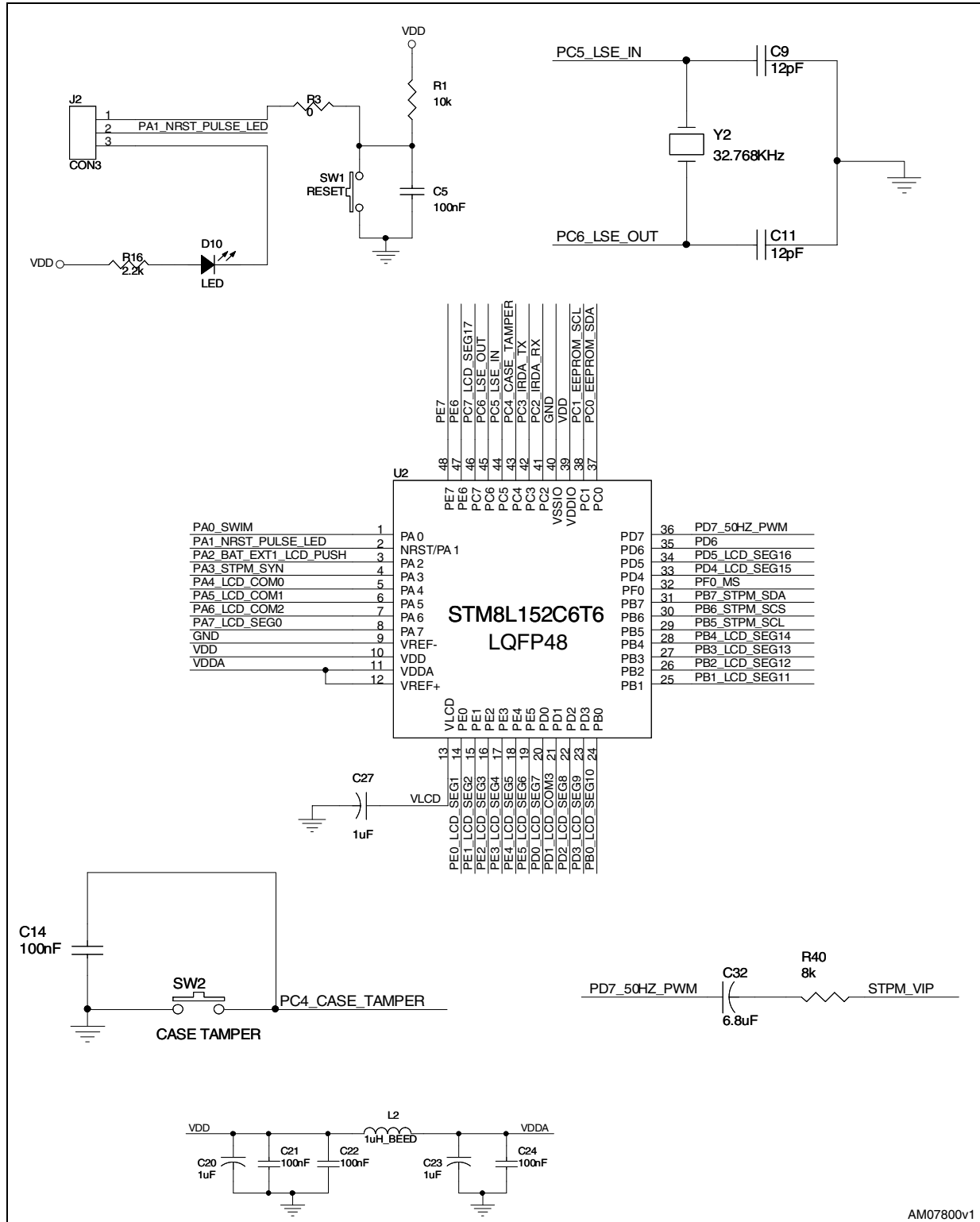
STEVAL-IPE012V1

Description

The STEVAL-IPE012V1 demonstration board implements a single-phase energy meter based on the STPM metering IC and STM8L152 microcontroller. The demonstration board is a fully functional single-phase solution with parameter display, tamper management, maximum demand (MD) calculation, EEPROM data logging, and low power management.

1 Schematics

Figure 1. Microcontroller schematic



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Figure 2. Battery section, connector section, magnetic sensor and IRDA module schematics

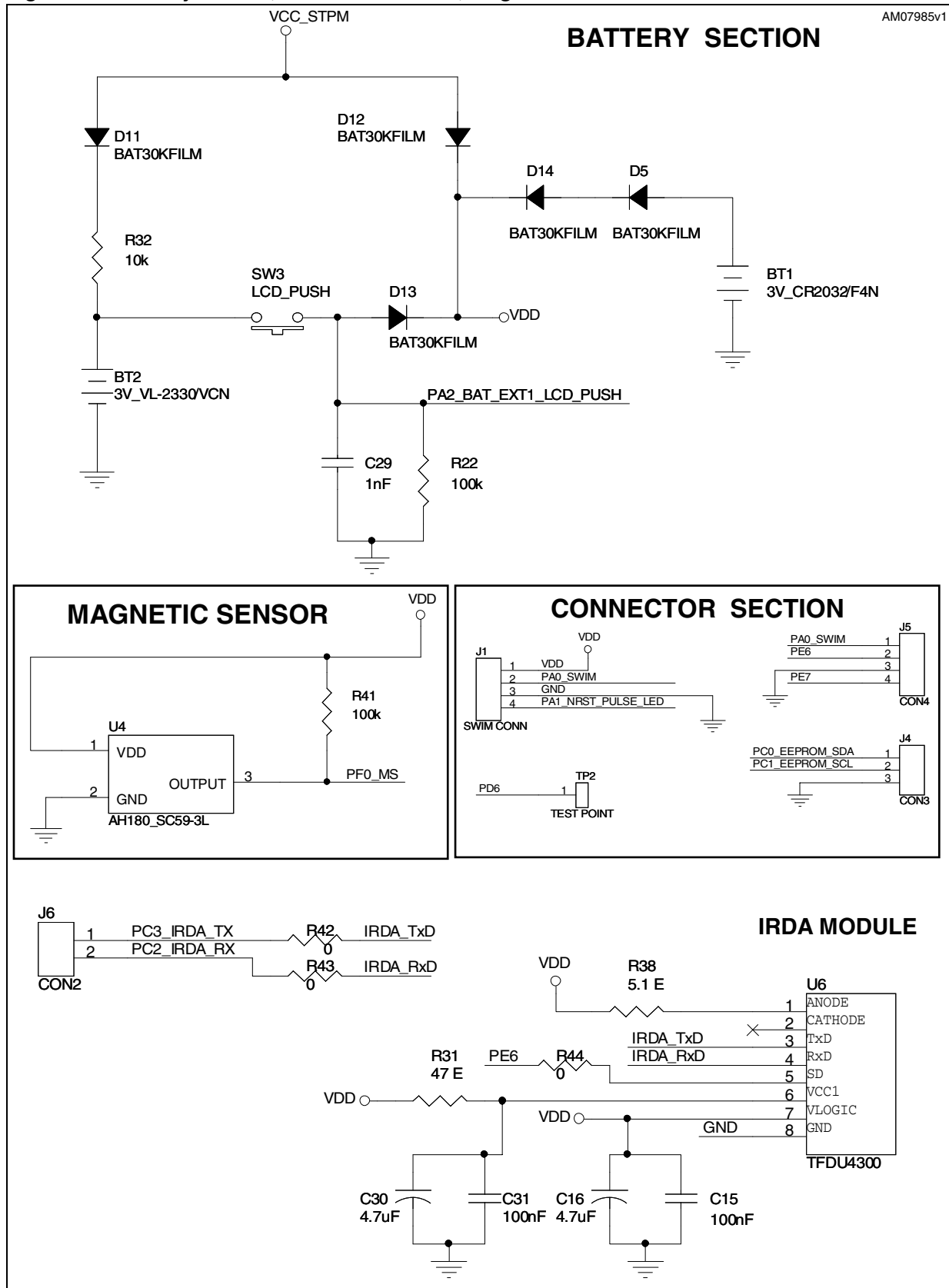
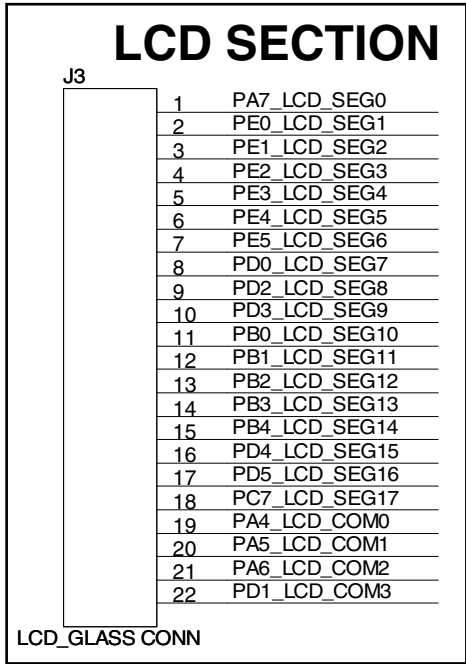
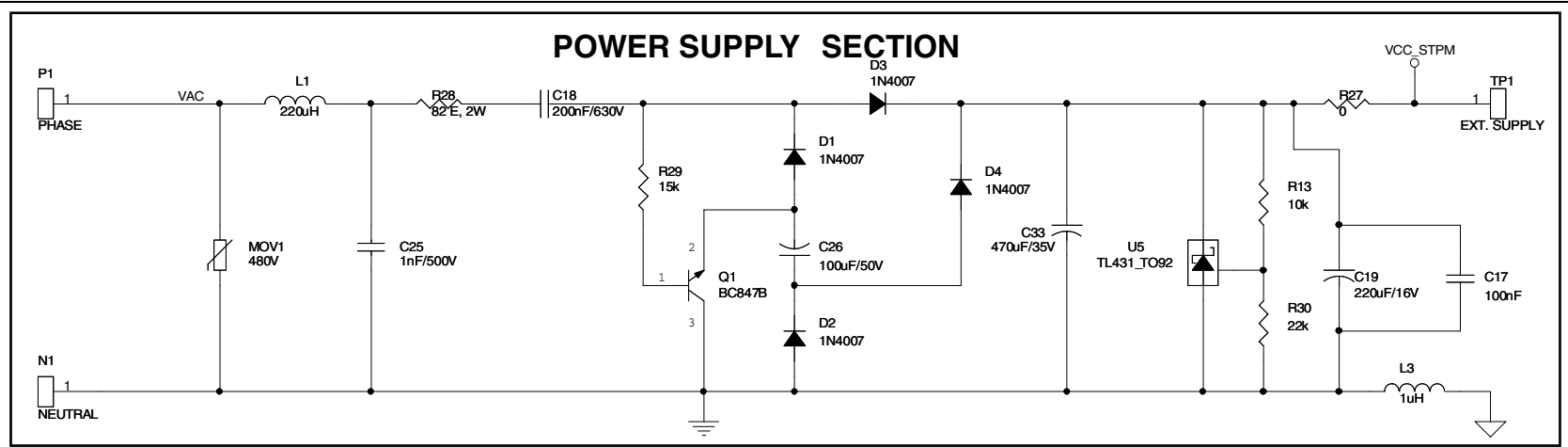




Figure 3. Power supply section, EEPROM section, LCD section, and neutral missing power supply section schematics



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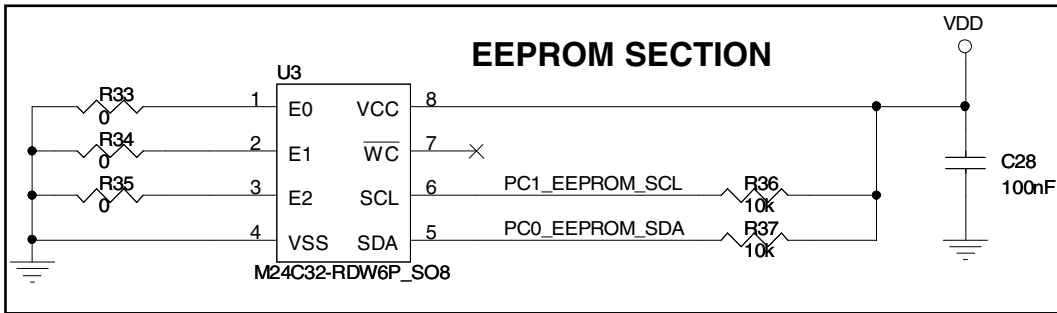
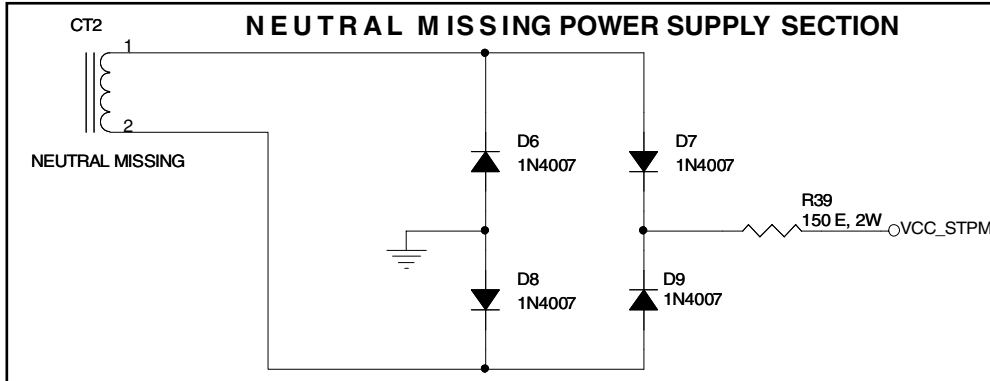
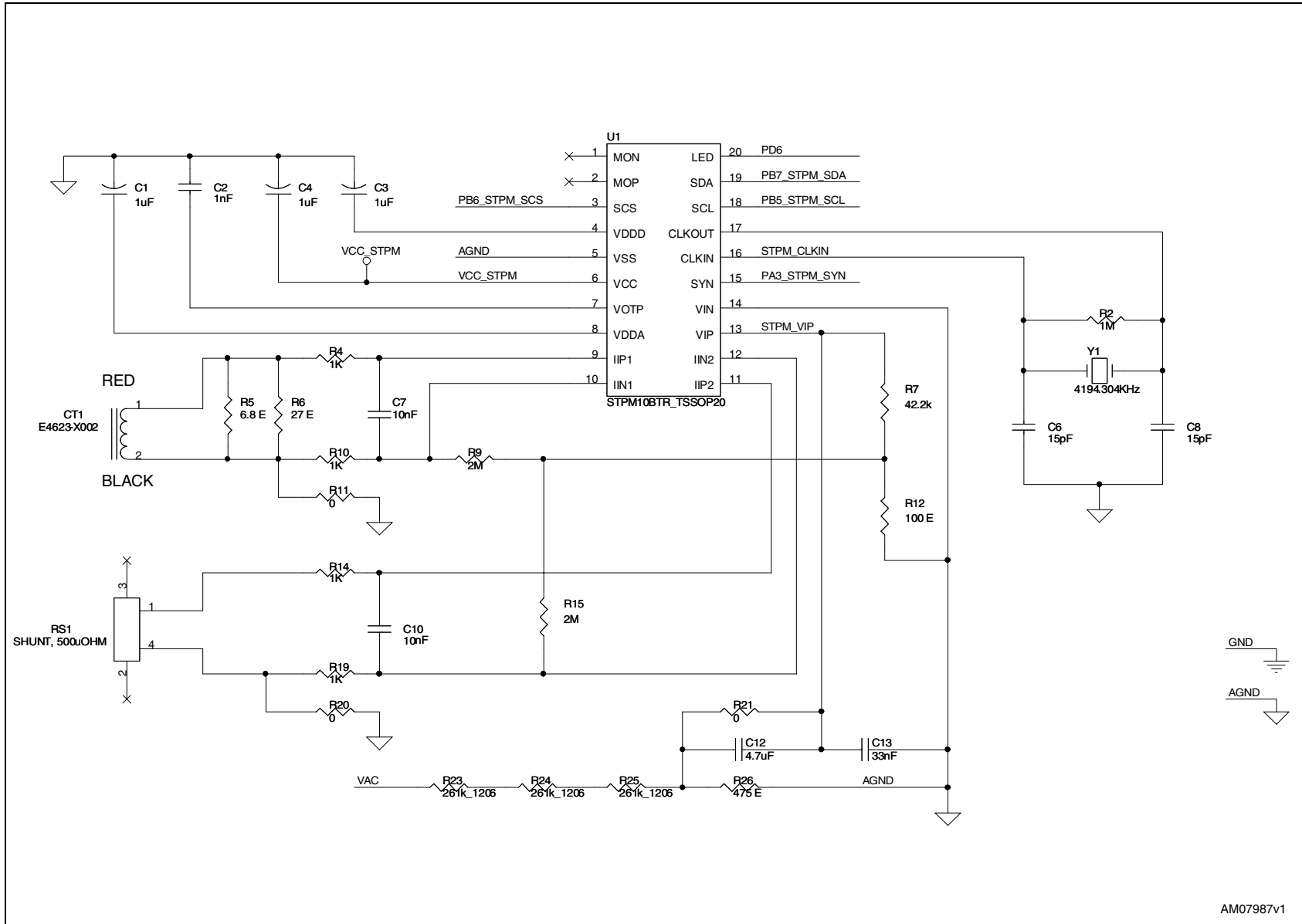




Figure 4. STPM schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
18-Aug-2010	1	Initial release.

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