



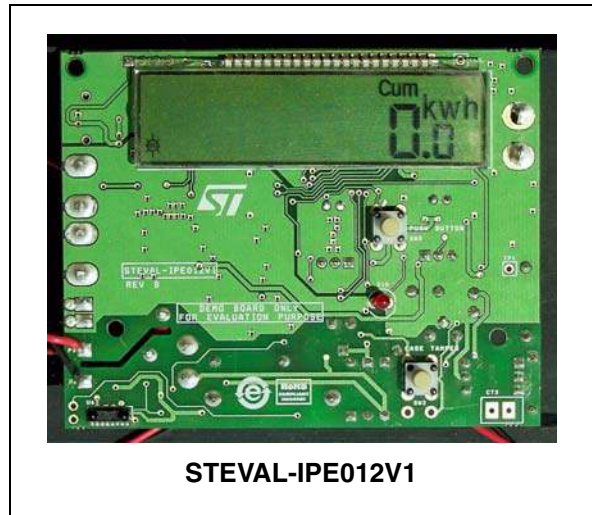
STEVAL-IPE012V1

Single-phase energy meter demonstration board using the STPM10 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

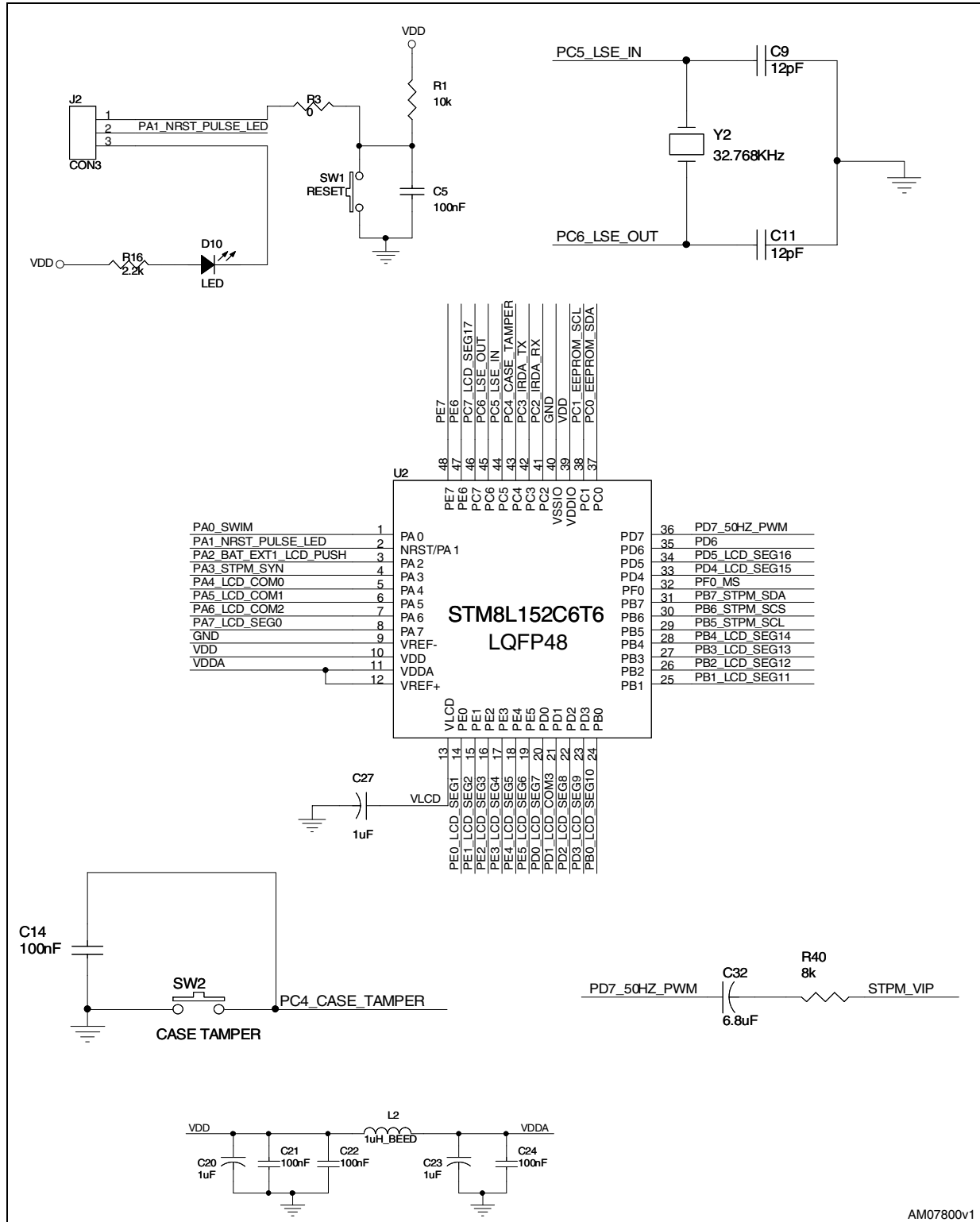


Description

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

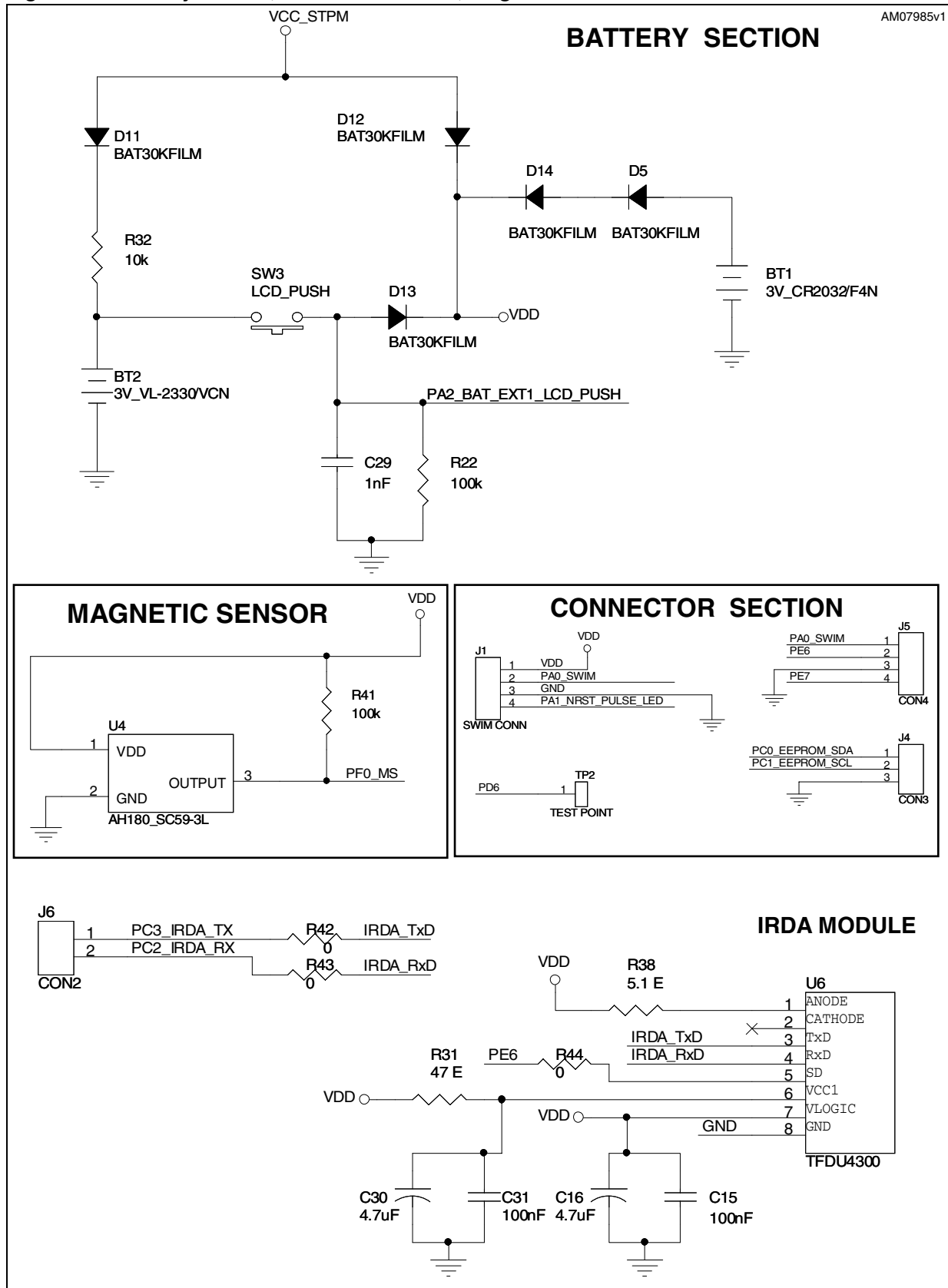


Figure 3. Power supply section, EEPROM section, LCD section, and neutral missing power supply section schematics

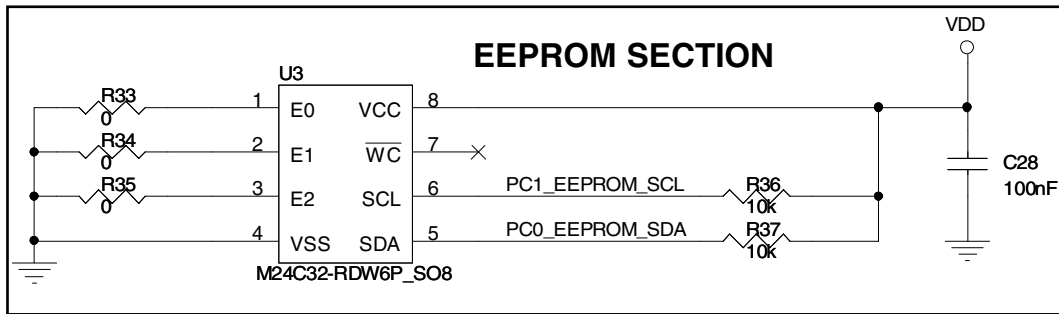
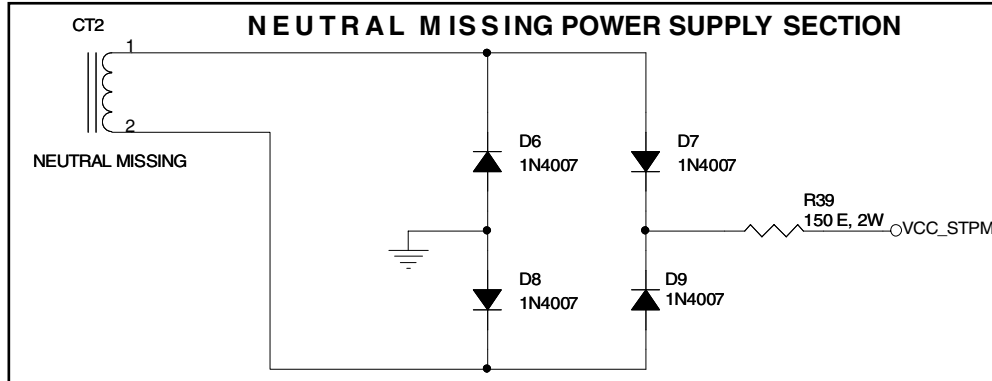
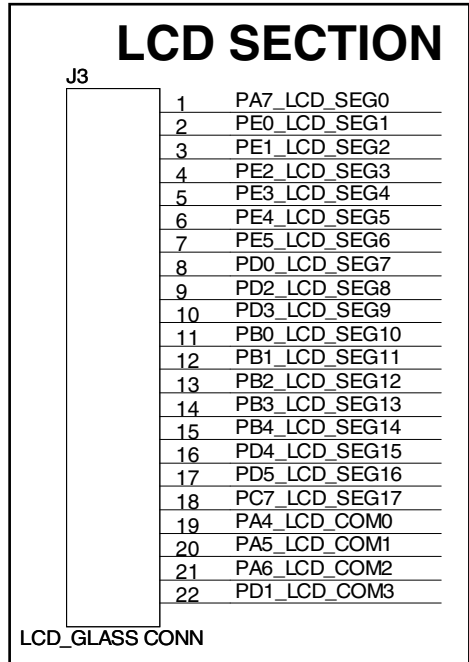
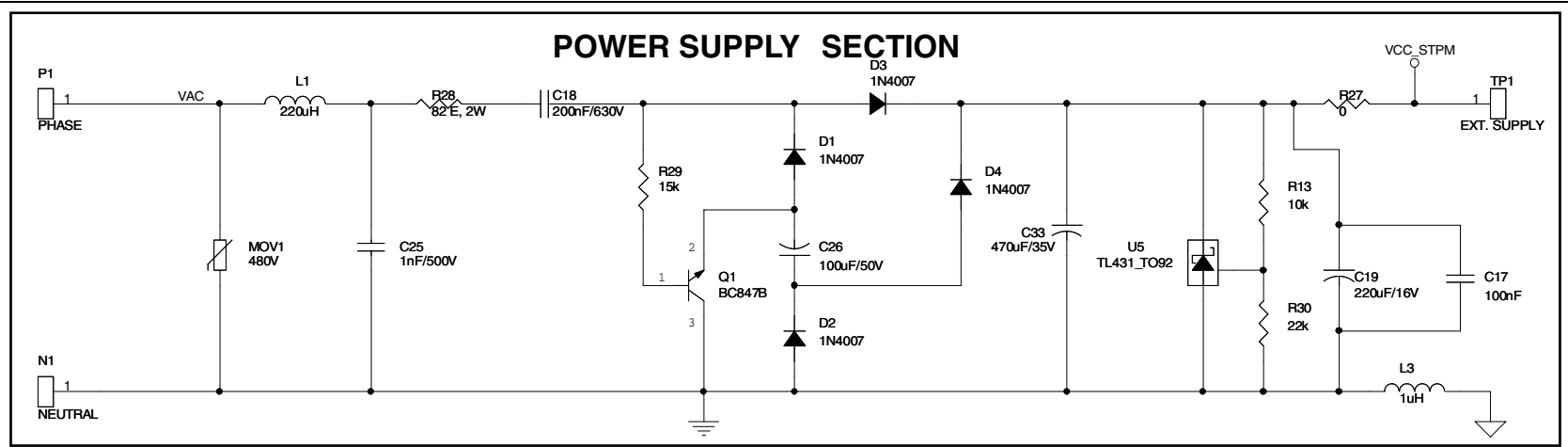
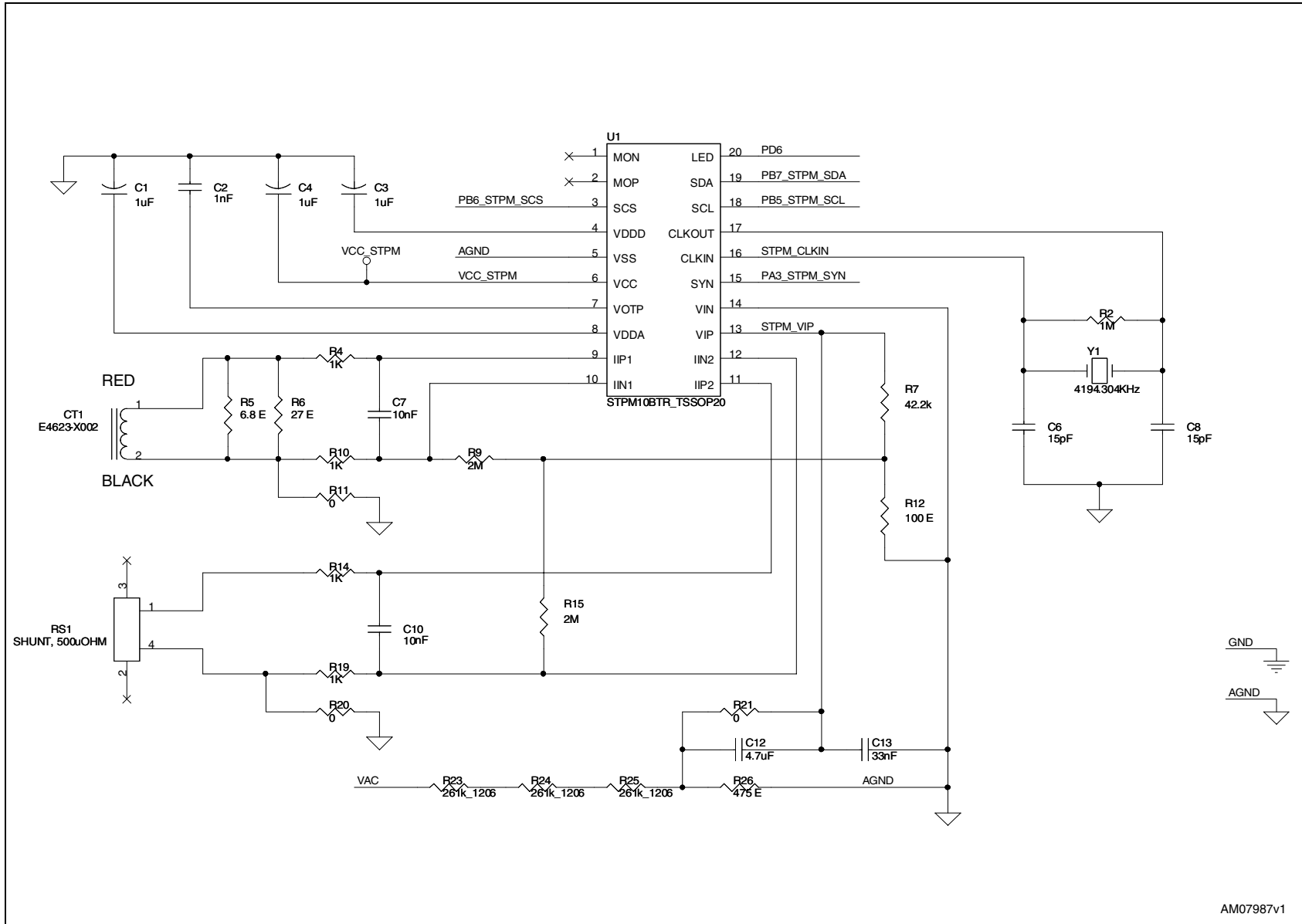




Figure 4. STPM schematic



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AM07987v1

2 Revision history

Table 1. Document revision history

Date	Revision	Changes
18-Aug-2010	1	Initial release.
31-Mar-2011	2	Updated title in cover page.

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