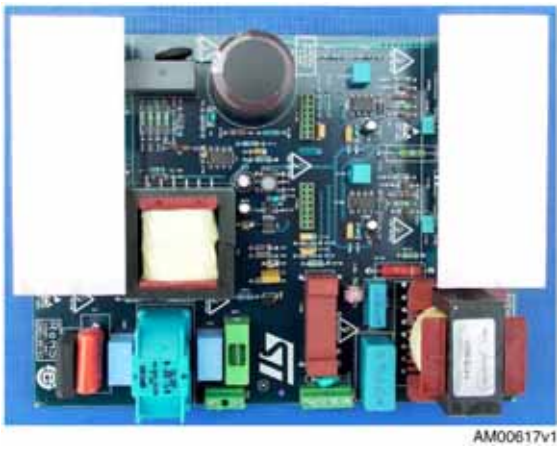
STEVAL-ILH001V1

250 W electronic ballast demonstration board for metal halide lamps based on the L6562 and ST7LITE39F2

Data Brief

Features

- Input voltage: 90 to 265 Vac, 50 - 60 Hz
- P_{OUT}: 250 W
- Power factor: ≥ 0.94 at 230 Vac
- Full-bridge for output stage working at low frequency to avoid acoustic resonance
- PFC (power factor correction) implemented using the L6562 PFC controller
- Total system efficiency up to 94%
- Current control during warm-up phase
- Power control during steady state



STEVAL-ILH001V1

Description

The STEVAL-ILH001V1 demonstration board implements a two-stage electronic ballast for 250 W, HID (high-intensity discharge) metal halide lamps.

The ballast features a boost converter (PFC controller) working in fixed OFF-time, and a full-bridge inverter to drive a lamp using a low frequency square wave.

The design of the STEVAL-ILH001V1 takes advantage of STMicroelectronics' very large product portfolio. ST components used in the design include: PFC drivers, an inverter driver microcontroller, auxiliary power supply, voltage reference, logic part, amplifier, comparators, and power devices such as power MOSFETs, IGBTs, and fast diodes.

For further information contact your local STMicroelectronics sales office. www.st.com

1 Circuit schematic

Figure 1. PFC electrical schematic

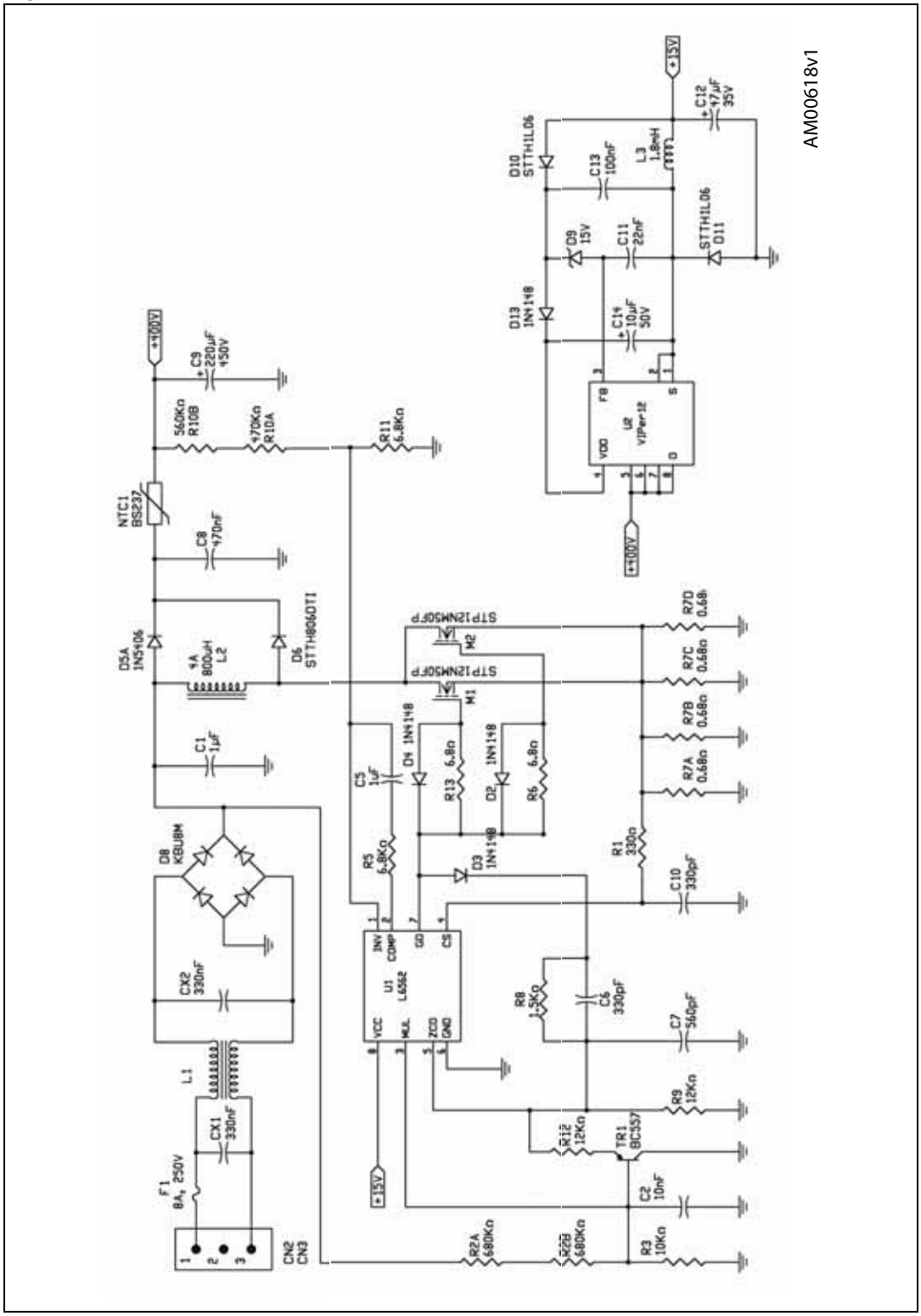


Figure 2. Full bridge electrical scheme

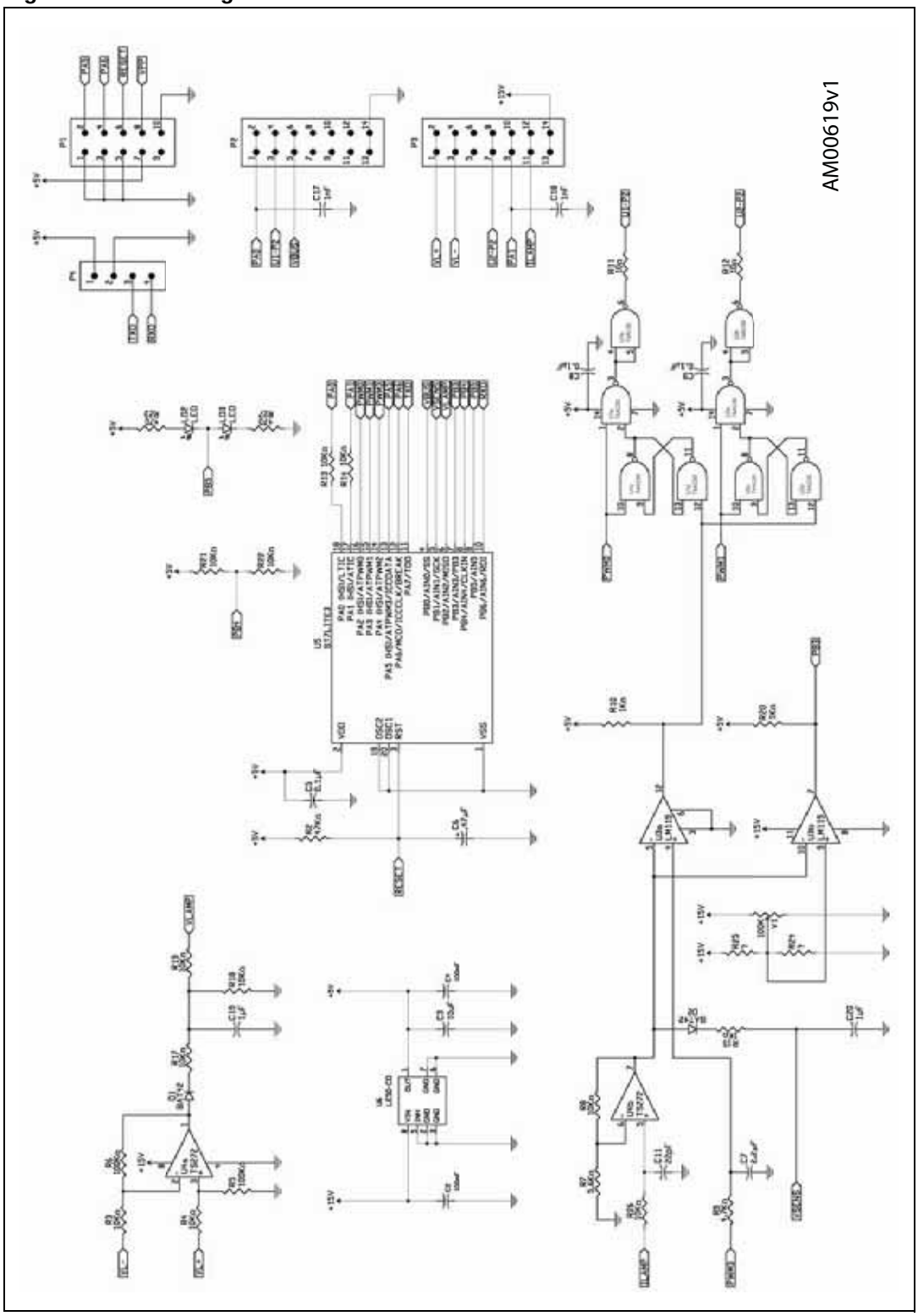
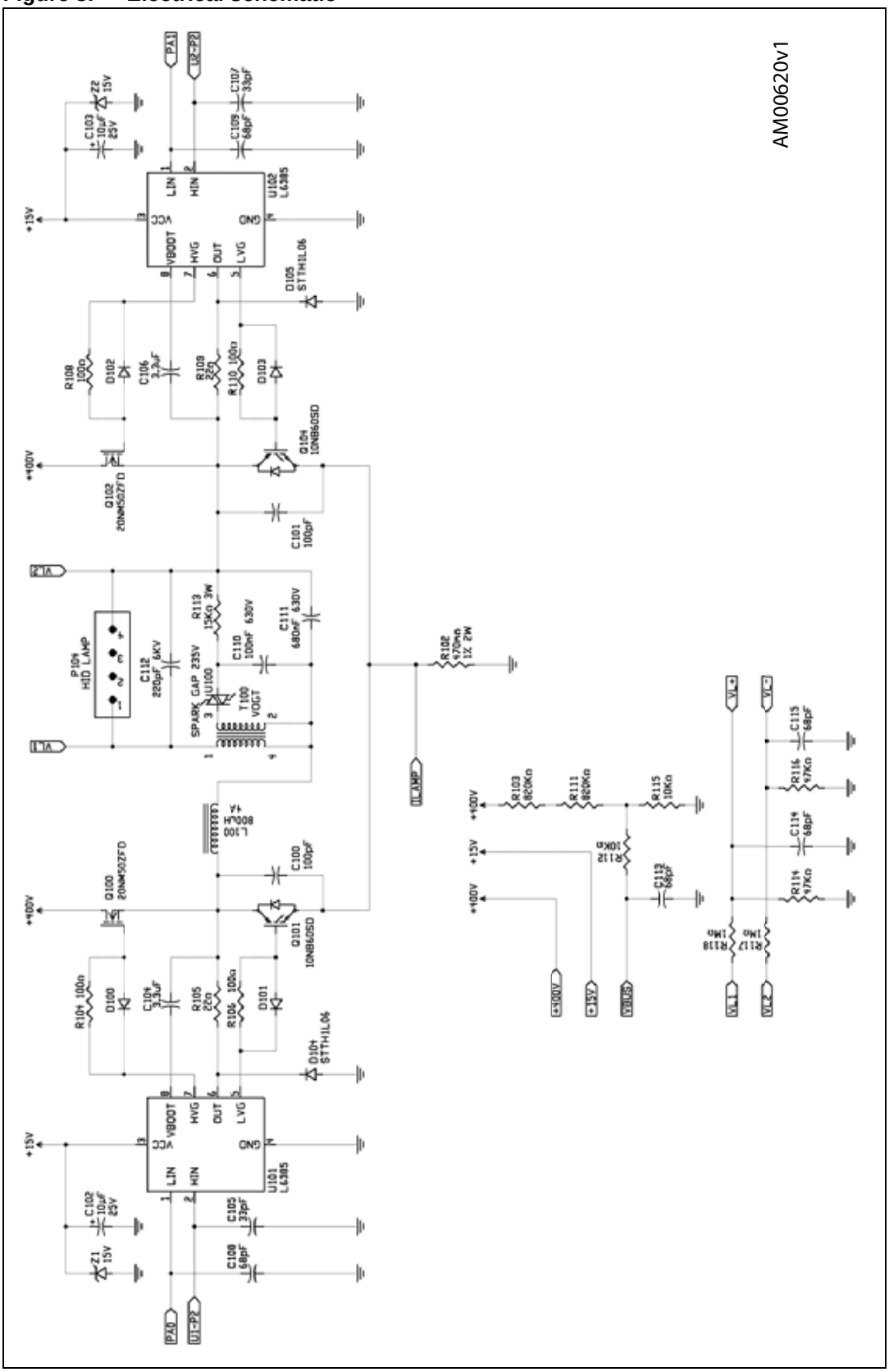


Figure 3. Electrical schematic



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
05-Jun-2008	1	Initial release.

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