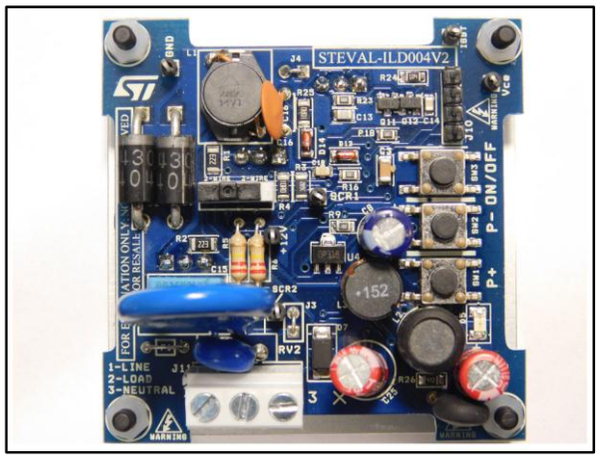
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STEVAL-ILD004V2

Digital wall dimmer for halogen and low-consumption lamps

Data brief



Features

- Flicker-free operation with paralleled lamps
- Operation in 2- or 3-wire configuration
- Leading-edge control
- Operation at 110 V or 230 V line rms voltage and 50 Hz or 60 Hz line frequency
- Dimmable power range:
  - 3 W to 600 W for 230 V rms line
  - 3 W to 300 W for 110 V rms line
  - higher power is possible with larger heatsink
- Power efficiency @ 600 W - 230 V > 99%
- Standby loss @ 230 V < 0.3 W
- Short-circuit protection at startup
- Enhanced interface with push-buttons; soft-start and soft-stop; memory of last setting
- Compliance with EMC standards:
  - IEC 61000-4-5: criteria A for 2 kV surge
  - IEC 61000-4-4: criteria A for more than 4 kV
- Filterless compliance with EN55015 for 600 W -230 V halogen lamp
- RoHS compliant

Description

The STEVAL-ILD004V2 evaluation board represents an innovative and low cost power topology for light wall dimmers using two sensitive TS820-600FP SCRs and a single STGF10NC60KD IGBT to dim 100 - 240 V halogen lamps, SELV halogen lamps through magnetic or electronic transformers, and new CFL and LED dimmable lamps.

Control of the board is achieved with STM8S103F2 microcontroller.

In comparison with STEVAL-ILD004V1, this board introduces a buck SMPS (operated through the VIPer06XS) instead of a linear power supply, for compatibility acrtoss all dimmable LED and CFL lamps.

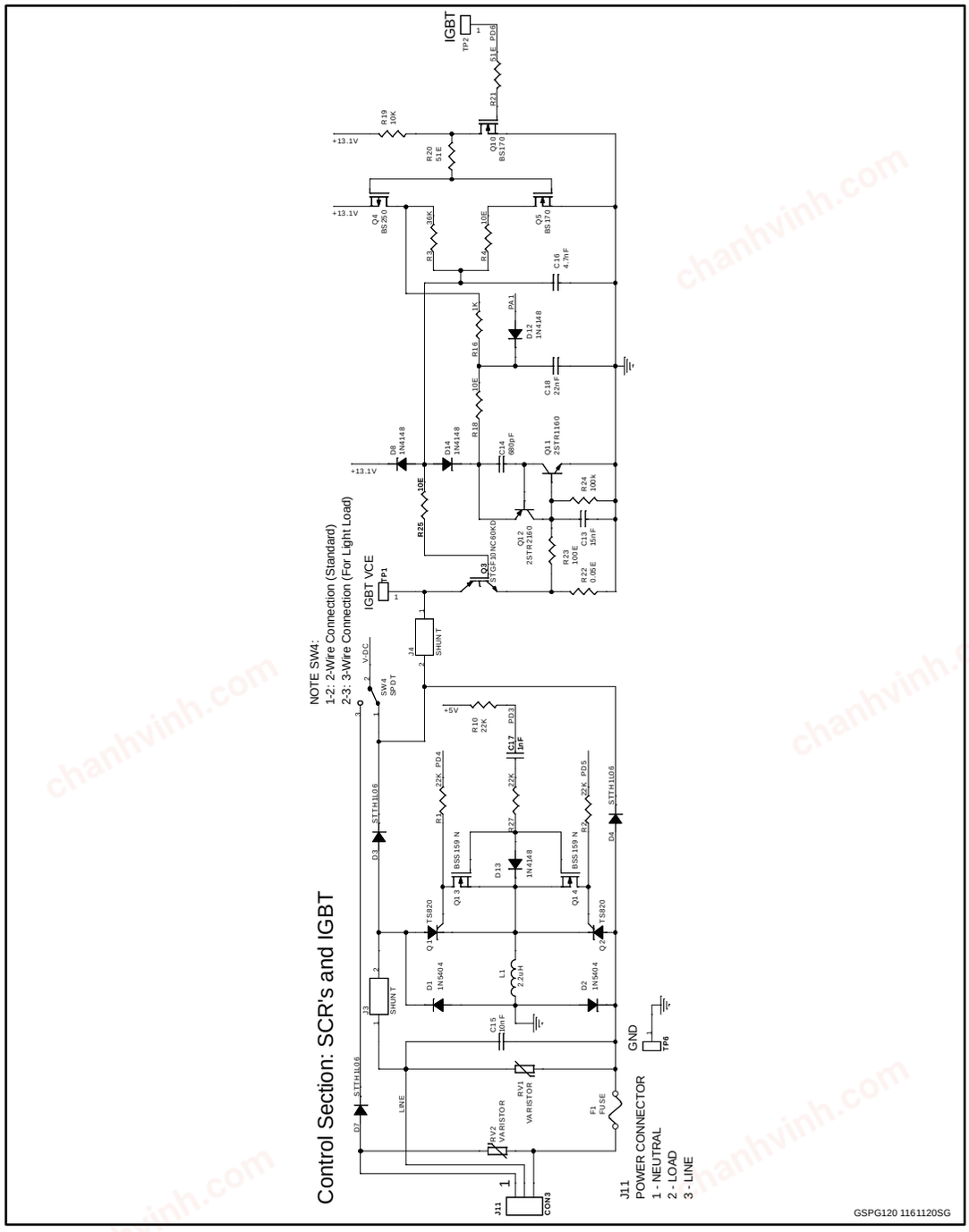
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1 Schematic diagram

Figure 1: STEVAL-ILD004V2 circuit schematic (1 of 3)



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Figure 2: STEVAL-ILD004V2 circuit schematic (2 of 3)

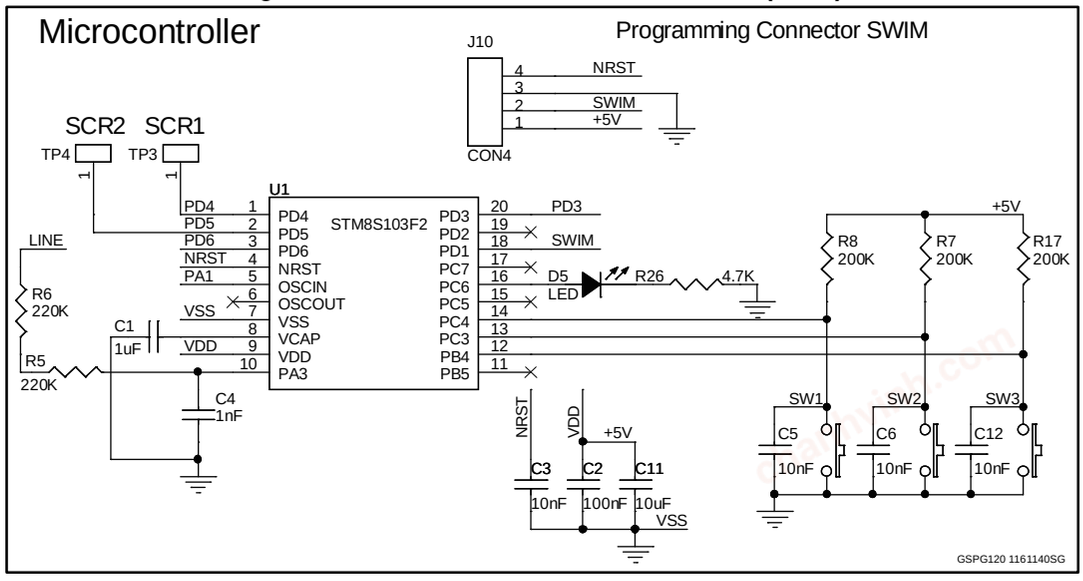
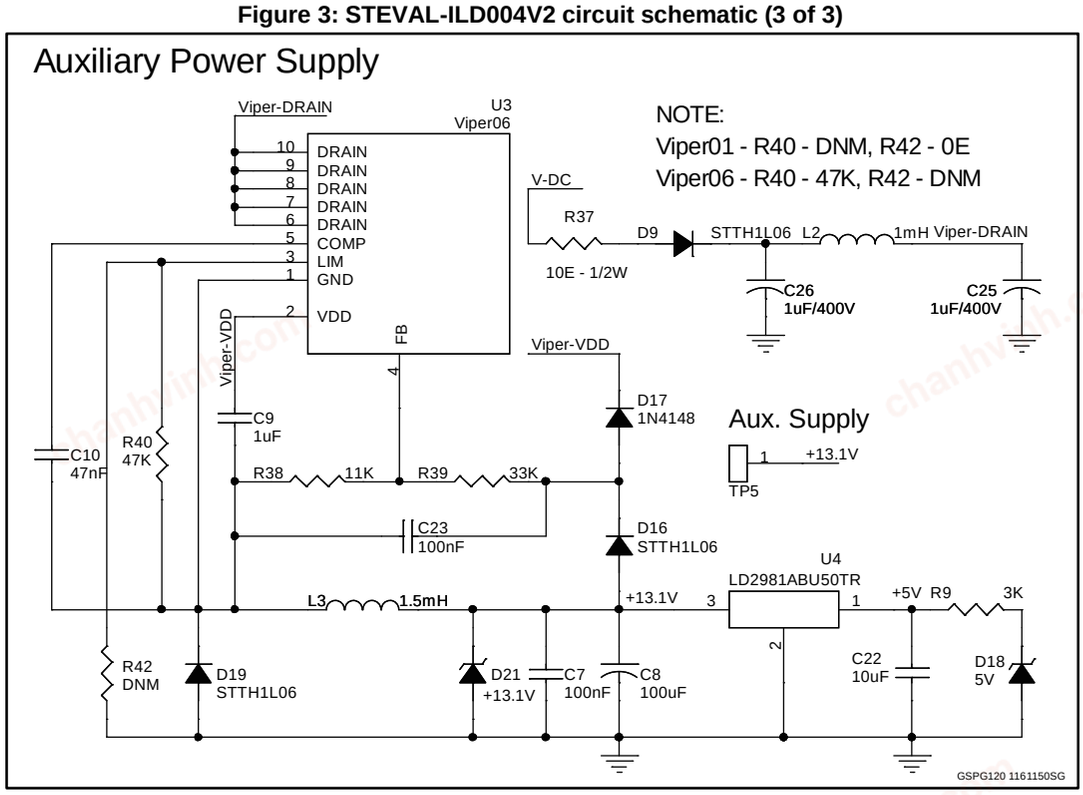


Figure 3: STEVAL-ILD004V2 circuit schematic (3 of 3)



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2 Revision history

Table 1: Document revision history

Date	Version	Changes
22-Jan-2016	1	Initial release.

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