STEVAL-ILL083V1

Smart home lighting based on HVLED815PF and SPBTLE-RF

Data brief

Features

- LED driver main features
  - 10 W flyback converter with quasi-resonant operation
  - Primary side regulation, no optocoupler required
  - High power factor and low THD
  - Open/short LED management
  - ±1% LED current regulation
  - Dimming range: 2.5% to 100%
- BLE connectivity main features
  - Works with Android App - Smart Home Lighting
  - Allows lamp remote power-on / power-off
  - Allows lamp remote dimming
- Standby power consumption: <0.5 W
- RoHS compliant

Description

The STEVAL-ILL083V1 evaluation board is an offline LED driver based on HVLED815PF and SPBTLE-RF very low power module for Bluetooth Smart v4.1 connectivity. The interfacing between the HVLED815PF and the SPBTLE-RF is managed by a STM32L0. The microcontroller and the connectivity module are supplied by the LED driver through the primary side auxiliary winding.

The embedded SPBTLE-RF Bluetooth v4.1 module lets you control the STEVAL-ILL083V1 board through the Smart Home Lighting Android™ application and can help reduce development and certification time.

The board can also be rendered visible to cloud applications with the addition of a wireless bridge.

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1 Schematic diagrams

Figure 1: STEVAL-ILL083V1 circuit schematic (1 of 3)

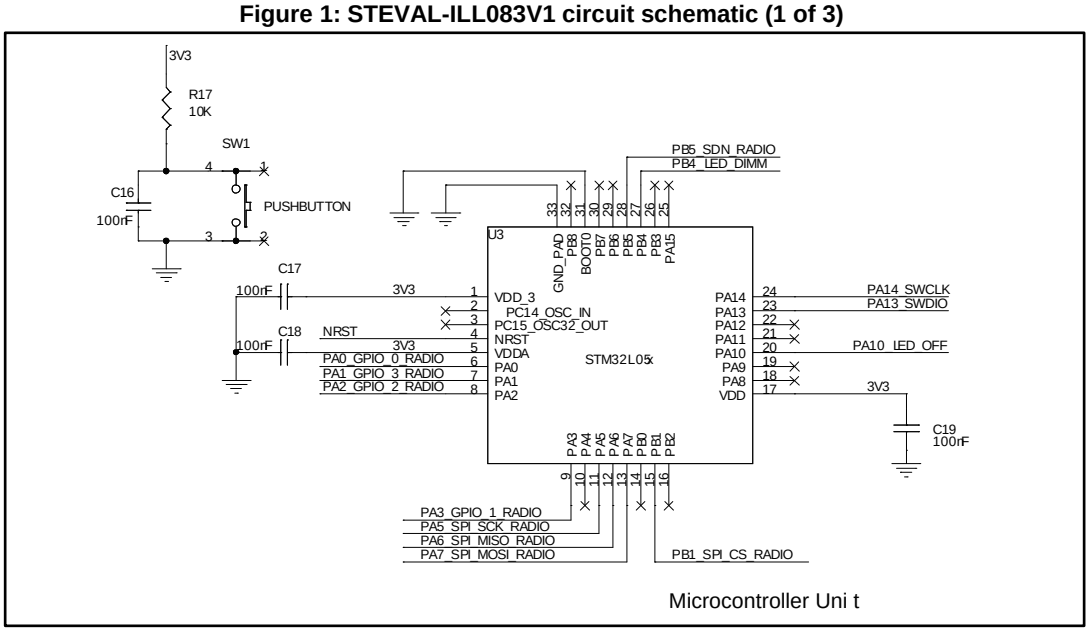


Figure 2: STEVAL-ILL083V1 circuit schematic (2 of 3)

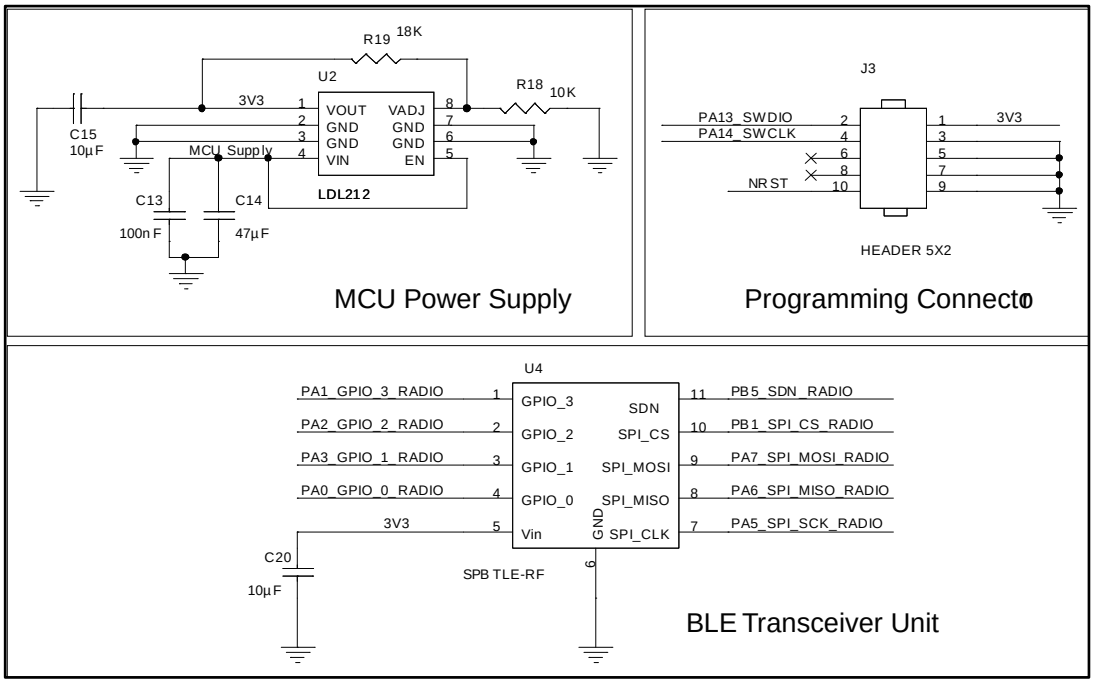
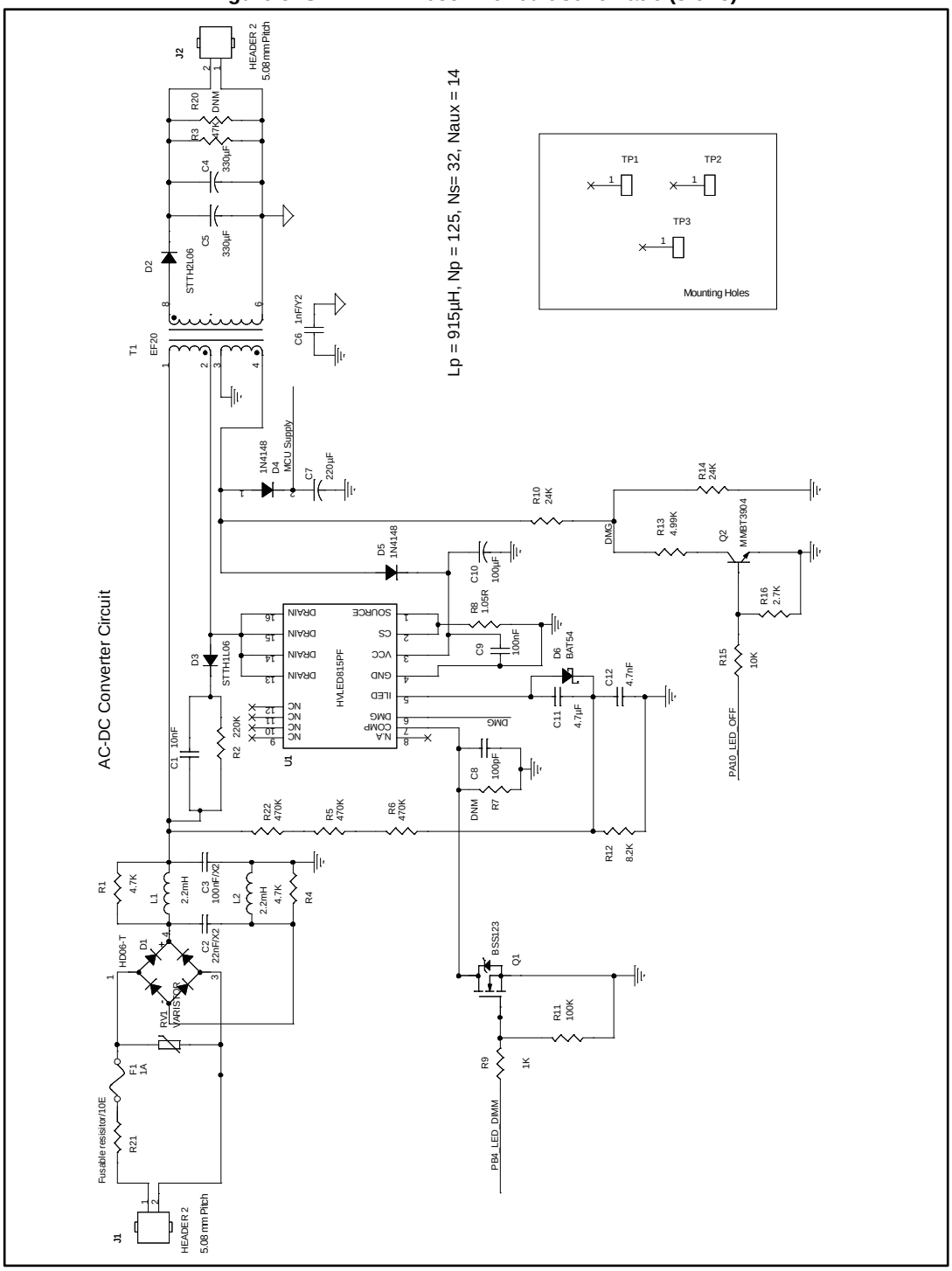


Figure 3: STEVAL-ILL083V1 circuit schematic (3 of 3)



2 Revision history

Table 1: Document revision history

Date	Version	Changes
25-Jan-2017	1	Initial release.
24-Mar-2017	2	Updated features and description on the cover page.
03-Nov-2017	3	Updated features, description and title in cover page

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