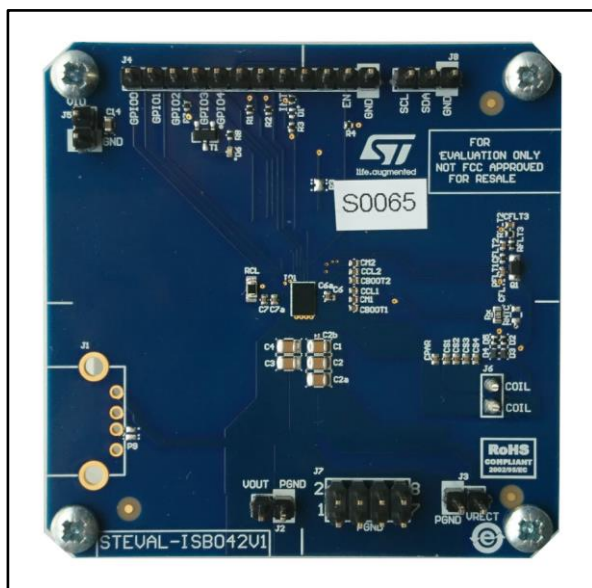


## Dual mode wireless power evaluation board for Qi and Airfuel inductive receiver and Qi-based transmitter with STWLC33

Data brief



### Description

The STEVAL-ISB042V1 is a 15-watt Qi and 5-watt Airfuel inductive (former PMA) wireless power receiver evaluation board based on the STWLC33 wireless power receiver solution for the WPC/Airfuel mobile device with dual mode coil.

The board lets you evaluate the STWLC33 capabilities as a Qi/Airfuel inductive receiver as well as its ability to power another Qi receiver.

The solution is certified in accordance with the extended power profile Qi v1.2 and Airfuel SR1 standard.

The STWLC33 IC is powered by a dual mode Rx coil attached to a 1.5 mm thick plastic fixture.

The STWLC firmware offers users the flexibility to modify parameters and settings to ensure proper integration of the STWLC33 device with the final application.

The layout is based on a cost-effective 4-layer PCB.

### Features

- STWLC33 evaluation board with Würth Elektronik dual mode coil (760308102207)
- Qi 1.2 compliant, supporting extended power profile: up to 15 W/10 V maximum output power
- Backward compatible with Qi baseline power profile: up to 5 W/5 V maximum output power
- PMA-SR1 (AirFuel inductive) compliant: 5 W/5.6 V maximum output power
- Transmitter function based on Qi protocol to charge wearable devices using the same Rx coil (up to 3 W power)
- Total system efficiency up to 80%
- Configurable GPIOs for status indication
- I<sup>2</sup>C interface for communication with the host system
- Foreign object detection (FOD)
- Complete kit (IC, firmware)
- RoHS compliant

# 1 Schematic diagrams

Figure 1: STEVAL-ISB042V1 circuit schematic (1 of 2)

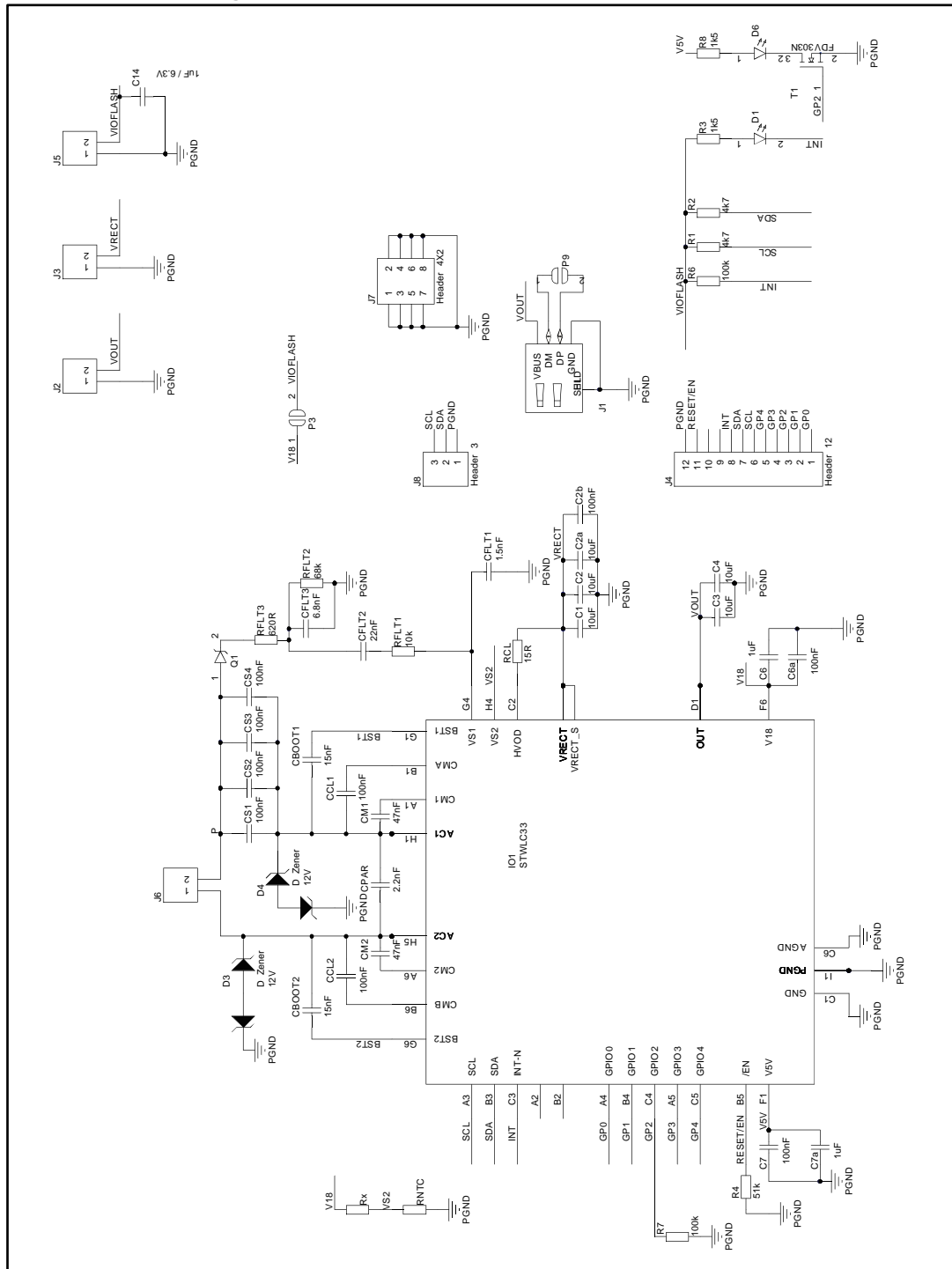
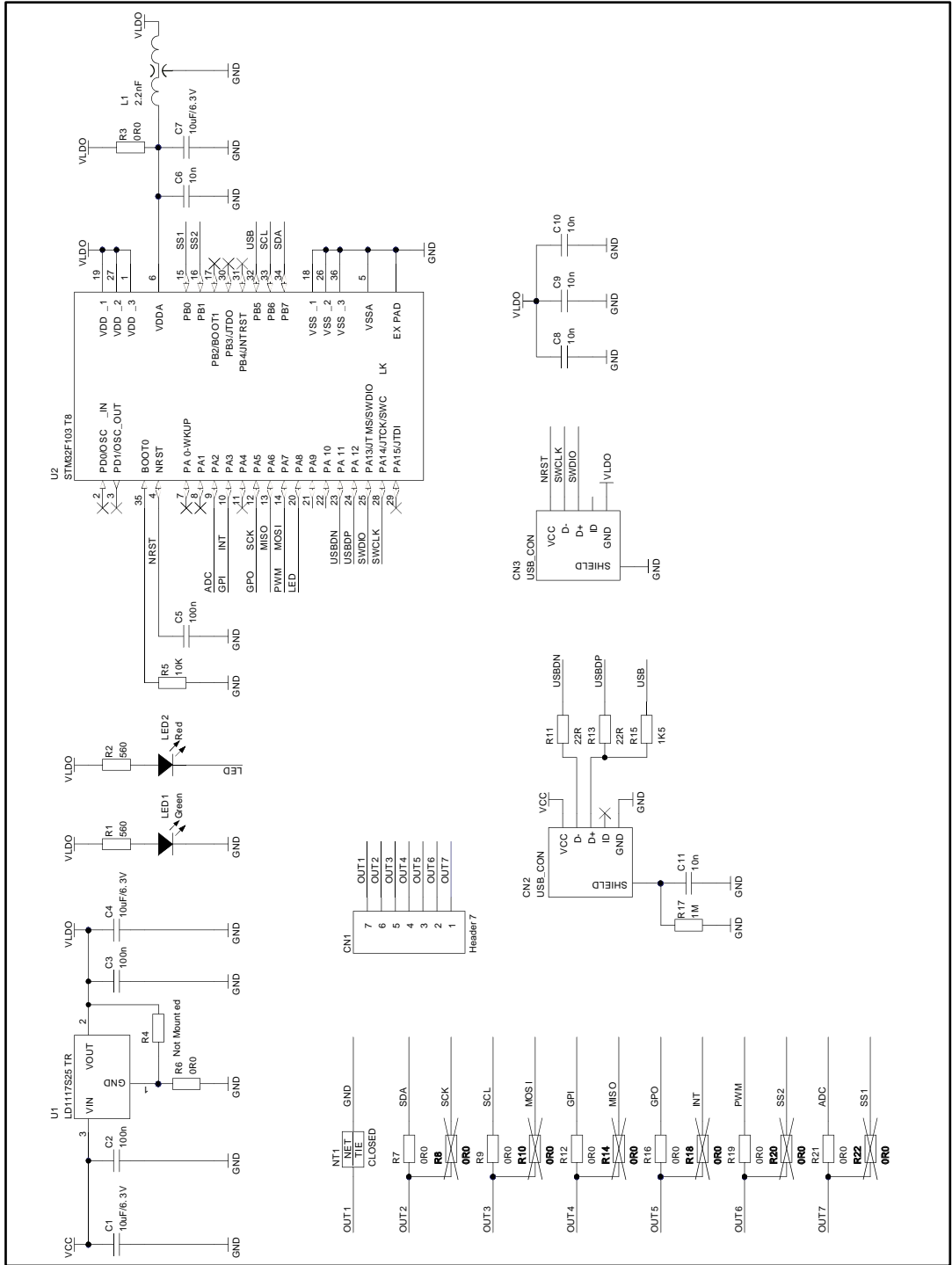


Figure 2: STEVAL-ISB042V1 circuit schematic (2 of 2)



## 2 Revision history

Table 1: Document revision history

Date	Version	Changes
08-Sep-2017	1	Initial release.
03-Oct-2017	2	Updated description on the cover page.

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