

## Qi-based wireless power receiver for Baseline Power Profile (BPP) applications up to 5 W using STWLC68



### Features

- Operates in Rx mode as Qi 1.2.4 5W BPP
- Constant 5V Output voltage (default settings)
- Foreign object detection (FOD) supported
- 400 kHz I<sup>2</sup>C interface for communication with host system (optional)
- Built-in USB-I<sup>2</sup>C convertor
- RoHS compliant

### Description

The **STEVAL-ISB68RX** evaluation board with STWLC68 wireless power receiver implements a 5 watt Qi Baseline Power Profile (BPP) application according to Qi specifications 1.2.4. The board functions as a standalone power receiver and provides a fixed output voltage when placed on a suitable wireless power transmitter.

The board also integrates a USB-to-I<sup>2</sup>C bridge, allowing the user can monitor and control the **STWLC68** chip with the **STSW-ISB68GUI** Graphical User Interface (GUI). The converter may also be used to directly interface with the final application or with other boards based on the same STWLC68 chip.

The STEVAL-ISB68RX includes several safety mechanisms providing overtemperature, overcurrent and overvoltage protection as well as Foreign Object Detection (FOD).

A dedicated connector provides advanced access to STWLC68 chip functionality, including control signals, programmable GPIOs, and analog input for NTC temperature sensor.

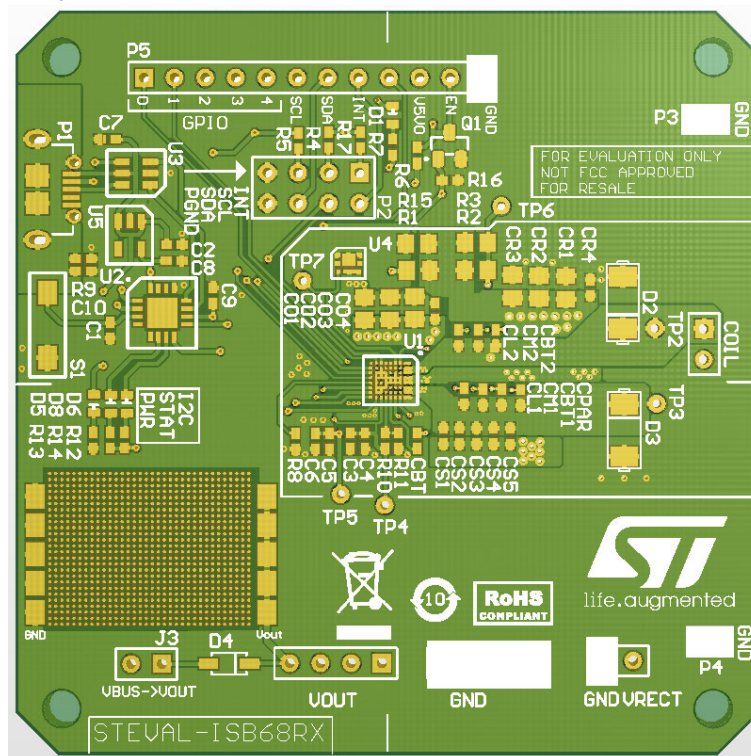
#### Product summary

evaluation board based on STWLC68 wireless power receiver implementing a 5W BPP application according to Qi 1.2.4 specs	<a href="#">STEVAL-ISB68RX</a>
Qi-compliant inductive wireless power receiver for 5W applications	<a href="#">STWLC68</a>
GUI for developing applications using the STWLC68 wireless power receiver	<a href="#">STSW-ISB68GUI</a>
Applications	<a href="#">Wireless Chargers</a>

# 1 Component layout

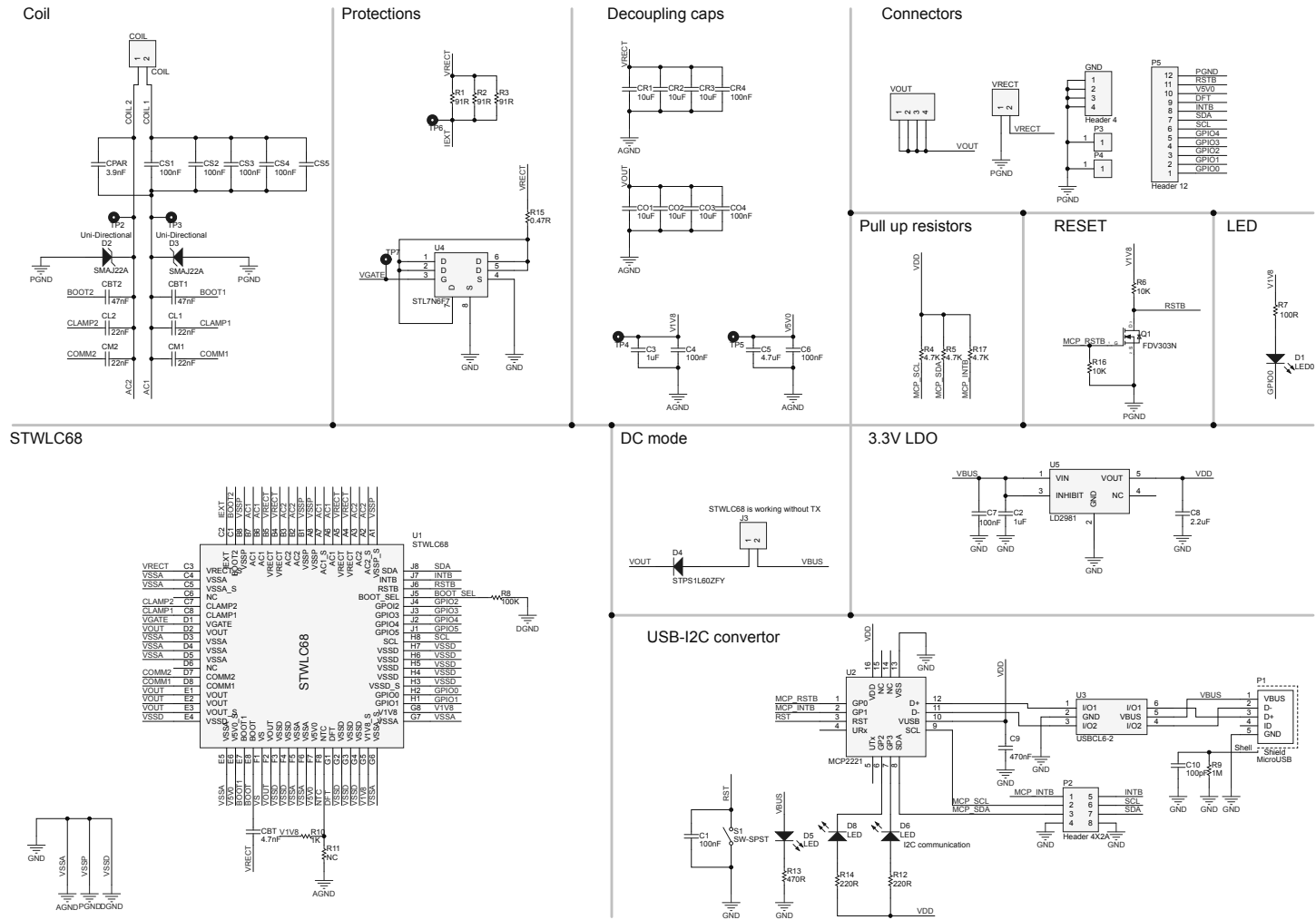
**Figure 1. STEVAL-ISB68RX silk screen**

- U1: STWLC68 wireless power receiver
- U2: USB Interface IC
- U3: ESD Suppressor
- U4: Power MOSFET
- U5: LDO voltage regulator
- P1: USB connector
- P5: Connector for STWLC68 pins



## 2 Schematic diagrams

Figure 2. STEVAL-ISB68RX schematic diagrams



## Revision history

**Table 1. Document revision history**

Date	Version	Changes
10-Jan-2020	1	Initial release.
27-Jan-2020	2	Updated cover page image.

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