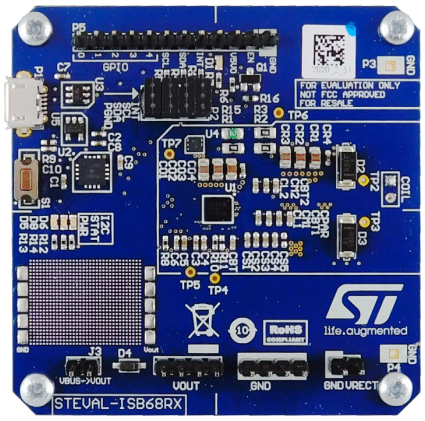
STEVAL-ISB68RX

Data brief

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 I²C interface for communication with host system (optional)
- Built-in USB-I²C 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-I²C 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).

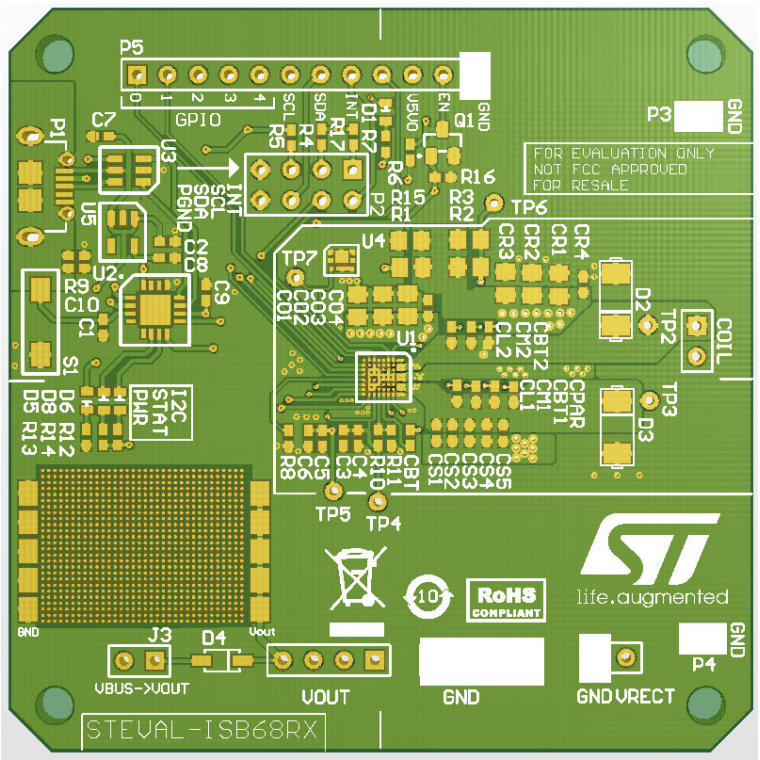
A dedicated connector provides advanced access to STWLC68 chip functionality, including control signals, programmable GPIOs, and analog input for NTC temperature sensor.

Product summary	
evaluation board based on STWLC68 wireless power receiver implementing a 5W BPP application according to Qi 1.2.4 specs	STEVAL-ISB68RX
Qi-compliant inductive wireless power receiver for 5W applications	STWLC68
GUI for developing applications using the STWLC68 wireless power receiver	STSW-ISB68GUI
Applications	Wireless Chargers

1 Component layout

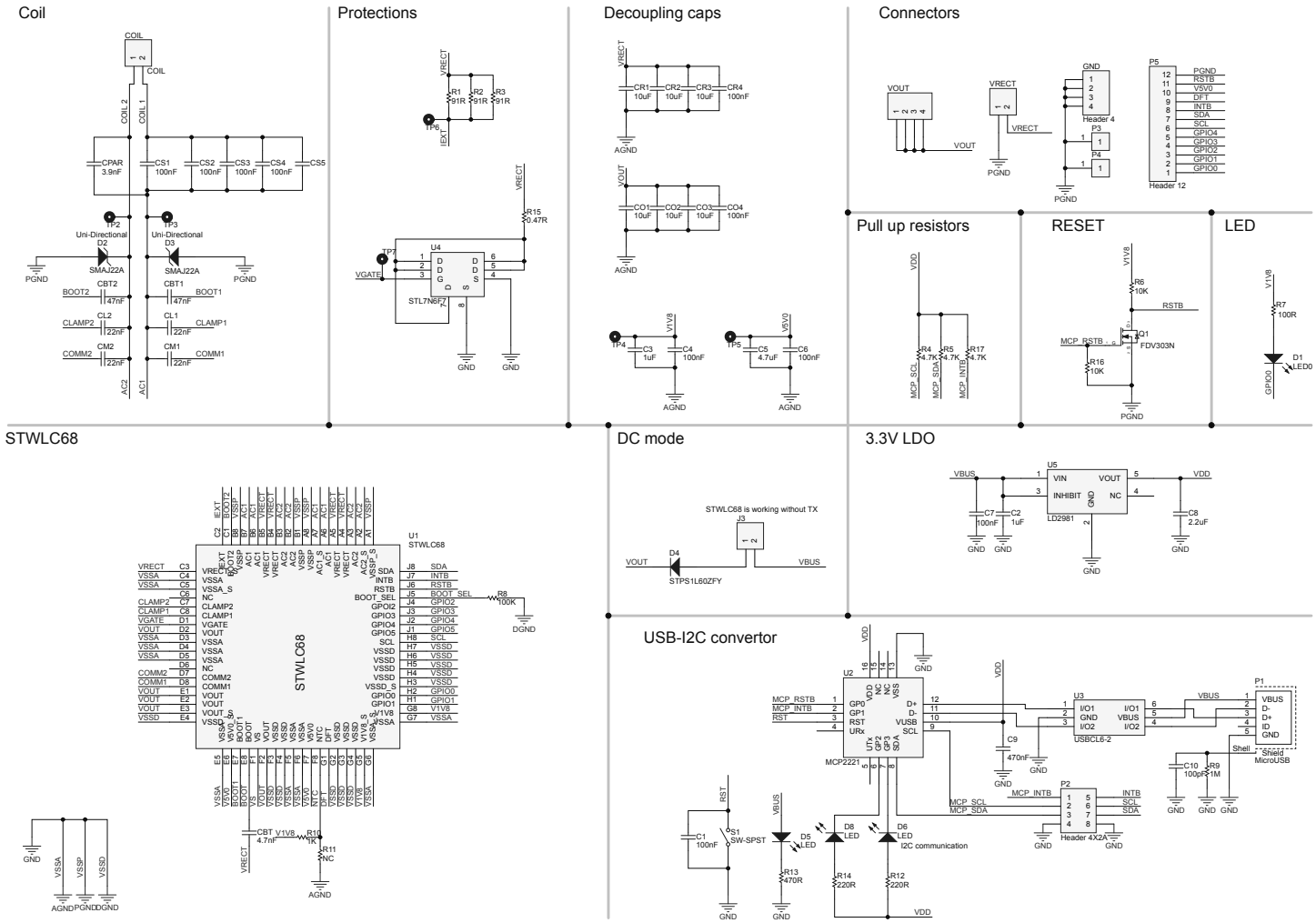
Figure 1. STEVAL-ISB68RX silk screen

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.