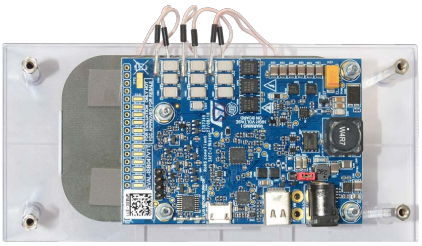
STEVAL-ISB047V1

Data brief

Qi certified 3-coil 15 W wireless charger TX evaluation kit based on STWBC-MC



Features

- STWBC-MC digital controller
- MP-A15 3-coil array
- 15 W potential power
- Flexible input voltage: 5 to 20 V from USB-C or DC jack
- 5 W mode when connected to 5 V USB input or DC jack
- Fixed frequency operation
- WPC Qi1.2.4 standard certified
- Robust demodulation algorithm, with triple path (V, I, f)
- Foreign object detection (FOD)
- Active presence detection
- UART protocol to control and monitor the system
- Complete reference design (evaluation board, schematics, PCB layout, firmware and tools)
- 2-layer PCB
- Low standby power consumption
- Flash memory based
- CE certified
- RoHS compliant
- WEEE compliant

Product summary	
Qi certified 3-coil 15 W wireless charger TX evaluation kit based on STWBC-MC	STEVAL-ISB047V1
USB-UART dongle	STEVAL-WBCDNGV1
Digital controller for wireless battery chargers transmitters for Qi multicoil applications	STWBC-MC
Firmware for STEVAL-ISB047V1	STSW-ISB047FW
Stand-alone USB PD controller	STUSB4500

Description

The STEVAL-ISB047V1 wireless battery charger TX evaluation kit consists of the STEVAL-ISB047V1T evaluation board and STEVAL-WBCDNGV1 USB-UART dongle. The kit is designed for charging devices such as smartphones or tablets where high power levels are required.

The evaluation board supports wireless battery charging of Qi-compliant devices up to 15 W. It also supports proprietary fast charging modes up to 10 W.

The STEVAL-ISB047V1 transmitter is based on the STWBC-MC and features a cost-effective half bridge topology, offering external interface via UART.

The STEVAL-ISB047V1 evaluation kit is a full solution, complete with boards, firmware, a GUI for debugging, schematics, layout files and bill of materials.

Tools for STEVAL-ISB047V1 are available on www.st.com, and allow users to access runtime information such as power delivered, regulation error and protocol status. Parameters can also be adjusted with these tools.

1 Evaluation board and block diagram

Figure 1. **STEVAL-ISB047V1T evaluation board**

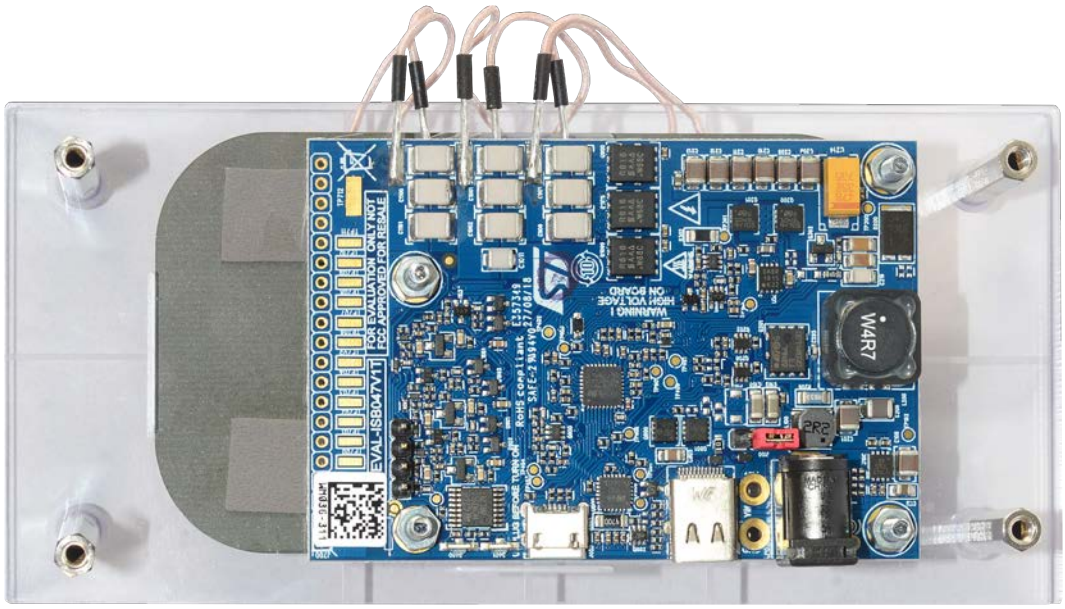
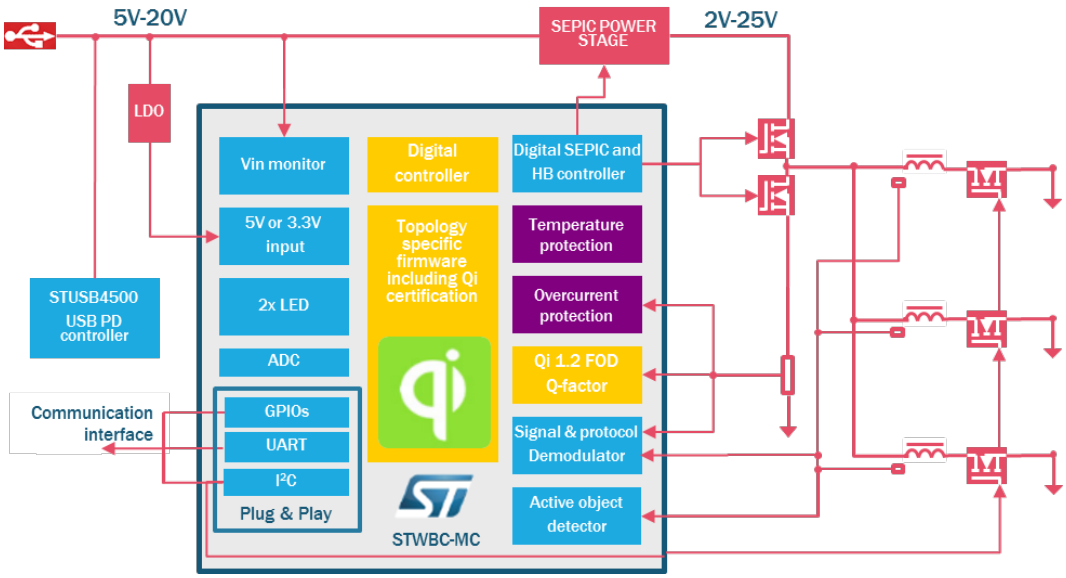


Figure 2. **STEVAL-ISB047V1T block diagram**



Revision history

Table 1. **Document revision history**

Date	Version	Changes
03-Aug-2018	1	Initial release.
06-Feb-2019	2	Updated title and cover page features.

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