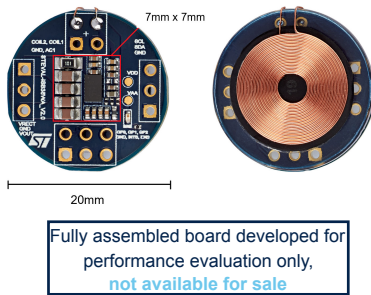


Qi-1.3 compatible wireless power receiver reference design for 2.5W wearable applications



Features

- Power transfer up to 2.5 W
- Qi 1.3 compliant
- Integrated
 - High efficiency synchronous rectifier
 - Low voltage drop regulator with output current limit control
- Output 5 V baseline power profile
- Adaptive rectifier configuration (ARC) mode for enhanced spatial freedom
- Accurate voltage/current measurement for foreign object detection (FOD)
- On-chip thermal management and protections

Description

The **STDES-WLC38WA** reference design is based on **STWLC38**. It is designed for wireless power receiver applications and it allows you to quickly start your 2.5 W Qi-BPP compatible wireless charging receiver projects.

This reference design document provides sufficient information to develop a project for up to 2.5 W charging using baseline power profile (BPP).

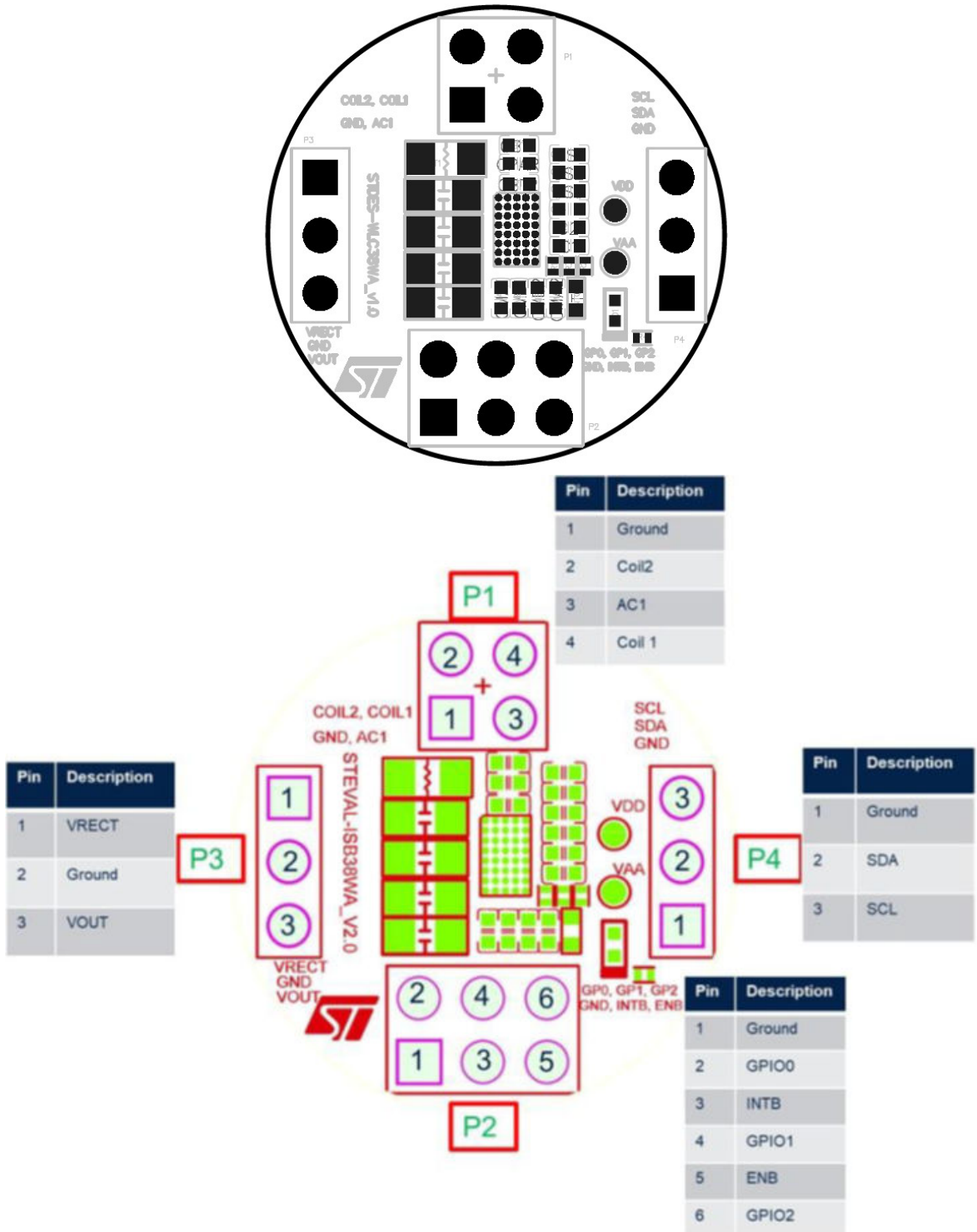
Through the I²C interface you can access and modify different configuration parameters, tailoring the operation of the device to the needs of custom applications.

Using an on-board USB-to-I²C bridge, the user can monitor and control the **STWLC38** using the **STSW-WPSTUDIO** graphical user interface (GUI).

Product summary	
Qi-1.3 compatible wireless power receiver reference design for 2.5W wearable applications	STDES-WLC38WA
Firmware for STDES-WLC38TWS	STSW-WLC38FWBPP
Qi-compliant inductive wireless power receiver for up to 15W applications	STWLC38JRM
GUI for developing applications using the STDES-WLC38TWS evaluation board	STSW-WPSTUDIO
Applications	Wireless Chargers

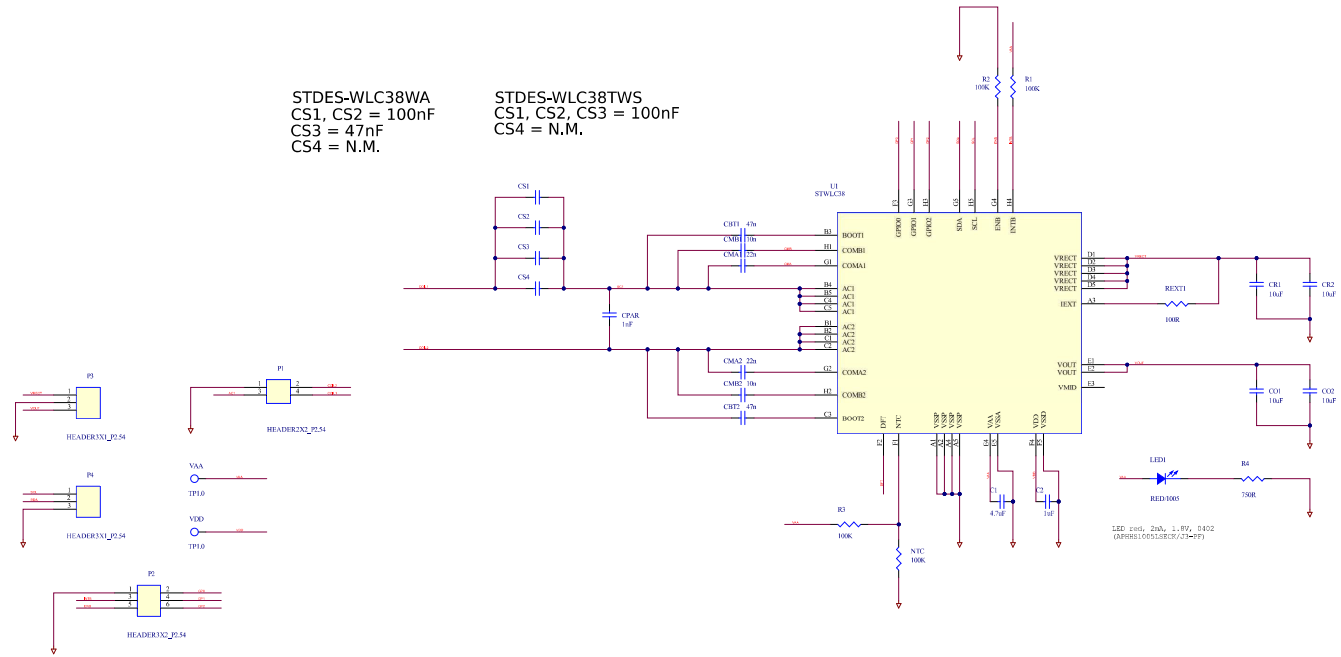
1 Component layout

Figure 1. Component layout



2 Schematic diagrams

Figure 2. STDES-WLC38WA circuit schematic



Revision history

Table 1. Document revision history

Date	Revision	Changes
31-Mar-2023	1	Initial release.
02-Aug-2023	2	Modified title in cover page. Updated cover image, product summary and Section 2 Schematic diagrams .

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