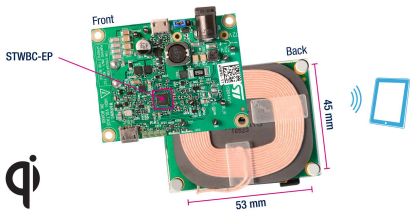
STEVAL-ISB044V1

Data brief

Qi MP-A10 15 W wireless charger TX evaluation kit based on STWBC-EP



Features

- STWBC-EP digital controller
- 15 W output power
- Qi MP-A10 reference design
- WPC Qi1.2.3 standard compliant
- Robust demodulation algorithm, with triple path (V, I, f)
- Foreign object detection (FOD)
- Accurate power control
- Active presence detection
- UART protocol to control and monitor the system
- Complete reference design (evaluation board, IC, firmware and tools)
- 2-layer PCB for easy design
- Flash memory-based
- RoHS compliant

Description

The STEVAL-ISB044V1 evaluation kit has been designed for devices, such as smartphones or tablets, requiring high power levels.

It supports wireless battery charging up to 15 W.

The embedded STWBC-EP digital controller transmitter is based on a cost-effective half-bridge topology providing external interfaces via UART and I²C.

The kit also includes STWBC-EP firmware, a graphical interface for debug, schematics, layout files and bill of materials.

There are specific tools for the STEVAL-ISB044V1 available on www.st.com which give runtime information, such as the power delivered, the regulation error or the protocol status as well as parameter tuning.

Summary table	
Qi MP-A10 15 W wireless charger TX evaluation kit based on STWBC-EP	STEVAL-ISB044V1
Digital controller for wireless battery charger transmitters (WBC) in 15 W medium power applications	STWBC-EP

1 Schematic diagrams

Figure 1. **STEVAL-ISB044V1 circuit schematic (1 of 8)**

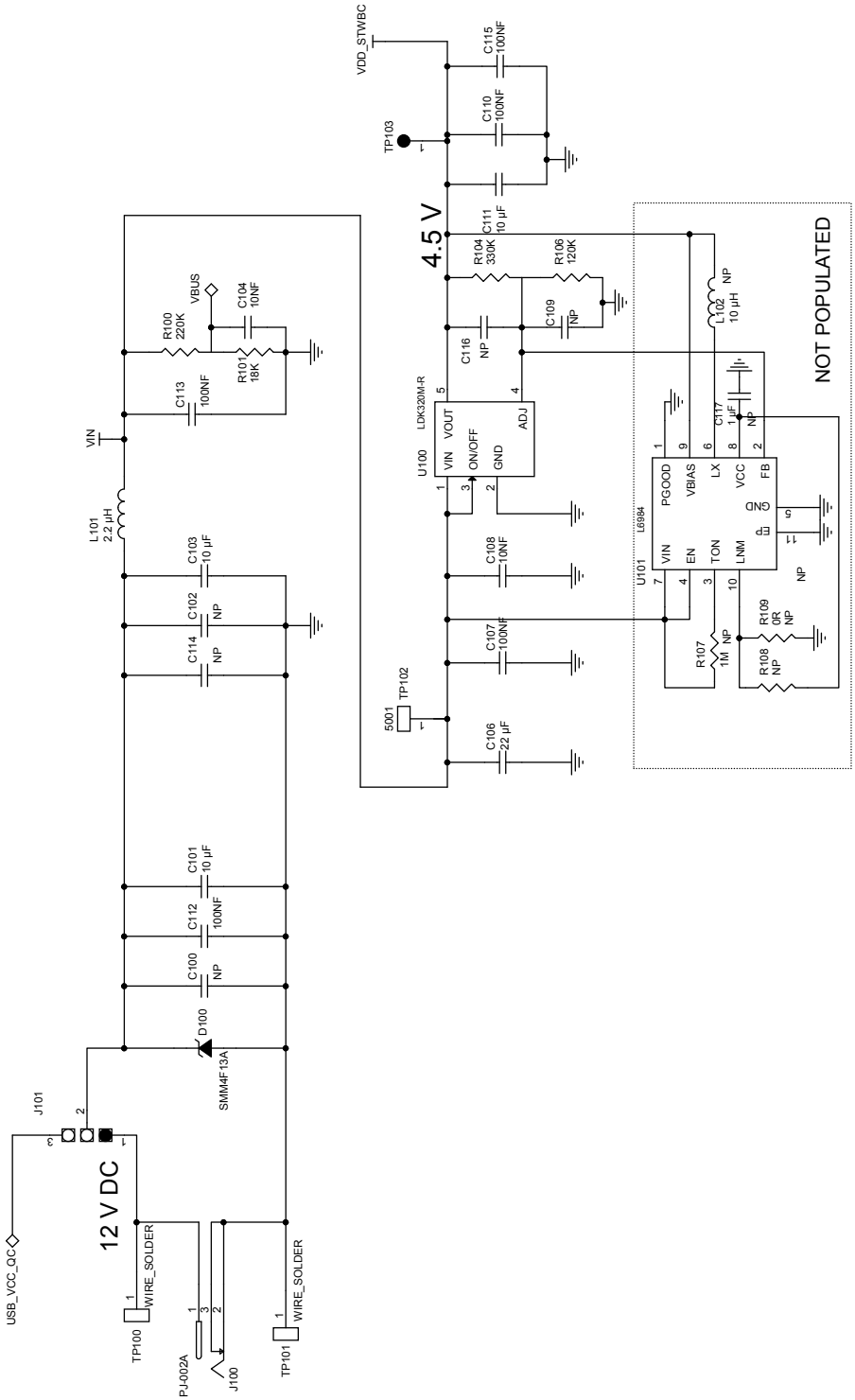


Figure 2. **STEVAL-ISB044V1 circuit schematic (2 of 8)**

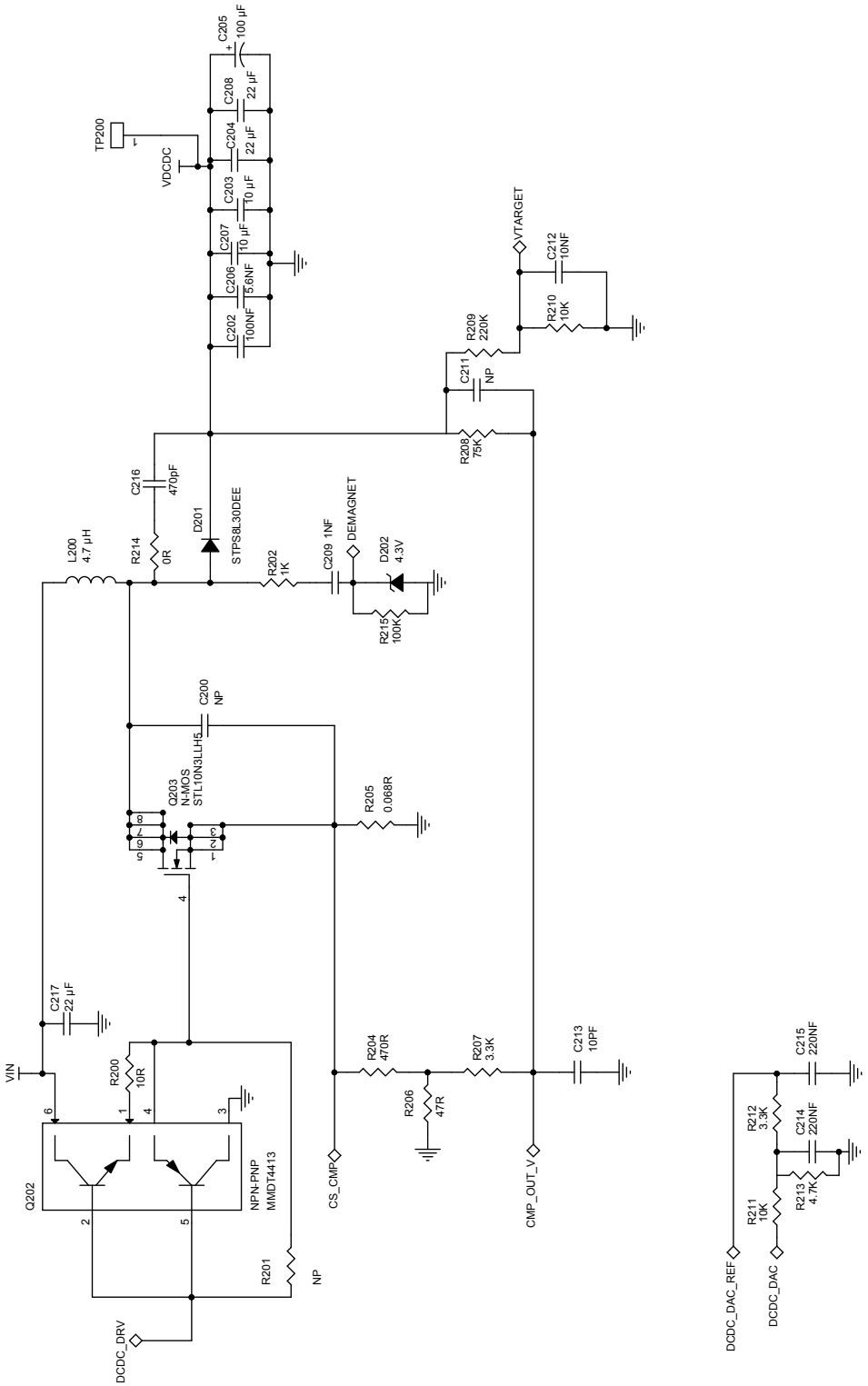


Figure 3. **STEVAL-ISB044V1 circuit schematic (3 of 8)**

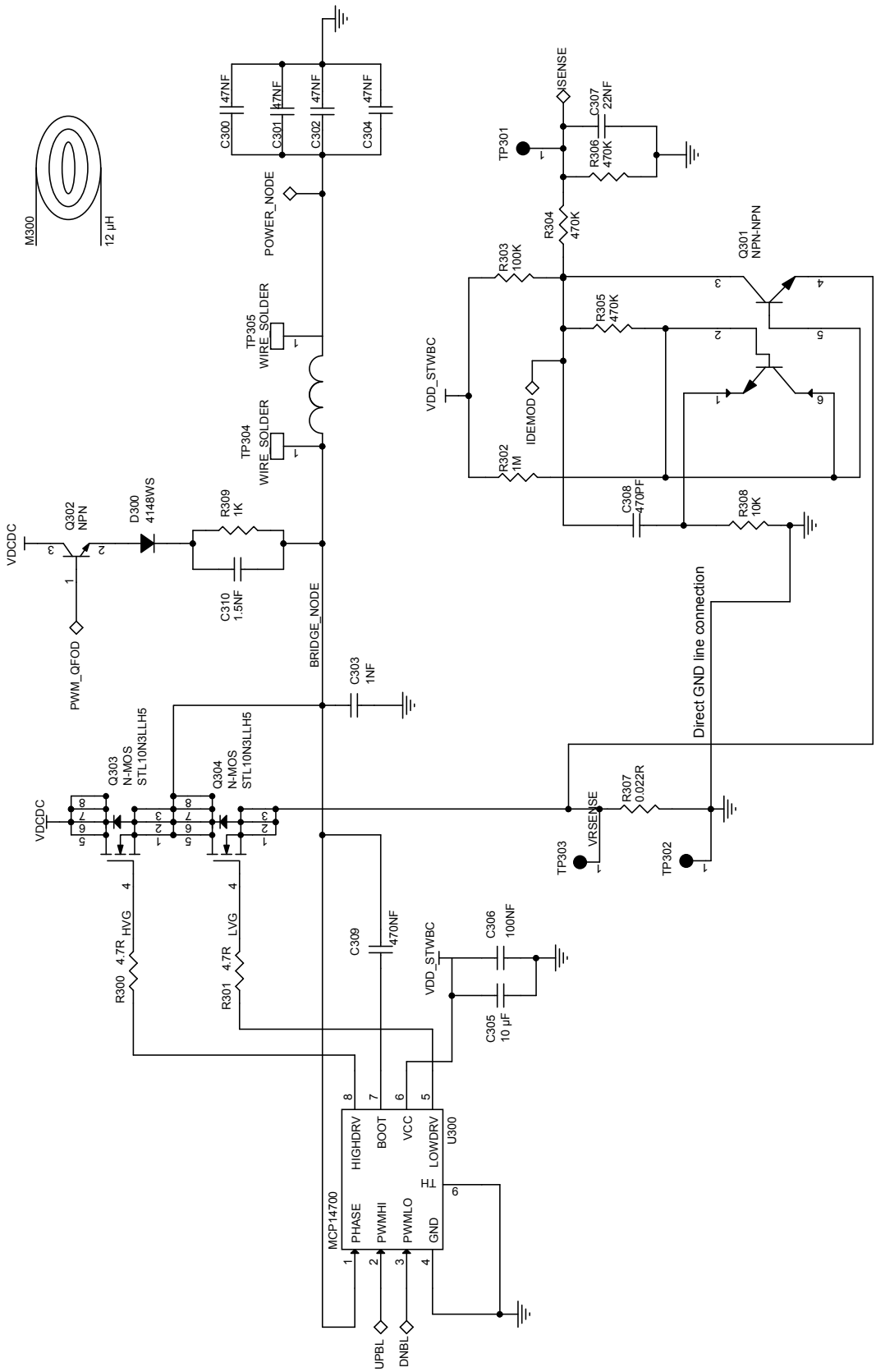


Figure 4. **STEVAL-ISB044V1 circuit schematic (4 of 8)**

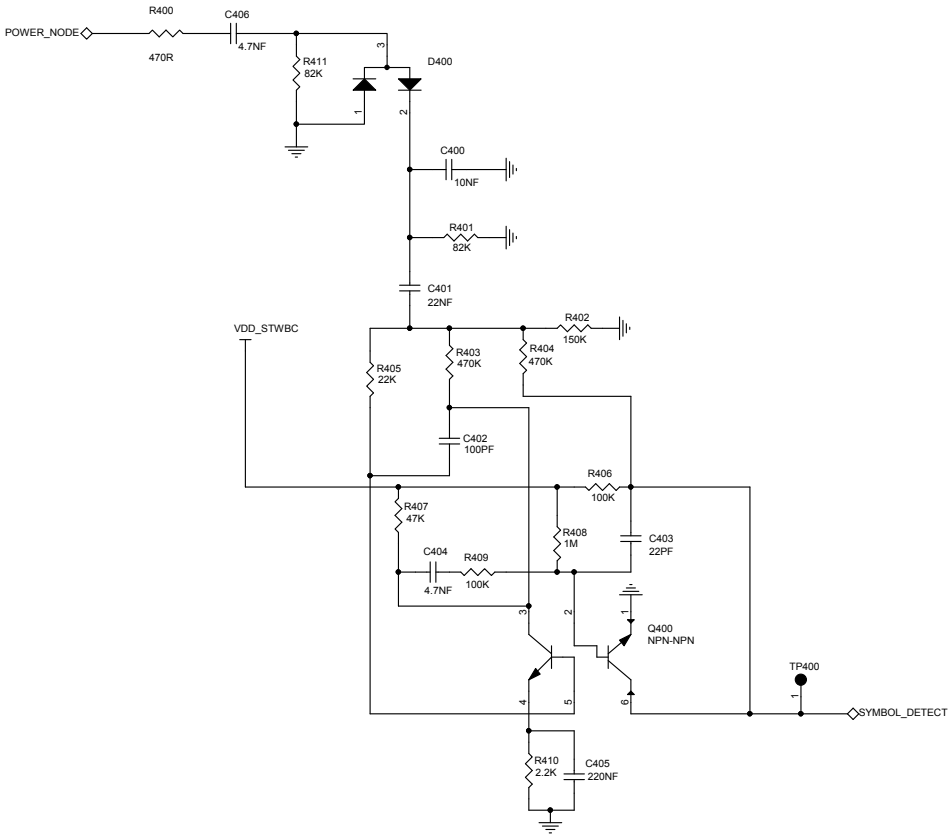


Figure 5. **STEVAL-ISB044V1 circuit schematic (5 of 8)**

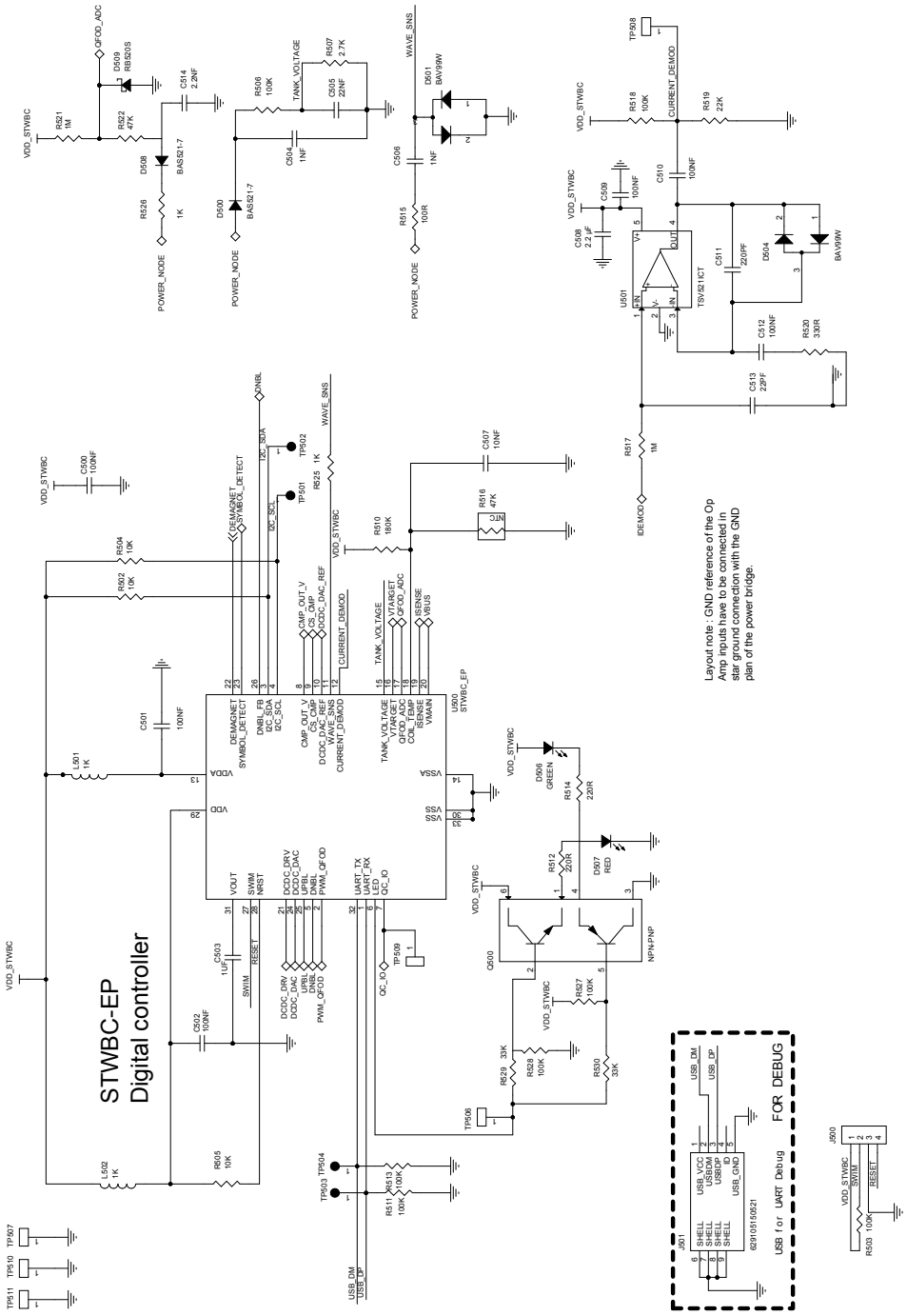


Figure 6. **STEVAL-ISB044V1 circuit schematic (6 of 8)**

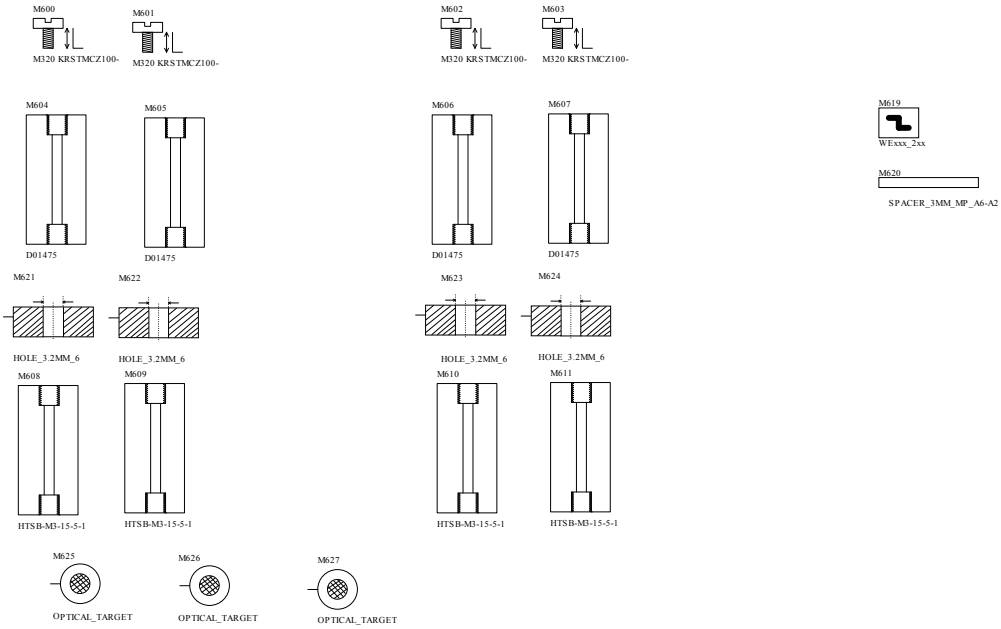


Figure 7. **STEVAL-ISB044V1 circuit schematic (7 of 8)**

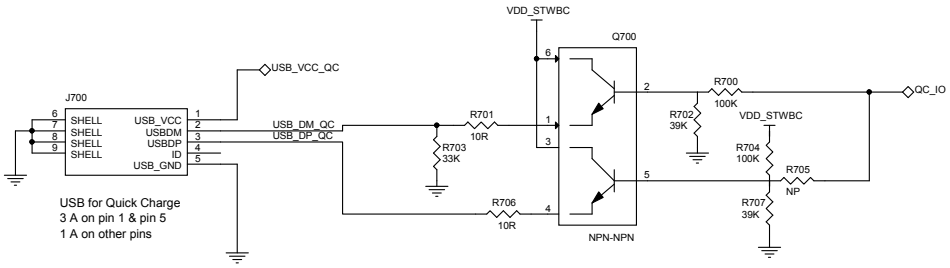
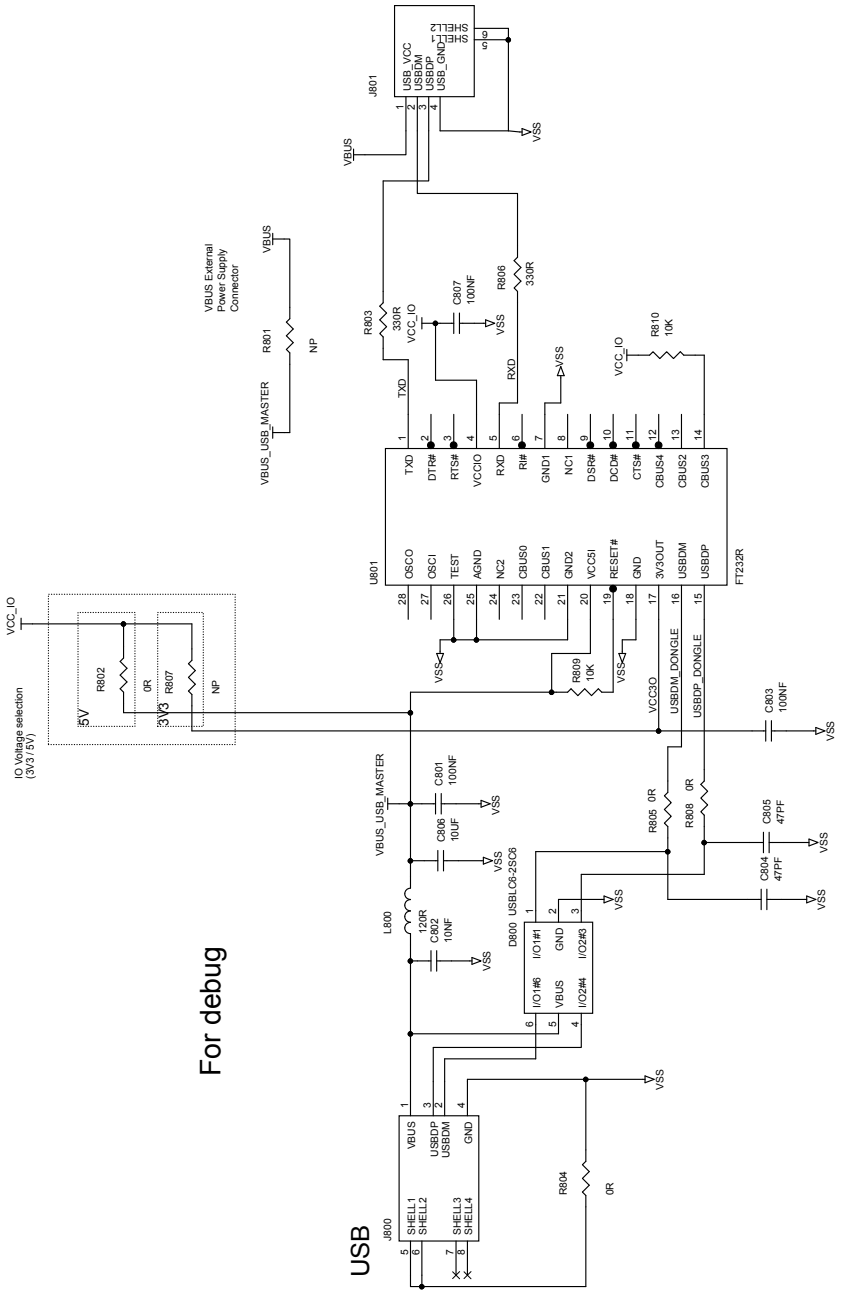


Figure 8. **STEVAL-ISB044V1 circuit schematic (8 of 8)**



Revision history

Table 1. **Document revision history**

Date	Version	Changes
09-Oct-2017	1	Initial release.
08-Feb-2018	2	Updated cover page image.