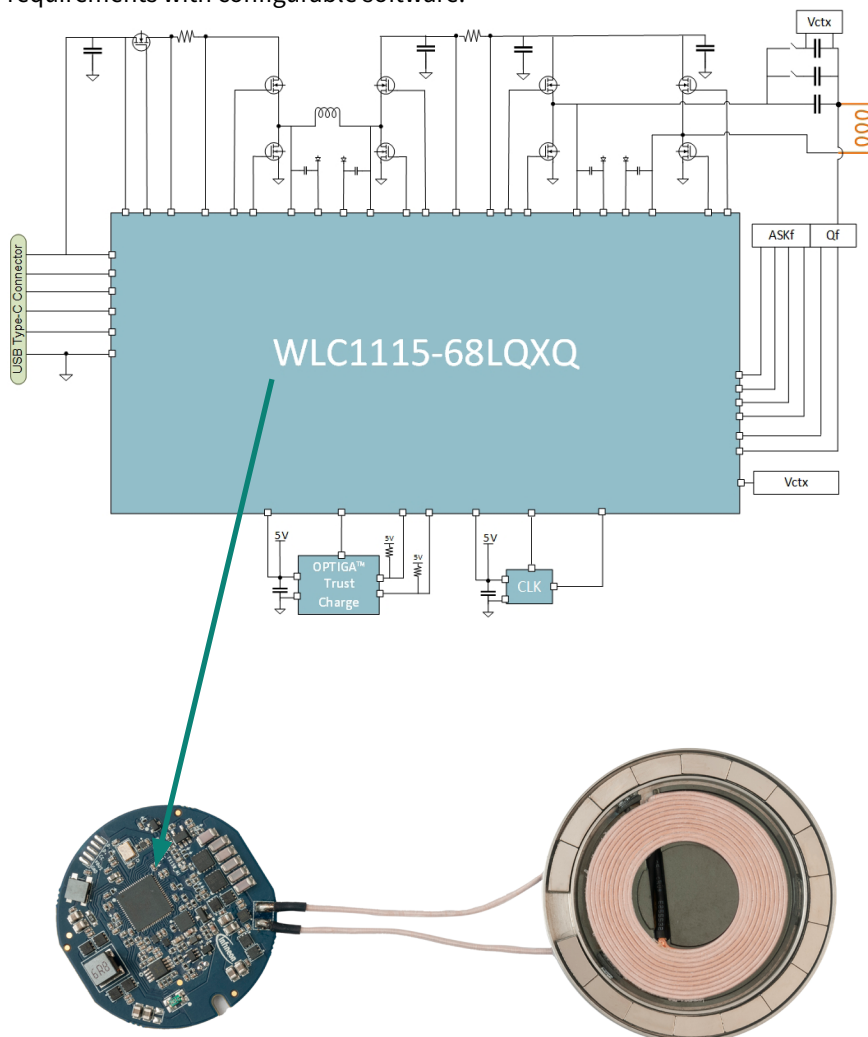


REF_WLC_TX15W_M1

Qi2 capable form factor optimized transmitter reference board

REF_WLC_TX15W_M1 is a highly integrated wireless charging transmitter solution using the Infineon WLC1 controller. The REF_WLC_TX15W_M1 reference design kit demonstrates the functionality of Infineon's WLC1115 wireless transmitter controller. It implements the Qi2 protocol and supports 15 W wireless charging using Qi2 magnetic power profile (MPP). It also supports Qi basic power profile (BPP) wireless charging receivers which do not support MPP. This WLC Qi2 MPP wireless power transmitter is powered using a USB-C power adapter that is compliant with USB PD 2.0 and higher specifications. To support the 15 W wireless charging, it is recommended to connect to 20 W or above USB-C PD charger.

Infineon's wireless charging controllers (WLC) offer highly integrated yet scalable platforms that help to meet compliance and proprietary charging requirements with configurable software.



Key features

- Qi v2.0 MPP transmitter
- Input voltage range: 4.5 V-24 V
- Output power: 15 W Qi MPP
- UVLO, OVP, OCP and OTP
- Programmable controller
- Integrated USB-C PD controller
- Integrated buck-boost
- Factory trimmed sensing
- Multipath ASK demodulator
- Adaptive foreign object detection (FOD)
- CC or I2C interface
- 68 QFN (8 mm x 8 mm)
- 0.4 mm pitch industrial grade

Potential applications

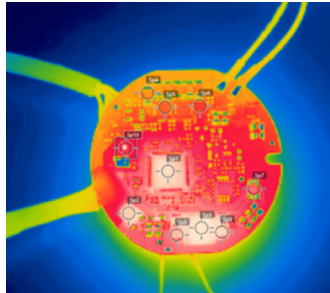
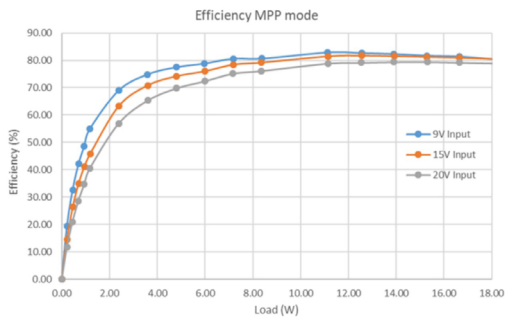
- Qi v2.0 MPP transmitter
- Proprietary power delivery extensions (PPDE)



SOLUTION BRIEF

System performance

- Efficiency end-end ~ 82%
- PCB temperature at 25 °C room ambient ~ 53 °C
- Active charging area ~ 196 mm²



Key benefits

- Compliant to Qi2.0 standard
- Turnkey REF solution
- Form factor optimized
- Highly integrated single-chip transmitter enabling Qi2
- USB-PD or wide DC input
- Programmable features for proprietary protocols
- ModusToolbox™ support

For the detailed test report please contact [Infineon's sales](#).

Key enabling products

- Wireless charging transmitter IC - [WLC1115-68LQXQ](#)
- [OPTIGA™ Trust Charge](#) - SLS32AIA020U3 (Qi authentication element)
- OptiMOS™ 5 - [ISK036N03LM5](#) (Buck-boost, inverter FETs)
- OptiMOS™ 5 - [BSZ146N10LS5](#) (MPP Resonant cap selection FETs)
- 30V Dual N-Channel StrongIRFET™ - [IRLHS6376](#) (ZVS snubber cap selection FETs)

Turnkey solution in optimal form factor



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