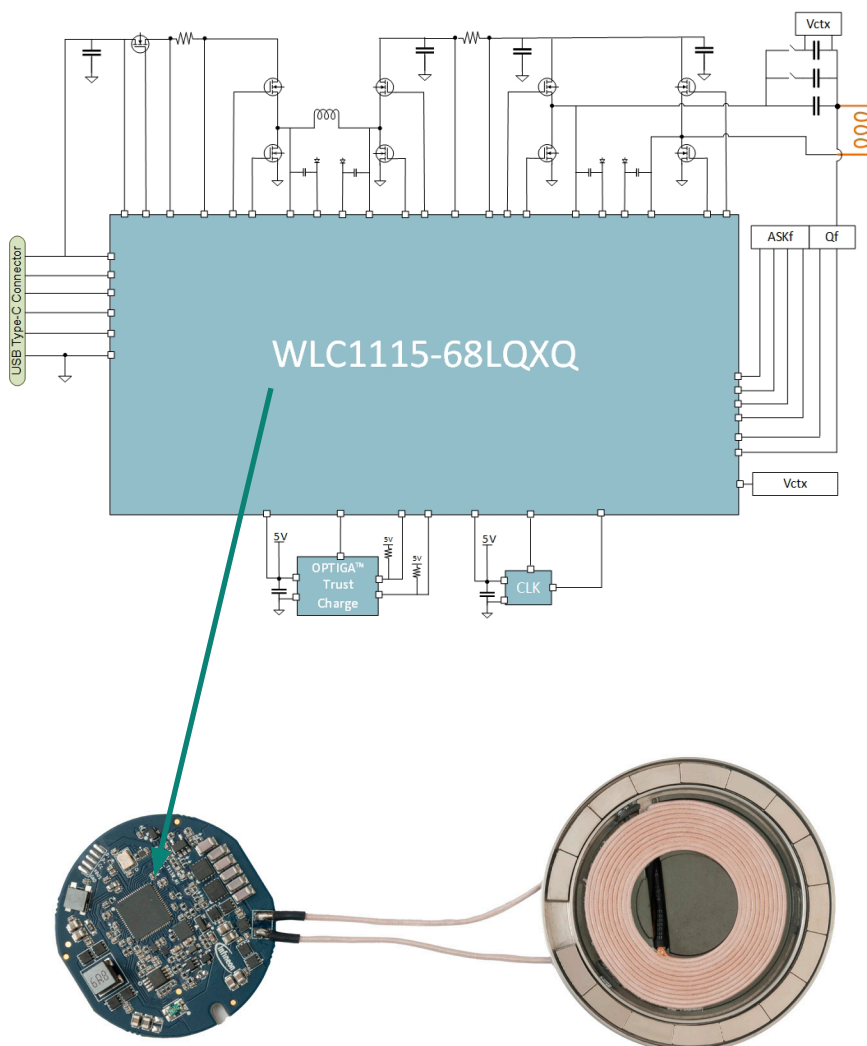


REF_WLC_TX15W_M1

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) to support 5 W wireless charging with 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.

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

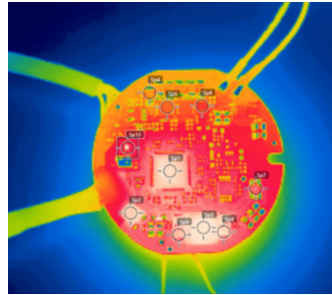
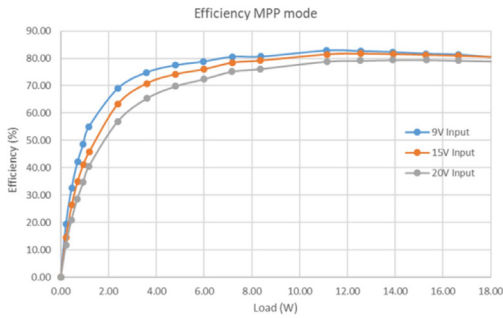
- Qi v2.0 MPP transmitter
- Proprietary power delivery extensions (PPDE)



SOLUTION BRIEF

System performance

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



Key benefits

- WLC1115 available in MP
- 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](#). Sampling NOW!

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



www.infineon.com

Published by
Infineon Technologies AG
Am Campeon 1-15, 85579 Neuburg
Germany

© 2023 Infineon Technologies AG
All rights reserved.

Public

Date: 08 / 2023

Please note!

This Document is for information purposes only and any information given herein shall in no event be regarded as a warranty, guarantee or description of any functionality, conditions and/or quality of our products or any suitability for a particular purpose. With regard to the technical specifications of our products, we kindly ask you to refer to the relevant product data sheets provided by us. Our customers and their technical departments are required to evaluate the suitability of our products for the intended application.

We reserve the right to change this document and/or the information given herein at any time.

Additional information

For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings

Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.