

Solution brief

15 W Qi transmitter (Tx) for charging smartphones

REF_10WTx_QI_4102

The 15 W wireless power transmitter evaluation board is a high-performance, easy-to-use development kit designed for applications with wireless power transfer of up to 15 W. It supports input voltage range of 9 – 12 V and is compatible with QC 2.0/3.0 adapters.

The transmitter provides designers with a certified platform that drastically reduces the development time of the end application. The system is compatible with WPC v1.2.4 receivers up to 15 W. Smartphones with proprietary fast charge capability are also supported.

Key features:

- > Up to 15 W wireless power transfer
- > WPC Qi v1.2.4 EPP certified
- > Fixed frequency power transfer
- > Supports fast charging for Samsung and Apple phones
- > MP-A11 coil configuration
- > VIN range: 9 – 12 V
- > 83% peak efficiency
- > To be operated with Q.C. 3.0 adapter
- > Improved accuracy of foreign object detection (FOD)
- > Cost-optimized architecture with low BOM count
- > Two LED indicators for power transfer and fault conditions
- > EMC, CISPR 22 compliant with no EMI choke
- > 25°C to +85°C temperature range

Key Infineon products

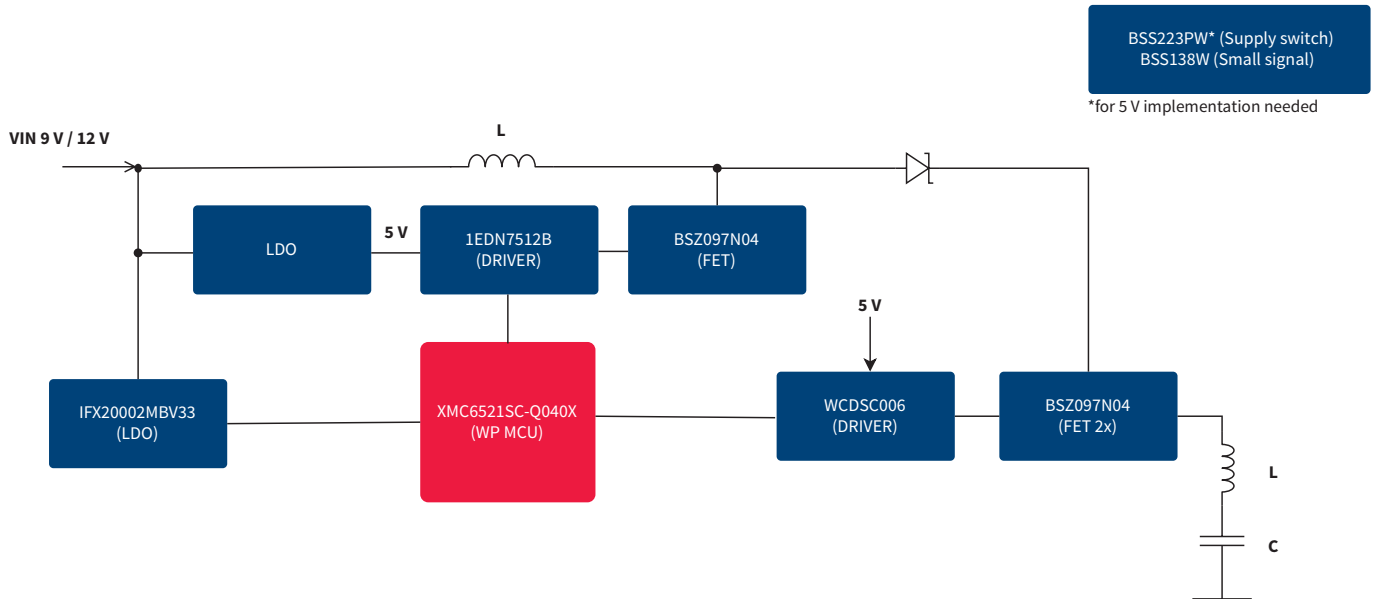
- > Wireless power controller XMC™-SC (XMC6521SC-Q040X)
- > OptiMOS™ 40 V (BSZ097N04LS)
- > EiceDRIVER™ 1EDN (1EDN7512B)
- > Wireless charging driver IC (WCDSC006)
- > Monolithically integrated low-drop voltage regulator (IFX20002MB V33)
- > OptiMOS™ N-channel MOSFET (BSS138WH)

Key benefits

- > Development effort reduction
- > Efficiency and accurate FOD
- > Reduced system costs
- > Fast charging capability



Solution diagram



Board specification

	Board number	REF_10WTx_QI_4102
	Solution max. power capability [W]	7.5 W / 10 W
	Frequency	fixed 127.8 kHz (Apple iOS), variable (Android)
	Input power supply	USB QC 3.0 (9 V/ 12 V)
	Topology	boost topology (half-bridge solution)
	Power regulation method	Variable voltage boost (added frequency control for Android)
	Rx-Tx communication	In-band communication (bi-directional)
	Supports	WPC 1.2.4 EPP
	Charging rates Rx	Up to 15 W
	FOD measurements calculated Tx power	Direct AC measurements at coil
	DC-DC efficiency	83%
	Dimensions	L: 85 mm, W: 50 mm, H: 6.4 mm Active area: L: 45 mm, W: 40 mm
Coil type	MP-A11	

Partnering with:



Spark Connected Inc. is our official partner for wireless charging.
The software IP is provided by our partner.

For details visit:
www.sparkconnected.com

Published by
Infineon Technologies Austria AG
9500 Villach, Austria

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