

Product brief

BSZ0910ND OptiMOS™ half-bridge

Infineon's optimized solution for wireless power and drives

We offer high performance products with the best price/performance ratio in the industry thanks to cost-effective packages and leading, reliable and mature silicon technology.

The leading OptiMOS™ technology combined with the PQFN 3.0 x 3.0 mm² package offers an optimized solution for DC-DC applications with space critical requirements.

The BSZ0910ND fits perfectly in wireless charging and drives (e.g. multicopter) architectures where designers target to simplify the layout and significantly save space without compromising on efficiency.

Highest efficiency:

- > In hard switching topologies low switching losses can be achieved due to low input and output capacitances
- > Benchmark for lowest switching and conduction losses
- > 3.0 x 3.0 mm² packages with low $R_{DS(on)}$ enable a small footprint for multi-coil designs

Key features

- > Symmetric half-bridge with very low $R_{DS(on)}$ in a small 3.0 x 3.0 mm² package outline
- > Exposed pads
- > Logic level (4.5 V rated)
- > RoHS compliant 6/6 (full lead free)

Key benefits

- > Low switching losses
- > High switching frequency operation
- > Lowest parasitics
- > Low operating temperature
- > Low gate drive losses
- > RoHS 6/6 lead free product

Key applications

- > Wireless charging
- > Multicopter
- > Drives
- > Wearables

Multicopter



Smartphones



Wearables



In-car charging



Notebooks



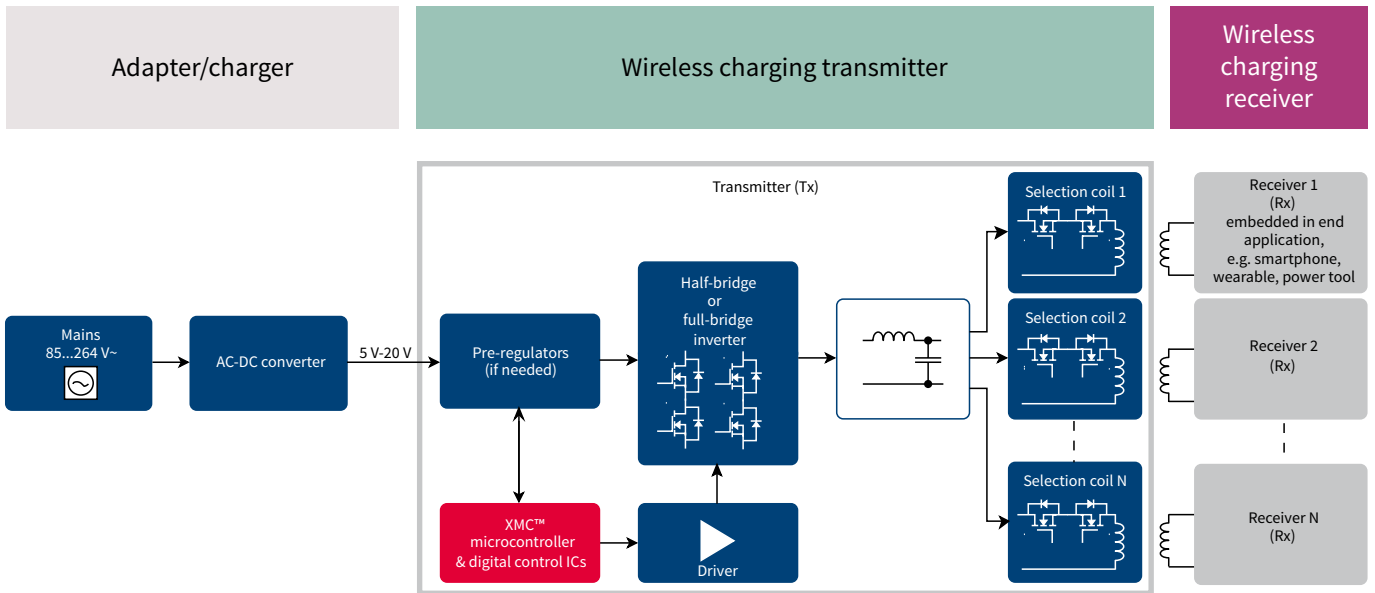
Power tools



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System diagram: inductive wireless charging



> Qi (WPC) which supports single-coil and multi-coil inductive topologies and uses frequencies of 100-300 kHz, dominates the market today in the smartphone segment as measured by volume. Their widespread use can be attributed to their cost-efficiency. Inductive topologies always rely on in-band communication.

> The BSZ0910ND is a leading product in the industry when it comes to fast switching because it has an optimized figure-of-merit for gate-source on-state resistance $R_{DS(on)}$.

Product portfolio

Sales name	V_{DS}	Package	$R_{DS(on) \text{ max.}}$ @ $V_{GS}=4.5 \text{ V}$ [mΩ]	$R_{DS(on) \text{ max.}}$ @ $V_{GS}=10 \text{ V}$ [mΩ]	$Q_g \text{ typ}$ @ $V_{GS}=4.5$ [nC]	$R_{th(ja)}$ [°C/W]
BSZ0910ND	30 V	WISON-8	13.0	9.5	4.0	65

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