PTX130W

Wireless Charging Poller IC

The PTX130W is a powerful and efficient NFC transmitter system-on-chip for NFC wireless charging applications alongside data communication. The PTX130W features improved key performance parameters such as output power and Rx sensitivity (-80dBc).

By eliminating EMC filter and matching components, the PTX130W enables simple integration and compact design without the complexity associated with existing solutions (dual resonating circuits composed by EMC filter and antenna). The device's superior RF performance enables small antenna design, fast charging and flexible placement of Poller and Listener antennas.

Applications

- NFC wireless charger devices for:
  - Wearables
  - Smart watches
  - Smart glasses
  - Hearing aids
  - Smart rings

Features

- High and efficient power transmission with accurate digital shaping programmability
- Up to 18% efficiency improvement compared to previous generation (PTX100W)
- Harvesting up to 1W on the NFC WLC Listener
- No EMC filter required due to sinewave output driver and Direct Antenna Connection (DiRAC)
- -80dBc RX sensitivity with full dynamic range due to DiRAC
- Automated Power Control Loop for system efficiency optimization
- WLC Poller functionalities
- WLC Poller with extended functionality, such as proprietary commands for transparent data channel
- Impedance change detection
- On-Chip processing of time critical commands
- Output power regulation with 1% step

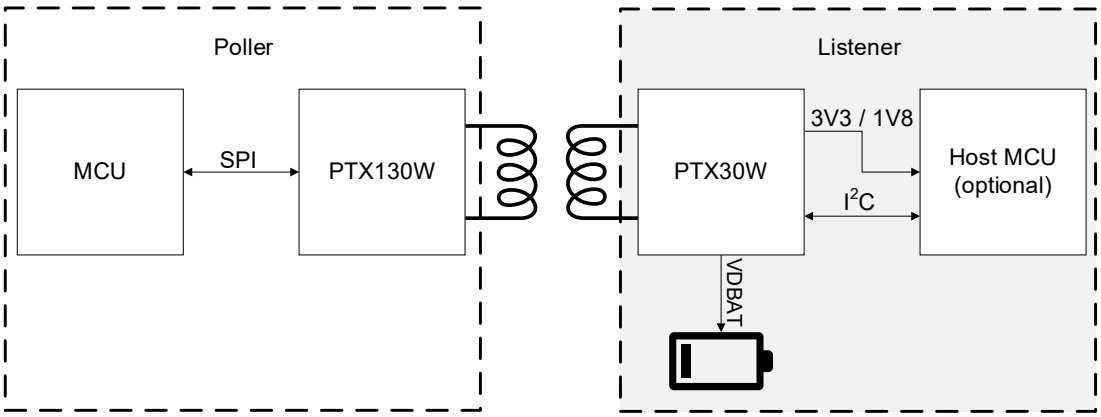

Figure 1. System Block Diagram

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