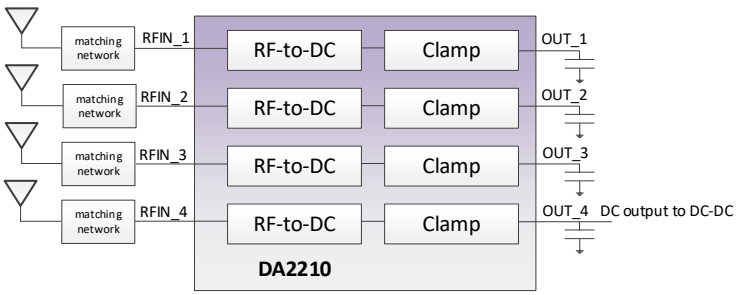
DA2210, DA2223 WattUp® Wireless Power Receivers

WattUp wire-free charging reduces footprint and increases spatial flexibility in wearables and hearables

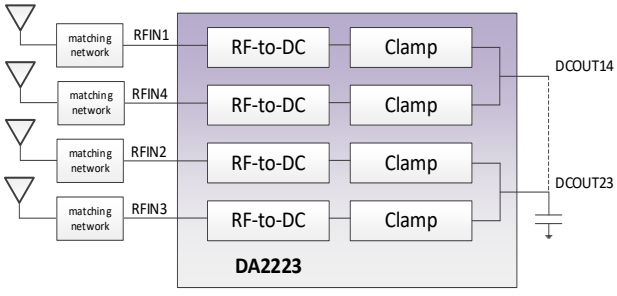
DA2210 and DA2223 are RF-to-DC wireless power receivers optimized for wireless charging applications, such as wearables, fitness trackers, hearables, hearing aids, asset trackers, and other battery-powered electronics, where small implementation size and increased spatial freedom during charging provide advantages over coil-based charging solutions.

DA2210 and DA2223 feature four RF-to-DC receiver paths, allowing connection of 1 to 4 antennas dependent upon desired power and antenna area available. Antennas can be small enough to fit into in-the-ear hearing aids. Multiple antennas can be used to increase received power for devices with increased area, such as remote controls or battery banks. Both DA2210 and DA2223 features external RF input matching for improved flexibility and RF-to-DC conversion efficiency. The device DC-outputs are internally clamped to limit the output voltage to within the range of most DC regulators. With a form factor smaller than DA2210, DA2223 is ideal for use in very small electronic devices, thus offering further flexibility in integration.

DA2210 WattUp Wireless Power RF-to-DC Receiver Block Diagram



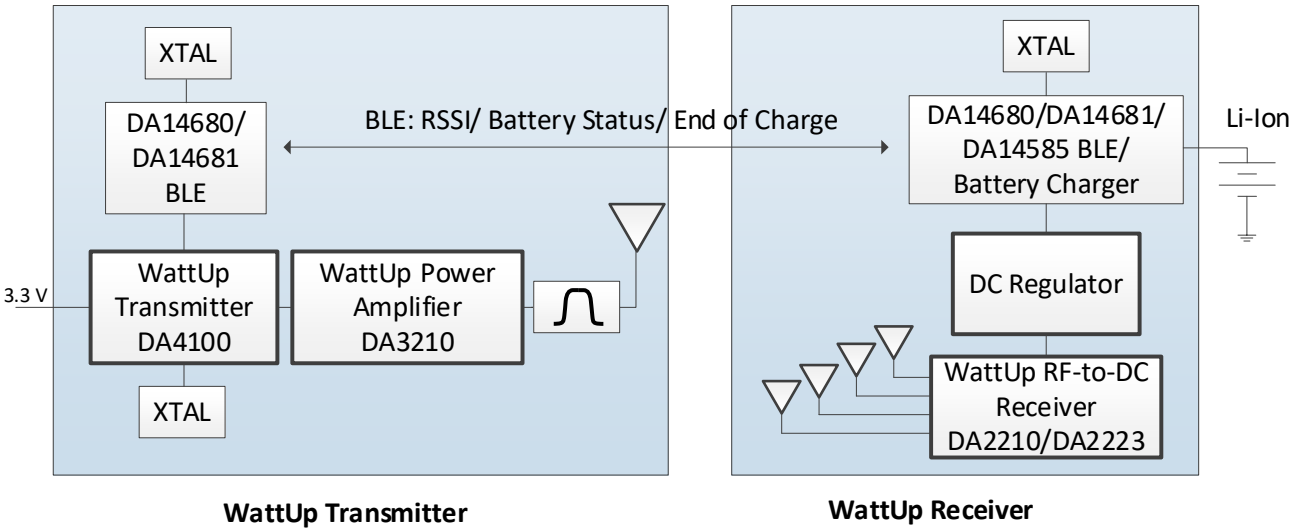
DA2223 WattUp Wireless Power RF-to-DC Receiver Block Diagram



Near Field WattUp System

The Near Field WattUp system is comprised of a WattUp wireless power transmitter (DA4100), a WattUp wireless power amplifier (DA3210), a WattUp wireless power receiver (DA2210 or DA2223), a DC regulator, a Li-Ion/Li-Poly battery charger and an optional Bluetooth® communication link (DA14680, DA14681 or DA14585) which supports battery status communication between the WattUp receiver and transmitter. The same link can be used to provide the user with full power management capabilities using the WattUp Application running on a Smartphone or tablet. Antennas are fabricated using low-cost PCB material, flexible PCB or sheet metal.

Near Field WattUp System Block Diagram



Applications

- Fitness Bands
- Hearables
- Hearing Aids
- Bluetooth Headsets
- Bluetooth Trackers
- Smart Pens
- Remote Controls
- Smart Glasses

Key benefits

- Ultra-small RF/antenna-based solution
- Improved spatial and orientation freedom
- Secure pairing of the transmitter and device-under-charge
- Eliminates connectors and charging contacts
- Enables fully sealed waterproof design

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