

Wireless Power Transfer Controller IC

DESCRIPTION

The MAP7201 is a Wireless Power Transfer Controller IC which integrates class E amplifier gate driver, boost controller which can operate for resonant system, synchronous buck converter with 5V output, 3.3V low-dropout regulator for external devices, sense amplifier, a crystal oscillator, an A/D converter, CV/CC controller, and digital communication (I²C) to control boost converter power rail up to 28V for wireless power transfer and LED driver for status indication.

The device has two modes for input power. In the boost mode, input power is from DC adapter and internal boost converter controller provides power to the power amplifier. In the AC-DC mode, input power is from AC-DC system like SMPS. The output of AC-DC system can be changed by the internal optocoupler controller.

APPLICATIONS

- Laptop, tablet wireless charger
- Smart phone, wearable devices wireless charger
- Furniture or intelligent home appliance

FEATURES

- **Highly integrated and efficient wireless power transfer controller**
- **Support dual modes for input power**
 - Boost mode support DC adaptor input
 - AC-DC mode support AC-DC system like SMPS
- **Boost controller**
 - I²C adjustable output voltage for wireless power control
 - I²C adjustable current limit
- **CV/CC controller for AC-DC mode**
 - I²C adjustable CV control for wireless power control
 - I²C adjustable current limit for CC control
- **Integrated crystal oscillator**
 - 6.78MHz clock output with 13.56MHz crystal
- **Differential high speed and current gate driver for class-E amplifier**
- **10-bit ADC for current/voltage sense**
- **Dimmable LED driver for status indication**
- **Synchronous buck converter**
 - 5V, 200mA
 - bypass function for low input voltage
- **Low dropout regulator**
 - 3.3V, 50mA
 - for Bluetooth or MCU
- **QFN available**
 - 28L TQFN 4.0x4.0mm², 0.75T
- **Green & RoHS**

TYPICAL APPLICATION (I)

