Operation description

This product includes the main chip MCU (WP9305A), signal processing, resonant full-bridge circuit composed of WP9305A MCU, MOS drive, resonant capacitor, power chip DCDC (STI3470), and inductor coil.

The key circuit of the transmitter consists of a resonant cavity, a control unit that drives the inductor, and a communication circuit that demodulates the voltage or current of the primary coil. Inductor coil, resonant capacitor, MOS and MOS drive form a resonant full bridge circuit. The transmission frequency of the coil is 125 kHz.

The power chip (STI3470) steps down the input voltage to 5V and supplies it to the WP9305A, LM324, etc. as a power supply.

WP9305A control module provides LED light control, PWM control, input voltage input current monitoring, and communication signal demodulation.

After the transmitter input is energized, the transmitter receives the presence of the analog ping coil, and the two sets of coils respectively scan the receiver at a frequency of about 2 Hz. If any of the coils detects the receiver, the operation of the other coil is stopped. The digital ping is sent by the coil transmitter that has detected the load, the receiver will get a signal strength packet, and the transmitter keeps the coil energized; then the receiver sends some data packets, identifies the transmitter, and provides the transmitter with the transmitter. The configuration and setting information, after entering the power transmission phase, the receiver sends a control error packet to the transmitter to increase or decrease the energy; this information is amplified by the LM324 and sent to the WP9305A chip for processing.

The receiver actively sends a “terminate charging” message, or no communication takes place within 1.25S, the transmitter will enter a low power state.

When the mobile phone is getting full, the charging current of the mobile phone charging management needs to be reduced, and the output current of the mobile phone receiver is also reduced.

Charging will not stop unless the coil signals a termination.

Product name: wireless charger pen holder
Model name:BW-WC02
Frequency range: 125KHz
Number of Channels: 1CH
Modulation type: ASK
Antenna type: Coil Antenna
Antenna gain: 0dBi