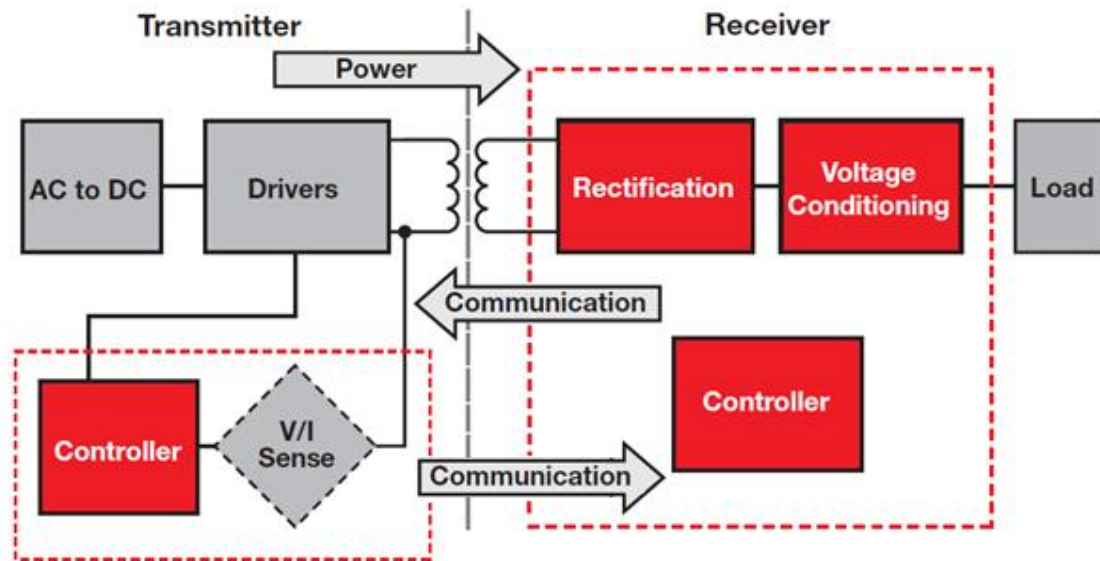
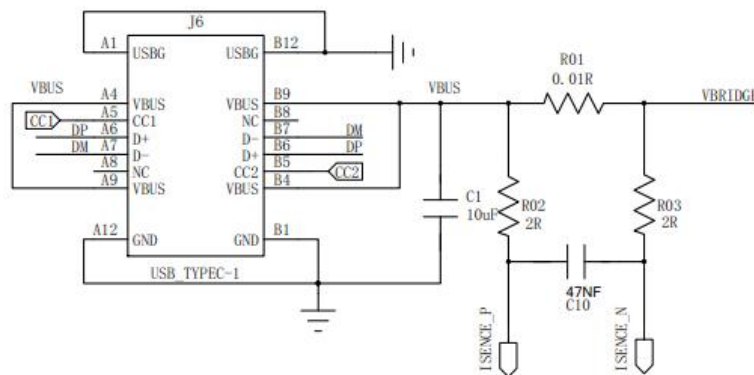


1、Wireless charging part:

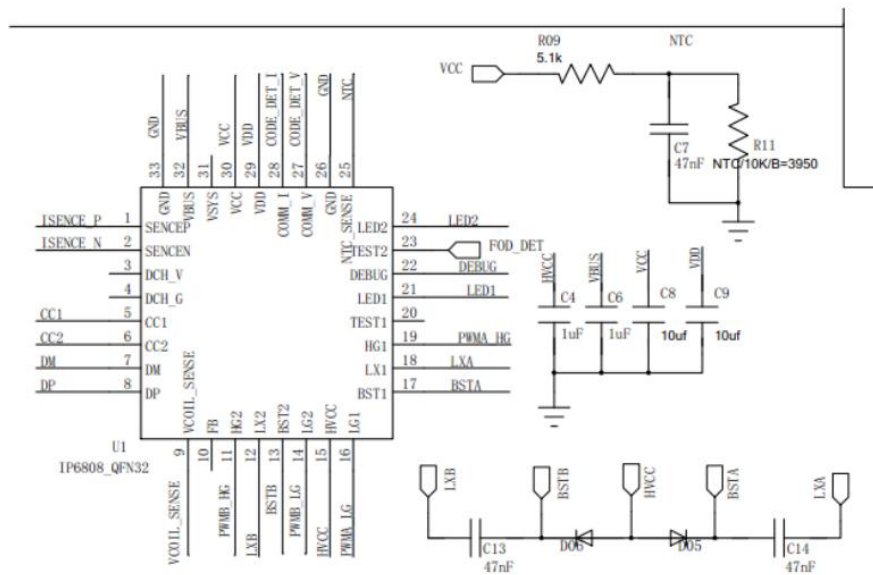


This transmitter is compatible with WPC-Qi V1.2.4 standard and supports two-way communication from transmitter to receiver. Inductive coupling is used between two planar coils to transmit power from the transmitter to the receiver. The distance between these two coils is generally 2-8mm. The output voltage regulation is in charge of a digital control loop. At this time, the receiver communicates with the transmitter and requires some power. This communication is a communication from a receiver to a transmitter through back scatter modulation. In back scatter modulation, the receiver coil is changed by loading changes, thereby changing the current consumption of the transmitter. We monitor these current changes and demodulate them into the information required for two devices to work together.

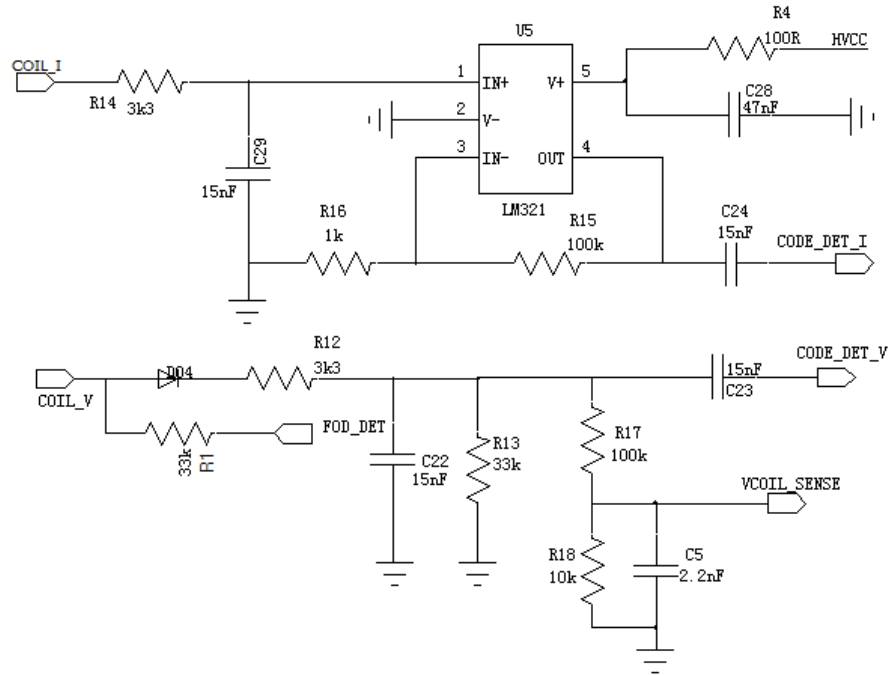
The key circuit of the transmitter is composed of a resonant cavity, a control unit that drives the inductor coil, and a communication circuit that demodulates the voltage or current of the primary coil. The inductor, resonant capacitor, MOS and MOS drive form a resonant full bridge circuit. If the receiver needs some power, the coil frequency and input voltage will change, but will remain between 110KHZ-205KHz, depending on the power demand.



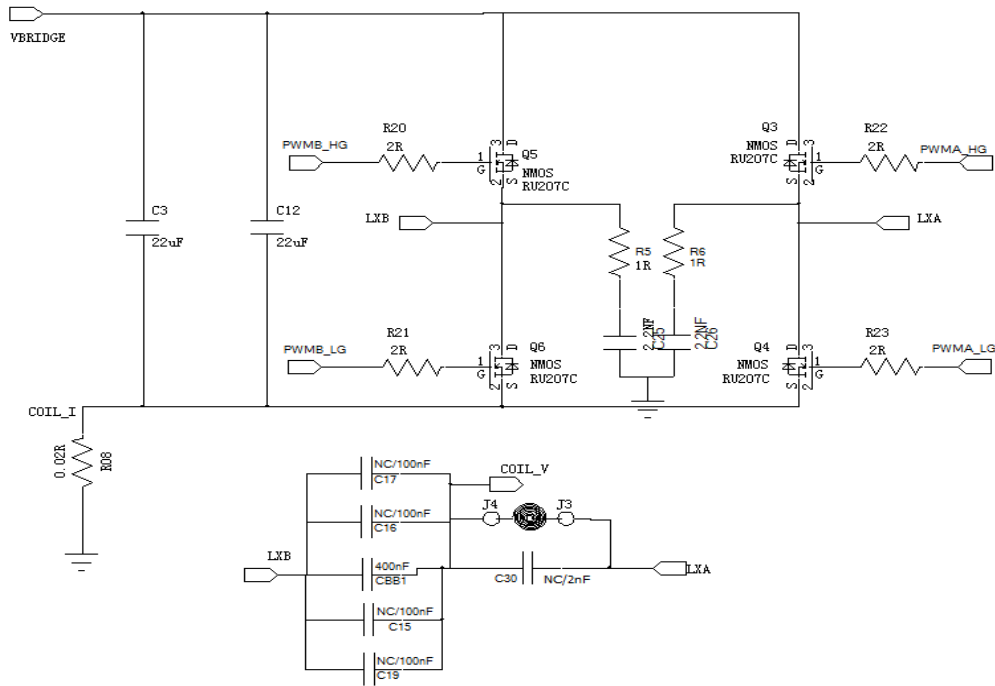
TYPE-C port: offer power, and support PD/QC.



IP6808-MCU offer PWM control, input voltage control, input current control, Communication signal demodulation function, PD/QC protocol and two internal and external over-temperature protections.



Two ASK demodulation peripheral circuits, which collect coil voltage and current respectively. Low-pass filtering and first-level amplification are performed through the peripheral circuit, and then sent to the chip for digital demodulation and decoding after blocking DC.



A resonant full-bridge drive circuit composed of full-bridge MOS, resonant capacitor, and inductance coil.

After the transmitter input and power on, the analog Ping of the transmitter detects it, if the receiver is detected, the transmitter sends a digital Ping, and the receiver will get a signal strength packet, and the transmitter keeps the coil energized; then the receiver send some data packets to identify the transmitter and provide configuration and setting the information to the transmitter. After that, it enters the power transmission stage, and the receiver sends control error packets to the transmitter to increase or decrease energy. If the receiver actively sends a "termination of charging" message, or does not communicate within 1.25S, the transmitter will enter a low power consumption state.