

Applicant: Shenzhen Goodwill Electrical Co., Ltd.

FCC ID: RFQ-GW302

FUNCTION EXPLAIN:

1. 2.4GHz Wireless Transmitter

This circuit modulates the video and audio onto a carrier frequency using FM. The modulated carrier signal is amplified and feeds to the antenna.

2. 2.4GHz Wireless Receiver

Modulated RF signal is received through the antenna. The received signal is down converted to a lower frequency IF.

3. Frequency synthesizer (SP5055S)

Both transmit and receiver frequencies are generated on a reference frequency derived from a quartz crystal. This allows accurate and stable frequencies generation. A micro controller is used to set both transient and receive frequencies by sending signals to the frequency synthesizer therefore allowing multi-channel operation.

4. FM demodulator

The IF from RF receiver is converted into audio signal by this circuitry. The demodulated audio goes into the speaker amplifier while the recovered date signal goes into the micro controller.

5. Microphone amplifier

The audio signal picked up by the microphone is a very low-level signal. A microphone amplifier is used amplifier is used to amplify this signal so that it can be transmitted.

6. Speaker Amplifier

The amplifier is used to amplify the received signal to sufficiently high levels before feeding into the speaker.

7. Micro-controller

This is the 'brain' of the system. It determines the transmit/ receive frequency pairs to use, handles the hand speaking signal between the mobile and fixed units to setup a communication signal and mutes the audio paths accordingly. It also switches off the transmitter when it is not required.