

The EUT is single channel 433MHz AM modulation device built in the 2.4GHz receiver. A IR sensor can detect the IR signal from remote controller then be transferred the detected signal by the 433MHz carrier to 433MHz receiver which built in the 2.4GHz transmitter. The signal will be transferred into IR signal again to control the peripheral nearby. The 433MHz signal will be stopped automatically after the release the button of controller

the operation description of the 433.92 receiver circuit is

- a.) the 433.92MHz control signal received from the antenna (which is short wire soldered on the PCB)
- b.) the received signal will be sent to excite the transistor which is designed with tuned circuit. The feedback circuit in this circuit will resonate the detector circuit, in the meantime, the signal will be also be detected ( type of regenerative receiver)
- c.) the detected signal will be transferred to IR signal to control the peripheral

433.92MHz signal generated from signal generator was provided to excite the receiver circuit. Then, the spurious measurement was performed. And the receiver report is issued base on the DoC policy.

the operation description of 433.92MHz transmitting circuit

- a.) the IR signal from IR controller was detected by the IR sensor
- b.) the detected signal was sent to a stage of amplifier to amplify the signal level
- c.) the amplified signal was sent to the oscillation circuit which includes transistor and a resonator.
- d.) the modulated signal will then be sent to other gain stages to amplify the level.
- e.) a short wire soldered on the PCB will be the antenna to transmit the signal.

Regards to the operation, the video or audio signal is not allowed be sent through this path.