

Technical Description:

The Equipment Under Test (EUT) is a plug and play replaceable 2.4GHz RF transceiver module for the remote control helicopter or plane. The EUT operates at frequency range from 2404MHz to 2479MHz with 3MHz channel spacing. The 2.4GHz RF module is powered by a 4.8V rechargeable battery pack. The EUT has a one set battery/data input pin and four sets signal pins which are connect with battery pack with sensor and connect with servo motor respectively. After switch on the EUT and paired up with the corresponding controller (transceiver), the servo motor of EUT can be controlled to run in different speed. Also, the information of temperature can be detected by sensor, then the EUT can collect data and send them back to the corresponding controller.

2.4GHz RF transceiver Module:

Modulation Type: OQPSK

Frequency Range: 2404MHz - 2479MHz, 3MHz channel spacing, 26 channels

Antenna Type: Integral, External (wire Antenna)

Antenna Gain: 2.14dBi

Nominal rated field strength: 88.7BμV/m at 3m

Maximum allowed field strength of production tolerance: +/-5dB

Frequency Table

Channel Number	Frequency [MHz]
1	2404
2	2407
3	2410
4	2413
5	2416
6	2419
7	2422
8	2425
9	2428
10	2431
11	2434
12	2437
13	2440
14	2443
15	2446
16	2449
17	2452
18	2455
19	2458
20	2461
21	2464
22	2467
23	2470
24	2473
25	2476
26	2479

2.4GHz RF module:

- i) IC3 acts as the 2.4GHz RF transceiver.
- ii) The 32MHz crystal (XTAL1) provides system clock for CC2520 (IC3)
- iii) U1 acts as hybrid Baluns
- iv) IC1 acts as MCU
- v) IC2 acts as voltage regulator
- vi) IC4 & IC5 acts SPDT switch
- vii) IC5 acts as a power amplifier
- viii) F1 acts as Band pass filter