



# FCC TEST REPORT

## FCC ID:2BLWM-YW5698A1

**Report Number**..... : ZKT-24092712469E

**Date of Test**..... Oct. 09, 2024 to Oct. 15, 2024

**Date of issue**..... : Oct. 15, 2024

**MIMO number of pages**..... 91

**Test Result**..... : PASS

**Testing Laboratory**..... : Shenzhen ZKT Technology Co., Ltd.

**Address** ..... 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

**Applicant's name** ..... : Young Win Technology Co., Ltd

**Address** ..... Room 1609,4 Buildings,Tian'an Yungu Industrial Park,Xuegang Road 2018,Longgang District,Shenzhen City China

**Manufacturer's name** ..... : Young Win Technology Co., Ltd

**Address** ..... Room 1609,4 Buildings,Tian'an Yungu Industrial Park,Xuegang Road 2018,Longgang District,Shenzhen City China

### Test specification:

**Standard**..... FCC CFR Title 47 Part 15 Subpart C Section 15.247  
ANSI C63.10:2013

**Test procedure**..... : /

**Non-standard test method** ..... : N/A

**Test Report Form No**..... : /

**Test Report Form(s) Originator**..... : ZKT Testing

**Master TRF** ..... : Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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**Product name**..... : Intelligent tablet camera

**Trademark** ..... : N/A

**Model/Type reference**..... : YW5698A1

**Ratings**..... : Input: 12V---3000mA For Power Adapter  
Power Adapter Input: AC 110-240V ~ 50/60Hz, 0.8A



Testing procedure and testing location:

Testing Laboratory.....: Shenzhen ZKT Technology Co., Ltd.

Address.....: 1/F, No. 101, Building B, No. 6, Tangwei Community  
Industrial Avenue, Fuhai Street, Bao'an District,  
Shenzhen, China

Tested by (name + signature).....: Jim Liu

Reviewer (name + signature).....: Jackson Fang

Approved (name + signature).....: Lake Xie





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1. VERSION

| ReportNo.        | Version | Description             | Approved      |
|------------------|---------|-------------------------|---------------|
| ZKT-24092712469E | Rev.01  | Initial issue of report | Oct. 15, 2024 |
|                  |         |                         |               |



## 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

| FCC Part15 (15.247) , Subpart C |                                  |        |        |
|---------------------------------|----------------------------------|--------|--------|
| Standard Section                | Test Item                        | Result | Remark |
| FCC part 15.203/15.247 (c)      | Antenna requirement              | PASS   |        |
| FCC part 15.207                 | AC Power Line Conducted Emission | PASS   |        |
| FCC part 15.247 (b)(3)          | Conducted Peak Output Power      | PASS   |        |
| FCC part 15.247 (a)(2)          | 6DB Bandwidth                    | PASS   |        |
| FCC part 15.247 (e)             | Power Spectral Density           | PASS   |        |
| FCC part 15.247(d)              | Band Edge                        | PASS   |        |
| FCC part 15.205/15.209          | Spurious Emission                | PASS   |        |
| ANSI C63.10:2013                | Duty cycle                       | PASS   |        |

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report



## 2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.

Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225

Designation Number: CN1299

IC Registered No.: 27033

CAB identifier: CN0110

## 2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$  · where expended uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$  · providing a level of confidence of approximately 95 % .

| No. | Item                                              | Uncertainty |
|-----|---------------------------------------------------|-------------|
| 1   | 3m chamber Radiated spurious emission(9KHz-30MHz) | U=4.5dB     |
| 2   | 3m chamber Radiated spurious emission(30MHz-1GHz) | U=4.8dB     |
| 3   | 3m chamber Radiated spurious emission(1GHz-6GHz)  | U=4.9dB     |
| 4   | 3m chamber Radiated spurious emission(6GHz-40GHz) | U=5.0dB     |
| 5   | Conducted disturbance                             | U=3.2dB     |
| 6   | RF Band Edge                                      | U=1.68dB    |
| 7   | RF power conducted                                | U=1.86dB    |
| 8   | RF conducted Spurious Emission                    | U=2.2dB     |
| 9   | RF Occupied Bandwidth                             | U=1.8MHz    |
| 10  | RF Power Spectral Density                         | U=1.75dB    |
| 11  | humidity uncertainty                              | U=5.3%      |
| 12  | Temperature uncertainty                           | U=0.59°C    |



### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

|                        |                                                                                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name:          | Intelligent tablet camera                                                                                                                           |
| Model No.:             | YW5698A1                                                                                                                                            |
| Model Different.:      | N/A                                                                                                                                                 |
| Serial No.:            | N/A                                                                                                                                                 |
| Sample ID              | ZKT-24092712469E-1                                                                                                                                  |
| Sample(s) Status:      | Engineer sample                                                                                                                                     |
| Channel numbers:       | 802.11b/802.11g /802.11n20: 11 CH<br>802.11n40: 7 CH                                                                                                |
| Channel separation:    | 5MHz                                                                                                                                                |
| Modulation technology: | 802.11b: Direct Sequence Spread Spectrum(DSSS)<br>802.11g/802.11n20/802.11n40:<br>Orthogonal Frequency Division Multiplexing(OFDM)                  |
| Data Rate              | 802.11b: 1/2/5.5/11Mbit/s<br>802.11g: 6/9/12/24/18/36/48/54Mbit/s<br>802.11n20/n40: MCS0-MCS7                                                       |
| Antenna Type:          | FPC Antenna A&B                                                                                                                                     |
| Antenna gain:          | 802.11b/g/n20/n40, working in SISO model, then the antenna gain as below:<br>802.11b/g/n20/n40: ANT A: 2.75dBi<br>802.11b/g/n20/n40: ANT B: 2.75dBi |
|                        | 802.11n20/n40 can MIMO model, then the antenna gain as below:<br>Directional gain = 2.75dBi + 10*log (1+1) dB = 5.76dBi                             |
| Power supply:          | Input: 12V $\overline{\text{---}}$ 3000mA                                                                                                           |
| Power Adapter:         | Input: AC 110-240V ~ 50/60Hz, 0.8A<br>Output: 12V $\overline{\text{---}}$ 3000mA                                                                    |



### 3.2 DESCRIPTION OF TEST MODES

|                                                                                                                                                                                                                                       |                                                |         |               |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------|---------------|---------------|
| Transmitting mode                                                                                                                                                                                                                     | Keep the EUT in continuously transmitting mode |         |               |               |
| Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data. |                                                |         |               |               |
| We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:                          |                                                |         |               |               |
| Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.                                                                                                                                  |                                                |         |               |               |
| Mode                                                                                                                                                                                                                                  | 802.11b                                        | 802.11g | 802.11n(HT20) | 802.11n(HT40) |
| Data rate                                                                                                                                                                                                                             | 1Mbps                                          | 6Mbps   | 6.5Mbps       | 13Mbps        |
|                                                                                                                                                                                                                                       |                                                |         |               |               |
| Test Software                                                                                                                                                                                                                         | DURT                                           |         |               |               |
| Power level setup                                                                                                                                                                                                                     | Default                                        |         |               |               |

### 3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission



Radiated Emission



Conducted Spurious



### 3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment                 | Mfr/Brand | Model/Type No. | Series No. | Note      |
|------|---------------------------|-----------|----------------|------------|-----------|
| E-1  | Intelligent tablet camera | N/A       | YW5698A1       | N/A        | EUT       |
| A1   | Power Adapter             | N/A       | GA-0361203000  | N/A        | Auxiliary |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
|      |               |              |        |      |
|      |               |              |        |      |

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



## 3.5EQUIPMENTS LIST FOR ALL TEST ITEMS

## Conduction Test equipment

| Item | Kind of Equipment   | Manufacturer | Type No. | Serial No.        | Firmware Version | Last calibration | Calibrated until |
|------|---------------------|--------------|----------|-------------------|------------------|------------------|------------------|
| 1    | LISN                | R&S          | ENV216   | 101471            | N/A              | Nov. 14, 2023    | Nov. 13, 2024    |
| 2    | LISN                | CYBERTEK     | EM5040A  | E1850400149       | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 3    | Test Cable          | N/A          | C-01     | N/A               | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 4    | Test Cable          | N/A          | C-02     | N/A               | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 5    | Test Cable          | N/A          | C-03     | N/A               | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 6    | EMI Test Receiver   | R&S          | ESCI3    | 101393            | 4.42 SP3         | Nov. 02, 2023    | Nov. 01, 2024    |
| 7    | Triple-Loop Antenna | N/A          | RF300    | N/A               | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 8    | Absorbing Clamp     | DZ           | ZN23201  | 15034             | N/A              | Nov. 07, 2023    | Nov. 06, 2024    |
| 9    | EMC Software        | Frad         | EZ-EMC   | Ver.EMC-CON 3A1.1 | N/A              | \                | \                |

## Radiation Test equipment

| Item | Equipment                         | Manufacturer   | Type No.        | Serial No.         | Firmware Version | Last calibration | Calibrated until |
|------|-----------------------------------|----------------|-----------------|--------------------|------------------|------------------|------------------|
| 1    | Spectrum Analyzer (9kHz-26.5GHz)  | KEYSIGHT       | 9020A           | MY55370835         | A.17.05          | Nov. 02, 2023    | Nov. 01, 2024    |
| 2    | Spectrum Analyzer (10kHz-39.9GHz) | R&S            | FSV40-N         | 100363             | 1.71 SP2         | Nov. 02, 2023    | Nov. 01, 2024    |
| 3    | EMI Test Receiver (9kHz-7GHz)     | R&S            | ESCI7           | 101169             | 4.32             | Nov. 02, 2023    | Nov. 01, 2024    |
| 4    | Bilog Antenna (30MHz-1500MHz)     | Schwarzbeck    | VULB9168        | N/A                | N/A              | Nov. 13, 2023    | Nov. 12, 2024    |
| 5    | Horn Antenna (1GHz-18GHz)         | Agilent        | AH-118          | 071145             | N/A              | Nov. 13, 2023    | Nov. 12, 2024    |
| 6    | Horn Antenna (15GHz-40GHz)        | A.H.System     | SAS-574         | 588                | N/A              | Nov. 13, 2023    | Nov. 12, 2024    |
| 7    | Loop Antenna                      | TESEQ          | HLA6121         | 58357              | N/A              | Nov. 16, 2023    | Nov. 15, 2024    |
| 8    | Amplifier (30-1000MHz)            | EM Electronics | EM330 Amplifier | 060747             | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 9    | Amplifier (1GHz-26.5GHz)          | Agilent        | 8449B           | 3008A00315         | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 10   | Amplifier (500MHz-40GHz)          | QuanJuDa       | DLE-161         | 097                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 11   | Test Cable                        | N/A            | R-01            | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 12   | Test Cable                        | N/A            | R-02            | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 13   | Test Cable                        | N/A            | R-03            | N/A                | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 14   | D.C. Power Supply                 | LongWei        | TPR-6405D       | N/A                | N/A              | \                | \                |
| 15   | EMC Software                      | Frad           | EZ-EMC          | Ver.EMC-CO N 3A1.1 | N/A              | \                | \                |
| 16   | Turntable                         | MF             | MF-7802BS       | N/A                | N/A              | \                | \                |
| 17   | Antenna tower                     | MF             | MF-7802BS       | N/A                | N/A              | \                | \                |



RF Test equipment

| Item | Equipment                         | Manufacturer | Type No.    | Serial No. | Firmware Version | Last calibration | Calibrated until |
|------|-----------------------------------|--------------|-------------|------------|------------------|------------------|------------------|
| 1    | Spectrum Analyzer (9kHz-26.5GHz)  | KEYSIGHT     | 9020A       | MY55370835 | A.17.05          | Nov. 02, 2023    | Nov. 01, 2024    |
| 2    | Spectrum Analyzer (10kHz-39.9GHz) | R&S          | FSV40-N     | 100363     | 1.71 SP2         | Nov. 02, 2023    | Nov. 01, 2024    |
| 3    | Test Cable                        | N/A          | RF-01       | N/A        | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 4    | Test Cable                        | N/A          | RF-02       | N/A        | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 5    | Test Cable                        | N/A          | RF-03       | N/A        | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 6    | ESG Signal Generator              | Agilent      | E4421B      | N/A        | B.03.84          | Nov. 02, 2023    | Nov. 01, 2024    |
| 7    | Signal Generator                  | Agilent      | N5182A      | N/A        | A.01.87          | Nov. 02, 2023    | Nov. 01, 2024    |
| 8    | Magnetic Field Probe Tester       | Narda        | ELT-400     | 0-0344     | N/A              | Nov. 16, 2023    | Nov. 15, 2024    |
| 9    | Wideband Radio Communication Test | R&S          | CMW500      | 106504     | V 3.7.22         | Nov. 02, 2023    | Nov. 01, 2024    |
| 10   | MWRF Power Meter Test system      | MW           | MW100-RF CB | N/A        | N/A              | Nov. 02, 2023    | Nov. 01, 2024    |
| 11   | Power Meter                       | KEYSIGHT     | N1912A P    | N/A        | A.05.00          | Nov. 02, 2023    | Nov. 01, 2024    |
| 12   | D.C. Power Supply                 | LongWei      | TPR-6405D   | N/A        | N/A              | \                | \                |
| 13   | RF Software                       | MW           | MTS8310     | V2.0.0.0   | N/A              | \                | \                |



#### 4. EMC EMISSION TEST

##### 4.1 CONDUCTED EMISSION MEASUREMENT

|                       |                                      |
|-----------------------|--------------------------------------|
| Test Requirement:     | FCC Part15 C Section 15.207          |
| Test Method:          | ANSI C63.10:2013                     |
| Test Frequency Range: | 150KHz to 30MHz                      |
| Receiver setup:       | RBW=9KHz, VBW=30KHz, Sweep time=auto |

##### 4.1.1 POWER LINE CONDUCTED EMISSION Limits

| FREQUENCY (MHz) | Limit (dBuV) |           | Standard |
|-----------------|--------------|-----------|----------|
|                 | Quasi-peak   | Average   |          |
| 0.15 -0.5       | 66 - 56 *    | 56 - 46 * | FCC      |
| 0.50 -5.0       | 56.00        | 46.00     | FCC      |
| 5.0 -30.0       | 60.00        | 50.00     | FCC      |

Note:

(1) \*Decreases with the logarithm of the frequency.

##### 4.1.2 TEST PROCEDURE

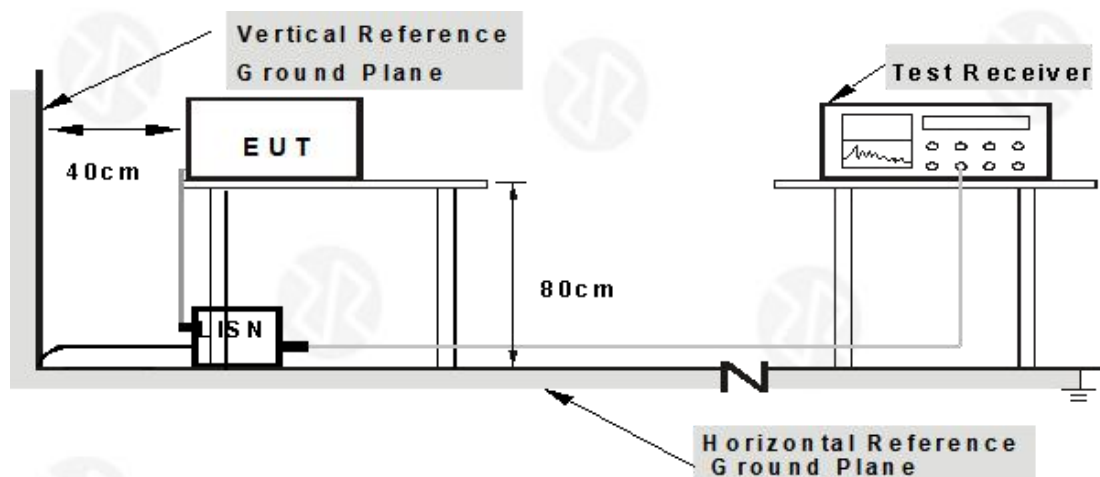
- The EUT was placed 0.1 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

##### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation



#### 4.1.4 TEST SETUP



- Note:** 1.Support units were connected to second LISN.  
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

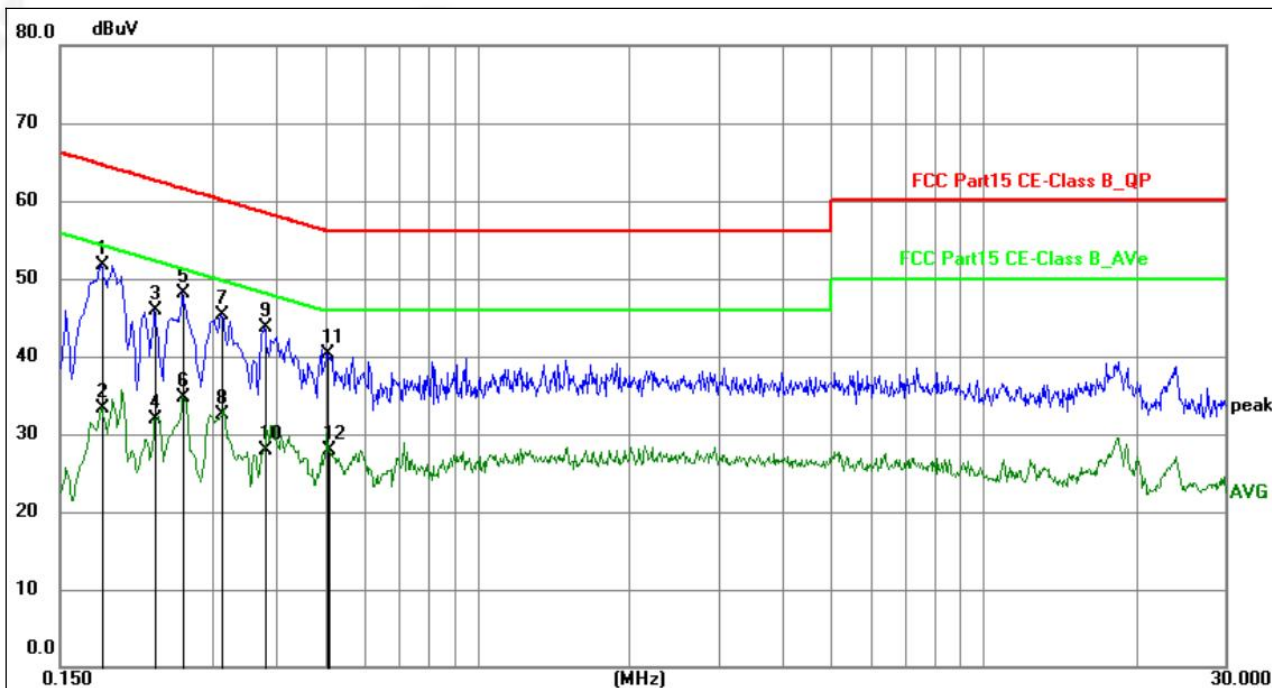
#### 4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



#### 4.1.6 TEST RESULT

|               |              |                    |                              |
|---------------|--------------|--------------------|------------------------------|
| Temperature:  | 26℃          | Relative Humidity: | 54%                          |
| Pressure:     | 101 kPa      | Polarization:      | L                            |
| Test Voltage: | AC 120V/60Hz | Test Mode:         | MIMO A+B 802.11n20 - 2412MHz |



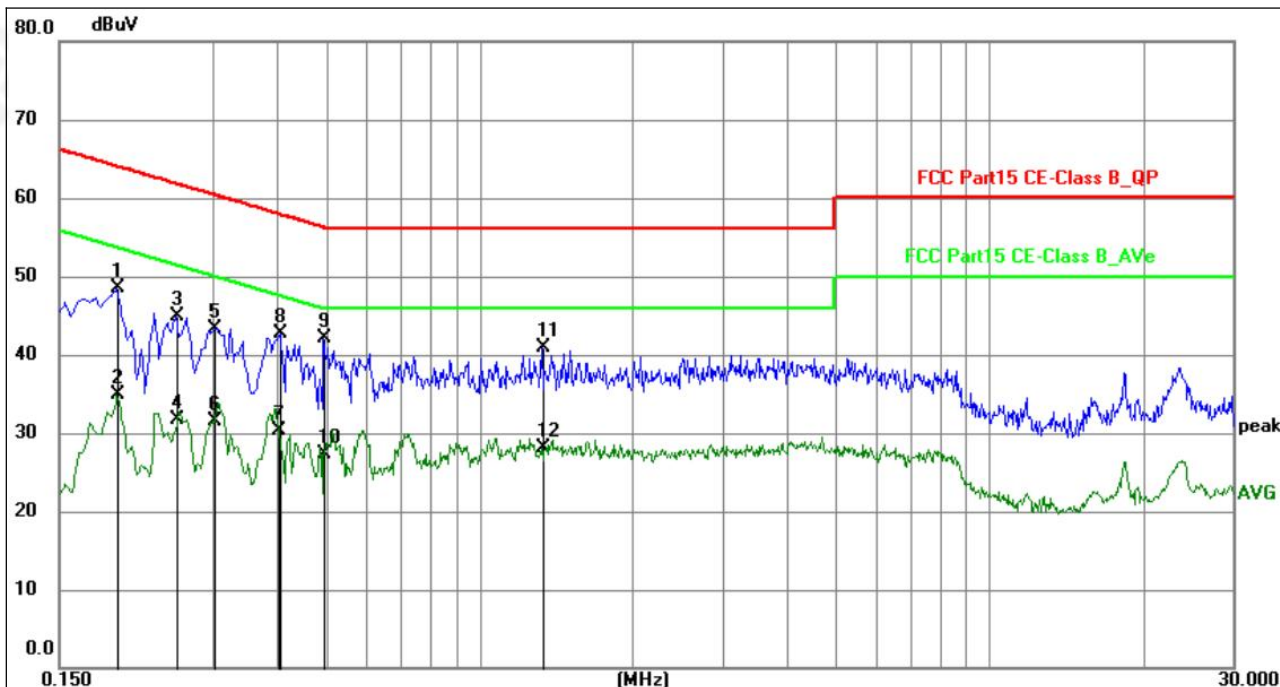
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F | Remark |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|--------|
| 1   | 0.1815          | 30.75          | 20.97       | 51.72        | 64.42        | -12.70      | QP       | P   |        |
| 2   | 0.1815          | 12.42          | 20.97       | 33.39        | 54.42        | -21.03      | AVG      | P   |        |
| 3   | 0.2310          | 24.90          | 21.02       | 45.92        | 62.41        | -16.49      | QP       | P   |        |
| 4   | 0.2310          | 10.79          | 21.02       | 31.81        | 52.41        | -20.60      | AVG      | P   |        |
| 5   | 0.2625          | 27.19          | 21.01       | 48.20        | 61.35        | -13.15      | QP       | P   |        |
| 6   | 0.2630          | 13.72          | 21.01       | 34.73        | 51.34        | -16.61      | AVG      | P   |        |
| 7   | 0.3120          | 24.37          | 20.99       | 45.36        | 59.92        | -14.56      | QP       | P   |        |
| 8   | 0.3132          | 11.61          | 20.99       | 32.60        | 49.89        | -17.29      | AVG      | P   |        |
| 9   | 0.3795          | 22.66          | 20.97       | 43.63        | 58.29        | -14.66      | QP       | P   |        |
| 10  | 0.3795          | 6.89           | 20.97       | 27.86        | 48.29        | -20.43      | AVG      | P   |        |
| 11  | 0.5055          | 19.54          | 20.83       | 40.37        | 56.00        | -15.63      | QP       | P   |        |
| 12  | 0.5100          | 7.12           | 20.83       | 27.95        | 46.00        | -18.05      | AVG      | P   |        |

#### Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Reading level + Correct Factor.
4. Correct Factor= Lisen factor+ Cable loss factor + limiter factor.
5. Margin= Measurement Level-Limit.
6. Both SISO ANT A and ANT B passed the test, the test data shows only the worst case MIMO A+B 802.11n20 - 2412MHz.



|               |              |                    |                              |
|---------------|--------------|--------------------|------------------------------|
| Temperature:  | 26℃          | Relative Humidity: | 54%                          |
| Pressure:     | 101 kPa      | Polarization:      | N                            |
| Test Voltage: | AC 120V/60Hz | Test Mode:         | MIMO A+B 802.11n20 - 2412MHz |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Detector | P/F | Remark |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|----------|-----|--------|
| 1   | 0.1949          | 27.48          | 20.99       | 48.47        | 63.83        | -15.36      | QP       | P   |        |
| 2   | 0.1949          | 13.96          | 20.99       | 34.95        | 53.83        | -18.88      | AVG      | P   |        |
| 3   | 0.2535          | 23.90          | 20.98       | 44.88        | 61.64        | -16.76      | QP       | P   |        |
| 4   | 0.2561          | 10.80          | 20.98       | 31.78        | 51.56        | -19.78      | AVG      | P   |        |
| 5   | 0.3030          | 22.40          | 20.97       | 43.37        | 60.16        | -16.79      | QP       | P   |        |
| 6   | 0.3030          | 10.61          | 20.97       | 31.58        | 50.16        | -18.58      | AVG      | P   |        |
| 7   | 0.4040          | 9.35           | 20.92       | 30.27        | 47.77        | -17.50      | AVG      | P   |        |
| 8   | 0.4065          | 21.82          | 20.92       | 42.74        | 57.72        | -14.98      | QP       | P   |        |
| 9   | 0.4965          | 21.20          | 20.85       | 42.05        | 56.06        | -14.01      | QP       | P   |        |
| 10  | 0.4965          | 6.48           | 20.85       | 27.33        | 46.06        | -18.73      | AVG      | P   |        |
| 11  | 1.3244          | 20.01          | 20.96       | 40.97        | 56.00        | -15.03      | QP       | P   |        |
| 12  | 1.3244          | 7.22           | 20.96       | 28.18        | 46.00        | -17.82      | AVG      | P   |        |

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Reading level + Correct Factor.
4. Correct Factor= Lisen factor+ Cable loss factor + limiter factor.
5. Margin= Measurement Level-Limit.
6. Both SISO ANT A and ANT B passed the test, the test data shows only the worst case MIMO A+B 802.11n20 - 2412MHz.



## 4.2 RADIATED EMISSION MEASUREMENT

|                       |                             |            |        |        |            |
|-----------------------|-----------------------------|------------|--------|--------|------------|
| Test Requirement:     | FCC Part15 C Section 15.209 |            |        |        |            |
| Test Method:          | ANSI C63.10:2013            |            |        |        |            |
| Test Frequency Range: | 9kHz to 25GHz               |            |        |        |            |
| Test site:            | Measurement Distance: 3m    |            |        |        |            |
| Receiver setup:       | Frequency                   | Detector   | RBW    | VBW    | Value      |
|                       | 9KHz-150KHz                 | Quasi-peak | 200Hz  | 600Hz  | Quasi-peak |
|                       | 150KHz-30MHz                | Quasi-peak | 9KHz   | 30KHz  | Quasi-peak |
|                       | 30MHz-1GHz                  | Quasi-peak | 100KHz | 300KHz | Quasi-peak |
|                       | Above 1GHz                  | Peak       | 1MHz   | 3MHz   | Peak       |
|                       |                             | Peak       | 1MHz   | 10Hz   | Average    |

### 4.2.1 RADIATED EMISSION LIMITS

| Frequencies<br>(MHz) | Field Strength<br>(micorvolts/meter) | Measurement Distance<br>(meters) |
|----------------------|--------------------------------------|----------------------------------|
| 0.009~0.490          | 2400/F(KHz)                          | 300                              |
| 0.490~1.705          | 24000/F(KHz)                         | 30                               |
| 1.705~30.0           | 30                                   | 30                               |
| 30~88                | 100                                  | 3                                |
| 88~216               | 150                                  | 3                                |
| 216~960              | 200                                  | 3                                |
| Above 960            | 500                                  | 3                                |

### LIMITS OF RADIATED EMISSION MEASUREMENT

| FREQUENCY (MHz) | Limit (dBuV/m) (at 3M) |         |
|-----------------|------------------------|---------|
|                 | PEAK                   | AVERAGE |
| Above 1000      | 74                     | 54      |

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

### 4.2.2 TEST PROCEDURE

Below 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 0.1 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of variable-height antenna tower.



- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- g. Different from above is the test site, change from Semi-Anechoic Chamber to fully Anechoic Chamber and change from table 0.8 meter to 1.5 meter (Above 18GHz the distance is 1 meter and table is 1.5 meter).
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel

Note:

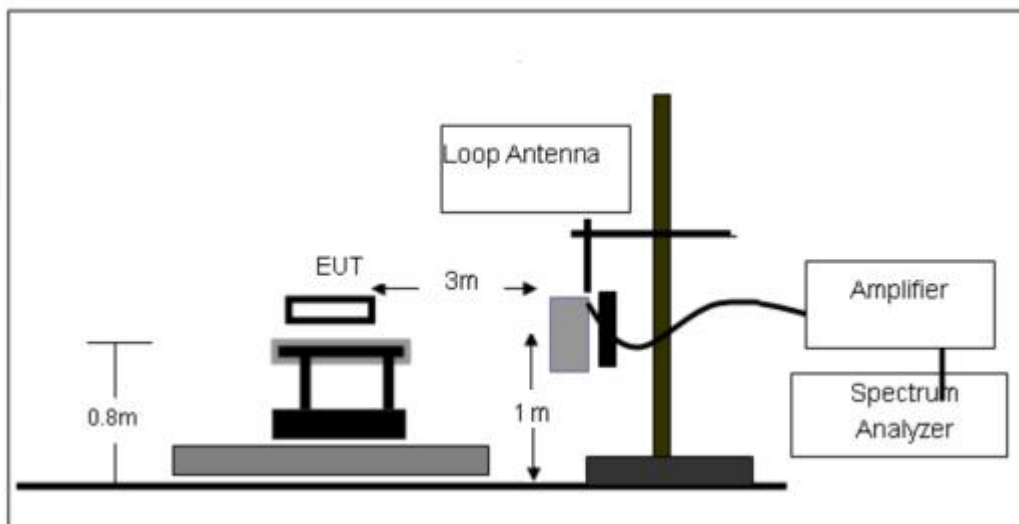
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

#### 4.2.3 DEVIATION FROM TEST STANDARD

No deviation

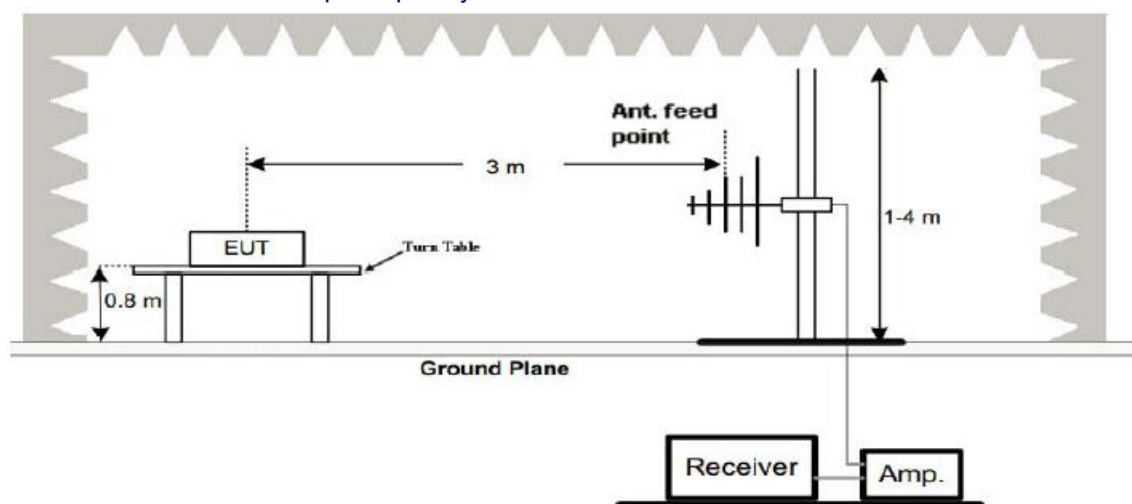
#### 4.2.4 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz

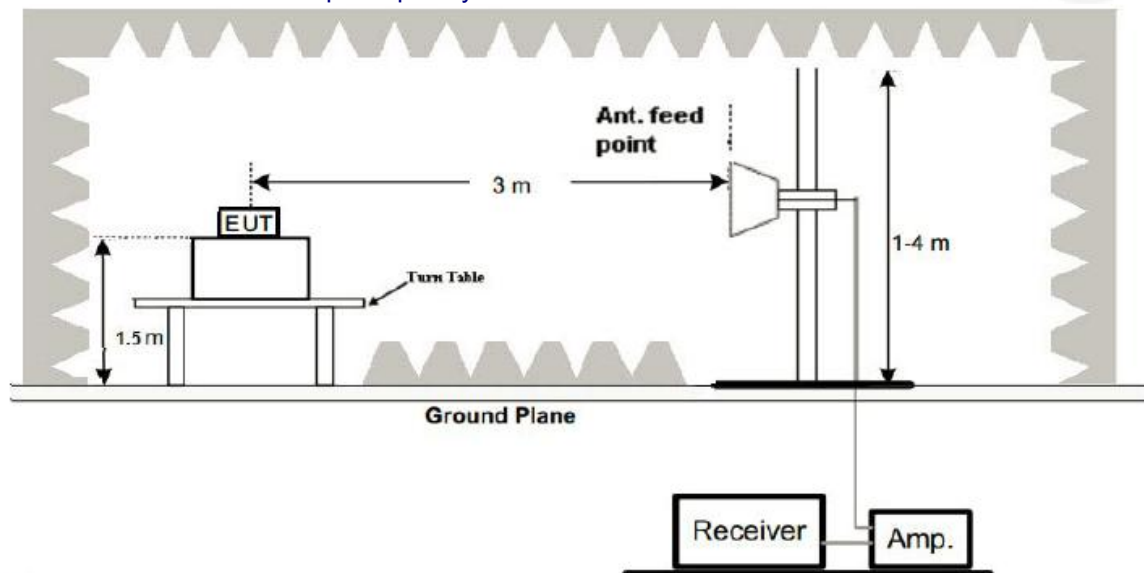




(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



#### 4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 4.2.6 TEST RESULTS

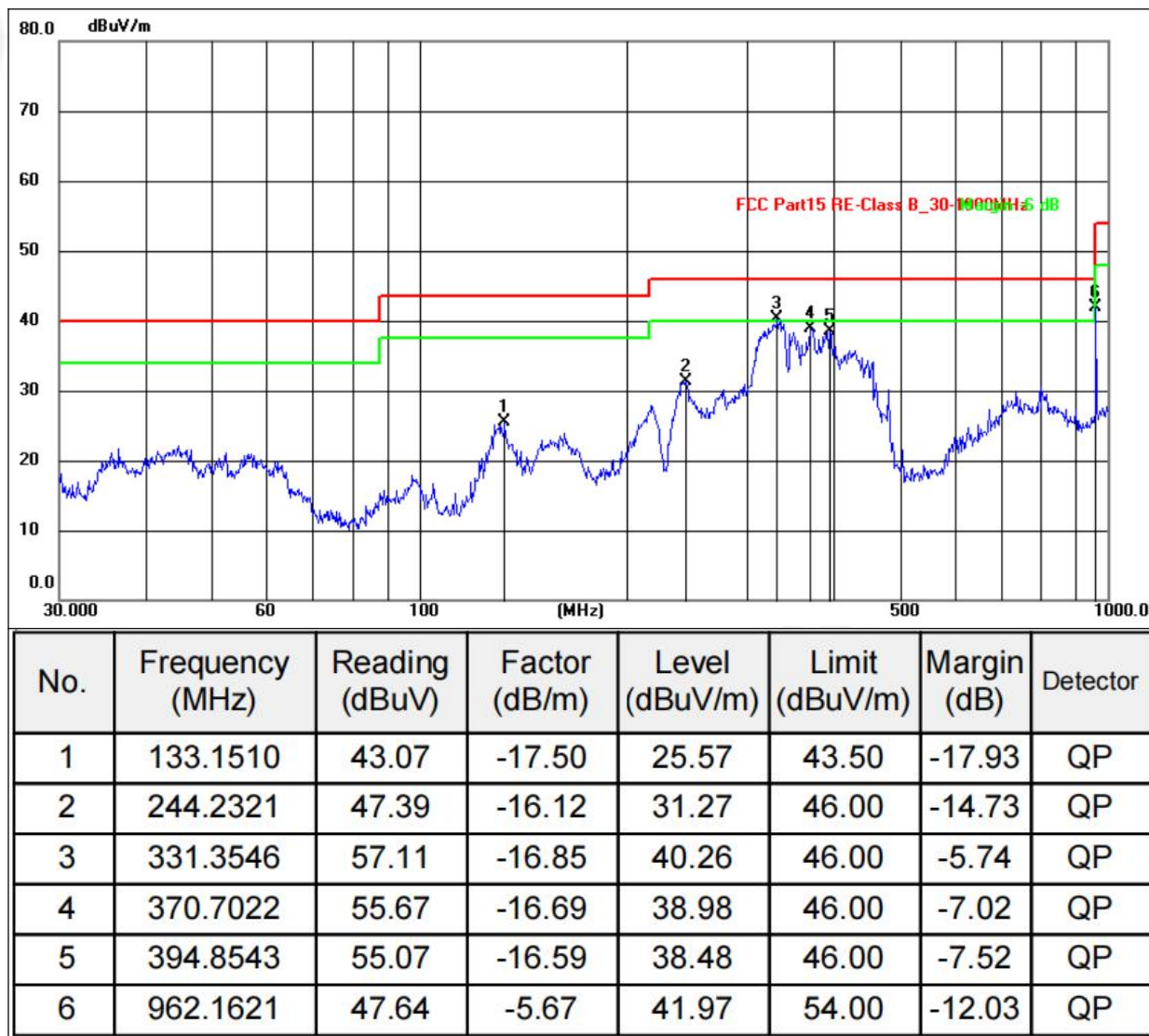
Between 9KHz – 30MHz

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.



Between 30MHz – 1GHz

|               |         |                    |                              |
|---------------|---------|--------------------|------------------------------|
| Temperature:  | 26℃     | Relative Humidity: | 54%                          |
| Pressure:     | 101 kPa | Polarization:      | Horizontal                   |
| Test Voltage: | DC 12V  | Test Mode :        | MIMO A+B 802.11n20 - 2412MHz |

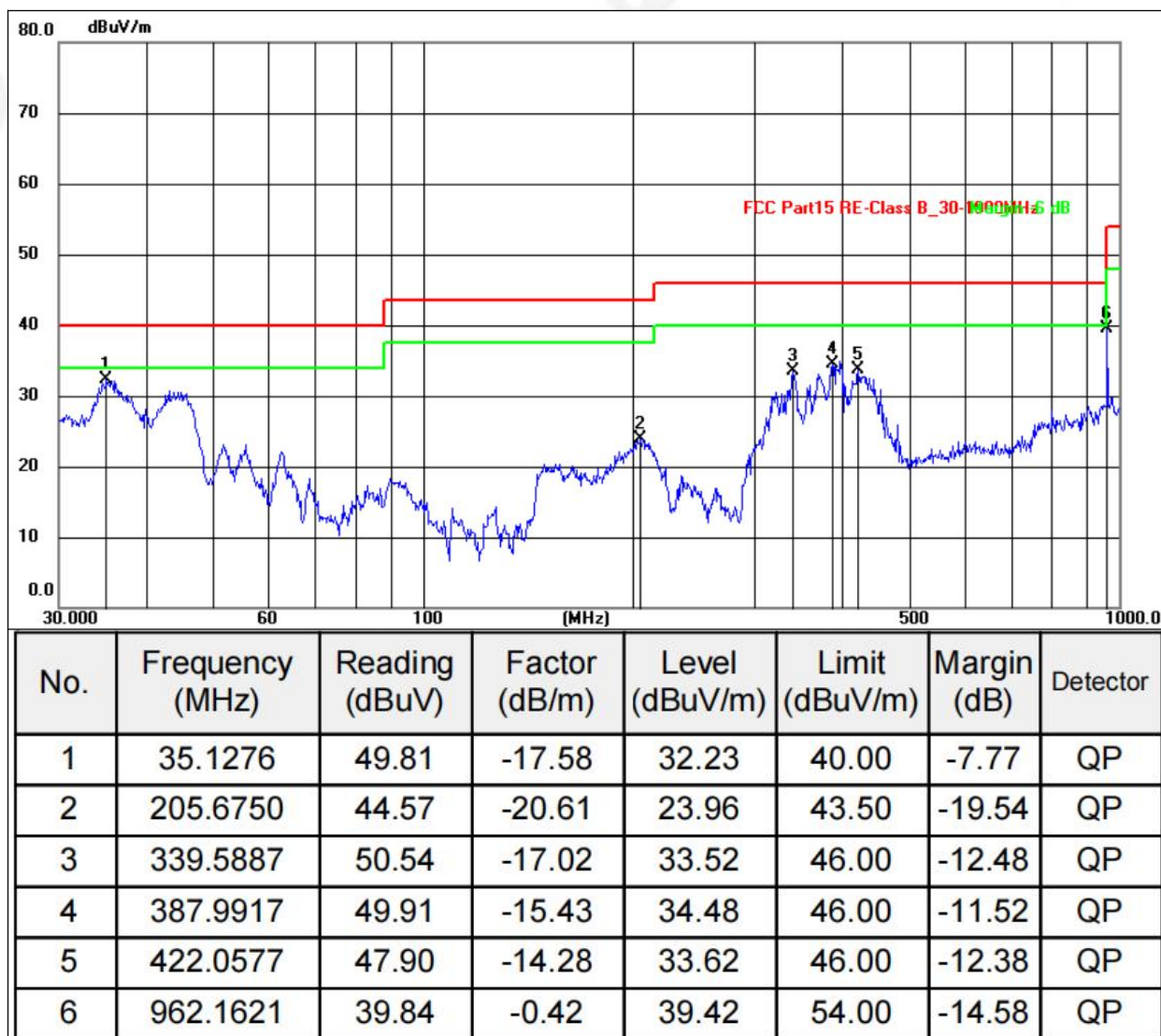


Remarks:

1. An initial pre-scan was performed on the peak detector.
2. Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Final Level = Reading level + Correct Factor.
5. Correct Factor= Antenna factor+ Cable loss factor - Amplifier factor.
6. Margin= Measurement Level-Limit.
7. Both SISO ANT A and ANT B passed the test, the test data shows only the worst case MIMO A+B 802.11n20 - 2412MHz.



|               |        |                    |                              |
|---------------|--------|--------------------|------------------------------|
| Temperature:  | 26℃    | Relative Humidity: | 54%                          |
| Pressure:     | 101kPa | Polarization:      | Vertical                     |
| Test Voltage: | DC 12V | Test Mode :        | MIMO A+B 802.11n20 - 2412MHz |



Remarks:

1. An initial pre-scan was performed on the peak detector.
2. Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Final Level = Reading level + Correct Factor.
5. Correct Factor= Antenna factor+ Cable loss factor - Amplifier factor.
6. Margin= Measurement Level-Limit.
7. Both SISO ANT A and ANT B passed the test, the test data shows only the worst case MIMO A+B 802.11n20 - 2412MHz.



1GHz~25GHz

SISO ANT A - 802.11b

| Polar<br>(H/V)      | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|---------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                     | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Low Channel:2412MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                   | 4824.00   | 50.16            | 30.55             | 5.77          | 24.66             | 50.04             | 74.00        | -23.96 | PK                   |
| V                   | 4824.00   | 43.18            | 30.55             | 5.77          | 24.66             | 43.06             | 54.00        | -10.94 | AV                   |
| V                   | 7236.00   | 53.06            | 30.33             | 6.32          | 24.55             | 53.60             | 74.00        | -20.40 | PK                   |
| V                   | 7236.00   | 43.82            | 30.33             | 6.32          | 24.55             | 44.36             | 54.00        | -9.64  | AV                   |
| V                   | 9648.00   | 51.73            | 30.85             | 7.45          | 24.69             | 53.02             | 74.00        | -20.98 | PK                   |
| V                   | 9648.00   | 43.66            | 30.85             | 7.45          | 24.69             | 44.95             | 54.00        | -9.05  | AV                   |
| V                   | 12060.00  | 51.56            | 31.02             | 8.99          | 25.57             | 55.10             | 74.00        | -18.90 | PK                   |
| V                   | 12060.00  | 43.18            | 31.02             | 8.99          | 25.57             | 46.72             | 54.00        | -7.28  | AV                   |
| H                   | 4824.00   | 52.67            | 30.55             | 5.77          | 24.66             | 52.55             | 74.00        | -21.45 | PK                   |
| H                   | 4824.00   | 43.94            | 30.55             | 5.77          | 24.66             | 43.82             | 54.00        | -10.18 | AV                   |
| H                   | 7236.00   | 54.64            | 30.33             | 6.32          | 24.55             | 55.18             | 74.00        | -18.82 | PK                   |
| H                   | 7236.00   | 43.12            | 30.33             | 6.32          | 24.55             | 43.66             | 54.00        | -10.34 | AV                   |
| H                   | 9648.00   | 53.10            | 30.85             | 7.45          | 24.69             | 54.39             | 74.00        | -19.61 | PK                   |
| H                   | 9648.00   | 43.66            | 30.85             | 7.45          | 24.69             | 44.95             | 54.00        | -9.05  | AV                   |
| H                   | 12060.00  | 53.41            | 31.02             | 8.99          | 25.57             | 56.95             | 74.00        | -17.05 | PK                   |
| H                   | 12060.00  | 43.83            | 31.02             | 8.99          | 25.57             | 47.37             | 54.00        | -6.63  | AV                   |

| Polar<br>(H/V)         | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|------------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                        | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Middle Channel:2437MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                      | 4874.00   | 51.10            | 30.55             | 5.77          | 24.66             | 50.98             | 74.00        | -23.02 | PK                   |
| V                      | 4874.00   | 43.33            | 30.55             | 5.77          | 24.66             | 43.21             | 54.00        | -10.79 | AV                   |
| V                      | 7311.00   | 54.17            | 30.33             | 6.32          | 24.55             | 54.71             | 74.00        | -19.29 | PK                   |
| V                      | 7311.00   | 43.31            | 30.33             | 6.32          | 24.55             | 43.85             | 54.00        | -10.15 | AV                   |
| V                      | 9748.00   | 54.16            | 30.85             | 7.45          | 24.69             | 55.45             | 74.00        | -18.55 | PK                   |
| V                      | 9748.00   | 43.24            | 30.85             | 7.45          | 24.69             | 44.53             | 54.00        | -9.47  | AV                   |
| V                      | 12185.00  | 53.74            | 31.02             | 8.99          | 25.57             | 57.28             | 74.00        | -16.72 | PK                   |
| V                      | 12185.00  | 43.06            | 31.02             | 8.99          | 25.57             | 46.60             | 54.00        | -7.40  | AV                   |
| H                      | 4874.00   | 52.01            | 30.55             | 5.77          | 24.66             | 51.89             | 74.00        | -22.11 | PK                   |
| H                      | 4874.00   | 43.51            | 30.55             | 5.77          | 24.66             | 43.39             | 54.00        | -10.61 | AV                   |
| H                      | 7311.00   | 53.22            | 30.33             | 6.32          | 24.55             | 53.76             | 74.00        | -20.24 | PK                   |
| H                      | 7311.00   | 43.09            | 30.33             | 6.32          | 24.55             | 43.63             | 54.00        | -10.37 | AV                   |
| H                      | 9748.00   | 53.01            | 30.85             | 7.45          | 24.69             | 54.30             | 74.00        | -19.70 | PK                   |
| H                      | 9748.00   | 43.39            | 30.85             | 7.45          | 24.69             | 44.68             | 54.00        | -9.32  | AV                   |
| H                      | 12185.00  | 52.84            | 31.02             | 8.99          | 25.57             | 56.38             | 74.00        | -17.62 | PK                   |
| H                      | 12185.00  | 43.14            | 31.02             | 8.99          | 25.57             | 46.68             | 54.00        | -7.32  | AV                   |



| Polar<br>(H/V)       | Frequency | Meter<br>Reading | Pre-ampli<br>fier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|----------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                      | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| High Channel:2462MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                    | 4924.00   | 54.89            | 30.55             | 5.77          | 24.66             | 54.77             | 74.00        | -19.23 | PK                   |
| V                    | 4924.00   | 43.84            | 30.55             | 5.77          | 24.66             | 43.72             | 54.00        | -10.28 | AV                   |
| V                    | 7386.00   | 51.22            | 30.33             | 6.32          | 24.55             | 51.76             | 74.00        | -22.24 | PK                   |
| V                    | 7386.00   | 43.20            | 30.33             | 6.32          | 24.55             | 43.74             | 54.00        | -10.26 | AV                   |
| V                    | 9848.00   | 51.72            | 30.85             | 7.45          | 24.69             | 53.01             | 74.00        | -20.99 | PK                   |
| V                    | 9848.00   | 43.47            | 30.85             | 7.45          | 24.69             | 44.76             | 54.00        | -9.24  | AV                   |
| V                    | 12310.00  | 54.59            | 31.02             | 8.99          | 25.57             | 58.13             | 74.00        | -15.87 | PK                   |
| V                    | 12310.00  | 43.06            | 31.02             | 8.99          | 25.57             | 46.60             | 54.00        | -7.40  | AV                   |
| H                    | 4924.00   | 54.39            | 30.55             | 5.77          | 24.66             | 54.27             | 74.00        | -19.73 | PK                   |
| H                    | 4924.00   | 43.74            | 30.55             | 5.77          | 24.66             | 43.62             | 54.00        | -10.38 | AV                   |
| H                    | 7386.00   | 50.82            | 30.33             | 6.32          | 24.55             | 51.36             | 74.00        | -22.64 | PK                   |
| H                    | 7386.00   | 43.23            | 30.33             | 6.32          | 24.55             | 43.77             | 54.00        | -10.23 | AV                   |
| H                    | 9848.00   | 54.25            | 30.85             | 7.45          | 24.69             | 55.54             | 74.00        | -18.46 | PK                   |
| H                    | 9848.00   | 43.31            | 30.85             | 7.45          | 24.69             | 44.60             | 54.00        | -9.40  | AV                   |
| H                    | 12310.00  | 50.65            | 31.02             | 8.99          | 25.57             | 54.19             | 74.00        | -19.81 | PK                   |
| H                    | 12310.00  | 43.89            | 31.02             | 8.99          | 25.57             | 47.43             | 54.00        | -6.57  | AV                   |

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,  
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



## SISO ANT B - 802.11b

| Polar<br>(H/V)      | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|---------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                     | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Low Channel:2412MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                   | 4824.00   | 50.69            | 30.55             | 5.77          | 24.66             | 50.57             | 74.00        | -23.43 | PK                   |
| V                   | 4824.00   | 43.25            | 30.55             | 5.77          | 24.66             | 43.13             | 54.00        | -10.87 | AV                   |
| V                   | 7236.00   | 52.62            | 30.33             | 6.32          | 24.55             | 53.16             | 74.00        | -20.84 | PK                   |
| V                   | 7236.00   | 43.41            | 30.33             | 6.32          | 24.55             | 43.95             | 54.00        | -10.05 | AV                   |
| V                   | 9648.00   | 53.15            | 30.85             | 7.45          | 24.69             | 54.44             | 74.00        | -19.56 | PK                   |
| V                   | 9648.00   | 43.90            | 30.85             | 7.45          | 24.69             | 45.19             | 54.00        | -8.81  | AV                   |
| V                   | 12060.00  | 52.79            | 31.02             | 8.99          | 25.57             | 56.33             | 74.00        | -17.67 | PK                   |
| V                   | 12060.00  | 43.01            | 31.02             | 8.99          | 25.57             | 46.55             | 54.00        | -7.45  | AV                   |
| H                   | 4824.00   | 53.17            | 30.55             | 5.77          | 24.66             | 53.05             | 74.00        | -20.95 | PK                   |
| H                   | 4824.00   | 43.83            | 30.55             | 5.77          | 24.66             | 43.71             | 54.00        | -10.29 | AV                   |
| H                   | 7236.00   | 51.32            | 30.33             | 6.32          | 24.55             | 51.86             | 74.00        | -22.14 | PK                   |
| H                   | 7236.00   | 43.48            | 30.33             | 6.32          | 24.55             | 44.02             | 54.00        | -9.98  | AV                   |
| H                   | 9648.00   | 53.52            | 30.85             | 7.45          | 24.69             | 54.81             | 74.00        | -19.19 | PK                   |
| H                   | 9648.00   | 43.63            | 30.85             | 7.45          | 24.69             | 44.92             | 54.00        | -9.08  | AV                   |
| H                   | 12060.00  | 54.85            | 31.02             | 8.99          | 25.57             | 58.39             | 74.00        | -15.61 | PK                   |
| H                   | 12060.00  | 43.86            | 31.02             | 8.99          | 25.57             | 47.40             | 54.00        | -6.60  | AV                   |

| Polar<br>(H/V)         | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|------------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                        | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Middle Channel:2437MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                      | 4874.00   | 51.08            | 30.55             | 5.77          | 24.66             | 50.96             | 74.00        | -23.04 | PK                   |
| V                      | 4874.00   | 43.02            | 30.55             | 5.77          | 24.66             | 42.90             | 54.00        | -11.10 | AV                   |
| V                      | 7311.00   | 50.04            | 30.33             | 6.32          | 24.55             | 50.58             | 74.00        | -23.42 | PK                   |
| V                      | 7311.00   | 43.48            | 30.33             | 6.32          | 24.55             | 44.02             | 54.00        | -9.98  | AV                   |
| V                      | 9748.00   | 51.51            | 30.85             | 7.45          | 24.69             | 52.80             | 74.00        | -21.20 | PK                   |
| V                      | 9748.00   | 43.33            | 30.85             | 7.45          | 24.69             | 44.62             | 54.00        | -9.38  | AV                   |
| V                      | 12185.00  | 50.49            | 31.02             | 8.99          | 25.57             | 54.03             | 74.00        | -19.97 | PK                   |
| V                      | 12185.00  | 43.85            | 31.02             | 8.99          | 25.57             | 47.39             | 54.00        | -6.61  | AV                   |
| H                      | 4874.00   | 52.82            | 30.55             | 5.77          | 24.66             | 52.70             | 74.00        | -21.30 | PK                   |
| H                      | 4874.00   | 43.23            | 30.55             | 5.77          | 24.66             | 43.11             | 54.00        | -10.89 | AV                   |
| H                      | 7311.00   | 53.67            | 30.33             | 6.32          | 24.55             | 54.21             | 74.00        | -19.79 | PK                   |
| H                      | 7311.00   | 43.68            | 30.33             | 6.32          | 24.55             | 44.22             | 54.00        | -9.78  | AV                   |
| H                      | 9748.00   | 53.65            | 30.85             | 7.45          | 24.69             | 54.94             | 74.00        | -19.06 | PK                   |
| H                      | 9748.00   | 43.56            | 30.85             | 7.45          | 24.69             | 44.85             | 54.00        | -9.15  | AV                   |
| H                      | 12185.00  | 51.23            | 31.02             | 8.99          | 25.57             | 54.77             | 74.00        | -19.23 | PK                   |
| H                      | 12185.00  | 43.39            | 31.02             | 8.99          | 25.57             | 46.93             | 54.00        | -7.07  | AV                   |



| Polar<br>(H/V)       | Frequency | Meter<br>Reading | Pre-ampli<br>fier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|----------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                      | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| High Channel:2462MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                    | 4924.00   | 51.29            | 30.55             | 5.77          | 24.66             | 51.17             | 74.00        | -22.83 | PK                   |
| V                    | 4924.00   | 43.46            | 30.55             | 5.77          | 24.66             | 43.34             | 54.00        | -10.66 | AV                   |
| V                    | 7386.00   | 52.59            | 30.33             | 6.32          | 24.55             | 53.13             | 74.00        | -20.87 | PK                   |
| V                    | 7386.00   | 43.29            | 30.33             | 6.32          | 24.55             | 43.83             | 54.00        | -10.17 | AV                   |
| V                    | 9848.00   | 52.65            | 30.85             | 7.45          | 24.69             | 53.94             | 74.00        | -20.06 | PK                   |
| V                    | 9848.00   | 43.43            | 30.85             | 7.45          | 24.69             | 44.72             | 54.00        | -9.28  | AV                   |
| V                    | 12310.00  | 51.02            | 31.02             | 8.99          | 25.57             | 54.56             | 74.00        | -19.44 | PK                   |
| V                    | 12310.00  | 43.71            | 31.02             | 8.99          | 25.57             | 47.25             | 54.00        | -6.75  | AV                   |
| H                    | 4924.00   | 52.39            | 30.55             | 5.77          | 24.66             | 52.27             | 74.00        | -21.73 | PK                   |
| H                    | 4924.00   | 43.08            | 30.55             | 5.77          | 24.66             | 42.96             | 54.00        | -11.04 | AV                   |
| H                    | 7386.00   | 51.57            | 30.33             | 6.32          | 24.55             | 52.11             | 74.00        | -21.89 | PK                   |
| H                    | 7386.00   | 43.48            | 30.33             | 6.32          | 24.55             | 44.02             | 54.00        | -9.98  | AV                   |
| H                    | 9848.00   | 50.36            | 30.85             | 7.45          | 24.69             | 51.65             | 74.00        | -22.35 | PK                   |
| H                    | 9848.00   | 43.13            | 30.85             | 7.45          | 24.69             | 44.42             | 54.00        | -9.58  | AV                   |
| H                    | 12310.00  | 53.10            | 31.02             | 8.99          | 25.57             | 56.64             | 74.00        | -17.36 | PK                   |
| H                    | 12310.00  | 43.08            | 31.02             | 8.99          | 25.57             | 46.62             | 54.00        | -7.38  | AV                   |

## Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,

Margin= Emission Level - Limit

2. If peak below the average limit, the average emission was no test.

3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



## SISO ANT A - 802.11g

| Polar<br>(H/V)      | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|---------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                     | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Low Channel:2412MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                   | 4824.00   | 51.61            | 30.55             | 5.77          | 24.66             | 51.49             | 74.00        | -22.51 | PK                   |
| V                   | 4824.00   | 43.16            | 30.55             | 5.77          | 24.66             | 43.04             | 54.00        | -10.96 | AV                   |
| V                   | 7236.00   | 50.78            | 30.33             | 6.32          | 24.55             | 51.32             | 74.00        | -22.68 | PK                   |
| V                   | 7236.00   | 43.07            | 30.33             | 6.32          | 24.55             | 43.61             | 54.00        | -10.39 | AV                   |
| V                   | 9648.00   | 50.30            | 30.85             | 7.45          | 24.69             | 51.59             | 74.00        | -22.41 | PK                   |
| V                   | 9648.00   | 43.38            | 30.85             | 7.45          | 24.69             | 44.67             | 54.00        | -9.33  | AV                   |
| V                   | 12060.00  | 53.97            | 31.02             | 8.99          | 25.57             | 57.51             | 74.00        | -16.49 | PK                   |
| V                   | 12060.00  | 43.21            | 31.02             | 8.99          | 25.57             | 46.75             | 54.00        | -7.25  | AV                   |
| H                   | 4824.00   | 53.46            | 30.55             | 5.77          | 24.66             | 53.34             | 74.00        | -20.66 | PK                   |
| H                   | 4824.00   | 43.34            | 30.55             | 5.77          | 24.66             | 43.22             | 54.00        | -10.78 | AV                   |
| H                   | 7236.00   | 54.66            | 30.33             | 6.32          | 24.55             | 55.20             | 74.00        | -18.80 | PK                   |
| H                   | 7236.00   | 43.59            | 30.33             | 6.32          | 24.55             | 44.13             | 54.00        | -9.87  | AV                   |
| H                   | 9648.00   | 53.23            | 30.85             | 7.45          | 24.69             | 54.52             | 74.00        | -19.48 | PK                   |
| H                   | 9648.00   | 43.68            | 30.85             | 7.45          | 24.69             | 44.97             | 54.00        | -9.03  | AV                   |
| H                   | 12060.00  | 51.16            | 31.02             | 8.99          | 25.57             | 54.70             | 74.00        | -19.30 | PK                   |
| H                   | 12060.00  | 43.23            | 31.02             | 8.99          | 25.57             | 46.77             | 54.00        | -7.23  | AV                   |

| Polar<br>(H/V)         | Frequency | Meter<br>Reading | Pre-amp<br>lifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|------------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                        | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Middle Channel:2437MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                      | 4874.00   | 51.18            | 30.55             | 5.77          | 24.66             | 51.06             | 74.00        | -22.94 | PK                   |
| V                      | 4874.00   | 43.13            | 30.55             | 5.77          | 24.66             | 43.01             | 54.00        | -10.99 | AV                   |
| V                      | 7311.00   | 52.17            | 30.33             | 6.32          | 24.55             | 52.71             | 74.00        | -21.29 | PK                   |
| V                      | 7311.00   | 43.52            | 30.33             | 6.32          | 24.55             | 44.06             | 54.00        | -9.94  | AV                   |
| V                      | 9748.00   | 54.78            | 30.85             | 7.45          | 24.69             | 56.07             | 74.00        | -17.93 | PK                   |
| V                      | 9748.00   | 43.46            | 30.85             | 7.45          | 24.69             | 44.75             | 54.00        | -9.25  | AV                   |
| V                      | 12185.00  | 50.09            | 31.02             | 8.99          | 25.57             | 53.63             | 74.00        | -20.37 | PK                   |
| V                      | 12185.00  | 43.49            | 31.02             | 8.99          | 25.57             | 47.03             | 54.00        | -6.97  | AV                   |
| H                      | 4874.00   | 50.21            | 30.55             | 5.77          | 24.66             | 50.09             | 74.00        | -23.91 | PK                   |
| H                      | 4874.00   | 43.99            | 30.55             | 5.77          | 24.66             | 43.87             | 54.00        | -10.13 | AV                   |
| H                      | 7311.00   | 52.37            | 30.33             | 6.32          | 24.55             | 52.91             | 74.00        | -21.09 | PK                   |
| H                      | 7311.00   | 43.34            | 30.33             | 6.32          | 24.55             | 43.88             | 54.00        | -10.12 | AV                   |
| H                      | 9748.00   | 52.73            | 30.85             | 7.45          | 24.69             | 54.02             | 74.00        | -19.98 | PK                   |
| H                      | 9748.00   | 43.85            | 30.85             | 7.45          | 24.69             | 45.14             | 54.00        | -8.86  | AV                   |
| H                      | 12185.00  | 50.69            | 31.02             | 8.99          | 25.57             | 54.23             | 74.00        | -19.77 | PK                   |
| H                      | 12185.00  | 43.74            | 31.02             | 8.99          | 25.57             | 47.28             | 54.00        | -6.72  | AV                   |



| Polar<br>(H/V)       | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|----------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                      | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| High Channel:2462MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                    | 4924.00   | 53.69            | 30.55             | 5.77          | 24.66             | 53.57             | 74.00        | -20.43 | PK                   |
| V                    | 4924.00   | 43.11            | 30.55             | 5.77          | 24.66             | 42.99             | 54.00        | -11.01 | AV                   |
| V                    | 7386.00   | 51.10            | 30.33             | 6.32          | 24.55             | 51.64             | 74.00        | -22.36 | PK                   |
| V                    | 7386.00   | 43.42            | 30.33             | 6.32          | 24.55             | 43.96             | 54.00        | -10.04 | AV                   |
| V                    | 9848.00   | 51.45            | 30.85             | 7.45          | 24.69             | 52.74             | 74.00        | -21.26 | PK                   |
| V                    | 9848.00   | 43.46            | 30.85             | 7.45          | 24.69             | 44.75             | 54.00        | -9.25  | AV                   |
| V                    | 12310.00  | 53.70            | 31.02             | 8.99          | 25.57             | 57.24             | 74.00        | -16.76 | PK                   |
| V                    | 12310.00  | 43.54            | 31.02             | 8.99          | 25.57             | 47.08             | 54.00        | -6.92  | AV                   |
| H                    | 4924.00   | 53.83            | 30.55             | 5.77          | 24.66             | 53.71             | 74.00        | -20.29 | PK                   |
| H                    | 4924.00   | 43.51            | 30.55             | 5.77          | 24.66             | 43.39             | 54.00        | -10.61 | AV                   |
| H                    | 7386.00   | 53.36            | 30.33             | 6.32          | 24.55             | 53.90             | 74.00        | -20.10 | PK                   |
| H                    | 7386.00   | 43.11            | 30.33             | 6.32          | 24.55             | 43.65             | 54.00        | -10.35 | AV                   |
| H                    | 9848.00   | 54.08            | 30.85             | 7.45          | 24.69             | 55.37             | 74.00        | -18.63 | PK                   |
| H                    | 9848.00   | 43.67            | 30.85             | 7.45          | 24.69             | 44.96             | 54.00        | -9.04  | AV                   |
| H                    | 12310.00  | 51.01            | 31.02             | 8.99          | 25.57             | 54.55             | 74.00        | -19.45 | PK                   |
| H                    | 12310.00  | 43.22            | 31.02             | 8.99          | 25.57             | 46.76             | 54.00        | -7.24  | AV                   |

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,  
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



## SISO ANT B - 802.11g

| Polar<br>(H/V)      | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|---------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                     | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Low Channel:2412MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                   | 4824.00   | 53.52            | 30.55             | 5.77          | 24.66             | 53.40             | 74.00        | -20.60 | PK                   |
| V                   | 4824.00   | 43.85            | 30.55             | 5.77          | 24.66             | 43.73             | 54.00        | -10.27 | AV                   |
| V                   | 7236.00   | 53.18            | 30.33             | 6.32          | 24.55             | 53.72             | 74.00        | -20.28 | PK                   |
| V                   | 7236.00   | 43.61            | 30.33             | 6.32          | 24.55             | 44.15             | 54.00        | -9.85  | AV                   |
| V                   | 9648.00   | 54.66            | 30.85             | 7.45          | 24.69             | 55.95             | 74.00        | -18.05 | PK                   |
| V                   | 9648.00   | 43.80            | 30.85             | 7.45          | 24.69             | 45.09             | 54.00        | -8.91  | AV                   |
| V                   | 12060.00  | 54.55            | 31.02             | 8.99          | 25.57             | 58.09             | 74.00        | -15.91 | PK                   |
| V                   | 12060.00  | 43.72            | 31.02             | 8.99          | 25.57             | 47.26             | 54.00        | -6.74  | AV                   |
| H                   | 4824.00   | 53.94            | 30.55             | 5.77          | 24.66             | 53.82             | 74.00        | -20.18 | PK                   |
| H                   | 4824.00   | 43.22            | 30.55             | 5.77          | 24.66             | 43.10             | 54.00        | -10.90 | AV                   |
| H                   | 7236.00   | 51.26            | 30.33             | 6.32          | 24.55             | 51.80             | 74.00        | -22.20 | PK                   |
| H                   | 7236.00   | 44.00            | 30.33             | 6.32          | 24.55             | 44.54             | 54.00        | -9.46  | AV                   |
| H                   | 9648.00   | 52.59            | 30.85             | 7.45          | 24.69             | 53.88             | 74.00        | -20.12 | PK                   |
| H                   | 9648.00   | 43.67            | 30.85             | 7.45          | 24.69             | 44.96             | 54.00        | -9.04  | AV                   |
| H                   | 12060.00  | 51.19            | 31.02             | 8.99          | 25.57             | 54.73             | 74.00        | -19.27 | PK                   |
| H                   | 12060.00  | 43.41            | 31.02             | 8.99          | 25.57             | 46.95             | 54.00        | -7.05  | AV                   |

| Polar<br>(H/V)         | Frequency | Meter<br>Reading | Pre-amp<br>lifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|------------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                        | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Middle Channel:2437MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                      | 4874.00   | 52.88            | 30.55             | 5.77          | 24.66             | 52.76             | 74.00        | -21.24 | PK                   |
| V                      | 4874.00   | 43.44            | 30.55             | 5.77          | 24.66             | 43.32             | 54.00        | -10.68 | AV                   |
| V                      | 7311.00   | 52.17            | 30.33             | 6.32          | 24.55             | 52.71             | 74.00        | -21.29 | PK                   |
| V                      | 7311.00   | 43.85            | 30.33             | 6.32          | 24.55             | 44.39             | 54.00        | -9.61  | AV                   |
| V                      | 9748.00   | 50.81            | 30.85             | 7.45          | 24.69             | 52.10             | 74.00        | -21.90 | PK                   |
| V                      | 9748.00   | 43.66            | 30.85             | 7.45          | 24.69             | 44.95             | 54.00        | -9.05  | AV                   |
| V                      | 12185.00  | 52.67            | 31.02             | 8.99          | 25.57             | 56.21             | 74.00        | -17.79 | PK                   |
| V                      | 12185.00  | 44.00            | 31.02             | 8.99          | 25.57             | 47.54             | 54.00        | -6.46  | AV                   |
| H                      | 4874.00   | 52.37            | 30.55             | 5.77          | 24.66             | 52.25             | 74.00        | -21.75 | PK                   |
| H                      | 4874.00   | 43.60            | 30.55             | 5.77          | 24.66             | 43.48             | 54.00        | -10.52 | AV                   |
| H                      | 7311.00   | 50.42            | 30.33             | 6.32          | 24.55             | 50.96             | 74.00        | -23.04 | PK                   |
| H                      | 7311.00   | 43.48            | 30.33             | 6.32          | 24.55             | 44.02             | 54.00        | -9.98  | AV                   |
| H                      | 9748.00   | 52.18            | 30.85             | 7.45          | 24.69             | 53.47             | 74.00        | -20.53 | PK                   |
| H                      | 9748.00   | 43.01            | 30.85             | 7.45          | 24.69             | 44.30             | 54.00        | -9.70  | AV                   |
| H                      | 12185.00  | 52.68            | 31.02             | 8.99          | 25.57             | 56.22             | 74.00        | -17.78 | PK                   |
| H                      | 12185.00  | 43.73            | 31.02             | 8.99          | 25.57             | 47.27             | 54.00        | -6.73  | AV                   |



| Polar<br>(H/V)       | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|----------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                      | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| High Channel:2462MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                    | 4924.00   | 53.92            | 30.55             | 5.77          | 24.66             | 53.80             | 74.00        | -20.20 | PK                   |
| V                    | 4924.00   | 43.84            | 30.55             | 5.77          | 24.66             | 43.72             | 54.00        | -10.28 | AV                   |
| V                    | 7386.00   | 52.72            | 30.33             | 6.32          | 24.55             | 53.26             | 74.00        | -20.74 | PK                   |
| V                    | 7386.00   | 43.62            | 30.33             | 6.32          | 24.55             | 44.16             | 54.00        | -9.84  | AV                   |
| V                    | 9848.00   | 52.31            | 30.85             | 7.45          | 24.69             | 53.60             | 74.00        | -20.40 | PK                   |
| V                    | 9848.00   | 43.25            | 30.85             | 7.45          | 24.69             | 44.54             | 54.00        | -9.46  | AV                   |
| V                    | 12310.00  | 51.61            | 31.02             | 8.99          | 25.57             | 55.15             | 74.00        | -18.85 | PK                   |
| V                    | 12310.00  | 43.73            | 31.02             | 8.99          | 25.57             | 47.27             | 54.00        | -6.73  | AV                   |
| H                    | 4924.00   | 52.89            | 30.55             | 5.77          | 24.66             | 52.77             | 74.00        | -21.23 | PK                   |
| H                    | 4924.00   | 43.82            | 30.55             | 5.77          | 24.66             | 43.70             | 54.00        | -10.30 | AV                   |
| H                    | 7386.00   | 50.29            | 30.33             | 6.32          | 24.55             | 50.83             | 74.00        | -23.17 | PK                   |
| H                    | 7386.00   | 43.60            | 30.33             | 6.32          | 24.55             | 44.14             | 54.00        | -9.86  | AV                   |
| H                    | 9848.00   | 50.13            | 30.85             | 7.45          | 24.69             | 51.42             | 74.00        | -22.58 | PK                   |
| H                    | 9848.00   | 43.40            | 30.85             | 7.45          | 24.69             | 44.69             | 54.00        | -9.31  | AV                   |
| H                    | 12310.00  | 52.44            | 31.02             | 8.99          | 25.57             | 55.98             | 74.00        | -18.02 | PK                   |
| H                    | 12310.00  | 43.31            | 31.02             | 8.99          | 25.57             | 46.85             | 54.00        | -7.15  | AV                   |

## Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,

Margin= Emission Level - Limit

2. If peak below the average limit, the average emission was no test.

3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



## SISO ANT A - 802.11n20

| Polar<br>(H/V)      | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|---------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                     | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Low Channel:2412MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                   | 4824.00   | 51.35            | 30.55             | 5.77          | 24.66             | 51.23             | 74.00        | -22.77 | PK                   |
| V                   | 4824.00   | 43.81            | 30.55             | 5.77          | 24.66             | 43.69             | 54.00        | -10.31 | AV                   |
| V                   | 7236.00   | 54.85            | 30.33             | 6.32          | 24.55             | 55.39             | 74.00        | -18.61 | PK                   |
| V                   | 7236.00   | 43.11            | 30.33             | 6.32          | 24.55             | 43.65             | 54.00        | -10.35 | AV                   |
| V                   | 9648.00   | 51.71            | 30.85             | 7.45          | 24.69             | 53.00             | 74.00        | -21.00 | PK                   |
| V                   | 9648.00   | 43.42            | 30.85             | 7.45          | 24.69             | 44.71             | 54.00        | -9.29  | AV                   |
| V                   | 12060.00  | 50.08            | 31.02             | 8.99          | 25.57             | 53.62             | 74.00        | -20.38 | PK                   |
| V                   | 12060.00  | 43.56            | 31.02             | 8.99          | 25.57             | 47.10             | 54.00        | -6.90  | AV                   |
| H                   | 4824.00   | 50.57            | 30.55             | 5.77          | 24.66             | 50.45             | 74.00        | -23.55 | PK                   |
| H                   | 4824.00   | 43.76            | 30.55             | 5.77          | 24.66             | 43.64             | 54.00        | -10.36 | AV                   |
| H                   | 7236.00   | 51.77            | 30.33             | 6.32          | 24.55             | 52.31             | 74.00        | -21.69 | PK                   |
| H                   | 7236.00   | 43.25            | 30.33             | 6.32          | 24.55             | 43.79             | 54.00        | -10.21 | AV                   |
| H                   | 9648.00   | 54.92            | 30.85             | 7.45          | 24.69             | 56.21             | 74.00        | -17.79 | PK                   |
| H                   | 9648.00   | 43.43            | 30.85             | 7.45          | 24.69             | 44.72             | 54.00        | -9.28  | AV                   |
| H                   | 12060.00  | 53.38            | 31.02             | 8.99          | 25.57             | 56.92             | 74.00        | -17.08 | PK                   |
| H                   | 12060.00  | 43.17            | 31.02             | 8.99          | 25.57             | 46.71             | 54.00        | -7.29  | AV                   |

| Polar<br>(H/V)         | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|------------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                        | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Middle Channel:2437MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                      | 4874.00   | 54.95            | 30.55             | 5.77          | 24.66             | 54.83             | 74.00        | -19.17 | PK                   |
| V                      | 4874.00   | 43.47            | 30.55             | 5.77          | 24.66             | 43.35             | 54.00        | -10.65 | AV                   |
| V                      | 7311.00   | 52.42            | 30.33             | 6.32          | 24.55             | 52.96             | 74.00        | -21.04 | PK                   |
| V                      | 7311.00   | 43.55            | 30.33             | 6.32          | 24.55             | 44.09             | 54.00        | -9.91  | AV                   |
| V                      | 9748.00   | 50.89            | 30.85             | 7.45          | 24.69             | 52.18             | 74.00        | -21.82 | PK                   |
| V                      | 9748.00   | 43.31            | 30.85             | 7.45          | 24.69             | 44.60             | 54.00        | -9.40  | AV                   |
| V                      | 12185.00  | 53.76            | 31.02             | 8.99          | 25.57             | 57.30             | 74.00        | -16.70 | PK                   |
| V                      | 12185.00  | 43.95            | 31.02             | 8.99          | 25.57             | 47.49             | 54.00        | -6.51  | AV                   |
| H                      | 4874.00   | 52.34            | 30.55             | 5.77          | 24.66             | 52.22             | 74.00        | -21.78 | PK                   |
| H                      | 4874.00   | 43.61            | 30.55             | 5.77          | 24.66             | 43.49             | 54.00        | -10.51 | AV                   |
| H                      | 7311.00   | 53.38            | 30.33             | 6.32          | 24.55             | 53.92             | 74.00        | -20.08 | PK                   |
| H                      | 7311.00   | 43.72            | 30.33             | 6.32          | 24.55             | 44.26             | 54.00        | -9.74  | AV                   |
| H                      | 9748.00   | 53.93            | 30.85             | 7.45          | 24.69             | 55.22             | 74.00        | -18.78 | PK                   |
| H                      | 9748.00   | 43.99            | 30.85             | 7.45          | 24.69             | 45.28             | 54.00        | -8.72  | AV                   |
| H                      | 12185.00  | 52.01            | 31.02             | 8.99          | 25.57             | 55.55             | 74.00        | -18.45 | PK                   |
| H                      | 12185.00  | 43.01            | 31.02             | 8.99          | 25.57             | 46.55             | 54.00        | -7.45  | AV                   |



| Polar<br>(H/V)       | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|----------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                      | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| High Channel:2462MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                    | 4924.00   | 51.62            | 30.55             | 5.77          | 24.66             | 51.50             | 74.00        | -22.50 | PK                   |
| V                    | 4924.00   | 43.48            | 30.55             | 5.77          | 24.66             | 43.36             | 54.00        | -10.64 | AV                   |
| V                    | 7386.00   | 53.49            | 30.33             | 6.32          | 24.55             | 54.03             | 74.00        | -19.97 | PK                   |
| V                    | 7386.00   | 43.59            | 30.33             | 6.32          | 24.55             | 44.13             | 54.00        | -9.87  | AV                   |
| V                    | 9848.00   | 54.72            | 30.85             | 7.45          | 24.69             | 56.01             | 74.00        | -17.99 | PK                   |
| V                    | 9848.00   | 43.69            | 30.85             | 7.45          | 24.69             | 44.98             | 54.00        | -9.02  | AV                   |
| V                    | 12310.00  | 50.32            | 31.02             | 8.99          | 25.57             | 53.86             | 74.00        | -20.14 | PK                   |
| V                    | 12310.00  | 43.86            | 31.02             | 8.99          | 25.57             | 47.40             | 54.00        | -6.60  | AV                   |
| H                    | 4924.00   | 52.64            | 30.55             | 5.77          | 24.66             | 52.52             | 74.00        | -21.48 | PK                   |
| H                    | 4924.00   | 43.60            | 30.55             | 5.77          | 24.66             | 43.48             | 54.00        | -10.52 | AV                   |
| H                    | 7386.00   | 52.96            | 30.33             | 6.32          | 24.55             | 53.50             | 74.00        | -20.50 | PK                   |
| H                    | 7386.00   | 43.55            | 30.33             | 6.32          | 24.55             | 44.09             | 54.00        | -9.91  | AV                   |
| H                    | 9848.00   | 50.32            | 30.85             | 7.45          | 24.69             | 51.61             | 74.00        | -22.39 | PK                   |
| H                    | 9848.00   | 43.51            | 30.85             | 7.45          | 24.69             | 44.80             | 54.00        | -9.20  | AV                   |
| H                    | 12310.00  | 54.78            | 31.02             | 8.99          | 25.57             | 58.32             | 74.00        | -15.68 | PK                   |
| H                    | 12310.00  | 43.06            | 31.02             | 8.99          | 25.57             | 46.60             | 54.00        | -7.40  | AV                   |

## Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,  
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. Both ANT A and ANT B passed the test, the test data shows only the worst case SISO ANT A.



## MIMO ANT A+B - 802.11n20

| Polar<br>(H/V)      | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|---------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                     | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Low Channel:2412MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                   | 4824.00   | 54.87            | 30.55             | 5.77          | 24.66             | 54.75             | 74.00        | -19.25 | PK                   |
| V                   | 4824.00   | 43.59            | 30.55             | 5.77          | 24.66             | 43.47             | 54.00        | -10.53 | AV                   |
| V                   | 7236.00   | 51.40            | 30.33             | 6.32          | 24.55             | 51.94             | 74.00        | -22.06 | PK                   |
| V                   | 7236.00   | 43.44            | 30.33             | 6.32          | 24.55             | 43.98             | 54.00        | -10.02 | AV                   |
| V                   | 9648.00   | 53.89            | 30.85             | 7.45          | 24.69             | 55.18             | 74.00        | -18.82 | PK                   |
| V                   | 9648.00   | 43.63            | 30.85             | 7.45          | 24.69             | 44.92             | 54.00        | -9.08  | AV                   |
| V                   | 12060.00  | 50.13            | 31.02             | 8.99          | 25.57             | 53.67             | 74.00        | -20.33 | PK                   |
| V                   | 12060.00  | 43.23            | 31.02             | 8.99          | 25.57             | 46.77             | 54.00        | -7.23  | AV                   |
| H                   | 4824.00   | 52.28            | 30.55             | 5.77          | 24.66             | 52.16             | 74.00        | -21.84 | PK                   |
| H                   | 4824.00   | 43.89            | 30.55             | 5.77          | 24.66             | 43.77             | 54.00        | -10.23 | AV                   |
| H                   | 7236.00   | 51.98            | 30.33             | 6.32          | 24.55             | 52.52             | 74.00        | -21.48 | PK                   |
| H                   | 7236.00   | 43.52            | 30.33             | 6.32          | 24.55             | 44.06             | 54.00        | -9.94  | AV                   |
| H                   | 9648.00   | 53.35            | 30.85             | 7.45          | 24.69             | 54.64             | 74.00        | -19.36 | PK                   |
| H                   | 9648.00   | 43.73            | 30.85             | 7.45          | 24.69             | 45.02             | 54.00        | -8.98  | AV                   |
| H                   | 12060.00  | 51.67            | 31.02             | 8.99          | 25.57             | 55.21             | 74.00        | -18.79 | PK                   |
| H                   | 12060.00  | 43.41            | 31.02             | 8.99          | 25.57             | 46.95             | 54.00        | -7.05  | AV                   |

| Polar<br>(H/V)         | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|------------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                        | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Middle Channel:2437MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                      | 4874.00   | 52.97            | 30.55             | 5.77          | 24.66             | 52.85             | 74.00        | -21.15 | PK                   |
| V                      | 4874.00   | 43.12            | 30.55             | 5.77          | 24.66             | 43.00             | 54.00        | -11.00 | AV                   |
| V                      | 7311.00   | 51.37            | 30.33             | 6.32          | 24.55             | 51.91             | 74.00        | -22.09 | PK                   |
| V                      | 7311.00   | 43.41            | 30.33             | 6.32          | 24.55             | 43.95             | 54.00        | -10.05 | AV                   |
| V                      | 9748.00   | 51.14            | 30.85             | 7.45          | 24.69             | 52.43             | 74.00        | -21.57 | PK                   |
| V                      | 9748.00   | 43.19            | 30.85             | 7.45          | 24.69             | 44.48             | 54.00        | -9.52  | AV                   |
| V                      | 12185.00  | 51.99            | 31.02             | 8.99          | 25.57             | 55.53             | 74.00        | -18.47 | PK                   |
| V                      | 12185.00  | 43.83            | 31.02             | 8.99          | 25.57             | 47.37             | 54.00        | -6.63  | AV                   |
| H                      | 4874.00   | 54.39            | 30.55             | 5.77          | 24.66             | 54.27             | 74.00        | -19.73 | PK                   |
| H                      | 4874.00   | 43.52            | 30.55             | 5.77          | 24.66             | 43.40             | 54.00        | -10.60 | AV                   |
| H                      | 7311.00   | 51.94            | 30.33             | 6.32          | 24.55             | 52.48             | 74.00        | -21.52 | PK                   |
| H                      | 7311.00   | 43.50            | 30.33             | 6.32          | 24.55             | 44.04             | 54.00        | -9.96  | AV                   |
| H                      | 9748.00   | 51.71            | 30.85             | 7.45          | 24.69             | 53.00             | 74.00        | -21.00 | PK                   |
| H                      | 9748.00   | 43.68            | 30.85             | 7.45          | 24.69             | 44.97             | 54.00        | -9.03  | AV                   |
| H                      | 12185.00  | 52.78            | 31.02             | 8.99          | 25.57             | 56.32             | 74.00        | -17.68 | PK                   |
| H                      | 12185.00  | 43.06            | 31.02             | 8.99          | 25.57             | 46.60             | 54.00        | -7.40  | AV                   |



| Polar<br>(H/V)       | Frequency | Meter<br>Reading | Pre-ampl<br>ifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|----------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                      | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| High Channel:2462MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                    | 4924.00   | 51.11            | 30.55             | 5.77          | 24.66             | 50.99             | 74.00        | -23.01 | PK                   |
| V                    | 4924.00   | 43.31            | 30.55             | 5.77          | 24.66             | 43.19             | 54.00        | -10.81 | AV                   |
| V                    | 7386.00   | 52.52            | 30.33             | 6.32          | 24.55             | 53.06             | 74.00        | -20.94 | PK                   |
| V                    | 7386.00   | 43.05            | 30.33             | 6.32          | 24.55             | 43.59             | 54.00        | -10.41 | AV                   |
| V                    | 9848.00   | 53.45            | 30.85             | 7.45          | 24.69             | 54.74             | 74.00        | -19.26 | PK                   |
| V                    | 9848.00   | 43.17            | 30.85             | 7.45          | 24.69             | 44.46             | 54.00        | -9.54  | AV                   |
| V                    | 12310.00  | 50.76            | 31.02             | 8.99          | 25.57             | 54.30             | 74.00        | -19.70 | PK                   |
| V                    | 12310.00  | 43.65            | 31.02             | 8.99          | 25.57             | 47.19             | 54.00        | -6.81  | AV                   |
| H                    | 4924.00   | 53.61            | 30.55             | 5.77          | 24.66             | 53.49             | 74.00        | -20.51 | PK                   |
| H                    | 4924.00   | 43.72            | 30.55             | 5.77          | 24.66             | 43.60             | 54.00        | -10.40 | AV                   |
| H                    | 7386.00   | 51.90            | 30.33             | 6.32          | 24.55             | 52.44             | 74.00        | -21.56 | PK                   |
| H                    | 7386.00   | 43.20            | 30.33             | 6.32          | 24.55             | 43.74             | 54.00        | -10.26 | AV                   |
| H                    | 9848.00   | 54.46            | 30.85             | 7.45          | 24.69             | 55.75             | 74.00        | -18.25 | PK                   |
| H                    | 9848.00   | 43.68            | 30.85             | 7.45          | 24.69             | 44.97             | 54.00        | -9.03  | AV                   |
| H                    | 12310.00  | 51.68            | 31.02             | 8.99          | 25.57             | 55.22             | 74.00        | -18.78 | PK                   |
| H                    | 12310.00  | 43.01            | 31.02             | 8.99          | 25.57             | 46.55             | 54.00        | -7.45  | AV                   |

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,  
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



SISO ANT A - 802.11n40

| Polar<br>(H/V)      | Frequenc<br>y | Meter<br>Reading | Pre-ampli<br>fier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|---------------------|---------------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                     | (MHz)         | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Low Channel:2422MHz |               |                  |                   |               |                   |                   |              |        |                      |
| V                   | 4844.00       | 53.82            | 30.55             | 5.77          | 24.66             | 53.70             | 74.00        | -20.30 | PK                   |
| V                   | 4844.00       | 43.10            | 30.55             | 5.77          | 24.66             | 42.98             | 54.00        | -11.02 | AV                   |
| V                   | 7266.00       | 52.03            | 30.33             | 6.32          | 24.55             | 52.57             | 74.00        | -21.43 | PK                   |
| V                   | 7266.00       | 43.61            | 30.33             | 6.32          | 24.55             | 44.15             | 54.00        | -9.85  | AV                   |
| V                   | 9688.00       | 52.72            | 30.85             | 7.45          | 24.69             | 54.01             | 74.00        | -19.99 | PK                   |
| V                   | 9688.00       | 43.39            | 30.85             | 7.45          | 24.69             | 44.68             | 54.00        | -9.32  | AV                   |
| V                   | 12110.00      | 53.27            | 31.02             | 8.99          | 25.57             | 56.81             | 74.00        | -17.19 | PK                   |
| V                   | 12110.00      | 43.04            | 31.02             | 8.99          | 25.57             | 46.58             | 54.00        | -7.42  | AV                   |
| H                   | 4844.00       | 54.93            | 30.55             | 5.77          | 24.66             | 54.81             | 74.00        | -19.19 | PK                   |
| H                   | 4844.00       | 43.43            | 30.55             | 5.77          | 24.66             | 43.31             | 54.00        | -10.69 | AV                   |
| H                   | 7266.00       | 53.05            | 30.33             | 6.32          | 24.55             | 53.59             | 74.00        | -20.41 | PK                   |
| H                   | 7266.00       | 43.01            | 30.33             | 6.32          | 24.55             | 43.55             | 54.00        | -10.45 | AV                   |
| H                   | 9688.00       | 53.07            | 30.85             | 7.45          | 24.69             | 54.36             | 74.00        | -19.64 | PK                   |
| H                   | 9688.00       | 43.55            | 30.85             | 7.45          | 24.69             | 44.84             | 54.00        | -9.16  | AV                   |
| H                   | 12110.00      | 51.02            | 31.02             | 8.99          | 25.57             | 54.56             | 74.00        | -19.44 | PK                   |
| H                   | 12110.00      | 43.34            | 31.02             | 8.99          | 25.57             | 46.88             | 54.00        | -7.12  | AV                   |

| Polar<br>(H/V)         | Frequenc<br>y | Meter<br>Reading | Pre-ampli<br>fier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|------------------------|---------------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                        | (MHz)         | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Middle Channel:2437MHz |               |                  |                   |               |                   |                   |              |        |                      |
| V                      | 4874.00       | 53.00            | 30.55             | 5.77          | 24.66             | 52.88             | 74.00        | -21.12 | PK                   |
| V                      | 4874.00       | 43.26            | 30.55             | 5.77          | 24.66             | 43.14             | 54.00        | -10.86 | AV                   |
| V                      | 7311.00       | 50.25            | 30.33             | 6.32          | 24.55             | 50.79             | 74.00        | -23.21 | PK                   |
| V                      | 7311.00       | 43.26            | 30.33             | 6.32          | 24.55             | 43.80             | 54.00        | -10.20 | AV                   |
| V                      | 9748.00       | 52.89            | 30.85             | 7.45          | 24.69             | 54.18             | 74.00        | -19.82 | PK                   |
| V                      | 9748.00       | 43.61            | 30.85             | 7.45          | 24.69             | 44.90             | 54.00        | -9.10  | AV                   |
| V                      | 12185.00      | 52.36            | 31.02             | 8.99          | 25.57             | 55.90             | 74.00        | -18.10 | PK                   |
| V                      | 12185.00      | 43.01            | 31.02             | 8.99          | 25.57             | 46.55             | 54.00        | -7.45  | AV                   |
| H                      | 4874.00       | 50.75            | 30.55             | 5.77          | 24.66             | 50.63             | 74.00        | -23.37 | PK                   |
| H                      | 4874.00       | 43.83            | 30.55             | 5.77          | 24.66             | 43.71             | 54.00        | -10.29 | AV                   |
| H                      | 7311.00       | 50.29            | 30.33             | 6.32          | 24.55             | 50.83             | 74.00        | -23.17 | PK                   |
| H                      | 7311.00       | 43.06            | 30.33             | 6.32          | 24.55             | 43.60             | 54.00        | -10.40 | AV                   |
| H                      | 9748.00       | 51.25            | 30.85             | 7.45          | 24.69             | 52.54             | 74.00        | -21.46 | PK                   |
| H                      | 9748.00       | 43.98            | 30.85             | 7.45          | 24.69             | 45.27             | 54.00        | -8.73  | AV                   |
| H                      | 12185.00      | 51.31            | 31.02             | 8.99          | 25.57             | 54.85             | 74.00        | -19.15 | PK                   |
| H                      | 12185.00      | 43.03            | 31.02             | 8.99          | 25.57             | 46.57             | 54.00        | -7.43  | AV                   |



| Polar<br>(H/V)       | Frequency | Meter<br>Reading | Pre-amp<br>lifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|----------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                      | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| High Channel:2452MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                    | 4904.00   | 52.67            | 30.55             | 5.77          | 24.66             | 52.55             | 74.00        | -21.45 | PK                   |
| V                    | 4904.00   | 43.28            | 30.55             | 5.77          | 24.66             | 43.16             | 54.00        | -10.84 | AV                   |
| V                    | 7356.00   | 53.82            | 30.33             | 6.32          | 24.55             | 54.36             | 74.00        | -19.64 | PK                   |
| V                    | 7356.00   | 43.30            | 30.33             | 6.32          | 24.55             | 43.84             | 54.00        | -10.16 | AV                   |
| V                    | 9808.00   | 54.09            | 30.85             | 7.45          | 24.69             | 55.38             | 74.00        | -18.62 | PK                   |
| V                    | 9808.00   | 43.07            | 30.85             | 7.45          | 24.69             | 44.36             | 54.00        | -9.64  | AV                   |
| V                    | 12260.00  | 54.71            | 31.02             | 8.99          | 25.57             | 58.25             | 74.00        | -15.75 | PK                   |
| V                    | 12260.00  | 43.76            | 31.02             | 8.99          | 25.57             | 47.30             | 54.00        | -6.70  | AV                   |
| H                    | 4904.00   | 54.31            | 30.55             | 5.77          | 24.66             | 54.19             | 74.00        | -19.81 | PK                   |
| H                    | 4904.00   | 43.59            | 30.55             | 5.77          | 24.66             | 43.47             | 54.00        | -10.53 | AV                   |
| H                    | 7356.00   | 51.51            | 30.33             | 6.32          | 24.55             | 52.05             | 74.00        | -21.95 | PK                   |
| H                    | 7356.00   | 43.72            | 30.33             | 6.32          | 24.55             | 44.26             | 54.00        | -9.74  | AV                   |
| H                    | 9808.00   | 53.79            | 30.85             | 7.45          | 24.69             | 55.08             | 74.00        | -18.92 | PK                   |
| H                    | 9808.00   | 43.02            | 30.85             | 7.45          | 24.69             | 44.31             | 54.00        | -9.69  | AV                   |
| H                    | 12260.00  | 54.02            | 31.02             | 8.99          | 25.57             | 57.56             | 74.00        | -16.44 | PK                   |
| H                    | 12260.00  | 43.51            | 31.02             | 8.99          | 25.57             | 47.05             | 54.00        | -6.95  | AV                   |

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,  
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4. Both ANT A and ANT B passed the test, the test data shows only the worst case SISO ANT A.



## MIMO ANT A+B - 802.11n40

| Polar<br>(H/V)      | Frequenc<br>y | Meter<br>Reading | Pre-ampli<br>fier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|---------------------|---------------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                     | (MHz)         | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Low Channel:2422MHz |               |                  |                   |               |                   |                   |              |        |                      |
| V                   | 4844.00       | 53.48            | 30.55             | 5.77          | 24.66             | 53.36             | 74.00        | -20.64 | PK                   |
| V                   | 4844.00       | 43.52            | 30.55             | 5.77          | 24.66             | 43.40             | 54.00        | -10.60 | AV                   |
| V                   | 7266.00       | 52.29            | 30.33             | 6.32          | 24.55             | 52.83             | 74.00        | -21.17 | PK                   |
| V                   | 7266.00       | 43.01            | 30.33             | 6.32          | 24.55             | 43.55             | 54.00        | -10.45 | AV                   |
| V                   | 9688.00       | 50.01            | 30.85             | 7.45          | 24.69             | 51.30             | 74.00        | -22.70 | PK                   |
| V                   | 9688.00       | 43.99            | 30.85             | 7.45          | 24.69             | 45.28             | 54.00        | -8.72  | AV                   |
| V                   | 12110.00      | 50.05            | 31.02             | 8.99          | 25.57             | 53.59             | 74.00        | -20.41 | PK                   |
| V                   | 12110.00      | 43.52            | 31.02             | 8.99          | 25.57             | 47.06             | 54.00        | -6.94  | AV                   |
| H                   | 4844.00       | 52.57            | 30.55             | 5.77          | 24.66             | 52.45             | 74.00        | -21.55 | PK                   |
| H                   | 4844.00       | 43.34            | 30.55             | 5.77          | 24.66             | 43.22             | 54.00        | -10.78 | AV                   |
| H                   | 7266.00       | 53.41            | 30.33             | 6.32          | 24.55             | 53.95             | 74.00        | -20.05 | PK                   |
| H                   | 7266.00       | 43.85            | 30.33             | 6.32          | 24.55             | 44.39             | 54.00        | -9.61  | AV                   |
| H                   | 9688.00       | 51.68            | 30.85             | 7.45          | 24.69             | 52.97             | 74.00        | -21.03 | PK                   |
| H                   | 9688.00       | 43.16            | 30.85             | 7.45          | 24.69             | 44.45             | 54.00        | -9.55  | AV                   |
| H                   | 12110.00      | 53.48            | 31.02             | 8.99          | 25.57             | 57.02             | 74.00        | -16.98 | PK                   |
| H                   | 12110.00      | 43.06            | 31.02             | 8.99          | 25.57             | 46.60             | 54.00        | -7.40  | AV                   |

| Polar<br>(H/V)         | Frequenc<br>y | Meter<br>Reading | Pre-ampli<br>fier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|------------------------|---------------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                        | (MHz)         | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| Middle Channel:2437MHz |               |                  |                   |               |                   |                   |              |        |                      |
| V                      | 4874.00       | 50.15            | 30.55             | 5.77          | 24.66             | 50.03             | 74.00        | -23.97 | PK                   |
| V                      | 4874.00       | 43.30            | 30.55             | 5.77          | 24.66             | 43.18             | 54.00        | -10.82 | AV                   |
| V                      | 7311.00       | 51.19            | 30.33             | 6.32          | 24.55             | 51.73             | 74.00        | -22.27 | PK                   |
| V                      | 7311.00       | 43.81            | 30.33             | 6.32          | 24.55             | 44.35             | 54.00        | -9.65  | AV                   |
| V                      | 9748.00       | 54.88            | 30.85             | 7.45          | 24.69             | 56.17             | 74.00        | -17.83 | PK                   |
| V                      | 9748.00       | 43.58            | 30.85             | 7.45          | 24.69             | 44.87             | 54.00        | -9.13  | AV                   |
| V                      | 12185.00      | 50.05            | 31.02             | 8.99          | 25.57             | 53.59             | 74.00        | -20.41 | PK                   |
| V                      | 12185.00      | 43.82            | 31.02             | 8.99          | 25.57             | 47.36             | 54.00        | -6.64  | AV                   |
| H                      | 4874.00       | 53.42            | 30.55             | 5.77          | 24.66             | 53.30             | 74.00        | -20.70 | PK                   |
| H                      | 4874.00       | 43.31            | 30.55             | 5.77          | 24.66             | 43.19             | 54.00        | -10.81 | AV                   |
| H                      | 7311.00       | 53.61            | 30.33             | 6.32          | 24.55             | 54.15             | 74.00        | -19.85 | PK                   |
| H                      | 7311.00       | 43.84            | 30.33             | 6.32          | 24.55             | 44.38             | 54.00        | -9.62  | AV                   |
| H                      | 9748.00       | 54.16            | 30.85             | 7.45          | 24.69             | 55.45             | 74.00        | -18.55 | PK                   |
| H                      | 9748.00       | 43.80            | 30.85             | 7.45          | 24.69             | 45.09             | 54.00        | -8.91  | AV                   |
| H                      | 12185.00      | 53.90            | 31.02             | 8.99          | 25.57             | 57.44             | 74.00        | -16.56 | PK                   |
| H                      | 12185.00      | 43.65            | 31.02             | 8.99          | 25.57             | 47.19             | 54.00        | -6.81  | AV                   |



| Polar<br>(H/V)       | Frequency | Meter<br>Reading | Pre-amp<br>lifier | Cable<br>Loss | Antenna<br>Factor | Emission<br>Level | Limits       | Margin | Detect<br>or<br>Type |
|----------------------|-----------|------------------|-------------------|---------------|-------------------|-------------------|--------------|--------|----------------------|
|                      | (MHz)     | (dBuV)           | (dB)              | (dB)          | (dB)              | (dBuV/m)          | (dBuV/<br>m) | (dB)   |                      |
| High Channel:2452MHz |           |                  |                   |               |                   |                   |              |        |                      |
| V                    | 4904.00   | 50.47            | 30.55             | 5.77          | 24.66             | 50.35             | 74.00        | -23.65 | PK                   |
| V                    | 4904.00   | 43.50            | 30.55             | 5.77          | 24.66             | 43.38             | 54.00        | -10.62 | AV                   |
| V                    | 7356.00   | 54.33            | 30.33             | 6.32          | 24.55             | 54.87             | 74.00        | -19.13 | PK                   |
| V                    | 7356.00   | 43.60            | 30.33             | 6.32          | 24.55             | 44.14             | 54.00        | -9.86  | AV                   |
| V                    | 9808.00   | 50.56            | 30.85             | 7.45          | 24.69             | 51.85             | 74.00        | -22.15 | PK                   |
| V                    | 9808.00   | 43.85            | 30.85             | 7.45          | 24.69             | 45.14             | 54.00        | -8.86  | AV                   |
| V                    | 12260.00  | 53.60            | 31.02             | 8.99          | 25.57             | 57.14             | 74.00        | -16.86 | PK                   |
| V                    | 12260.00  | 43.44            | 31.02             | 8.99          | 25.57             | 46.98             | 54.00        | -7.02  | AV                   |
| H                    | 4904.00   | 52.74            | 30.55             | 5.77          | 24.66             | 52.62             | 74.00        | -21.38 | PK                   |
| H                    | 4904.00   | 43.32            | 30.55             | 5.77          | 24.66             | 43.20             | 54.00        | -10.80 | AV                   |
| H                    | 7356.00   | 52.71            | 30.33             | 6.32          | 24.55             | 53.25             | 74.00        | -20.75 | PK                   |
| H                    | 7356.00   | 43.95            | 30.33             | 6.32          | 24.55             | 44.49             | 54.00        | -9.51  | AV                   |
| H                    | 9808.00   | 52.90            | 30.85             | 7.45          | 24.69             | 54.19             | 74.00        | -19.81 | PK                   |
| H                    | 9808.00   | 43.04            | 30.85             | 7.45          | 24.69             | 44.33             | 54.00        | -9.67  | AV                   |
| H                    | 12260.00  | 52.34            | 31.02             | 8.99          | 25.57             | 55.88             | 74.00        | -18.12 | PK                   |
| H                    | 12260.00  | 43.43            | 31.02             | 8.99          | 25.57             | 46.97             | 54.00        | -7.03  | AV                   |

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,  
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



## 5. RADIATED BAND EMISSION MEASUREMENT

### 5.1 TEST REQUIREMENT:

|                       |                                                                                                    |          |      |      |         |
|-----------------------|----------------------------------------------------------------------------------------------------|----------|------|------|---------|
| Test Requirement:     | FCC Part15 C Section 15.209 and 15.205                                                             |          |      |      |         |
| Test Method:          | ANSI C63.10: 2013                                                                                  |          |      |      |         |
| Test Frequency Range: | All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed. |          |      |      |         |
| Test site:            | Measurement Distance: 3m                                                                           |          |      |      |         |
| Receiver setup:       | Frequency                                                                                          | Detector | RBW  | VBW  | Value   |
|                       | Above                                                                                              | Peak     | 1MHz | 3MHz | Peak    |
|                       | 1GHz                                                                                               | Average  | 1MHz | 3MHz | Average |

### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

| FREQUENCY (MHz) | Class B (dBuV/m) (at 3M) |         |
|-----------------|--------------------------|---------|
|                 | PEAK                     | AVERAGE |
| Above 1000      | 74                       | 54      |

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

### 5.2 TEST PROCEDURE

Above 1GHz test procedure as below:

- a. 1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could bestopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dBmargin would be re-tested one by one using peak, quasi-peak or average method as specified and then reportedin a data sheet.
- g. Test the EUT in the lowest channel,the Highest channel

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

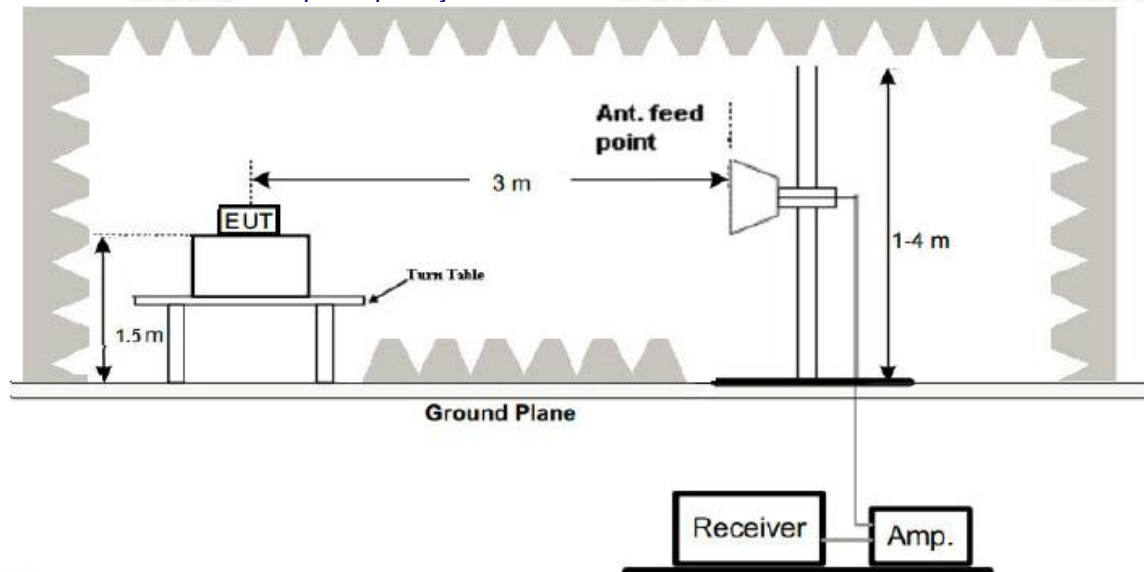
### 5.3 DEVIATION FROM TEST STANDARD

No deviation



## 5.4 TEST SETUP

### Radiated Emission Test-Up Frequency Above 1GHz



## 5.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



## 5.6 TEST RESULT

|                                                                                                                  | Polar<br>(H/V)       | Frequency<br>(MHz) | Meter<br>Reading<br>(dBuV) | Pre-<br>amplifier<br>(dB) | Cable<br>Loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Emission<br>level<br>(dBuV/m) | Limit<br>(dBu<br>V/m) | Margin<br>(dB) | Dete<br>ctor<br>Type | Result |
|------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------------|---------------------------|-----------------------|-----------------------------|-------------------------------|-----------------------|----------------|----------------------|--------|
| SISO<br>ANT A<br>802.11b                                                                                         | LowChannel 2412MHz   |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2390.00            | 54.30                      | 30.22                     | 4.85                  | 23.98                       | 52.91                         | 74.00                 | -21.09         | PK                   | PASS   |
|                                                                                                                  | H                    | 2390.00            | 44.64                      | 30.22                     | 4.85                  | 23.98                       | 43.25                         | 54.00                 | -10.75         | AV                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 54.18                      | 30.22                     | 4.85                  | 23.98                       | 52.79                         | 74.00                 | -21.21         | PK                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 44.05                      | 30.22                     | 4.85                  | 23.98                       | 42.66                         | 54.00                 | -11.34         | AV                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 54.36                      | 30.22                     | 4.85                  | 23.98                       | 52.97                         | 74.00                 | -21.03         | PK                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 44.57                      | 30.22                     | 4.85                  | 23.98                       | 43.18                         | 54.00                 | -10.82         | AV                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 53.62                      | 30.22                     | 4.85                  | 23.98                       | 52.23                         | 74.00                 | -21.77         | PK                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 44.39                      | 30.22                     | 4.85                  | 23.98                       | 43.00                         | 54.00                 | -11.00         | AV                   | PASS   |
|                                                                                                                  | HighChannel 2462MHz  |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2483.50            | 54.83                      | 30.22                     | 4.85                  | 23.98                       | 53.44                         | 74.00                 | -20.56         | PK                   | PASS   |
|                                                                                                                  | H                    | 2483.50            | 44.39                      | 30.22                     | 4.85                  | 23.98                       | 43.00                         | 54.00                 | -11.00         | AV                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 53.68                      | 30.22                     | 4.85                  | 23.98                       | 52.29                         | 74.00                 | -21.71         | PK                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 44.69                      | 30.22                     | 4.85                  | 23.98                       | 43.30                         | 54.00                 | -10.70         | AV                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 54.97                      | 30.22                     | 4.85                  | 23.98                       | 53.58                         | 74.00                 | -20.42         | PK                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 44.52                      | 30.22                     | 4.85                  | 23.98                       | 43.13                         | 54.00                 | -10.87         | AV                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 54.22                      | 30.22                     | 4.85                  | 23.98                       | 52.83                         | 74.00                 | -21.17         | PK                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 44.80                      | 30.22                     | 4.85                  | 23.98                       | 43.41                         | 54.00                 | -10.59         | AV                   | PASS   |
| SISO<br>ANT B<br>802.11b                                                                                         | LowChannel 2412MHz   |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2390.00            | 53.55                      | 30.22                     | 4.85                  | 23.98                       | 52.16                         | 74.00                 | -21.84         | PK                   | PASS   |
|                                                                                                                  | H                    | 2390.00            | 44.55                      | 30.22                     | 4.85                  | 23.98                       | 43.16                         | 54.00                 | -10.84         | AV                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 54.08                      | 30.22                     | 4.85                  | 23.98                       | 52.69                         | 74.00                 | -21.31         | PK                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 44.30                      | 30.22                     | 4.85                  | 23.98                       | 42.91                         | 54.00                 | -11.09         | AV                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 54.12                      | 30.22                     | 4.85                  | 23.98                       | 52.73                         | 74.00                 | -21.27         | PK                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 44.58                      | 30.22                     | 4.85                  | 23.98                       | 43.19                         | 54.00                 | -10.81         | AV                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 54.52                      | 30.22                     | 4.85                  | 23.98                       | 53.13                         | 74.00                 | -20.87         | PK                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 44.50                      | 30.22                     | 4.85                  | 23.98                       | 43.11                         | 54.00                 | -10.89         | AV                   | PASS   |
|                                                                                                                  | High Channel 2462MHz |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2483.50            | 54.41                      | 30.22                     | 4.85                  | 23.98                       | 53.02                         | 74.00                 | -20.98         | PK                   | PASS   |
|                                                                                                                  | H                    | 2483.50            | 44.45                      | 30.22                     | 4.85                  | 23.98                       | 43.06                         | 54.00                 | -10.94         | AV                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 53.82                      | 30.22                     | 4.85                  | 23.98                       | 52.43                         | 74.00                 | -21.57         | PK                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 44.16                      | 30.22                     | 4.85                  | 23.98                       | 42.77                         | 54.00                 | -11.23         | AV                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 53.89                      | 30.22                     | 4.85                  | 23.98                       | 52.50                         | 74.00                 | -21.50         | PK                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 44.44                      | 30.22                     | 4.85                  | 23.98                       | 43.05                         | 54.00                 | -10.95         | AV                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 54.56                      | 30.22                     | 4.85                  | 23.98                       | 53.17                         | 74.00                 | -20.83         | PK                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 44.60                      | 30.22                     | 4.85                  | 23.98                       | 43.21                         | 54.00                 | -10.79         | AV                   | PASS   |
| <b>Remark:</b>                                                                                                   |                      |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
| 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit. |                      |                    |                            |                           |                       |                             |                               |                       |                |                      |        |



|                                                                                                                  | Polar<br>(H/V)       | Frequency<br>(MHz) | Meter<br>Reading<br>(dBuV) | Pre-<br>amplifier<br>(dB) | Cable<br>Loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Emission<br>level<br>(dBuV/m) | Limit<br>(dBu<br>V/m) | Margin<br>(dB) | Dete<br>ctor<br>Type | Result |
|------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------------|---------------------------|-----------------------|-----------------------------|-------------------------------|-----------------------|----------------|----------------------|--------|
| SISO<br>ANT A<br>802.11g                                                                                         | LowChannel 2412MHz   |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2390.00            | 54.02                      | 30.22                     | 4.85                  | 23.98                       | 52.63                         | 74.00                 | -21.37         | PK                   | PASS   |
|                                                                                                                  | H                    | 2390.00            | 44.93                      | 30.22                     | 4.85                  | 23.98                       | 43.54                         | 54.00                 | -10.46         | AV                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 54.64                      | 30.22                     | 4.85                  | 23.98                       | 53.25                         | 74.00                 | -20.75         | PK                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 44.02                      | 30.22                     | 4.85                  | 23.98                       | 42.63                         | 54.00                 | -11.37         | AV                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 53.32                      | 30.22                     | 4.85                  | 23.98                       | 51.93                         | 74.00                 | -22.07         | PK                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 44.18                      | 30.22                     | 4.85                  | 23.98                       | 42.79                         | 54.00                 | -11.21         | AV                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 54.00                      | 30.22                     | 4.85                  | 23.98                       | 52.61                         | 74.00                 | -21.39         | PK                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 44.93                      | 30.22                     | 4.85                  | 23.98                       | 43.54                         | 54.00                 | -10.46         | AV                   | PASS   |
|                                                                                                                  | HighChannel 2462MHz  |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2483.50            | 54.34                      | 30.22                     | 4.85                  | 23.98                       | 52.95                         | 74.00                 | -21.05         | PK                   | PASS   |
|                                                                                                                  | H                    | 2483.50            | 44.66                      | 30.22                     | 4.85                  | 23.98                       | 43.27                         | 54.00                 | -10.73         | AV                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 53.60                      | 30.22                     | 4.85                  | 23.98                       | 52.21                         | 74.00                 | -21.79         | PK                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 44.34                      | 30.22                     | 4.85                  | 23.98                       | 42.95                         | 54.00                 | -11.05         | AV                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 53.07                      | 30.22                     | 4.85                  | 23.98                       | 51.68                         | 74.00                 | -22.32         | PK                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 44.62                      | 30.22                     | 4.85                  | 23.98                       | 43.23                         | 54.00                 | -10.77         | AV                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 53.56                      | 30.22                     | 4.85                  | 23.98                       | 52.17                         | 74.00                 | -21.83         | PK                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 44.50                      | 30.22                     | 4.85                  | 23.98                       | 43.11                         | 54.00                 | -10.89         | AV                   | PASS   |
| SISO<br>ANT B<br>802.11g                                                                                         | LowChannel 2412MHz   |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2390.00            | 53.65                      | 30.22                     | 4.85                  | 23.98                       | 52.26                         | 74.00                 | -21.74         | PK                   | PASS   |
|                                                                                                                  | H                    | 2390.00            | 44.77                      | 30.22                     | 4.85                  | 23.98                       | 43.38                         | 54.00                 | -10.62         | AV                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 54.72                      | 30.22                     | 4.85                  | 23.98                       | 53.33                         | 74.00                 | -20.67         | PK                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 44.00                      | 30.22                     | 4.85                  | 23.98                       | 42.61                         | 54.00                 | -11.39         | AV                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 54.87                      | 30.22                     | 4.85                  | 23.98                       | 53.48                         | 74.00                 | -20.52         | PK                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 44.46                      | 30.22                     | 4.85                  | 23.98                       | 43.07                         | 54.00                 | -10.93         | AV                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 54.28                      | 30.22                     | 4.85                  | 23.98                       | 52.89                         | 74.00                 | -21.11         | PK                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 44.26                      | 30.22                     | 4.85                  | 23.98                       | 42.87                         | 54.00                 | -11.13         | AV                   | PASS   |
|                                                                                                                  | High Channel 2462MHz |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2483.50            | 53.03                      | 30.22                     | 4.85                  | 23.98                       | 51.64                         | 74.00                 | -22.36         | PK                   | PASS   |
|                                                                                                                  | H                    | 2483.50            | 44.27                      | 30.22                     | 4.85                  | 23.98                       | 42.88                         | 54.00                 | -11.12         | AV                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 54.10                      | 30.22                     | 4.85                  | 23.98                       | 52.71                         | 74.00                 | -21.29         | PK                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 44.50                      | 30.22                     | 4.85                  | 23.98                       | 43.11                         | 54.00                 | -10.89         | AV                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 53.27                      | 30.22                     | 4.85                  | 23.98                       | 51.88                         | 74.00                 | -22.12         | PK                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 44.18                      | 30.22                     | 4.85                  | 23.98                       | 42.79                         | 54.00                 | -11.21         | AV                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 54.99                      | 30.22                     | 4.85                  | 23.98                       | 53.60                         | 74.00                 | -20.40         | PK                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 44.31                      | 30.22                     | 4.85                  | 23.98                       | 42.92                         | 54.00                 | -11.08         | AV                   | PASS   |
| <b>Remark:</b>                                                                                                   |                      |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
| 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit. |                      |                    |                            |                           |                       |                             |                               |                       |                |                      |        |



|                                                                                                                  | Polar<br>(H/V)       | Frequency<br>(MHz) | Meter<br>Reading<br>(dBuV) | Pre-<br>amplifier<br>(dB) | Cable<br>Loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Emission<br>level<br>(dBuV/m) | Limit<br>(dBu<br>V/m) | Margin<br>(dB) | Dete<br>ctor<br>Type | Result |
|------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------------|---------------------------|-----------------------|-----------------------------|-------------------------------|-----------------------|----------------|----------------------|--------|
| SISO<br>ANT A<br>802.11n20                                                                                       | LowChannel 2412MHz   |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2390.00            | 53.56                      | 30.22                     | 4.85                  | 23.98                       | 52.17                         | 74.00                 | -21.83         | PK                   | PASS   |
|                                                                                                                  | H                    | 2390.00            | 44.88                      | 30.22                     | 4.85                  | 23.98                       | 43.49                         | 54.00                 | -10.51         | AV                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 54.32                      | 30.22                     | 4.85                  | 23.98                       | 52.93                         | 74.00                 | -21.07         | PK                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 44.80                      | 30.22                     | 4.85                  | 23.98                       | 43.41                         | 54.00                 | -10.59         | AV                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 53.46                      | 30.22                     | 4.85                  | 23.98                       | 52.07                         | 74.00                 | -21.93         | PK                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 44.20                      | 30.22                     | 4.85                  | 23.98                       | 42.81                         | 54.00                 | -11.19         | AV                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 54.15                      | 30.22                     | 4.85                  | 23.98                       | 52.76                         | 74.00                 | -21.24         | PK                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 44.35                      | 30.22                     | 4.85                  | 23.98                       | 42.96                         | 54.00                 | -11.04         | AV                   | PASS   |
|                                                                                                                  | HighChannel 2462MHz  |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2483.50            | 53.46                      | 30.22                     | 4.85                  | 23.98                       | 52.07                         | 74.00                 | -21.93         | PK                   | PASS   |
|                                                                                                                  | H                    | 2483.50            | 44.63                      | 30.22                     | 4.85                  | 23.98                       | 43.24                         | 54.00                 | -10.76         | AV                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 53.58                      | 30.22                     | 4.85                  | 23.98                       | 52.19                         | 74.00                 | -21.81         | PK                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 44.20                      | 30.22                     | 4.85                  | 23.98                       | 42.81                         | 54.00                 | -11.19         | AV                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 54.42                      | 30.22                     | 4.85                  | 23.98                       | 53.03                         | 74.00                 | -20.97         | PK                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 44.02                      | 30.22                     | 4.85                  | 23.98                       | 42.63                         | 54.00                 | -11.37         | AV                   | PASS   |
| SISO<br>ANT A<br>802.11n40                                                                                       | LowChannel 2422MHz   |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2390.00            | 54.79                      | 30.22                     | 4.85                  | 23.98                       | 53.40                         | 74.00                 | -20.60         | PK                   | PASS   |
|                                                                                                                  | H                    | 2390.00            | 44.04                      | 30.22                     | 4.85                  | 23.98                       | 42.65                         | 54.00                 | -11.35         | AV                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 54.55                      | 30.22                     | 4.85                  | 23.98                       | 53.16                         | 74.00                 | -20.84         | PK                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 44.28                      | 30.22                     | 4.85                  | 23.98                       | 42.89                         | 54.00                 | -11.11         | AV                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 54.04                      | 30.22                     | 4.85                  | 23.98                       | 52.65                         | 74.00                 | -21.35         | PK                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 44.33                      | 30.22                     | 4.85                  | 23.98                       | 42.94                         | 54.00                 | -11.06         | AV                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 54.12                      | 30.22                     | 4.85                  | 23.98                       | 52.73                         | 74.00                 | -21.27         | PK                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 44.24                      | 30.22                     | 4.85                  | 23.98                       | 42.85                         | 54.00                 | -11.15         | AV                   | PASS   |
|                                                                                                                  | High Channel 2452MHz |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2483.50            | 54.36                      | 30.22                     | 4.85                  | 23.98                       | 52.97                         | 74.00                 | -21.03         | PK                   | PASS   |
|                                                                                                                  | H                    | 2483.50            | 44.65                      | 30.22                     | 4.85                  | 23.98                       | 43.26                         | 54.00                 | -10.74         | AV                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 53.52                      | 30.22                     | 4.85                  | 23.98                       | 52.13                         | 74.00                 | -21.87         | PK                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 44.89                      | 30.22                     | 4.85                  | 23.98                       | 43.50                         | 54.00                 | -10.50         | AV                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 54.71                      | 30.22                     | 4.85                  | 23.98                       | 53.32                         | 74.00                 | -20.68         | PK                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 44.20                      | 30.22                     | 4.85                  | 23.98                       | 42.81                         | 54.00                 | -11.19         | AV                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 54.84                      | 30.22                     | 4.85                  | 23.98                       | 53.45                         | 74.00                 | -20.55         | PK                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 44.69                      | 30.22                     | 4.85                  | 23.98                       | 43.30                         | 54.00                 | -10.70         | AV                   | PASS   |
| <b>Remark:</b>                                                                                                   |                      |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
| 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit. |                      |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
| 2. Both ANT A and ANT B passed the test, the test data shows only the worst case SISO ANT A.                     |                      |                    |                            |                           |                       |                             |                               |                       |                |                      |        |



|                                                                                                                  | Polar<br>(H/V)       | Frequency<br>(MHz) | Meter<br>Reading<br>(dBuV) | Pre-<br>amplifier<br>(dB) | Cable<br>Loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Emission<br>level<br>(dBuV/m) | Limit<br>(dBu<br>V/m) | Margin<br>(dB) | Dete<br>ctor<br>Type | Result |
|------------------------------------------------------------------------------------------------------------------|----------------------|--------------------|----------------------------|---------------------------|-----------------------|-----------------------------|-------------------------------|-----------------------|----------------|----------------------|--------|
| MIMO<br>ANT A+B<br>802.11n20                                                                                     | LowChannel 2412MHz   |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2390.00            | 54.18                      | 30.22                     | 4.85                  | 23.98                       | 52.79                         | 74.00                 | -21.21         | PK                   | PASS   |
|                                                                                                                  | H                    | 2390.00            | 44.71                      | 30.22                     | 4.85                  | 23.98                       | 43.32                         | 54.00                 | -10.68         | AV                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 54.31                      | 30.22                     | 4.85                  | 23.98                       | 52.92                         | 74.00                 | -21.08         | PK                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 44.59                      | 30.22                     | 4.85                  | 23.98                       | 43.20                         | 54.00                 | -10.80         | AV                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 54.38                      | 30.22                     | 4.85                  | 23.98                       | 52.99                         | 74.00                 | -21.01         | PK                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 44.10                      | 30.22                     | 4.85                  | 23.98                       | 42.71                         | 54.00                 | -11.29         | AV                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 54.88                      | 30.22                     | 4.85                  | 23.98                       | 53.49                         | 74.00                 | -20.51         | PK                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 44.18                      | 30.22                     | 4.85                  | 23.98                       | 42.79                         | 54.00                 | -11.21         | AV                   | PASS   |
|                                                                                                                  | HighChannel 2462MHz  |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2483.50            | 54.34                      | 30.22                     | 4.85                  | 23.98                       | 52.95                         | 74.00                 | -21.05         | PK                   | PASS   |
|                                                                                                                  | H                    | 2483.50            | 44.97                      | 30.22                     | 4.85                  | 23.98                       | 43.58                         | 54.00                 | -10.42         | AV                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 54.13                      | 30.22                     | 4.85                  | 23.98                       | 52.74                         | 74.00                 | -21.26         | PK                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 44.62                      | 30.22                     | 4.85                  | 23.98                       | 43.23                         | 54.00                 | -10.77         | AV                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 53.76                      | 30.22                     | 4.85                  | 23.98                       | 52.37                         | 74.00                 | -21.63         | PK                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 44.27                      | 30.22                     | 4.85                  | 23.98                       | 42.88                         | 54.00                 | -11.12         | AV                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 54.57                      | 30.22                     | 4.85                  | 23.98                       | 53.18                         | 74.00                 | -20.82         | PK                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 44.90                      | 30.22                     | 4.85                  | 23.98                       | 43.51                         | 54.00                 | -10.49         | AV                   | PASS   |
| MIMO<br>ANT A+B<br>802.11n40                                                                                     | LowChannel 2422MHz   |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2390.00            | 53.54                      | 30.22                     | 4.85                  | 23.98                       | 52.15                         | 74.00                 | -21.85         | PK                   | PASS   |
|                                                                                                                  | H                    | 2390.00            | 44.23                      | 30.22                     | 4.85                  | 23.98                       | 42.84                         | 54.00                 | -11.16         | AV                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 53.65                      | 30.22                     | 4.85                  | 23.98                       | 52.26                         | 74.00                 | -21.74         | PK                   | PASS   |
|                                                                                                                  | H                    | 2400.00            | 44.47                      | 30.22                     | 4.85                  | 23.98                       | 43.08                         | 54.00                 | -10.92         | AV                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 53.62                      | 30.22                     | 4.85                  | 23.98                       | 52.23                         | 74.00                 | -21.77         | PK                   | PASS   |
|                                                                                                                  | V                    | 2390.00            | 44.47                      | 30.22                     | 4.85                  | 23.98                       | 43.08                         | 54.00                 | -10.92         | AV                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 54.55                      | 30.22                     | 4.85                  | 23.98                       | 53.16                         | 74.00                 | -20.84         | PK                   | PASS   |
|                                                                                                                  | V                    | 2400.00            | 44.86                      | 30.22                     | 4.85                  | 23.98                       | 43.47                         | 54.00                 | -10.53         | AV                   | PASS   |
|                                                                                                                  | High Channel 2452MHz |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
|                                                                                                                  | H                    | 2483.50            | 54.03                      | 30.22                     | 4.85                  | 23.98                       | 52.64                         | 74.00                 | -21.36         | PK                   | PASS   |
|                                                                                                                  | H                    | 2483.50            | 44.78                      | 30.22                     | 4.85                  | 23.98                       | 43.39                         | 54.00                 | -10.61         | AV                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 54.02                      | 30.22                     | 4.85                  | 23.98                       | 52.63                         | 74.00                 | -21.37         | PK                   | PASS   |
|                                                                                                                  | H                    | 2500.00            | 44.66                      | 30.22                     | 4.85                  | 23.98                       | 43.27                         | 54.00                 | -10.73         | AV                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 54.42                      | 30.22                     | 4.85                  | 23.98                       | 53.03                         | 74.00                 | -20.97         | PK                   | PASS   |
|                                                                                                                  | V                    | 2483.50            | 44.78                      | 30.22                     | 4.85                  | 23.98                       | 43.39                         | 54.00                 | -10.61         | AV                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 53.27                      | 30.22                     | 4.85                  | 23.98                       | 51.88                         | 74.00                 | -22.12         | PK                   | PASS   |
|                                                                                                                  | V                    | 2500.00            | 44.60                      | 30.22                     | 4.85                  | 23.98                       | 43.21                         | 54.00                 | -10.79         | AV                   | PASS   |
| <b>Remark:</b>                                                                                                   |                      |                    |                            |                           |                       |                             |                               |                       |                |                      |        |
| 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit. |                      |                    |                            |                           |                       |                             |                               |                       |                |                      |        |



## 6. POWER SPECTRAL DENSITY TEST

|                   |                                                           |
|-------------------|-----------------------------------------------------------|
| Test Requirement: | FCC Part15 C Section 15.247 (e)                           |
| Test Method:      | ANSI C63.10:2013 and KDB558074 D01DTS Meas Guidancev05r02 |

### 6.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C |                        |           |                       |        |
|---------------------------------|------------------------|-----------|-----------------------|--------|
| Section                         | Test Item              | Limit     | Frequency Range (MHz) | Result |
| 15.247                          | Power Spectral Density | 8dBm/3kHz | 2400-2483.5           | PASS   |

### 6.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to:  $3\text{ kHz} \leq \text{RBW} \leq 100\text{ kHz}$ .
4. Set the VBW  $\geq 3 \times \text{RBW}$ .
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

### 6.3 DEVIATION FROM STANDARD

No deviation.

### 6.4 TEST SETUP



### 6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.



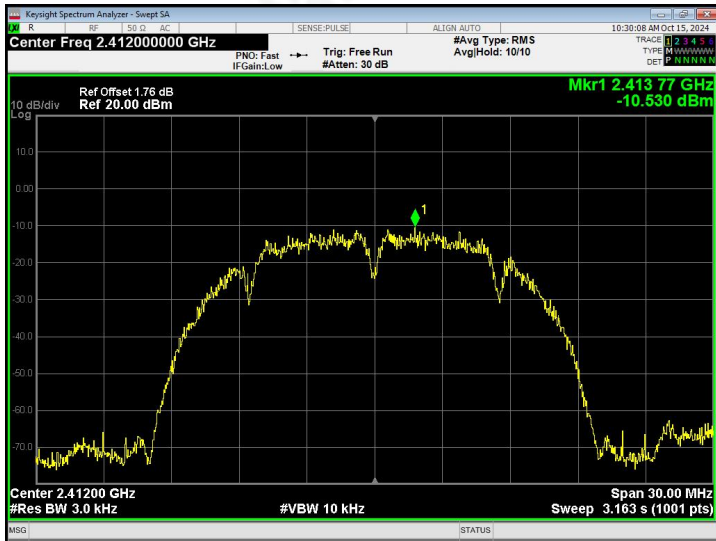
## 6.6 TEST RESULT

|               |        |                     |        |
|---------------|--------|---------------------|--------|
| Temperature : | 26℃    | Relative Humidity : | 54%    |
| Pressure :    | 101kPa | Test Voltage :      | DC 12V |

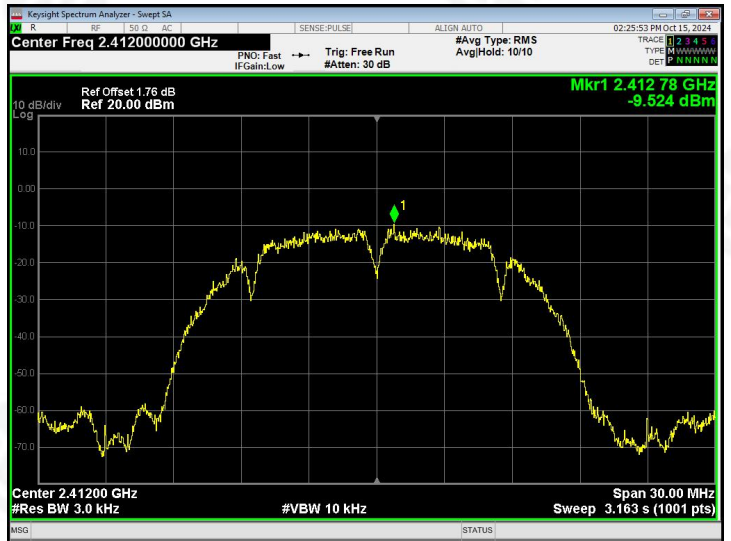
| Test Mode | Antenna    | Frequency<br>(MHz) | Power Spectral<br>Density<br>(dBm/3kHz) | Limit<br>(dBm/3kHz) | Result |
|-----------|------------|--------------------|-----------------------------------------|---------------------|--------|
| 802.11b   | SISO ANT A | 2412               | -10.530                                 | 8                   | PASS   |
|           |            | 2437               | -10.401                                 |                     |        |
|           |            | 2462               | -10.255                                 |                     |        |
|           | SISO ANT B | 2412               | -9.524                                  | 8                   | PASS   |
|           |            | 2437               | -10.797                                 |                     |        |
|           |            | 2462               | -10.355                                 |                     |        |



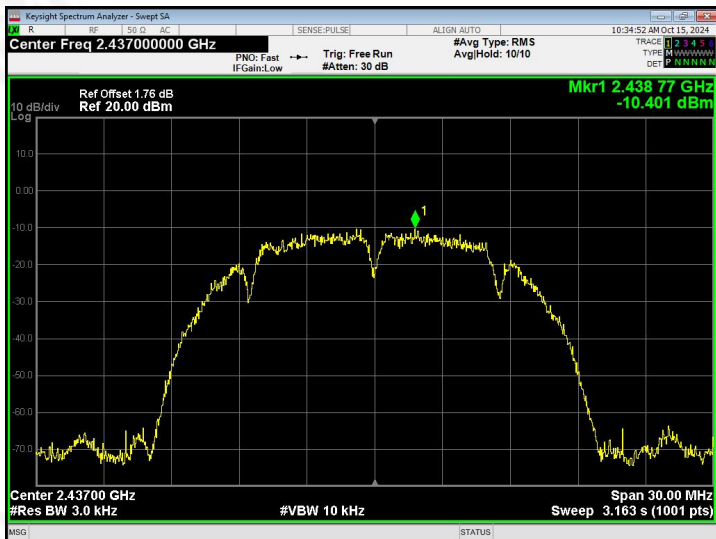
SISO ANT A - 802.11b  
CH01



SISO ANT B - 802.11b  
CH01



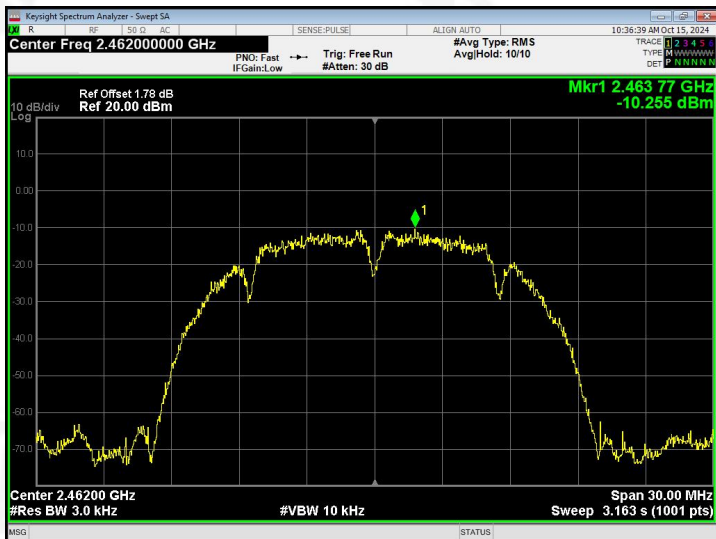
CH06



CH06



CH11



CH11



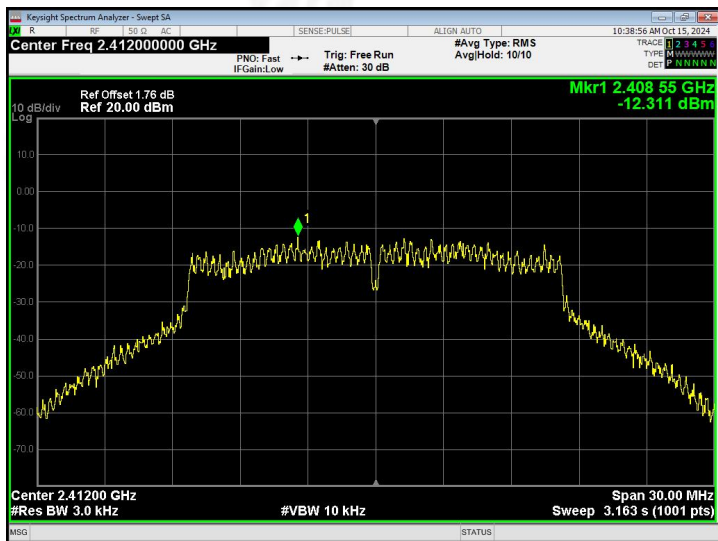


|               |        |                     |        |
|---------------|--------|---------------------|--------|
| Temperature : | 26℃    | Relative Humidity : | 54%    |
| Pressure :    | 101kPa | Test Voltage :      | DC 12V |

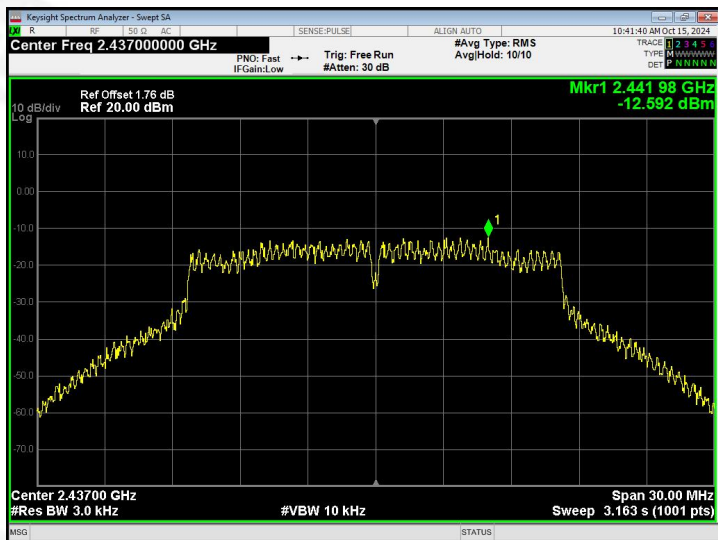
| Test Mode | Antenna    | Frequency<br>(MHz) | Power Spectral<br>Density<br>(dBm/3kHz) | Limit<br>(dBm/3kHz) | Result |
|-----------|------------|--------------------|-----------------------------------------|---------------------|--------|
| 802.11g   | SISO ANT A | 2412               | -12.311                                 | 8                   | PASS   |
|           |            | 2437               | -12.592                                 |                     |        |
|           |            | 2462               | -11.499                                 |                     |        |
|           | SISO ANT B | 2412               | -9.647                                  | 8                   | PASS   |
|           |            | 2437               | -11.884                                 |                     |        |
|           |            | 2462               | -11.662                                 |                     |        |



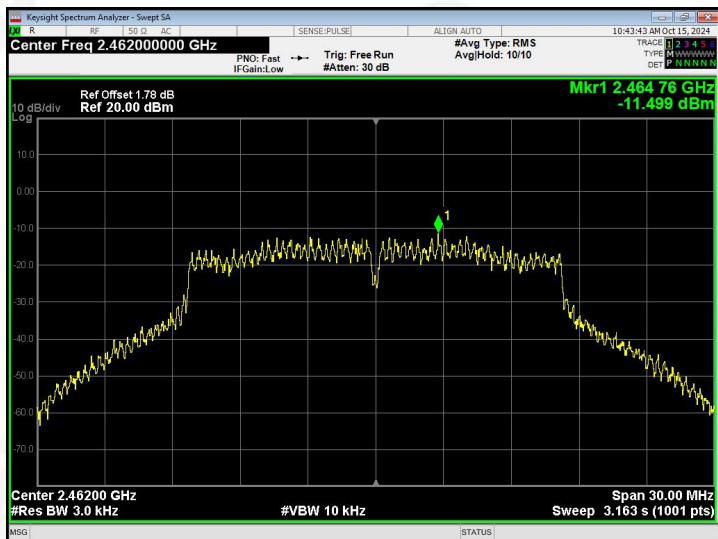
SISO ANT A - 802.11g  
CH01



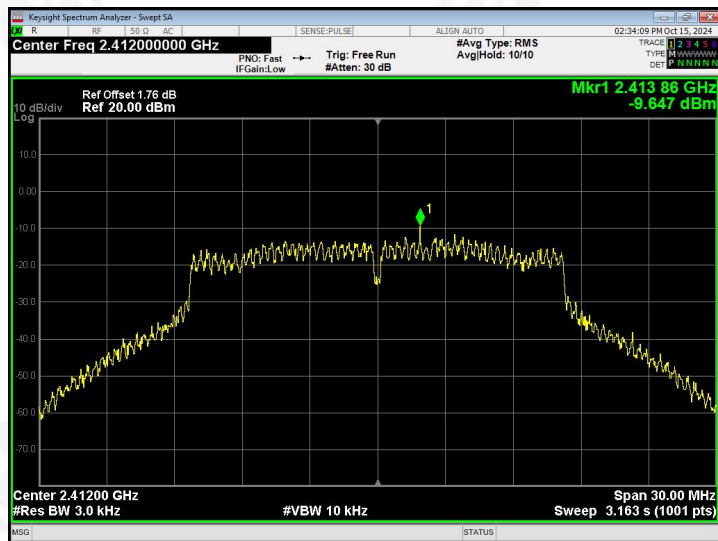
CH06



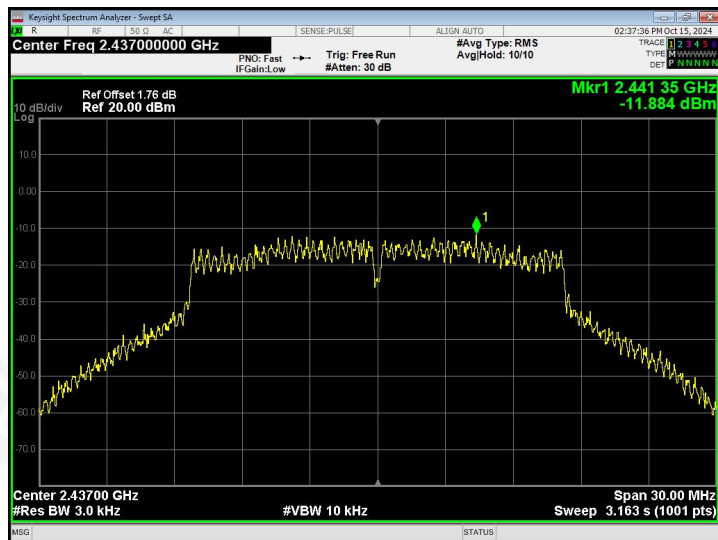
CH11



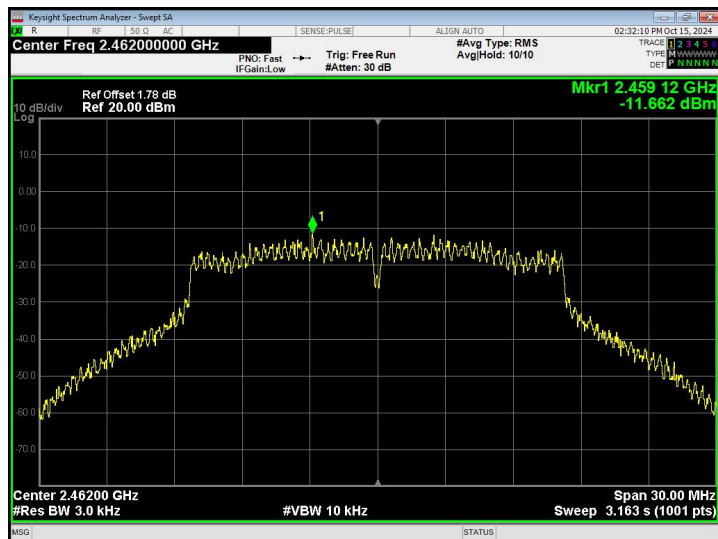
SISO ANT B - 802.11g  
CH01



CH06



CH11



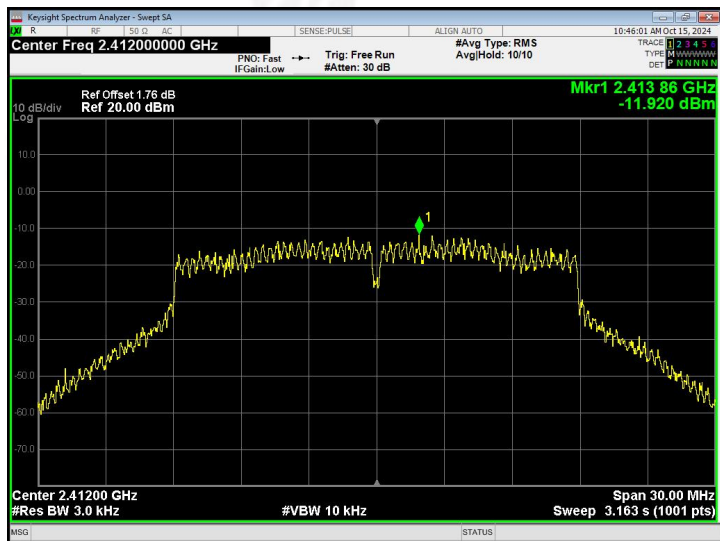


|               |        |                     |        |
|---------------|--------|---------------------|--------|
| Temperature : | 26℃    | Relative Humidity : | 54%    |
| Pressure :    | 101kPa | Test Voltage :      | DC 12V |

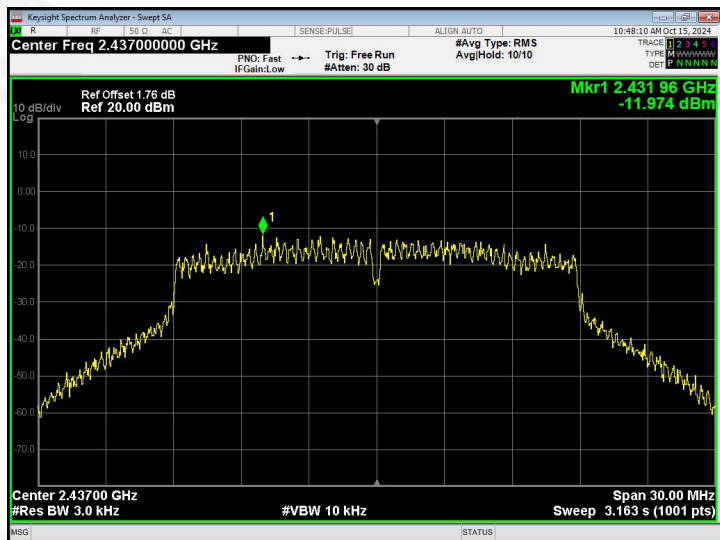
| Test Mode | Antenna      | Frequency<br>(MHz) | Power Spectral<br>Density<br>(dBm/3kHz) | Limit<br>(dBm/3kHz) | Result |
|-----------|--------------|--------------------|-----------------------------------------|---------------------|--------|
| 802.11n20 | SISO ANT A   | 2412               | -11.920                                 | 8                   | PASS   |
|           |              | 2437               | -11.974                                 |                     |        |
|           |              | 2462               | -11.742                                 |                     |        |
|           | SISO ANT B   | 2412               | -10.816                                 | 8                   | PASS   |
|           |              | 2437               | -10.572                                 |                     |        |
|           |              | 2462               | -12.018                                 |                     |        |
|           | MIMO ANT A+B | 2412               | -8.323                                  | 8                   | PASS   |
|           |              | 2437               | -8.206                                  |                     |        |
|           |              | 2462               | -8.868                                  |                     |        |



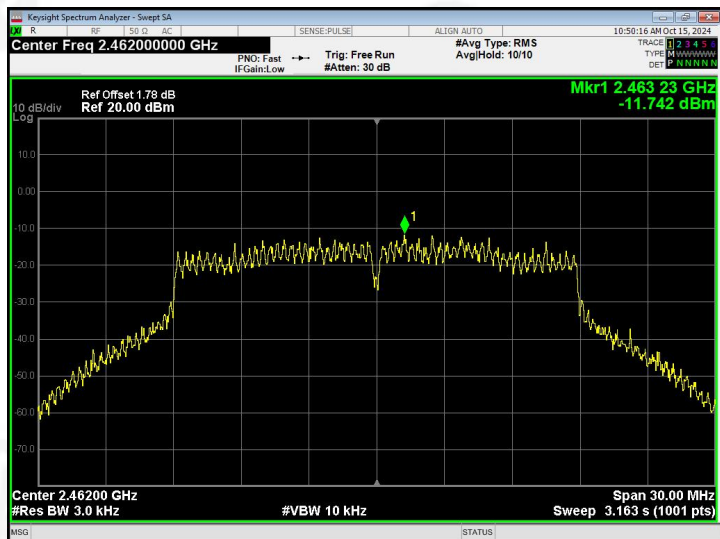
SISO ANT A - 802.11n20  
CH01



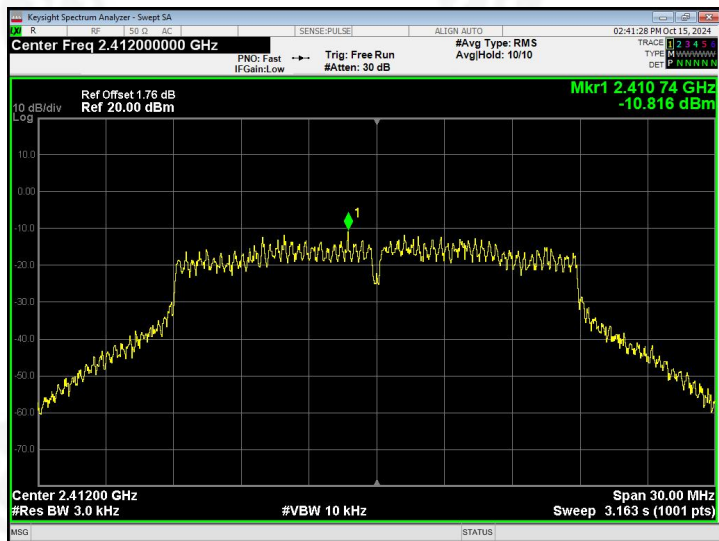
CH06



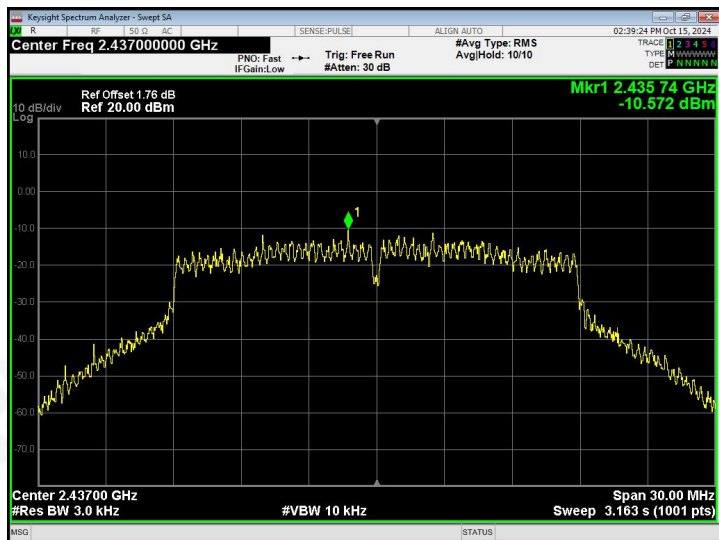
CH11



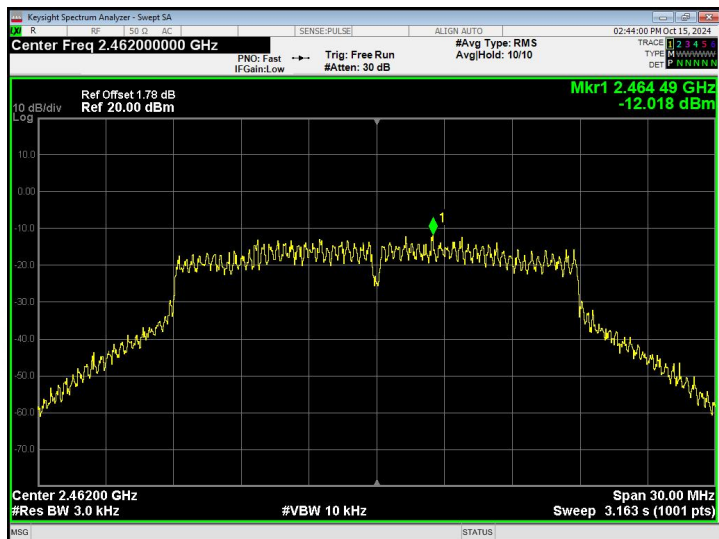
SISO ANT B - 802.11n20  
CH01



CH06



CH11



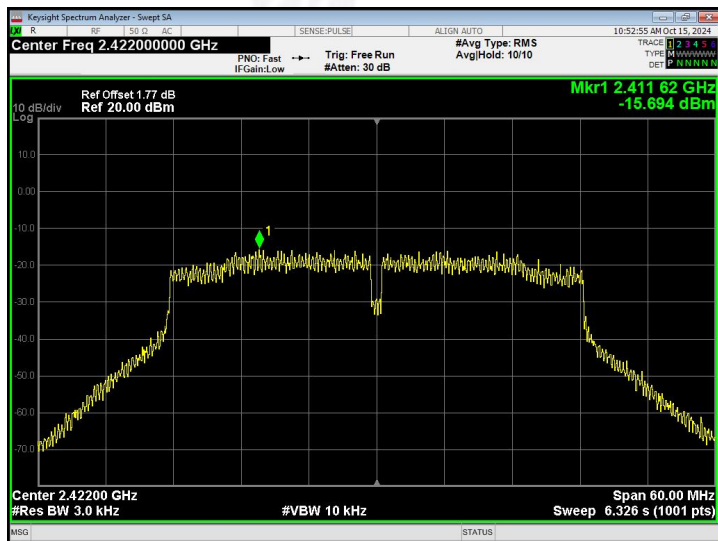


|               |        |                     |        |
|---------------|--------|---------------------|--------|
| Temperature : | 26℃    | Relative Humidity : | 54%    |
| Pressure :    | 101kPa | Test Voltage :      | DC 12V |

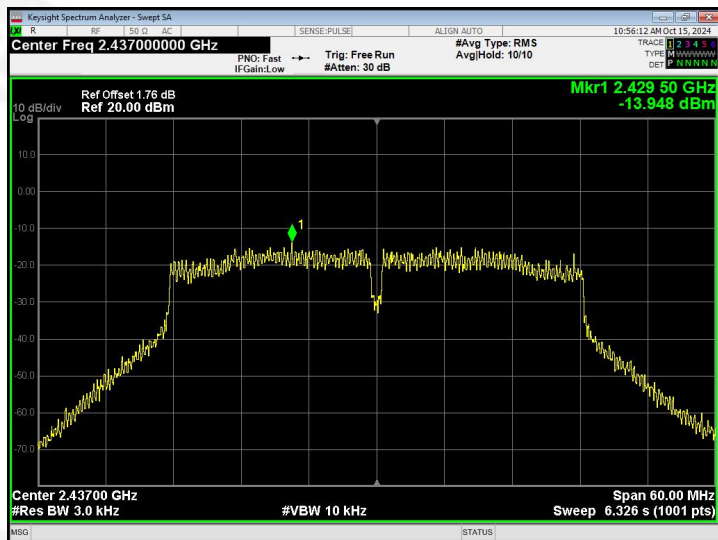
| Test Mode | Antenna      | Frequency<br>(MHz) | Power Spectral<br>Density<br>(dBm/3kHz) | Limit<br>(dBm/3kHz) | Result |
|-----------|--------------|--------------------|-----------------------------------------|---------------------|--------|
| 802.11n40 | SISO ANT A   | 2422               | -15.694                                 | 8                   | PASS   |
|           |              | 2437               | -13.948                                 |                     |        |
|           |              | 2452               | -14.799                                 |                     |        |
|           | SISO ANT B   | 2422               | -15.387                                 | 8                   | PASS   |
|           |              | 2437               | -13.342                                 |                     |        |
|           |              | 2452               | -14.352                                 |                     |        |
|           | MIMO ANT A+B | 2422               | -12.527                                 | 8                   | PASS   |
|           |              | 2437               | -10.624                                 |                     |        |
|           |              | 2452               | -11.559                                 |                     |        |



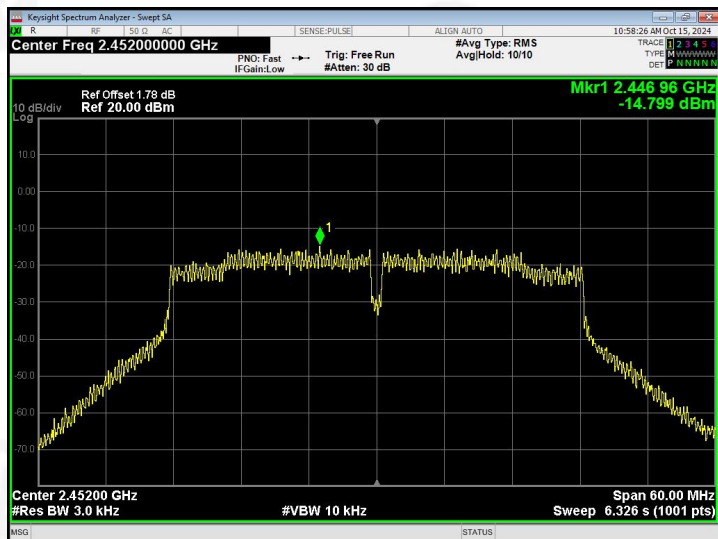
SISO ANT A - 802.11n40  
CH03



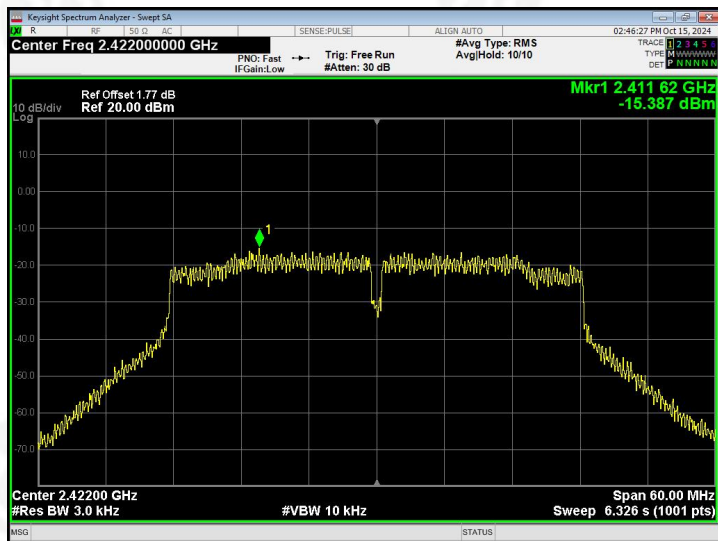
CH06



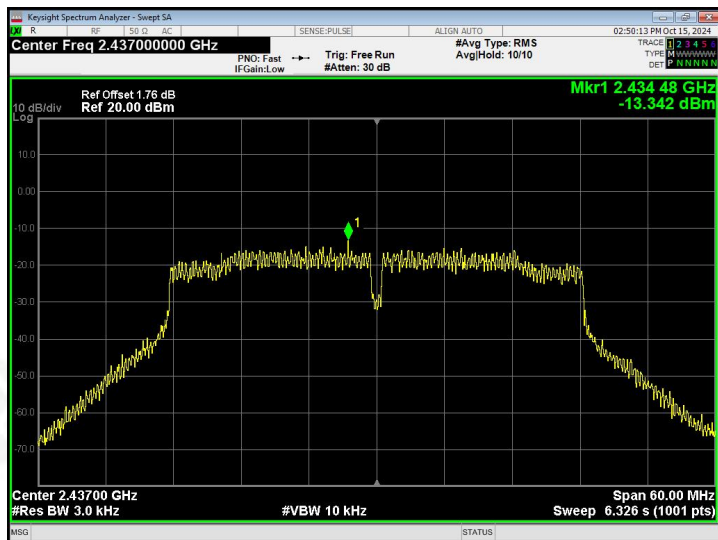
CH09



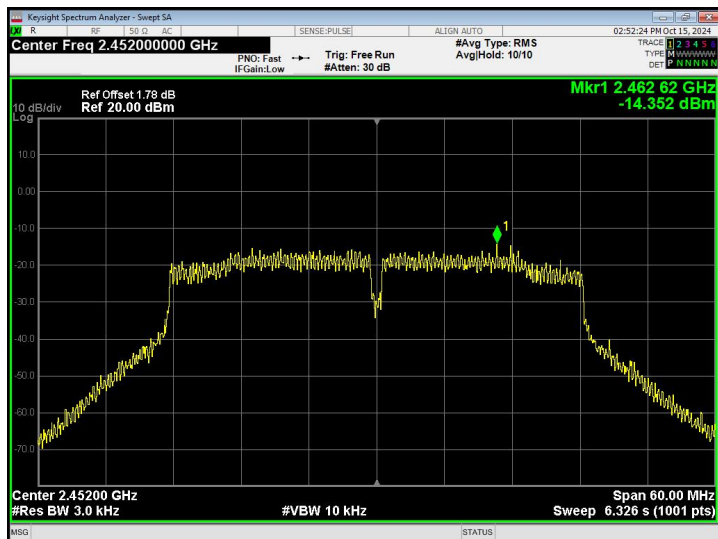
SISO ANT A - 802.11n40  
CH03



CH06



CH09





## 7. 6DB BANDWIDTH

|                   |                                                           |
|-------------------|-----------------------------------------------------------|
| Test Requirement: | FCC Part15 C Section 15.247 (a)(2)                        |
| Test Method:      | ANSI C63.10:2013 and KDB558074 D01DTS Meas Guidancev05r02 |

### 7.1 APPLIED PROCEDURES / LIMIT

| FCC Part15 (15.247) , Subpart C |           |                                         |                       |        |
|---------------------------------|-----------|-----------------------------------------|-----------------------|--------|
| Section                         | Test Item | Limit                                   | Frequency Range (MHz) | Result |
| 15.247(a)(2)                    | Bandwidth | $\geq 500\text{KHz}$<br>(6dB bandwidth) | 2400-2483.5           | PASS   |

### 7.2 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW)  $\geq 3 \times \text{RBW}$ .
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 7.3 DEVIATION FROM STANDARD

No deviation.

### 7.4 TEST SETUP



### 7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



## 7.6 TEST RESULT

|               |        |                     |        |
|---------------|--------|---------------------|--------|
| Temperature : | 26℃    | Relative Humidity : | 54%    |
| Pressure :    | 101kPa | Test Voltage :      | DC 12V |

| Test Mode | Antenna    | Frequency<br>(MHz) | 6dB Bandwidth<br>(MHz) | Limit<br>(kHz) | Result |
|-----------|------------|--------------------|------------------------|----------------|--------|
| 802.11b   | SISO ANT A | 2412               | 10.05                  | >500           | PASS   |
|           |            | 2437               | 10.07                  |                |        |
|           |            | 2462               | 10.04                  |                |        |
|           | SISO ANT B | 2412               | 10.10                  | >500           | PASS   |
|           |            | 2437               | 10.12                  |                |        |
|           |            | 2462               | 10.12                  |                |        |
| 802.11g   | SISO ANT A | 2412               | 15.10                  | >500           | PASS   |
|           |            | 2437               | 15.09                  |                |        |
|           |            | 2462               | 15.08                  |                |        |
|           | SISO ANT B | 2412               | 15.06                  | >500           | PASS   |
|           |            | 2437               | 15.00                  |                |        |
|           |            | 2462               | 15.09                  |                |        |

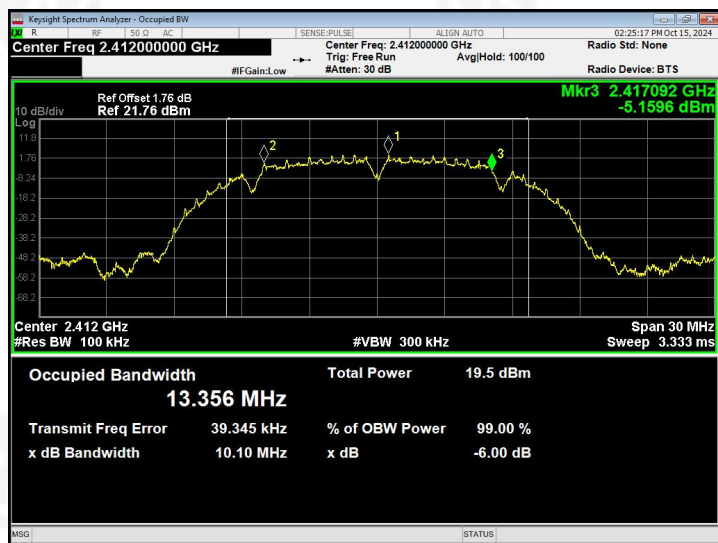
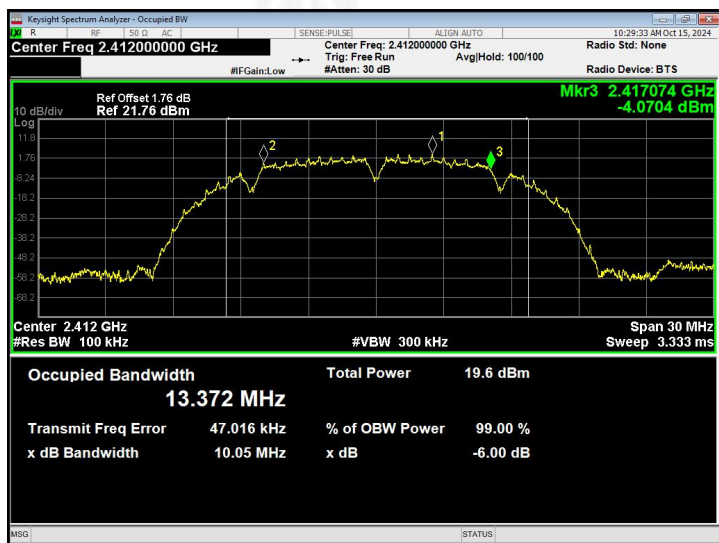


6dB Bandwidth - 802.11b

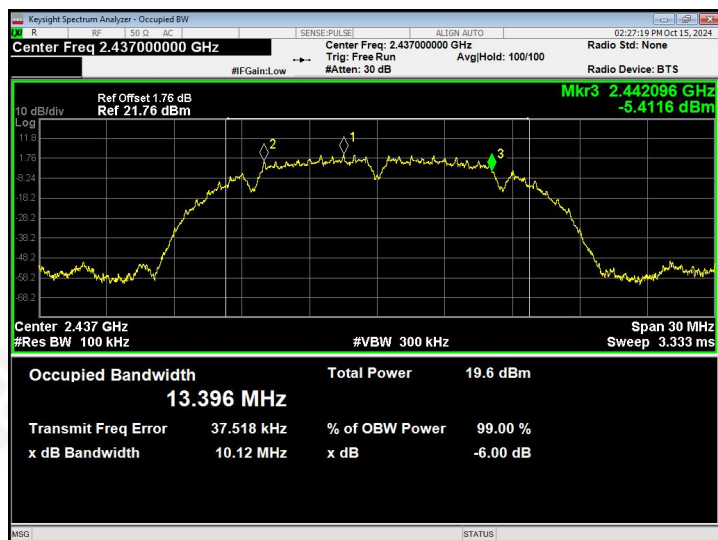
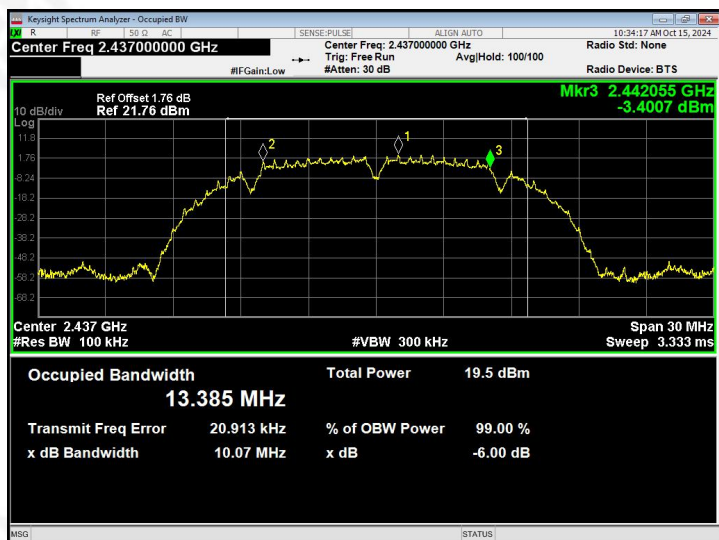
SISO ANT A

SISO ANT B

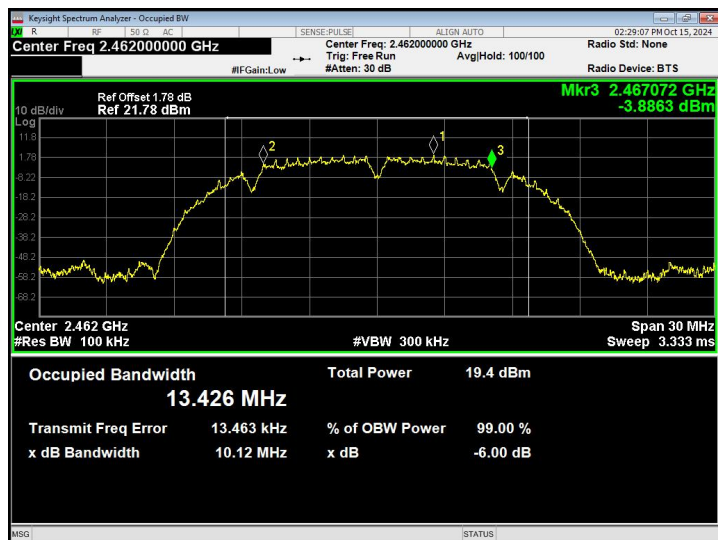
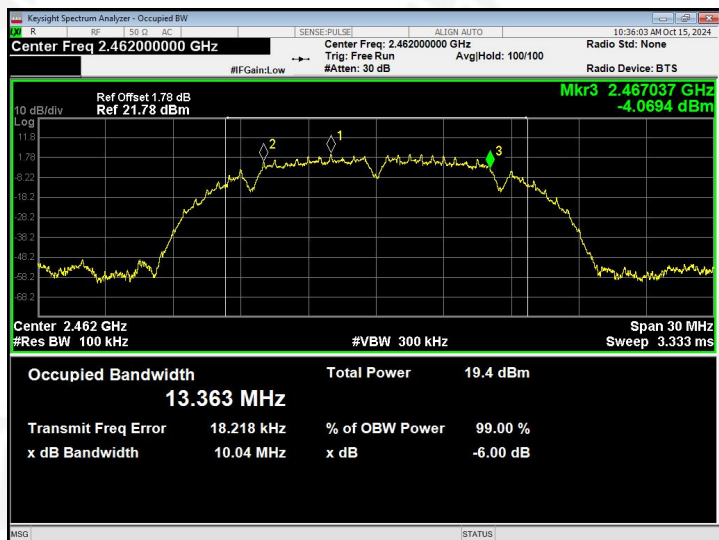
Lowest channel



Middle channel



Highest channel



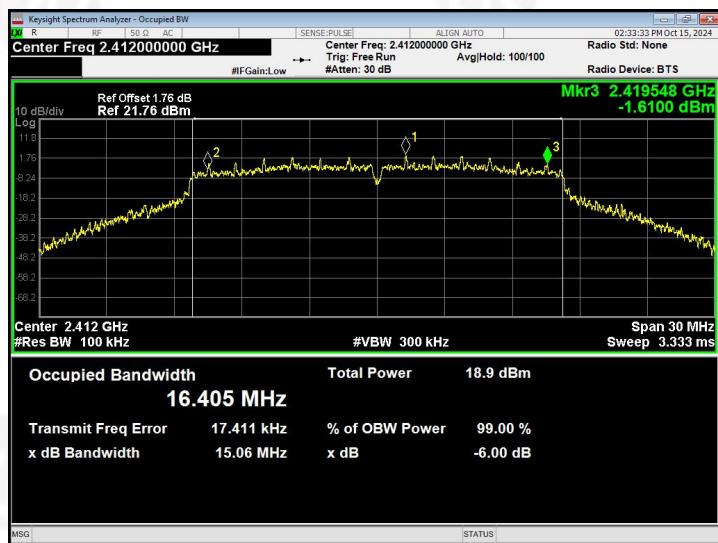
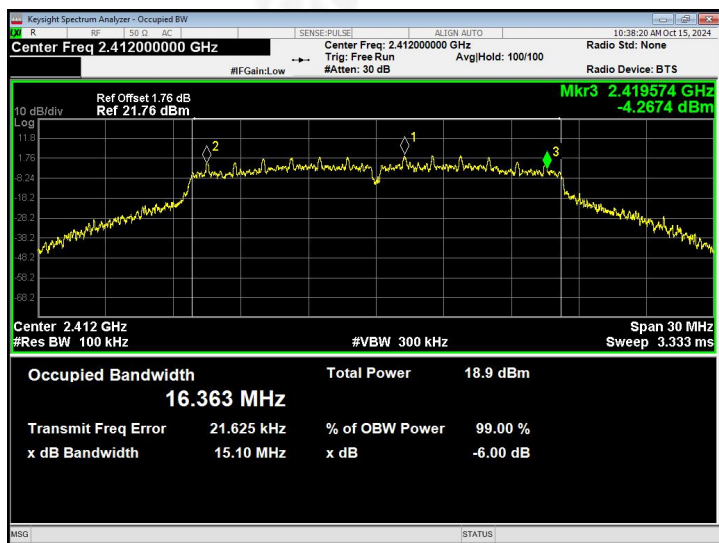


6dB Bandwidth - 802.11g

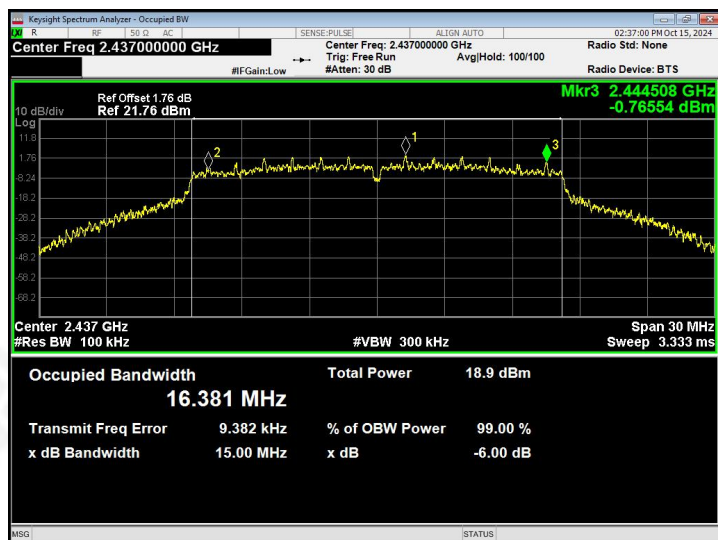
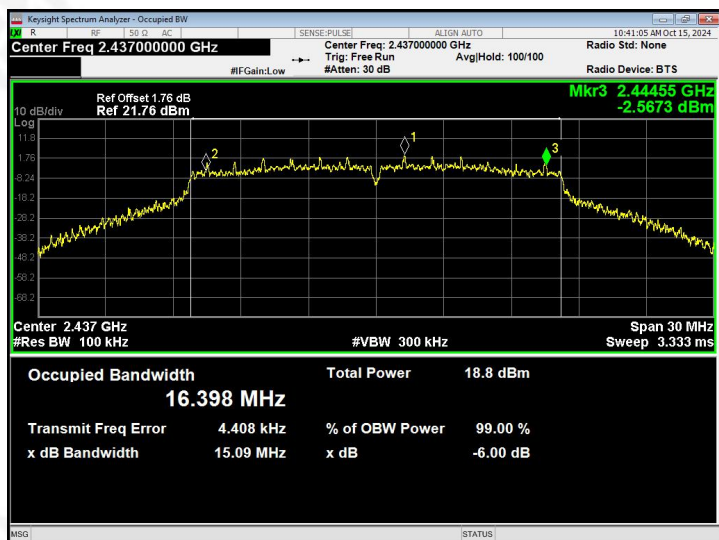
SISO ANT A

SISO ANT B

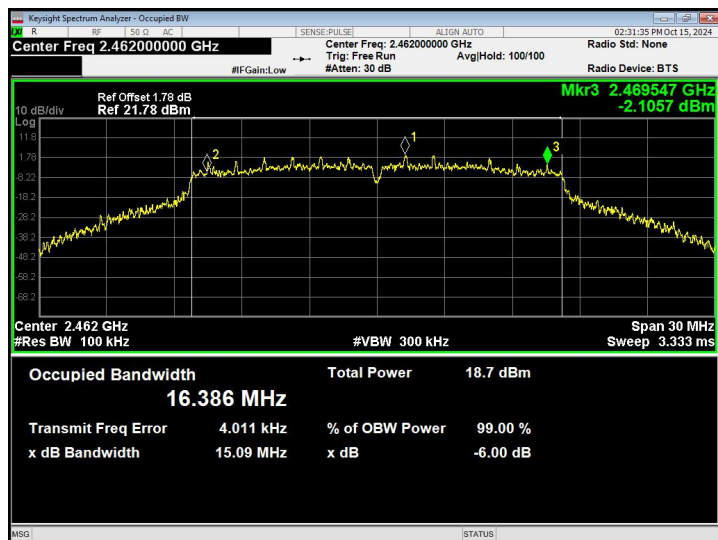
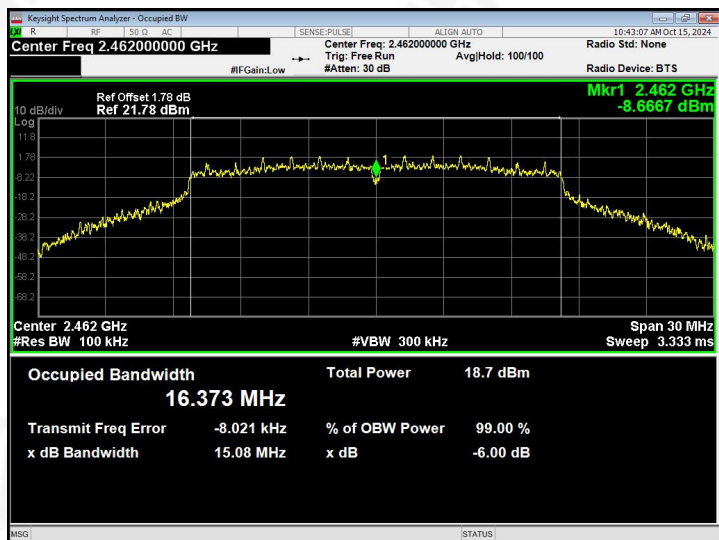
Lowest channel



Middle channel



Highest channel





|               |        |                     |        |
|---------------|--------|---------------------|--------|
| Temperature : | 26℃    | Relative Humidity : | 54%    |
| Pressure :    | 101kPa | Test Voltage :      | DC 12V |

| Test Mode | Antenna    | Frequency<br>(MHz) | 6dB Bandwidth<br>(MHz) | Limit<br>(kHz) | Result |
|-----------|------------|--------------------|------------------------|----------------|--------|
| 802.11n20 | SISO ANT A | 2412               | 15.12                  | >500           | PASS   |
|           |            | 2437               | 15.08                  |                |        |
|           |            | 2462               | 15.13                  |                |        |
|           | SISO ANT B | 2412               | 15.04                  | >500           | PASS   |
|           |            | 2437               | 15.12                  |                |        |
|           |            | 2462               | 15.04                  |                |        |
|           | MIMO ANT A | 2412               | 15.12                  | >500           | PASS   |
|           |            | 2437               | 15.12                  |                |        |
|           |            | 2462               | 15.00                  |                |        |
|           | MIMO ANT B | 2412               | 15.10                  | >500           | PASS   |
|           |            | 2437               | 15.11                  |                |        |
|           |            | 2462               | 15.12                  |                |        |
| 802.11n40 | SISO ANT A | 2422               | 35.02                  | >500           | PASS   |
|           |            | 2437               | 33.83                  |                |        |
|           |            | 2452               | 35.09                  |                |        |
|           | SISO ANT B | 2422               | 35.06                  | >500           | PASS   |
|           |            | 2437               | 33.84                  |                |        |
|           |            | 2452               | 35.08                  |                |        |
|           | MIMO ANT A | 2422               | 33.80                  | >500           | PASS   |
|           |            | 2437               | 35.08                  |                |        |
|           |            | 2452               | 35.05                  |                |        |
|           | MIMO ANT B | 2422               | 35.02                  | >500           | PASS   |
|           |            | 2437               | 35.08                  |                |        |
|           |            | 2452               | 35.03                  |                |        |