# FCC RF Test Report

| | | |
|---|---|---|
| **APPLICANT** | : | **Texas Instruments Incorporated** |
| **EQUIPMENT** | : | **WiFi and Bluetooth Module** |
| **BRAND NAME** | : | **Texas Instruments** |
| **MODEL NAME** | : | **WL18MODGI** |
| **FCC ID** | : | **Z64-WL18DBMOD** |
| **STANDARD** | : | **FCC Part 15 Subpart E §15.407** |
| **CLASSIFICATION** | : | **(NII) Unlicensed National Information Infrastructure** |

**The product was received on Oct. 09, 2014 and testing was completed on Dec. 16, 2014. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.**

**The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.**

**Reviewed by: Joseph Lin / Supervisor**

**Approved by: Jones Tsai / Manager**

Testing Laboratory 1190

***SPORTON INTERNATIONAL INC.***
***No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.***

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# REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|---|---|---|---|
| FR4O0971D | Rev. 01 | Initial issue of report | Dec. 19, 2014 |
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# SUMMARY OF TEST RESULT

| Report Section | FCC Rule | Description | Limit | Result | Remark |
|---|---|---|---|---|---|
| 3.1 | 2.1049<br>15.403(i) | 26dB & 99% Bandwidth | - | Pass | - |
| 3.2 | 15.407(a) | Maximum Conducted Output Power | ≤ 24 dBm (depend on band) | Pass | - |
| 3.3 | 15.407(a) | Power Spectral Density | ≤ 11 dBm (depend on band) | Pass | - |
| 3.4 | 15.407(b) | Unwanted Emissions | ≤ -17, -27 dBm (depend on band)&15.209(a) | Pass | Under limit 0.78 dB at 5470 MHz |
| 3.5 | 15.207 | AC Conducted Emission | 15.207(a) | Pass | Under limit 15.20 dB at 0.150 MHz |
| 3.6 | 15.407(g) | Frequency Stability | Within Operation Band | Pass | - |
| 3.7 | 15.407(c) | Automatically Discontinue Transmission | Discontinue Transmission | Pass | - |
| 3.8 | 15.203 &<br>15.407(a) | Antenna Requirement | N/A | Pass | - |

# 1 General Description

## 1.1 Applicant

**Texas Instruments Incorporated**
12500 TI Boulevard, M/S 8751, Dallas, TX 75243, USA

## 1.2 Manufacturer

**Jorjin Technologies Inc**
17F, No. 239, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan

## 1.3 Feature of Equipment Under Test

| Product Feature | |
|---|---|
| **Equipment** | WiFi and Bluetooth Module |
| **Brand Name** | Texas Instruments |
| **Model Name** | WL18MODGI |
| **FCC ID** | Z64-WL18DBMOD |
| **EUT supports Radios application** | WLAN 11a/b/g/n HT20/HT40<br>Bluetooth v4.0 EDR/LE |
| **HW Version** | WG7837-T0B |
| **EUT Stage** | Identical Prototype |

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 1.4 Product Specification of Equipment Under Test

| Product Specification subjective to this standard | |
|---|---|
| **Tx/Rx Channel Frequency Range** | 5180 MHz ~ 5240 MHz<br>5260 MHz ~ 5320 MHz<br>5500 MHz ~ 5580 MHz<br>5660 MHz ~ 5700 MHz |
| **Maximum Output Power** | **<Ant. 1>**<br>**<5180 MHz ~ 5240 MHz>**<br>802.11a : 15.58 dBm / 0.0361 W<br>802.11n HT20 : 15.71 dBm / 0.0372 W<br>802.11n HT40 : 16.60 dBm / 0.0457 W<br>**<5260 MHz ~ 5320 MHz>**<br>802.11a : 13.20 dBm / 0.0209 W<br>802.11n HT20 : 13.27 dBm / 0.0212 W<br>802.11n HT40 : 16.86 dBm / 0.0485 W<br>**<5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz >**<br>802.11a : 17.50 dBm / 0.0562 W<br>802.11n HT20 : 17.24 dBm / 0.0530 W<br>802.11n HT40 : 15.78 dBm / 0.0378 W<br>**<Ant. 2>**<br>**<5180 MHz ~ 5240 MHz>**<br>802.11a : 15.82 dBm / 0.0382 W<br>802.11n HT20 : 15.54 dBm / 0.0358 W<br>802.11n HT40 : 16.98 dBm / 0.0499 W<br>**<5260 MHz ~ 5320 MHz>**<br>802.11a : 13.48 dBm / 0.0223 W<br>802.11n HT20 : 13.87 dBm / 0.0244 W<br>802.11n HT40 : 17.20 dBm / 0.0525 W<br>**<5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz >**<br>802.11a : 18.44 dBm / 0.0698 W<br>802.11n HT20 : 17.52 dBm / 0.0565 W<br>802.11n HT40 : 16.74 dBm / 0.0472 W |
| **99% Occupied Bandwidth** | 802.11a : 19.05 MHz<br>802.11n HT20 : 18.85 MHz<br>802.11n HT40 : 36.50 MHz |
| **Type of Modulation** | 802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) |

| Antenna Information | | | |
|---|---|---|---|
| **Antenna Type** | **Brand** | **2.4GHz~2.5GHz** | **4.9GHz~5.8GHz** |
| PCB | Ethertronics | -0.6 | 4.5 |
| Dipole | LSR | 2 | 2 |
| PCB | Laird | 2 | 4 |
| Chip | Pulse | 3.2 | 4.2 |
| PIFA | LSR | 2 | 3 |
| Chip | TDK | 2.4 | 3.96 |

## 1.5 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.6 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

| | | | |
|---|---|---|---|
| **Test Site** | SPORTON INTERNATIONAL INC. | | |
| **Test Site Location** | No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,<br>Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 | | |
| **Test Site No.** | **Sporton Site No.** | | |
| | TH02-HY | CO05-HY | 03CH07-HY |

**Note:** The test site complies with ANSI C63.4 2009 requirement.

## 1.7 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v01
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2009

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

# 2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

## 2.1 Carrier Frequency and Channel

| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---|---|---|---|---|
| 5150-5250 MHz Band 1 (U-NII-1) | 36 | 5180 | 44 | 5220 |
| | **38** | **5190** | **46** | **5230** |
| | 40 | 5200 | 48 | 5240 |

| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---|---|---|---|---|
| 5250-5350 MHz Band 2 (U-NII-2A) | 52 | 5260 | 60 | 5300 |
| | **54** | **5270** | **62** | **5310** |
| | 56 | 5280 | 64 | 5320 |

| Frequency Band | Channel | Freq. (MHz) | Channel | Freq. (MHz) |
|---|---|---|---|---|
| 5470-5600 MHz and 5650-5725 MHz Band 3 (U-NII-2C) | 100 | 5500 | 116 | 5580 |
| | **102** | **5510** | 132 | 5660 |
| | 104 | 5520 | **134** | **5670** |
| | 108 | 5540 | 136 | 5680 |
| | **110** | **5550** | 140 | 5700 |
| | 112 | 5560 | | |

**Note:** The above Frequency and Channel in boldface were 802.11n HT40.

## 2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

**<Ant. 1>**

| 5GHz 802.11a mode | | | |
|---|---|---|---|
| Data Rate (MHz) | 6M bps | | |
| Channel | 36 | 44 | 48 |
| Frequency (MHz) | 5180 | 5220 | 5240 |
| Average Power (dBm) | 15.54 | **15.58** | 15.40 |
| Channel | 52 | 60 | 64 |
| Frequency (MHz) | 5260 | 5300 | 5320 |
| Average Power (dBm) | **13.20** | 12.94 | 12.98 |
| Channel | 100 | 116 | 140 |
| Frequency (MHz) | 5500 | 5580 | 5700 |
| Average Power (dBm) | 14.30 | **17.50** | 11.82 |

| 5GHz 802.11n HT20 mode | | | |
|---|---|---|---|
| Data Rate (MHz) | MCS0 | | |
| Channel | 36 | 44 | 48 |
| Frequency (MHz) | 5180 | 5220 | 5240 |
| Average Power (dBm) | **15.71** | 15.35 | 15.28 |
| Channel | 52 | 60 | 64 |
| Frequency (MHz) | 5260 | 5300 | 5320 |
| Average Power (dBm) | 13.12 | **13.27** | 12.79 |
| Channel | 100 | 116 | 140 |
| Frequency (MHz) | 5500 | 5580 | 5700 |
| Average Power (dBm) | 14.06 | **17.24** | 11.76 |

| 5GHz 802.11n HT40 mode | | | |
|---|---|---|---|
| Data Rate (MHz) | MCS0 | | |
| Channel | 38 | 46 | |
| Frequency (MHz) | 5190 | 5230 | |
| Average Power (dBm) | 11.48 | **16.60** | |
| Channel | 54 | 62 | |
| Frequency (MHz) | 5270 | 5310 | |
| Average Power (dBm) | **16.86** | 11.80 | |
| Channel | 102 | 110 | 134 |
| Frequency (MHz) | 5510 | 5550 | 5670 |
| Average Power (dBm) | 11.52 | **15.78** | 12.56 |

**<Ant. 2>**

| 5GHz 802.11a mode | | | |
|---|---|---|---|
| Data Rate (MHz) | 6M bps | | |
| Channel | 36 | 44 | 48 |
| Frequency (MHz) | 5180 | 5220 | 5240 |
| Average Power (dBm) | 15.71 | **15.82** | 15.56 |
| Channel | 52 | 60 | 64 |
| Frequency (MHz) | 5260 | 5300 | 5320 |
| Average Power (dBm) | 13.30 | **13.48** | 13.28 |
| Channel | 100 | 116 | 140 |
| Frequency (MHz) | 5500 | 5580 | 5700 |
| Average Power (dBm) | 14.52 | **18.44** | 11.94 |

| 5GHz 802.11n HT20 mode | | | |
|---|---|---|---|
| Data Rate (MHz) | MCS0 | | |
| Channel | 36 | 44 | 48 |
| Frequency (MHz) | 5180 | 5220 | 5240 |
| Average Power (dBm) | **15.54** | 15.53 | 15.48 |
| Channel | 52 | 60 | 64 |
| Frequency (MHz) | 5260 | 5300 | 5320 |
| Average Power (dBm) | 13.44 | **13.87** | 13.37 |
| Channel | 100 | 116 | 140 |
| Frequency (MHz) | 5500 | 5580 | 5700 |
| Average Power (dBm) | 14.93 | **17.52** | 12.19 |

| 5GHz 802.11n HT40 mode | | | |
|---|---|---|---|
| Data Rate (MHz) | MCS0 | | |
| Channel | 38 | 46 | |
| Frequency (MHz) | 5190 | 5230 | |
| Average Power (dBm) | 11.76 | **16.98** | |
| Channel | 54 | 62 | |
| Frequency (MHz) | 5270 | 5310 | |
| Average Power (dBm) | **17.20** | 12.22 | |
| Channel | 102 | 110 | 134 |
| Frequency (MHz) | 5510 | 5550 | 5670 |
| Average Power (dBm) | 11.28 | **16.74** | 12.83 |

## 2.3 Test Mode

**Final results of test modes, data rates and test channels are shown as following table.**

| Test Cases | | | | |
|---|---|---|---|---|
| | Test Items | Mode | Data rate | Test Channel |
| Conducted TCs | 26dB and 99% BW Power Spectral Density | 802.11a | 6 Mbps | L/M/H |
| | | 802.11n HT20 | MCS0 | L/M/H |
| | | 802.11n HT40 | MCS0 | L/M/H |
| | Output Power | 802.11a | 6 Mbps | L/M/H |
| | | 802.11n HT20 | MCS0 | L/M/H |
| | | 802.11n HT40 | MCS0 | L/M/H |
| | Frequency Stability | 802.11a | 6 Mbps | L/M/H |
| | | 802.11n HT20 | MCS0 | L/M/H |
| | | 802.11n HT40 | MCS0 | L/M/H |
| Radiated TCs | Radiated Band Edge | 802.11a | 6 Mbps | L/M/H |
| | Radiated Spurious Emission | 802.11a | 6 Mbps | L/M/H |
| AC Conducted Emission | Mode 1 ： WLAN (5GHz) Link + Bluetooth Link + Adapter | | | |

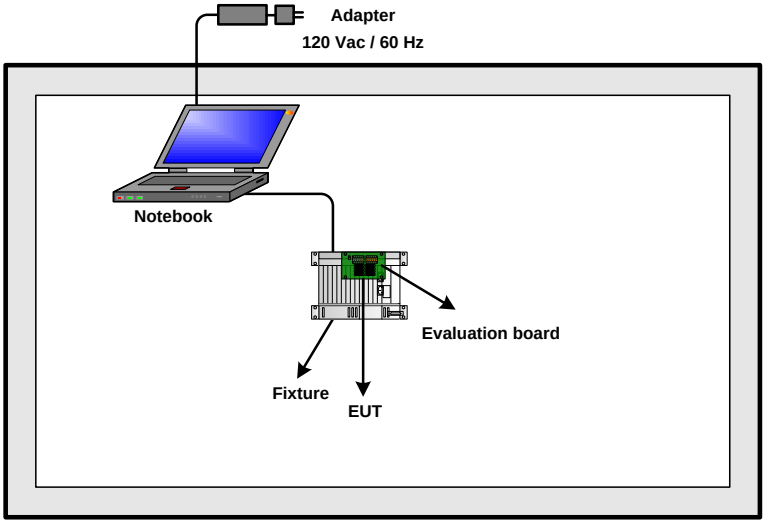
| Ch. # | | Band I：5150-5250 MHz | Band II：5250-5350 MHz | Band III：5470-5600 MHz and 5650-5725MHz |
|---|---|---|---|---|
| | | 802.11a | 802.11a | 802.11a |
| L | Low | 36 | 52 | 100 |
| M | Middle | 44 | 60 | 116 |
| H | High | 48 | 64 | 140 |

| Ch. # | | Band I：5150-5250 MHz | Band II：5250-5350 MHz | Band III：5470-5600 MHz and 5650-5725MHz |
|---|---|---|---|---|
| | | 802.11n HT20 | 802.11n HT20 | 802.11n HT20 |
| L | Low | 36 | 52 | 100 |
| M | Middle | 44 | 60 | 116 |
| H | High | 48 | 64 | 140 |

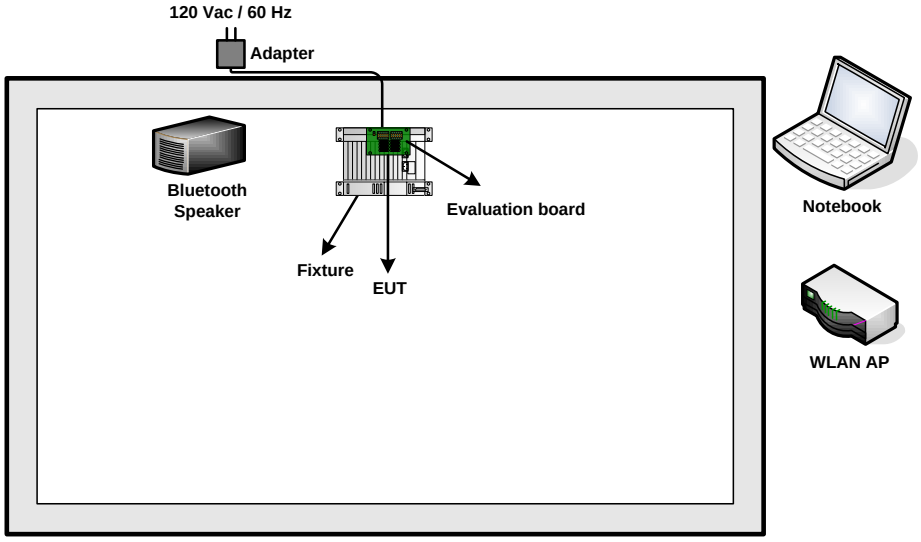
| Ch. # | | Band I：5150-5250 MHz | Band II：5250-5350 MHz | Band III：5470-5600 MHz and 5650-5725MHz |
|---|---|---|---|---|
| | | 802.11n HT40 | 802.11n HT40 | 802.11n HT40 |
| L | Low | 38 | 54 | 102 |
| M | Middle | - | - | 110 |
| H | High | 46 | 62 | 134 |

## 2.4 Connection Diagram of Test System

**<WLAN Tx Mode>**




**<AC Conducted Emission Mode>**



## 2.5 Support Unit used in test configuration and system

| Item | Equipment | Trade Name | Model Name | FCC ID | Data Cable | Power Cord |
|---|---|---|---|---|---|---|
| 1. | WLAN AP | D-Link | DIR-628 | KA2DIR628A2 | N/A | Unshielded, 1.8 m |
| 2. | Notebook | DELL | Latitude E6320 | FCC DoC/ Contains FCC ID: QDS-BRCM1054 | N/A | AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m |
| 3. | Notebook | Lenovo | M490S | FCC DoC | N/A | AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m |
| 4. | Bluetooth Speaker | MI | MDZ-03-AC | N/A | N/A | N/A |
| 5. | Fixture | N/A | N/A | N/A | N/A | N/A |
| 6. | Evaluation board | N/A | WG1300BE00 | N/A | N/A | N/A |

## 2.6 EUT Operation Test Setup

For WLAN function, programmed RF utility, “RTTT Tool” installed in the notebook make the EUT provide functions like channel selection and power level for continuous transmitting and receiving signals.

## 2.7 Measurement Results Explanation Example

**For all conducted test items:**

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

*Offset(dB) = RF cable loss(dB) + attenuator factor(dB).*

= 4.2 + 10 = 14.2 (dB)

# 3 Test Result

## 3.1 26dB & 99% Bandwidth Measurement

### 3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

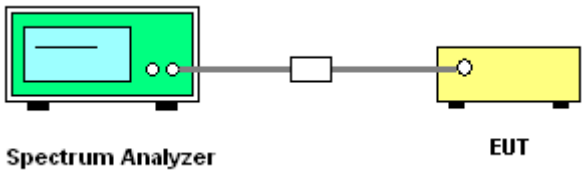
### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

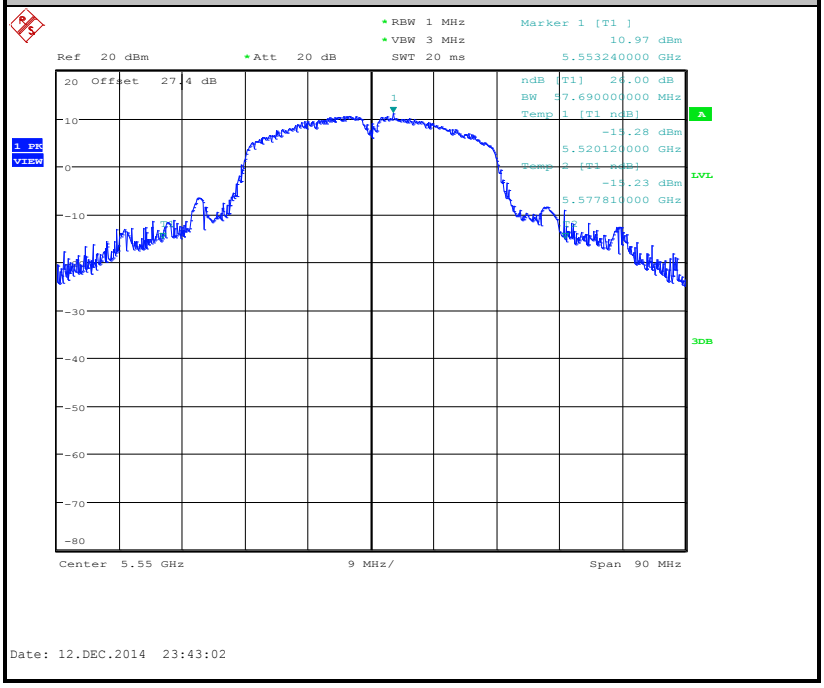
### 3.1.4 Test Setup



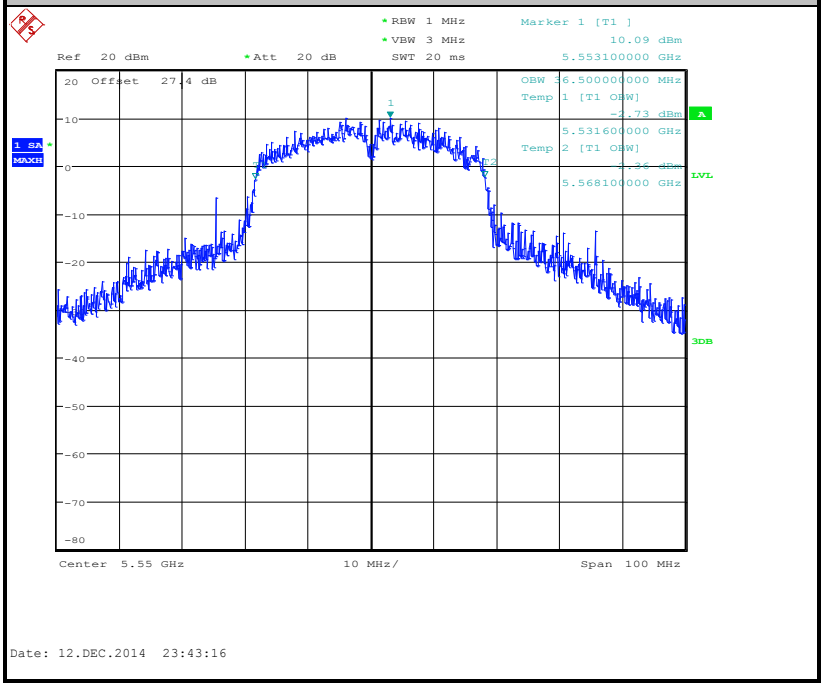
### 3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

**Maximum 26dB Bandwidth**




**Maximum 99% Occupied Bandwidth**



## 3.2 Maximum Conducted Output Power Measurement

### 3.2.1 Limit of Maximum Conducted Output Power

**<FCC 14-30 CFR 15.407>**

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW.

For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

### 3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

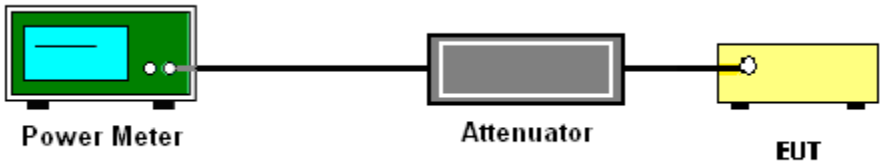
### 3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, 10 log(1/x), where x is the duty cycle.

### 3.2.4 Test Setup




### 3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

# 3.3 Power Spectral Density Measurement

## 3.3.1 Limit of Power Spectral Density

**<FCC 14-30 CFR 15.407>**

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

## 3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01.
Section F) Maximum power spectral density.

**# Method SA-2 #**

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

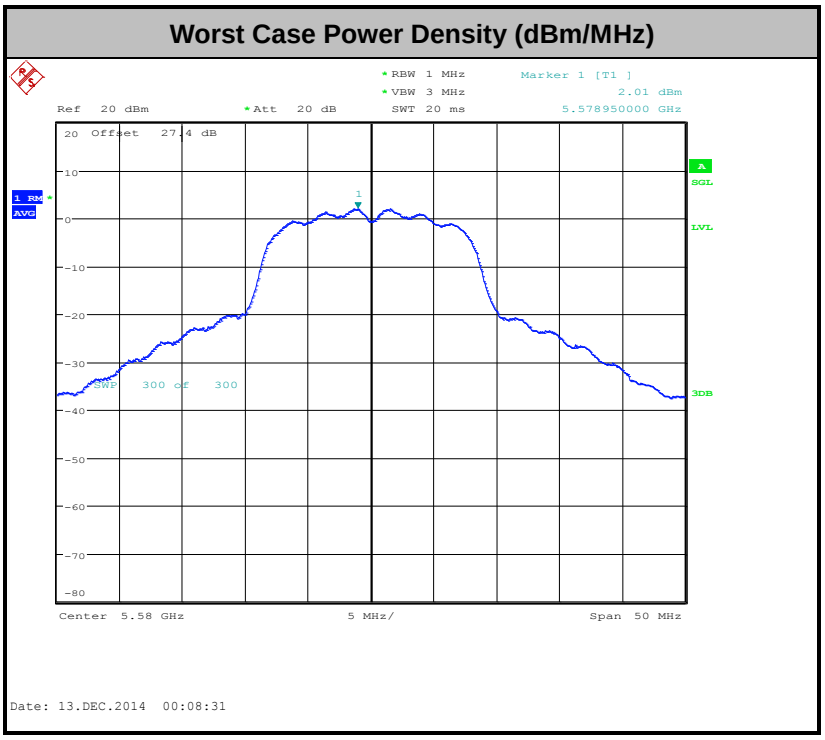
1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 2 Span / RBW.
   - Sweep time = auto.
   - Detector = RMS
   - Trace average at least 100 traces in power averaging mode.
   - Add 10 log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add 10 log(1/0.25) = 6 dB if the duty cycle is 25 percent.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

### 3.3.4 Test Setup

### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

**Worst Case Power Density (dBm/MHz)**



## 3.4 Unwanted Emissions Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

### 3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of –27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

(2) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table,

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (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 |

**Note:** The following formula is used to convert the EIRP to field strength.

$$E=\frac{1000000\sqrt{30P}}{3}$$ μV/m, where P is the eirp (Watts)

| EIRP (dBm) | Field Strength at 3m (dBμV/m) |
|---|---|
| -17 | 78.3 |
| - 27 | 68.3 |

(3) KDB789033 v01 G)2)c) As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.

### 3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

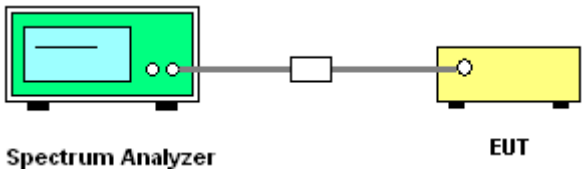
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

| Antenna | Band | Duty Cycle(%) | T(us) | 1/T(kHz) | VBW Setting |
|---|---|---|---|---|---|
| 1 | 802.11a | 93.01 | 3413.46 | 0.29 | 300Hz |
| 1 | 802.11an20 | 92.92 | 3157.05 | 0.32 | 1kHz |
| 1 | 802.11an40 | 86.61 | 1554.49 | 0.64 | 1kHz |
| 2 | 802.11a | 93.42 | 3413.46 | 0.29 | 300Hz |
| 2 | 802.11an20 | 93.4 | 3173.08 | 0.32 | 1kHz |
| 2 | 802.11an40 | 86.1 | 1538.46 | 0.65 | 1kHz |

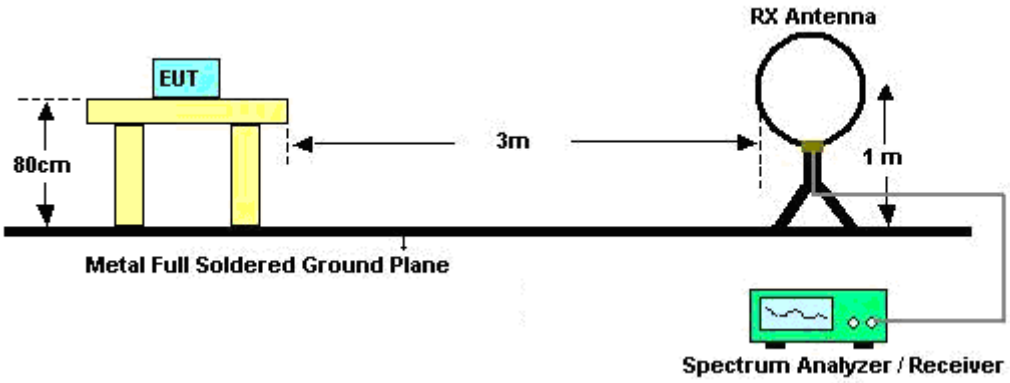
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

### 3.4.4 Test Setup

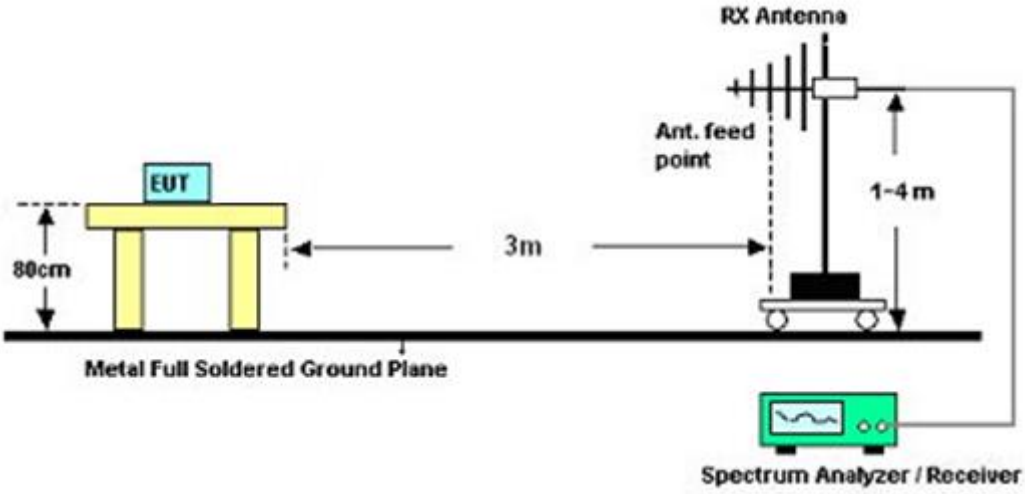
**For Conducted Measurement Setup:**



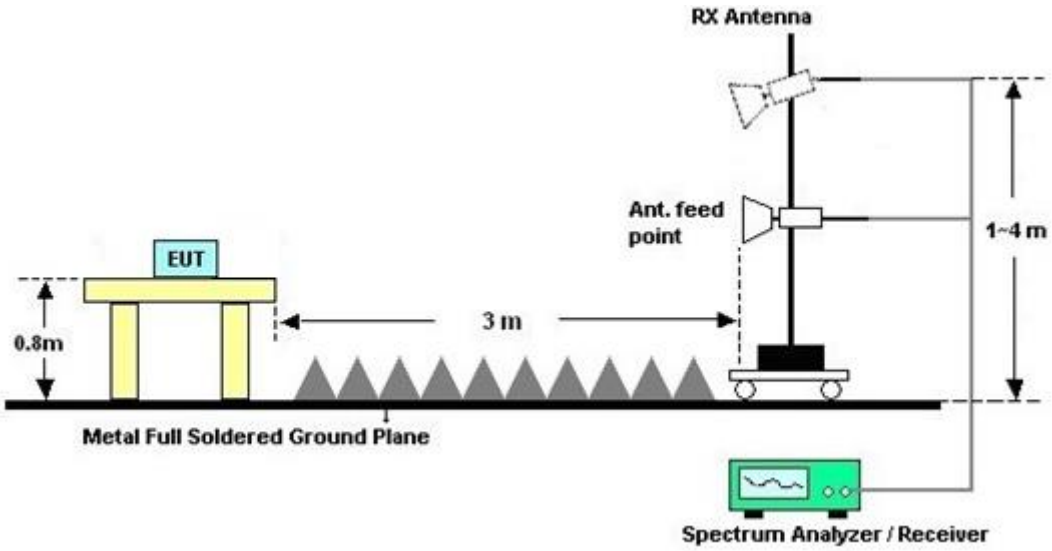

**For radiated emissions below 30MHz**




**For radiated emissions from 30MHz to 1GHz**



**For radiated emissions above 1GHz**




## 3.4.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

### 3.4.6 Test Result of Conducted Spurious at Band Edges in the Restricted Band

**15E 5150~5250MHz**

**WIFI 802.11a (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11a CH 36 5180MHz | | 5150 | -22.86 | -1.66 | -21.2 | -29.86 | 4.5 | 2.5 | 0 | P |
| | | 5147.3 | -43.02 | -1.82 | -41.2 | -50.02 | 4.5 | 2.5 | 0 | A |
| | * | 5181 | 11.75 | - | - | 4.75 | 4.5 | 2.5 | 0 | P |
| | * | 5181 | 1.31 | - | - | -5.69 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 44 5220MHz | | 5115.2 | -40.16 | -18.96 | -21.2 | -47.16 | 4.5 | 2.5 | 0 | P |
| | | 5117 | -50.4 | -9.2 | -41.2 | -57.4 | 4.5 | 2.5 | 0 | A |
| | * | 5219 | 16.2 | - | - | 9.2 | 4.5 | 2.5 | 0 | P |
| | * | 5219 | 7.74 | - | - | 0.74 | 4.5 | 2.5 | 0 | A |
| | | 5367.6 | -47.19 | -25.99 | -21.2 | -54.19 | 4.5 | 2.5 | 0 | P |
| | | 5426.67 | -58.07 | -16.87 | -41.2 | -65.07 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 48 5240MHz | | 5135 | -41.39 | -20.19 | -21.2 | -48.39 | 4.5 | 2.5 | 0 | P |
| | | 5135.3 | -50.69 | -9.49 | -41.2 | -57.69 | 4.5 | 2.5 | 0 | A |
| | * | 5239 | 16.5 | - | - | 9.5 | 4.5 | 2.5 | 0 | P |
| | * | 5239 | 7.4 | - | - | 0.4 | 4.5 | 2.5 | 0 | A |
| 2 | | | | | | | | | | |
| 802.11a CH 36 5180MHz | | 5150 | -30.54 | -9.34 | -21.2 | -37.54 | 4.5 | 2.5 | 0 | P |
| | | 5148.2 | -48.68 | -7.48 | -41.2 | -55.68 | 4.5 | 2.5 | 0 | A |
| | * | 5178 | 16.18 | - | - | 9.18 | 4.5 | 2.5 | 0 | P |
| | * | 5178 | 7.44 | - | - | 0.44 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 44 5220MHz | | 5114.9 | -41.27 | -20.07 | -21.2 | -48.27 | 4.5 | 2.5 | 0 | P |
| | | 5114.9 | -51.08 | -9.88 | -41.2 | -58.08 | 4.5 | 2.5 | 0 | A |
| | * | 5222 | 15.99 | - | - | 8.99 | 4.5 | 2.5 | 0 | P |
| | * | 5222 | 7.87 | - | - | 0.87 | 4.5 | 2.5 | 0 | A |
| | | 5425.46 | -46.6 | -25.4 | -21.2 | -53.6 | 4.5 | 2.5 | 0 | P |
| | | 5426.67 | -58.48 | -17.28 | -41.2 | -65.48 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 48 5240MHz | | 5134.85 | -40.72 | -19.52 | -21.2 | -47.72 | 4.5 | 2.5 | 0 | P |
| | | 5134.4 | -50.49 | -9.29 | -41.2 | -57.49 | 4.5 | 2.5 | 0 | A |
| | * | 5241 | 16.46 | - | - | 9.46 | 4.5 | 2.5 | 0 | P |
| | * | 5241 | 7.62 | - | - | 0.62 | 4.5 | 2.5 | 0 | A |

**15E 5150~5250MHz**

**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n | | 5143.55 | -26.36 | -5.16 | -21.2 | -33.36 | 4.5 | 2.5 | 0 | P |
| HT20 | | 5150 | -48.08 | -6.88 | -41.2 | -55.08 | 4.5 | 2.5 | 0 | A |
| CH 36 | * | 5181 | 16.16 | - | - | 9.16 | 4.5 | 2.5 | 0 | P |
| 5180MHz | * | 5181 | 7.16 | - | - | 0.16 | 4.5 | 2.5 | 0 | A |
| | | 5147.9 | -39.59 | -18.39 | -21.2 | -46.59 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5116.85 | -50.58 | -9.38 | -41.2 | -57.58 | 4.5 | 2.5 | 0 | A |
| HT20 | * | 5221 | 15.81 | - | - | 8.81 | 4.5 | 2.5 | 0 | P |
| CH 44 | * | 5221 | 7.35 | - | - | 0.35 | 4.5 | 2.5 | 0 | A |
| 5220MHz | | 5350.22 | -47.13 | -25.93 | -21.2 | -54.13 | 4.5 | 2.5 | 0 | P |
| | | 5424.8 | -58.34 | -17.14 | -41.2 | -65.34 | 4.5 | 2.5 | 0 | A |
| 802.11n | | 5134.4 | -40.46 | -19.26 | -21.2 | -47.46 | 4.5 | 2.5 | 0 | P |
| HT20 | | 5136.95 | -50.71 | -9.51 | -41.2 | -57.71 | 4.5 | 2.5 | 0 | A |
| CH 48 | * | 5241 | 16.5 | - | - | 9.5 | 4.5 | 2.5 | 0 | P |
| 5240MHz | * | 5241 | 7.44 | - | - | 0.44 | 4.5 | 2.5 | 0 | A |
| 2 | | | | | | | | | | |
| 802.11n | | 5147.45 | -30.13 | -8.93 | -21.2 | -37.13 | 4.5 | 2.5 | 0 | P |
| HT20 | | 5149.55 | -48.75 | -7.55 | -41.2 | -55.75 | 4.5 | 2.5 | 0 | A |
| CH 36 | * | 5178 | 16.22 | - | - | 9.22 | 4.5 | 2.5 | 0 | P |
| 5180MHz | * | 5178 | 7.58 | - | - | 0.58 | 4.5 | 2.5 | 0 | A |
| | | 5112.95 | -39.83 | -18.63 | -21.2 | -46.83 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5114.75 | -50.85 | -9.65 | -41.2 | -57.85 | 4.5 | 2.5 | 0 | A |
| HT20 | * | 5218 | 15.39 | - | - | 8.39 | 4.5 | 2.5 | 0 | P |
| CH 44 | * | 5218 | 7.71 | - | - | 0.71 | 4.5 | 2.5 | 0 | A |
| 5220MHz | | 5379.37 | -46.82 | -25.62 | -21.2 | -53.82 | 4.5 | 2.5 | 0 | P |
| | | 5431.07 | -57.97 | -16.77 | -41.2 | -64.97 | 4.5 | 2.5 | 0 | A |
| 802.11n | | 5134.25 | -41.01 | -19.81 | -21.2 | -48.01 | 4.5 | 2.5 | 0 | P |
| HT20 | | 5133.65 | -50.74 | -9.54 | -41.2 | -57.74 | 4.5 | 2.5 | 0 | A |
| CH 48 | * | 5242 | 16.74 | - | - | 9.74 | 4.5 | 2.5 | 0 | P |
| 5240MHz | * | 5242 | 7.82 | - | - | 0.82 | 4.5 | 2.5 | 0 | A |

**15E 5150~5250MHz**

**WIFI 802.11n HT40 (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| | | 5149.7 | -32.02 | -10.82 | -21.2 | -39.02 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5149.85 | -48.54 | -7.34 | -41.2 | -55.54 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5193 | 7.77 | - | - | 0.77 | 4.5 | 2.5 | 0 | P |
| CH 38 | * | 5193 | -0.82 | - | - | -7.82 | 4.5 | 2.5 | 0 | A |
| 5190MHz | | 5400.05 | -48.6 | -27.4 | -21.2 | -55.6 | 4.5 | 2.5 | 0 | P |
| | | 5395.65 | -60.13 | -18.93 | -41.2 | -67.13 | 4.5 | 2.5 | 0 | A |
| | | 5136.8 | -31.73 | -10.53 | -21.2 | -38.73 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5137.4 | -50.33 | -9.13 | -41.2 | -57.33 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5232 | 14.33 | - | - | 7.33 | 4.5 | 2.5 | 0 | P |
| CH 46 | * | 5232 | 5.35 | - | - | -1.65 | 4.5 | 2.5 | 0 | A |
| 5230MHz | | 5352.53 | -43.77 | -22.57 | -21.2 | -50.77 | 4.5 | 2.5 | 0 | P |
| | | 5350.11 | -55.65 | -14.45 | -41.2 | -62.65 | 4.5 | 2.5 | 0 | A |
| 2 | | | | | | | | | | |
| | | 5149.1 | -34.44 | -13.24 | -21.2 | -41.44 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5149.55 | -47.7 | -6.5 | -41.2 | -54.7 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5191 | 8.14 | - | - | 1.14 | 4.5 | 2.5 | 0 | P |
| CH 38 | * | 5191 | -0.32 | - | - | -7.32 | 4.5 | 2.5 | 0 | A |
| 5190MHz | | 5353.08 | -48.72 | -27.52 | -21.2 | -55.72 | 4.5 | 2.5 | 0 | P |
| | | 5396.75 | -59.64 | -18.44 | -41.2 | -66.64 | 4.5 | 2.5 | 0 | A |
| | | 5136.8 | -33.07 | -11.87 | -21.2 | -40.07 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5137.4 | -50.8 | -9.6 | -41.2 | -57.8 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5232 | 14.63 | - | - | 7.63 | 4.5 | 2.5 | 0 | P |
| CH 46 | * | 5232 | 5.68 | - | - | -1.32 | 4.5 | 2.5 | 0 | A |
| 5230MHz | | 5354.07 | -41.9 | -20.7 | -21.2 | -48.9 | 4.5 | 2.5 | 0 | P |
| | | 5350 | -55.13 | -13.93 | -41.2 | -62.13 | 4.5 | 2.5 | 0 | A |

**15E 5250~5350MHz**

**WIFI 802.11a (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11a CH 52 5260MHz | * | 5261 | 12.79 | - | - | 5.79 | 4.5 | 2.5 | 0 | P |
| | * | 5261 | 4.31 | - | - | -2.69 | 4.5 | 2.5 | 0 | A |
| | | 5367.16 | -40.55 | -19.35 | -21.2 | -47.55 | 4.5 | 2.5 | 0 | P |
| | | 5364.85 | -51.46 | -10.26 | -41.2 | -58.46 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 60 5300MHz | | 5029.1 | -45.84 | -24.64 | -21.2 | -52.84 | 4.5 | 2.5 | 0 | P |
| | | 5028.05 | -56.18 | -14.98 | -41.2 | -63.18 | 4.5 | 2.5 | 0 | A |
| | * | 5302 | 13.13 | - | - | 6.13 | 4.5 | 2.5 | 0 | P |
| | * | 5302 | 4.51 | - | - | -2.49 | 4.5 | 2.5 | 0 | A |
| | | 5405.11 | -42.31 | -21.11 | -21.2 | -49.31 | 4.5 | 2.5 | 0 | P |
| | | 5405.99 | -52.71 | -11.51 | -41.2 | -59.71 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 64 5320MHz | * | 5322 | 13.27 | - | - | 6.27 | 4.5 | 2.5 | 0 | P |
| | * | 5322 | 4.81 | - | - | -2.19 | 4.5 | 2.5 | 0 | A |
| | | 5354.07 | -38.38 | -17.18 | -21.2 | -45.38 | 4.5 | 2.5 | 0 | P |
| | | 5350.99 | -50.78 | -9.58 | -41.2 | -57.78 | 4.5 | 2.5 | 0 | A |
| 2 | | | | | | | | | | |
| 802.11a CH 52 5260MHz | * | 5262 | 13.78 | - | - | 6.78 | 4.5 | 2.5 | 0 | P |
| | * | 5262 | 4.91 | - | - | -2.09 | 4.5 | 2.5 | 0 | A |
| | | 5363.31 | -40.8 | -19.6 | -21.2 | -47.8 | 4.5 | 2.5 | 0 | P |
| | | 5366.06 | -50.79 | -9.59 | -41.2 | -57.79 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 60 5300MHz | | 5028.5 | -45.21 | -24.01 | -21.2 | -52.21 | 4.5 | 2.5 | 0 | P |
| | | 5029.4 | -56.38 | -15.18 | -41.2 | -63.38 | 4.5 | 2.5 | 0 | A |
| | * | 5298 | 14.32 | - | - | 7.32 | 4.5 | 2.5 | 0 | P |
| | * | 5298 | 5 | - | - | -2 | 4.5 | 2.5 | 0 | A |
| | | 5406.1 | -41.62 | -20.42 | -21.2 | -48.62 | 4.5 | 2.5 | 0 | P |
| | | 5405.44 | -51.65 | -10.45 | -41.2 | -58.65 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 64 5320MHz | * | 5319 | 13.74 | - | - | 6.74 | 4.5 | 2.5 | 0 | P |
| | * | 5319 | 5.21 | - | - | -1.79 | 4.5 | 2.5 | 0 | A |
| | | 5352.09 | -37.08 | -15.88 | -21.2 | -44.08 | 4.5 | 2.5 | 0 | P |
| | | 5424.69 | -51.35 | -10.15 | -41.2 | -58.35 | 4.5 | 2.5 | 0 | A |

**15E 5250~5350MHz**

**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n | * | 5260 | 12.64 | - | - | 5.64 | 4.5 | 2.5 | 0 | P |
| HT20 | * | 5260 | 4.3 | - | - | -2.7 | 4.5 | 2.5 | 0 | A |
| CH 52 | | 5365.84 | -41.27 | -20.07 | -21.2 | -48.27 | 4.5 | 2.5 | 0 | P |
| 5260MHz | | 5365.62 | -51.45 | -10.25 | -41.2 | -58.45 | 4.5 | 2.5 | 0 | A |
| | | 5029.55 | -46.21 | -25.01 | -21.2 | -53.21 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5027.75 | -56.31 | -15.11 | -41.2 | -63.31 | 4.5 | 2.5 | 0 | A |
| HT20 | * | 5301 | 12.7 | - | - | 5.7 | 4.5 | 2.5 | 0 | P |
| CH 60 | * | 5301 | 4.61 | - | - | -2.39 | 4.5 | 2.5 | 0 | A |
| 5300MHz | | 5400.71 | -41.54 | -20.34 | -21.2 | -48.54 | 4.5 | 2.5 | 0 | P |
| | | 5403.13 | -52.6 | -11.4 | -41.2 | -59.6 | 4.5 | 2.5 | 0 | A |
| 802.11n | * | 5318 | 12.92 | - | - | 5.92 | 4.5 | 2.5 | 0 | P |
| HT20 | * | 5318 | 4.5 | - | - | -2.5 | 4.5 | 2.5 | 0 | A |
| CH 64 | | 5354.51 | -38.1 | -16.9 | -21.2 | -45.1 | 4.5 | 2.5 | 0 | P |
| 5320MHz | | 5427.22 | -51.76 | -10.56 | -41.2 | -58.76 | 4.5 | 2.5 | 0 | A |
| 2 | | | | | | | | | | |
| 802.11n | * | 5258 | 13.95 | - | - | 6.95 | 4.5 | 2.5 | 0 | P |
| HT20 | * | 5258 | 4.87 | - | - | -2.13 | 4.5 | 2.5 | 0 | A |
| CH 52 | | 5364.96 | -40.57 | -19.37 | -21.2 | -47.57 | 4.5 | 2.5 | 0 | P |
| 5260MHz | | 5363.2 | -51.21 | -10.01 | -41.2 | -58.21 | 4.5 | 2.5 | 0 | A |
| | | 5030 | -45.97 | -24.77 | -21.2 | -52.97 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5027.15 | -55.98 | -14.78 | -41.2 | -62.98 | 4.5 | 2.5 | 0 | A |
| HT20 | * | 5298 | 13.53 | - | - | 6.53 | 4.5 | 2.5 | 0 | P |
| CH 60 | * | 5298 | 5.02 | - | - | -1.98 | 4.5 | 2.5 | 0 | A |
| 5300MHz | | 5355.28 | -40.18 | -18.98 | -21.2 | -47.18 | 4.5 | 2.5 | 0 | P |
| | | 5405.44 | -52 | -10.8 | -41.2 | -59 | 4.5 | 2.5 | 0 | A |
| 802.11n | * | 5322 | 13.41 | - | - | 6.41 | 4.5 | 2.5 | 0 | P |
| HT20 | * | 5322 | 4.96 | - | - | -2.04 | 4.5 | 2.5 | 0 | A |
| CH 64 | | 5352.31 | -34.37 | -13.17 | -21.2 | -41.37 | 4.5 | 2.5 | 0 | P |
| 5320MHz | | 5425.57 | -51.28 | -10.08 | -41.2 | -58.28 | 4.5 | 2.5 | 0 | A |

**15E 5250~5350MHz**

**WIFI 802.11n HT40 (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| | | 5146.4 | -43.55 | -22.35 | -21.2 | -50.55 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5150 | -55.16 | -13.96 | -41.2 | -62.16 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5268 | 14.02 | - | - | 7.02 | 4.5 | 2.5 | 0 | P |
| CH 54 | * | 5268 | 5.29 | - | - | -1.71 | 4.5 | 2.5 | 0 | A |
| 5270MHz | | 5350.66 | -33.26 | -12.06 | -21.2 | -40.26 | 4.5 | 2.5 | 0 | P |
| | | 5365.29 | -50.67 | -9.47 | -41.2 | -57.67 | 4.5 | 2.5 | 0 | A |
| | | 5114.15 | -49.55 | -28.35 | -21.2 | -56.55 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5042.3 | -60.8 | -19.6 | -41.2 | -67.8 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5308 | 8.17 | - | - | 1.17 | 4.5 | 2.5 | 0 | P |
| CH 62 | * | 5308 | -0.25 | - | - | -7.25 | 4.5 | 2.5 | 0 | A |
| 5310MHz | | 5350.88 | -30.5 | -9.3 | -21.2 | -37.5 | 4.5 | 2.5 | 0 | P |
| | | 5350 | -47.44 | -6.24 | -41.2 | -54.44 | 4.5 | 2.5 | 0 | A |
| 2 | | | | | | | | | | |
| | | 5150 | -43.58 | -22.38 | -21.2 | -50.58 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5149.85 | -55.39 | -14.19 | -41.2 | -62.39 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5272 | 15.32 | - | - | 8.32 | 4.5 | 2.5 | 0 | P |
| CH 54 | * | 5272 | 5.84 | - | - | -1.16 | 4.5 | 2.5 | 0 | A |
| 5270MHz | | 5350.77 | -32.84 | -11.64 | -21.2 | -39.84 | 4.5 | 2.5 | 0 | P |
| | | 5376.18 | -50.18 | -8.98 | -41.2 | -57.18 | 4.5 | 2.5 | 0 | A |
| | | 5126.6 | -50.05 | -28.85 | -21.2 | -57.05 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5134.85 | -60.88 | -19.68 | -41.2 | -67.88 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5312 | 8.64 | - | - | 1.64 | 4.5 | 2.5 | 0 | P |
| CH 62 | * | 5312 | 0.28 | - | - | -6.72 | 4.5 | 2.5 | 0 | A |
| 5310MHz | | 5350.99 | -29.84 | -8.64 | -21.2 | -36.84 | 4.5 | 2.5 | 0 | P |
| | | 5351.1 | -45.6 | -4.4 | -41.2 | -52.6 | 4.5 | 2.5 | 0 | A |

**15E 5470~5725MHz**

**WIFI 802.11a (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11a CH 100 5500MHz | | 5466.64 | -32.17 | -10.97 | -21.2 | -39.17 | 4.5 | 2.5 | 0 | P |
| | | 5469.84 | -48.39 | -7.19 | -41.2 | -55.39 | 4.5 | 2.5 | 0 | A |
| | * | 5499 | 14.06 | - | - | 7.06 | 4.5 | 2.5 | 0 | P |
| | * | 5499 | 5.62 | - | - | -1.38 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 116 5580MHz | | 5467.76 | -36.47 | -15.27 | -21.2 | -43.47 | 4.5 | 2.5 | 0 | P |
| | | 5469.84 | -50.69 | -9.49 | -41.2 | -57.69 | 4.5 | 2.5 | 0 | A |
| | * | 5579 | 17.2 | - | - | 10.2 | 4.5 | 2.5 | 0 | P |
| | * | 5579 | 9.81 | - | - | 2.81 | 4.5 | 2.5 | 0 | A |
| | | 5726.84 | -45.71 | -24.51 | -21.2 | -52.71 | 4.5 | 2.5 | 0 | P |
| | | 5726.68 | -58.82 | -17.62 | -41.2 | -65.82 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 140 5700MHz | * | 5699 | 12.59 | - | - | 5.59 | 4.5 | 2.5 | 0 | P |
| | * | 5699 | 3.87 | - | - | -3.13 | 4.5 | 2.5 | 0 | A |
| | | 5725.32 | -32.89 | -11.69 | -21.2 | -39.89 | 4.5 | 2.5 | 0 | P |
| | | 5725.08 | -49.8 | -8.6 | -41.2 | -56.8 | 4.5 | 2.5 | 0 | A |
| 2 | | | | | | | | | | |
| 802.11a CH 100 5500MHz | | 5469.52 | -30.55 | -9.35 | -21.2 | -37.55 | 4.5 | 2.5 | 0 | P |
| | | 5470 | -48.08 | -6.88 | -41.2 | -55.08 | 4.5 | 2.5 | 0 | A |
| | * | 5499 | 14.68 | - | - | 7.68 | 4.5 | 2.5 | 0 | P |
| | * | 5499 | 6.49 | - | - | -0.51 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 116 5580MHz | | 5469.36 | -39.51 | -18.31 | -21.2 | -46.51 | 4.5 | 2.5 | 0 | P |
| | | 5469.68 | -49.17 | -7.97 | -41.2 | -56.17 | 4.5 | 2.5 | 0 | A |
| | * | 5581 | 18.61 | - | - | 11.61 | 4.5 | 2.5 | 0 | P |
| | * | 5581 | 10.2 | - | - | 3.2 | 4.5 | 2.5 | 0 | A |
| | | 5731.24 | -46.36 | -25.16 | -21.2 | -53.36 | 4.5 | 2.5 | 0 | P |
| | | 5729.8 | -59.1 | -17.9 | -41.2 | -66.1 | 4.5 | 2.5 | 0 | A |
| 802.11a CH 140 5700MHz | * | 5701 | 13.56 | - | - | 6.56 | 4.5 | 2.5 | 0 | P |
| | * | 5701 | 3.81 | - | - | -3.19 | 4.5 | 2.5 | 0 | A |
| | | 5726.92 | -31.34 | -10.14 | -21.2 | -38.34 | 4.5 | 2.5 | 0 | P |
| | | 5725.24 | -50.02 | -8.82 | -41.2 | -57.02 | 4.5 | 2.5 | 0 | A |

**15E 5470~5725MHz**

**WIFI 802.11n HT20 (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n | | 5468.88 | -29.82 | -8.62 | -21.2 | -36.82 | 4.5 | 2.5 | 0 | P |
| HT20 | | 5470 | -49.06 | -7.86 | -41.2 | -56.06 | 4.5 | 2.5 | 0 | A |
| CH 100 | * | 5499 | 13.85 | - | - | 6.85 | 4.5 | 2.5 | 0 | P |
| 5500MHz | * | 5499 | 5.15 | - | - | -1.85 | 4.5 | 2.5 | 0 | A |
| | | 5469.2 | -40.57 | -19.37 | -21.2 | -47.57 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5470 | -50.78 | -9.58 | -41.2 | -57.78 | 4.5 | 2.5 | 0 | A |
| HT20 | * | 5581 | 17.57 | - | - | 10.57 | 4.5 | 2.5 | 0 | P |
| CH 116 | * | 5581 | 9.1 | - | - | 2.1 | 4.5 | 2.5 | 0 | A |
| 5580MHz | | 5725.64 | -45.13 | -23.93 | -21.2 | -52.13 | 4.5 | 2.5 | 0 | P |
| | | 5730.12 | -58.78 | -17.58 | -41.2 | -65.78 | 4.5 | 2.5 | 0 | A |
| 802.11n | * | 5699 | 12.03 | - | - | 5.03 | 4.5 | 2.5 | 0 | P |
| HT20 | * | 5699 | 3.59 | - | - | -3.41 | 4.5 | 2.5 | 0 | A |
| CH 140 | | 5727.32 | -31.92 | -10.72 | -21.2 | -38.92 | 4.5 | 2.5 | 0 | P |
| 5700MHz | | 5725.08 | -49.41 | -8.21 | -41.2 | -56.41 | 4.5 | 2.5 | 0 | A |
| 2 | | | | | | | | | | |
| 802.11n | | 5469.84 | -28.85 | -7.65 | -21.2 | -35.85 | 4.5 | 2.5 | 0 | P |
| HT20 | | 5469.84 | -46.83 | -5.63 | -41.2 | -53.83 | 4.5 | 2.5 | 0 | A |
| CH 100 | * | 5502 | 14.73 | - | - | 7.73 | 4.5 | 2.5 | 0 | P |
| 5500MHz | * | 5502 | 6.39 | - | - | -0.61 | 4.5 | 2.5 | 0 | A |
| | | 5470 | -40.38 | -19.18 | -21.2 | -47.38 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5469.04 | -49.95 | -8.75 | -41.2 | -56.95 | 4.5 | 2.5 | 0 | A |
| HT20 | * | 5578 | 17.98 | - | - | 10.98 | 4.5 | 2.5 | 0 | P |
| CH 116 | * | 5578 | 9.78 | - | - | 2.78 | 4.5 | 2.5 | 0 | A |
| 5580MHz | | 5730.76 | -45.81 | -24.61 | -21.2 | -52.81 | 4.5 | 2.5 | 0 | P |
| | | 5728.36 | -58.89 | -17.69 | -41.2 | -65.89 | 4.5 | 2.5 | 0 | A |
| 802.11n | * | 5698 | 12.82 | - | - | 5.82 | 4.5 | 2.5 | 0 | P |
| HT20 | * | 5698 | 4.13 | - | - | -2.87 | 4.5 | 2.5 | 0 | A |
| CH 140 | | 5729.96 | -32.75 | -11.55 | -21.2 | -39.75 | 4.5 | 2.5 | 0 | P |
| 5700MHz | | 5725.16 | -49.56 | -8.36 | -41.2 | -56.56 | 4.5 | 2.5 | 0 | A |

**15E 5470~5725MHz**

**WIFI 802.11n HT40 (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | ( dBµV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n | | 5469.82 | -24.71 | -3.51 | -21.2 | -31.71 | 4.5 | 2.5 | 0 | P |
| HT40 | | 5470 | -44.25 | -3.05 | -41.2 | -51.25 | 4.5 | 2.5 | 0 | A |
| CH 102 | * | 5512 | 6.92 | - | - | -0.08 | 4.5 | 2.5 | 0 | P |
| 5510MHz | * | 5512 | -1.57 | - | - | -8.57 | 4.5 | 2.5 | 0 | A |
| | | 5467.44 | -26.45 | -5.25 | -21.2 | -33.45 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5469.84 | -43.86 | -2.66 | -41.2 | -50.86 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5552 | 13.6 | - | - | 6.6 | 4.5 | 2.5 | 0 | P |
| CH 110 | * | 5552 | 4.72 | - | - | -2.28 | 4.5 | 2.5 | 0 | A |
| 5550MHz | | 5727.8 | -46.65 | -25.45 | -21.2 | -53.65 | 4.5 | 2.5 | 0 | P |
| | | 5751.08 | -58.79 | -17.59 | -41.2 | -65.79 | 4.5 | 2.5 | 0 | A |
| 802.11n | * | 5675 | 9.84 | - | - | 2.84 | 4.5 | 2.5 | 0 | P |
| HT40 | * | 5675 | 1.33 | - | - | -5.67 | 4.5 | 2.5 | 0 | A |
| CH 134 | | 5733.08 | -36.55 | -15.35 | -21.2 | -43.55 | 4.5 | 2.5 | 0 | P |
| 5670MHz | | 5746.12 | -53.04 | -11.84 | -41.2 | -60.04 | 4.5 | 2.5 | 0 | A |
| 2 | | | | | | | | | | |
| 802.11n | | 5469.82 | -22.81 | -1.61 | -21.2 | -29.81 | 4.5 | 2.5 | 0 | P |
| HT40 | | 5470 | -41.98 | -0.78 | -41.2 | -48.98 | 4.5 | 2.5 | 0 | A |
| CH 102 | * | 5512 | 8.22 | - | - | 1.22 | 4.5 | 2.5 | 0 | P |
| 5510MHz | * | 5512 | -0.54 | - | - | -7.54 | 4.5 | 2.5 | 0 | A |
| | | 5469.68 | -26.14 | -4.94 | -21.2 | -33.14 | 4.5 | 2.5 | 0 | P |
| 802.11n | | 5470 | -45.08 | -3.88 | -41.2 | -52.08 | 4.5 | 2.5 | 0 | A |
| HT40 | * | 5548 | 13.9 | - | - | 6.9 | 4.5 | 2.5 | 0 | P |
| CH 110 | * | 5548 | 5.53 | - | - | -1.47 | 4.5 | 2.5 | 0 | A |
| 5550MHz | | 5729.8 | -47.74 | -26.54 | -21.2 | -54.74 | 4.5 | 2.5 | 0 | P |
| | | 5753.48 | -58.88 | -17.68 | -41.2 | -65.88 | 4.5 | 2.5 | 0 | A |
| 802.11n | * | 5668 | 10.56 | - | - | 3.56 | 4.5 | 2.5 | 0 | P |
| HT40 | * | 5668 | 1.36 | - | - | -5.64 | 4.5 | 2.5 | 0 | A |
| CH 134 | | 5733.08 | -32.66 | -11.46 | -21.2 | -39.66 | 4.5 | 2.5 | 0 | P |
| 5670MHz | | 5751.24 | -52.43 | -11.23 | -41.2 | -59.43 | 4.5 | 2.5 | 0 | A |

### 3.4.7 Test Result of Conducted Spurious Emission in the Restricted Band

**15E 5150~5250MHz**

**WIFI 802.11a (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11a CH 36 5180MHz | | 120.45 | -60.63 | -8.93 | -51.7 | -72.33 | 4.5 | 2.5 | 4.7 | P |
| | | 161.76 | -60.39 | -8.69 | -51.7 | -72.09 | 4.5 | 2.5 | 4.7 | P |
| | | 220.08 | -60.65 | -11.45 | -49.2 | -72.35 | 4.5 | 2.5 | 4.7 | P |
| | | 533.1 | -60.47 | -11.27 | -49.2 | -72.17 | 4.5 | 2.5 | 4.7 | P |
| | | 694.1 | -59.79 | -10.59 | -49.2 | -71.49 | 4.5 | 2.5 | 4.7 | P |
| | | 839.7 | -59.66 | -10.46 | -49.2 | -71.36 | 4.5 | 2.5 | 4.7 | P |
| | | 10360 | -66.68 | -45.48 | -21.2 | -73.68 | 4.5 | 2.5 | 0 | P |
| | | 15540 | -54.34 | -33.14 | -21.2 | -61.34 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 44 5220MHz | | 113.7 | -59.25 | -7.55 | -51.7 | -70.95 | 4.5 | 2.5 | 4.7 | P |
| | | 180.39 | -60.99 | -9.29 | -51.7 | -72.69 | 4.5 | 2.5 | 4.7 | P |
| | | 232.23 | -60.84 | -11.64 | -49.2 | -72.54 | 4.5 | 2.5 | 4.7 | P |
| | | 419 | -60.73 | -11.53 | -49.2 | -72.43 | 4.5 | 2.5 | 4.7 | P |
| | | 602.4 | -59.93 | -10.73 | -49.2 | -71.63 | 4.5 | 2.5 | 4.7 | P |
| | | 794.9 | -60.29 | -11.09 | -49.2 | -71.99 | 4.5 | 2.5 | 4.7 | P |
| | | 10440 | -64.26 | -43.06 | -21.2 | -71.26 | 4.5 | 2.5 | 0 | P |
| | | 15660 | -55.17 | -33.97 | -21.2 | -62.17 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 48 5240MHz | | 91.02 | -59.55 | -7.85 | -51.7 | -71.25 | 4.5 | 2.5 | 4.7 | P |
| | | 209.28 | -60.95 | -9.25 | -51.7 | -72.65 | 4.5 | 2.5 | 4.7 | P |
| | | 255.45 | -60.02 | -10.82 | -49.2 | -71.72 | 4.5 | 2.5 | 4.7 | P |
| | | 435.1 | -60.7 | -11.5 | -49.2 | -72.4 | 4.5 | 2.5 | 4.7 | P |
| | | 630.4 | -61.43 | -12.23 | -49.2 | -73.13 | 4.5 | 2.5 | 4.7 | P |
| | | 853.7 | -60.57 | -11.37 | -49.2 | -72.27 | 4.5 | 2.5 | 4.7 | P |
| | | 10480 | -63.69 | -42.49 | -21.2 | -70.69 | 4.5 | 2.5 | 0 | P |
| | | 15720 | -54.96 | -33.76 | -21.2 | -61.96 | 4.5 | 2.5 | 0 | P |

**15E 5150~5250MHz**

**WIFI 802.11a (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11a CH 36 5180MHz | | 67.8 | -60.37 | -5.17 | -55.2 | -72.07 | 4.5 | 2.5 | 4.7 | P |
| | | 163.92 | -60.63 | -8.93 | -51.7 | -72.33 | 4.5 | 2.5 | 4.7 | P |
| | | 262.2 | -61.25 | -12.05 | -49.2 | -72.95 | 4.5 | 2.5 | 4.7 | P |
| | | 442.8 | -60.32 | -11.12 | -49.2 | -72.02 | 4.5 | 2.5 | 4.7 | P |
| | | 554.8 | -60.2 | -11 | -49.2 | -71.9 | 4.5 | 2.5 | 4.7 | P |
| | | 829.2 | -60.51 | -11.31 | -49.2 | -72.21 | 4.5 | 2.5 | 4.7 | P |
| | | 10360 | -66.19 | -44.99 | -21.2 | -73.19 | 4.5 | 2.5 | 0 | P |
| | | 15540 | -53.86 | -32.66 | -21.2 | -60.86 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 44 5220MHz | | 140.7 | -60.37 | -8.67 | -51.7 | -72.07 | 4.5 | 2.5 | 4.7 | P |
| | | 196.32 | -60.91 | -9.21 | -51.7 | -72.61 | 4.5 | 2.5 | 4.7 | P |
| | | 251.94 | -60.54 | -11.34 | -49.2 | -72.24 | 4.5 | 2.5 | 4.7 | P |
| | | 603.8 | -60.39 | -11.19 | -49.2 | -72.09 | 4.5 | 2.5 | 4.7 | P |
| | | 706.7 | -60.43 | -11.23 | -49.2 | -72.13 | 4.5 | 2.5 | 4.7 | P |
| | | 947.5 | -59.42 | -10.22 | -49.2 | -71.12 | 4.5 | 2.5 | 4.7 | P |
| | | 10440 | -64.85 | -43.65 | -21.2 | -71.85 | 4.5 | 2.5 | 0 | P |
| | | 15660 | -53.5 | -32.3 | -21.2 | -60.5 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 48 5240MHz | | 100.47 | -60.97 | -9.27 | -51.7 | -72.67 | 4.5 | 2.5 | 4.7 | P |
| | | 154.47 | -61.78 | -10.08 | -51.7 | -73.48 | 4.5 | 2.5 | 4.7 | P |
| | | 255.99 | -61.39 | -12.19 | -49.2 | -73.09 | 4.5 | 2.5 | 4.7 | P |
| | | 419.7 | -60.3 | -11.1 | -49.2 | -72 | 4.5 | 2.5 | 4.7 | P |
| | | 601.7 | -59.58 | -10.38 | -49.2 | -71.28 | 4.5 | 2.5 | 4.7 | P |
| | | 879.6 | -60.57 | -11.37 | -49.2 | -72.27 | 4.5 | 2.5 | 4.7 | P |
| | | 10480 | -64.44 | -43.24 | -21.2 | -71.44 | 4.5 | 2.5 | 0 | P |
| | | 15720 | -55.75 | -34.55 | -21.2 | -62.75 | 4.5 | 2.5 | 0 | P |

**15E 5150~5250MHz**

**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT20 CH 36 5180MHz | | 57.54 | -62.05 | -6.85 | -55.2 | -73.75 | 4.5 | 2.5 | 4.7 | P |
| | | 147.18 | -62.36 | -10.66 | -51.7 | -74.06 | 4.5 | 2.5 | 4.7 | P |
| | | 238.44 | -63.2 | -14 | -49.2 | -74.9 | 4.5 | 2.5 | 4.7 | P |
| | | 518.4 | -61.66 | -12.46 | -49.2 | -73.36 | 4.5 | 2.5 | 4.7 | P |
| | | 700.4 | -60.64 | -11.44 | -49.2 | -72.34 | 4.5 | 2.5 | 4.7 | P |
| | | 839 | -61.98 | -12.78 | -49.2 | -73.68 | 4.5 | 2.5 | 4.7 | P |
| | | 10360 | -66.26 | -45.06 | -21.2 | -73.26 | 4.5 | 2.5 | 0 | P |
| | | 15540 | -54.03 | -32.83 | -21.2 | -61.03 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 44 5220MHz | | 97.5 | -60.87 | -9.17 | -51.7 | -72.57 | 4.5 | 2.5 | 4.7 | P |
| | | 162.3 | -60.7 | -9 | -51.7 | -72.4 | 4.5 | 2.5 | 4.7 | P |
| | | 227.64 | -60.75 | -11.55 | -49.2 | -72.45 | 4.5 | 2.5 | 4.7 | P |
| | | 435.1 | -61.06 | -11.86 | -49.2 | -72.76 | 4.5 | 2.5 | 4.7 | P |
| | | 654.9 | -60.74 | -11.54 | -49.2 | -72.44 | 4.5 | 2.5 | 4.7 | P |
| | | 750.1 | -60.79 | -11.59 | -49.2 | -72.49 | 4.5 | 2.5 | 4.7 | P |
| | | 10440 | -63.84 | -42.64 | -21.2 | -70.84 | 4.5 | 2.5 | 0 | P |
| | | 15660 | -54.57 | -33.37 | -21.2 | -61.57 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 48 5240MHz | | 110.46 | -61 | -9.3 | -51.7 | -72.7 | 4.5 | 2.5 | 4.7 | P |
| | | 176.61 | -61.14 | -9.44 | -51.7 | -72.84 | 4.5 | 2.5 | 4.7 | P |
| | | 225.75 | -60.81 | -11.61 | -49.2 | -72.51 | 4.5 | 2.5 | 4.7 | P |
| | | 471.5 | -59.69 | -10.49 | -49.2 | -71.39 | 4.5 | 2.5 | 4.7 | P |
| | | 675.2 | -58.89 | -9.69 | -49.2 | -70.59 | 4.5 | 2.5 | 4.7 | P |
| | | 947.5 | -59.23 | -10.03 | -49.2 | -70.93 | 4.5 | 2.5 | 4.7 | P |
| | | 10480 | -63.84 | -42.64 | -21.2 | -70.84 | 4.5 | 2.5 | 0 | P |
| | | 15720 | -54.92 | -33.72 | -21.2 | -61.92 | 4.5 | 2.5 | 0 | P |

**15E 5150~5250MHz**

**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT20 CH 36 5180MHz | | 91.02 | -60.37 | -8.67 | -51.7 | -72.07 | 4.5 | 2.5 | 4.7 | P |
| | | 168.78 | -60.78 | -9.08 | -51.7 | -72.48 | 4.5 | 2.5 | 4.7 | P |
| | | 248.97 | -61.02 | -11.82 | -49.2 | -72.72 | 4.5 | 2.5 | 4.7 | P |
| | | 430.9 | -60.7 | -11.5 | -49.2 | -72.4 | 4.5 | 2.5 | 4.7 | P |
| | | 638.8 | -60.74 | -11.54 | -49.2 | -72.44 | 4.5 | 2.5 | 4.7 | P |
| | | 869.1 | -59.35 | -10.15 | -49.2 | -71.05 | 4.5 | 2.5 | 4.7 | P |
| | | 10360 | -66.27 | -45.07 | -21.2 | -73.27 | 4.5 | 2.5 | 0 | P |
| | | 15540 | -54.46 | -33.26 | -21.2 | -61.46 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 44 5220MHz | | 121.26 | -60.99 | -9.29 | -51.7 | -72.69 | 4.5 | 2.5 | 4.7 | P |
| | | 159.6 | -60.63 | -8.93 | -51.7 | -72.33 | 4.5 | 2.5 | 4.7 | P |
| | | 259.77 | -61.36 | -12.16 | -49.2 | -73.06 | 4.5 | 2.5 | 4.7 | P |
| | | 668.2 | -60.96 | -11.76 | -49.2 | -72.66 | 4.5 | 2.5 | 4.7 | P |
| | | 724.9 | -59.05 | -9.85 | -49.2 | -70.75 | 4.5 | 2.5 | 4.7 | P |
| | | 773.2 | -63.36 | -14.16 | -49.2 | -75.06 | 4.5 | 2.5 | 4.7 | P |
| | | 10440 | -64.49 | -43.29 | -21.2 | -71.49 | 4.5 | 2.5 | 0 | P |
| | | 15660 | -54.85 | -33.65 | -21.2 | -61.85 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 48 5240MHz | | 140.7 | -60.83 | -9.13 | -51.7 | -72.53 | 4.5 | 2.5 | 4.7 | P |
| | | 237.9 | -60.03 | -10.83 | -49.2 | -71.73 | 4.5 | 2.5 | 4.7 | P |
| | | 265.44 | -59.73 | -10.53 | -49.2 | -71.43 | 4.5 | 2.5 | 4.7 | P |
| | | 595.4 | -60.61 | -11.41 | -49.2 | -72.31 | 4.5 | 2.5 | 4.7 | P |
| | | 673.1 | -60.19 | -10.99 | -49.2 | -71.89 | 4.5 | 2.5 | 4.7 | P |
| | | 874 | -58.81 | -9.61 | -49.2 | -70.51 | 4.5 | 2.5 | 4.7 | P |
| | | 10480 | -64.29 | -43.09 | -21.2 | -71.29 | 4.5 | 2.5 | 0 | P |
| | | 15720 | -55.71 | -34.51 | -21.2 | -62.71 | 4.5 | 2.5 | 0 | P |

**15E 5150~5250MHz**

**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT40 CH 38 5190MHz | | 153.66 | -60.92 | -9.22 | -51.7 | -72.62 | 4.5 | 2.5 | 4.7 | P |
| | | 177.42 | -60.76 | -9.06 | -51.7 | -72.46 | 4.5 | 2.5 | 4.7 | P |
| | | 238.17 | -60.55 | -11.35 | -49.2 | -72.25 | 4.5 | 2.5 | 4.7 | P |
| | | 487.6 | -58.92 | -9.72 | -49.2 | -70.62 | 4.5 | 2.5 | 4.7 | P |
| | | 679.4 | -60.39 | -11.19 | -49.2 | -72.09 | 4.5 | 2.5 | 4.7 | P |
| | | 904.8 | -59.98 | -10.78 | -49.2 | -71.68 | 4.5 | 2.5 | 4.7 | P |
| | | 10380 | -64.74 | -43.54 | -21.2 | -71.74 | 4.5 | 2.5 | 0 | P |
| | | 15570 | -53.64 | -32.44 | -21.2 | -60.64 | 4.5 | 2.5 | 0 | P |
| 802.11n HT40 CH 46 5230MHz | | 85.89 | -60.24 | -5.04 | -55.2 | -71.94 | 4.5 | 2.5 | 4.7 | P |
| | | 121.26 | -60.58 | -8.88 | -51.7 | -72.28 | 4.5 | 2.5 | 4.7 | P |
| | | 176.88 | -60.02 | -8.32 | -51.7 | -71.72 | 4.5 | 2.5 | 4.7 | P |
| | | 414.1 | -60.76 | -11.56 | -49.2 | -72.46 | 4.5 | 2.5 | 4.7 | P |
| | | 540.8 | -60.71 | -11.51 | -49.2 | -72.41 | 4.5 | 2.5 | 4.7 | P |
| | | 649.3 | -60.93 | -11.73 | -49.2 | -72.63 | 4.5 | 2.5 | 4.7 | P |
| | | 10460 | -64.48 | -43.28 | -21.2 | -71.48 | 4.5 | 2.5 | 0 | P |
| | | 15690 | -53.7 | -32.5 | -21.2 | -60.7 | 4.5 | 2.5 | 0 | P |

**15E 5150~5250MHz**

**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT40 CH 38 5190MHz | | 85.89 | -60.24 | -5.04 | -55.2 | -71.94 | 4.5 | 2.5 | 4.7 | P |
| | | 121.26 | -60.58 | -8.88 | -51.7 | -72.28 | 4.5 | 2.5 | 4.7 | P |
| | | 176.88 | -60.02 | -8.32 | -51.7 | -71.72 | 4.5 | 2.5 | 4.7 | P |
| | | 414.1 | -60.76 | -11.56 | -49.2 | -72.46 | 4.5 | 2.5 | 4.7 | P |
| | | 540.8 | -60.71 | -11.51 | -49.2 | -72.41 | 4.5 | 2.5 | 4.7 | P |
| | | 649.3 | -60.93 | -11.73 | -49.2 | -72.63 | 4.5 | 2.5 | 4.7 | P |
| | | 10460 | -64.48 | -43.28 | -21.2 | -71.48 | 4.5 | 2.5 | 0 | P |
| | | 15690 | -53.7 | -32.5 | -21.2 | -60.7 | 4.5 | 2.5 | 0 | P |
| 802.11n HT40 CH 46 5230MHz | | 78.33 | -59.69 | -4.49 | -55.2 | -71.39 | 4.5 | 2.5 | 4.7 | P |
| | | 163.11 | -60.6 | -8.9 | -51.7 | -72.3 | 4.5 | 2.5 | 4.7 | P |
| | | 209.82 | -60.92 | -9.22 | -51.7 | -72.62 | 4.5 | 2.5 | 4.7 | P |
| | | 410.6 | -60.47 | -11.27 | -49.2 | -72.17 | 4.5 | 2.5 | 4.7 | P |
| | | 640.2 | -63.01 | -13.81 | -49.2 | -74.71 | 4.5 | 2.5 | 4.7 | P |
| | | 869.1 | -59.79 | -10.59 | -49.2 | -71.49 | 4.5 | 2.5 | 4.7 | P |
| | | 10460 | -64.47 | -43.27 | -21.2 | -71.47 | 4.5 | 2.5 | 0 | P |
| | | 15690 | -54.72 | -33.52 | -21.2 | -61.72 | 4.5 | 2.5 | 0 | P |

**15E 5250~5350MHz**

**WIFI 802.11a (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11a CH 52 5260MHz | | 71.85 | -60.23 | -5.03 | -55.2 | -71.93 | 4.5 | 2.5 | 4.7 | P |
| | | 136.65 | -61.03 | -9.33 | -51.7 | -72.73 | 4.5 | 2.5 | 4.7 | P |
| | | 230.61 | -60.11 | -10.91 | -49.2 | -71.81 | 4.5 | 2.5 | 4.7 | P |
| | | 510 | -60.23 | -11.03 | -49.2 | -71.93 | 4.5 | 2.5 | 4.7 | P |
| | | 664 | -60.88 | -11.68 | -49.2 | -72.58 | 4.5 | 2.5 | 4.7 | P |
| | | 825 | -60.41 | -11.21 | -49.2 | -72.11 | 4.5 | 2.5 | 4.7 | P |
| | | 10520 | -64.74 | -43.54 | -21.2 | -71.74 | 4.5 | 2.5 | 0 | P |
| | | 15780 | -55.92 | -34.72 | -21.2 | -62.92 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 60 5300MHz | | 72.12 | -60.57 | -5.37 | -55.2 | -72.27 | 4.5 | 2.5 | 4.7 | P |
| | | 123.42 | -60.4 | -8.7 | -51.7 | -72.1 | 4.5 | 2.5 | 4.7 | P |
| | | 230.88 | -60.67 | -11.47 | -49.2 | -72.37 | 4.5 | 2.5 | 4.7 | P |
| | | 365.8 | -60.19 | -10.99 | -49.2 | -71.89 | 4.5 | 2.5 | 4.7 | P |
| | | 600.3 | -60.93 | -11.73 | -49.2 | -72.63 | 4.5 | 2.5 | 4.7 | P |
| | | 755.7 | -59.75 | -10.55 | -49.2 | -71.45 | 4.5 | 2.5 | 4.7 | P |
| | | 10600 | -63.46 | -42.26 | -21.2 | -70.46 | 4.5 | 2.5 | 0 | P |
| | | 15900 | -56.75 | -35.55 | -21.2 | -63.75 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 64 5320MHz | | 94.53 | -60.12 | -8.42 | -51.7 | -71.82 | 4.5 | 2.5 | 4.7 | P |
| | | 146.64 | -60.97 | -9.27 | -51.7 | -72.67 | 4.5 | 2.5 | 4.7 | P |
| | | 267.06 | -60.4 | -11.2 | -49.2 | -72.1 | 4.5 | 2.5 | 4.7 | P |
| | | 479.9 | -60.51 | -11.31 | -49.2 | -72.21 | 4.5 | 2.5 | 4.7 | P |
| | | 658.4 | -60.2 | -11 | -49.2 | -71.9 | 4.5 | 2.5 | 4.7 | P |
| | | 896.4 | -60.51 | -11.31 | -49.2 | -72.21 | 4.5 | 2.5 | 4.7 | P |
| | | 10640 | -63.81 | -42.61 | -21.2 | -70.81 | 4.5 | 2.5 | 0 | P |
| | | 15960 | -55.04 | -33.84 | -21.2 | -62.04 | 4.5 | 2.5 | 0 | P |

**15E 5250~5350MHz**

**WIFI 802.11a (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11a CH 52 5260MHz | | 145.02 | -61.02 | -9.32 | -51.7 | -72.72 | 4.5 | 2.5 | 4.7 | P |
| | | 176.88 | -59.5 | -7.8 | -51.7 | -71.2 | 4.5 | 2.5 | 4.7 | P |
| | | 234.93 | -60.58 | -11.38 | -49.2 | -72.28 | 4.5 | 2.5 | 4.7 | P |
| | | 510.7 | -60.44 | -11.24 | -49.2 | -72.14 | 4.5 | 2.5 | 4.7 | P |
| | | 722.8 | -59.03 | -9.83 | -49.2 | -70.73 | 4.5 | 2.5 | 4.7 | P |
| | | 912.5 | -59.98 | -10.78 | -49.2 | -71.68 | 4.5 | 2.5 | 4.7 | P |
| | | 10520 | -63.62 | -42.42 | -21.2 | -70.62 | 4.5 | 2.5 | 0 | P |
| | | 15780 | -55.5 | -34.3 | -21.2 | -62.5 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 60 5300MHz | | 142.86 | -60.1 | -8.4 | -51.7 | -71.8 | 4.5 | 2.5 | 4.7 | P |
| | | 198.75 | -60.73 | -9.03 | -51.7 | -72.43 | 4.5 | 2.5 | 4.7 | P |
| | | 253.83 | -61.06 | -11.86 | -49.2 | -72.76 | 4.5 | 2.5 | 4.7 | P |
| | | 398.7 | -61.27 | -12.07 | -49.2 | -72.97 | 4.5 | 2.5 | 4.7 | P |
| | | 603.1 | -60.67 | -11.47 | -49.2 | -72.37 | 4.5 | 2.5 | 4.7 | P |
| | | 776.7 | -60.45 | -11.25 | -49.2 | -72.15 | 4.5 | 2.5 | 4.7 | P |
| | | 10600 | -64.29 | -43.09 | -21.2 | -71.29 | 4.5 | 2.5 | 0 | P |
| | | 15900 | -56.6 | -35.4 | -21.2 | -63.6 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 64 5320MHz | | 86.7 | -60.28 | -5.08 | -55.2 | -71.98 | 4.5 | 2.5 | 4.7 | P |
| | | 160.68 | -60.75 | -9.05 | -51.7 | -72.45 | 4.5 | 2.5 | 4.7 | P |
| | | 214.95 | -60.23 | -8.53 | -51.7 | -71.93 | 4.5 | 2.5 | 4.7 | P |
| | | 482.7 | -60.57 | -11.37 | -49.2 | -72.27 | 4.5 | 2.5 | 4.7 | P |
| | | 679.4 | -60.61 | -11.41 | -49.2 | -72.31 | 4.5 | 2.5 | 4.7 | P |
| | | 791.4 | -60.73 | -11.53 | -49.2 | -72.43 | 4.5 | 2.5 | 4.7 | P |
| | | 10640 | -64.86 | -43.66 | -21.2 | -71.86 | 4.5 | 2.5 | 0 | P |
| | | 15960 | -55.33 | -34.13 | -21.2 | -62.33 | 4.5 | 2.5 | 0 | P |

**15E 5250~5350MHz**

**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT20 CH 52 5260MHz | | 144.48 | -60.13 | -8.43 | -51.7 | -71.83 | 4.5 | 2.5 | 4.7 | P |
| | | 186.33 | -60.27 | -8.57 | -51.7 | -71.97 | 4.5 | 2.5 | 4.7 | P |
| | | 295.68 | -60.41 | -11.21 | -49.2 | -72.11 | 4.5 | 2.5 | 4.7 | P |
| | | 571.6 | -60.85 | -11.65 | -49.2 | -72.55 | 4.5 | 2.5 | 4.7 | P |
| | | 810.3 | -59.54 | -10.34 | -49.2 | -71.24 | 4.5 | 2.5 | 4.7 | P |
| | | 988.8 | -60.45 | -19.25 | -41.2 | -72.15 | 4.5 | 2.5 | 4.7 | P |
| | | 10520 | -63.53 | -42.33 | -21.2 | -70.53 | 4.5 | 2.5 | 0 | P |
| | | 15780 | -55.7 | -34.5 | -21.2 | -62.7 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 60 5300MHz | | 116.94 | -60.39 | -8.69 | -51.7 | -72.09 | 4.5 | 2.5 | 4.7 | P |
| | | 174.18 | -60.24 | -8.54 | -51.7 | -71.94 | 4.5 | 2.5 | 4.7 | P |
| | | 261.66 | -59.48 | -10.28 | -49.2 | -71.18 | 4.5 | 2.5 | 4.7 | P |
| | | 432.3 | -59.57 | -10.37 | -49.2 | -71.27 | 4.5 | 2.5 | 4.7 | P |
| | | 497.4 | -60.47 | -11.27 | -49.2 | -72.17 | 4.5 | 2.5 | 4.7 | P |
| | | 690.6 | -59.57 | -10.37 | -49.2 | -71.27 | 4.5 | 2.5 | 4.7 | P |
| | | 10600 | -65.42 | -44.22 | -21.2 | -72.42 | 4.5 | 2.5 | 0 | P |
| | | 15900 | -56.36 | -35.16 | -21.2 | -63.36 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 64 5320MHz | | 151.5 | -60.57 | -8.87 | -51.7 | -72.27 | 4.5 | 2.5 | 4.7 | P |
| | | 193.08 | -60.3 | -8.6 | -51.7 | -72 | 4.5 | 2.5 | 4.7 | P |
| | | 277.32 | -59.95 | -10.75 | -49.2 | -71.65 | 4.5 | 2.5 | 4.7 | P |
| | | 426.7 | -60.91 | -11.71 | -49.2 | -72.61 | 4.5 | 2.5 | 4.7 | P |
| | | 731.2 | -60.53 | -11.33 | -49.2 | -72.23 | 4.5 | 2.5 | 4.7 | P |
| | | 951 | -60.39 | -11.19 | -49.2 | -72.09 | 4.5 | 2.5 | 4.7 | P |
| | | 10640 | -64.94 | -43.74 | -21.2 | -71.94 | 4.5 | 2.5 | 0 | P |
| | | 15960 | -55.48 | -34.28 | -21.2 | -62.48 | 4.5 | 2.5 | 0 | P |

**15E 5250~5350MHz**

**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT20 CH 52 5260MHz | | 88.05 | -61.56 | -9.86 | -51.7 | -73.26 | 4.5 | 2.5 | 4.7 | P |
| | | 162.03 | -61.14 | -9.44 | -51.7 | -72.84 | 4.5 | 2.5 | 4.7 | P |
| | | 203.61 | -60.84 | -9.14 | -51.7 | -72.54 | 4.5 | 2.5 | 4.7 | P |
| | | 399.4 | -61.14 | -11.94 | -49.2 | -72.84 | 4.5 | 2.5 | 4.7 | P |
| | | 533.1 | -60.88 | -11.68 | -49.2 | -72.58 | 4.5 | 2.5 | 4.7 | P |
| | | 766.9 | -60.19 | -10.99 | -49.2 | -71.89 | 4.5 | 2.5 | 4.7 | P |
| | | 10520 | -65.87 | -44.67 | -21.2 | -72.87 | 4.5 | 2.5 | 0 | P |
| | | 15780 | -56.99 | -35.79 | -21.2 | -63.99 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 60 5300MHz | | 113.7 | -60.37 | -8.67 | -51.7 | -72.07 | 4.5 | 2.5 | 4.7 | P |
| | | 184.17 | -60.3 | -8.6 | -51.7 | -72 | 4.5 | 2.5 | 4.7 | P |
| | | 263.82 | -61.1 | -11.9 | -49.2 | -72.8 | 4.5 | 2.5 | 4.7 | P |
| | | 521.9 | -60.57 | -11.37 | -49.2 | -72.27 | 4.5 | 2.5 | 4.7 | P |
| | | 603.8 | -60.73 | -11.53 | -49.2 | -72.43 | 4.5 | 2.5 | 4.7 | P |
| | | 854.4 | -60.65 | -11.45 | -49.2 | -72.35 | 4.5 | 2.5 | 4.7 | P |
| | | 10600 | -65.6 | -44.4 | -21.2 | -72.6 | 4.5 | 2.5 | 0 | P |
| | | 15900 | -55.59 | -34.39 | -21.2 | -62.59 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 64 5320MHz | | 140.7 | -60.41 | -8.71 | -51.7 | -72.11 | 4.5 | 2.5 | 4.7 | P |
| | | 179.31 | -60.4 | -8.7 | -51.7 | -72.1 | 4.5 | 2.5 | 4.7 | P |
| | | 262.2 | -60.67 | -11.47 | -49.2 | -72.37 | 4.5 | 2.5 | 4.7 | P |
| | | 488.3 | -60.76 | -11.56 | -49.2 | -72.46 | 4.5 | 2.5 | 4.7 | P |
| | | 685.7 | -60.54 | -11.34 | -49.2 | -72.24 | 4.5 | 2.5 | 4.7 | P |
| | | 792.1 | -60.17 | -10.97 | -49.2 | -71.87 | 4.5 | 2.5 | 4.7 | P |
| | | 10640 | -63.82 | -42.62 | -21.2 | -70.82 | 4.5 | 2.5 | 0 | P |
| | | 15960 | -54.74 | -33.54 | -21.2 | -61.74 | 4.5 | 2.5 | 0 | P |

**15E 5250~5350MHz**

**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT40 CH 54 5270MHz | | 80.76 | -60.46 | -5.26 | -55.2 | -72.16 | 4.5 | 2.5 | 4.7 | P |
| | | 156.9 | -60.52 | -8.82 | -51.7 | -72.22 | 4.5 | 2.5 | 4.7 | P |
| | | 268.14 | -60.33 | -11.13 | -49.2 | -72.03 | 4.5 | 2.5 | 4.7 | P |
| | | 490.4 | -60.77 | -11.57 | -49.2 | -72.47 | 4.5 | 2.5 | 4.7 | P |
| | | 779.5 | -60.53 | -11.33 | -49.2 | -72.23 | 4.5 | 2.5 | 4.7 | P |
| | | 902 | -60.54 | -11.34 | -49.2 | -72.24 | 4.5 | 2.5 | 4.7 | P |
| | | 10540 | -64.45 | -43.25 | -21.2 | -71.45 | 4.5 | 2.5 | 0 | P |
| | | 15810 | -54.88 | -33.68 | -21.2 | -61.88 | 4.5 | 2.5 | 0 | P |
| 802.11n HT40 CH 62 5310MHz | | 64.56 | -60.05 | -4.85 | -55.2 | -71.75 | 4.5 | 2.5 | 4.7 | P |
| | | 129.09 | -60.7 | -9 | -51.7 | -72.4 | 4.5 | 2.5 | 4.7 | P |
| | | 187.14 | -59.69 | -7.99 | -51.7 | -71.39 | 4.5 | 2.5 | 4.7 | P |
| | | 420.4 | -60.74 | -11.54 | -49.2 | -72.44 | 4.5 | 2.5 | 4.7 | P |
| | | 555.5 | -60.53 | -11.33 | -49.2 | -72.23 | 4.5 | 2.5 | 4.7 | P |
| | | 745.9 | -59.25 | -10.05 | -49.2 | -70.95 | 4.5 | 2.5 | 4.7 | P |
| | | 10620 | -63.05 | -41.85 | -21.2 | -70.05 | 4.5 | 2.5 | 0 | P |
| | | 15930 | -54.7 | -33.5 | -21.2 | -61.7 | 4.5 | 2.5 | 0 | P |

**15E 5250~5350MHz**

**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT40 CH 54 5270MHz | | 131.25 | -59.29 | -7.59 | -51.7 | -70.99 | 4.5 | 2.5 | 4.7 | P |
| | | 168.78 | -60.57 | -8.87 | -51.7 | -72.27 | 4.5 | 2.5 | 4.7 | P |
| | | 244.65 | -60.83 | -11.63 | -49.2 | -72.53 | 4.5 | 2.5 | 4.7 | P |
| | | 565.3 | -60.5 | -11.3 | -49.2 | -72.2 | 4.5 | 2.5 | 4.7 | P |
| | | 694.8 | -60.98 | -11.78 | -49.2 | -72.68 | 4.5 | 2.5 | 4.7 | P |
| | | 909 | -60.48 | -11.28 | -49.2 | -72.18 | 4.5 | 2.5 | 4.7 | P |
| | | 10540 | -65.06 | -43.86 | -21.2 | -72.06 | 4.5 | 2.5 | 0 | P |
| | | 15810 | -56.86 | -35.66 | -21.2 | -63.86 | 4.5 | 2.5 | 0 | P |
| 802.11n HT40 CH 62 5310MHz | | 96.15 | -60.64 | -8.94 | -51.7 | -72.34 | 4.5 | 2.5 | 4.7 | P |
| | | 186.06 | -60.24 | -8.54 | -51.7 | -71.94 | 4.5 | 2.5 | 4.7 | P |
| | | 268.14 | -60.46 | -11.26 | -49.2 | -72.16 | 4.5 | 2.5 | 4.7 | P |
| | | 471.5 | -59.96 | -10.76 | -49.2 | -71.66 | 4.5 | 2.5 | 4.7 | P |
| | | 638.8 | -60.61 | -11.41 | -49.2 | -72.31 | 4.5 | 2.5 | 4.7 | P |
| | | 919.5 | -60.01 | -10.81 | -49.2 | -71.71 | 4.5 | 2.5 | 4.7 | P |
| | | 10620 | -65 | -43.8 | -21.2 | -72 | 4.5 | 2.5 | 0 | P |
| | | 15930 | -54.53 | -33.33 | -21.2 | -61.53 | 4.5 | 2.5 | 0 | P |

**15E 5470~5725MHz**

**WIFI 802.11a (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11a CH 100 5500MHz | | 54.84 | -61.34 | -6.14 | -55.2 | -73.04 | 4.5 | 2.5 | 4.7 | P |
| | | 142.05 | -60.87 | -9.17 | -51.7 | -72.57 | 4.5 | 2.5 | 4.7 | P |
| | | 233.04 | -60.95 | -11.75 | -49.2 | -72.65 | 4.5 | 2.5 | 4.7 | P |
| | | 480.6 | -60 | -10.8 | -49.2 | -71.7 | 4.5 | 2.5 | 4.7 | P |
| | | 623.4 | -60.87 | -11.67 | -49.2 | -72.57 | 4.5 | 2.5 | 4.7 | P |
| | | 900.6 | -60.3 | -11.1 | -49.2 | -72 | 4.5 | 2.5 | 4.7 | P |
| | | 11000 | -64.8 | -43.6 | -21.2 | -71.8 | 4.5 | 2.5 | 0 | P |
| | | 16500 | -55.05 | -33.85 | -21.2 | -62.05 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 116 5580MHz | | 62.67 | -61.26 | -6.06 | -55.2 | -72.96 | 4.5 | 2.5 | 4.7 | P |
| | | 156.9 | -61.13 | -9.43 | -51.7 | -72.83 | 4.5 | 2.5 | 4.7 | P |
| | | 216.3 | -59.94 | -10.74 | -49.2 | -71.64 | 4.5 | 2.5 | 4.7 | P |
| | | 524.7 | -60.43 | -11.23 | -49.2 | -72.13 | 4.5 | 2.5 | 4.7 | P |
| | | 671 | -60.19 | -10.99 | -49.2 | -71.89 | 4.5 | 2.5 | 4.7 | P |
| | | 808.9 | -60.39 | -11.19 | -49.2 | -72.09 | 4.5 | 2.5 | 4.7 | P |
| | | 11160 | -66.01 | -44.81 | -21.2 | -73.01 | 4.5 | 2.5 | 0 | P |
| | | 16740 | -55.37 | -34.17 | -21.2 | -62.37 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 140 5700MHz | | 85.62 | -61 | -5.8 | -55.2 | -72.7 | 4.5 | 2.5 | 4.7 | P |
| | | 147.99 | -61.25 | -9.55 | -51.7 | -72.95 | 4.5 | 2.5 | 4.7 | P |
| | | 226.02 | -60.91 | -11.71 | -49.2 | -72.61 | 4.5 | 2.5 | 4.7 | P |
| | | 450.5 | -60.28 | -11.08 | -49.2 | -71.98 | 4.5 | 2.5 | 4.7 | P |
| | | 630.4 | -59.86 | -10.66 | -49.2 | -71.56 | 4.5 | 2.5 | 4.7 | P |
| | | 844.6 | -59.46 | -10.26 | -49.2 | -71.16 | 4.5 | 2.5 | 4.7 | P |
| | | 11400 | -64.5 | -43.3 | -21.2 | -71.5 | 4.5 | 2.5 | 0 | P |
| | | 17100 | -54.62 | -33.42 | -21.2 | -61.62 | 4.5 | 2.5 | 0 | P |

**15E 5470~5725MHz**

**WIFI 802.11a (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11a CH 100 5500MHz | | 51.6 | -60.2 | -5 | -55.2 | -71.9 | 4.5 | 2.5 | 4.7 | P |
| | | 71.85 | -61.06 | -5.86 | -55.2 | -72.76 | 4.5 | 2.5 | 4.7 | P |
| | | 82.38 | -61.23 | -6.03 | -55.2 | -72.93 | 4.5 | 2.5 | 4.7 | P |
| | | 437.2 | -60.38 | -11.18 | -49.2 | -72.08 | 4.5 | 2.5 | 4.7 | P |
| | | 533.1 | -61.14 | -11.94 | -49.2 | -72.84 | 4.5 | 2.5 | 4.7 | P |
| | | 700.4 | -60.76 | -11.56 | -49.2 | -72.46 | 4.5 | 2.5 | 4.7 | P |
| | | 11000 | -65.62 | -44.42 | -21.2 | -72.62 | 4.5 | 2.5 | 0 | P |
| | | 16500 | -54.13 | -32.93 | -21.2 | -61.13 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 116 5580MHz | | 152.85 | -60.33 | -8.63 | -51.7 | -72.03 | 4.5 | 2.5 | 4.7 | P |
| | | 214.68 | -60.44 | -8.74 | -51.7 | -72.14 | 4.5 | 2.5 | 4.7 | P |
| | | 247.35 | -59.34 | -10.14 | -49.2 | -71.04 | 4.5 | 2.5 | 4.7 | P |
| | | 491.1 | -60.33 | -11.13 | -49.2 | -72.03 | 4.5 | 2.5 | 4.7 | P |
| | | 654.9 | -60.36 | -11.16 | -49.2 | -72.06 | 4.5 | 2.5 | 4.7 | P |
| | | 869.8 | -61.29 | -12.09 | -49.2 | -72.99 | 4.5 | 2.5 | 4.7 | P |
| | | 11160 | -61.39 | -40.19 | -21.2 | -68.39 | 4.5 | 2.5 | 0 | P |
| | | 16740 | -54.9 | -33.7 | -21.2 | -61.9 | 4.5 | 2.5 | 0 | P |
| 802.11a CH 140 5700MHz | | 226.56 | -61.46 | -12.26 | -49.2 | -73.16 | 4.5 | 2.5 | 4.7 | P |
| | | 256.53 | -60.67 | -11.47 | -49.2 | -72.37 | 4.5 | 2.5 | 4.7 | P |
| | | 296.22 | -60.83 | -11.63 | -49.2 | -72.53 | 4.5 | 2.5 | 4.7 | P |
| | | 351.1 | -62.93 | -13.73 | -49.2 | -74.63 | 4.5 | 2.5 | 4.7 | P |
| | | 569.5 | -61.39 | -12.19 | -49.2 | -73.09 | 4.5 | 2.5 | 4.7 | P |
| | | 988.1 | -59.9 | -18.7 | -41.2 | -71.6 | 4.5 | 2.5 | 4.7 | P |
| | | 11400 | -66.67 | -45.47 | -21.2 | -73.67 | 4.5 | 2.5 | 0 | P |
| | | 17100 | -54.68 | -33.48 | -21.2 | -61.68 | 4.5 | 2.5 | 0 | P |

**15E 5470~5725MHz**

**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT20 CH 100 5500MHz | | 169.59 | -61.03 | -9.33 | -51.7 | -72.73 | 4.5 | 2.5 | 4.7 | P |
| | | 226.29 | -61.37 | -12.17 | -49.2 | -73.07 | 4.5 | 2.5 | 4.7 | P |
| | | 276.24 | -60.58 | -11.38 | -49.2 | -72.28 | 4.5 | 2.5 | 4.7 | P |
| | | 437.9 | -60.84 | -11.64 | -49.2 | -72.54 | 4.5 | 2.5 | 4.7 | P |
| | | 713 | -61.01 | -11.81 | -49.2 | -72.71 | 4.5 | 2.5 | 4.7 | P |
| | | 902.7 | -61.27 | -12.07 | -49.2 | -72.97 | 4.5 | 2.5 | 4.7 | P |
| | | 11000 | -63.12 | -41.92 | -21.2 | -70.12 | 4.5 | 2.5 | 0 | P |
| | | 16500 | -54.17 | -32.97 | -21.2 | -61.17 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 116 5580MHz | | 67.53 | -58.85 | -3.65 | -55.2 | -70.55 | 4.5 | 2.5 | 4.7 | P |
| | | 150.15 | -58.94 | -7.24 | -51.7 | -70.64 | 4.5 | 2.5 | 4.7 | P |
| | | 228.99 | -60.49 | -11.29 | -49.2 | -72.19 | 4.5 | 2.5 | 4.7 | P |
| | | 440.7 | -60.26 | -11.06 | -49.2 | -71.96 | 4.5 | 2.5 | 4.7 | P |
| | | 787.9 | -60.5 | -11.3 | -49.2 | -72.2 | 4.5 | 2.5 | 4.7 | P |
| | | 948.2 | -59.62 | -10.42 | -49.2 | -71.32 | 4.5 | 2.5 | 4.7 | P |
| | | 11160 | -62.65 | -41.45 | -21.2 | -69.65 | 4.5 | 2.5 | 0 | P |
| | | 16740 | -56.53 | -35.33 | -21.2 | -63.53 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 140 5700MHz | | 146.64 | -61.43 | -9.73 | -51.7 | -73.13 | 4.5 | 2.5 | 4.7 | P |
| | | 193.35 | -60.69 | -8.99 | -51.7 | -72.39 | 4.5 | 2.5 | 4.7 | P |
| | | 251.4 | -61.43 | -12.23 | -49.2 | -73.13 | 4.5 | 2.5 | 4.7 | P |
| | | 470.8 | -60.57 | -11.37 | -49.2 | -72.27 | 4.5 | 2.5 | 4.7 | P |
| | | 660.5 | -60.17 | -10.97 | -49.2 | -71.87 | 4.5 | 2.5 | 4.7 | P |
| | | 871.9 | -61.04 | -11.84 | -49.2 | -72.74 | 4.5 | 2.5 | 4.7 | P |
| | | 11400 | -64.93 | -43.73 | -21.2 | -71.93 | 4.5 | 2.5 | 0 | P |
| | | 17100 | -55.18 | -33.98 | -21.2 | -62.18 | 4.5 | 2.5 | 0 | P |

**15E 5470~5725MHz**

**WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT20 CH 100 5500MHz | | 62.67 | -61.43 | -6.23 | -55.2 | -73.13 | 4.5 | 2.5 | 4.7 | P |
| | | 128.28 | -61.36 | -9.66 | -51.7 | -73.06 | 4.5 | 2.5 | 4.7 | P |
| | | 209.01 | -61.48 | -9.78 | -51.7 | -73.18 | 4.5 | 2.5 | 4.7 | P |
| | | 494.6 | -61.11 | -11.91 | -49.2 | -72.81 | 4.5 | 2.5 | 4.7 | P |
| | | 607.3 | -61.19 | -11.99 | -49.2 | -72.89 | 4.5 | 2.5 | 4.7 | P |
| | | 759.9 | -61.11 | -11.91 | -49.2 | -72.81 | 4.5 | 2.5 | 4.7 | P |
| | | 11000 | -62.63 | -41.43 | -21.2 | -69.63 | 4.5 | 2.5 | 0 | P |
| | | 16500 | -54.22 | -33.02 | -21.2 | -61.22 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 116 5580MHz | | 150.42 | -60.39 | -8.69 | -51.7 | -72.09 | 4.5 | 2.5 | 4.7 | P |
| | | 171.21 | -60.91 | -9.21 | -51.7 | -72.61 | 4.5 | 2.5 | 4.7 | P |
| | | 261.12 | -59.91 | -10.71 | -49.2 | -71.61 | 4.5 | 2.5 | 4.7 | P |
| | | 559.7 | -60.73 | -11.53 | -49.2 | -72.43 | 4.5 | 2.5 | 4.7 | P |
| | | 792.1 | -60.82 | -11.62 | -49.2 | -72.52 | 4.5 | 2.5 | 4.7 | P |
| | | 888 | -61.32 | -12.12 | -49.2 | -73.02 | 4.5 | 2.5 | 4.7 | P |
| | | 11160 | -67.21 | -46.01 | -21.2 | -74.21 | 4.5 | 2.5 | 0 | P |
| | | 16740 | -54.8 | -33.6 | -21.2 | -61.8 | 4.5 | 2.5 | 0 | P |
| 802.11n HT20 CH 140 5700MHz | | 40.8 | -61.46 | -6.26 | -55.2 | -73.16 | 4.5 | 2.5 | 4.7 | P |
| | | 56.46 | -61.54 | -6.34 | -55.2 | -73.24 | 4.5 | 2.5 | 4.7 | P |
| | | 97.77 | -61.14 | -9.44 | -51.7 | -72.84 | 4.5 | 2.5 | 4.7 | P |
| | | 392.4 | -60.51 | -11.31 | -49.2 | -72.21 | 4.5 | 2.5 | 4.7 | P |
| | | 617.1 | -60.36 | -11.16 | -49.2 | -72.06 | 4.5 | 2.5 | 4.7 | P |
| | | 981.1 | -61.18 | -19.98 | -41.2 | -72.88 | 4.5 | 2.5 | 4.7 | P |
| | | 11400 | -62.43 | -41.23 | -21.2 | -69.43 | 4.5 | 2.5 | 0 | P |
| | | 17100 | -53.64 | -32.44 | -21.2 | -60.64 | 4.5 | 2.5 | 0 | P |

**15E 5470~5725MHz**

**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT40 CH 102 5510MHz | | 60.24 | -59.91 | -4.71 | -55.2 | -71.61 | 4.5 | 2.5 | 4.7 | P |
| | | 165.54 | -59.97 | -8.27 | -51.7 | -71.67 | 4.5 | 2.5 | 4.7 | P |
| | | 237.09 | -61.26 | -12.06 | -49.2 | -72.96 | 4.5 | 2.5 | 4.7 | P |
| | | 410.6 | -60.13 | -10.93 | -49.2 | -71.83 | 4.5 | 2.5 | 4.7 | P |
| | | 551.3 | -61.16 | -11.96 | -49.2 | -72.86 | 4.5 | 2.5 | 4.7 | P |
| | | 825.7 | -60.88 | -11.68 | -49.2 | -72.58 | 4.5 | 2.5 | 4.7 | P |
| | | 11020 | -63.95 | -42.75 | -21.2 | -70.95 | 4.5 | 2.5 | 0 | P |
| | | 16530 | -54 | -32.8 | -21.2 | -61 | 4.5 | 2.5 | 0 | P |
| 802.11n HT40 CH 110 5550MHz | | 110.46 | -59.87 | -8.17 | -51.7 | -71.57 | 4.5 | 2.5 | 4.7 | P |
| | | 217.38 | -60.58 | -11.38 | -49.2 | -72.28 | 4.5 | 2.5 | 4.7 | P |
| | | 288.12 | -60.46 | -11.26 | -49.2 | -72.16 | 4.5 | 2.5 | 4.7 | P |
| | | 384 | -61.19 | -11.99 | -49.2 | -72.89 | 4.5 | 2.5 | 4.7 | P |
| | | 510 | -60.61 | -11.41 | -49.2 | -72.31 | 4.5 | 2.5 | 4.7 | P |
| | | 731.9 | -61.04 | -11.84 | -49.2 | -72.74 | 4.5 | 2.5 | 4.7 | P |
| | | 11100 | -67.16 | -45.96 | -21.2 | -74.16 | 4.5 | 2.5 | 0 | P |
| | | 16650 | -54.6 | -33.4 | -21.2 | -61.6 | 4.5 | 2.5 | 0 | P |
| 802.11n HT40 CH 134 5670MHz | | 66.99 | -60.24 | -5.04 | -55.2 | -71.94 | 4.5 | 2.5 | 4.7 | P |
| | | 185.79 | -60.31 | -8.61 | -51.7 | -72.01 | 4.5 | 2.5 | 4.7 | P |
| | | 256.26 | -61.1 | -11.9 | -49.2 | -72.8 | 4.5 | 2.5 | 4.7 | P |
| | | 390.3 | -60.68 | -11.48 | -49.2 | -72.38 | 4.5 | 2.5 | 4.7 | P |
| | | 744.5 | -60.76 | -11.56 | -49.2 | -72.46 | 4.5 | 2.5 | 4.7 | P |
| | | 949.6 | -59.96 | -10.76 | -49.2 | -71.66 | 4.5 | 2.5 | 4.7 | P |
| | | 11340 | -66.15 | -44.95 | -21.2 | -73.15 | 4.5 | 2.5 | 0 | P |
| | | 17010 | -53.74 | -32.54 | -21.2 | -60.74 | 4.5 | 2.5 | 0 | P |

**15E 5470~5725MHz**

**WIFI 802.11n HT40 (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Grounding | Peak |
|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Gain | Loss | Factor | Avg |
| 2 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dBi ) | ( dB ) | ( dB ) | (P/A) |
| 802.11n HT40 CH 102 5510MHz | | 105.33 | -60.89 | -9.19 | -51.7 | -72.59 | 4.5 | 2.5 | 4.7 | P |
| | | 145.83 | -59.62 | -7.92 | -51.7 | -71.32 | 4.5 | 2.5 | 4.7 | P |
| | | 233.85 | -62.57 | -13.37 | -49.2 | -74.27 | 4.5 | 2.5 | 4.7 | P |
| | | 464.5 | -61.01 | -11.81 | -49.2 | -72.71 | 4.5 | 2.5 | 4.7 | P |
| | | 617.8 | -60.76 | -11.56 | -49.2 | -72.46 | 4.5 | 2.5 | 4.7 | P |
| | | 701.1 | -60.38 | -11.18 | -49.2 | -72.08 | 4.5 | 2.5 | 4.7 | P |
| | | 11020 | -66.88 | -45.68 | -21.2 | -73.88 | 4.5 | 2.5 | 0 | P |
| | | 16530 | -55.07 | -33.87 | -21.2 | -62.07 | 4.5 | 2.5 | 0 | P |
| 802.11n HT40 CH 110 5550MHz | | 69.96 | -60.13 | -4.93 | -55.2 | -71.83 | 4.5 | 2.5 | 4.7 | P |
| | | 179.58 | -59.95 | -8.25 | -51.7 | -71.65 | 4.5 | 2.5 | 4.7 | P |
| | | 253.56 | -60.91 | -11.71 | -49.2 | -72.61 | 4.5 | 2.5 | 4.7 | P |
| | | 416.9 | -60.61 | -11.41 | -49.2 | -72.31 | 4.5 | 2.5 | 4.7 | P |
| | | 573.7 | -60.21 | -11.01 | -49.2 | -71.91 | 4.5 | 2.5 | 4.7 | P |
| | | 764.1 | -61.21 | -12.01 | -49.2 | -72.91 | 4.5 | 2.5 | 4.7 | P |
| | | 11100 | -65.52 | -44.32 | -21.2 | -72.52 | 4.5 | 2.5 | 0 | P |
| | | 16650 | -56.22 | -35.02 | -21.2 | -63.22 | 4.5 | 2.5 | 0 | P |
| 802.11n HT40 CH 134 5670MHz | | 79.14 | -60.23 | -5.03 | -55.2 | -71.93 | 4.5 | 2.5 | 4.7 | P |
| | | 149.61 | -60.65 | -8.95 | -51.7 | -72.35 | 4.5 | 2.5 | 4.7 | P |
| | | 229.53 | -60.44 | -11.24 | -49.2 | -72.14 | 4.5 | 2.5 | 4.7 | P |
| | | 411.3 | -60.62 | -11.42 | -49.2 | -72.32 | 4.5 | 2.5 | 4.7 | P |
| | | 646.5 | -61.09 | -11.89 | -49.2 | -72.79 | 4.5 | 2.5 | 4.7 | P |
| | | 883.1 | -60.44 | -11.24 | -49.2 | -72.14 | 4.5 | 2.5 | 4.7 | P |
| | | 11340 | -63.38 | -42.18 | -21.2 | -70.38 | 4.5 | 2.5 | 0 | P |
| | | 17010 | -55.33 | -34.13 | -21.2 | -62.33 | 4.5 | 2.5 | 0 | P |

### 3.4.8 Test Result of Cabinet Radiated Spurious at Band Edges

Please refer to Appendix B of this report.

### 3.4.9 Test Result of Cabinet Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix B of this report.

# 3.5 AC Conducted Emission Measurement

## 3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

| Frequency of emission (MHz) | Conducted limit (dBμV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15-0.5 | 66 to 56* | 56 to 46* |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

*Decreases with the logarithm of the frequency.

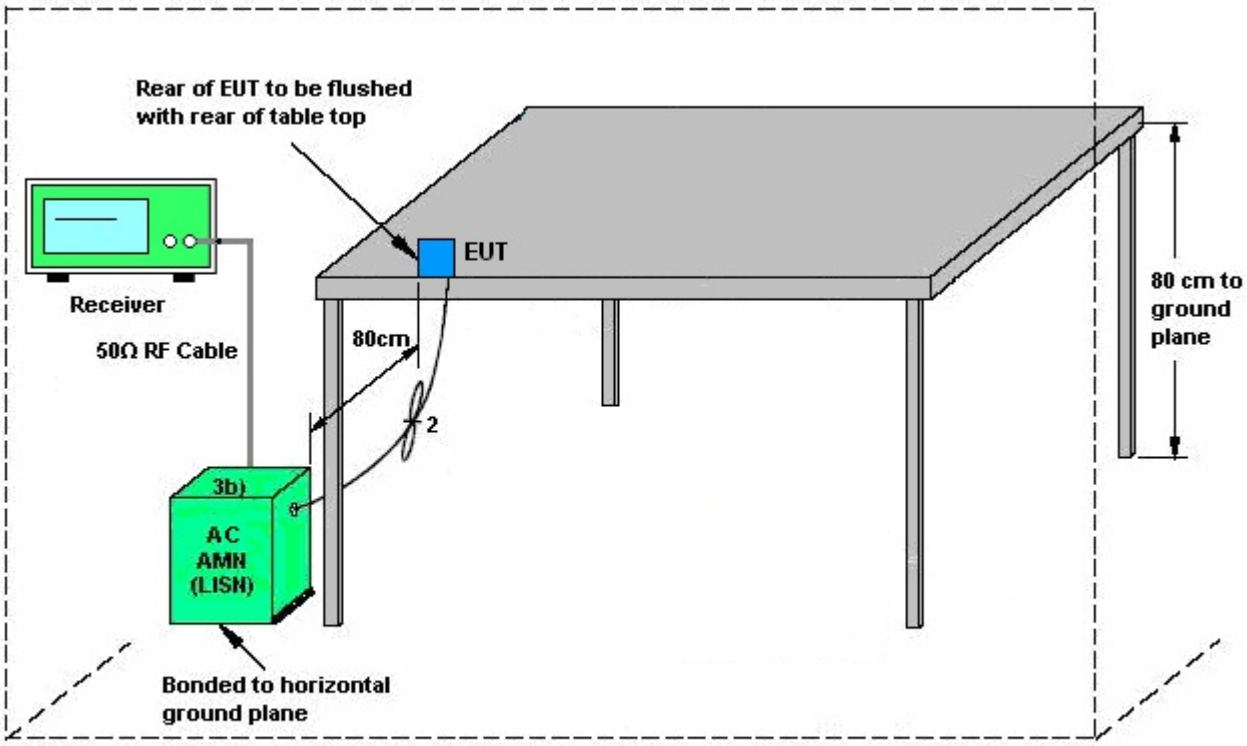
## 3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

## 3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

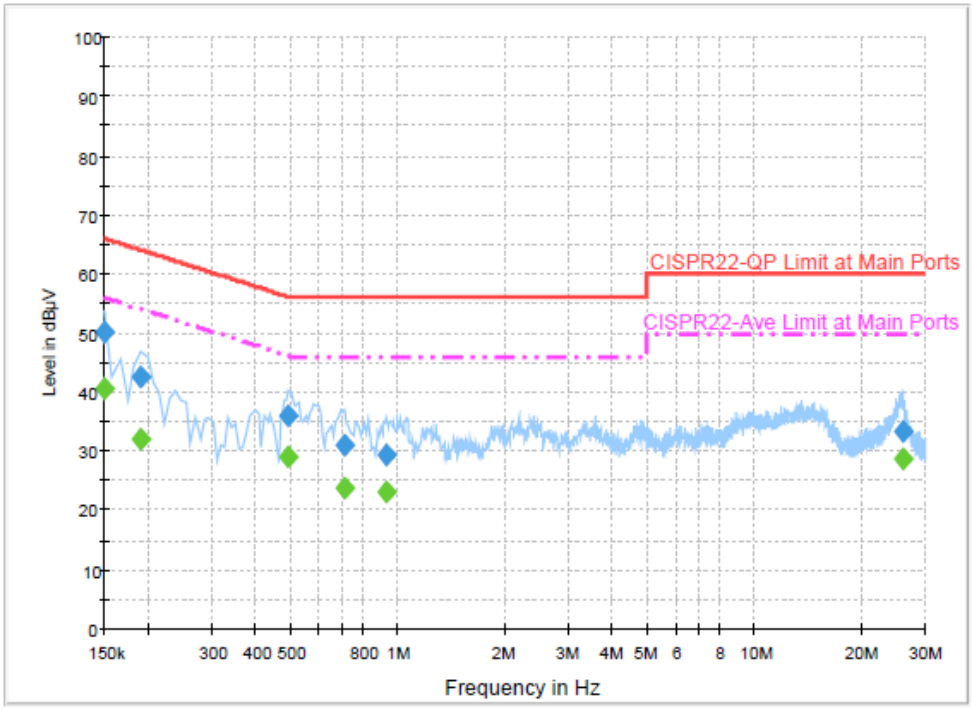
### 3.5.4 Test Setup




AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

### 3.5.5 Test Result of AC Conducted Emission

| Test Mode : | Mode 1 | Temperature : | 20~22℃ |
|---|---|---|---|
| Test Engineer : | Kai-Chun CHu | Relative Humidity : | 46~48% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Line |
| Function Type : | WLAN (5GHz) Link + Bluetooth Link + Adapter | | |



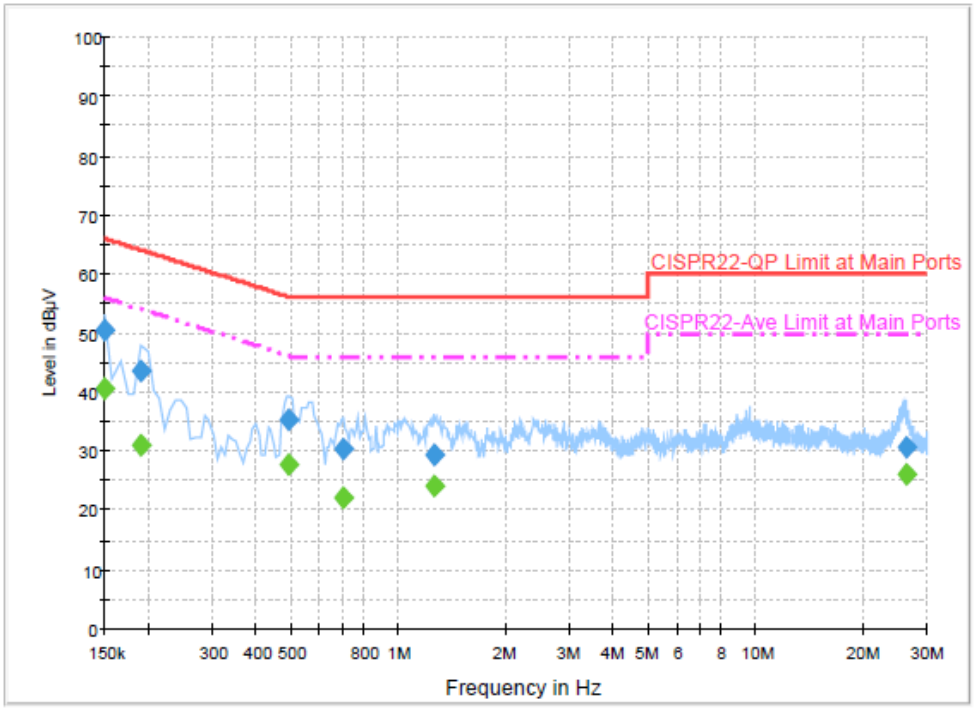

**Final Result : QuasiPeak**

| Frequency (MHz) | QuasiPeak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.150000 | 50.3 | Off | L1 | 19.5 | 15.7 | 66.0 |
| 0.190000 | 42.7 | Off | L1 | 19.5 | 21.3 | 64.0 |
| 0.494000 | 36.0 | Off | L1 | 19.4 | 20.1 | 56.1 |
| 0.710000 | 31.1 | Off | L1 | 19.6 | 24.9 | 56.0 |
| 0.926000 | 29.5 | Off | L1 | 19.5 | 26.5 | 56.0 |
| 26.030000 | 33.3 | Off | L1 | 19.9 | 26.7 | 60.0 |

**Final Result : Average**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.150000 | 40.8 | Off | L1 | 19.5 | 15.2 | 56.0 |
| 0.190000 | 31.9 | Off | L1 | 19.5 | 22.1 | 54.0 |
| 0.494000 | 29.1 | Off | L1 | 19.4 | 17.0 | 46.1 |
| 0.710000 | 23.6 | Off | L1 | 19.6 | 22.4 | 46.0 |
| 0.926000 | 23.0 | Off | L1 | 19.5 | 23.0 | 46.0 |
| 26.030000 | 28.8 | Off | L1 | 19.9 | 21.2 | 50.0 |

| Test Mode : | Mode 1 | Temperature : | 20~22℃ |
|---|---|---|---|
| Test Engineer : | Kai-Chun CHu | Relative Humidity : | 46~48% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Neutral |
| Function Type : | WLAN (5GHz) Link + Bluetooth Link + Adapter | | |




**Final Result : QuasiPeak**

| Frequency (MHz) | QuasiPeak (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.150000 | 50.6 | Off | N | 19.5 | 15.4 | 66.0 |
| 0.190000 | 43.7 | Off | N | 19.5 | 20.3 | 64.0 |
| 0.494000 | 35.3 | Off | N | 19.4 | 20.8 | 56.1 |
| 0.702000 | 30.4 | Off | N | 19.6 | 25.6 | 56.0 |
| 1.254000 | 29.4 | Off | N | 19.6 | 26.6 | 56.0 |
| 26.366000 | 30.6 | Off | N | 20.1 | 29.4 | 60.0 |

**Final Result : Average**

| Frequency (MHz) | Average (dBµV) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|
| 0.150000 | 40.7 | Off | N | 19.5 | 15.3 | 56.0 |
| 0.190000 | 31.2 | Off | N | 19.5 | 22.8 | 54.0 |
| 0.494000 | 27.8 | Off | N | 19.4 | 18.3 | 46.1 |
| 0.702000 | 22.3 | Off | N | 19.6 | 23.7 | 46.0 |
| 1.254000 | 24.0 | Off | N | 19.6 | 22.0 | 46.0 |
| 26.366000 | 26.2 | Off | N | 20.1 | 23.8 | 50.0 |

# 3.6 Frequency Stability Measurement

## 3.6.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

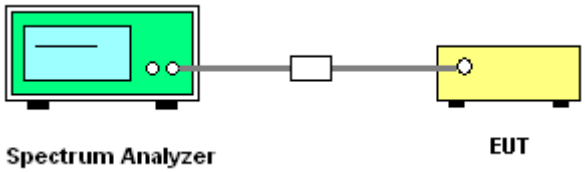
## 3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

## 3.6.3 Test Procedures

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

## 3.6.4 Test Setup




## 3.6.5 Test Result of Frequency Stability

Please refer to Appendix A.

# 3.7 Automatically Discontinue Transmission

## 3.7.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

## 3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

## 3.7.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

# 3.8 Antenna Requirements

## 3.8.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2) ,if transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

## 3.8.2 Antenna Anti-Replacement Construction

Non-standard antenna connector is used.

## 3.8.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = $G_{ANT}$ + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = 10 log($N_{ANT}/N_{SS}$=1) dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

The EUT supports CDD mode.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain “DG” is calculated as following table.

| | Ant 1 (dBi) | Ant 2 (dBi) | DG for Power (dBi) | DG for PSD (dBi) | Power Limit Reduction (dB) | PSD Limit Reduction (dB) |
|---|---|---|---|---|---|---|
| **Band I** | 4.50 | 4.50 | 4.50 | 7.51 | 0.00 | 1.51 |
| **Band II** | 4.50 | 4.50 | 4.50 | 7.51 | 0.00 | 1.51 |
| **Band III** | 4.50 | 4.50 | 4.50 | 7.51 | 0.00 | 1.51 |

*Power limit reduction = Composite gain – 6dBi, ( min = 0 )*

*PSD limit reduction = Composite gain + PSD Array gain – 6dBi, ( min = 0 )*

# 4 List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|---|---|---|---|---|---|---|---|---|
| Spectrum Analyzer | Rohde & Schwarz | FSP40 | 100055 | 9kHz~40GHz | Jun. 09, 2014 | Dec. 09, 2014 ~ Dec. 13, 2014 | Jun. 08, 2015 | Conducted (TH02-HY) |
| Power Meter | Anritsu | ML2495A | 1036004 | 300MHz~40GHz | Aug. 09, 2014 | Dec. 09, 2014 ~ Dec. 13, 2014 | Aug. 08, 2015 | Conducted (TH02-HY) |
| Power Sensor | Anritsu | MA2411B | 1027253 | 300MHz~40GHz | Aug. 09, 2014 | Dec. 09, 2014 ~ Dec. 13, 2014 | Aug. 08, 2015 | Conducted (TH02-HY) |
| Spectrum Analyzer | Rohde & Schwarz | FSV30 | 101749 | 10Hz ~ 30GHz | Feb. 10, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Feb. 09, 2015 | Radiation (03CH07-HY) |
| EMI Test Receiver | Rohde & Schwarz | ESCI 7 | 100724 | 9 kHz~7 GHz | Aug. 30, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Aug. 29, 2015 | Radiation (03CH07-HY) |
| Loop Antenna | R&S | HFH2-Z2 | 100315 | 9 kHz~30 MHz | Jul. 28, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Jul. 27, 2015 | Radiation (03CH07-HY) |
| Bilog Antenna | Schaffner | CBL6111C | 2726 | 30MHz ~ 1GHz | Sep. 27, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Sep. 26, 2015 | Radiation (03CH07-HY) |
| Double Ridge Horn Antenna | ESCO | 3117 | 75962 | 1GHz~18GHz | Aug. 19, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Aug. 18, 2015 | Radiation (03CH07-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA9170251 | 18GHz~40GHz | Oct. 02, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Oct. 01, 2015 | Radiation (03CH07-HY) |
| Preamplifier | COM-POWER | PA-103A | 161241 | 10 MHz ~ 1000MHz | Mar. 17, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Mar. 16, 2015 | Radiation (03CH07-HY) |
| Preamplifier | Agilent | 8449B | 3008A02362 | 1 GHz~26.5 GHz | Oct. 21, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Oct. 20, 2015 | Radiation (03CH07-HY) |
| Preamplifier | MITEQ | AMF-7D-0010 1800-30-10P | 1590074 | DC~18 GHz | Jul. 07, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Jul. 06, 2015 | Radiation (03CH07-HY) |
| Preamplifier | MITEQ | AMF-7D-0010 1800-30-10P | 1590075 | DC~18 GHz | Apr. 21, 2014 | Dec. 15, 2014 ~ Dec. 16, 2014 | Apr. 20, 2015 | Radiation (03CH07-HY) |
| Turn Table | ChainTek | ChainTek 3000 | N/A | 0 ~ 360 degree | N/A | Dec. 15, 2014 ~ Dec. 16, 2014 | N/A | Radiation (03CH07-HY) |
| Antenna Mast | ChainTek | ChainTek 3000 | N/A | N/A | N/A | Dec. 15, 2014 ~ Dec. 16, 2014 | N/A | Radiation (03CH07-HY) |
| EMI Test Receiver | Rohde & Schwarz | ESCS 30 | 100356 | 9kHz ~ 2.75GHz | Nov. 12, 2014 | Dec. 10, 2014 | Nov. 11, 2015 | Conduction (CO05-HY) |
| LISN (for auxiliary equipment) | Rohde & Schwarz | ENV216 | 100081 | 9kHz ~ 30MHz | Dec. 08, 2014 | Dec. 10, 2014 | Dec. 07, 2015 | Conduction (CO05-HY) |
| LISN | Rohde & Schwarz | ENV216 | 100080 | 9kHz ~ 30MHz | Dec. 02, 2014 | Dec. 10, 2014 | Dec. 01, 2015 | Conduction (CO05-HY) |
| AC Power Source | ChainTek | APC-1000W | N/A | N/A | N/A | Dec. 10, 2014 | N/A | Conduction (CO05-HY) |

# 5 Uncertainty of Evaluation

**Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **2.26** |

**Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)**

| | |
|---|---|
| **Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))** | **4.50** |

# Appendix A. Test Result of conducted Test Results

Report Number : FR4O0971D

| | | | | |
|---|---|---|---|---|
| Test Engineer: | Alex Lee | Temperature: | 21~25 | °C |
| Test Date: | 2014/12/12 | Relative Humidity: | 51~54 | % |

Report Number : FR4O0971D

***TEST RESULTS DATA***
***26dB and 99% OBW***

| Band I | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | 99% Bandwidth (MHz) | | 26 dB Bandwidth (MHz) | | IC 99% Bandwidth Power Limit (dBm) | | IC 99% Bandwidth EIRP Limit (dBm) | | | Note |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | Ant 1 | Ant 2 | Ant 1 | Ant 2 | | |
| 11a | 6Mbps | 1 | 36 | 5180 | | 17.80 | | 27.65 | - | | | 22.50 | | |
| 11a | 6Mbps | 1 | 44 | 5220 | | 17.65 | | 25.50 | - | | | 22.47 | | |
| 11a | 6Mbps | 1 | 48 | 5240 | | 18.35 | | 28.15 | - | | | 22.64 | | |
| HT20 | MCS0 | 1 | 36 | 5180 | | 18.50 | | 27.80 | - | | | 22.67 | - | |
| HT20 | MCS0 | 1 | 44 | 5220 | | 18.45 | | 27.90 | - | | | 22.66 | | |
| HT20 | MCS0 | 1 | 48 | 5240 | | 18.60 | | 28.60 | - | | | 22.70 | | |
| HT40 | MCS0 | 1 | 38 | 5190 | | 36.10 | | 45.09 | - | | | 23.01 | | |
| HT40 | MCS0 | 1 | 46 | 5230 | | 36.20 | | 52.65 | - | | | 23.01 | | |

***TEST RESULTS DATA***
***Average Power Table***

| FCC Band I | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | Duty Factor (dB) | | Average Conducted Power (dBm) | | | FCC Conducted Power Limit (dBm) | | DG (dBi) | | Pass/Fail |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | SUM | Ant 1 | Ant 2 | Ant 1 | Ant 2 | |
| 11a | 6Mbps | 1 | 36 | 5180 | 4.90 | 4.90 | 15.54 | 15.71 | | 24.00 | 24.00 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 44 | 5220 | 4.90 | 4.90 | 15.58 | 15.82 | | 24.00 | 24.00 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 48 | 5240 | 4.90 | 4.90 | 15.40 | 15.56 | | 24.00 | 24.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 36 | 5180 | 4.77 | 4.77 | 15.71 | 15.54 | - | 24.00 | 24.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 44 | 5220 | 4.77 | 4.77 | 15.35 | 15.53 | | 24.00 | 24.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 48 | 5240 | 4.77 | 4.77 | 15.28 | 15.48 | | 24.00 | 24.00 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 38 | 5190 | 5.17 | 5.17 | 11.48 | 11.76 | | 24.00 | 24.00 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 46 | 5230 | 5.17 | 5.17 | 16.60 | 16.98 | | 24.00 | 24.00 | 4.50 | 4.50 | Pass |

## ***TEST RESULTS DATA***
## ***Power Spectral Density***

| FCC Band I | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | Duty Factor (dB) | | Average Power Density (dBm/MHz) | | | Average PSD Limit (dBm/MHz) | | DG (dBi) | | Pass /Fail |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | SUM | Ant 1 | Ant 2 | Ant 1 | Ant 2 | |
| 11a | 6Mbps | 1 | 36 | 5180 | 4.90 | 4.90 | | 5.17 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 44 | 5220 | 4.90 | 4.90 | | 5.35 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 48 | 5240 | 4.90 | 4.90 | | 5.18 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 36 | 5180 | 4.77 | 4.77 | | 4.81 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 44 | 5220 | 4.77 | 4.77 | | 5.36 | - | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 48 | 5240 | 4.77 | 4.77 | | 4.93 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 38 | 5190 | 5.17 | 5.17 | | -3.04 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 46 | 5230 | 5.17 | 5.17 | | 3.51 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |

***TEST RESULTS DATA***
***26dB and 99% OBW***

| Band II | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | 99% Bandwidth (MHz) | | 26 dB Bandwidth (MHz) | | IC 99% Bandwidth Power Limit (dBm) | | IC 99% Bandwidth EIRP Limit (dBm) | | FCC 26dB Bandwidth Power Limit (dBm) | | Note |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | Ant 1 | Ant 2 | Ant 1 | Ant 2 | Ant 1 | Ant 2 | |
| 11a | 6Mbps | 1 | 52 | 5260 | | 17.50 | | 25.50 | | 23.43 | | 29.43 | | 23.98 | |
| 11a | 6Mbps | 1 | 60 | 5300 | | 17.35 | | 26.35 | | 23.39 | | 29.39 | | 23.98 | |
| 11a | 6Mbps | 1 | 64 | 5320 | | 17.40 | | 25.50 | | 23.41 | | 29.41 | | 23.98 | |
| HT20 | MCS0 | 1 | 52 | 5260 | | 18.75 | | 28.10 | | 23.73 | | 29.73 | | 23.98 | |
| HT20 | MCS0 | 1 | 60 | 5300 | | 18.60 | | 27.95 | | 23.70 | | 29.70 | | 23.98 | |
| HT20 | MCS0 | 1 | 64 | 5320 | | 18.55 | | 28.30 | | 23.68 | | 29.68 | | 23.98 | |
| HT40 | MCS0 | 1 | 54 | 5270 | | 36.50 | | 54.81 | | 23.98 | | 30.00 | | 23.98 | |
| HT40 | MCS0 | 1 | 62 | 5310 | | 35.90 | | 45.36 | | 23.98 | | 30.00 | | 23.98 | |

***TEST RESULTS DATA***
***Average Power Table***

| FCC Band II | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | Duty Factor (dB) | | Average Conducted Power (dBm) | | | FCC Conducted Power Limit (dBm) | | DG (dBi) | | Pass/Fail |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | SUM | Ant 1 | Ant 2 | Ant 1 | Ant 2 | |
| 11a | 6Mbps | 1 | 52 | 5260 | 4.90 | 4.90 | 13.20 | 13.30 | | | 23.98 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 60 | 5300 | 4.90 | 4.90 | 12.94 | 13.48 | | | 23.98 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 64 | 5320 | 4.90 | 4.90 | 12.98 | 13.28 | | | 23.98 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 52 | 5260 | 4.77 | 4.77 | 13.12 | 13.44 | | | 23.98 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 60 | 5300 | 4.77 | 4.77 | 13.27 | 13.87 | - | | 23.98 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 64 | 5320 | 4.77 | 4.77 | 12.79 | 13.37 | | | 23.98 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 54 | 5270 | 5.17 | 5.17 | 16.86 | 17.20 | | | 23.98 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 62 | 5310 | 5.17 | 5.17 | 11.80 | 12.22 | | | 23.98 | 4.50 | 4.50 | Pass |

***TEST RESULTS DATA***
***Power Spectral Density***

| Band II | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | Duty Factor (dB) | | Average Power Density (dBm/MHz) | | | Average PSD Limit (dBm/MHz) | | DG (dBi) | | Pass /Fail |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | SUM | Ant 1 | Ant 2 | Ant 1 | Ant 2 | |
| 11a | 6Mbps | 1 | 52 | 5260 | 4.90 | 4.90 | | 1.84 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 60 | 5300 | 4.90 | 4.90 | | 2.31 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 64 | 5320 | 4.90 | 4.90 | | 1.67 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 52 | 5260 | 4.77 | 4.77 | | 1.70 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 60 | 5300 | 4.77 | 4.77 | | 2.09 | - | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 64 | 5320 | 4.77 | 4.77 | | 1.64 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 54 | 5270 | 5.17 | 5.17 | | 2.94 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 62 | 5310 | 5.17 | 5.17 | | -2.54 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |

***TEST RESULTS DATA***
***26dB and 99% OBW***

| Band III | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | 99% Bandwidth (MHz) | | 26 dB Bandwidth (MHz) | | IC 99% Bandwidth Power Limit (dBm) | | IC 99% Bandwidth EIRP Limit (dBm) | | FCC 26dB Bandwidth Power Limit (dBm) | | Note |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | Ant 1 | Ant 2 | Ant 1 | Ant 2 | Ant 1 | Ant 2 | |
| 11a | 6Mbps | 1 | 100 | 5500 | | 17.50 | | 27.05 | | 23.43 | | 29.43 | | 23.98 | |
| 11a | 6Mbps | 1 | 116 | 5580 | | 19.05 | | 33.35 | | 23.80 | | 29.80 | | 23.98 | |
| 11a | 6Mbps | 1 | 140 | 5700 | | 17.25 | | 25.30 | | 23.37 | | 29.37 | | 23.98 | |
| HT20 | MCS0 | 1 | 100 | 5500 | | 18.85 | | 29.20 | | 23.75 | | 29.75 | | 23.98 | |
| HT20 | MCS0 | 1 | 116 | 5580 | | 18.75 | | 28.60 | | 23.73 | | 29.73 | | 23.98 | |
| HT20 | MCS0 | 1 | 140 | 5700 | | 18.50 | | 27.80 | | 23.67 | | 29.67 | | 23.98 | |
| HT40 | MCS0 | 1 | 102 | 5510 | | 36.00 | | 44.64 | | 23.98 | | 30.00 | | 23.98 | |
| HT40 | MCS0 | 1 | 110 | 5550 | | 36.50 | | 57.69 | | 23.98 | | 30.00 | | 23.98 | |
| HT40 | MCS0 | 1 | 134 | 5670 | | 36.10 | | 48.15 | | 23.98 | | 30.00 | | 23.98 | |

***TEST RESULTS DATA***
***Average Power Table***

| FCC Band III | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | Duty Factor (dB) | | Average Conducted Power (dBm) | | | FCC Conducted Power Limit (dBm) | | DG (dBi) | | Pass/Fail |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | SUM | Ant 1 | Ant 2 | Ant 1 | Ant 2 | |
| 11a | 6Mbps | 1 | 100 | 5500 | 4.90 | 4.90 | 14.30 | 14.52 | | | 23.98 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 116 | 5580 | 4.90 | 4.90 | 17.50 | 18.44 | | | 23.98 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 140 | 5700 | 4.90 | 4.90 | 11.82 | 11.94 | | | 23.98 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 100 | 5500 | 4.77 | 4.77 | 14.06 | 14.93 | | | 23.98 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 116 | 5580 | 4.77 | 4.77 | 17.24 | 17.52 | - | | 23.98 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 140 | 5700 | 4.77 | 4.77 | 11.76 | 12.19 | | | 23.98 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 102 | 5510 | 5.17 | 5.17 | 11.52 | 11.28 | | | 23.98 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 110 | 5550 | 5.17 | 5.17 | 15.78 | 16.74 | | | 23.98 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 134 | 5670 | 5.17 | 5.17 | 12.56 | 12.83 | | | 23.98 | 4.50 | 4.50 | Pass |

***TEST RESULTS DATA***
***Power Spectral Density***

| Band III | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | Duty Factor (dB) | | Average Power Density (dBm/MHz) | | | Average PSD Limit (dBm/MHz) | | DG (dBi) | | Pass /Fail |
| | | | | | Ant 1 | Ant 2 | Ant 1 | Ant 2 | SUM | Ant 1 | Ant 2 | Ant 1 | Ant 2 | |
| 11a | 6Mbps | 1 | 100 | 5500 | 4.90 | 4.90 | | 3.18 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 116 | 5580 | 4.90 | 4.90 | | 6.91 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| 11a | 6Mbps | 1 | 140 | 5700 | 4.90 | 4.90 | | 0.06 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 100 | 5500 | 4.77 | 4.77 | | 2.86 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 116 | 5580 | 4.77 | 4.77 | | 5.95 | - | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT20 | MCS0 | 1 | 140 | 5700 | 4.77 | 4.77 | | -0.43 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 102 | 5510 | 5.17 | 5.17 | | -0.42 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 110 | 5550 | 5.17 | 5.17 | | 2.90 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |
| HT40 | MCS0 | 1 | 134 | 5670 | 5.17 | 5.17 | | -1.98 | | 11.00 | 11.00 | 4.50 | 4.50 | Pass |

***TEST RESULTS DATA***
***Frequency Stability***

| Band I | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stablility (ppm) | Temperature (°C) | Voltage (V) | Note |
| 11a | 6Mbps | 1 | 36 | 5180 | 5180.000 | 0.000 | 0.00 | 20 | 108 | |
| 11a | 6Mbps | 1 | 36 | 5180 | 5180.000 | 0.000 | 0.00 | 20 | 132 | |
| 11a | 6Mbps | 1 | 36 | 5180 | 5180.000 | 0.000 | 0.00 | 20 | 120 | |
| 11a | 6Mbps | 1 | 36 | 5180 | 5180.000 | 0.000 | 0.00 | -30 | 120 | |
| 11a | 6Mbps | 1 | 36 | 5180 | 5180.000 | 0.000 | 0.00 | 50 | 120 | |

| Band II | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stablility (ppm) | Temperature (°C) | Voltage (V) | Note |
| 11a | 6Mbps | 1 | 64 | 5320 | 5320.000 | 0.000 | 0.00 | 20 | 108 | |
| 11a | 6Mbps | 1 | 64 | 5320 | 5320.000 | 0.000 | 0.00 | 20 | 132 | |
| 11a | 6Mbps | 1 | 64 | 5320 | 5320.000 | 0.000 | 0.00 | 20 | 120 | |
| 11a | 6Mbps | 1 | 64 | 5320 | 5320.000 | 0.000 | 0.00 | -30 | 120 | |
| 11a | 6Mbps | 1 | 64 | 5320 | 5320.000 | 0.000 | 0.00 | 50 | 120 | |

| Band III | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mod. | Data Rate | NTX | Channe | Freq. (MHz) | Center Frequency (MHz) | Frequency Deviation (MHz) | Frequency Stablility (ppm) | Temperature (°C) | Voltage (V) | Note |
| 11a | 6Mbps | 1 | 100 | 5500 | 5500.000 | 0.000 | 0.00 | 20 | 108 | |
| 11a | 6Mbps | 1 | 100 | 5500 | 5500.000 | 0.000 | 0.00 | 20 | 132 | |
| 11a | 6Mbps | 1 | 100 | 5500 | 5500.000 | 0.000 | 0.00 | 20 | 120 | |
| 11a | 6Mbps | 1 | 100 | 5500 | 5500.000 | 0.000 | 0.00 | -30 | 120 | |
| 11a | 6Mbps | 1 | 100 | 5500 | 5500.000 | 0.000 | 0.00 | 50 | 120 | |

# Appendix B. Radiated Spurious Emission

| Test Engineer : | Nick Yu, Derreck Chen and Ken Wu | Temperature : | 23~25°C |
|---|---|---|---|
| | | Relative Humidity : | 48~51% |

**15E Band 1 - 5150~5250MHz**

**WIFI 802.11a (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | (dBµV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| | | 5013.5 | 55.74 | -18.26 | 74 | 42.24 | 34.42 | 11.37 | 32.29 | 100 | 0 | P | H |
| | | 5149.7 | 42.34 | -11.66 | 54 | 28.67 | 34.61 | 11.55 | 32.49 | 100 | 0 | A | H |
| | * | 5177 | 57.32 | - | - | 43.63 | 34.66 | 11.55 | 32.52 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| 802.11a | | | | | | | | | | | | | H |
| CH 36 | | | | | | | | | | | | | H |
| 5180MHz | | 5023.55 | 56.51 | -17.49 | 74 | 42.97 | 34.45 | 11.41 | 32.32 | 100 | 0 | P | V |
| | | 5148.35 | 42.39 | -11.61 | 54 | 28.72 | 34.61 | 11.55 | 32.49 | 100 | 0 | A | V |
| | * | 5180 | 56.89 | - | - | 43.2 | 34.66 | 11.55 | 32.52 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| | | 5079.8 | 56.61 | -17.39 | 74 | 43.02 | 34.52 | 11.46 | 32.39 | 100 | 0 | P | H |
| | | 5142.05 | 42.33 | -11.67 | 54 | 28.62 | 34.61 | 11.55 | 32.45 | 100 | 0 | A | H |
| | * | 5217 | 60.34 | - | - | 46.6 | 34.7 | 11.59 | 32.55 | 100 | 0 | P | H |
| | | 5407.64 | 56.6 | -17.4 | 74 | 43.29 | 34.96 | 11.74 | 33.39 | 100 | 0 | P | H |
| | | 5386.74 | 42.71 | -11.29 | 54 | 29.31 | 34.94 | 11.74 | 33.28 | 100 | 0 | A | H |
| 802.11a | | | | | | | | | | | | | H |
| CH 44 | | 5140.85 | 56.26 | -17.74 | 74 | 42.55 | 34.61 | 11.55 | 32.45 | 100 | 0 | P | V |
| 5220MHz | | 5145.8 | 42.37 | -11.63 | 54 | 28.7 | 34.61 | 11.55 | 32.49 | 100 | 0 | A | V |
| | * | 5218 | 58.35 | - | - | 44.61 | 34.7 | 11.59 | 32.55 | 100 | 0 | P | V |
| | | 5388.94 | 56.27 | -17.73 | 74 | 42.87 | 34.94 | 11.74 | 33.28 | 100 | 0 | P | V |
| | | 5380.47 | 42.62 | -11.38 | 54 | 29.22 | 34.94 | 11.74 | 33.28 | 100 | 0 | A | V |
| | | | | | | | | | | | | | V |

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | (dBµV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a CH 48 5240MHz | | 5082.3 | 56.55 | -17.45 | 74 | 42.96 | 34.52 | 11.46 | 32.39 | 100 | 0 | P | H |
| | | 5143.7 | 42.05 | -11.95 | 54 | 28.34 | 34.61 | 11.55 | 32.45 | 100 | 0 | A | H |
| | * | 5239 | 64.88 | - | - | 51.18 | 34.73 | 11.62 | 32.65 | 100 | 0 | P | H |
| | | 5412.26 | 55.96 | -18.04 | 74 | 42.63 | 34.98 | 11.74 | 33.39 | 100 | 0 | P | H |
| | | 5375.74 | 42.59 | -11.41 | 54 | 29.25 | 34.91 | 11.71 | 33.28 | 100 | 0 | A | H |
| | | | | | | | | | | | | | H |
| | | 5142.7 | 56.03 | -17.97 | 74 | 42.32 | 34.61 | 11.55 | 32.45 | 100 | 0 | P | V |
| | | 5144.1 | 42.18 | -11.82 | 54 | 28.51 | 34.61 | 11.55 | 32.49 | 100 | 0 | A | V |
| | * | 5239 | 62.72 | - | - | 49.02 | 34.73 | 11.62 | 32.65 | 100 | 0 | P | V |
| | | 5364.3 | 56.93 | -17.07 | 74 | 43.49 | 34.91 | 11.71 | 33.18 | 100 | 0 | P | V |
| | | 5399.94 | 42.69 | -11.31 | 54 | 29.38 | 34.96 | 11.74 | 33.39 | 100 | 0 | A | V |
| | | | | | | | | | | | | | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |

**15E band 1 5150~5250MHz**

**WIFI 802.11a (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | (dBµV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a CH 36 5180MHz | | 10359 | 42.4 | -31.6 | 74 | 47.71 | 37.22 | 16.34 | 58.87 | 100 | 0 | P | H |
| | | 15540 | 47.01 | -26.99 | 74 | 43.8 | 40.34 | 20.36 | 57.49 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 10359 | 44.03 | -29.97 | 74 | 49.34 | 37.22 | 16.34 | 58.87 | 100 | 0 | P | V |
| | | 15540 | 47.27 | -26.73 | 74 | 44.06 | 40.34 | 20.36 | 57.49 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| 802.11a CH 44 5220MHz | | 10440 | 42.1 | -31.9 | 74 | 47.31 | 37.26 | 16.41 | 58.88 | 100 | 0 | P | H |
| | | 15660 | 46.25 | -27.75 | 74 | 42.7 | 40.49 | 20.41 | 57.35 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 10440 | 43.6 | -30.4 | 74 | 48.81 | 37.26 | 16.41 | 58.88 | 100 | 0 | P | V |
| | | 15660 | 46.57 | -27.43 | 74 | 43.02 | 40.49 | 20.41 | 57.35 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| 802.11a CH 48 5240MHz | | 10479 | 42.55 | -31.45 | 74 | 47.7 | 37.29 | 16.45 | 58.89 | 100 | 0 | P | H |
| | | 15720 | 47.37 | -26.63 | 74 | 43.62 | 40.57 | 20.45 | 57.27 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 10479 | 42.69 | -31.31 | 74 | 47.84 | 37.29 | 16.45 | 58.89 | 100 | 0 | P | V |
| | | 15720 | 47.81 | -26.19 | 74 | 44.06 | 40.57 | 20.45 | 57.27 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |

**15E Band 2 - 5250~5350MHz**

**WIFI 802.11a (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | (dBµV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a CH 52 5260MHz | | 5083.4 | 56.72 | -17.28 | 74 | 43.13 | 34.52 | 11.46 | 32.39 | 100 | 0 | P | H |
| | | 5149.85 | 42.56 | -11.44 | 54 | 28.89 | 34.61 | 11.55 | 32.49 | 100 | 0 | A | H |
| | * | 5265 | 62.97 | - | - | 49.31 | 34.77 | 11.65 | 32.76 | 100 | 0 | P | H |
| | | 5421.3 | 55.78 | -18.22 | 74 | 42.39 | 34.98 | 11.8 | 33.39 | 100 | 0 | P | H |
| | | 5379.88 | 42.13 | -11.87 | 54 | 28.76 | 34.94 | 11.71 | 33.28 | 100 | 0 | A | H |
| | | | | | | | | | | | | | H |
| | | 5079.5 | 56.22 | -17.78 | 74 | 42.63 | 34.52 | 11.46 | 32.39 | 100 | 0 | P | V |
| | | 5148.5 | 42.41 | -11.59 | 54 | 28.74 | 34.61 | 11.55 | 32.49 | 100 | 0 | A | V |
| | * | 5262 | 61.69 | - | - | 48.03 | 34.77 | 11.65 | 32.76 | 100 | 0 | P | V |
| | | 5371 | 56.71 | -17.29 | 74 | 43.27 | 34.91 | 11.71 | 33.18 | 100 | 0 | P | V |
| | | 5409.91 | 42.55 | -11.45 | 54 | 29.24 | 34.96 | 11.74 | 33.39 | 100 | 0 | A | V |
| | | | | | | | | | | | | | V |
| 802.11a CH 60 5300MHz | | 5043.95 | 55.98 | -18.02 | 74 | 42.45 | 34.47 | 11.41 | 32.35 | 100 | 0 | P | H |
| | | 5149.4 | 42.4 | -11.6 | 54 | 28.73 | 34.61 | 11.55 | 32.49 | 100 | 0 | A | H |
| | * | 5298 | 62.69 | - | - | 49.19 | 34.82 | 11.65 | 32.97 | 100 | 0 | P | H |
| | | 5370.68 | 55.78 | -18.22 | 74 | 42.34 | 34.91 | 11.71 | 33.18 | 100 | 0 | P | H |
| | | 5386.41 | 42.71 | -11.29 | 54 | 29.31 | 34.94 | 11.74 | 33.28 | 100 | 0 | A | H |
| | | | | | | | | | | | | | H |
| | | 5016.05 | 56.07 | -17.93 | 74 | 42.57 | 34.42 | 11.37 | 32.29 | 100 | 0 | P | V |
| | | 5147.15 | 42.44 | -11.56 | 54 | 28.77 | 34.61 | 11.55 | 32.49 | 100 | 0 | A | V |
| | * | 5299 | 61.01 | - | - | 47.51 | 34.82 | 11.65 | 32.97 | 100 | 0 | P | V |
| | | 5389.38 | 56.38 | -17.62 | 74 | 42.98 | 34.94 | 11.74 | 33.28 | 100 | 0 | P | V |
| | | 5390.04 | 42.66 | -11.34 | 54 | 29.26 | 34.94 | 11.74 | 33.28 | 100 | 0 | A | V |
| | | | | | | | | | | | | | V |

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | (dBµV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a CH 64 5320MHz | * | 5319 | 61.47 | - | - | 47.92 | 34.84 | 11.68 | 32.97 | 100 | 0 | P | H |
| | | 5385.86 | 56.24 | -17.76 | 74 | 42.84 | 34.94 | 11.74 | 33.28 | 100 | 0 | P | H |
| | | 5387.95 | 42.69 | -11.31 | 54 | 29.29 | 34.94 | 11.74 | 33.28 | 100 | 0 | A | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | * | 5320 | 61.5 | - | - | 47.95 | 34.84 | 11.68 | 32.97 | 100 | 0 | P | V |
| | | 5414.68 | 56.16 | -17.84 | 74 | 42.83 | 34.98 | 11.74 | 33.39 | 100 | 0 | P | V |
| | | 5405.11 | 42.73 | -11.27 | 54 | 29.42 | 34.96 | 11.74 | 33.39 | 100 | 0 | A | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |

**15E band 2 5250~5350MHz**

**WIFI 802.11a (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | (dBµV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a CH 52 5260MHz | | 10521 | 42.98 | -31.02 | 74 | 48.01 | 37.32 | 16.49 | 58.84 | 100 | 0 | P | H |
| | | 15780 | 47.34 | -26.66 | 74 | 43.47 | 40.63 | 20.46 | 57.22 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 10521 | 42.07 | -31.93 | 74 | 47.1 | 37.32 | 16.49 | 58.84 | 100 | 0 | P | V |
| | | 15780 | 47.78 | -26.22 | 74 | 43.91 | 40.63 | 20.46 | 57.22 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| 802.11a CH 60 5300MHz | | 10599 | 41.22 | -32.78 | 74 | 45.85 | 37.42 | 16.56 | 58.61 | 100 | 0 | P | H |
| | | 15900 | 48.28 | -25.72 | 74 | 44.06 | 40.78 | 20.52 | 57.08 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 10600 | 41.85 | -32.15 | 74 | 46.48 | 37.42 | 16.56 | 58.61 | 100 | 0 | P | V |
| | | 15900 | 47.25 | -26.75 | 74 | 43.03 | 40.78 | 20.52 | 57.08 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| 802.11a CH 64 5320MHz | | 10641 | 41.3 | -32.7 | 74 | 45.75 | 37.47 | 16.6 | 58.52 | 100 | 0 | P | H |
| | | 15960 | 46.81 | -27.19 | 74 | 42.4 | 40.86 | 20.55 | 57 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 10641 | 41.45 | -32.55 | 74 | 45.9 | 37.47 | 16.6 | 58.52 | 100 | 0 | P | V |
| | | 15960 | 46.92 | -27.08 | 74 | 42.51 | 40.86 | 20.55 | 57 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |

**15E Band 3 - 5470~5725MHz**

**WIFI 802.11a (Band Edge @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | (dBμV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a CH 100 5500MHz | | 5406.64 | 56.16 | -17.84 | 74 | 42.85 | 34.96 | 11.74 | 33.39 | 100 | 0 | P | H |
| | | 5397.84 | 42.67 | -11.33 | 54 | 29.25 | 34.96 | 11.74 | 33.28 | 100 | 0 | A | H |
| | * | 5499 | 60.81 | - | - | 47.51 | 35.1 | 11.86 | 33.66 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 5406.48 | 57.42 | -16.58 | 74 | 44.11 | 34.96 | 11.74 | 33.39 | 100 | 0 | P | V |
| | | 5407.6 | 42.7 | -11.3 | 54 | 29.39 | 34.96 | 11.74 | 33.39 | 100 | 0 | A | V |
| | * | 5503 | 58.9 | - | - | 45.62 | 35.1 | 11.92 | 33.74 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| 802.11a CH 116 5580MHz | | 5444.4 | 55.92 | -18.08 | 74 | 42.59 | 35.01 | 11.8 | 33.48 | 100 | 0 | P | H |
| | | 5402.32 | 42.67 | -11.33 | 54 | 29.36 | 34.96 | 11.74 | 33.39 | 100 | 0 | A | H |
| | * | 5579 | 62.5 | - | - | 49.39 | 35.14 | 11.98 | 34.01 | 100 | 0 | P | H |
| | | 5762.76 | 56.36 | -17.64 | 74 | 42.97 | 35.26 | 12.33 | 34.2 | 100 | 0 | P | H |
| | | 5753 | 42.41 | -11.59 | 54 | 28.99 | 35.26 | 12.33 | 34.17 | 100 | 0 | A | H |
| | | | | | | | | | | | | | H |
| | | 5352.24 | 56.04 | -17.96 | 74 | 42.62 | 34.89 | 11.71 | 33.18 | 100 | 0 | P | V |
| | | 5388.24 | 42.67 | -11.33 | 54 | 29.27 | 34.94 | 11.74 | 33.28 | 100 | 0 | A | V |
| | * | 5578 | 64.5 | - | - | 51.39 | 35.14 | 11.98 | 34.01 | 100 | 0 | P | V |
| | | 5728.76 | 55.91 | -18.09 | 74 | 42.57 | 35.23 | 12.26 | 34.15 | 100 | 0 | P | V |
| | | 5762.52 | 42.45 | -11.55 | 54 | 29.06 | 35.26 | 12.33 | 34.2 | 100 | 0 | A | V |
| | | | | | | | | | | | | | V |

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | (dBµV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a CH 140 5700MHz | * | 5704 | 58.76 | - | - | 45.4 | 35.22 | 12.26 | 34.12 | 100 | 0 | P | H |
| | | 5761.08 | 56.67 | -17.33 | 74 | 43.28 | 35.26 | 12.33 | 34.2 | 100 | 0 | P | H |
| | | 5757 | 42.37 | -11.63 | 54 | 28.98 | 35.26 | 12.33 | 34.2 | 100 | 0 | A | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | * | 5696 | 58.51 | - | - | 45.24 | 35.21 | 12.18 | 34.12 | 100 | 0 | P | V |
| | | 5761.32 | 57.04 | -16.96 | 74 | 43.65 | 35.26 | 12.33 | 34.2 | 100 | 0 | P | V |
| | | 5757.72 | 42.4 | -11.6 | 54 | 29.01 | 35.26 | 12.33 | 34.2 | 100 | 0 | A | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |

**Remark**

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

**15E band 3 - 5470~5725MHz**

**WIFI 802.11a (Harmonic @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | (dBµV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11a CH 100 5500MHz | | 11001 | 43.94 | -30.06 | 74 | 46.66 | 37.9 | 16.94 | 57.56 | 100 | 0 | P | H |
| | | 16500 | 47.94 | -26.06 | 74 | 41.63 | 41.4 | 20.88 | 55.97 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 11000 | 44.24 | -29.76 | 74 | 46.96 | 37.9 | 16.94 | 57.56 | 100 | 0 | P | V |
| | | 16500 | 47.19 | -26.81 | 74 | 40.88 | 41.4 | 20.88 | 55.97 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| 802.11a CH 116 5580MHz | | 11160 | 44.56 | -29.44 | 74 | 46.84 | 38 | 17.08 | 57.36 | 100 | 0 | P | H |
| | | 16740 | 48.08 | -25.92 | 74 | 41.21 | 41.88 | 21.04 | 56.05 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 11160 | 43.98 | -30.02 | 74 | 46.26 | 38 | 17.08 | 57.36 | 100 | 0 | P | V |
| | | 16740 | 48.9 | -25.1 | 74 | 42.03 | 41.88 | 21.04 | 56.05 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| 802.11a CH 140 5700MHz | | 11400 | 44.09 | -29.91 | 74 | 45.71 | 38.14 | 17.31 | 57.07 | 100 | 0 | P | H |
| | | 17100 | 50.01 | -23.99 | 74 | 42.58 | 42.32 | 21.27 | 56.16 | 100 | 0 | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | 11400 | 44.97 | -29.03 | 74 | 46.59 | 38.14 | 17.31 | 57.07 | 100 | 0 | P | V |
| | | 17100 | 48.68 | -25.32 | 74 | 41.25 | 42.32 | 21.27 | 56.16 | 100 | 0 | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| Remark | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |

**15E Emission below 1GHz**

**WIFI 802.11a (LF @ 3m)**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBµV/m ) | ( dB ) | ( dBµV/m ) | (dBµV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| | | 40.53 | 28.36 | -11.64 | 40 | 44.49 | 13.3 | 1.77 | 31.2 | | | P | H |
| | | 209.28 | 35.78 | -7.72 | 43.5 | 55 | 9.19 | 2.69 | 31.1 | 197 | 286 | P | H |
| | | 288.39 | 26.65 | -19.35 | 46 | 41.51 | 13.04 | 3.16 | 31.06 | | | P | H |
| | | 324.5 | 25.96 | -20.04 | 46 | 40.08 | 13.6 | 3.28 | 31 | | | P | H |
| | | 493.2 | 26.24 | -19.76 | 46 | 35.2 | 17.94 | 3.77 | 30.67 | | | P | H |
| | | 948.9 | 28.09 | -17.91 | 46 | 29.16 | 24.39 | 4.94 | 30.4 | | | P | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| | | | | | | | | | | | | | H |
| 802.11a | | | | | | | | | | | | | H |
| LF | | 46.47 | 28.67 | -11.33 | 40 | 48.3 | 9.8 | 1.77 | 31.2 | 125 | 12 | P | V |
| | | 209.28 | 32.11 | -11.39 | 43.5 | 51.33 | 9.19 | 2.69 | 31.1 | | | P | V |
| | | 275.97 | 27.61 | -18.39 | 46 | 42.56 | 12.84 | 3.16 | 30.95 | | | P | V |
| | | 344.8 | 29.96 | -16.04 | 46 | 43.34 | 14.25 | 3.39 | 31.02 | | | P | V |
| | | 620.6 | 32.33 | -13.67 | 46 | 38.45 | 20.22 | 4.22 | 30.56 | | | P | V |
| | | 897.1 | 32.59 | -13.41 | 46 | 35.13 | 23.11 | 4.66 | 30.31 | | | P | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |
| | | | | | | | | | | | | | V |

**Remark**

1. No other spurious found.
2. All results are PASS against limit line.

**Note symbol**

| | |
|---|---|
| * | **Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency per 15.209(c). |
| ! | Test result is **over limit** line. |
| P/A | **P**eak or **A**verage |
| H/V | **H**orizontal or **V**ertical |

**A calculation example for radiated spurious emission is shown as below:**

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Cable | Preamp | Ant | Table | Peak | Pol. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | ( MHz ) | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 802.11b CH 01 2412MHz | | 2390 | 55.45 | -18.55 | 74 | 54.51 | 32.22 | 4.58 | 35.86 | 103 | 308 | P | H |
| | | 2390 | 43.54 | -10.46 | 54 | 42.6 | 32.22 | 4.58 | 35.86 | 103 | 308 | A | H |

1. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

**For Average Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

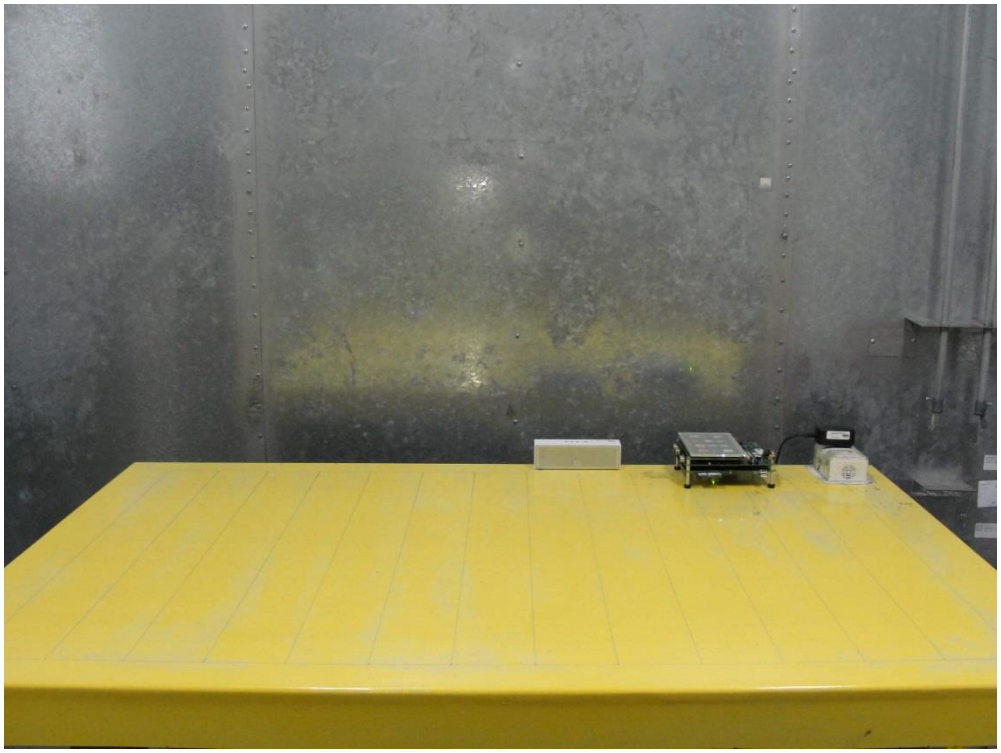
= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

**Both peak and average measured complies with the limit line, so test result is "PASS".**

# Appendix C. Setup Photographs

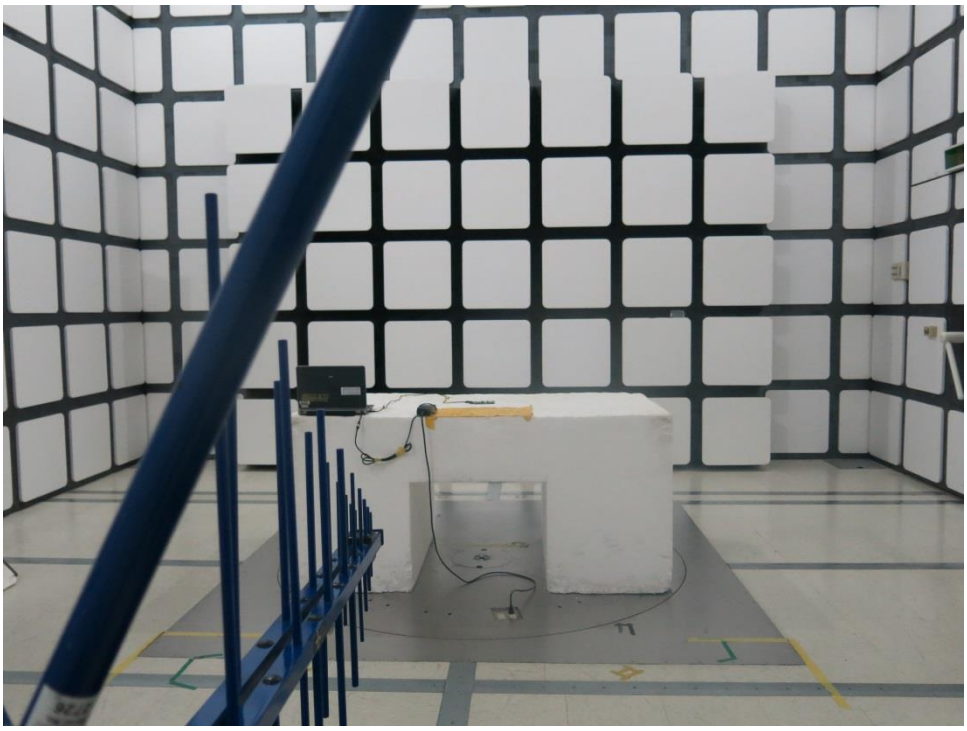
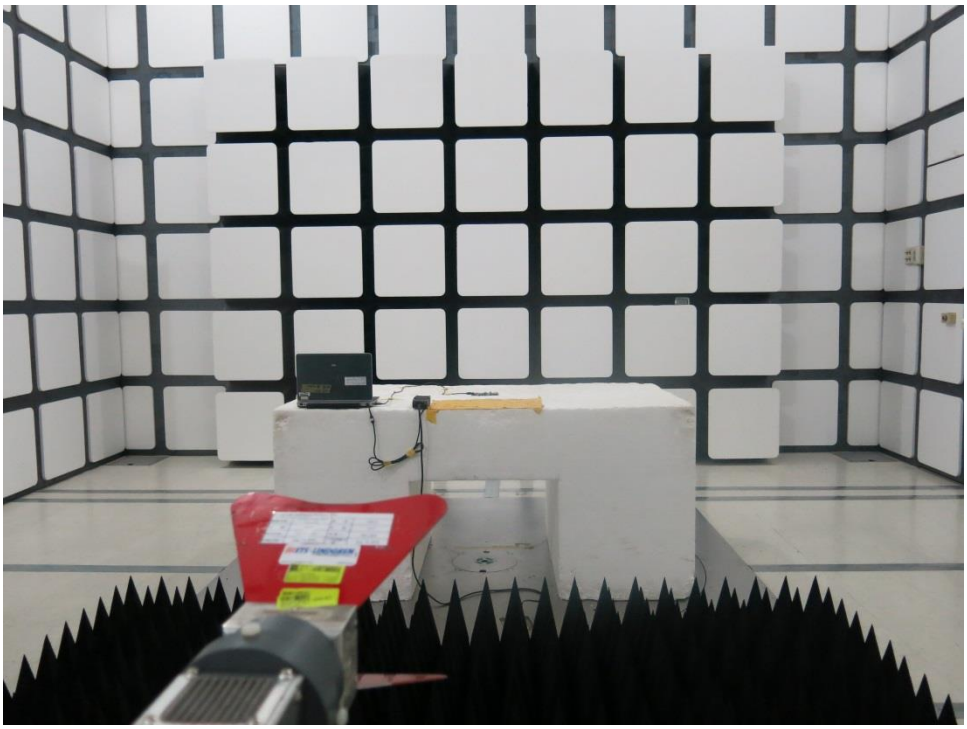
## <Conducted Emission>



## <Radiated Emission>

### X Plane

**LF**



**HF**