

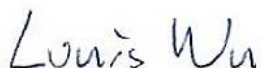
# FCC CO-LOCATION RADIO TEST REPORT

FCC ID : A4R-H2D  
Equipment : Interactive internet streaming device  
Model Name : H2D  
Applicant : Google LLC  
1600 Amphitheatre Parkway,  
Mountain View, California, 94043 USA  
Standard : FCC Part 15 Subpart E §15.407

The product was received on Jun. 05, 2019 and testing was started from Jun. 24, 2019 and completed on Aug. 03, 2019. We, SPORTON INTERNATIONAL INC., EMC & Wireless Communications Laboratory, 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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



Approved by: Louis Wu

**SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory**

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



## Table of Contents

|                                                           |           |
|-----------------------------------------------------------|-----------|
| <b>History of this test report.....</b>                   | <b>3</b>  |
| <b>Summary of Test Result.....</b>                        | <b>4</b>  |
| <b>1 General Description .....</b>                        | <b>5</b>  |
| 1.1 Product Feature of Equipment Under Test.....          | 5         |
| 1.2 Product Specification of Equipment Under Test.....    | 6         |
| 1.3 Modification of EUT .....                             | 6         |
| 1.4 Testing Location .....                                | 6         |
| 1.5 Applicable Standards.....                             | 7         |
| <b>2 Test Configuration of Equipment Under Test .....</b> | <b>8</b>  |
| 2.1 Carrier Frequency and Channel .....                   | 8         |
| 2.2 Test Mode.....                                        | 9         |
| 2.3 Connection Diagram of Test System.....                | 10        |
| 2.4 EUT Operation Test Setup .....                        | 10        |
| <b>3 Test Result .....</b>                                | <b>11</b> |
| 3.1 Unwanted Emissions Measurement .....                  | 11        |
| 3.2 Antenna Requirements.....                             | 16        |
| <b>4 List of Measuring Equipment.....</b>                 | <b>17</b> |
| <b>5 Uncertainty of Evaluation .....</b>                  | <b>18</b> |
| <b>Appendix A. Radiated Spurious Emission</b>             |           |
| <b>Appendix B. Radiated Spurious Emission Plots</b>       |           |
| <b>Appendix C. Duty Cycle Plots</b>                       |           |



## History of this test report

| Report No. | Version | Description                                                                                                                                                                                                 | Issued Date   |
|------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| FR960558G  | 01      | Initial issue of report                                                                                                                                                                                     | Aug. 13, 2019 |
| FR960558G  | 02      | <ol style="list-style-type: none"><li>1. Remove description of out-of-band emission for KDB789033 D02 v02r01 G)2)c)</li><li>2. Revised 11a Ch40 band edge data at co-location 11b Ch06 + 11a Ch40</li></ol> | Sep. 02, 2019 |
| FR960558G  | 03      | <ol style="list-style-type: none"><li>1. Revise the description of EUT supported radio to 802.15.4</li><li>2. Revised Connection Diagram of Test System config.</li></ol>                                   | Sep. 20, 2019 |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |
|            |         |                                                                                                                                                                                                             |               |

## Summary of Test Result

| Report Clause | Ref Std. Clause     | Test Items          | Result (PASS/FAIL) | Remark                                    |
|---------------|---------------------|---------------------|--------------------|-------------------------------------------|
| 3.1           | 15.407(b)           | Unwanted Emissions  | Pass               | Under limit<br>3.77 dB at<br>5150.000 MHz |
| 3.2           | 15.203<br>15.407(a) | Antenna Requirement | Pass               | -                                         |

**Remark:** Not required means after assessing, test items are not necessary to carry out.

**Declaration of Conformity:**

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

**Reviewed by:** Wii Chang

**Report Producer:** Dara Chiu

# 1 General Description

## 1.1 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                            |
|---------------------------------|--------------------------------------------------------------------------------------------|
| Equipment                       | Interactive internet streaming device                                                      |
| Model Name                      | H2D                                                                                        |
| FCC ID                          | A4R-H2D                                                                                    |
| EUT supports Radios application | WLAN 11a/b/g/n HT20/HT40<br>WLAN 11ac VHT20/VHT40/VHT80<br>Bluetooth BR/EDR/LE<br>802.15.4 |
| EUT Stage                       | Identical Prototype                                                                        |

**Remark:** The above EUT's information was declared by manufacturer.

| EUT Information List |                |
|----------------------|----------------|
| No.                  | S/N            |
| #1                   | 96030EXANZZ0X0 |
| #2                   | 96050EXANZZ2T3 |

## 1.2 Product Specification of Equipment Under Test

| Standards-related Product Specification |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx/Rx Frequency Range</b>            | 2400 MHz ~ 2483.5 MHz<br>5180 MHz ~ 5240 MHz<br>5745 MHz ~ 5825 MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Antenna Type / Gain</b>              | <b>&lt;Bluetooth-LE&gt;</b><br>Ant. 1 : PIFA Antenna type with gain 3.01 dBi<br><b>&lt;802.15.4&gt;</b><br>Ant. 3 : PIFA Antenna type with gain 2.96 dBi<br><b>&lt;2400 MHz ~ 2483.5 MHz&gt;</b><br>Ant. 1 : PIFA Antenna type with gain 3.01 dBi<br>Ant. 2 : PIFA Antenna type with gain 3.82 dBi<br><b>&lt;5180 MHz ~ 5240 MHz&gt;</b><br>Ant. 1 : PIFA Antenna type with gain 3.49 dBi<br>Ant. 2 : PIFA Antenna type with gain 4.82 dBi<br>Ant. 3 : PIFA Antenna type with gain 4.46 dBi<br>Ant. 4 : PIFA Antenna type with gain 4.08 dBi<br><b>&lt;5745 MHz ~ 5825 MHz&gt;</b><br>Ant. 1 : PIFA Antenna type with gain 4.62 dBi<br>Ant. 2 : PIFA Antenna type with gain 5.40 dBi<br>Ant. 3 : PIFA Antenna type with gain 4.01 dBi<br>Ant. 4 : PIFA Antenna type with gain 4.98 dBi |
| <b>Type of Modulation</b>               | Bluetooth LE : GFSK<br>802.11b : DSSS (DBPSK / DQPSK / CCK)<br>802.11a : OFDM (BPSK / QPSK / 16QAM / 64QAM)<br>802.15.4: O-QPSK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## 1.3 Modification of EUT

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

## 1.4 Testing Location

|                           |                                                                                                                                           |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Test Site</b>          | SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory                                                                       |
| <b>Test Site Location</b> | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist.,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-0868<br>FAX: +886-3-327-0855 |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b><br>03CH12-HY                                                                                                      |

**Note:** The test site complies with ANSI C63.4 2014 requirement.

FCC Designation No. TW0007



## **1.5 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 v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02
- ♦ ANSI C63.10-2013

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.

## 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: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

### 2.1 Carrier Frequency and Channel

| 2400-2483.5 MHz<br>Bluetooth -LE |             | 2400-2483.5 MHz<br>802.15.4 |             |
|----------------------------------|-------------|-----------------------------|-------------|
| Channel                          | Freq. (MHz) | Channel                     | Freq. (MHz) |
| 19                               | 2440        | 18                          | 2440        |

| 2400-2483.5 MHz<br>802.11b |             | 5150~5250 MHz<br>802.11a |             |
|----------------------------|-------------|--------------------------|-------------|
| Channel                    | Freq. (MHz) | Channel                  | Freq. (MHz) |
| 6                          | 2437        | 40                       | 5200        |
|                            |             | 157                      | 5785        |

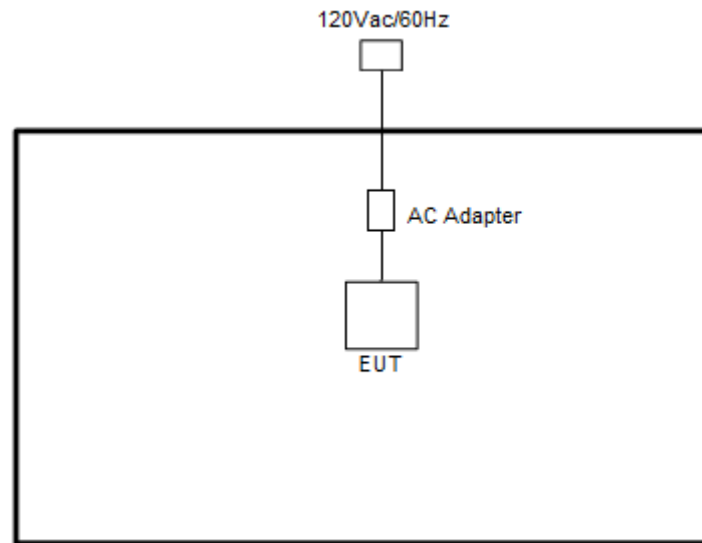
## 2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

<Co-Location>

| Modulation                                                                                                  | Data Rate      |
|-------------------------------------------------------------------------------------------------------------|----------------|
| Bluetooth – LE Ch. 19 (2440MHz) for Ant. 1<br>+ 5GHz 802.11a Ch. 40 (5200MHz) for MIMO Ant. 1+2+3+4         | 1Mbps + 6Mbps  |
| Bluetooth – LE Ch. 19 (2440MHz) for Ant. 1<br>+ 5GHz 802.11a Ch. 157 (5785MHz) for MIMO Ant. 1+2+3+4        | 1Mbps + 6Mbps  |
| 802.15.4 Ch. 18 (2440MHz) for Ant. 3<br>+ 5GHz 802.11a Ch. 40 (5200MHz) for MIMO Ant. 1+2+3+4               | 250KHz + 6Mbps |
| 802.15.4 Ch.18 (2440MHz) for Ant. 3<br>+ 5GHz 802.11a Ch. 157 (5785MHz) for MIMO Ant. 1+2+3+4               | 250KHz + 6Mbps |
| 2.4GHz 802.11b Ch. 06 (2437MHz) for MIMO Ant. 1+2<br>+ 5GHz 802.11a Ch. 40 (5200MHz) for MIMO Ant. 1+2+3+4  | 1Mbps + 6Mbps  |
| 2.4GHz 802.11b Ch. 06 (2437MHz) for MIMO Ant. 1+2<br>+ 5GHz 802.11a Ch. 157 (5785MHz) for MIMO Ant. 1+2+3+4 | 1Mbps + 6Mbps  |

## 2.3 Connection Diagram of Test System



## 2.4 EUT Operation Test Setup

The RF test items, utility “QRCT 4.0.00108” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

### 3 Test Result

#### 3.1 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

##### 3.1.1 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 shall comply with the general field strength limits as below table:

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

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

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



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

(3) KDB789033 D02 v02r01 G)2)c)

- (i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.
- (ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

### 3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

### 3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. 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

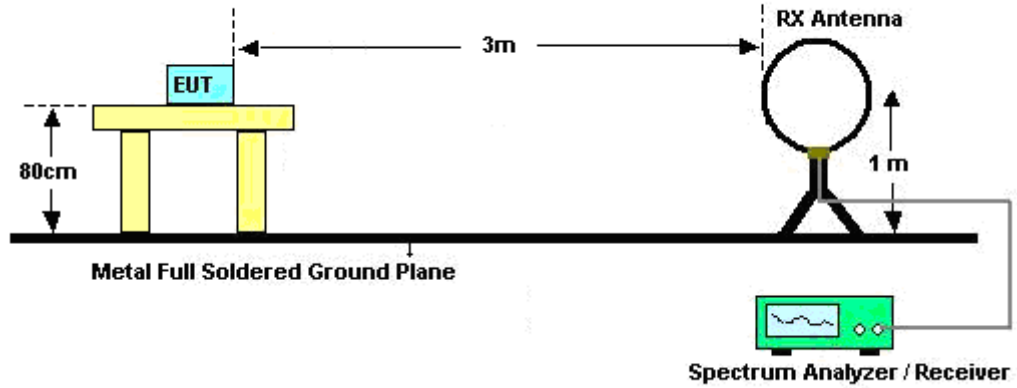
- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

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

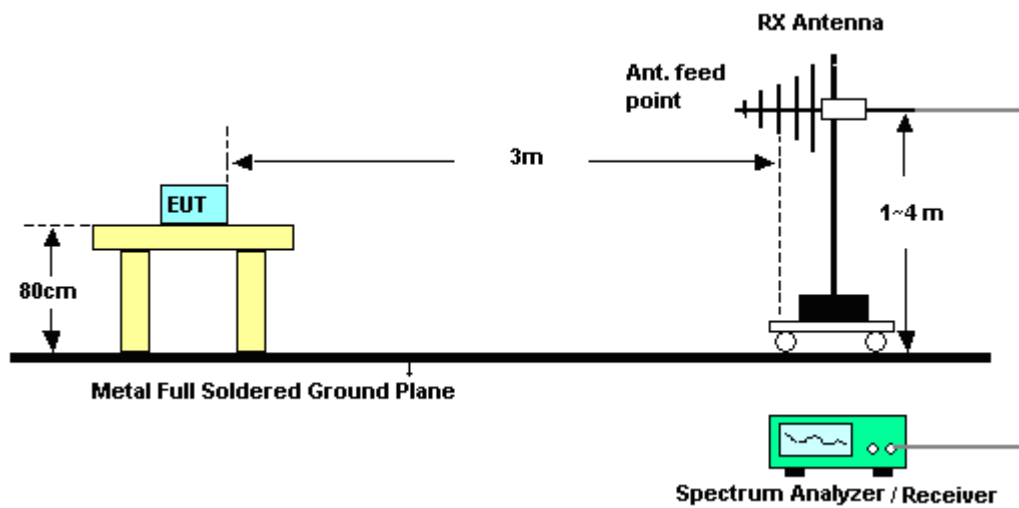
- RBW = 1 MHz
  - VBW = 10 Hz, when duty cycle is no less than 98 percent.
  - $VBW \geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively 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.

### 3.1.4 Test Setup

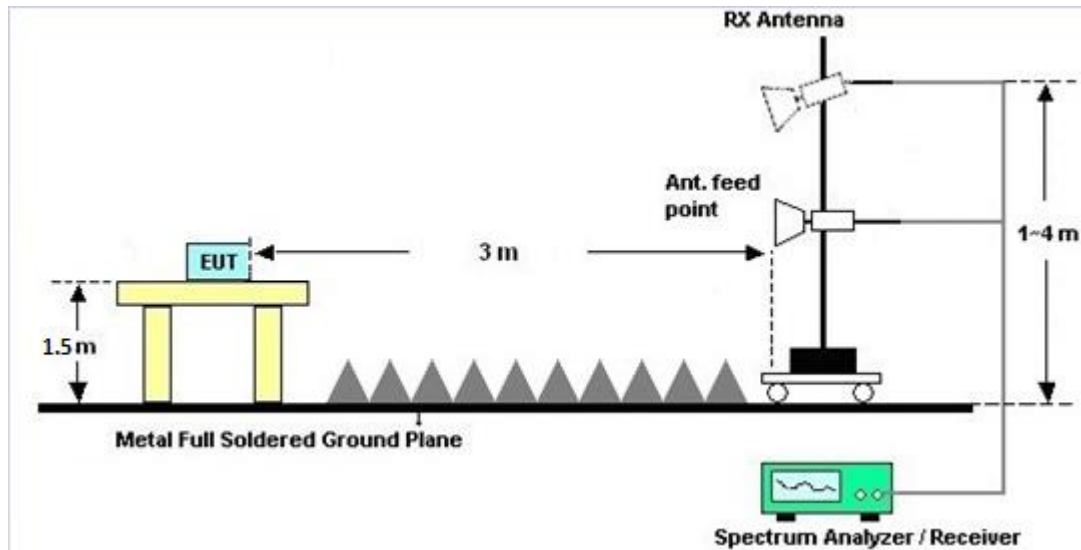
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



### 3.1.5 Test Results of Radiated Spurious 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 was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

### 3.1.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A and B.

### 3.1.7 Duty Cycle

Please refer to Appendix C.

### 3.1.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix A and B.



## **3.2 Antenna Requirements**

### **3.2.1 Standard Applicable**

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.

### **3.2.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

### **3.2.3 Antenna Gain**

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



## 4 List of Measuring Equipment

| Instrument           | Manufacturer    | Model No.                                | Serial No.      | Characteristics                  | Calibration Date | Test Date                       | Due Date      | Remark                   |
|----------------------|-----------------|------------------------------------------|-----------------|----------------------------------|------------------|---------------------------------|---------------|--------------------------|
| Loop Antenna         | Rohde & Schwarz | HFH2-Z2                                  | 100488          | 9 kHz~30 MHz                     | Jan. 07, 2019    | Jun. 24, 2019<br>~Avg. 03, 2019 | Jan. 06, 2020 | Radiation<br>(03CH12-HY) |
| Bilog Antenna        | TESEQ           | CBL<br>6111D&00800<br>N1D01N-06          | 37059&01        | 30MHz~1GHz                       | Oct. 13, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Oct. 12, 2019 | Radiation<br>(03CH12-HY) |
| Horn Antenna         | SCHWARZBECK     | BBHA 9120D                               | 9120D-132<br>8  | 1GHz ~ 18GHz                     | Nov. 09, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Nov. 08, 2019 | Radiation<br>(03CH12-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK     | BBHA 9170                                | BBHA9170<br>584 | 18GHz ~ 40GHz                    | Dec. 05, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Dec. 04, 2019 | Radiation<br>(03CH12-HY) |
| Preamplifier         | COM-POWER       | PA-103                                   | 161075          | 10MHz~1GHz                       | Mar. 25, 2019    | Jun. 24, 2019<br>~Avg. 03, 2019 | Mar. 24, 2020 | Radiation<br>(03CH12-HY) |
| Preamplifier         | Agilent         | 8449B                                    | 3008A023<br>75  | 1GHz~26.5GHz                     | May 27, 2019     | Jun. 24, 2019<br>~Avg. 03, 2019 | May 26, 2020  | Radiation<br>(03CH12-HY) |
| Preamplifier         | MITEQ           | AMF-7D-0010<br>1800-30-10P               | 1590074         | 1GHz~18GHz                       | May 20, 2019     | Jun. 24, 2019<br>~Avg. 03, 2019 | May 19, 2020  | Radiation<br>(03CH12-HY) |
| Preamplifier         | EMEC            | EM18G40G                                 | 060715          | 18GHz ~ 40GHz                    | Dec. 06, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Dec. 05, 2019 | Radiation<br>(03CH12-HY) |
| EMI Test Receiver    | Rohde & Schwarz | ESU26                                    | 100390          | 20Hz~26.5GHz                     | Dec. 26, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Dec. 25, 2019 | Radiation<br>(03CH12-HY) |
| Spectrum Analyzer    | Keysight        | N9010A                                   | MY553705<br>26  | 10Hz~44GHz                       | Mar. 19, 2019    | Jun. 24, 2019<br>~Avg. 03, 2019 | Mar. 18, 2020 | Radiation<br>(03CH12-HY) |
| Hygrometer           | TECPEL          | DTM-303B                                 | TP140349        | N/A                              | Oct. 22, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Oct. 21, 2019 | Radiation<br>(03CH12-HY) |
| Filter               | Wainwright      | WLK4-1000-1<br>530-6000-40S<br>S         | SN11            | 1 GHz Lowpass                    | Sep. 16, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Sep. 15, 2019 | Radiation<br>(03CH12-HY) |
| Filter               | Wainwright      | WHKX12-270<br>0-3000-18000<br>-60SS      | SN3             | 3 GHz Highpass                   | Sep. 16, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Sep. 15, 2019 | Radiation<br>(03CH12-HY) |
| Filter               | Woken           | WHKX8-5272.<br>5-6750-18000<br>-40ST     | SN2             | 6.75G Highpass                   | Sep. 17, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Sep.16, 2019  | Radiation<br>(03CH12-HY) |
| Notch Filter         | Wainwright      | WRCGV2400/<br>2483-2390/24<br>93-35/10SS | SN4             | 2.4G                             | Nov. 02, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Nov. 01, 2019 | Radiation<br>(03CH12-HY) |
| Notch Filter         | Wainwright      | WRCJV12-51<br>20-5150-5350<br>-5380-40SS | SN1             | 5GBand1~2                        | Mar. 15, 2019    | Jun. 24, 2019<br>~Avg. 03, 2019 | Mar. 14, 2020 | Radiation<br>(03CH12-HY) |
| Notch Filter         | Wainwright      | WRCJV12-56<br>95-5725-5850<br>-5880-40SS | SN6             | 5GBand4                          | Jul. 04, 2019    | Jun. 24, 2019<br>~Avg. 03, 2019 | Jul. 03, 2020 | Radiation<br>(03CH12-HY) |
| RF Cable             | HUBER + SUHNER  | SUCOFLEX<br>126E                         | 0058/126E       | 30M-18G                          | Mar. 13, 2019    | Jun. 24, 2019<br>~Avg. 03, 2019 | Mar. 12, 2020 | Radiation<br>(03CH12-HY) |
| RF Cable             | HUBER + SUHNER  | SUCOFLEX<br>102                          | 505134/2        | 30M~40GHz                        | Oct. 16, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Oct. 15, 2019 | Radiation<br>(03CH12-HY) |
| RF Cable             | HUBER + SUHNER  | SUCOFLEX<br>102                          | 800740/2        | 30M~40GHz                        | Oct. 16, 2018    | Jun. 24, 2019<br>~Avg. 03, 2019 | Oct. 15, 2019 | Radiation<br>(03CH12-HY) |
| Controller           | EMEC            | EM1000                                   | N/A             | Control Turn<br>table & Ant Mast | N/A              | Jun. 24, 2019<br>~Avg. 03, 2019 | N/A           | Radiation<br>(03CH12-HY) |
| Antenna Mast         | EMEC            | AM-BS-4500-<br>B                         | N/A             | 1m~4m                            | N/A              | Jun. 24, 2019<br>~Avg. 03, 2019 | N/A           | Radiation<br>(03CH12-HY) |
| Turn Table           | EMEC            | TT2000                                   | N/A             | 0~360 Degree                     | N/A              | Jun. 24, 2019<br>~Avg. 03, 2019 | N/A           | Radiation<br>(03CH12-HY) |
| Software             | Audix           | E3<br>6.2009-8-24                        | RK-00098<br>9   | N/A                              | N/A              | Jun. 24, 2019<br>~Avg. 03, 2019 | N/A           | Radiation<br>(03CH12-HY) |



## 5 Uncertainty of Evaluation

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

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.10 |
|----------------------------------------------------------------------------|------|

### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.20 |
|----------------------------------------------------------------------------|------|

### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

|                                                                            |      |
|----------------------------------------------------------------------------|------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 4.70 |
|----------------------------------------------------------------------------|------|



## **Appendix A. Radiated Spurious Emission**

|                        |                                         |                            |      |
|------------------------|-----------------------------------------|----------------------------|------|
| <b>Test Engineer :</b> | Jack Cheng, Lance Chiang, and Chuan Chu | <b>Temperature :</b>       | 25°C |
|                        |                                         | <b>Relative Humidity :</b> | 61%  |



## 2.4GHz 2440MHz + 5GHz 5200MHz

## BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch40 (Band Edge @ 3m)

| BLE+WIFI                    | Note                                                                                        | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak  | Pol.  |
|-----------------------------|---------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| Ant.                        |                                                                                             |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 1<br>1+2+3+4                |                                                                                             | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| BLE(1M)<br>CH19<br>2440MHz  |                                                                                             | 2377.62   | 55.77      | -18.23 | 74         | 44.76    | 27.54    | 16.61  | 33.14  | 203    | 236     | P     | H     |
|                             |                                                                                             | 2335.76   | 46.61      | -7.39  | 54         | 35.45    | 27.69    | 16.56  | 33.09  | 203    | 236     | A     | H     |
|                             | *                                                                                           | 2440      | 111.73     | -      | -          | 100.86   | 27.42    | 16.67  | 33.22  | 203    | 236     | P     | H     |
|                             | *                                                                                           | 2440      | 110.93     | -      | -          | 100.06   | 27.42    | 16.67  | 33.22  | 203    | 236     | A     | H     |
|                             |                                                                                             | 2492.65   | 55.59      | -18.41 | 74         | 44.84    | 27.31    | 16.72  | 33.28  | 203    | 236     | P     | H     |
|                             |                                                                                             | 2499.16   | 45.96      | -8.04  | 54         | 35.23    | 27.3     | 16.72  | 33.29  | 203    | 236     | A     | H     |
|                             |                                                                                             | 2325.54   | 55.82      | -18.18 | 74         | 44.6     | 27.75    | 16.55  | 33.08  | 233    | 354     | P     | V     |
|                             |                                                                                             | 2339.96   | 46.38      | -7.62  | 54         | 35.25    | 27.66    | 16.57  | 33.1   | 233    | 354     | A     | V     |
|                             | *                                                                                           | 2440      | 115.72     | -      | -          | 104.85   | 27.42    | 16.67  | 33.22  | 233    | 354     | P     | V     |
|                             | *                                                                                           | 2440      | 114.88     | -      | -          | 104.01   | 27.42    | 16.67  | 33.22  | 233    | 354     | A     | V     |
|                             |                                                                                             | 2488.87   | 56.73      | -17.27 | 74         | 45.97    | 27.32    | 16.72  | 33.28  | 233    | 354     | P     | V     |
|                             |                                                                                             | 2489.92   | 46.3       | -7.7   | 54         | 35.54    | 27.32    | 16.72  | 33.28  | 233    | 354     | A     | V     |
| 802.11a<br>CH 40<br>5200MHz |                                                                                             | 5147.68   | 55.53      | -18.47 | 74         | 47.28    | 31.9     | 9.82   | 33.47  | 285    | 332     | P     | H     |
|                             |                                                                                             | 5149.24   | 48.12      | -5.88  | 54         | 39.86    | 31.9     | 9.83   | 33.47  | 285    | 332     | A     | H     |
|                             | *                                                                                           | 5200      | 121.52     | -      | -          | 113.38   | 31.7     | 9.9    | 33.46  | 285    | 332     | P     | H     |
|                             | *                                                                                           | 5200      | 114.04     | -      | -          | 105.9    | 31.7     | 9.9    | 33.46  | 285    | 332     | A     | H     |
|                             |                                                                                             | 5371.52   | 51.48      | -22.52 | 74         | 43.42    | 31.39    | 10.11  | 33.44  | 285    | 332     | P     | H     |
|                             |                                                                                             | 5376      | 44.76      | -9.24  | 54         | 36.68    | 31.4     | 10.12  | 33.44  | 285    | 332     | A     | H     |
|                             |                                                                                             | 5149.5    | 57.91      | -16.09 | 74         | 49.65    | 31.9     | 9.83   | 33.47  | 325    | 234     | P     | V     |
|                             |                                                                                             | 5150      | 50.23      | -3.77  | 54         | 41.97    | 31.9     | 9.83   | 33.47  | 325    | 234     | A     | V     |
|                             | *                                                                                           | 5200      | 121.76     | -      | -          | 113.62   | 31.7     | 9.9    | 33.46  | 325    | 234     | P     | V     |
|                             | *                                                                                           | 5200      | 114.12     | -      | -          | 105.98   | 31.7     | 9.9    | 33.46  | 325    | 234     | A     | V     |
|                             |                                                                                             | 5416.88   | 50.81      | -23.19 | 74         | 42.51    | 31.57    | 10.17  | 33.44  | 325    | 234     | P     | V     |
|                             |                                                                                             | 5376      | 43.13      | -10.87 | 54         | 35.05    | 31.4     | 10.12  | 33.44  | 325    | 234     | A     | V     |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |           |            |        |            |          |          |        |        |        |         |       |       |



**BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch40 (Harmonic @ 3m)**

| BLE+WIFI<br>Ant.<br>1<br>1+2+3+4                                            | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| <b>BLE(1M)<br/>CH19<br/>2440MHz<br/>+<br/>802.11a<br/>CH 40<br/>5200MHz</b> |                                                                                             | 4880                 | 53.06               | -20.94                  | 74                          | 45.85                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 185                     | P                     | H             |
|                                                                             |                                                                                             | 4880                 | 43.04               | -10.96                  | 54                          | 35.83                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 185                     | A                     | H             |
|                                                                             |                                                                                             | 7320                 | 43.44               | -30.56                  | 74                          | 52.11                     | 36.56                         | 13.94                  | 59.17                      | 100                  | 0                       | P                     | H             |
|                                                                             |                                                                                             | 10400                | 46.63               | -21.57                  | 68.2                        | 51.54                     | 39.7                          | 16.25                  | 60.86                      | 100                  | 0                       | P                     | H             |
|                                                                             |                                                                                             | 15600                | 45.14               | -28.86                  | 74                          | 48.47                     | 37.8                          | 20.35                  | 61.48                      | 100                  | 0                       | P                     | H             |
|                                                                             |                                                                                             | 4880                 | 52.38               | -21.62                  | 74                          | 45.17                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | P                     | V             |
|                                                                             |                                                                                             | 4880                 | 43.4                | -10.6                   | 54                          | 36.19                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | A                     | V             |
|                                                                             |                                                                                             | 7320                 | 43.55               | -30.45                  | 74                          | 52.22                     | 36.56                         | 13.94                  | 59.17                      | 100                  | 0                       | P                     | V             |
|                                                                             |                                                                                             | 10400                | 46.27               | -21.93                  | 68.2                        | 51.18                     | 39.7                          | 16.25                  | 60.86                      | 100                  | 0                       | P                     | V             |
|                                                                             |                                                                                             | 15600                | 46.75               | -27.25                  | 74                          | 50.08                     | 37.8                          | 20.35                  | 61.48                      | 100                  | 0                       | P                     | V             |
| <b>Remark</b>                                                               | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



## 2.4GHz 2440MHz + 5GHz 5785MHz

## BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch157 (Band Edge @ 3m)

| BLE<br>Ant.<br>1           | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| BLE(1M)<br>CH19<br>2440MHz |                                                                                             | 2324.84              | 56.62               | -17.38                  | 74                          | 45.4                      | 27.75                         | 16.55                  | 33.08                      | 198                  | 229                     | P                     | H             |
|                            |                                                                                             | 2327.22              | 46.35               | -7.65                   | 54                          | 35.14                     | 27.74                         | 16.55                  | 33.08                      | 198                  | 229                     | A                     | H             |
|                            | *                                                                                           | 2440                 | 112.44              | -                       | -                           | 101.57                    | 27.42                         | 16.67                  | 33.22                      | 198                  | 229                     | P                     | H             |
|                            | *                                                                                           | 2440                 | 110.39              | -                       | -                           | 99.52                     | 27.42                         | 16.67                  | 33.22                      | 198                  | 229                     | A                     | H             |
|                            |                                                                                             | 2489.5               | 55.69               | -18.31                  | 74                          | 44.93                     | 27.32                         | 16.72                  | 33.28                      | 198                  | 229                     | P                     | H             |
|                            |                                                                                             | 2488.17              | 46.13               | -7.87                   | 54                          | 35.38                     | 27.32                         | 16.71                  | 33.28                      | 198                  | 229                     | A                     | H             |
|                            |                                                                                             | 2358.72              | 55.85               | -18.15                  | 74                          | 44.8                      | 27.58                         | 16.59                  | 33.12                      | 216                  | 360                     | P                     | V             |
|                            |                                                                                             | 2376.08              | 46.33               | -7.67                   | 54                          | 35.31                     | 27.55                         | 16.61                  | 33.14                      | 216                  | 360                     | A                     | V             |
|                            | *                                                                                           | 2440                 | 115.95              | -                       | -                           | 105.08                    | 27.42                         | 16.67                  | 33.22                      | 216                  | 360                     | P                     | V             |
|                            | *                                                                                           | 2440                 | -115.45             | -                       | -                           | 104.58                    | 27.42                         | 16.67                  | 33.22                      | 216                  | 360                     | A                     | V             |
|                            |                                                                                             | 2489.43              | 57.58               | -16.42                  | 74                          | 46.82                     | 27.32                         | 16.72                  | 33.28                      | 216                  | 360                     | P                     | V             |
|                            |                                                                                             | 2483.62              | 46.16               | -7.84                   | 54                          | 35.39                     | 27.33                         | 16.71                  | 33.27                      | 216                  | 360                     | A                     | V             |
| Remark                     | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



| WIFI<br>Ant.<br>1+2+3+4               | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11a<br/>CH 157<br/>5785MHz</b> |                                                                                             | 5643.8               | 52.42               | -15.78                  | 68.2                        | 43.71                     | 31.71                         | 10.45                  | 33.45                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5697.6               | 57.79               | -45.64                  | 103.43                      | 48.78                     | 31.99                         | 10.48                  | 33.46                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5715.8               | 65.24               | -44.39                  | 109.63                      | 56.18                     | 32.03                         | 10.49                  | 33.46                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5724.8               | 63.77               | -57.97                  | 121.74                      | 54.68                     | 32.05                         | 10.5                   | 33.46                      | 117                  | 288                     | P                       | H               |
|                                       | *                                                                                           | 5785                 | 120.88              | -                       | -                           | 111.65                    | 32.17                         | 10.53                  | 33.47                      | 117                  | 288                     | P                       | H               |
|                                       | *                                                                                           | 5785                 | 112.94              | -                       | -                           | 103.71                    | 32.17                         | 10.53                  | 33.47                      | 117                  | 288                     | A                       | H               |
|                                       |                                                                                             | 5851.2               | 62.06               | -57.4                   | 119.46                      | 52.65                     | 32.3                          | 10.59                  | 33.48                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5858.2               | 67.44               | -42.46                  | 109.9                       | 58.01                     | 32.32                         | 10.59                  | 33.48                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5879.8               | 56.8                | -44.83                  | 101.63                      | 47.31                     | 32.36                         | 10.61                  | 33.48                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5932.6               | 50.93               | -17.27                  | 68.2                        | 41.23                     | 32.53                         | 10.66                  | 33.49                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5644.6               | 51.82               | -16.38                  | 68.2                        | 43.11                     | 31.71                         | 10.45                  | 33.45                      | 236                  | 93                      | P                       | V               |
|                                       |                                                                                             | 5692.6               | 58.34               | -41.4                   | 99.74                       | 49.36                     | 31.96                         | 10.48                  | 33.46                      | 236                  | 93                      | P                       | V               |
|                                       |                                                                                             | 5713.8               | 70.47               | -38.6                   | 109.07                      | 61.41                     | 32.03                         | 10.49                  | 33.46                      | 236                  | 93                      | P                       | V               |
|                                       |                                                                                             | 5724.8               | 64.62               | -57.12                  | 121.74                      | 55.53                     | 32.05                         | 10.5                   | 33.46                      | 236                  | 93                      | P                       | V               |
|                                       | *                                                                                           | 5785                 | 124.01              | -                       | -                           | 114.78                    | 32.17                         | 10.53                  | 33.47                      | 236                  | 93                      | P                       | V               |
|                                       | *                                                                                           | 5785                 | 115.95              | -                       | -                           | 106.72                    | 32.17                         | 10.53                  | 33.47                      | 236                  | 93                      | A                       | V               |
|                                       |                                                                                             | 5852.4               | 72.91               | -43.82                  | 116.73                      | 63.5                      | 32.3                          | 10.59                  | 33.48                      | 236                  | 93                      | P                       | V               |
|                                       |                                                                                             | 5855.2               | 69.81               | -40.93                  | 110.74                      | 60.39                     | 32.31                         | 10.59                  | 33.48                      | 236                  | 93                      | P                       | V               |
|                                       |                                                                                             | 5892.4               | 56.15               | -36.14                  | 92.29                       | 46.63                     | 32.38                         | 10.62                  | 33.48                      | 236                  | 93                      | P                       | V               |
|                                       |                                                                                             | 5938.2               | 52.52               | -15.68                  | 68.2                        | 42.8                      | 32.55                         | 10.66                  | 33.49                      | 236                  | 93                      | P                       | V               |
| <b>Remark</b>                         | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch157 (Harmonic @ 3m)

| BLE+WIFI<br>Ant.<br>1/<br>1+2+3+4                               | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| BLE(1M)<br>CH19<br>2440MHz<br>+<br>802.11a<br>CH 157<br>5785MHz |                                                                                             | 4880                 | 52.81               | -21.19                  | 74                          | 45.6                      | 31.1                          | 9.6                    | 33.49                      | 100                  | 185                     | P                     | H             |
|                                                                 |                                                                                             | 4880                 | 43.03               | -10.97                  | 54                          | 35.82                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 185                     | A                     | H             |
|                                                                 |                                                                                             | 7320                 | 42.9                | -31.1                   | 74                          | 51.57                     | 36.56                         | 13.94                  | 59.17                      | 100                  | 0                       | P                     | H             |
|                                                                 |                                                                                             | 11570                | 46.15               | -27.85                  | 74                          | 51.68                     | 39.66                         | 17.07                  | 62.26                      | 100                  | 0                       | P                     | H             |
|                                                                 |                                                                                             | 17355                | 51.38               | -16.82                  | 68.2                        | 46.45                     | 41.4                          | 22.35                  | 58.82                      | 100                  | 0                       | P                     | H             |
|                                                                 |                                                                                             | 4880                 | 53.34               | -20.66                  | 74                          | 46.13                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | P                     | V             |
|                                                                 |                                                                                             | 4880                 | 43.33               | -10.67                  | 54                          | 36.12                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | A                     | V             |
|                                                                 |                                                                                             | 7320                 | 42.54               | -31.46                  | 74                          | 51.21                     | 36.56                         | 13.94                  | 59.17                      | 100                  | 0                       | P                     | V             |
|                                                                 |                                                                                             | 11570                | 46.01               | -27.99                  | 74                          | 51.54                     | 39.66                         | 17.07                  | 62.26                      | 100                  | 0                       | P                     | V             |
|                                                                 |                                                                                             | 17355                | 52.52               | -15.68                  | 68.2                        | 47.59                     | 41.4                          | 22.35                  | 58.82                      | 100                  | 0                       | P                     | V             |
| Remark                                                          | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



## 2.4GHz 2440MHz + 5GHz 5200MHz

## 802.15.4\_Tx\_Ch18+11a\_Tx\_Ch40 (Band Edge @ 3m)

| 802.15.4 +<br>WIFI<br>Ant.<br>3/<br>1+2+3+4 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|---------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.15.4<br>CH18<br>2440MHz                 |                                                                                             | 2387.56              | 54.94               | -19.06                  | 74                          | 43.95                     | 27.52                         | 16.63                  | 33.16                      | 355                  | 2                       | P                     | H             |
|                                             |                                                                                             | 2389.94              | 45.22               | -8.78                   | 54                          | 34.23                     | 27.52                         | 16.63                  | 33.16                      | 355                  | 2                       | A                     | H             |
|                                             | *                                                                                           | 2440                 | 116.6               | -                       | -                           | 105.73                    | 27.42                         | 16.67                  | 33.22                      | 355                  | 2                       | P                     | H             |
|                                             | *                                                                                           | 2440                 | 114.8               | -                       | -                           | 103.93                    | 27.42                         | 16.67                  | 33.22                      | 355                  | 2                       | A                     | H             |
|                                             |                                                                                             | 2497.56              | 55.09               | -18.91                  | 74                          | 44.36                     | 27.3                          | 16.72                  | 33.29                      | 355                  | 2                       | P                     | H             |
|                                             |                                                                                             | 2484                 | 45.56               | -8.44                   | 54                          | 34.79                     | 27.33                         | 16.71                  | 33.27                      | 355                  | 2                       | A                     | H             |
|                                             |                                                                                             | 2346.82              | 55.75               | -18.25                  | 74                          | 44.66                     | 27.62                         | 16.58                  | 33.11                      | 400                  | 255                     | P                     | V             |
|                                             |                                                                                             | 2314.76              | 45.27               | -8.73                   | 54                          | 33.99                     | 27.81                         | 16.54                  | 33.07                      | 400                  | 255                     | A                     | V             |
|                                             | *                                                                                           | 2440                 | 111.69              | -                       | -                           | 100.82                    | 27.42                         | 16.67                  | 33.22                      | 400                  | 255                     | P                     | V             |
|                                             | *                                                                                           | 2440                 | 110.01              | -                       | -                           | 99.14                     | 27.42                         | 16.67                  | 33.22                      | 400                  | 255                     | A                     | V             |
|                                             |                                                                                             | 2487.24              | 55.58               | -18.42                  | 74                          | 44.81                     | 27.33                         | 16.71                  | 33.27                      | 400                  | 255                     | P                     | V             |
|                                             |                                                                                             | 2484.72              | 45.22               | -8.78                   | 54                          | 34.45                     | 27.33                         | 16.71                  | 33.27                      | 400                  | 255                     | A                     | V             |
| 802.11a<br>CH 40<br>5200MHz                 |                                                                                             | 5149.5               | 56.32               | -17.68                  | 74                          | 48.06                     | 31.9                          | 9.83                   | 33.47                      | 285                  | 333                     | P                     | H             |
|                                             |                                                                                             | 5148.46              | 48.04               | -5.96                   | 54                          | 39.78                     | 31.9                          | 9.83                   | 33.47                      | 285                  | 333                     | A                     | H             |
|                                             | *                                                                                           | 5200                 | 121.38              | -                       | -                           | 113.24                    | 31.7                          | 9.9                    | 33.46                      | 285                  | 333                     | P                     | H             |
|                                             | *                                                                                           | 5200                 | 113.75              | -                       | -                           | 105.61                    | 31.7                          | 9.9                    | 33.46                      | 285                  | 333                     | A                     | H             |
|                                             |                                                                                             | 5365.36              | 50.64               | -23.36                  | 74                          | 42.61                     | 31.36                         | 10.11                  | 33.44                      | 285                  | 333                     | P                     | H             |
|                                             |                                                                                             | 5376                 | 44.44               | -9.56                   | 54                          | 36.36                     | 31.4                          | 10.12                  | 33.44                      | 285                  | 333                     | A                     | H             |
|                                             |                                                                                             | 5149.5               | 57.26               | -16.74                  | 74                          | 49                        | 31.9                          | 9.83                   | 33.47                      | 326                  | 229                     | P                     | V             |
|                                             |                                                                                             | 5150                 | 49.89               | -4.11                   | 54                          | 41.63                     | 31.9                          | 9.83                   | 33.47                      | 326                  | 229                     | A                     | V             |
|                                             | *                                                                                           | 5200                 | 121.98              | -                       | -                           | 113.84                    | 31.7                          | 9.9                    | 33.46                      | 326                  | 229                     | P                     | V             |
|                                             | *                                                                                           | 5200                 | 114.4               | -                       | -                           | 106.26                    | 31.7                          | 9.9                    | 33.46                      | 326                  | 229                     | A                     | V             |
|                                             |                                                                                             | 5368.72              | 51.78               | -22.22                  | 74                          | 43.74                     | 31.37                         | 10.11                  | 33.44                      | 326                  | 229                     | P                     | V             |
|                                             |                                                                                             | 5376                 | 43.16               | -10.84                  | 54                          | 35.08                     | 31.4                          | 10.12                  | 33.44                      | 326                  | 229                     | A                     | V             |
| Remark                                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



**802.15.4\_Tx\_Ch18+11a\_Tx\_Ch40 (Harmonic @ 3m)**

| 802.15.4+<br>WIFI<br>Ant.<br>3/<br>1+2+3+4                                   | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| <b>802.15.4<br/>CH18<br/>2440MHz<br/>+<br/>802.11a<br/>CH 40<br/>5200MHz</b> |                                                                                             | 4880                 | 52.09               | -21.91                  | 74                          | 44.88                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 180                     | P                     | H             |
|                                                                              |                                                                                             | 4880                 | 42.54               | -11.46                  | 54                          | 35.33                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 180                     | A                     | H             |
|                                                                              |                                                                                             | 7320                 | 43.06               | -30.94                  | 74                          | 51.73                     | 36.56                         | 13.94                  | 59.17                      | 100                  | 0                       | P                     | H             |
|                                                                              |                                                                                             | 10400                | 45.66               | -22.54                  | 68.2                        | 50.57                     | 39.7                          | 16.25                  | 60.86                      | 100                  | 0                       | P                     | H             |
|                                                                              |                                                                                             | 15600                | 45.2                | -28.8                   | 74                          | 48.53                     | 37.8                          | 20.35                  | 61.48                      | 100                  | 0                       | P                     | H             |
|                                                                              |                                                                                             | 4880                 | 52.29               | -21.71                  | 74                          | 45.08                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | P                     | V             |
|                                                                              |                                                                                             | 4880                 | 43.2                | -10.8                   | 54                          | 35.99                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | A                     | V             |
|                                                                              |                                                                                             | 7320                 | 42.52               | -31.48                  | 74                          | 51.19                     | 36.56                         | 13.94                  | 59.17                      | 100                  | 0                       | P                     | V             |
|                                                                              |                                                                                             | 10400                | 46.6                | -21.6                   | 68.2                        | 51.51                     | 39.7                          | 16.25                  | 60.86                      | 100                  | 0                       | P                     | V             |
|                                                                              |                                                                                             | 15600                | 47.1                | -26.9                   | 74                          | 50.43                     | 37.8                          | 20.35                  | 61.48                      | 100                  | 0                       | P                     | V             |
| <b>Remark</b>                                                                | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



## 2.4GHz 2440MHz + 5GHz 5785MHz

## 802.15.4\_Tx\_Ch18+11a\_Tx\_Ch157 (Band Edge @ 3m)

| 802.15.4<br>Ant.<br>3       | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-----------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.15.4<br>CH18<br>2440MHz |                                                                                             | 2336.88              | 55.13               | -18.87                  | 74                          | 43.98                     | 27.68                         | 16.56                  | 33.09                      | 345                  | 6                       | P                     | H             |
|                             |                                                                                             | 2389.24              | 45.77               | -8.23                   | 54                          | 34.78                     | 27.52                         | 16.63                  | 33.16                      | 345                  | 6                       | A                     | H             |
|                             | *                                                                                           | 2440                 | 117.81              | -                       | -                           | 106.94                    | 27.42                         | 16.67                  | 33.22                      | 345                  | 6                       | P                     | H             |
|                             | *                                                                                           | 2440                 | 115.45              | -                       | -                           | 104.58                    | 27.42                         | 16.67                  | 33.22                      | 345                  | 6                       | A                     | H             |
|                             |                                                                                             | 2483.5               | 55.36               | -18.64                  | 74                          | 44.59                     | 27.33                         | 16.71                  | 33.27                      | 345                  | 6                       | P                     | H             |
|                             |                                                                                             | 2483.76              | 46.07               | -7.93                   | 54                          | 35.3                      | 27.33                         | 16.71                  | 33.27                      | 345                  | 6                       | A                     | H             |
|                             |                                                                                             | 2389.38              | 55.78               | -18.22                  | 74                          | 44.79                     | 27.52                         | 16.63                  | 33.16                      | 395                  | 254                     | P                     | V             |
|                             |                                                                                             | 2343.74              | 45.51               | -8.49                   | 54                          | 34.4                      | 27.64                         | 16.57                  | 33.1                       | 395                  | 254                     | A                     | V             |
|                             | *                                                                                           | 2440                 | 113.94              | -                       | -                           | 103.07                    | 27.42                         | 16.67                  | 33.22                      | 395                  | 254                     | P                     | V             |
|                             | *                                                                                           | 2440                 | 112.14              | -                       | -                           | 101.27                    | 27.42                         | 16.67                  | 33.22                      | 395                  | 254                     | A                     | V             |
|                             |                                                                                             | 2491.53              | 55.56               | -18.44                  | 74                          | 44.8                      | 27.32                         | 16.72                  | 33.28                      | 395                  | 254                     | P                     | V             |
|                             |                                                                                             | 2490.76              | 45.45               | -8.55                   | 54                          | 34.69                     | 27.32                         | 16.72                  | 33.28                      | 395                  | 254                     | A                     | V             |
| Remark                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



| WIFI<br>Ant.<br>1+2+3+4               | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| <b>802.11a<br/>CH 157<br/>5785MHz</b> |                                                                                             | 5602.6               | 50.83               | -17.37                  | 68.2                        | 42.05                     | 31.79                         | 10.43                  | 33.44                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5697.6               | 61.14               | -42.29                  | 103.43                      | 52.13                     | 31.99                         | 10.48                  | 33.46                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5717                 | 70.36               | -39.6                   | 109.96                      | 61.3                      | 32.03                         | 10.49                  | 33.46                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5724.8               | 66.72               | -55.02                  | 121.74                      | 57.63                     | 32.05                         | 10.5                   | 33.46                      | 117                  | 288                     | P                       | H               |
|                                       | *                                                                                           | 5785                 | 121.42              | -                       | -                           | 112.19                    | 32.17                         | 10.53                  | 33.47                      | 117                  | 288                     | P                       | H               |
|                                       | *                                                                                           | 5785                 | 113.51              | -                       | -                           | 104.28                    | 32.17                         | 10.53                  | 33.47                      | 117                  | 288                     | A                       | H               |
|                                       |                                                                                             | 5851.4               | 65.44               | -53.57                  | 119.01                      | 56.03                     | 32.3                          | 10.59                  | 33.48                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5859.4               | 67.36               | -42.21                  | 109.57                      | 57.93                     | 32.32                         | 10.59                  | 33.48                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5878.2               | 55.35               | -47.47                  | 102.82                      | 45.86                     | 32.36                         | 10.61                  | 33.48                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5932.6               | 51.6                | -16.6                   | 68.2                        | 41.9                      | 32.53                         | 10.66                  | 33.49                      | 117                  | 288                     | P                       | H               |
|                                       |                                                                                             | 5603.6               | 52.15               | -16.05                  | 68.2                        | 43.37                     | 31.79                         | 10.43                  | 33.44                      | 235                  | 95                      | P                       | V               |
|                                       |                                                                                             | 5692.8               | 58.54               | -41.35                  | 99.89                       | 49.56                     | 31.96                         | 10.48                  | 33.46                      | 235                  | 95                      | P                       | V               |
|                                       |                                                                                             | 5712.4               | 69.2                | -39.47                  | 108.67                      | 60.15                     | 32.02                         | 10.49                  | 33.46                      | 235                  | 95                      | P                       | V               |
|                                       |                                                                                             | 5725                 | 65.3                | -56.9                   | 122.2                       | 56.21                     | 32.05                         | 10.5                   | 33.46                      | 235                  | 95                      | P                       | V               |
|                                       | *                                                                                           | 5785                 | 124.22              | -                       | -                           | 114.99                    | 32.17                         | 10.53                  | 33.47                      | 235                  | 95                      | P                       | V               |
|                                       | *                                                                                           | 5785                 | 116.25              | -                       | -                           | 107.02                    | 32.17                         | 10.53                  | 33.47                      | 235                  | 95                      | A                       | V               |
|                                       |                                                                                             | 5852.8               | 72.69               | -43.13                  | 115.82                      | 63.27                     | 32.31                         | 10.59                  | 33.48                      | 235                  | 95                      | P                       | V               |
|                                       |                                                                                             | 5871.6               | 66.54               | -39.61                  | 106.15                      | 57.08                     | 32.34                         | 10.6                   | 33.48                      | 235                  | 95                      | P                       | V               |
|                                       |                                                                                             | 5875.2               | 59.41               | -45.64                  | 105.05                      | 49.93                     | 32.35                         | 10.61                  | 33.48                      | 235                  | 95                      | P                       | V               |
|                                       |                                                                                             | 5945.4               | 52.85               | -15.35                  | 68.2                        | 43.09                     | 32.58                         | 10.67                  | 33.49                      | 235                  | 95                      | P                       | V               |
| <b>Remark</b>                         | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## 802.15.4\_Tx\_Ch18+11a\_Tx\_Ch157 (Harmonic @ 3m)

| 802.15.4+<br>WIFI<br>Ant.<br>3<br>1+2+3+4                        | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.15.4<br>CH18<br>2440MHz<br>+<br>802.11a<br>CH 157<br>5785MHz |                                                                                             | 4880                 | 52.83               | -21.17                  | 74                          | 45.62                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 185                     | P                     | H             |
|                                                                  |                                                                                             | 4880                 | 42.43               | -11.57                  | 54                          | 35.22                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 185                     | A                     | H             |
|                                                                  |                                                                                             | 7320                 | 43.74               | -30.26                  | 74                          | 52.41                     | 36.56                         | 13.94                  | 59.17                      | 100                  | 0                       | P                     | H             |
|                                                                  |                                                                                             | 11570                | 46.26               | -27.74                  | 74                          | 51.79                     | 39.66                         | 17.07                  | 62.26                      | 100                  | 0                       | P                     | H             |
|                                                                  |                                                                                             | 17355                | 50.66               | -17.54                  | 68.2                        | 45.73                     | 41.4                          | 22.35                  | 58.82                      | 100                  | 0                       | P                     | H             |
|                                                                  |                                                                                             | 4880                 | 52.98               | -21.02                  | 74                          | 45.77                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | P                     | V             |
|                                                                  |                                                                                             | 4880                 | 43.54               | -10.46                  | 54                          | 36.33                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | A                     | V             |
|                                                                  |                                                                                             | 7320                 | 43.6                | -30.4                   | 74                          | 52.27                     | 36.56                         | 13.94                  | 59.17                      | 100                  | 0                       | P                     | V             |
|                                                                  |                                                                                             | 11570                | 46.88               | -27.12                  | 74                          | 52.41                     | 39.66                         | 17.07                  | 62.26                      | 100                  | 0                       | P                     | V             |
|                                                                  |                                                                                             | 17355                | 52.06               | -16.14                  | 68.2                        | 47.13                     | 41.4                          | 22.35                  | 58.82                      | 100                  | 0                       | P                     | V             |
| Remark                                                           | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



## 2.4GHz 2440MHz + 5GHz 5200MHz

## 11b\_Tx\_Ch06+11a\_Tx\_Ch40 (Band Edge @ 3m)

| WIFI<br>Ant.<br>1+2/<br>1+2+3+4 | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|---------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 11b<br>CH06<br>2437MHz          |                                                                                             | 2345.98              | 56.37               | -17.63                  | 74                          | 45.28                     | 27.62                         | 16.58                  | 33.11                      | 112                  | 229                     | P                       | H               |
|                                 |                                                                                             | 2386.02              | 45.38               | -8.62                   | 54                          | 34.38                     | 27.53                         | 16.62                  | 33.15                      | 112                  | 229                     | A                       | H               |
|                                 | *                                                                                           | 2437                 | 115.66              | -                       | -                           | 104.77                    | 27.43                         | 16.67                  | 33.21                      | 112                  | 229                     | P                       | H               |
|                                 | *                                                                                           | 2437                 | 112.67              | -                       | -                           | 101.78                    | 27.43                         | 16.67                  | 33.21                      | 112                  | 229                     | A                       | H               |
|                                 |                                                                                             | 2490.55              | 55.7                | -18.3                   | 74                          | 44.94                     | 27.32                         | 16.72                  | 33.28                      | 112                  | 229                     | P                       | H               |
|                                 |                                                                                             | 2483.69              | 45.48               | -8.52                   | 54                          | 34.71                     | 27.33                         | 16.71                  | 33.27                      | 112                  | 229                     | A                       | H               |
|                                 |                                                                                             | 2389.66              | 58.17               | -15.83                  | 74                          | 47.18                     | 27.52                         | 16.63                  | 33.16                      | 231                  | 358                     | P                       | V               |
|                                 |                                                                                             | 2389.24              | 49.07               | -4.93                   | 54                          | 38.08                     | 27.52                         | 16.63                  | 33.16                      | 231                  | 358                     | A                       | V               |
|                                 | *                                                                                           | 2437                 | 119.35              | -                       | -                           | 108.46                    | 27.43                         | 16.67                  | 33.21                      | 231                  | 358                     | P                       | V               |
|                                 | *                                                                                           | 2437                 | 116.07              | -                       | -                           | 105.18                    | 27.43                         | 16.67                  | 33.21                      | 231                  | 358                     | A                       | V               |
|                                 |                                                                                             | 2484.95              | 57.25               | -16.75                  | 74                          | 46.48                     | 27.33                         | 16.71                  | 33.27                      | 231                  | 358                     | P                       | V               |
|                                 |                                                                                             | 2484.67              | 47.22               | -6.78                   | 54                          | 36.45                     | 27.33                         | 16.71                  | 33.27                      | 231                  | 358                     | A                       | V               |
| 802.11a<br>CH 40<br>5200MHz     |                                                                                             | 5148.72              | 54.94               | -19.06                  | 74                          | 46.68                     | 31.9                          | 9.83                   | 33.47                      | 294                  | 328                     | P                       | H               |
|                                 |                                                                                             | 5148.46              | 48.01               | -5.99                   | 54                          | 39.75                     | 31.9                          | 9.83                   | 33.47                      | 294                  | 328                     | A                       | H               |
|                                 | *                                                                                           | 5200                 | 121.34              | -                       | -                           | 113.2                     | 31.7                          | 9.9                    | 33.46                      | 294                  | 328                     | P                       | H               |
|                                 | *                                                                                           | 5200                 | 113.96              | -                       | -                           | 105.82                    | 31.7                          | 9.9                    | 33.46                      | 294                  | 328                     | A                       | H               |
|                                 |                                                                                             | 5360.04              | 51.64               | -22.36                  | 74                          | 43.64                     | 31.34                         | 10.1                   | 33.44                      | 294                  | 328                     | P                       | H               |
|                                 |                                                                                             | 5376.28              | 43.2                | -10.8                   | 54                          | 35.11                     | 31.41                         | 10.12                  | 33.44                      | 294                  | 328                     | A                       | H               |
|                                 |                                                                                             | 5149.76              | 58.88               | -15.12                  | 74                          | 50.62                     | 31.9                          | 9.83                   | 33.47                      | 325                  | 228                     | P                       | V               |
|                                 |                                                                                             | 5150                 | 49.73               | -4.27                   | 54                          | 41.47                     | 31.9                          | 9.83                   | 33.47                      | 325                  | 228                     | A                       | V               |
|                                 | *                                                                                           | 5200                 | 121.65              | -                       | -                           | 113.51                    | 31.7                          | 9.9                    | 33.46                      | 325                  | 228                     | P                       | V               |
|                                 | *                                                                                           | 5200                 | 114.05              | -                       | -                           | 105.91                    | 31.7                          | 9.9                    | 33.46                      | 325                  | 228                     | A                       | V               |
|                                 |                                                                                             | 5428.36              | 50.17               | -23.83                  | 74                          | 41.81                     | 31.61                         | 10.19                  | 33.44                      | 325                  | 228                     | P                       | V               |
|                                 |                                                                                             | 5434.24              | 42.5                | -11.5                   | 54                          | 34.1                      | 31.64                         | 10.2                   | 33.44                      | 325                  | 228                     | A                       | V               |
| Remark                          | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## 11b\_Tx\_Ch06+11a\_Tx\_Ch40 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1+2<br>1+2+3+4                             | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 11b<br>CH06<br>2437MHz<br>+<br>802.11a<br>CH 40<br>5200MHz |                                                                                             | 4874                 | 51.7                | -22.3                   | 74                          | 44.49                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 180                     | P                     | H             |
|                                                            |                                                                                             | 4874                 | 42.09               | -11.91                  | 54                          | 34.88                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 180                     | A                     | H             |
|                                                            |                                                                                             | 7311                 | 44.04               | -29.96                  | 74                          | 52.69                     | 36.58                         | 13.95                  | 59.18                      | 100                  | 0                       | P                     | H             |
|                                                            |                                                                                             | 10400                | 46.16               | -22.04                  | 68.2                        | 51.07                     | 39.7                          | 16.25                  | 60.86                      | 100                  | 0                       | P                     | H             |
|                                                            |                                                                                             | 15600                | 46.92               | -27.08                  | 74                          | 50.25                     | 37.8                          | 20.35                  | 61.48                      | 100                  | 0                       | P                     | H             |
|                                                            |                                                                                             | 4874                 | 51.73               | -22.27                  | 74                          | 44.52                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | P                     | V             |
|                                                            |                                                                                             | 4874                 | 43.08               | -10.92                  | 54                          | 35.87                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | A                     | V             |
|                                                            |                                                                                             | 7311                 | 48.09               | -25.91                  | 74                          | 56.74                     | 36.58                         | 13.95                  | 59.18                      | 100                  | 0                       | P                     | V             |
|                                                            |                                                                                             | 10400                | 48.41               | -19.79                  | 68.2                        | 53.32                     | 39.7                          | 16.25                  | 60.86                      | 100                  | 0                       | P                     | V             |
|                                                            |                                                                                             | 15600                | 47.78               | -26.22                  | 74                          | 51.11                     | 37.8                          | 20.35                  | 61.48                      | 100                  | 0                       | P                     | V             |
| Remark                                                     | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |

**2.4GHz 2440MHz + 5GHz 5785MHz****11b\_Tx\_Ch06+11a\_Tx\_Ch157 (Band Edge @ 3m)**

| WIFI<br>Ant.<br>1+2             | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|---------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| <b>11b<br/>CH06<br/>2437MHz</b> |                                                                                             | 2356.76              | 56.57               | -17.43                  | 74                          | 45.51                     | 27.59                         | 16.59                  | 33.12                      | 100                  | 229                     | P                     | H             |
|                                 |                                                                                             | 2389.38              | 46.51               | -7.49                   | 54                          | 35.52                     | 27.52                         | 16.63                  | 33.16                      | 100                  | 229                     | A                     | H             |
|                                 | *                                                                                           | 2437                 | 115.02              | -                       | -                           | 104.13                    | 27.43                         | 16.67                  | 33.21                      | 100                  | 229                     | P                     | H             |
|                                 | *                                                                                           | 2437                 | 111.77              | -                       | -                           | 100.88                    | 27.43                         | 16.67                  | 33.21                      | 100                  | 229                     | A                     | H             |
|                                 |                                                                                             | 2487.54              | 56.23               | -17.77                  | 74                          | 45.48                     | 27.32                         | 16.71                  | 33.28                      | 100                  | 229                     | P                     | H             |
|                                 |                                                                                             | 2484.88              | 45.92               | -8.08                   | 54                          | 35.15                     | 27.33                         | 16.71                  | 33.27                      | 100                  | 229                     | A                     | H             |
|                                 |                                                                                             | 2384.06              | 58.31               | -15.69                  | 74                          | 47.31                     | 27.53                         | 16.62                  | 33.15                      | 224                  | 360                     | P                     | V             |
|                                 |                                                                                             | 2386.72              | 48.17               | -5.83                   | 54                          | 37.17                     | 27.53                         | 16.62                  | 33.15                      | 224                  | 360                     | A                     | V             |
|                                 | *                                                                                           | 2437                 | 120.59              | -                       | -                           | 109.7                     | 27.43                         | 16.67                  | 33.21                      | 224                  | 360                     | P                     | V             |
|                                 | *                                                                                           | 2437                 | 117.59              | -                       | -                           | 106.7                     | 27.43                         | 16.67                  | 33.21                      | 224                  | 360                     | A                     | V             |
|                                 |                                                                                             | 2486.28              | 57.77               | -16.23                  | 74                          | 47                        | 27.33                         | 16.71                  | 33.27                      | 224                  | 360                     | P                     | V             |
|                                 |                                                                                             | 2484.39              | 47.47               | -6.53                   | 54                          | 36.7                      | 27.33                         | 16.71                  | 33.27                      | 224                  | 360                     | A                     | V             |
| <b>Remark</b>                   | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



| WIFI<br>Ant.<br>1+2+3+4      | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11a<br>CH 157<br>5785MHz |                                                                                             | 5614.6               | 51                  | -17.2                   | 68.2                        | 42.24                     | 31.77                         | 10.44                  | 33.45                      | 101                  | 283                     | P                       | H               |
|                              |                                                                                             | 5698                 | 53.84               | -49.89                  | 103.73                      | 44.83                     | 31.99                         | 10.48                  | 33.46                      | 101                  | 283                     | P                       | H               |
|                              |                                                                                             | 5718.6               | 62.53               | -47.88                  | 110.41                      | 53.45                     | 32.04                         | 10.5                   | 33.46                      | 101                  | 283                     | P                       | H               |
|                              |                                                                                             | 5722                 | 58.46               | -56.9                   | 115.36                      | 49.38                     | 32.04                         | 10.5                   | 33.46                      | 101                  | 283                     | P                       | H               |
|                              | *                                                                                           | 5785                 | 121.2               | -                       | -                           | 111.97                    | 32.17                         | 10.53                  | 33.47                      | 101                  | 283                     | P                       | H               |
|                              | *                                                                                           | 5785                 | 113.37              | -                       | -                           | 104.14                    | 32.17                         | 10.53                  | 33.47                      | 101                  | 283                     | A                       | H               |
|                              |                                                                                             | 5850                 | 59.09               | -63.11                  | 122.2                       | 49.68                     | 32.3                          | 10.59                  | 33.48                      | 101                  | 283                     | P                       | H               |
|                              |                                                                                             | 5857.8               | 62.57               | -47.44                  | 110.01                      | 53.14                     | 32.32                         | 10.59                  | 33.48                      | 101                  | 283                     | P                       | H               |
|                              |                                                                                             | 5878.6               | 55.18               | -47.35                  | 102.53                      | 45.69                     | 32.36                         | 10.61                  | 33.48                      | 101                  | 283                     | P                       | H               |
|                              |                                                                                             | 5944.8               | 51.92               | -16.28                  | 68.2                        | 42.16                     | 32.58                         | 10.67                  | 33.49                      | 101                  | 283                     | P                       | H               |
|                              |                                                                                             | 5609.8               | 50.45               | -17.75                  | 68.2                        | 41.68                     | 31.78                         | 10.44                  | 33.45                      | 162                  | 14                      | P                       | V               |
|                              |                                                                                             | 5697.6               | 54.96               | -48.47                  | 103.43                      | 45.95                     | 31.99                         | 10.48                  | 33.46                      | 162                  | 14                      | P                       | V               |
|                              |                                                                                             | 5718.4               | 61.73               | -48.62                  | 110.35                      | 52.65                     | 32.04                         | 10.5                   | 33.46                      | 162                  | 14                      | P                       | V               |
|                              |                                                                                             | 5724.8               | 65.46               | -56.28                  | 121.74                      | 56.37                     | 32.05                         | 10.5                   | 33.46                      | 162                  | 14                      | P                       | V               |
|                              | *                                                                                           | 5785                 | 121.07              | -                       | -                           | 111.84                    | 32.17                         | 10.53                  | 33.47                      | 162                  | 14                      | P                       | V               |
|                              | *                                                                                           | 5785                 | 113.47              | -                       | -                           | 104.24                    | 32.17                         | 10.53                  | 33.47                      | 162                  | 14                      | A                       | V               |
|                              |                                                                                             | 5855                 | 59.13               | -51.67                  | 110.8                       | 49.71                     | 32.31                         | 10.59                  | 33.48                      | 162                  | 14                      | P                       | V               |
|                              |                                                                                             | 5856.8               | 63.89               | -46.41                  | 110.3                       | 54.47                     | 32.31                         | 10.59                  | 33.48                      | 162                  | 14                      | P                       | V               |
|                              |                                                                                             | 5898.2               | 55.09               | -32.9                   | 87.99                       | 45.55                     | 32.4                          | 10.63                  | 33.49                      | 162                  | 14                      | P                       | V               |
|                              |                                                                                             | 5934                 | 51.78               | -16.42                  | 68.2                        | 42.07                     | 32.54                         | 10.66                  | 33.49                      | 162                  | 14                      | P                       | V               |
| Remark                       | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## 11b\_Tx\_Ch06+11a\_Tx\_Ch157 (Harmonic @ 3m)

| WIFI<br>Ant.<br>1+2<br>1+2+3+4                              | Note                                                                                        | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 11b<br>CH06<br>2437MHz<br>+<br>802.11a<br>CH 157<br>5785MHz |                                                                                             | 4874                 | 51.91               | -22.09                  | 74                          | 44.7                      | 31.1                          | 9.6                    | 33.49                      | 100                  | 180                     | P                     | H             |
|                                                             |                                                                                             | 4874                 | 42.45               | -11.55                  | 54                          | 35.24                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 180                     | A                     | H             |
|                                                             |                                                                                             | 7311                 | 43.98               | -30.02                  | 74                          | 52.63                     | 36.58                         | 13.95                  | 59.18                      | 100                  | 0                       | P                     | H             |
|                                                             |                                                                                             | 11570                | 46.64               | -27.36                  | 74                          | 52.17                     | 39.66                         | 17.07                  | 62.26                      | 100                  | 0                       | P                     | H             |
|                                                             |                                                                                             | 17355                | 51.17               | -17.03                  | 68.2                        | 46.24                     | 41.4                          | 22.35                  | 58.82                      | 100                  | 0                       | P                     | H             |
|                                                             |                                                                                             | 4874                 | 52.45               | -21.55                  | 74                          | 45.24                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | P                     | V             |
|                                                             |                                                                                             | 4874                 | 43.2                | -10.8                   | 54                          | 35.99                     | 31.1                          | 9.6                    | 33.49                      | 100                  | 230                     | A                     | V             |
|                                                             |                                                                                             | 7311                 | 43.91               | -30.09                  | 74                          | 52.56                     | 36.58                         | 13.95                  | 59.18                      | 100                  | 0                       | P                     | V             |
|                                                             |                                                                                             | 11570                | 47.15               | -26.85                  | 74                          | 52.68                     | 39.66                         | 17.07                  | 62.26                      | 100                  | 0                       | P                     | V             |
|                                                             |                                                                                             | 17355                | 52.29               | -15.91                  | 68.2                        | 47.36                     | 41.4                          | 22.35                  | 58.82                      | 100                  | 0                       | P                     | V             |
| Remark                                                      | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                       |               |



## Emission below 1GHz

## BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch40 (LF)

| BLE+WIFI<br>Ant.<br>1<br>1+2+3+4                                     | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|----------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| BLE(1M)<br>CH19<br>2440MHz<br>+<br>802.11a<br>CH 40<br>5200MHz<br>LF |                                                                            | 70.74                | 30.27               | -9.73                   | 40                          | 47.22                     | 12.27                         | 1.23                   | 30.45                      | -                    | -                       | P                       | H               |
|                                                                      |                                                                            | 82.38                | 30.75               | -9.25                   | 40                          | 46.22                     | 13.64                         | 1.33                   | 30.44                      | -                    | -                       | P                       | H               |
|                                                                      |                                                                            | 130.88               | 32.55               | -10.95                  | 43.5                        | 44.02                     | 17.37                         | 1.56                   | 30.4                       | -                    | -                       | P                       | H               |
|                                                                      |                                                                            | 399.57               | 40.24               | -5.76                   | 46                          | 45.88                     | 21.62                         | 2.72                   | 29.98                      | 100                  | 342                     | QP                      | H               |
|                                                                      |                                                                            | 453.89               | 38.24               | -7.76                   | 46                          | 41.99                     | 23.17                         | 2.95                   | 29.87                      | 102                  | 35                      | QP                      | H               |
|                                                                      |                                                                            | 722.58               | 37.16               | -8.84                   | 46                          | 35.67                     | 27.2                          | 3.76                   | 29.47                      | -                    | -                       | P                       | H               |
|                                                                      |                                                                            | 34.85                | 32.92               | -7.08                   | 40                          | 40.31                     | 22.04                         | 0.83                   | 30.26                      | 100                  | 0                       | P                       | V               |
|                                                                      |                                                                            | 68.8                 | 31.35               | -8.65                   | 40                          | 48.52                     | 12.08                         | 1.21                   | 30.46                      | -                    | -                       | P                       | V               |
|                                                                      |                                                                            | 127.97               | 32.1                | -11.4                   | 43.5                        | 43.54                     | 17.42                         | 1.54                   | 30.4                       | -                    | -                       | P                       | V               |
|                                                                      |                                                                            | 457.77               | 37.62               | -8.38                   | 46                          | 41.3                      | 23.22                         | 2.97                   | 29.87                      | -                    | -                       | P                       | V               |
|                                                                      |                                                                            | 722.58               | 35.64               | -10.36                  | 46                          | 34.15                     | 27.2                          | 3.76                   | 29.47                      | -                    | -                       | P                       | V               |
|                                                                      |                                                                            | 891.36               | 37.6                | -8.4                    | 46                          | 33.48                     | 29.04                         | 4.23                   | 29.15                      | -                    | -                       | P                       | V               |
| Remark                                                               | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch157 (LF)

| BLE+WIFI<br>Ant.<br>1<br>1+2+3+4                                      | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| BLE(1M)<br>CH19<br>2440MHz<br>+<br>802.11a<br>CH 157<br>5785MHz<br>LF |                                                                            | 68.8                 | 31.64               | -8.36                   | 40                          | 48.81                   | 12.08                         | 1.21                   | 30.46                      | -                    | -                       | P                     | H             |
|                                                                       |                                                                            | 84.32                | 31.77               | -8.23                   | 40                          | 46.95                   | 13.91                         | 1.35                   | 30.44                      | -                    | -                       | P                     | H             |
|                                                                       |                                                                            | 131.85               | 33.83               | -9.67                   | 43.5                        | 45.3                    | 17.37                         | 1.56                   | 30.4                       | -                    | -                       | P                     | H             |
|                                                                       |                                                                            | 400.54               | 40.3                | -5.7                    | 46                          | 45.91                   | 21.65                         | 2.72                   | 29.98                      | 101                  | 348                     | QP                    | H             |
|                                                                       |                                                                            | 446.13               | 38.91               | -7.09                   | 46                          | 42.8                    | 23.08                         | 2.92                   | 29.89                      | 100                  | 46                      | QP                    | H             |
|                                                                       |                                                                            | 889.42               | 39.74               | -6.26                   | 46                          | 35.62                   | 29.05                         | 4.23                   | 29.16                      | -                    | -                       | P                     | H             |
|                                                                       |                                                                            | 35.82                | 30.41               | -9.59                   | 40                          | 38.32                   | 21.52                         | 0.84                   | 30.27                      | 100                  | 52                      | QP                    | V             |
|                                                                       |                                                                            | 131.85               | 34.28               | -9.22                   | 43.5                        | 45.75                   | 17.37                         | 1.56                   | 30.4                       | -                    | -                       | P                     | V             |
|                                                                       |                                                                            | 175.5                | 33.88               | -9.62                   | 43.5                        | 47.01                   | 15.3                          | 1.92                   | 30.35                      | -                    | -                       | P                     | V             |
|                                                                       |                                                                            | 404.42               | 39.96               | -6.04                   | 46                          | 45.36                   | 21.83                         | 2.74                   | 29.97                      | -                    | -                       | P                     | V             |
|                                                                       |                                                                            | 462.62               | 38.57               | -7.43                   | 46                          | 42.15                   | 23.3                          | 2.98                   | 29.86                      | -                    | -                       | P                     | V             |
|                                                                       |                                                                            | 894.27               | 36.63               | -9.37                   | 46                          | 32.52                   | 29.02                         | 4.24                   | 29.15                      | -                    | -                       | P                     | V             |
| Remark                                                                | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |



**802.15.4\_Tx\_Ch18+11a\_Tx\_Ch40 (LF)**

| 802.15.4+<br>WIFI<br>Ant.<br>1<br>1+2+3+4                             | Note                                                                       | Frequency<br><br>( MHz ) | Level<br><br>( dBμV/m ) | Over<br><br>Limit<br>( dB ) | Limit<br><br>Line<br>( dBμV/m ) | Read<br><br>Level<br>(dBμV) | Antenna<br><br>Factor<br>( dB/m ) | Path<br><br>Loss<br>( dB ) | Preamp<br><br>Factor<br>( dB ) | Ant<br><br>Pos<br>( cm ) | Table<br><br>Pos<br>( deg ) | Peak<br><br>Avg.<br>(P/A) | Pol.<br><br>(H/V) |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------|-------------------------|-----------------------------|---------------------------------|-----------------------------|-----------------------------------|----------------------------|--------------------------------|--------------------------|-----------------------------|---------------------------|-------------------|
| 802.15.4<br>CH18<br>2440MHz<br>+<br>802.11a<br>CH 40<br>5200MHz<br>LF |                                                                            | 41.64                    | 25.42                   | -14.58                      | 40                              | 36.46                       | 18.4                              | 0.92                       | 30.36                          | -                        | -                           | P                         | H                 |
|                                                                       |                                                                            | 130.88                   | 32                      | -11.5                       | 43.5                            | 43.47                       | 17.37                             | 1.56                       | 30.4                           | -                        | -                           | P                         | H                 |
|                                                                       |                                                                            | 172.59                   | 30.75                   | -12.75                      | 43.5                            | 43.72                       | 15.48                             | 1.9                        | 30.35                          | -                        | -                           | P                         | H                 |
|                                                                       |                                                                            | 398.6                    | 35.61                   | -10.39                      | 46                              | 41.29                       | 21.59                             | 2.71                       | 29.98                          | 100                      | 350                         | QP                        | H                 |
|                                                                       |                                                                            | 454.86                   | 39.64                   | -6.36                       | 46                              | 43.36                       | 23.19                             | 2.96                       | 29.87                          | -                        | -                           | P                         | H                 |
|                                                                       |                                                                            | 885.54                   | 39.26                   | -6.74                       | 46                              | 35.12                       | 29.08                             | 4.22                       | 29.16                          | -                        | -                           | P                         | H                 |
|                                                                       |                                                                            | 40.67                    | 32.5                    | -7.5                        | 40                              | 43.06                       | 18.87                             | 0.91                       | 30.34                          | 100                      | 35                          | QP                        | V                 |
|                                                                       |                                                                            | 127                      | 32.2                    | -11.3                       | 43.5                            | 43.64                       | 17.44                             | 1.52                       | 30.4                           | -                        | -                           | P                         | V                 |
|                                                                       |                                                                            | 176.47                   | 32.57                   | -10.93                      | 43.5                            | 45.76                       | 15.24                             | 1.92                       | 30.35                          | -                        | -                           | P                         | V                 |
|                                                                       |                                                                            | 408.3                    | 39.1                    | -6.9                        | 46                              | 44.31                       | 22                                | 2.75                       | 29.96                          | -                        | -                           | P                         | V                 |
|                                                                       |                                                                            | 890.39                   | 39.63                   | -6.37                       | 46                              | 35.5                        | 29.05                             | 4.23                       | 29.15                          | -                        | -                           | P                         | V                 |
|                                                                       |                                                                            | 913.67                   | 39.22                   | -6.78                       | 46                              | 34.76                       | 29.25                             | 4.31                       | 29.1                           | -                        | -                           | P                         | V                 |
| Remark                                                                | 1. No other spurious found.<br>2. All results are PASS against limit line. |                          |                         |                             |                                 |                             |                                   |                            |                                |                          |                             |                           |                   |



## 802.15.4\_Tx\_Ch18+11a\_Tx\_Ch157 (LF)

| 802.15.4+<br>WIFI<br>Ant.<br>1<br>1+2+3+4                              | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| 802.15.4<br>CH18<br>2440MHz<br>+<br>802.11a<br>CH 157<br>5785MHz<br>LF |                                                                            | 68.8                 | 32.54               | -7.46                   | 40                          | 49.71                   | 12.08                         | 1.21                   | 30.46                      | -                    | -                       | P                     | H             |
|                                                                        |                                                                            | 135.73               | 33.89               | -9.61                   | 43.5                        | 45.32                   | 17.37                         | 1.59                   | 30.39                      | -                    | -                       | P                     | H             |
|                                                                        |                                                                            | 177.44               | 31.33               | -12.17                  | 43.5                        | 44.57                   | 15.18                         | 1.93                   | 30.35                      | -                    | -                       | P                     | H             |
|                                                                        |                                                                            | 395.69               | 38.32               | -7.68                   | 46                          | 44.09                   | 21.52                         | 2.7                    | 29.99                      | 100                  | 349                     | QP                    | H             |
|                                                                        |                                                                            | 450.98               | 38.07               | -7.93                   | 46                          | 41.87                   | 23.14                         | 2.94                   | 29.88                      | 100                  | 44                      | QP                    | H             |
|                                                                        |                                                                            | 888.45               | 38.33               | -7.67                   | 46                          | 34.21                   | 29.06                         | 4.22                   | 29.16                      | -                    | -                       | P                     | H             |
|                                                                        |                                                                            | 34.85                | 28.49               | -11.51                  | 40                          | 35.88                   | 22.04                         | 0.83                   | 30.26                      | 100                  | 215                     | QP                    | V             |
|                                                                        |                                                                            | 130.88               | 34.21               | -9.29                   | 43.5                        | 45.68                   | 17.37                         | 1.56                   | 30.4                       | -                    | -                       | P                     | V             |
|                                                                        |                                                                            | 175.5                | 33.74               | -9.76                   | 43.5                        | 46.87                   | 15.3                          | 1.92                   | 30.35                      | -                    | -                       | P                     | V             |
|                                                                        |                                                                            | 405.39               | 37.43               | -8.57                   | 46                          | 42.79                   | 21.87                         | 2.74                   | 29.97                      | 101                  | 353                     | QP                    | V             |
|                                                                        |                                                                            | 720.64               | 32.97               | -13.03                  | 46                          | 31.55                   | 27.13                         | 3.76                   | 29.47                      | -                    | -                       | P                     | V             |
|                                                                        |                                                                            | 889.42               | 37.85               | -8.15                   | 46                          | 33.73                   | 29.05                         | 4.23                   | 29.16                      | -                    | -                       | P                     | V             |
| Remark                                                                 | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |

**11b\_Tx\_Ch06+11a\_Tx\_Ch40 (LF)**

| WIFI<br>Ant.<br>1+2<br>1+2+3+4                                                 | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|--------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| <b>11b<br/>CH06<br/>2437MHz<br/>+<br/>802.11a<br/>CH 40<br/>5200MHz<br/>LF</b> |                                                                            | 41.64                | 32.8                | -7.2                    | 40                          | 43.82                   | 18.4                          | 0.93                   | 30.35                      | -                    | -                       | P                     | H             |
|                                                                                |                                                                            | 131.85               | 35.05               | -8.45                   | 43.5                        | 46.51                   | 17.37                         | 1.56                   | 30.39                      | -                    | -                       | P                     | H             |
|                                                                                |                                                                            | 335.55               | 36.66               | -9.34                   | 46                          | 44.3                    | 19.91                         | 2.53                   | 30.08                      | -                    | -                       | P                     | H             |
|                                                                                |                                                                            | 414.12               | 38.17               | -7.83                   | 46                          | 42.97                   | 22.26                         | 2.89                   | 29.95                      | 100                  | 37                      | QP                    | H             |
|                                                                                |                                                                            | 707.06               | 33.09               | -12.91                  | 46                          | 31.92                   | 26.77                         | 3.9                    | 29.5                       | -                    | -                       | P                     | H             |
|                                                                                |                                                                            | 967.99               | 36.72               | -17.28                  | 54                          | 30.17                   | 30.81                         | 4.68                   | 28.94                      | -                    | -                       | P                     | H             |
|                                                                                |                                                                            | 41.935               | 32.44               | -7.56                   | 40                          | 43.61                   | 18.25                         | 0.94                   | 30.36                      | 100                  | 12                      | QP                    | V             |
|                                                                                |                                                                            | 80.44                | 33.05               | -6.95                   | 40                          | 48.85                   | 13.36                         | 1.29                   | 30.45                      | -                    | -                       | P                     | V             |
|                                                                                |                                                                            | 127.97               | 35.78               | -7.72                   | 43.5                        | 47.21                   | 17.42                         | 1.55                   | 30.4                       | -                    | -                       | P                     | V             |
|                                                                                |                                                                            | 439.34               | 39.4                | -6.6                    | 46                          | 43.31                   | 22.98                         | 3.01                   | 29.9                       | -                    | -                       | P                     | V             |
|                                                                                |                                                                            | 924.34               | 36.27               | -9.73                   | 46                          | 31.23                   | 29.55                         | 4.56                   | 29.07                      | -                    | -                       | P                     | V             |
|                                                                                |                                                                            | 973.81               | 36.96               | -17.04                  | 54                          | 30.42                   | 30.76                         | 4.71                   | 28.93                      | -                    | -                       | P                     | V             |
| <b>Remark</b>                                                                  | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |

**11b\_Tx\_Ch06+11a\_Tx\_Ch157 (LF)**

| WIFI<br>Ant.<br>1+2<br>1+2+3+4                                                  | Note                                                                       | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Ant<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-----------------------|---------------|
| <b>11b<br/>CH06<br/>2437MHz<br/>+<br/>802.11a<br/>CH 157<br/>5785MHz<br/>LF</b> |                                                                            | 42.61                | 25.72               | -14.28                  | 40                          | 37.21                   | 17.92                         | 0.95                   | 30.36                      | -                    | -                       | P                     | H             |
|                                                                                 |                                                                            | 124.09               | 35.46               | -8.04                   | 43.5                        | 46.86                   | 17.48                         | 1.52                   | 30.4                       | -                    | -                       | P                     | H             |
|                                                                                 |                                                                            | 410.24               | 39.79               | -6.21                   | 46                          | 44.79                   | 22.09                         | 2.87                   | 29.96                      | 100                  | 0                       | P                     | H             |
|                                                                                 |                                                                            | 458.74               | 38.94               | -7.06                   | 46                          | 42.47                   | 23.23                         | 3.1                    | 29.86                      | -                    | -                       | P                     | H             |
|                                                                                 |                                                                            | 746.83               | 34.53               | -11.47                  | 46                          | 31.99                   | 27.92                         | 4.03                   | 29.41                      | -                    | -                       | P                     | H             |
|                                                                                 |                                                                            | 975.75               | 36.94               | -17.06                  | 54                          | 30.41                   | 30.74                         | 4.71                   | 28.92                      | -                    | -                       | P                     | H             |
|                                                                                 |                                                                            | 43.062               | 34.34               | -5.66                   | 40                          | 46.06                   | 17.7                          | 0.95                   | 30.37                      | 100                  | 64                      | QP                    | V             |
|                                                                                 |                                                                            | 80.44                | 32                  | -8                      | 40                          | 47.8                    | 13.36                         | 1.29                   | 30.45                      | -                    | -                       | P                     | V             |
|                                                                                 |                                                                            | 123.12               | 31.53               | -11.97                  | 43.5                        | 42.93                   | 17.48                         | 1.52                   | 30.4                       | -                    | -                       | P                     | V             |
|                                                                                 |                                                                            | 412.18               | 39.06               | -6.94                   | 46                          | 43.97                   | 22.17                         | 2.88                   | 29.96                      | -                    | -                       | P                     | V             |
|                                                                                 |                                                                            | 457.77               | 38.26               | -7.74                   | 46                          | 41.8                    | 23.22                         | 3.1                    | 29.86                      | -                    | -                       | P                     | V             |
|                                                                                 |                                                                            | 965.08               | 36.74               | -17.26                  | 54                          | 30.19                   | 30.83                         | 4.67                   | 28.95                      | -                    | -                       | P                     | V             |
| <b>Remark</b>                                                                   | 1. No other spurious found.<br>2. All results are PASS against limit line. |                      |                     |                         |                             |                         |                               |                        |                            |                      |                         |                       |               |



**Note symbol**

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

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

| WIFI    | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Ant    | Table   | Peak    | Pol.    |
|---------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant.    |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 1+2     |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11b |      | 2390      | 55.45      | -18.55 | 74         | 54.51    | 32.22    | 4.58   | 35.86  | 103    | 308     | P       | H       |
| CH 01   |      |           |            |        |            |          |          |        |        |        |         |         |         |
| 2412MHz |      | 2390      | 43.54      | -10.46 | 54         | 42.6     | 32.22    | 4.58   | 35.86  | 103    | 308     | A       | H       |

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)

2. Level(dBμV/m) =

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

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

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path 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) + Path 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”.**



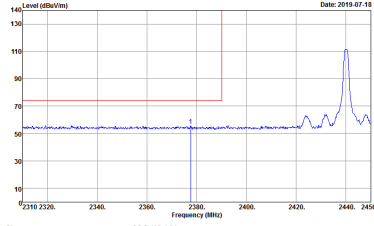
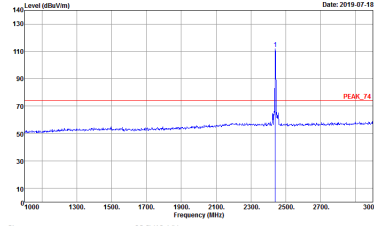
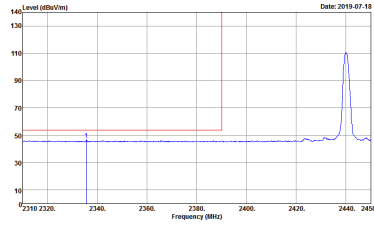
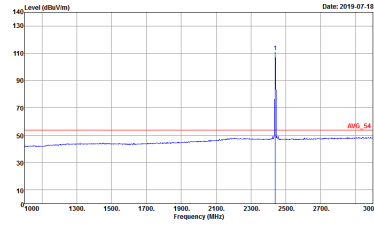
## Appendix B. Radiated Spurious Emission Plots

|                        |                                         |                            |      |
|------------------------|-----------------------------------------|----------------------------|------|
| <b>Test Engineer :</b> | Jack Cheng, Lance Chiang, and Chuan Chu | <b>Temperature :</b>       | 25°C |
|                        |                                         | <b>Relative Humidity :</b> | 61%  |

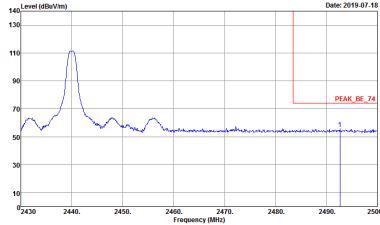
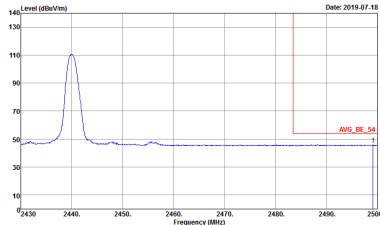
### Note symbol

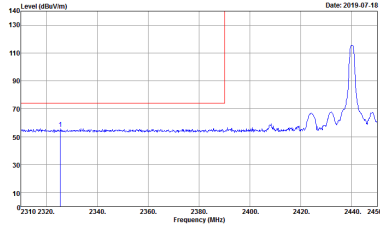
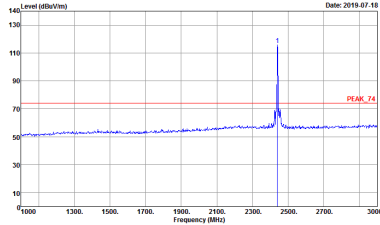
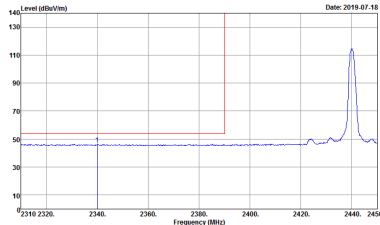
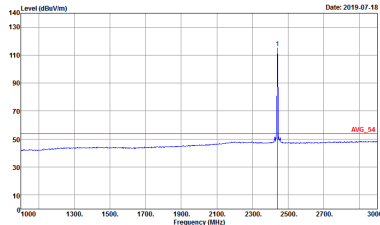
|    |                       |
|----|-----------------------|
| -L | Low channel location  |
| -R | High channel location |

**2.4GHz 2400~2483.5MHz+Band 1 - 5150~5250MHz**
**BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch40 (Band Edge @ 3m)**

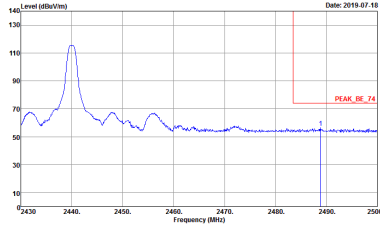
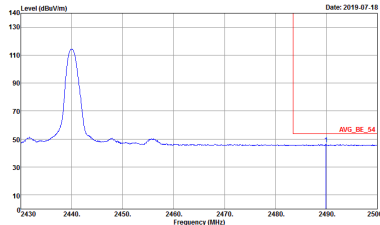
| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | BLE CH19 2440MHz - L                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
| 1    | Horizontal                                                                                                                                                                                                                                                                                     | Fundamental                                                                                                                                                                                                                                                                                  |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>56 WLAN Setting : 22<br/>Add 56 Notch</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>56 WLAN Setting : 22<br/>Add 56 Notch</p>  |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>56 WLAN Setting : 22<br/>Add 56 Notch</p> |  <p>Site : 03CH12-HY<br/>Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>56 WLAN Setting : 22<br/>Add 56 Notch</p> |



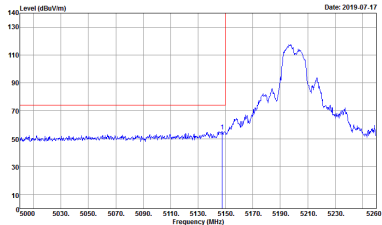
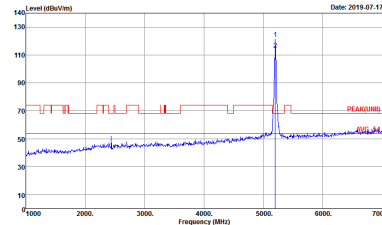
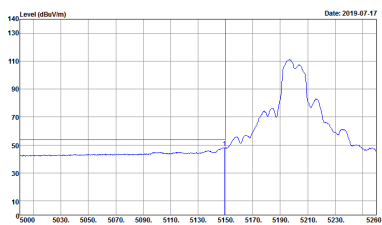
| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                     |             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | BLE CH19 2440MHz - R                                                                                                                                                                                                                                                                                     |             |
| 1    | Horizontal                                                                                                                                                                                                                                                                                               | Fundamental |
| Peak | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div> | Left blank  |

| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                     |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | BLE CH19 2440MHz - L                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                     |
| 1    | Vertical                                                                                                                                                                                                                                                                                                                                                                              | Fundamental                                                                                                                                                                                                                                                                                                                                                                         |
| Peak |  <p>Site Condition : 03CH12-HV<br/>           Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>           Detector : Peak<br/>           Project : 960558<br/>           Mode : 44<br/>           BLE Setting : Default<br/>           5G WLAN Setting : 22<br/>           : Add 5G Notch</p>  |  <p>Site Condition : 03CH12-HV<br/>           Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL<br/>           Detector : Peak<br/>           Project : 960558<br/>           Mode : 44<br/>           BLE Setting : Default<br/>           5G WLAN Setting : 22<br/>           : Add 5G Notch</p>  |
|      |  <p>Site Condition : 03CH12-HV<br/>           Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>           Detector : Peak<br/>           Project : 960558<br/>           Mode : 44<br/>           BLE Setting : Default<br/>           5G WLAN Setting : 22<br/>           : Add 5G Notch</p> |  <p>Site Condition : 03CH12-HV<br/>           Condition : AVG_54 3m HORN_9120D_1328 VERTICAL<br/>           Detector : Peak<br/>           Project : 960558<br/>           Mode : 44<br/>           BLE Setting : Default<br/>           5G WLAN Setting : 22<br/>           : Add 5G Notch</p> |

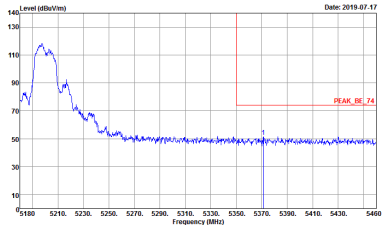
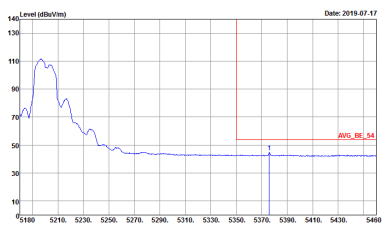


| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                   |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | BLE CH19 2440MHz - R                                                                                                                                                                                                                                                                                   |             |
| 1    | Vertical                                                                                                                                                                                                                                                                                               | Fundamental |
| Peak | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div> | Left blank  |

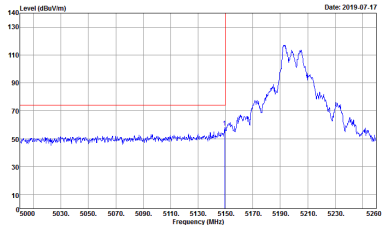
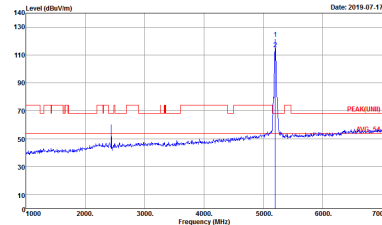
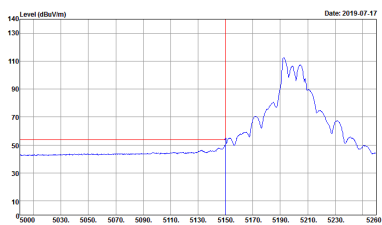


| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                  |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH40 5200MHz - L                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                  |
| 1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                       | Fundamental                                                                                                                                                                                                                                                                                      |
| Peak    |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK(FUND) 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p> |
| Avg.    |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p> | Left blank                                                                                                                                                                                                                                                                                       |

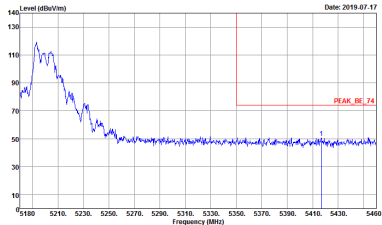
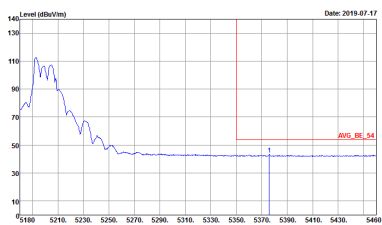


| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                                                     |             |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT     | 802.11a CH40 5200MHz - R                                                                                                                                                                                                                                                                                                                               |             |
| 1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                                                                             | Fundamental |
| Peak    | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div> | Left blank  |
| Avg.    | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>RBW:1000.000kHz VBW:1000kHz SWT:Auto<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div>    | Left blank  |

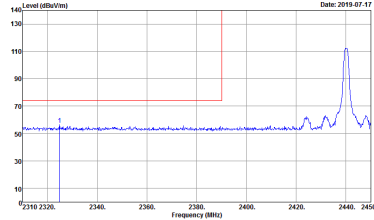
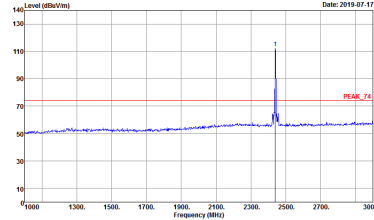
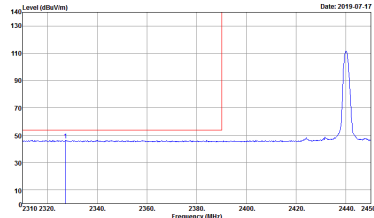
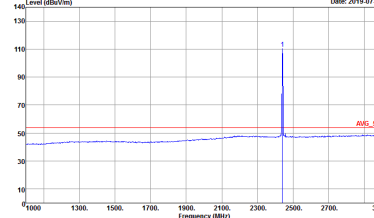


| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                          |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH40 5200MHz - L                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                          |
| 1+2+3+4 | Vertical                                                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                                                              |
| Peak    | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div>  | <div><p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div> |
| Avg.    | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div> | Left blank                                                                                                                                                                                                                                                                                               |

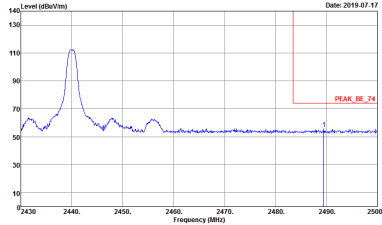
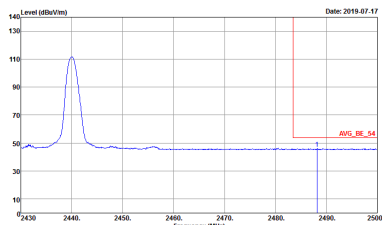


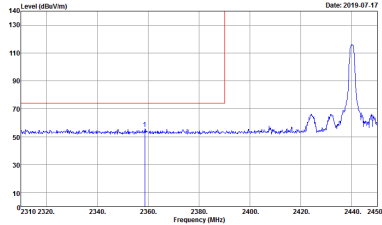
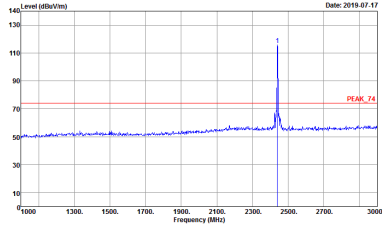
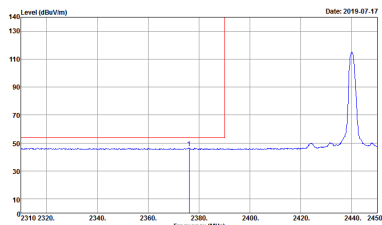
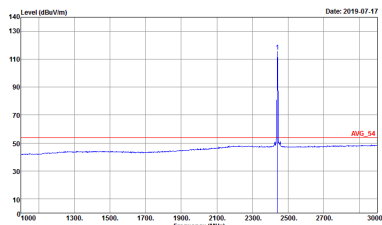
| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                       |             |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT     | 802.11a CH40 5200MHz - R                                                                                                                                                                                                                                                                                 |             |
| 1+2+3+4 | Vertical                                                                                                                                                                                                                                                                                                 | Fundamental |
| Peak    | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div>  | Left blank  |
| Avg.    | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div> | Left blank  |

**2.4GHz 2400~2483.5MHz+Band 4 - 5725~5850MHz**
**BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch157 (Band Edge @ 3m)**

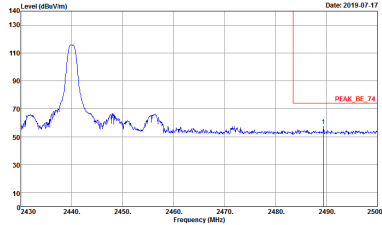
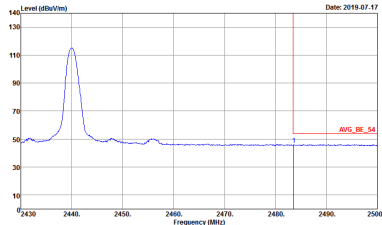
| BLE         | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                             |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT         | BLE CH19 2440MHz - L                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                             |
| 1           | Horizontal                                                                                                                                                                                                                                                                    | Fundamental                                                                                                                                                                                                                                                                 |
| <b>Peak</b> |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : default<br/>56 WLAN Setting : 25</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : default<br/>56 WLAN Setting : 25</p>  |
|             |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : default<br/>56 WLAN Setting : 25</p> |  <p>Site : 03CH12-HY<br/>Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : default<br/>56 WLAN Setting : 25</p> |



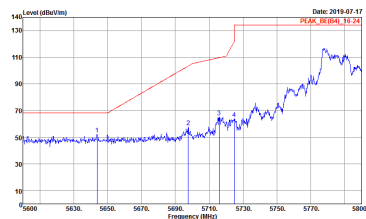
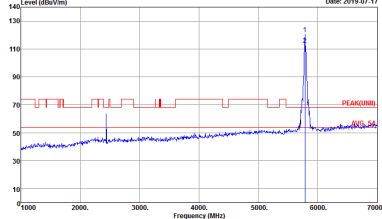
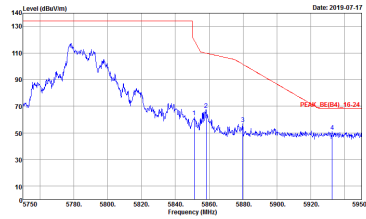
| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                    |             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | BLE CH19 2440MHz - R                                                                                                                                                                                                                                                                    |             |
| 1    | Horizontal                                                                                                                                                                                                                                                                              | Fundamental |
| Peak | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p></div> | Left blank  |

| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                           |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | BLE CH19 2440MHz - L                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                           |
| 1    | Vertical                                                                                                                                                                                                                                                                    | Fundamental                                                                                                                                                                                                                                                               |
| Peak |  <p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p>  |  <p>Site : 03CH12-HV<br/>Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p>  |
|      |  <p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p> |  <p>Site : 03CH12-HV<br/>Condition : AVG_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p> |

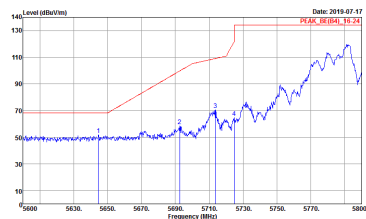
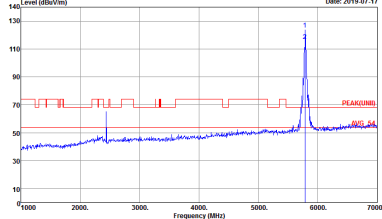


| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                  |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | BLE CH19 2440MHz - R                                                                                                                                                                                                                                                                  |             |
| 1    | Vertical                                                                                                                                                                                                                                                                              | Fundamental |
| Peak | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p></div> | Left blank  |



| WIFI    | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                   |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH157 5785MHz                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                   |
| 1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                                         | Fundamental                                                                                                                                                                                                                                                                                                       |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div>   | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> | Left blank                                                                                                                                                                                                                                                                                                        |

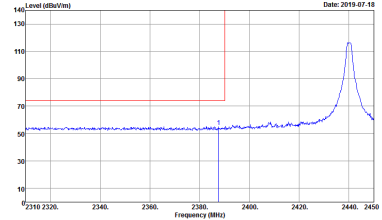
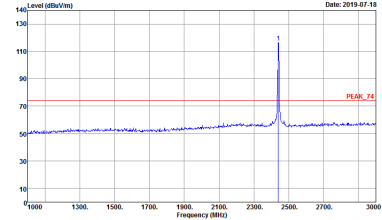
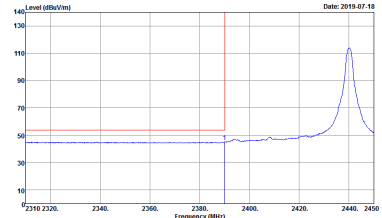
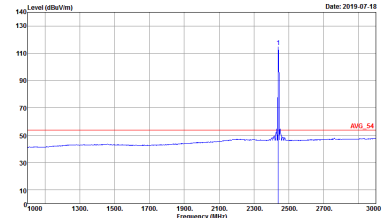


| WIFI    | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                 |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH157 5785MHz                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                 |
| 1+2+3+4 | Vertical                                                                                                                                                                                                                                                                                                         | Fundamental                                                                                                                                                                                                                                                                                                     |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div>   | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> | Left blank                                                                                                                                                                                                                                                                                                      |

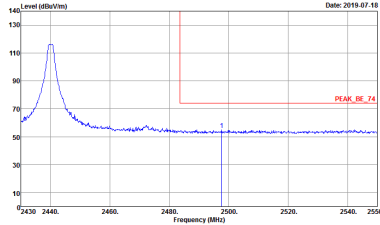
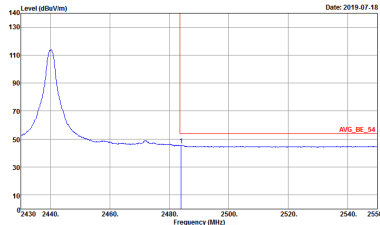


## 2.4GHz 2400~2483.5MHz+Band 1 - 5150~5250MHz

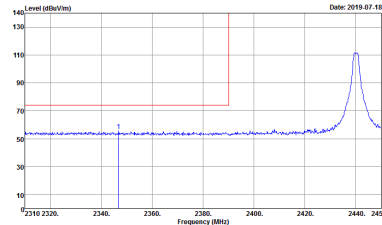
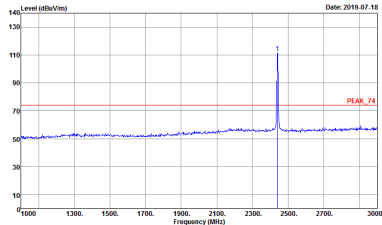
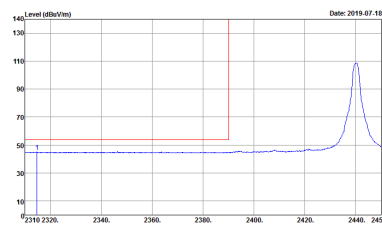
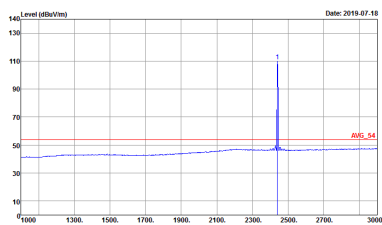
## 802.15.4\_Tx\_Ch18+11a\_Tx\_Ch40 (Band Edge @ 3m)

| 802.15.4 | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                          |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT      | 802.15.4 CH18 2440MHz - L                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                          |
| 3        | Horizontal                                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                                              |
| Peak     |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : Add 5G Notch</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : Add 5G Notch</p>  |
| Avg.     |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : Add 5G Notch</p> |  <p>Site : 03CH12-HY<br/>Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : Add 5G Notch</p> |

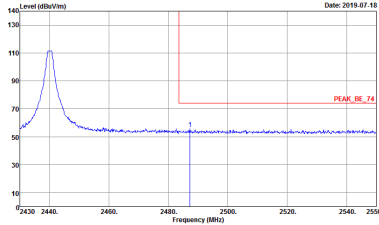
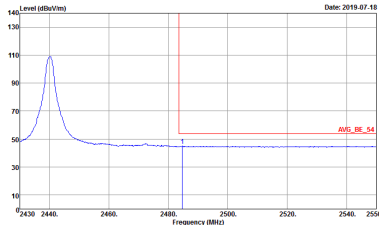


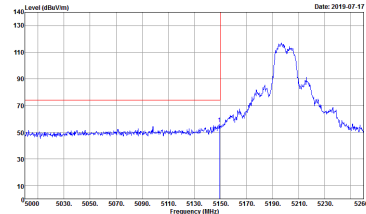
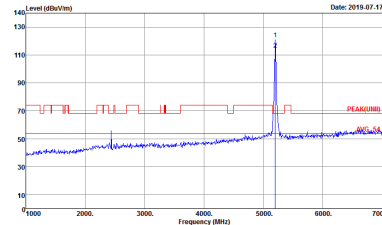
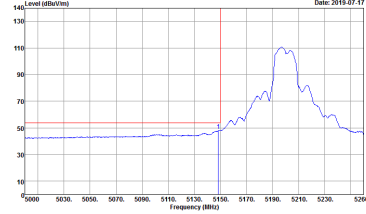
| 802.15.4 | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                        |             |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT      | 802.15.4 CH18 2440MHz - R                                                                                                                                                                                                                                                                                   |             |
| 3        | Horizontal                                                                                                                                                                                                                                                                                                  | Fundamental |
| Peak     | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div>  | Left blank  |
| Avg.     | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div> | Left blank  |

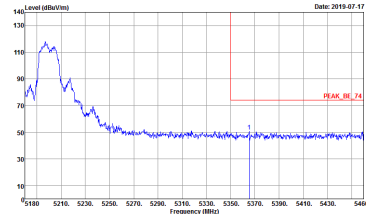
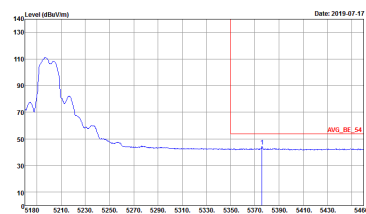


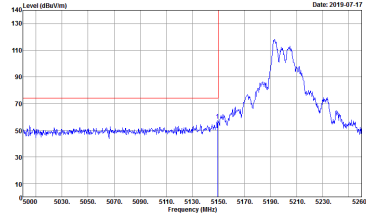
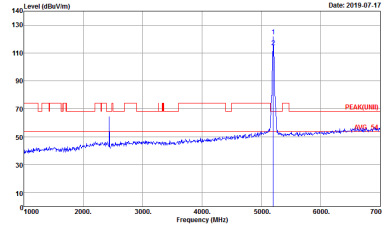
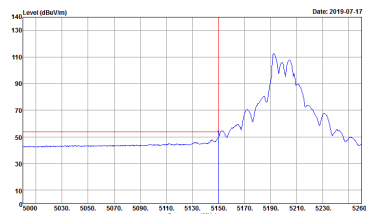
| 802.15.4 | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                  |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT      | 802.15.4 CH18 2440MHz - L                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                  |
| 3        | Vertical                                                                                                                                                                                                                                                                                        | Fundamental                                                                                                                                                                                                                                                                                      |
| Peak     |  <p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p>  |  <p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p>  |
|          |  <p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p> |  <p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p> |



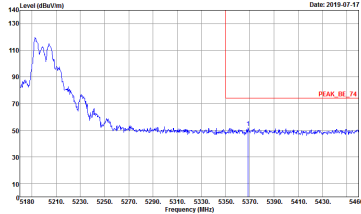
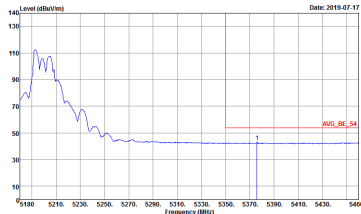
| 802.15.4 | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                      |             |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT      | 802.15.4 CH18 2440MHz - R                                                                                                                                                                                                                                                                                 |             |
| 3        | Vertical                                                                                                                                                                                                                                                                                                  | Fundamental |
| Peak     | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div>  | Left blank  |
| Avg.     | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div> | Left blank  |

| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                     |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH40 5200MHz - L                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                     |
| 1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                                                                                                         |
| Peak    |  <p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p>  |  <p>Site : 03CH12-HV<br/>Condition : PEAK(FUND) 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p> |
| Avg.    |  <p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p> | Left blank                                                                                                                                                                                                                                                                                          |

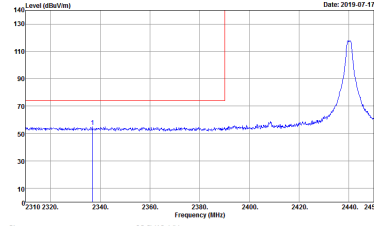
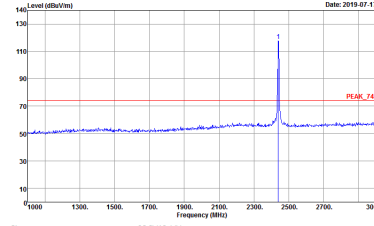
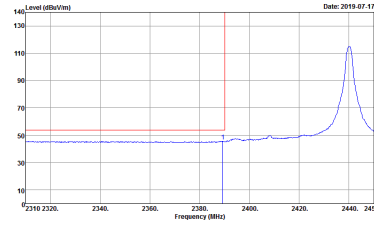
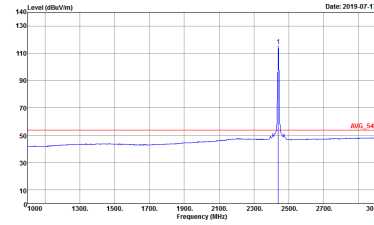
| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                  |             |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT     | 802.11a CH40 5200MHz - R                                                                                                                                                                                                                                                                            |             |
| 1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                          | Fundamental |
| Peak    |  <p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p>  | Left blank  |
| Avg.    |  <p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p> | Left blank  |

| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                   |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH40 5200MHz - L                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                   |
| 1+2+3+4 | Vertical                                                                                                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                                                                                                       |
| Peak    |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p> |
| Avg.    |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p> | Left blank                                                                                                                                                                                                                                                                                        |

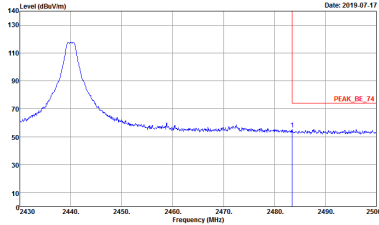
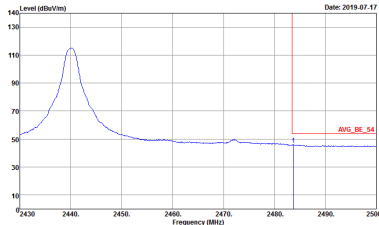


| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                          |             |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT     | 802.11a CH40 5200MHz - R                                                                                                                                                                                                                                                                                    |             |
| 1+2+3+4 | Vertical                                                                                                                                                                                                                                                                                                    | Fundamental |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div>  | Left blank  |
| Avg.    | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 46<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div> | Left blank  |

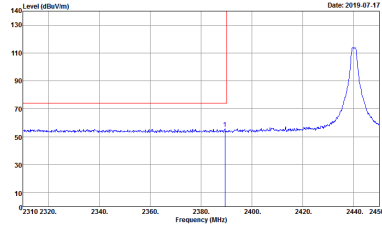
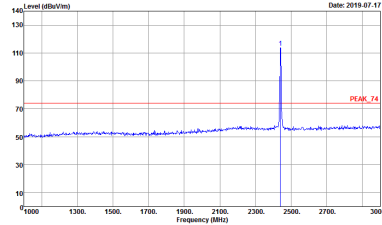
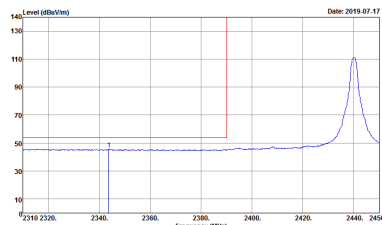
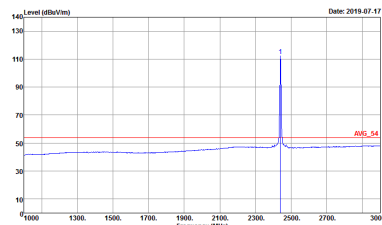
**2.4GHz 2400~2483.5MHz+Band 4 - 5725~5850MHz**
**802.15.4\_Tx\_Ch18+11a\_Tx\_Ch157 (Band Edge @ 3m)**

| 802.15.4 | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT      | 802.15.4 CH18 2440MHz - L                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                |
| 3        | Horizontal                                                                                                                                                                                                                                                                       | Fundamental                                                                                                                                                                                                                                                                    |
| Peak     |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p>  |
|          |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p> |  <p>Site : 03CH12-HY<br/>Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p> |

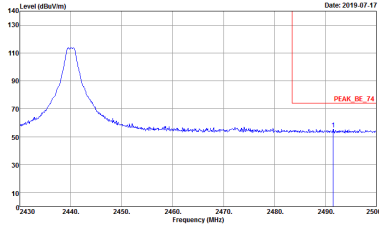
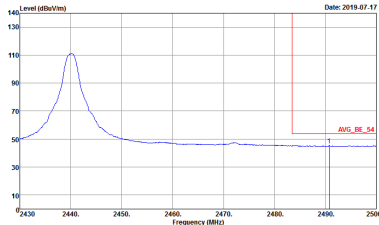


| 802.15.4 | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                       |             |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT      | 802.15.4 CH18 2440MHz - R                                                                                                                                                                                                                                                                  |             |
| 3        | Horizontal                                                                                                                                                                                                                                                                                 | Fundamental |
| Peak     | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_RE_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div>  | Left blank  |
| Avg.     | <div><p>Site : 03CH12-HY<br/>Condition : AVG_RE_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div> | Left blank  |

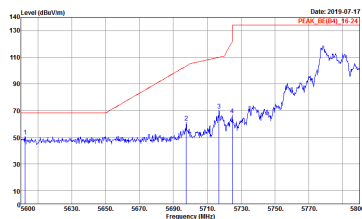
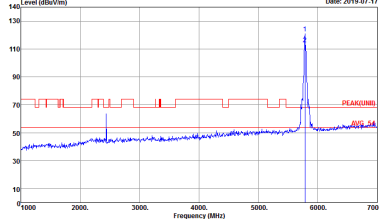
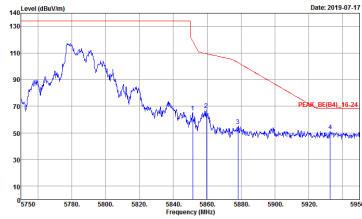


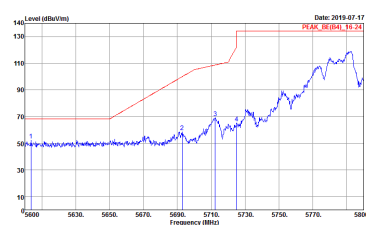
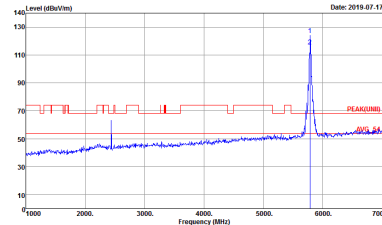
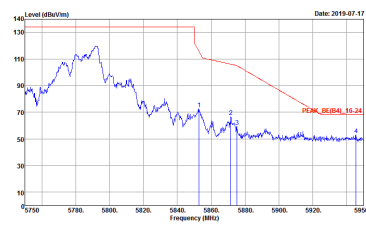
| 802.15.4 | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                           |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT      | 802.15.4 CH18 2440MHz - L                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                           |
| 3        | Vertical                                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                                               |
| Peak     | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div>  | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div>  |
| Avg.     | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div> | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div> |



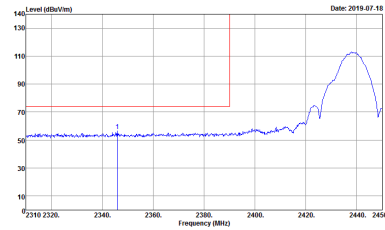
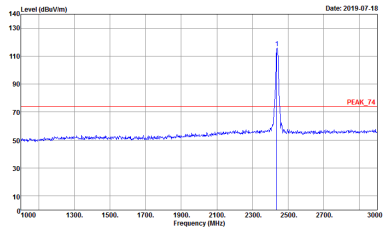
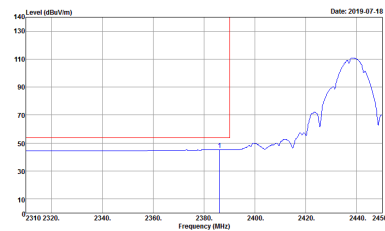
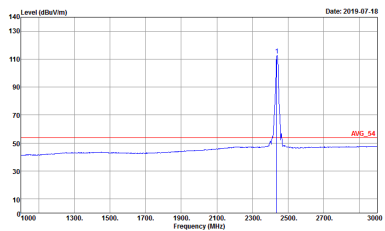
| 802.15.4 | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                     |             |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT      | 802.15.4 CH18 2440MHz - R                                                                                                                                                                                                                                                                |             |
| 3        | Vertical                                                                                                                                                                                                                                                                                 | Fundamental |
| Peak     | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div>  | Left blank  |
| Avg.     | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div> | Left blank  |



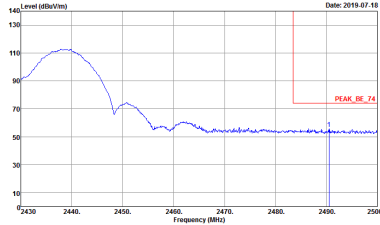
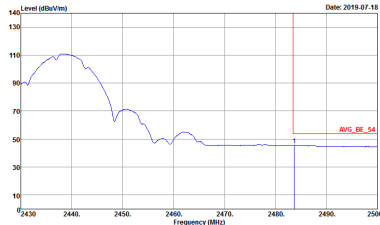
| WIFI    | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                      |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH157 5785MHz                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                      |
| 1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                                            | Fundamental                                                                                                                                                                                                                                                                                                          |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_RE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div>   | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_RE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_RE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> | Left blank                                                                                                                                                                                                                                                                                                           |

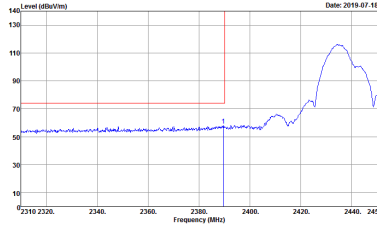
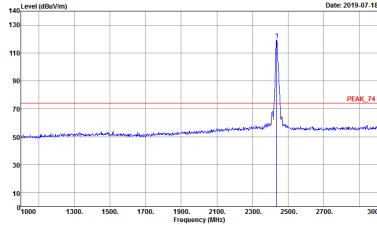
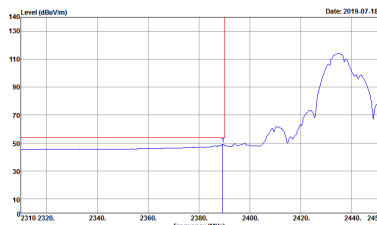
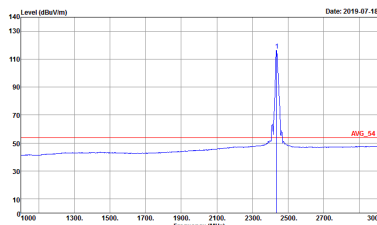
| WIFI    | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                   |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH157 5785MHz                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                   |
| 1+2+3+4 | Vertical                                                                                                                                                                                                                                                                                                  | Fundamental                                                                                                                                                                                                                                                                                       |
| Peak    |  <p>Site : 03CH12-HV<br/>Condition : PEAK_RE(B4)_16-24 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p>   |  <p>Site : 03CH12-HV<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p> |
| Peak    |  <p>Site : 03CH12-HV<br/>Condition : PEAK_RE(B4)_16-24 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p> | Left blank                                                                                                                                                                                                                                                                                        |

**2.4GHz 2400~2483.5MHz+Band 1 - 5150~5250MHz**
**11b\_Tx\_Ch06+11a\_Tx\_Ch40 (Band Edge @ 3m)**

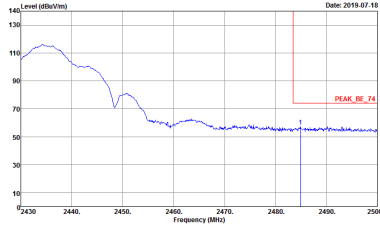
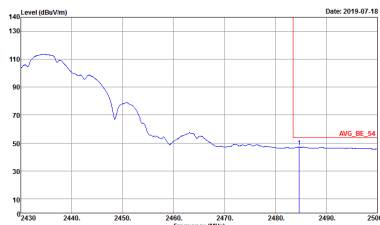
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11b CH06 2437MHz - L                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                             |
| 1+2  | Horizontal                                                                                                                                                                                                                                                                                    | Fundamental                                                                                                                                                                                                                                                                                 |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 22<br/>Add 56 Notch</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 22<br/>Add 56 Notch</p>  |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 22<br/>Add 56 Notch</p> |  <p>Site : 03CH12-HY<br/>Condition : AVG_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 22<br/>Add 56 Notch</p> |



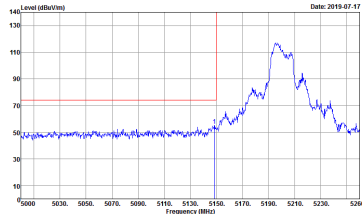
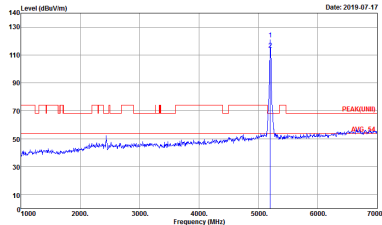
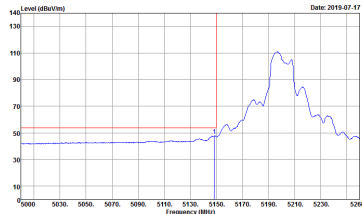
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                      |             |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11b CH06 2437MHz - R                                                                                                                                                                                                                                                                                  |             |
| 1+2  | Horizontal                                                                                                                                                                                                                                                                                                | Fundamental |
| Peak | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_RE_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH12-HV<br/>Condition : AVG_RE_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div> | Left blank  |

| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                  |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11b CH06 2437MHz - L                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                  |
| 1+2  | Vertical                                                                                                                                                                                                                                                                                           | Fundamental                                                                                                                                                                                                                                                                                      |
| Peak |  <p>Site Condition : 03CH12-HV<br/> PEAK_BE_T4 3m HORN_9120D_1328 VERTICAL<br/> Detector : Peak<br/> Project : 960558<br/> Mode : 48<br/> 2.4G WLAN Setting : 25<br/> 5G WLAN Setting : 22<br/> Add 56 Notch</p>  |  <p>Site Condition : 03CH12-HV<br/> PEAK_T4 3m HORN_9120D_1328 VERTICAL<br/> Detector : Peak<br/> Project : 960558<br/> Mode : 48<br/> 2.4G WLAN Setting : 25<br/> 5G WLAN Setting : 22<br/> Add 56 Notch</p>  |
| Avg. |  <p>Site Condition : 03CH12-HV<br/> AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/> Detector : Peak<br/> Project : 960558<br/> Mode : 48<br/> 2.4G WLAN Setting : 25<br/> 5G WLAN Setting : 22<br/> Add 56 Notch</p> |  <p>Site Condition : 03CH12-HV<br/> AVG_54 3m HORN_9120D_1328 VERTICAL<br/> Detector : Peak<br/> Project : 960558<br/> Mode : 48<br/> 2.4G WLAN Setting : 25<br/> 5G WLAN Setting : 22<br/> Add 56 Notch</p> |

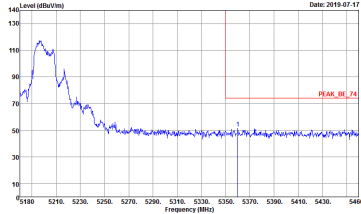
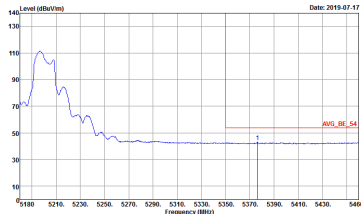


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                    |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11b CH06 2437MHz - R                                                                                                                                                                                                                                                                                |             |
| 1+2  | Vertical                                                                                                                                                                                                                                                                                                | Fundamental |
| Peak | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_RE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH12-HV<br/>Condition : AVG_RE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 22<br/>Add 5G Notch</p></div> | Left blank  |

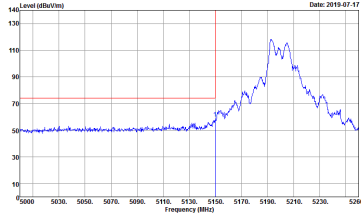
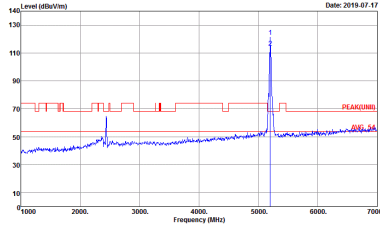
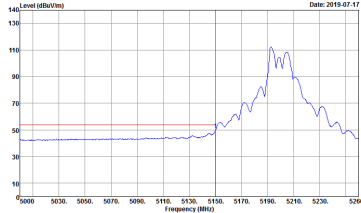


| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                            |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH40 5200MHz - L                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                            |
| 1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                                  | Fundamental                                                                                                                                                                                                                                                                                                |
| Peak    | <div><p>Site : 03CH12-HY<br/>Condition : PEAK, 85.74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>Z46 WLAN Setting : 25<br/>56 WLAN Setting : 22<br/>Add 2.4G Notch</p></div>  | <div><p>Site : 03CH12-HY<br/>Condition : PEAK(FUND) 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>Z46 WLAN Setting : 25<br/>56 WLAN Setting : 22<br/>Add 2.4G Notch</p></div> |
| Avg.    | <div><p>Site : 03CH12-HY<br/>Condition : AVG, BE_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>Z46 WLAN Setting : 25<br/>56 WLAN Setting : 22<br/>Add 2.4G Notch</p></div> | Left blank                                                                                                                                                                                                                                                                                                 |

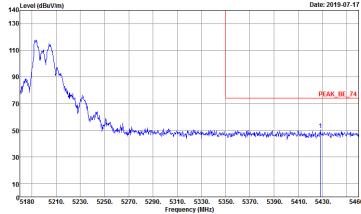
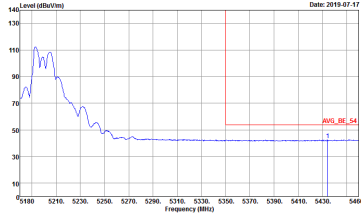


| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                         |             |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT     | 802.11a CH40 5200MHz - R                                                                                                                                                                                                                                                                                   |             |
| 1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                                 | Fundamental |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_85_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>Z4G WLAN Setting : 25<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div>  | Left blank  |
| Avg.    | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>Z4G WLAN Setting : 25<br/>5G WLAN Setting : 22<br/>Add 2.4G Notch</p></div> | Left blank  |



| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                          |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH40 5200MHz - L                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                          |
| 1+2+3+4 | Vertical                                                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                                                              |
| Peak    | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_85_74 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>Z46 WLAN Setting : 25<br/>56 WLAN Setting : 22<br/>Add 2.4G Notch</p></div>  | <div><p>Site : 03CH12-HY<br/>Condition : PEAK(FUND) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>Z46 WLAN Setting : 25<br/>56 WLAN Setting : 22<br/>Add 2.4G Notch</p></div> |
| Avg.    | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>Z46 WLAN Setting : 25<br/>56 WLAN Setting : 22<br/>Add 2.4G Notch</p></div> | Left blank                                                                                                                                                                                                                                                                                               |

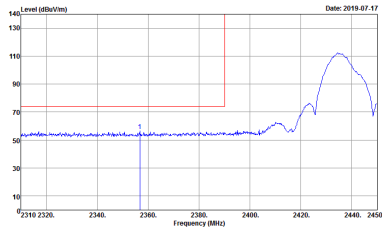
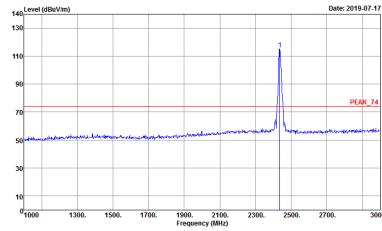
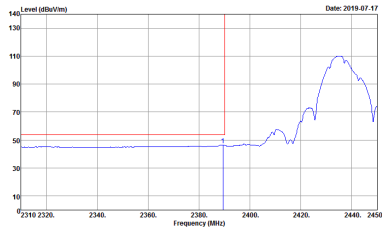
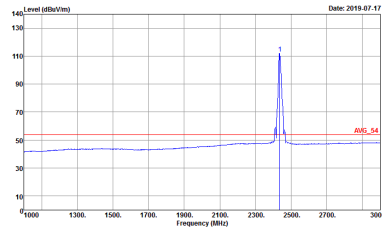


| WIFI    | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                                                                                                        |             |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT     | 802.11a CH40 5200MHz - R                                                                                                                                                                                                                                                                                  |             |
| 1+2+3+4 | Vertical                                                                                                                                                                                                                                                                                                  | Fundamental |
| Peak    | <div><p>Site : 03CH12-HY<br/>Condition : PEAK_85_74 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G WLAN Setting : Z5<br/>5G WLAN Setting : Z2<br/>Add 2.4G Notch</p></div>  | Left blank  |
| Avg.    | <div><p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G WLAN Setting : Z5<br/>5G WLAN Setting : Z2<br/>Add 2.4G Notch</p></div> | Left blank  |

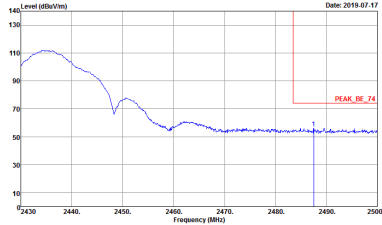
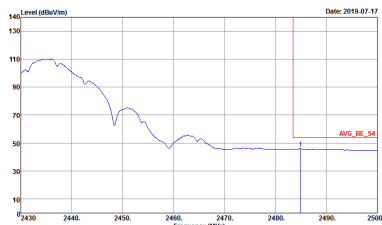


## 2.4GHz 2400~2483.5MHz+Band 4 - 5725~5850MHz

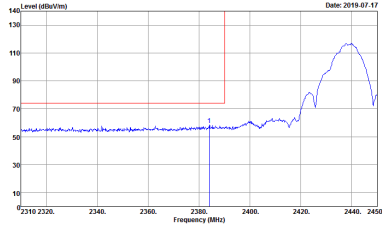
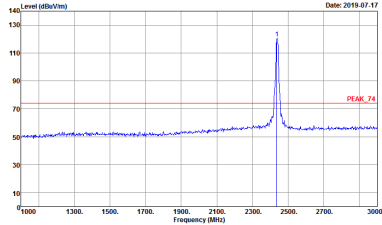
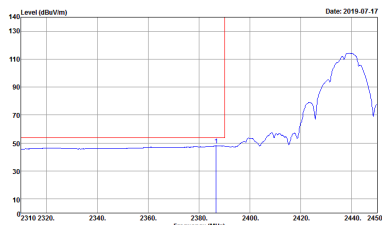
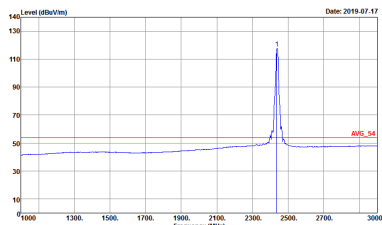
## 11b\_Tx\_Ch06+11a\_Tx\_Ch157 (Band Edge @ 3m)

| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                            |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11b CH06 2437MHz - L                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                            |
| 1+2  | Horizontal                                                                                                                                                                                                                                                                   | Fundamental                                                                                                                                                                                                                                                                |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 25</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 25</p>  |
| Avg. |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 25</p> |  <p>Site : 03CH12-HY<br/>Condition : AVG_54 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 25</p> |

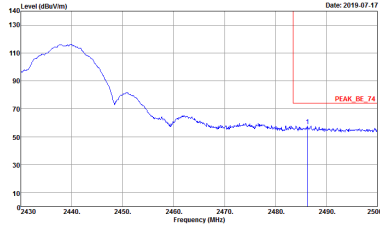
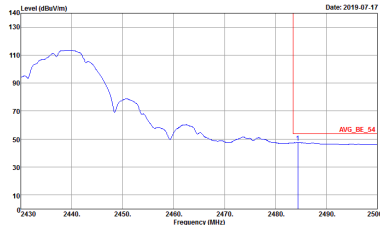


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                   |             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11b CH06 2437MHz - R                                                                                                                                                                                                                                                               |             |
| 1+2  | Horizontal                                                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 25</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G LAN Setting : 25<br/>5G LAN Setting : 25</p></div> | Left blank  |

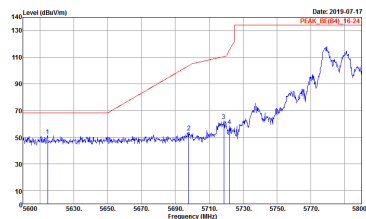
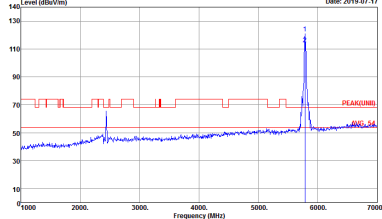
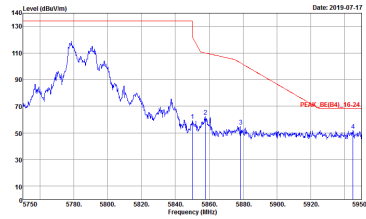


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                            |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11b CH06 2437MHz - L                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                            |
| 1+2  | Vertical                                                                                                                                                                                                                                                                     | Fundamental                                                                                                                                                                                                                                                                |
| Peak |  <p>Site : 03CH12-HY<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25</p>  |  <p>Site : 03CH12-HY<br/>Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25</p>  |
|      |  <p>Site : 03CH12-HY<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25</p> |  <p>Site : 03CH12-HY<br/>Condition : AVG_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25</p> |

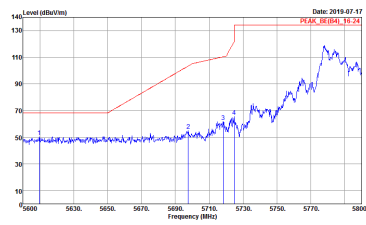
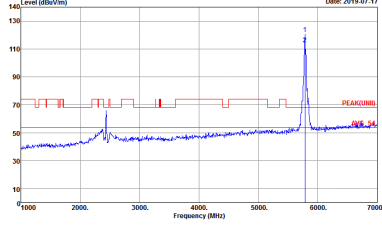
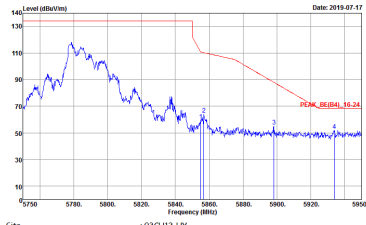


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                   |             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11b CH06 2437MHz - R                                                                                                                                                                                                                                                               |             |
| 1+2  | Vertical                                                                                                                                                                                                                                                                               | Fundamental |
| Peak | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH12-HV<br/>Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25</p></div> | Left blank  |



| WIFI    | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH157 5785MHz                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                    |
| 1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                                                                                                                        |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div>   | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> | Left blank                                                                                                                                                                                                                                                                                                         |

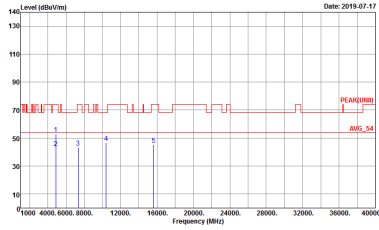
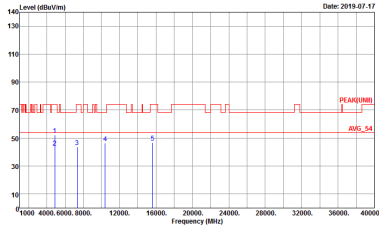


| WIFI    | Band 4 5725~5850MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                  |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT     | 802.11a CH157 5785MHz                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                  |
| 1+2+3+4 | Vertical                                                                                                                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                                                                                                                      |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div>   | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> |
| Peak    | <div><p>Site : 03CH12-HV<br/>Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25<br/>Add 2.4G Notch</p></div> | Left blank                                                                                                                                                                                                                                                                                                       |



2.4GHz 2400~2483.5MHz+Band 1 - 5150~5250MHz

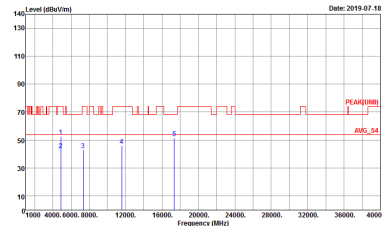
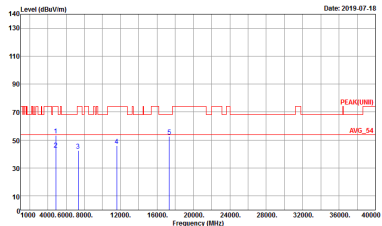
BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch40 (Harmonic @ 3m)

| WIFI          | 2.4GHz 2440 MHz+5GHz 5200MHz Harmonic @ 3m                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                       |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT           | BLE(1M)_Tx_CH19+11a_Tx_Ch40 2440+5200MHz                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                       |
| 1/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                             | Vertical                                                                                                                                                                                                                                                                              |
| Peak<br>Avg.  | <div><p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22</p></div> | <div><p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 44<br/>BLE Setting : Default<br/>5G WLAN Setting : 22</p></div> |



## 2.4GHz+5GHz 2400~2483.5MHz++Band 4 - 5725~5850MHz

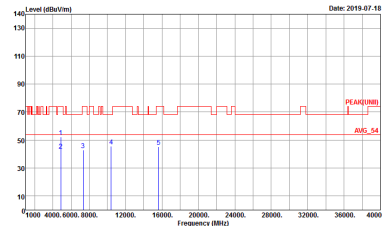
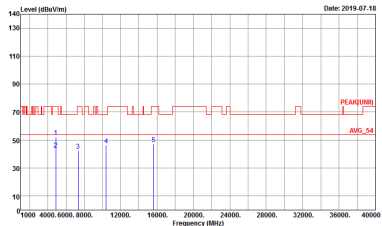
## BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch157 (Harmonic @ 3m)

| WIFI          | 2.4GHz 2440 MHz+5GHz 5785MHz Harmonic @ 3m                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                             |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT           | BLE(1M)_Tx_CH19+11a_Tx_Ch157 2440+5785MHz                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                             |
| 1/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                   | Vertical                                                                                                                                                                                                                                                                    |
| Peak<br>Avg.  |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 45<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p> |



2.4GHz 2400~2483.5MHz+Band 1 - 5150~5250MHz

802.15.4\_Tx\_Ch18+11a\_Tx\_Ch40 (Harmonic @ 3m)

| WIFI          | 2.4GHz 2440 MHz+5GHz 5200MHz Harmonic @ 3m                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT           | 802.15.4_Tx_CH18+11a_Tx_Ch40 2440+5200MHz                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                |
| 3/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                      | Vertical                                                                                                                                                                                                                                                                       |
| Peak<br>Avg.  |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 40<br/>Zigbee Setting : Default<br/>5G WLAN Setting : Z2</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 40<br/>Zigbee Setting : Default<br/>5G WLAN Setting : Z2</p> |



2.4GHz+5GHz 2400~2483.5MHz++Band 4 - 5725~5850MHz

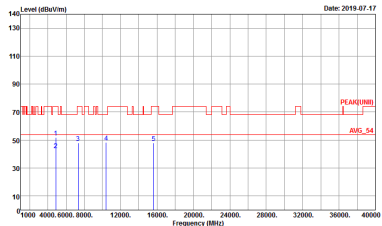
802.15.4\_Tx\_Ch18+11a\_Tx\_Ch157 (Harmonic @ 3m)

| WIFI          | 2.4GHz 2440 MHz+5GHz 5785MHz Harmonic @ 3m                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                          |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT           | 802.15.4_Tx_Ch18+11a_Tx_Ch157 2440+5785MHz                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                          |
| 3/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                                | Vertical                                                                                                                                                                                                                                                                                 |
| Peak<br>Avg.  | <div><p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div> | <div><p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 47<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p></div> |



## 2.4GHz 2400~2483.5MHz+Band 1 - 5150~5250MHz

## 11b\_Tx\_Ch06+11a\_Tx\_Ch40 (Harmonic @ 3m)

| WIFI            | 2.4GHz 2437 MHz+5GHz 5200MHz Harmonic @ 3m                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                              |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT             | 11b_Tx_Ch06+11a_Tx_Ch40 2437+5200MHz                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                              |
| 1+2/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                    | Vertical                                                                                                                                                                                                                                                                     |
| Peak<br>Avg.    |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 22</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(UNIT) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 48<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 22</p> |

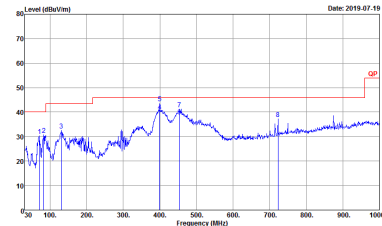
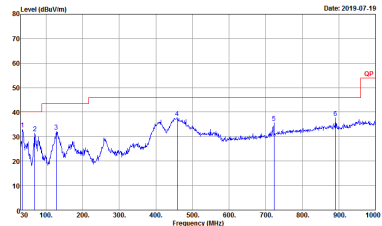


## 2.4GHz+5GHz 2400~2483.5MHz++Band 4 - 5725~5850MHz

## 11b\_Tx\_Ch06a\_Tx\_Ch157 (Harmonic @ 3m)

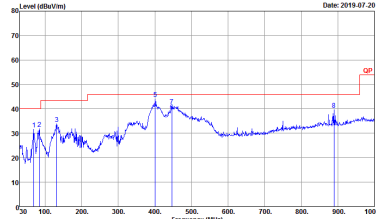
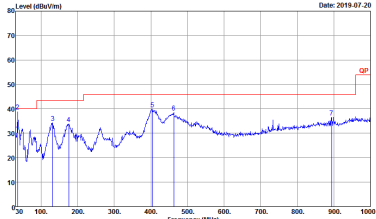
| WIFI            | 2.4GHz 2437 MHz+5GHz 5785MHz Harmonic @ 3m                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                              |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT             | 11b_Tx_Ch06+11a_Tx_Ch157 2437+5785MHz                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                              |
| 1+2/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                    | Vertical                                                                                                                                                                                                                                                                     |
| Peak<br>Avg.    |  <p>Site : 03CH12-HY<br/>Condition : PEAK(LINE) 3m HORN_91200_1328 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25</p> |  <p>Site : 03CH12-HY<br/>Condition : PEAK(LINE) 3m HORN_91200_1328 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Mode : 49<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25</p> |

**Emission below 1GHz**
**BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch40 (LF)**

| WIFI          | 2.4GHz 2440 MHz+5GHz 5200MHz                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                         |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT           | BLE(1M)_Tx_Ch19+11a_Tx_Ch40 LF                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                         |
| 1/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                               | Vertical                                                                                                                                                                                                                                                |
| QP /<br>Peak  |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1LO6_6111D_37059 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>BLE Setting : Default<br/>5G WLAN Setting : 22</p> |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1LO6_6111D_37059 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>BLE Setting : Default<br/>5G WLAN Setting : 22</p> |

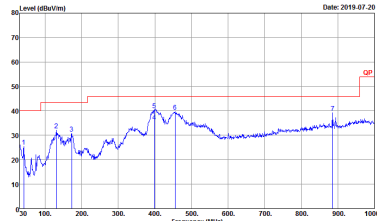
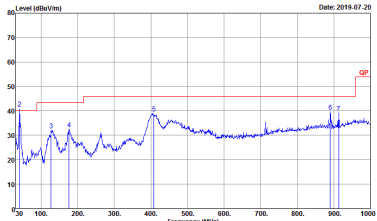


BLE(1M)\_Tx\_Ch19+11a\_Tx\_Ch157 (LF)

| WIFI          | 2.4GHz 2440 MHz+5GHz 5785MHz                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                         |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT           | BLE(1M)_Tx_Ch19+11a_Tx_Ch157                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                         |
| 1/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                               | Vertical                                                                                                                                                                                                                                                |
| QP /<br>Peak  |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1L06_6111D_37059 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p> |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1L06_6111D_37059 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>BLE Setting : Default<br/>5G WLAN Setting : 25</p> |
|               |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                         |

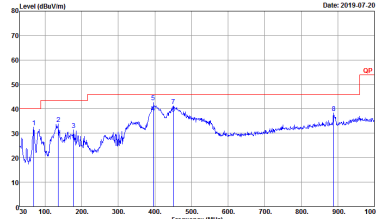
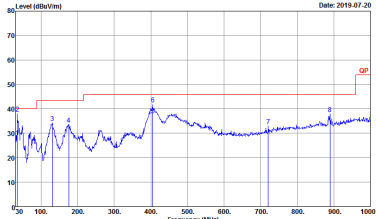


## 802.15.4\_Tx\_Ch18+11a\_Tx\_Ch40 (LF)

| WIFI          | 2.4GHz 2440 MHz+5GHz 5200MHz                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                            |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT           | 802.15.4_Tx_Ch18+11a_Tx_Ch40                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                            |
| 3/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                  | Vertical                                                                                                                                                                                                                                                   |
| QP /<br>Peak  |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1L06_6111D_37059 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22</p> |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1L06_6111D_37059 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 22</p> |
|               |                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |

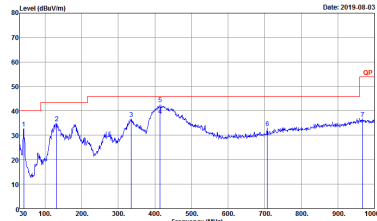
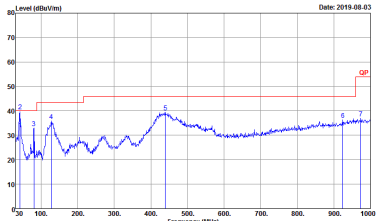


## 802.15.4\_Tx\_Ch18+11a\_Tx\_Ch157 (LF)

| WIFI          | 2.4GHz 2440 MHz+5GHz 5785MHz                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                            |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT           | 802.15.4_Tx_Ch18+11a_Tx_Ch157 LF                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                            |
| 3/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                  | Vertical                                                                                                                                                                                                                                                   |
| QP /<br>Peak  |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1L06_6111D_37059 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p> |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1L06_6111D_37059 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>Zigbee Setting : Default<br/>5G WLAN Setting : 25</p> |
|               |                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |

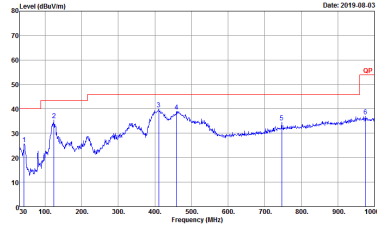
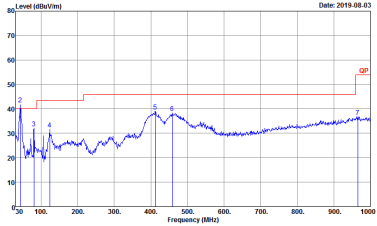


## 11b\_Tx\_Ch06+11a\_Tx\_Ch40 (LF)

| WIFI            | 2.4GHz 2437 MHz+5GHz 5200MHz                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                           |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT             | 11b_Tx_Ch06+11a_Tx_Ch40                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                           |
| 1+2/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                 | Vertical                                                                                                                                                                                                                                                                  |
| QP /<br>Peak    |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1LO6_6111D_37059 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 22<br/>: #4 Adapter</p> |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1LO6_6111D_37059 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 22<br/>: #4 Adapter</p> |



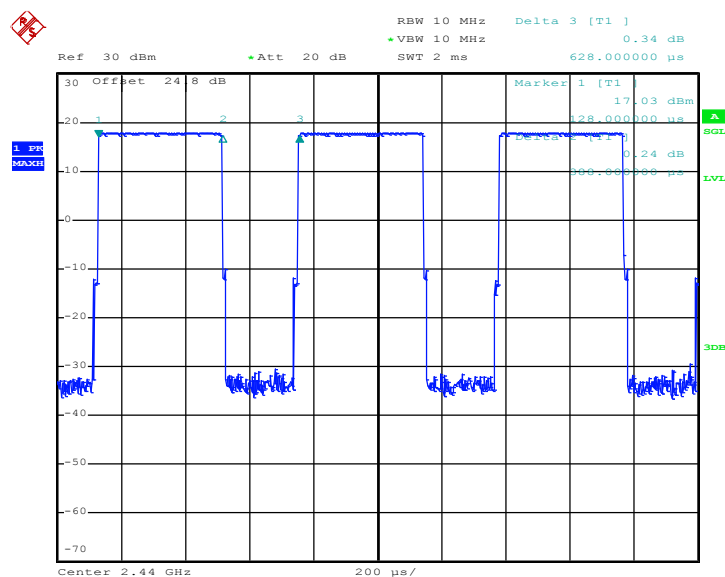
## 11b\_Tx\_Ch06+11a\_Tx\_Ch157 (LF)

| WIFI            | 2.4GHz 2437 MHz+5GHz 5785MHz                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                            |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT             | 11b_Tx_Ch06+11a_Tx_Ch157 LF                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                            |
| 1+2/<br>1+2+3+4 | Horizontal                                                                                                                                                                                                                                                                  | Vertical                                                                                                                                                                                                                                                                   |
| QP /<br>Peak    |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1LO6_6111D_37059 HORIZONTAL<br/>Detector : Peak<br/>Project : 960558<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25<br/> : #4 Adapter</p> |  <p>Site : 03CH12-HY<br/>Condition : QP 3m B1LO6_6111D_37059 VERTICAL<br/>Detector : Peak<br/>Project : 960558<br/>2.4G WLAN Setting : 25<br/>5G WLAN Setting : 25<br/> : #4 Adapter</p> |

## Appendix C. Duty Cycle Plots

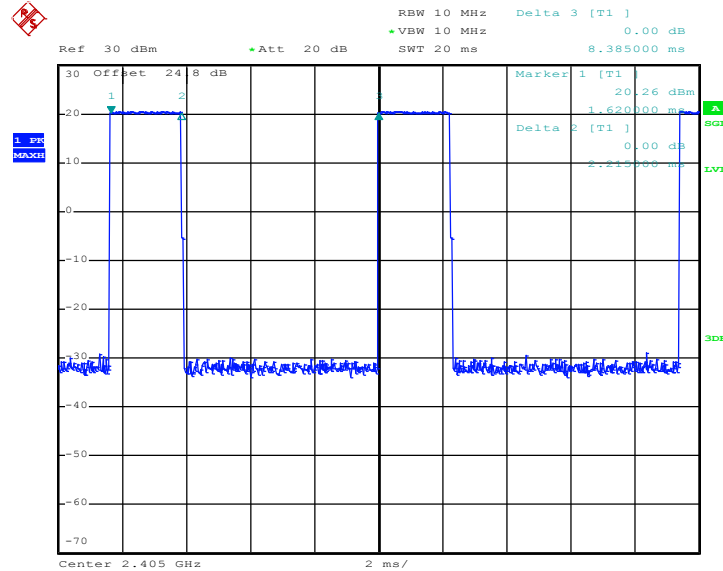
| Antenna | Band           | Duty Cycle (%) | T(us)    | 1/T(kHz) | VBW Setting | Duty Factor (dB) |
|---------|----------------|----------------|----------|----------|-------------|------------------|
| 1       | Bluetooth – LE | 61.78          | 388.00   | 2.58     | 3kHz        | 2.09             |
| 3       | 802.15.4       | 26.42          | 2215.00  | 0.45     | 1kHz        | 5.78             |
| 1+2     | 802.11b        | 98.03          | 12450.00 | 0.08     | 10Hz        | 0.09             |
| 1+2+3+4 | 802.11a        | 96.71          | 2060.00  | 0.49     | 1kHz        | 0.15             |

### Bluetooth - LE



Date: 28.JUL.2019 14:46:37

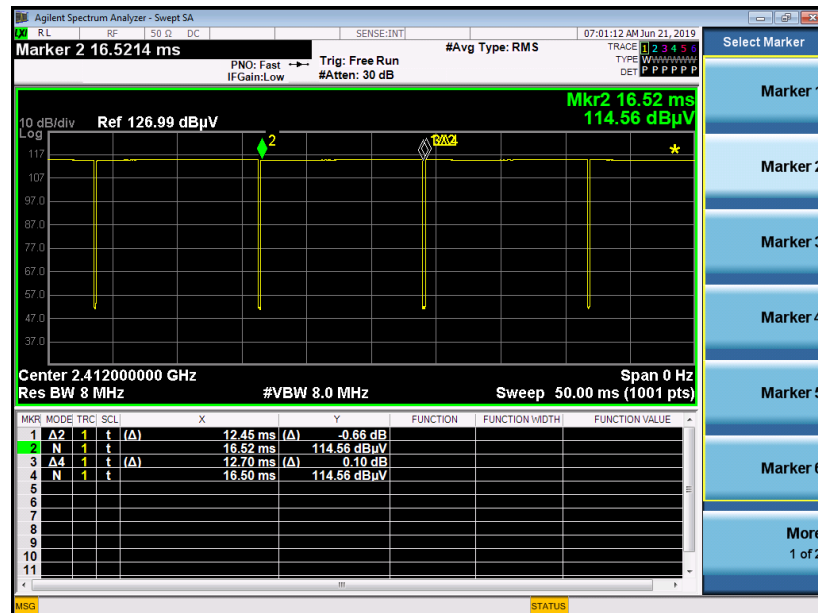
802.15.4



Date: 17.JUL.2019 10:10:32

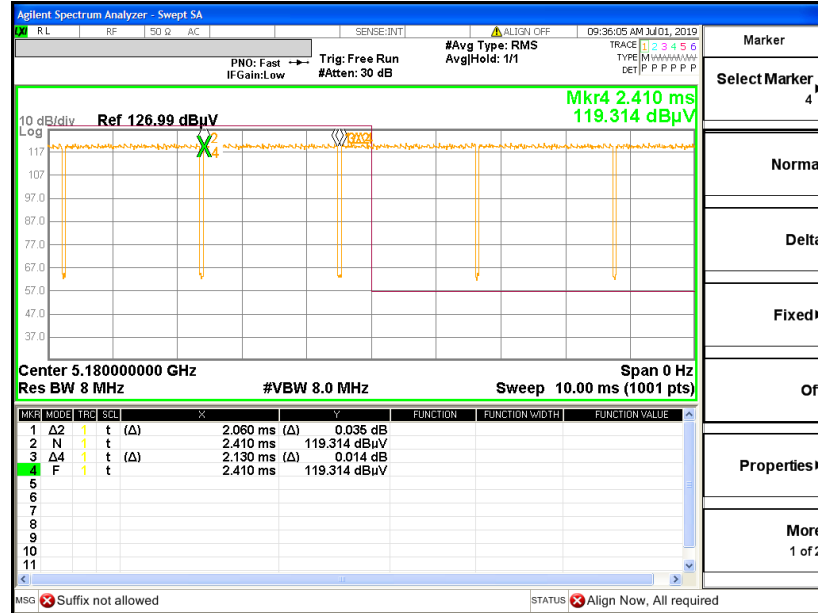
<Ant. 1+2>

802.11b



<Ant. 1+2+3+4>

802.11a



————THE END————