



# FCC RADIO TEST REPORT

**FCC ID** : UZ7VC8300  
**Equipment** : Vehicle Computer  
**Brand Name** : Zebra  
**Model Name** : VC8300  
**Applicant** : Zebra Technologies Corporation  
1 Zebra Plaza, Holtsville, NY 11742  
**Manufacturer** : Zebra Technologies Corporation  
1 Zebra Plaza, Holtsville, NY 11742  
**Standard** : FCC Part 15 Subpart C §15.247

The product was received on Feb. 15, 2019 and testing was started from Apr. 04, 2019 and completed on Apr. 09, 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 variant 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: Jones Tsai

**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 .....                                    | 7         |
| 1.4 Testing Location .....                                       | 7         |
| 1.5 Applicable Standards.....                                    | 8         |
| <b>2 Test Configuration of Equipment Under Test .....</b>        | <b>9</b>  |
| 2.1 Carrier Frequency and Channel .....                          | 9         |
| 2.2 Test Mode.....                                               | 10        |
| 2.3 Connection Diagram of Test System.....                       | 11        |
| 2.4 Support Unit used in test configuration and system .....     | 12        |
| 2.5 EUT Operation Test Setup .....                               | 13        |
| 2.6 Measurement Results Explanation Example.....                 | 13        |
| <b>3 Test Result .....</b>                                       | <b>14</b> |
| 3.1 6dB and 99% Bandwidth Measurement .....                      | 14        |
| 3.2 Output Power Measurement.....                                | 16        |
| 3.3 Power Spectral Density Measurement .....                     | 18        |
| 3.4 Conducted Band Edges and Spurious Emission Measurement ..... | 20        |
| 3.5 Radiated Band Edges and Spurious Emission Measurement .....  | 33        |
| 3.6 Antenna Requirements.....                                    | 37        |
| <b>4 List of Measuring Equipment.....</b>                        | <b>38</b> |
| <b>5 Uncertainty of Evaluation.....</b>                          | <b>39</b> |
| <b>Appendix A. Radiated Spurious Emission</b>                    |           |
| <b>Appendix B. Radiated Spurious Emission Plots</b>              |           |
| <b>Appendix C. Setup Photographs</b>                             |           |



## History of this test report

| Report No.   | Version | Description             | Issued Date  |
|--------------|---------|-------------------------|--------------|
| FR8N0846-03A | 01      | Initial issue of report | May 06, 2019 |
|              |         |                         |              |
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## Summary of Test Result

| Report Clause | Ref Std. Clause    | Test Items                                         | Result (PASS/FAIL) | Remark                                    |
|---------------|--------------------|----------------------------------------------------|--------------------|-------------------------------------------|
| 3.1           | 15.247(a)(2)       | 6dB Bandwidth                                      | Pass               | -                                         |
| 3.1           | 2.1049             | 99% Occupied Bandwidth                             | Reporting only     | -                                         |
| 3.2           | 15.247(b)          | Power Output Measurement                           | Pass               | -                                         |
| 3.3           | 15.247(e)          | Power Spectral Density                             | Pass               | -                                         |
| 3.4           | 15.247(d)          | Conducted Band Edges                               | Pass               | -                                         |
|               |                    | Conducted Spurious Emission                        | Pass               | -                                         |
| 3.5           | 15.247(d)          | Radiated Band Edges and Radiated Spurious Emission | Pass               | Under limit<br>1.07 dB at<br>2390.000 MHz |
| -             | 15.207             | AC Conducted Emission                              | Not Required       | -                                         |
| 3.6           | 15.203 & 15.247(b) | Antenna Requirement                                | Pass               | -                                         |

**Remark:**

- Not required means after assessing, test items are not necessary to carry out.
- This is a variant report by adding TXBF Mode. All the test cases were performed on original report which can be referred to Sporton Report Number FR8N0846C. Based on the original report, the test cases were verified.

**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: Natasha Hsieh**

# 1 General Description

## 1.1 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                |
|---------------------------------|--------------------------------------------------------------------------------|
| Equipment                       | Vehicle Computer                                                               |
| Brand Name                      | Zebra                                                                          |
| Model Name                      | VC8300                                                                         |
| FCC ID                          | UZ7VC8300                                                                      |
| Sample 1                        | EUT with SKU 1                                                                 |
| Sample 2                        | EUT with SKU 2                                                                 |
| Sample 3                        | EUT with SKU 3                                                                 |
| Sample 4                        | EUT with SKU 4                                                                 |
| Sample 5                        | EUT with SKU 5                                                                 |
| Sample 6                        | EUT with SKU 6                                                                 |
| Sample 7                        | EUT with SKU 7                                                                 |
| EUT supports Radios application | WLAN 11a/b/g/n HT20/HT40<br>WLAN 11ac VHT20/VHT40/VHT80<br>Bluetooth BR/EDR/LE |
| HW Version                      | EVT1                                                                           |
| SW Version                      | Zebra/VC8300/VC8310:8.1.0/01-14-12-00-ON-U00-PRD/266:<br>eng/release-keys      |
| FW Version                      | 01-14-12.00-ON-U00-PRD                                                         |
| MFD                             | 03Nov18                                                                        |
| EUT Stage                       | Identical Prototype                                                            |

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

| Specification of Accessories |            |       |            |                  |
|------------------------------|------------|-------|------------|------------------|
| AC Adapter                   | Brand Name | Zebra | Model Name | FSP150-AAAN2-Z   |
| Battery                      | Brand Name | Zebra | Model Name | BT000254A01      |
| Car Charger                  | Brand Name | Zebra | Model Name | CA1210           |
| RJ50/USB cable               | Brand Name | Zebra | Model Name | CBA-U01-S07ZAR   |
| Scanner                      | Brand Name | Zebra | Model Name | DS3508           |
| Scanner                      | Brand Name | Zebra | Model Name | LS3408           |
| Audio Speaker                | Brand Name | Zebra | Model Name | M1000            |
| Ferrite Core                 | Brand Name | Zebra | Model Name | M1000            |
| Keyboard (ikey)              | Brand Name | Zebra | Model Name | SLK-101-M-USB-3F |
| Keyboard (remote keyboard)   | Brand Name | Zebra | Model Name | KYBD-QWH-VC80    |
| External Antenna (Monopole)  | Brand Name | Zebra | Model Name | AN2010           |
| External Antenna (Monopole)  | Brand Name | Zebra | Model Name | AN2020           |
| External Antenna (Dipole)    | Brand Name | Zebra | Model Name | AN2030           |
| Power Pre-regulator          | Brand Name | PSION | Model Name | PS1370           |

**<Sample Information>**

| Model Name           | VC80x 8"                |                         |                                              | VC80x 10"                |                          |                          |                          |
|----------------------|-------------------------|-------------------------|----------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                      | SKU1                    | SKU2                    | SKU3                                         | SKU4                     | SKU5                     | SKU6                     | SKU7                     |
| SKU Name             | Warehouse 1             | Warehouse 2             | Freezer<br>SK HYNIX eMMC<br>& MICRON<br>DRAM | Warehouse                | Outdoor                  | Warehouse                | Freezer                  |
| OS                   | Android O               | Android O               | Android O                                    | Android O                | Android O                | Android O                | Android O                |
| Display              | Tianma                  | Tianma                  | Tianma                                       | AUO                      | Mitsubishi               | AUO                      | AUO                      |
| DTB board / Fixture  | DTB 8" CTP<br>(TCA8414) | DTB 8" CTP<br>(TCA8414) | DTB 8" CTP<br>(TCA8414)                      | DTB AUO CTP<br>(TCA8414) | DTB MIT CTP<br>(TCA8414) | DTB AUO RTP<br>(TCA8414) | DTB AUO RTP<br>(TCA8414) |
| TP Type (Gunze)      | CTP 8"                  | CTP 8"                  | CTP 8" w/ Heater                             | CTP 10"                  | CTP 10"                  | RTP                      | RTP w/ Heater            |
| KB printing          | QWERTY                  | AZETY                   | QWERTY                                       |                          |                          |                          |                          |
| KB Board             | NO                      | NO                      | NO                                           | Yes                      | Yes                      | Yes                      | Yes                      |
| KB                   | Yes                     | Yes                     | Yes                                          | NO                       | NO                       | NO                       | NO                       |
| MLB                  | SDA660                  | SDA660                  | SDA660                                       | SDA660                   | SDA660                   | SDA660                   | SDA660                   |
| PWR Board            | Yes                     | Yes                     | Yes                                          | Yes                      | Yes                      | Yes                      | Yes                      |
| USB Board            | Yes                     | Yes                     | Yes                                          | Yes                      | Yes                      | Yes                      | Yes                      |
| DB9 Board            | Yes                     | Yes                     | Yes                                          | Yes                      | Yes                      | Yes                      | Yes                      |
| Battery Heater Board | Yes                     | Yes                     | Yes                                          | Yes                      | Yes                      | Yes                      | Yes                      |

**1.2 Product Specification of Equipment Under Test**

| Standards-related Product Specification   |                                                                                                                                                        |          |         |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|
| Tx/Rx Channel Frequency Range             | 2412 MHz ~ 2462 MHz                                                                                                                                    |          |         |
| Maximum (average) Output Power to antenna | <MIMO Chain 1 + 2><br>802.11ac VHT20 : 21.76 dBm(0.1500 W)<br>802.11ac VHT40 : 15.76 dBm(0.0377 W)                                                     |          |         |
| 99% Occupied Bandwidth                    | <MIMO Chain. 1><br>802.11ac VHT20 : 18.30MHz<br>802.11ac VHT40 : 37.10MHz<br><MIMO Chain. 2><br>802.11ac VHT20 : 17.95MHz<br>802.11ac VHT40 : 36.90MHz |          |         |
| Type of Modulation                        | 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)                                                                                                  |          |         |
| Antenna Function Description              |                                                                                                                                                        |          |         |
|                                           |                                                                                                                                                        | Chain. 1 | Chain 2 |
|                                           | 802.11 ac<br>TXBF                                                                                                                                      | V        | V       |

**Note:** MIMO Chain 1+2 is a calculated result from sum of the power MIMO Chain 1 and MIMO Chain 2.



| Antenna No. | Chain No.    | Model        | Antenna Type | Antenna Gain (dBi)<br>Exclude Cable loss | Internal Cable loss (dB) | External Cable loss (dB) | Antenna Gain (dBi)<br>Include Cable loss | Frequency (GHz) |
|-------------|--------------|--------------|--------------|------------------------------------------|--------------------------|--------------------------|------------------------------------------|-----------------|
| 1           | Int. Chain 0 | AN-000242-01 | Patch        | 3.30                                     | N/A                      | N/A                      | 3.30                                     | 2.4~2.4835      |
|             |              |              |              | 4.53                                     | N/A                      | N/A                      | 4.53                                     | 5.15~5.85       |
|             | Int. Chain 1 |              |              | 4.00                                     | N/A                      | N/A                      | 4.00                                     | 2.4~2.4835      |
|             |              |              |              | 4.79                                     | N/A                      | N/A                      | 4.79                                     | 5.15~5.85       |
| 2           | Ext. Chain 0 | AN2010       | Monopole     | 2                                        | 0.6                      | 1.8                      | -0.4                                     | 2.4~2.4835      |
|             |              |              |              | 2                                        | 0.9                      | 2.6                      | -1.5                                     | 5.15~5.85       |
|             | Ext. Chain 1 |              |              | 2                                        | 0.6                      | 1.8                      | -0.4                                     | 2.4~2.4835      |
|             |              |              |              | 2                                        | 0.9                      | 2.6                      | -1.5                                     | 5.15~5.85       |
| 3           | Ext. Chain 0 | AN2020       | Monopole     | 5                                        | 0.6                      | 1.8                      | 2.6                                      | 2.4~2.4835      |
|             | Ext. Chain 1 |              |              | 5                                        | 0.6                      | 1.8                      | 2.6                                      | 2.4~2.4835      |
| 4           | Ext. Chain 0 | AN2030       | Dipole       | 2                                        | 0.6                      | N/A                      | 1.4                                      | 2.4~2.4835      |
|             |              |              |              | 3.7                                      | 0.9                      | N/A                      | 2.8                                      | 5.15~5.85       |
|             | Ext. Chain 1 |              |              | 2                                        | 0.6                      | N/A                      | 1.4                                      | 2.4~2.4835      |
|             |              |              |              | 3.7                                      | 0.9                      | N/A                      | 2.8                                      | 5.15~5.85       |

### 1.3 Modification of EUT

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

### 1.4 Testing Location

|                    |                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC.                                                                                            |
| Test Site Location | No.52, Huaya 1st Rd., Guishan Dist.,<br>Taoyuan City, Taiwan (R.O.C.)<br>TEL: +886-3-327-3456<br>FAX: +886-3-328-4978 |
| Test Site No.      | Sporton Site No.<br>TH05-HY                                                                                           |

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

|                    |                                                                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Test Site          | SPORTON INTERNATIONAL INC.                                                                                                                |
| Test Site Location | 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 |
| Test Site No.      | Sporton Site No.<br>03CH11-HY                                                                                                             |

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

FCC Designation No. TW1190 and 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 C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ 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). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane for Antenna 1; Y plane for Antenna 3; Vertical for Antenna 4) were recorded in this report.

### 2.1 Carrier Frequency and Channel

| Frequency Band  | Channel | Freq.<br>(MHz) | Channel | Freq.<br>(MHz) |
|-----------------|---------|----------------|---------|----------------|
| 2400-2483.5 MHz | 1       | 2412           | 7       | 2442           |
|                 | 2       | 2417           | 8       | 2447           |
|                 | 3       | 2422           | 9       | 2452           |
|                 | 4       | 2427           | 10      | 2457           |
|                 | 5       | 2432           | 11      | 2462           |
|                 | 6       | 2437           |         |                |

**MIMO <Chain 1+2>**

| 802.11ac VHT20 RF Avg Output Power (dBm) |                 |           |                    |           |       |       |       |       |       |       |       |
|------------------------------------------|-----------------|-----------|--------------------|-----------|-------|-------|-------|-------|-------|-------|-------|
| Power vs. Channel                        |                 |           | Power vs Data Rate |           |       |       |       |       |       |       |       |
| Channel                                  | Frequency (MHz) | MCS Index | Channel            | MCS Index |       |       |       |       |       |       |       |
|                                          |                 | MCS 0     |                    | MCS 1     | MCS 2 | MCS 3 | MCS 4 | MCS 5 | MCS 6 | MCS 7 | MCS 8 |
| CH 01                                    | 2412            | 16.56     | CH 06              | 21.66     | 21.61 | 21.56 | 21.61 | 21.61 | 21.66 | 21.61 | 21.61 |
| CH 06                                    | 2437            | 21.76     |                    |           |       |       |       |       |       |       |       |
| CH 11                                    | 2462            | 13.36     |                    |           |       |       |       |       |       |       |       |

| 802.11ac VHT40 RF Avg Output Power (dBm) |                 |           |                    |           |       |       |       |       |       |       |       |       |
|------------------------------------------|-----------------|-----------|--------------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|
| Power vs. Channel                        |                 |           | Power vs Data Rate |           |       |       |       |       |       |       |       |       |
| Channel                                  | Frequency (MHz) | MCS Index | Channel            | MCS Index |       |       |       |       |       |       |       |       |
|                                          |                 | MCS 0     |                    | MCS 1     | MCS 2 | MCS 3 | MCS 4 | MCS 5 | MCS 6 | MCS 7 | MCS 8 | MCS 9 |
| CH 03                                    | 2422            | 13.82     | CH 06              | 15.66     | 15.66 | 15.71 | 15.41 | 15.36 | 15.41 | 15.41 | 15.36 | 15.41 |
| CH 06                                    | 2437            | 15.76     |                    |           |       |       |       |       |       |       |       |       |
| CH 09                                    | 2452            | 8.86      |                    |           |       |       |       |       |       |       |       |       |

## 2.2 Test Mode

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

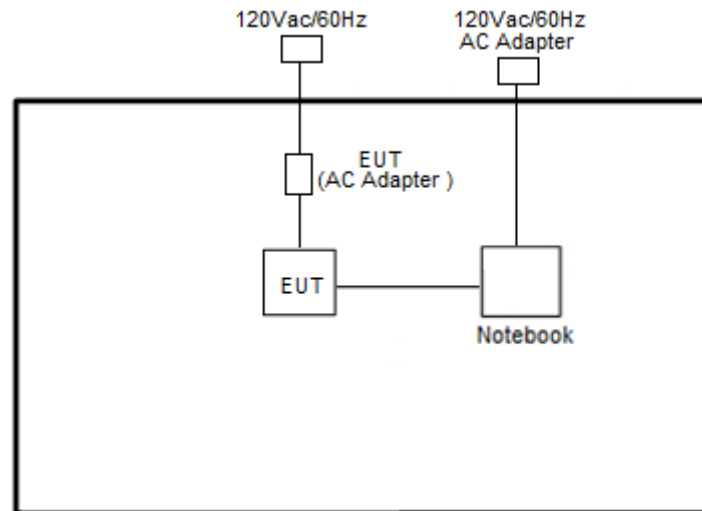
**TXBF Mode**

| Modulation     | Data Rate |
|----------------|-----------|
| 802.11ac VHT20 | MCS0      |
| 802.11ac VHT40 | MCS0      |

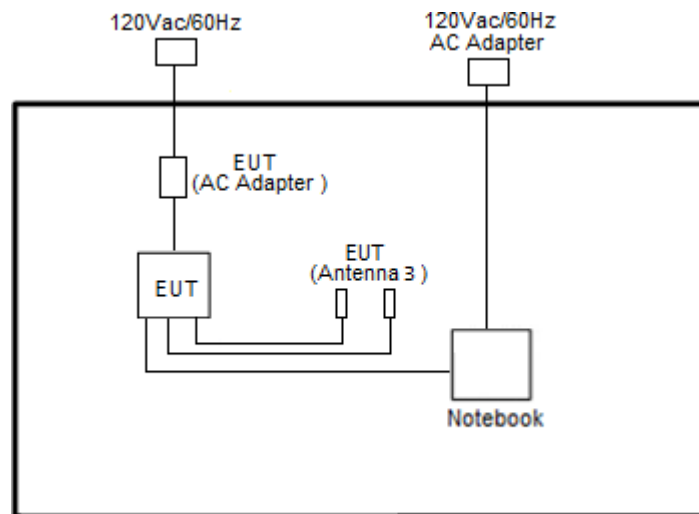
**Remark:** For Radiated Test Cases, the tests were performed with Sample 3, and each antenna (Ant. 1, Ant. 3, Ant. 4) was tested.

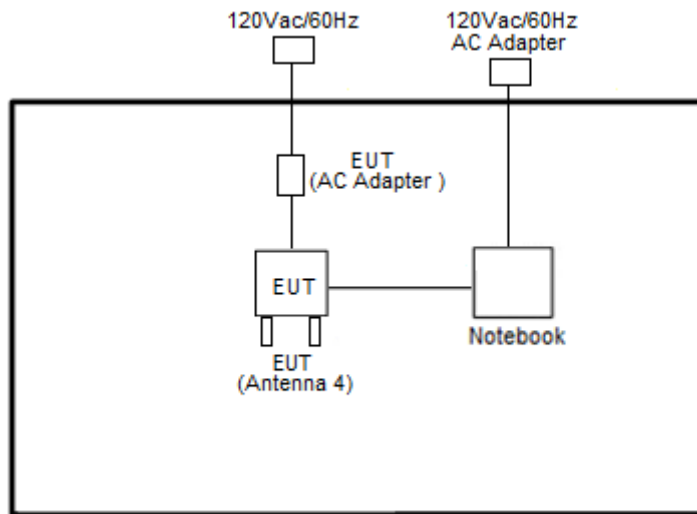
## 2.3 Connection Diagram of Test System

<EUT with Antenna 1>



<EUT with Antenna 3>



**<EUT with Antenna 4>**

**2.4 Support Unit used in test configuration and system**

| Item | Equipment | Trade Name | Model Name | FCC ID      | Data Cable | Power Cord     |
|------|-----------|------------|------------|-------------|------------|----------------|
| 1.   | Notebook  | Lenovo     | G480       | NoteBook-41 | NA         | unshilded 1.8m |



## 2.5 EUT Operation Test Setup

For TXBF mode, the modulation modes and data rates manipulated by the command lines in the engineering program made the EUT link to another EUT by power under the normal operation. The “ADB” software tool was used to enable the EUT to transmit signals continuously.

## 2.6 Measurement Results Explanation Example

**For all conducted test items:**

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

Example:

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

*Offset = RF cable loss + attenuator factor.*

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

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

### 3 Test Result

#### 3.1 6dB and 99% Bandwidth Measurement

##### 3.1.1 Limit of 6dB and 99% Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

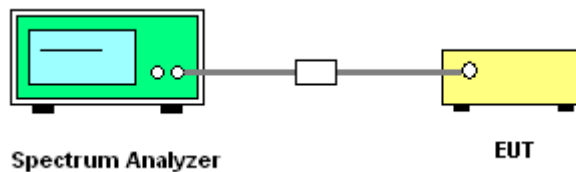
##### 3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

##### 3.1.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW)  $\geq 3 * RBW$ .
6. Measure and record the results in the test report.

##### 3.1.4 Test Setup

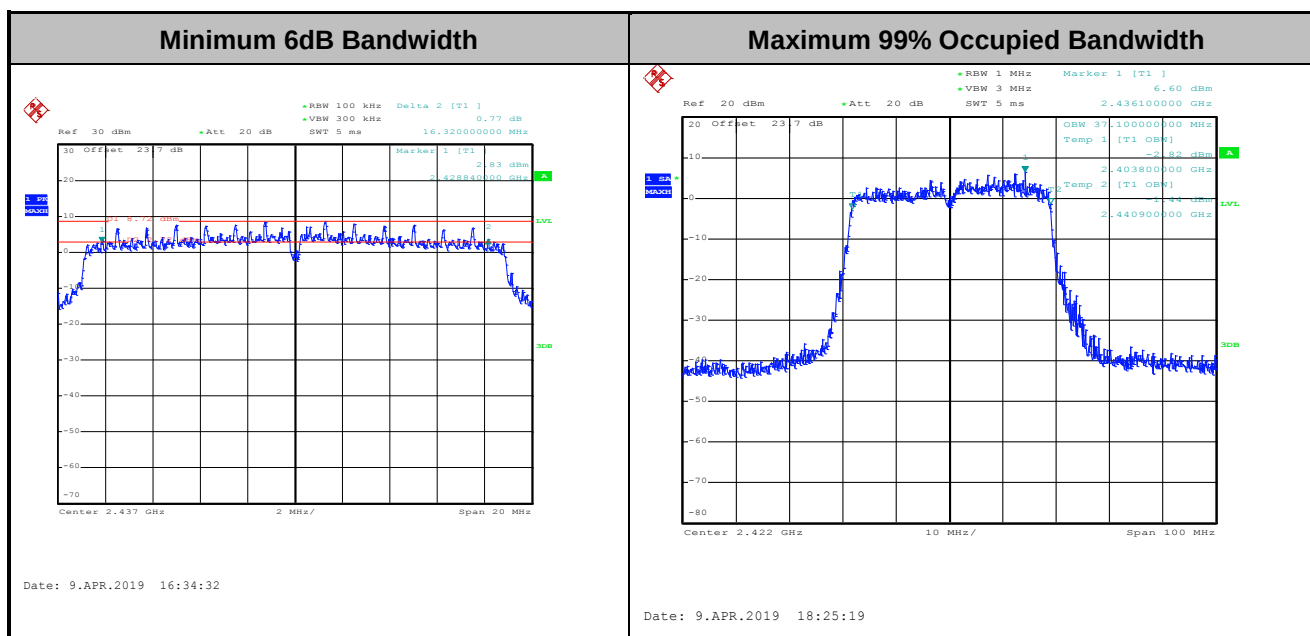




## 3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

|                 |             |                     |         |
|-----------------|-------------|---------------------|---------|
| Test Engineer : | Richard Qiu | Temperature :       | 21~25°C |
|                 |             | Relative Humidity : | 51~54%  |

| 2.4GHz Band |           |     |     |             |                       |         |              |         |                    |           |
|-------------|-----------|-----|-----|-------------|-----------------------|---------|--------------|---------|--------------------|-----------|
| Mod.        | Data Rate | NTX | CH. | Freq. (MHz) | 99% Occupied BW (MHz) |         | 6dB BW (MHz) |         | 6dB BW Limit (MHz) | Pass/Fail |
|             |           |     |     |             | Chain 1               | Chain 2 | Chain 1      | Chain 2 |                    |           |
| VHT20       | MCS0      | 2   | 1   | 2412        | 18.30                 | 17.85   | 17.52        | 17.68   | 0.50               | Pass      |
| VHT20       | MCS0      | 2   | 6   | 2437        | 17.95                 | 17.95   | 17.72        | 16.32   | 0.50               | Pass      |
| VHT20       | MCS0      | 2   | 11  | 2462        | 17.90                 | 17.90   | 16.52        | 16.92   | 0.50               | Pass      |
| VHT40       | MCS0      | 2   | 3   | 2422        | 37.10                 | 36.40   | 35.68        | 35.70   | 0.50               | Pass      |
| VHT40       | MCS0      | 2   | 6   | 2437        | 36.40                 | 36.50   | 35.04        | 36.64   | 0.50               | Pass      |
| VHT40       | MCS0      | 2   | 9   | 2452        | 36.50                 | 36.90   | 36.32        | 36.36   | 0.50               | Pass      |



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.



## **3.2 Output Power Measurement**

### **3.2.1 Limit of Output Power**

For systems using digital modulation in the 2400-2483.5MHz, the limit for output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi is used, the output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

### **3.2.2 Measuring Instruments**

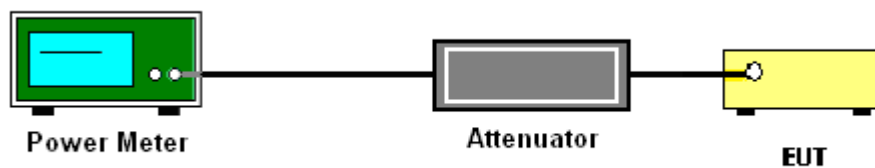
See list of measuring equipment of this test report.

### **3.2.3 Test Procedures**

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.



### 3.2.4 Test Setup



### 3.2.5 Test Result of Average Output Power

|                        |             |                            |        |
|------------------------|-------------|----------------------------|--------|
| <b>Test Engineer :</b> | Richard Qiu | <b>Temperature :</b>       | 21~25℃ |
|                        |             | <b>Relative Humidity :</b> | 51~54% |

| 2.4GHz Band |           |     |     |             |                               |         |       |                             |         |          |         |                  |         |                        |         |            |
|-------------|-----------|-----|-----|-------------|-------------------------------|---------|-------|-----------------------------|---------|----------|---------|------------------|---------|------------------------|---------|------------|
| Mod.        | Data Rate | NTX | CH. | Freq. (MHz) | Average Conducted Power (dBm) |         |       | Conducted Power Limit (dBm) |         | DG (dBi) |         | EIRP Power (dBm) |         | EIRP Power Limit (dBm) |         | Pass /Fail |
|             |           |     |     |             | Chain 1                       | Chain 2 | SUM   | Chain 1                     | Chain 2 | Chain 1  | Chain 2 | Chain 1          | Chain 2 | Chain 1                | Chain 2 |            |
| VHT20       | MCS0      | 2   | 1   | 2412        | 13.70                         | 13.40   | 16.56 | 27.99                       |         | 8.01     |         | 24.57            |         | 36.00                  |         | Pass       |
| VHT20       | MCS0      | 2   | 6   | 2437        | 18.80                         | 18.70   | 21.76 | 27.99                       |         | 8.01     |         | 29.77            |         | 36.00                  |         | Pass       |
| VHT20       | MCS0      | 2   | 11  | 2462        | 10.40                         | 10.30   | 13.36 | 27.99                       |         | 8.01     |         | 21.37            |         | 36.00                  |         | Pass       |
| VHT40       | MCS0      | 2   | 3   | 2422        | 11.10                         | 10.50   | 13.82 | 27.99                       |         | 8.01     |         | 21.83            |         | 36.00                  |         | Pass       |
| VHT40       | MCS0      | 2   | 6   | 2437        | 12.90                         | 12.60   | 15.76 | 27.99                       |         | 8.01     |         | 23.77            |         | 36.00                  |         | Pass       |
| VHT40       | MCS0      | 2   | 9   | 2452        | 5.90                          | 5.80    | 8.86  | 27.99                       |         | 8.01     |         | 16.87            |         | 36.00                  |         | Pass       |

### 3.3 Power Spectral Density Measurement

#### 3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

#### 3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

#### 3.3.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

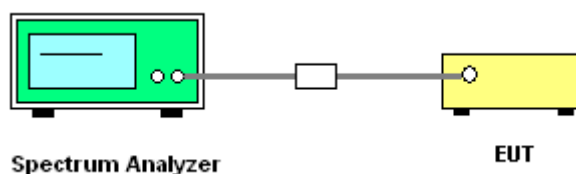
If measurements performed using method (2) plus  $10 \log(N)$  exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

Method (1): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

Method (2): Measure and add  $10 \log(N)$  dB, where N is the number of outputs. (N=2)

#### 3.3.4 Test Setup

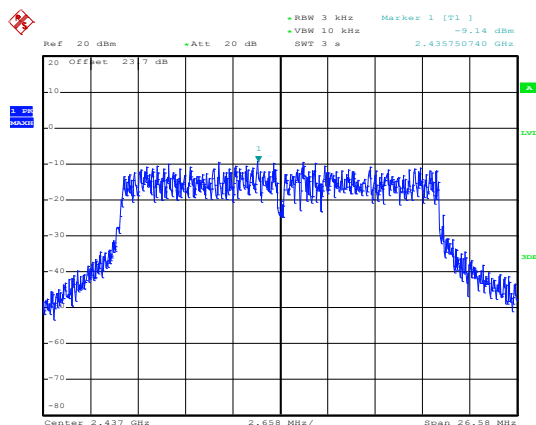




## 3.3.5 Test Result of Power Spectral Density

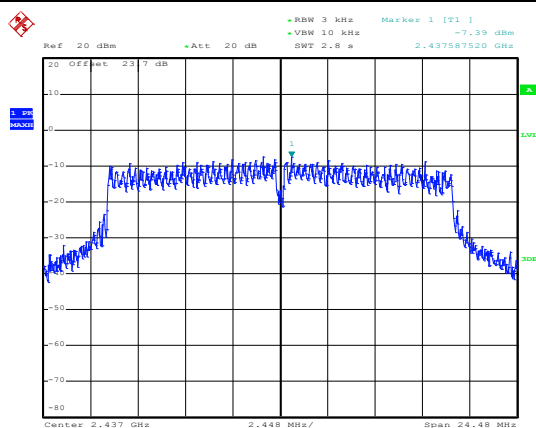
|                 |             |                     |         |
|-----------------|-------------|---------------------|---------|
| Test Engineer : | Richard Qiu | Temperature :       | 21~25°C |
|                 |             | Relative Humidity : | 51~54%  |

Worst Case Power Density (dBm/3kHz) for MIMO Chain. 1



Date: 9.APR.2019 16:30:56

Worst Case Power Density (dBm/3kHz) for MIMO Chain. 2



Date: 9.APR.2019 16:35:00

## 3.4 Conducted Band Edges and Spurious Emission Measurement

### 3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.

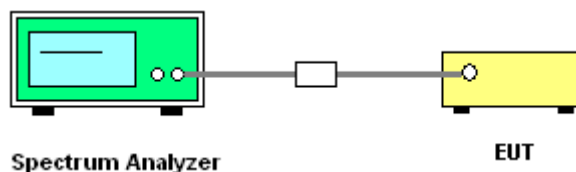
### 3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

### 3.4.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.11.3 Emission level measurement
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

### 3.4.4 Test Setup

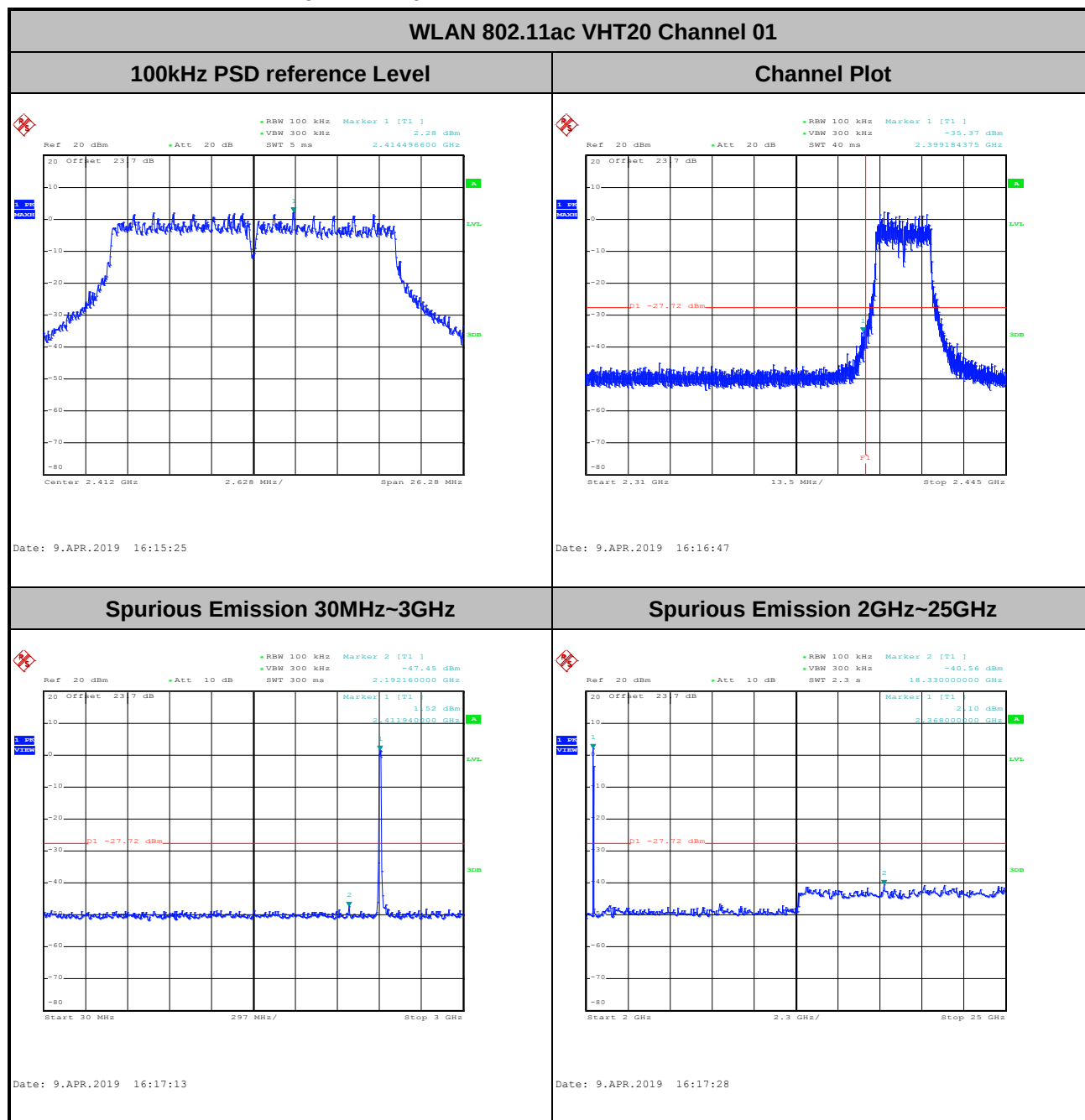




## 3.4.5 Test Result of Conducted Band Edges and Spurious Emission

|                 |             |                     |         |
|-----------------|-------------|---------------------|---------|
| Test Engineer : | Richard Qiu | Temperature :       | 21~25°C |
|                 |             | Relative Humidity : | 51~54%  |

Number of TX = 2, Chain. 1 (Measured)





Ref 20 dBm Att 20 dB SWT 5 ms 2.436521560 GHz

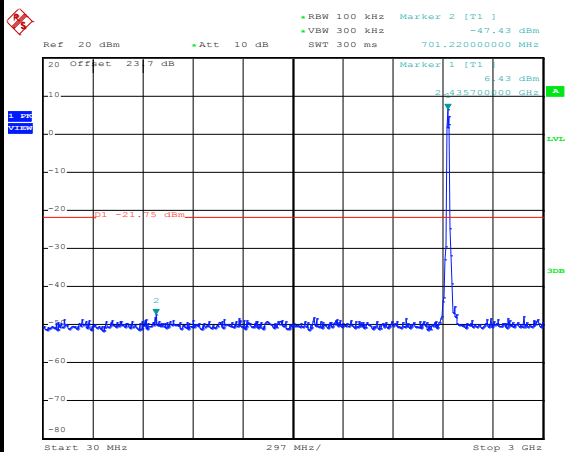
RBW 100 kHz Marker 1 [T1] 8.25 dBm  
VBW 300 kHz

1 PR MAX

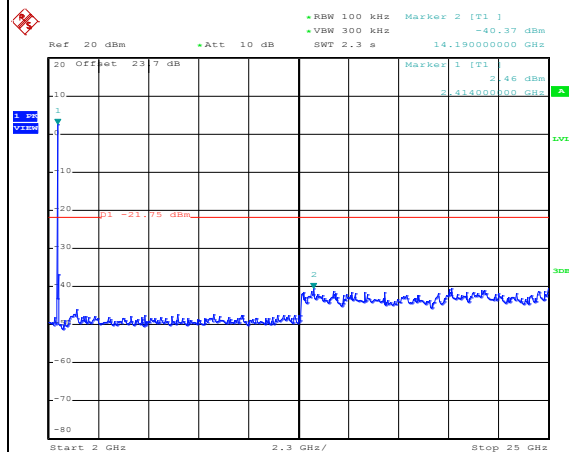
2.658 MHz/

Center 2.437 GHz Span 26.58 MHz

## Spurious Emission 30MHz~3GHz



## Spurious Emission 2GHz~25GHz

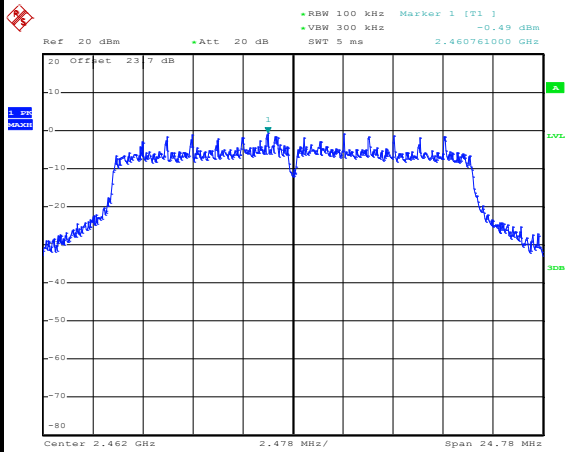


Date: 9.APR.2019 16:32:06



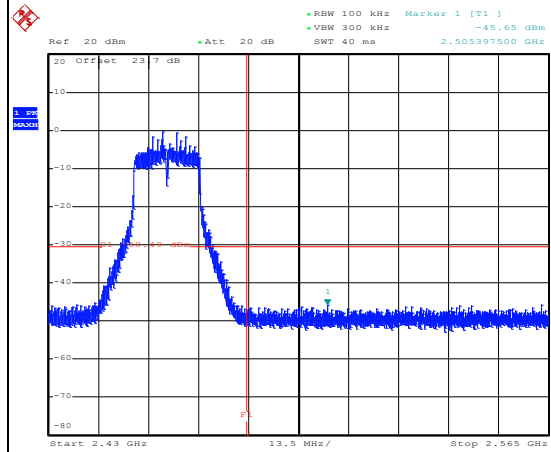
## WLAN 802.11ac VHT20 Channel 11

## 100kHz PSD reference Level



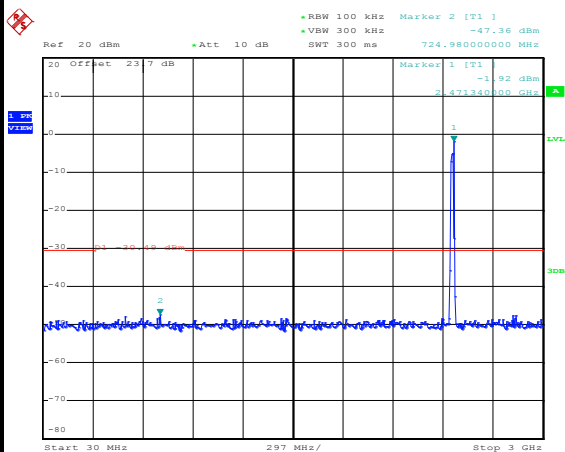
Date: 9.APR.2019 16:56:13

## Channel Plot



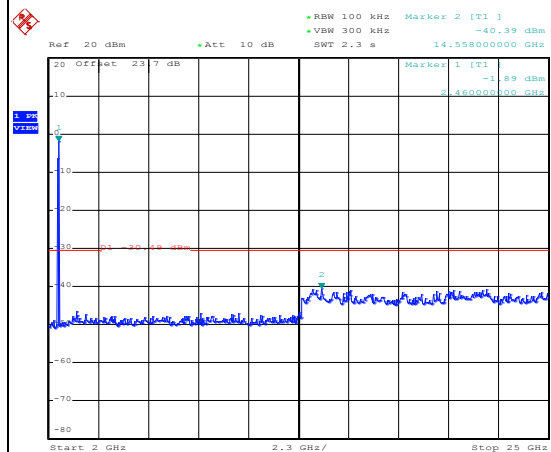
Date: 9.APR.2019 16:56:36

## Spurious Emission 30MHz~3GHz



Date: 9.APR.2019 16:56:53

## Spurious Emission 2GHz~25GHz

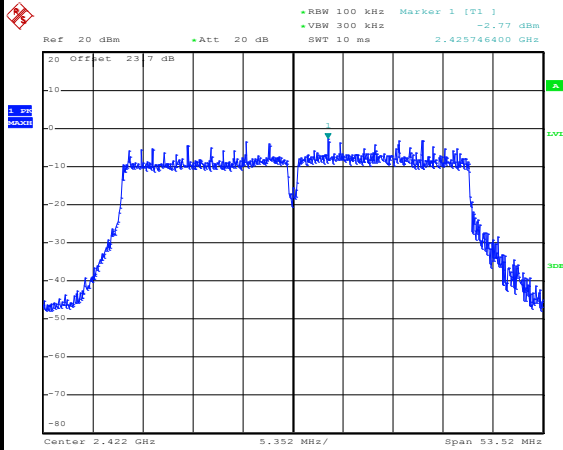


Date: 9.APR.2019 16:57:08



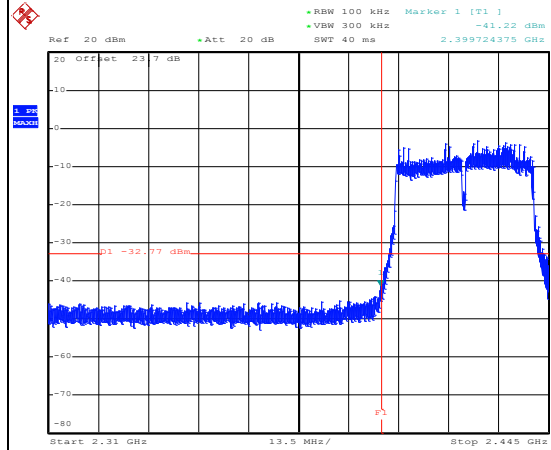
## WLAN 802.11ac VTH40 Channel 03

## 100kHz PSD reference Level



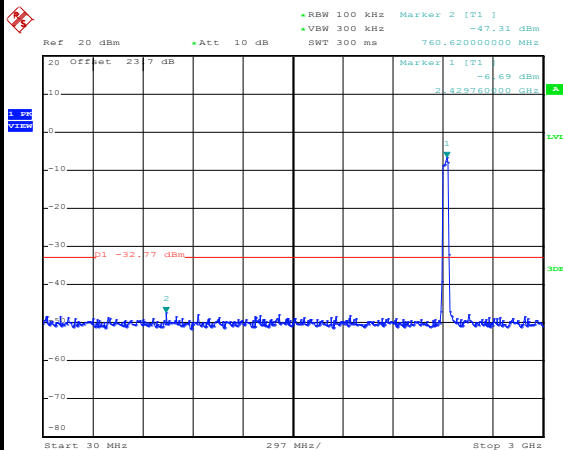
Date: 9.APR.2019 18:23:57

## Channel Plot



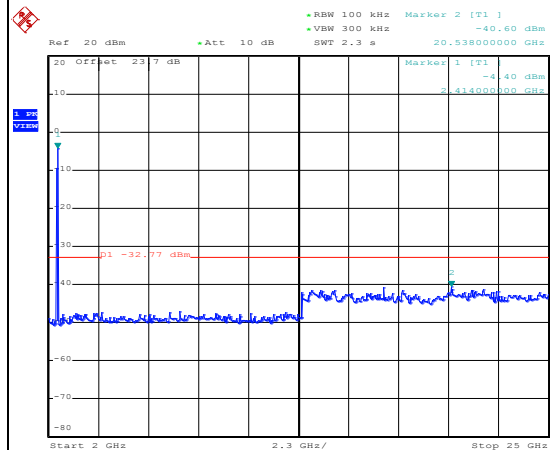
Date: 9.APR.2019 18:24:16

## Spurious Emission 30MHz~3GHz



Date: 9.APR.2019 18:24:47

## Spurious Emission 2GHz~25GHz



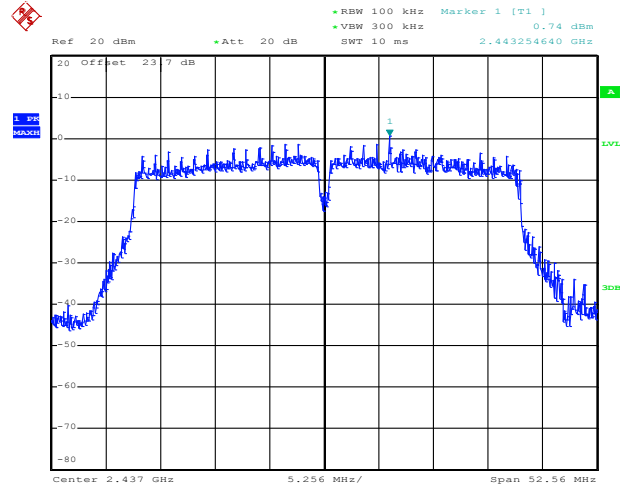
Date: 9.APR.2019 18:25:03





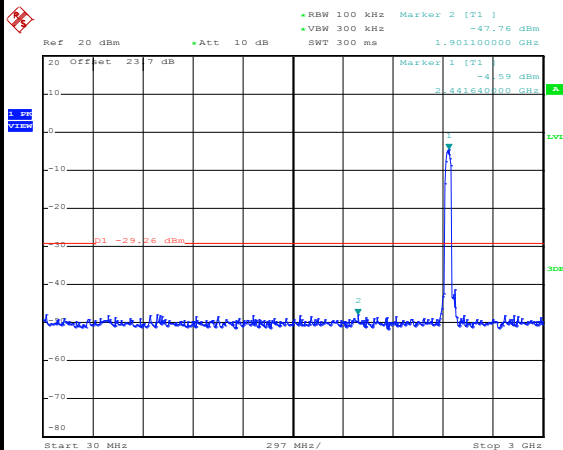
## WLAN 802.11ac VTH40 Channel 06

## 100kHz PSD reference Level



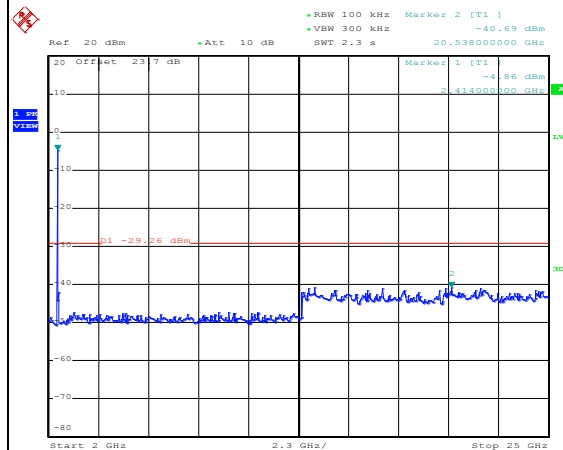
Date: 9.APR.2019 18:31:56

## Spurious Emission 30MHz~3GHz



Date: 9.APR.2019 18:32:20

## Spurious Emission 2GHz~25GHz

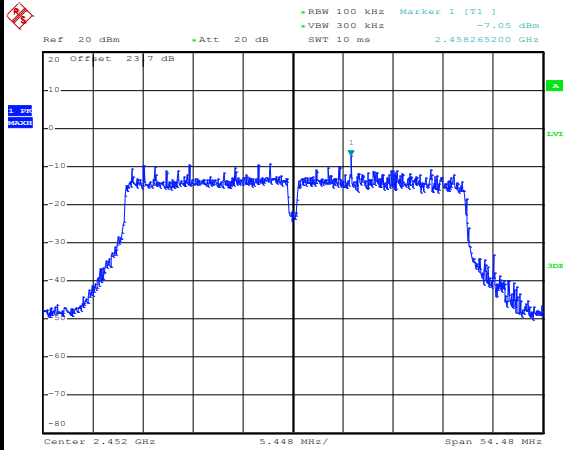


Date: 9.APR.2019 18:32:36



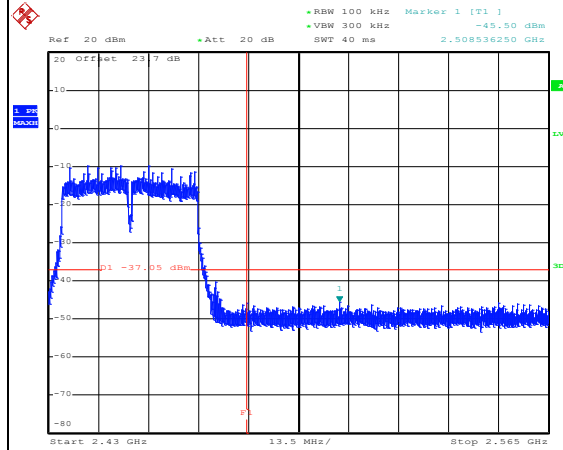
## WLAN 802.11ac VTH40 Channel 09

## 100kHz PSD reference Level



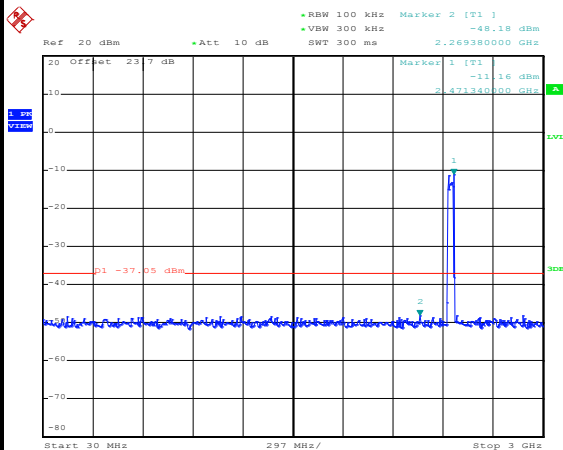
Date: 9.APR.2019 19:39:37

## Channel Plot



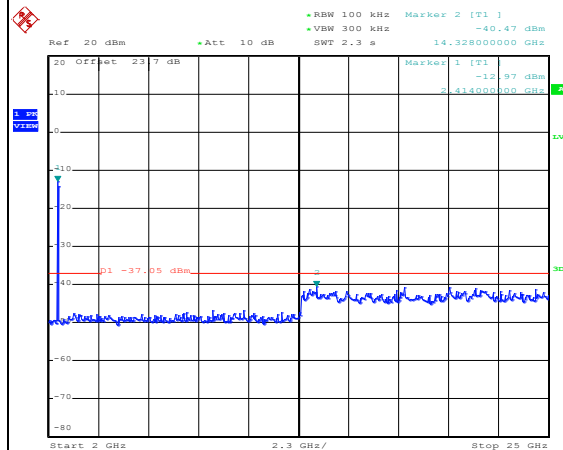
Date: 9.APR.2019 19:39:53

## Spurious Emission 30MHz~3GHz



Date: 9.APR.2019 19:40:11

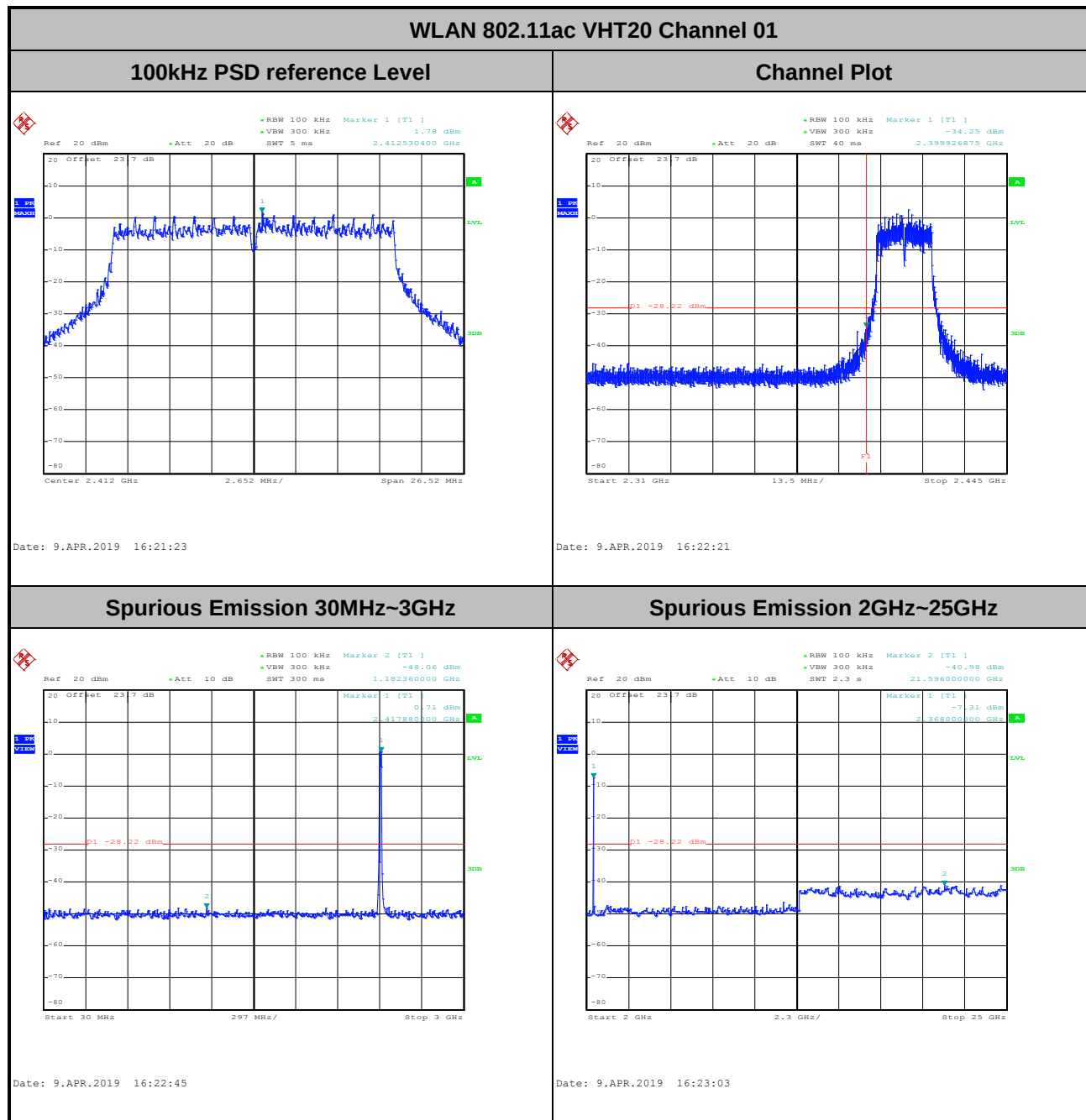
## Spurious Emission 2GHz~25GHz



Date: 9.APR.2019 19:40:27



Number of TX = 2, Chain. 2 (Measured)





Ref 20 dBm Att 20 dB SWT 5 ms 2.435727040 GHz

20 Offset 23.7 dB

1 RBW 100 kHz Marker 1 [T1] 8.29 dBm

VBW 300 kHz

1 PR MAX

Center 2.437 GHz 2.448 MHz/ Span 24.48 MHz

Ref 20 dBm      •Att 10 dB      •RBW 100 kHz      Marker 2 [T1]      -47.59 dBm  
 •VBW 300 kHz      SWT 300 ms      220.080000000 MHz

20 Offset 2317 dB  
 10  
 0  
 -10  
 -20  
 -30  
 -40  
 -50  
 -60  
 -70  
 -80

Marker 2 [T1]      1.81 dBm  
 2.435798305 GHz

2  
 -21.71 dBm

Start 30 MHz      297 MHz/      Stop 3 GHz

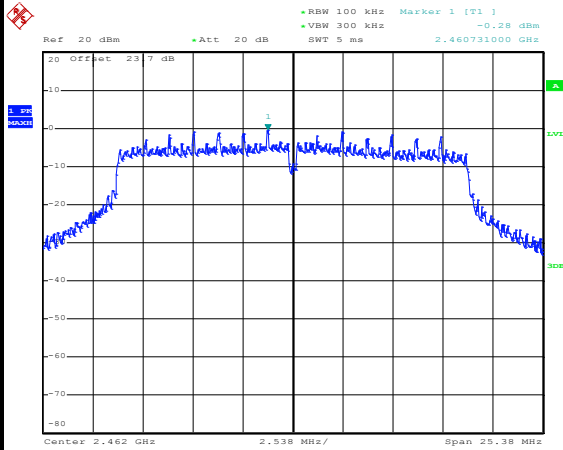
The screenshot shows a Spectrum Analyzer interface. At the top, there are several status indicators: a red square icon with a white 'X', a frequency range of 20 dBm, an attenuation of 10 dB, a resolution bandwidth (RBW) of 100 kHz, a video bandwidth (VBW) of 300 kHz, a sweep time (SWT) of 2.3 s, and a center frequency of 23.52800000 GHz. The main display area shows a spectrum plot with a blue trace. The y-axis represents power in dBm, ranging from -80 to 20. The x-axis represents frequency in GHz, ranging from 2.0 to 2.5. A red horizontal line is drawn at -21.71 dBm. A green cursor is positioned at the top of the plot, and a green marker is labeled '2' at approximately 2.3 GHz. The plot shows a noisy baseline with a slight increase in power around 2.3 GHz.

Page Number : 28 of 39  
Issued Date : May 06, 2019  
Report Version : 01



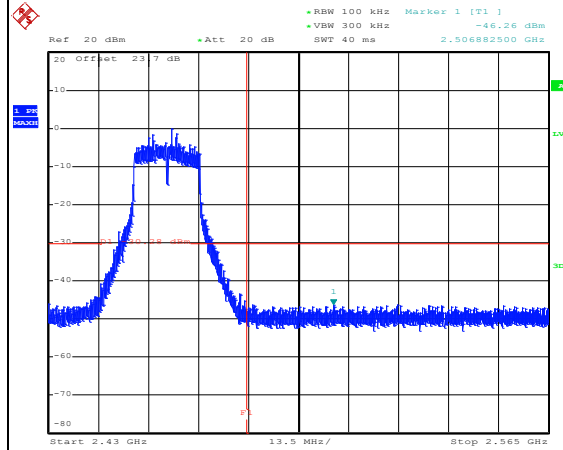
## WLAN 802.11ac VHT20 Channel 11

## 100kHz PSD reference Level



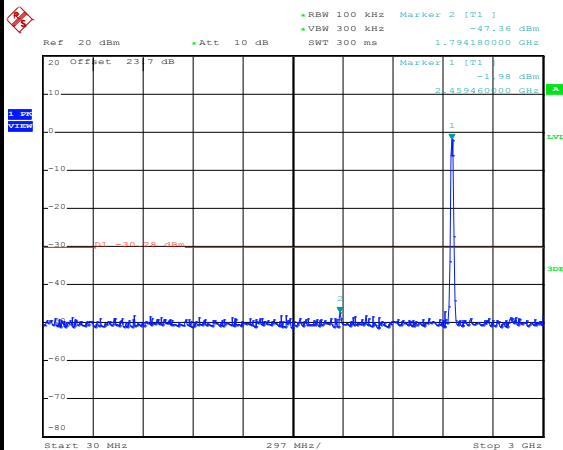
Date: 9.APR.2019 17:01:12

## Channel Plot



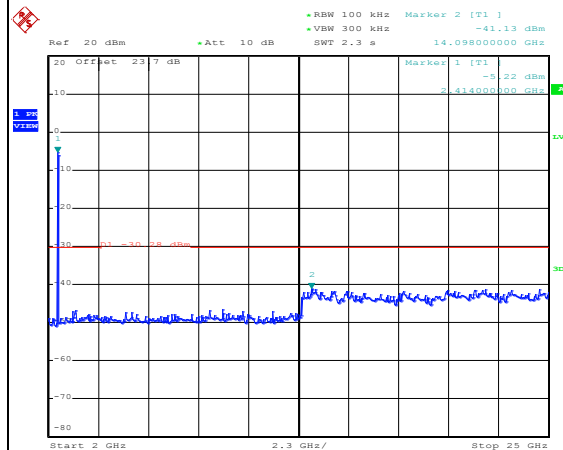
Date: 9.APR.2019 17:01:31

## Spurious Emission 30MHz~3GHz



Date: 9.APR.2019 17:01:47

## Spurious Emission 2GHz~25GHz

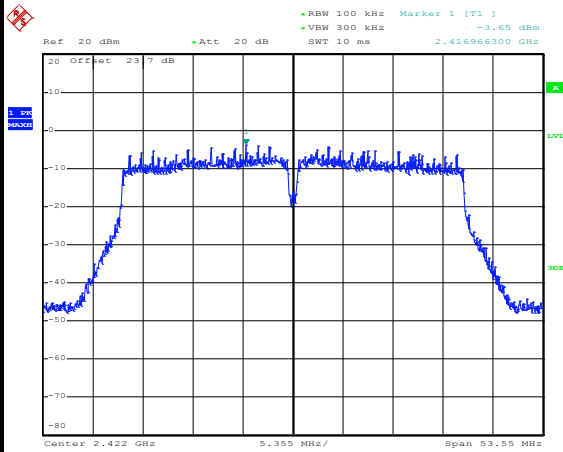


Date: 9.APR.2019 17:02:02



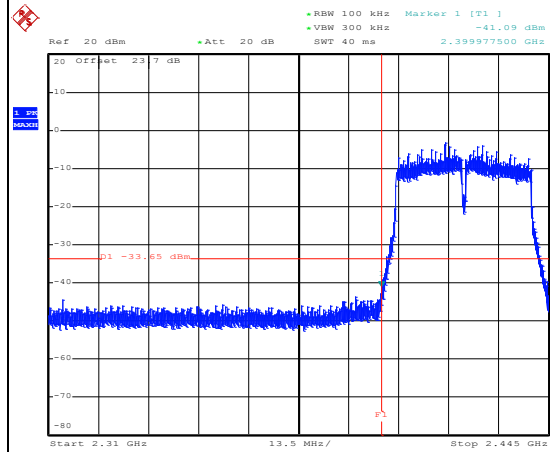
## WLAN 802.11ac VTH40 Channel 03

## 100kHz PSD reference Level



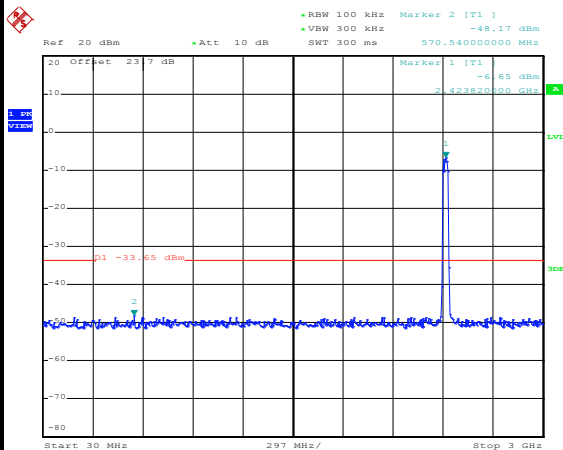
Date: 9.APR.2019 18:51:25

## Channel Plot



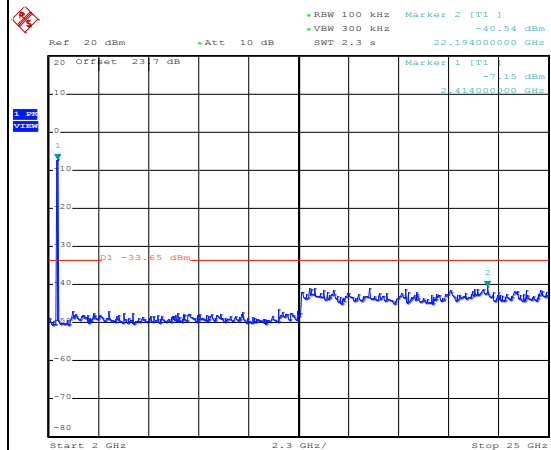
Date: 9.APR.2019 18:51:43

## Spurious Emission 30MHz~3GHz



Date: 9.APR.2019 18:52:09

## Spurious Emission 2GHz~25GHz

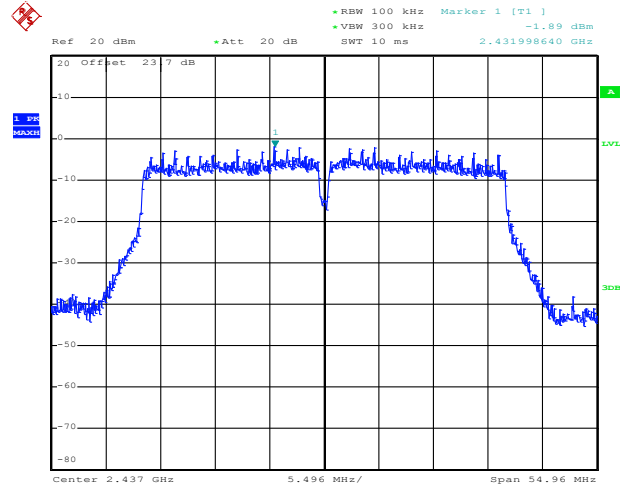


Date: 9.APR.2019 18:52:25



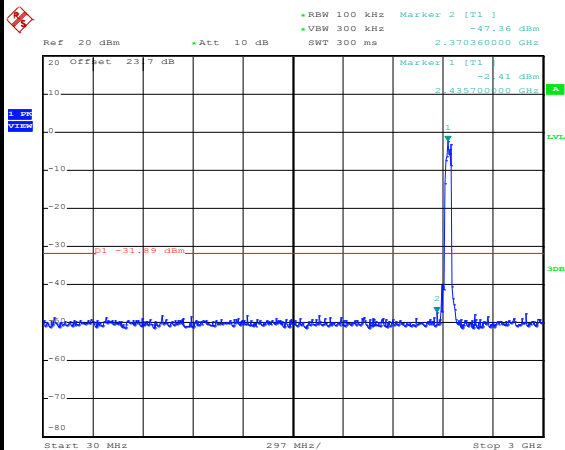
## WLAN 802.11ac VTH40 Channel 06

## 100kHz PSD reference Level



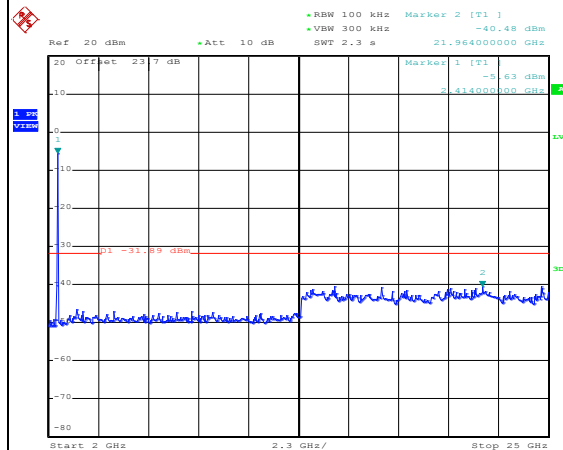
Date: 9.APR.2019 18:34:51

## Spurious Emission 30MHz~3GHz



Date: 9.APR.2019 18:35:20

## Spurious Emission 2GHz~25GHz

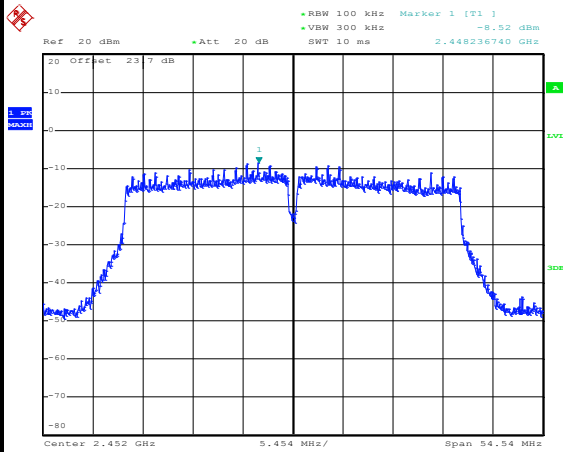


Date: 9.APR.2019 18:35:35



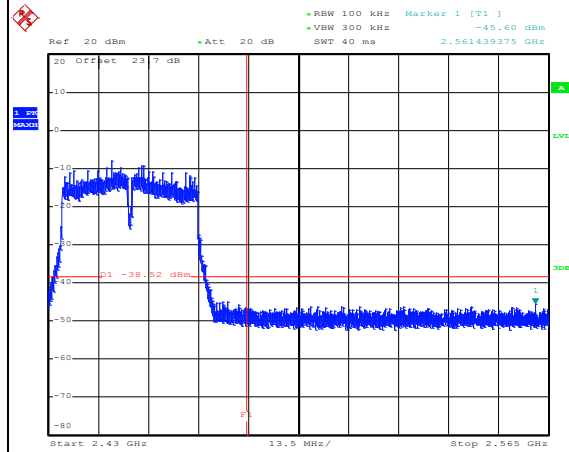
## WLAN 802.11ac VTH40 Channel 09

## 100kHz PSD reference Level



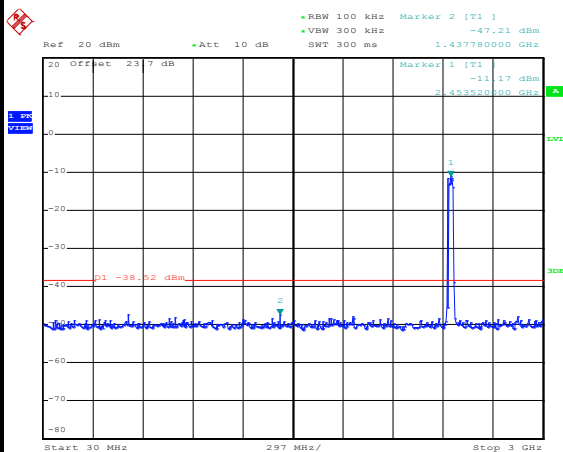
Date: 9.APR.2019 19:36:06

## Channel Plot



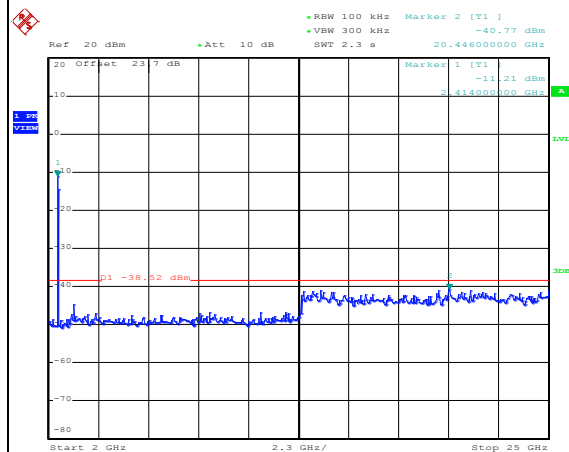
Date: 9.APR.2019 19:36:24

## Spurious Emission 30MHz~3GHz



Date: 9.APR.2019 19:36:44

## Spurious Emission 2GHz~25GHz



Date: 9.APR.2019 19:37:00



### 3.5 Radiated Band Edges and Spurious Emission Measurement

#### 3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

| 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                                |

#### 3.5.2 Measuring Instruments

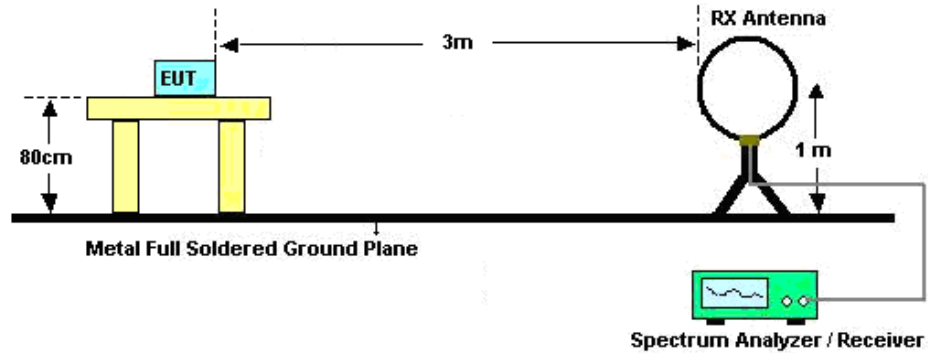
See list of measuring equipment of this test report.

### 3.5.3 Test Procedures

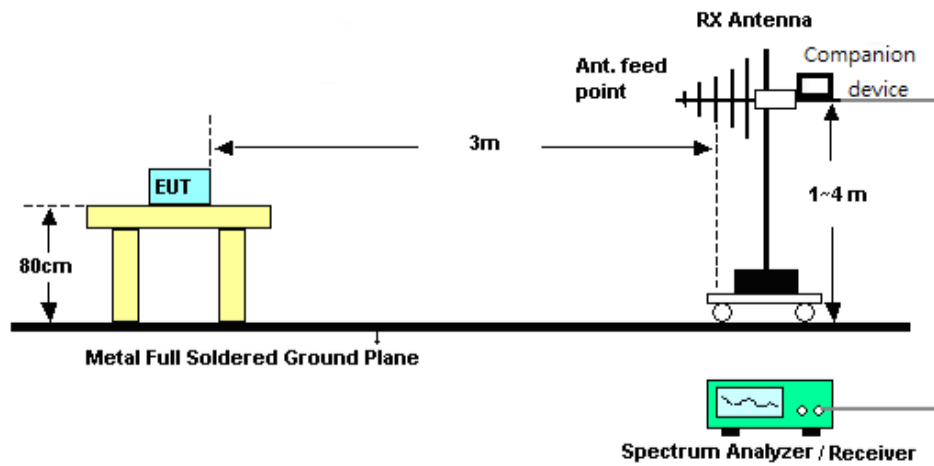
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. 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.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
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.
8. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1$  GHz;  $VBW \geq RBW$ ; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \geq 1$  GHz for peak measurement.  
For average measurement:
    - $VBW = 10$  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.

### 3.5.4 Test Setup

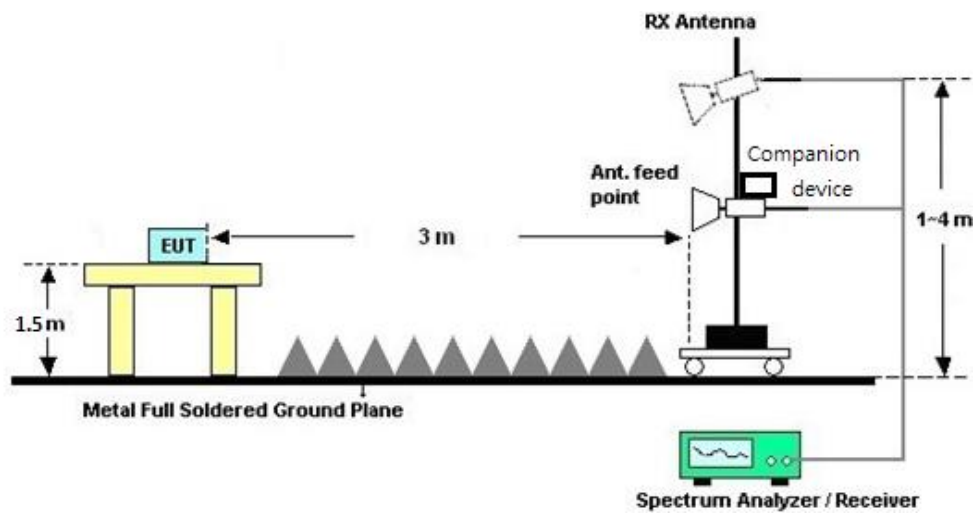
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



**3.5.5 Test Results of Radiated Spurious Emissions (9kHz ~ 30MHz)**

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.

**3.5.6 Test Result of Radiated Spurious at Band Edges**

Please refer to Appendix A and B.

**3.5.7 Test Result of Radiated Spurious Emission (30MHz ~ 10<sup>th</sup> Harmonic)**

Please refer to Appendix A and B.

### 3.6 Antenna Requirements

#### 3.6.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

#### 3.6.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

#### 3.6.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

$$DirectionalGain = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

$N_{SS}$  = the number of independent spatial streams of data;

$N_{ANT}$  = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$  if the  $k$ th antenna is being fed by spatial stream  $j$ , or zero if it is not;  
 $G_k$  is the gain in dBi of the  $k$ th antenna.

The EUT supports beamforming for 802.11ac modes.

The directional gain calculation is following F)2)e)ii) of KDB 662911 D01 v02r01.

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

The directional gain "DG" is calculated as following table.

|         |                   |                   | DG<br>for<br>Power<br>(dBi) | DG<br>for<br>PSD<br>(dBi) | Power<br>Limit<br>Reduction<br>(dB) | PSD<br>Limit<br>Reduction<br>(dB) |
|---------|-------------------|-------------------|-----------------------------|---------------------------|-------------------------------------|-----------------------------------|
|         | Chain. 1<br>(dBi) | Chain. 2<br>(dBi) |                             |                           |                                     |                                   |
| 2.4 GHz | 5.00              | 5.00              | 8.01                        | 8.01                      | 2.01                                | 2.01                              |

Power Limit Reduction = DG(Power) – 6dBi, ( min = 0 )

PSD Limit Reduction = DG(PSD) – 6dBi, ( min = 0 )



## 4 List of Measuring Equipment

| Instrument            | Manufacturer      | Model No.                           | Serial No.           | Characteristics                     | Calibration Date | Test Date                       | Due Date      | Remark                   |
|-----------------------|-------------------|-------------------------------------|----------------------|-------------------------------------|------------------|---------------------------------|---------------|--------------------------|
| Power Sensor          | DARE              | RadiPower                           | 15I00041S<br>NO09    | 10MHz~6GHz                          | May 07, 2018     | Apr. 09, 2019                   | May 06, 2019  | Conducted<br>(TH05-HY)   |
| Spectrum Analyzer     | Rohde & Schwarz   | FSP40                               | 100057               | 9kHz-40GHz                          | Nov. 21, 2018    | Apr. 09, 2019                   | Nov. 20, 2019 | Conducted<br>(TH05-HY)   |
| Spectrum Analyzer     | Rohde & Schwarz   | FSV 30                              | 100895               | 9kHz~30GHz                          | Apr. 20, 2018    | Apr. 09, 2019                   | Apr. 19, 2019 | Conducted<br>(TH05-HY)   |
| Switch Box & RF Cable | EM                | EMSW18                              | SW107090<br>3        | N/A                                 | Dec 19 2018      | Apr. 09, 2019                   | Dec 18 2019   | Conducted<br>(TH05-HY)   |
| Amplifier             | MITEQ             | TTA1840-35-HG                       | 1871923              | 18GHz~40GHz,<br>VSWR : 2.5:1<br>max | Jul. 16, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Jul. 15, 2019 | Radiation<br>(03CH11-HY) |
| Amplifier             | SONOMA            | 310N                                | 187312               | 9kHz~1GHz                           | Dec. 04, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Dec. 03, 2019 | Radiation<br>(03CH11-HY) |
| Bilog Antenna         | TESEQ             | CBL 6111D&<br>N-6-06                | 35414&AT-<br>N0602   | 30MHz~1GHz                          | Oct. 13, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Oct. 12, 2019 | Radiation<br>(03CH11-HY) |
| Horn Antenna          | SCHWARZBE<br>CK   | BBHA 9120<br>D                      | 9120D-132<br>6       | 1GHz ~ 18GHz                        | Oct. 30, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Oct. 29, 2019 | Radiation<br>(03CH11-HY) |
| Loop Antenna          | Rohde & Schwarz   | HFH2-Z2                             | 100488               | 9 kHz~30 MHz                        | Jan. 07, 2019    | Apr. 04, 2019~<br>Apr. 09, 2019 | Jan. 06, 2020 | Radiation<br>(03CH11-HY) |
| Preamplifier          | Keysight          | 83017A                              | MY532700<br>80       | 1GHz~26.5GHz                        | Nov. 14, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Nov. 13, 2020 | Radiation<br>(03CH11-HY) |
| Spectrum Analyzer     | Keysight          | N9010A                              | MY542004<br>86       | 10Hz ~ 44GHz                        | Oct. 19, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Oct. 18, 2019 | Radiation<br>(03CH11-HY) |
| Antenna Mast          | EMEC              | AM-BS-4500-<br>B                    | N/A                  | 1~4m                                | N/A              | Apr. 04, 2019~<br>Apr. 09, 2019 | N/A           | Radiation<br>(03CH11-HY) |
| Turn Table            | EMEC              | TT 2000                             | N/A                  | 0~360 Degree                        | N/A              | Apr. 04, 2019~<br>Apr. 09, 2019 | N/A           | Radiation<br>(03CH11-HY) |
| Preamplifier          | Jet-Power         | JPA0118-55-3<br>03                  | 171000180<br>0054001 | 1GHz~18GHz                          | Apr. 16, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Apr. 15, 2019 | Radiation<br>(03CH11-HY) |
| SHF-EHF Horn Antenna  | SCHWARZBE<br>CK   | BBHA 9170                           | BBHA9170<br>584      | 18GHz- 40GHz                        | Dec. 05, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Dec. 04, 2019 | Radiation<br>(03CH11-HY) |
| EMI Test Receiver     | Keysight          | N9038A(MXE<br>)                     | MY554201<br>70       | N/A                                 | Mar. 08, 2019    | Apr. 04, 2019~<br>Apr. 09, 2019 | Mar. 07, 2020 | Radiation<br>(03CH11-HY) |
| Software              | Audix             | E3<br>6.2009-8-24                   | RK-00104<br>2        | N/A                                 | N/A              | Apr. 04, 2019~<br>Apr. 09, 2019 | N/A           | Radiation<br>(03CH11-HY) |
| RF Cable              | HUBER +<br>SUHNER | SUCOFLEX<br>104                     | MY9837/4<br>PE       | 9kHz-30MHz                          | Mar. 13, 2019    | Apr. 04, 2019~<br>Apr. 09, 2019 | Mar. 12, 2020 | Radiation<br>(03CH11-HY) |
| RF Cable              | HUBER +<br>SUHNER | SUCOFLEX<br>102                     | MY2859/2             | 30MHz-40GHz                         | Mar. 13, 2019    | Apr. 04, 2019~<br>Apr. 09, 2019 | Mar. 12, 2020 | Radiation<br>(03CH11-HY) |
| RF Cable              | HUBER +<br>SUHNER | SUCOFLEX<br>104                     | MY9837/4<br>PE       | 30M-18G                             | Mar. 13, 2019    | Apr. 04, 2019~<br>Apr. 09, 2019 | Mar. 12, 2020 | Radiation<br>(03CH11-HY) |
| RF Cable              | HUBER +<br>SUHNER | SUCOFLEX<br>102                     | MY4274/2             | 30MHz-40GHz                         | Mar. 13, 2019    | Apr. 04, 2019~<br>Apr. 09, 2019 | Mar. 12, 2020 | Radiation<br>(03CH11-HY) |
| Filter                | Wainwright        | WLK4-1000-1<br>530-8000-40S<br>S    | SN11                 | 1G Low Pass                         | Sep. 16, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Sep. 17, 2019 | Radiation<br>(03CH11-HY) |
| Filter                | Wainwright        | WHKX12-270<br>0-3000-18000<br>-60SS | SN3                  | 2.7G High Pass                      | Sep. 16, 2018    | Apr. 04, 2019~<br>Apr. 09, 2019 | Sep. 17, 2019 | Radiation<br>(03CH11-HY) |

## 5 Uncertainty of Evaluation

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

|                                                                            |     |
|----------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.2 |
|----------------------------------------------------------------------------|-----|

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

|                                                                            |     |
|----------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.5 |
|----------------------------------------------------------------------------|-----|

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

|                                                                            |     |
|----------------------------------------------------------------------------|-----|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.2 |
|----------------------------------------------------------------------------|-----|



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

|                        |                              |                            |         |
|------------------------|------------------------------|----------------------------|---------|
| <b>Test Engineer :</b> | Hao Xu, Ken Wu, and JC Liang | <b>Temperature :</b>       | 21~26°C |
|                        |                              | <b>Relative Humidity :</b> | 52~57%  |





&lt;For Antenna 1&gt;

&lt;Chain 1+2&gt;

2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

| WIFI                                  | Note | Frequency | Level      | Over<br>Limit | Limit<br>Line | Read<br>Level | Antenna<br>Factor | Path<br>Loss | Preamp<br>Factor | Ant<br>Pos | Table<br>Pos | Peak<br>Avg. | Pol.    |
|---------------------------------------|------|-----------|------------|---------------|---------------|---------------|-------------------|--------------|------------------|------------|--------------|--------------|---------|
|                                       |      | ( MHz )   | ( dBμV/m ) | ( dB )        | ( dBμV/m )    | ( dBμV )      | ( dB/m )          | ( dB )       | ( dB )           | ( cm )     | ( deg )      | ( P/A )      | ( H/V ) |
| 802.11ac<br>VHT20<br>CH 01<br>2412MHz |      | 2389.695  | 63.59      | -10.41        | 74            | 53.14         | 27.44             | 16.64        | 33.63            | 145        | 360          | P            | H       |
|                                       |      | 2390      | 52.93      | -1.07         | 54            | 42.48         | 27.44             | 16.64        | 33.63            | 145        | 360          | A            | H       |
|                                       | *    | 2412      | 115.53     | -             | -             | 105.11        | 27.38             | 16.66        | 33.62            | 145        | 360          | P            | H       |
|                                       | *    | 2412      | 105.82     | -             | -             | 95.4          | 27.38             | 16.66        | 33.62            | 145        | 360          | P            | H       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | H       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | H       |
|                                       |      | 2389.905  | 55.25      | -18.75        | 74            | 44.8          | 27.44             | 16.64        | 33.63            | 100        | 120          | P            | V       |
|                                       |      | 2389.905  | 45.9       | -8.1          | 54            | 35.45         | 27.44             | 16.64        | 33.63            | 100        | 120          | A            | V       |
|                                       | *    | 2412      | 105.28     | -             | -             | 94.86         | 27.38             | 16.66        | 33.62            | 100        | 120          | P            | V       |
|                                       | *    | 2412      | 97.1       | -             | -             | 86.68         | 27.38             | 16.66        | 33.62            | 100        | 120          | A            | V       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | V       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | V       |
| 802.11ac<br>VHT20<br>CH 06<br>2437MHz |      | 2388.88   | 64.1       | -9.9          | 74            | 53.65         | 27.44             | 16.64        | 33.63            | 109        | 352          | P            | H       |
|                                       |      | 2389.68   | 47.92      | -6.08         | 54            | 37.47         | 27.44             | 16.64        | 33.63            | 109        | 352          | A            | H       |
|                                       | *    | 2437      | 119.69     | -             | -             | 109.28        | 27.33             | 16.69        | 33.61            | 109        | 352          | P            | H       |
|                                       | *    | 2437      | 110.88     | -             | -             | 100.47        | 27.33             | 16.69        | 33.61            | 109        | 352          | A            | H       |
|                                       |      | 2485.04   | 71.43      | -2.57         | 74            | 60.99         | 27.3              | 16.74        | 33.6             | 109        | 352          | P            | H       |
|                                       |      | 2484.32   | 52.29      | -1.71         | 54            | 41.85         | 27.3              | 16.74        | 33.6             | 109        | 352          | A            | H       |
|                                       |      | 2389.36   | 54.87      | -19.13        | 74            | 44.42         | 27.44             | 16.64        | 33.63            | 115        | 120          | P            | V       |
|                                       |      | 2390      | 43.39      | -10.61        | 54            | 32.94         | 27.44             | 16.64        | 33.63            | 115        | 120          | A            | V       |
|                                       | *    | 2437      | 109.77     | -             | -             | 99.36         | 27.33             | 16.69        | 33.61            | 115        | 120          | P            | V       |
|                                       | *    | 2437      | 101.77     | -             | -             | 91.36         | 27.33             | 16.69        | 33.61            | 115        | 120          | A            | V       |
|                                       |      | 2483.52   | 59.97      | -14.03        | 74            | 49.53         | 27.3              | 16.74        | 33.6             | 115        | 120          | P            | V       |
|                                       |      | 2484.24   | 44.05      | -9.95         | 54            | 33.61         | 27.3              | 16.74        | 33.6             | 115        | 120          | A            | V       |



|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |    |   |   |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|------|-------|------|-----|----|---|---|
| <b>802.11ac</b><br><b>VHT20</b><br><b>CH 11</b><br><b>2462MHz</b> | *                                                                                           | 2462    | 110.82 | -      | -  | 100.4 | 27.3 | 16.72 | 33.6 | 161 | 18 | P | H |
|                                                                   | *                                                                                           | 2462    | 103.23 | -      | -  | 92.81 | 27.3 | 16.72 | 33.6 | 161 | 18 | A | H |
|                                                                   |                                                                                             | 2484.76 | 60.32  | -13.68 | 74 | 49.88 | 27.3 | 16.74 | 33.6 | 161 | 18 | P | H |
|                                                                   |                                                                                             | 2483.52 | 50.76  | -3.24  | 54 | 40.32 | 27.3 | 16.74 | 33.6 | 161 | 18 | A | H |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |    |   | H |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |    |   | H |
|                                                                   | *                                                                                           | 2462    | 103.93 | -      | -  | 93.51 | 27.3 | 16.72 | 33.6 | 100 | 57 | P | V |
|                                                                   | *                                                                                           | 2462    | 96.06  | -      | -  | 85.64 | 27.3 | 16.72 | 33.6 | 100 | 57 | A | V |
|                                                                   |                                                                                             | 2485.04 | 57.27  | -16.73 | 74 | 46.83 | 27.3 | 16.74 | 33.6 | 100 | 57 | P | V |
|                                                                   |                                                                                             | 2483.56 | 44.63  | -9.37  | 54 | 34.19 | 27.3 | 16.74 | 33.6 | 100 | 57 | A | V |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |    |   | V |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |    |   | V |
| <b>Remark</b>                                                     | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |      |       |      |     |    |   |   |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT20 (Harmonic @ 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 ) |
|---------------------------------------|--------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT20<br>CH 01<br>2412MHz |                                                              | 4824                 | 38.06               | -35.94                  | 74                          | 54.97                     | 31.1                          | 10.56                  | 58.57                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              | 4824                 | 38.7                | -35.3                   | 74                          | 55.61                     | 31.1                          | 10.56                  | 58.57                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT20<br>CH 06<br>2437MHz |                                                              | 4874                 | 45.53               | -28.47                  | 74                          | 62.42                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              | 7311                 | 42.46               | -31.54                  | 74                          | 51.64                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              | 4874                 | 42.71               | -31.29                  | 74                          | 59.6                      | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              | 7311                 | 42.71               | -31.29                  | 74                          | 51.89                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT20<br>CH 11<br>2462MHz |                                                              | 4924                 | 37.71               | -36.29                  | 74                          | 54.45                     | 31.14                         | 10.65                  | 58.53                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              | 7386                 | 42                  | -32                     | 74                          | 51.21                     | 36.46                         | 13.05                  | 58.72                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              | 4924                 | 39.01               | -34.99                  | 74                          | 55.75                     | 31.14                         | 10.65                  | 58.53                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              | 7386                 | 41.44               | -32.56                  | 74                          | 50.65                     | 36.46                         | 13.05                  | 58.72                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| Remark                                | 1. No other spurious found.                                  |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                       | 2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (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 ) |
|---------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 03<br>2422MHz |      | 2390                 | 62.06               | -11.94                  | 74                          | 51.61                     | 27.44                         | 16.64                  | 33.63                      | 113                  | 15                      | P                       | H               |
|                                       |      | 2389.68              | 52.7                | -1.3                    | 54                          | 42.25                     | 27.44                         | 16.64                  | 33.63                      | 113                  | 15                      | A                       | H               |
|                                       | *    | 2422                 | 108.55              | -                       | -                           | 98.14                     | 27.36                         | 16.67                  | 33.62                      | 113                  | 15                      | P                       | H               |
|                                       | *    | 2422                 | 100.36              | -                       | -                           | 89.95                     | 27.36                         | 16.67                  | 33.62                      | 113                  | 15                      | A                       | H               |
|                                       |      | 2484.24              | 55.78               | -18.22                  | 74                          | 45.34                     | 27.3                          | 16.74                  | 33.6                       | 113                  | 15                      | P                       | H               |
|                                       |      | 2484.64              | 44.14               | -9.86                   | 54                          | 33.7                      | 27.3                          | 16.74                  | 33.6                       | 113                  | 15                      | A                       | H               |
|                                       |      | 2389.84              | 55.11               | -18.89                  | 74                          | 44.66                     | 27.44                         | 16.64                  | 33.63                      | 100                  | 120                     | P                       | V               |
|                                       |      | 2390                 | 49.17               | -4.83                   | 54                          | 38.72                     | 27.44                         | 16.64                  | 33.63                      | 100                  | 120                     | A                       | V               |
|                                       | *    | 2422                 | 99.07               | -                       | -                           | 88.66                     | 27.36                         | 16.67                  | 33.62                      | 100                  | 120                     | P                       | V               |
|                                       | *    | 2422                 | 91.04               | -                       | -                           | 80.63                     | 27.36                         | 16.67                  | 33.62                      | 100                  | 120                     | A                       | V               |
|                                       |      | 2484.08              | 53.15               | -20.85                  | 74                          | 42.71                     | 27.3                          | 16.74                  | 33.6                       | 100                  | 120                     | P                       | V               |
|                                       |      | 2483.84              | 43.43               | -10.57                  | 54                          | 32.99                     | 27.3                          | 16.74                  | 33.6                       | 100                  | 120                     | A                       | V               |
| 802.11ac<br>VHT40<br>CH 06<br>2437MHz |      | 2389.84              | 60.25               | -13.75                  | 74                          | 49.8                      | 27.44                         | 16.64                  | 33.63                      | 115                  | 16                      | P                       | H               |
|                                       |      | 2389.84              | 50.37               | -3.63                   | 54                          | 39.92                     | 27.44                         | 16.64                  | 33.63                      | 115                  | 16                      | A                       | H               |
|                                       | *    | 2437                 | 111.02              | -                       | -                           | 100.61                    | 27.33                         | 16.69                  | 33.61                      | 115                  | 16                      | P                       | H               |
|                                       | *    | 2437                 | 102.26              | -                       | -                           | 91.85                     | 27.33                         | 16.69                  | 33.61                      | 115                  | 16                      | A                       | H               |
|                                       |      | 2483.92              | 60.15               | -13.85                  | 74                          | 49.71                     | 27.3                          | 16.74                  | 33.6                       | 115                  | 16                      | P                       | H               |
|                                       |      | 2483.68              | 51.94               | -2.06                   | 54                          | 41.5                      | 27.3                          | 16.74                  | 33.6                       | 115                  | 16                      | A                       | H               |
|                                       |      | 2389.68              | 53.13               | -20.87                  | 74                          | 42.68                     | 27.44                         | 16.64                  | 33.63                      | 100                  | 121                     | P                       | V               |
|                                       |      | 2389.52              | 44.38               | -9.62                   | 54                          | 33.93                     | 27.44                         | 16.64                  | 33.63                      | 100                  | 121                     | A                       | V               |
|                                       | *    | 2437                 | 100.08              | -                       | -                           | 89.67                     | 27.33                         | 16.69                  | 33.61                      | 100                  | 121                     | P                       | V               |
|                                       | *    | 2437                 | 94.13               | -                       | -                           | 83.72                     | 27.33                         | 16.69                  | 33.61                      | 100                  | 121                     | A                       | V               |
|                                       |      | 2484.56              | 55.89               | -18.11                  | 74                          | 45.45                     | 27.3                          | 16.74                  | 33.6                       | 100                  | 121                     | P                       | V               |
|                                       |      | 2483.68              | 44.52               | -9.48                   | 54                          | 34.08                     | 27.3                          | 16.74                  | 33.6                       | 100                  | 121                     | A                       | V               |



|                                                                   |                                                                                             |         |        |        |    |       |       |       |       |     |     |   |   |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|-------|-----|-----|---|---|
| <b>802.11ac</b><br><b>VHT40</b><br><b>CH 09</b><br><b>2452MHz</b> |                                                                                             | 2327.44 | 52.38  | -21.62 | 74 | 41.77 | 27.69 | 16.57 | 33.65 | 110 | 17  | P | H |
|                                                                   |                                                                                             | 2339.44 | 43.29  | -10.71 | 54 | 32.72 | 27.64 | 16.58 | 33.65 | 110 | 17  | A | H |
|                                                                   | *                                                                                           | 2452    | 102.81 | -      | -  | 92.42 | 27.3  | 16.7  | 33.61 | 110 | 17  | P | H |
|                                                                   | *                                                                                           | 2452    | 95.16  | -      | -  | 84.77 | 27.3  | 16.7  | 33.61 | 110 | 17  | A | H |
|                                                                   |                                                                                             | 2483.52 | 57.72  | -16.28 | 74 | 47.28 | 27.3  | 16.74 | 33.6  | 110 | 17  | P | H |
|                                                                   |                                                                                             | 2483.84 | 52.2   | -1.8   | 54 | 41.76 | 27.3  | 16.74 | 33.6  | 110 | 17  | P | H |
|                                                                   |                                                                                             | 2362    | 51.73  | -22.27 | 74 | 41.21 | 27.55 | 16.61 | 33.64 | 112 | 118 | P | V |
|                                                                   |                                                                                             | 2379.92 | 43.1   | -10.9  | 54 | 32.62 | 27.48 | 16.63 | 33.63 | 112 | 118 | A | V |
|                                                                   | *                                                                                           | 2452    | 94.5   | -      | -  | 84.11 | 27.3  | 16.7  | 33.61 | 112 | 118 | P | V |
|                                                                   | *                                                                                           | 2452    | 86.31  | -      | -  | 75.92 | 27.3  | 16.7  | 33.61 | 112 | 118 | A | V |
|                                                                   |                                                                                             | 2484.64 | 54.23  | -19.77 | 74 | 43.79 | 27.3  | 16.74 | 33.6  | 112 | 118 | P | V |
|                                                                   |                                                                                             | 2484.16 | 44.68  | -9.32  | 54 | 34.24 | 27.3  | 16.74 | 33.6  | 112 | 118 | P | V |
| <b>Remark</b>                                                     | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |       |     |     |   |   |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (Harmonic @ 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 ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 03<br>2422MHz |                                                                                             | 4844                 | 38.08               | -35.92                  | 74                          | 54.97                     | 31.1                          | 10.57                  | 58.56                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 7266                 | 41.84               | -32.16                  | 74                          | 51.08                     | 36.43                         | 13.2                   | 58.87                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             | 4844                 | 38.6                | -35.4                   | 74                          | 55.49                     | 31.1                          | 10.57                  | 58.56                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 7266                 | 42.83               | -31.17                  | 74                          | 52.07                     | 36.43                         | 13.2                   | 58.87                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT40<br>CH 06<br>2437MHz |                                                                                             | 4874                 | 37.66               | -36.34                  | 74                          | 54.55                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 7311                 | 42.24               | -31.76                  | 74                          | 51.42                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             | 4874                 | 38.61               | -35.39                  | 74                          | 55.5                      | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 7311                 | 41.66               | -32.34                  | 74                          | 50.84                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT40<br>CH 09<br>2452MHz |                                                                                             | 4904                 | 38.3                | -35.7                   | 74                          | 55.18                     | 31.02                         | 10.63                  | 58.53                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 7356                 | 41.17               | -32.83                  | 74                          | 50.28                     | 36.58                         | 13.08                  | 58.77                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             | 4904                 | 38.63               | -35.37                  | 74                          | 55.51                     | 31.02                         | 10.63                  | 58.53                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 7356                 | 41.39               | -32.61                  | 74                          | 50.5                      | 36.58                         | 13.08                  | 58.77                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| Remark                                | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |

## Emission below 1GHz

## 2.4GHz WIFI 802.11ac VHT20 (LF)

| 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) |
| 2.4GHz<br>802.11ac<br><br>VHT20<br>LF |      | 55.22     | 25.94      | -14.06 | 40         | 45.34  | 11.98    | 0.98   | 32.36  | -      | -       | P     | H     |
|                                       |      | 139.61    | 28.34      | -15.16 | 43.5       | 41.92  | 17.14    | 1.57   | 32.29  | -      | -       | P     | H     |
|                                       |      | 208.48    | 28.42      | -15.08 | 43.5       | 43.76  | 14.9     | 1.99   | 32.23  | -      | -       | P     | H     |
|                                       |      | 430.61    | 34         | -12    | 46         | 40.7   | 22.65    | 2.81   | 32.16  | -      | -       | P     | H     |
|                                       |      | 624.61    | 32.23      | -13.77 | 46         | 35.09  | 25.91    | 3.42   | 32.19  | -      | -       | P     | H     |
|                                       |      | 958.29    | 34.14      | -11.86 | 46         | 29.68  | 30.93    | 4.34   | 30.81  | 100    | 0       | QP    | H     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |      | 32.91     | 31.72      | -8.28  | 40         | 40.57  | 22.73    | 0.79   | 32.37  | -      | -       | P     | V     |
|                                       |      | 48.43     | 32.46      | -7.54  | 40         | 49.04  | 14.87    | 0.92   | 32.37  | 100    | 63      | P     | V     |
|                                       |      | 68.8      | 31.97      | -8.03  | 40         | 51.28  | 11.91    | 1.13   | 32.35  | -      | -       | P     | V     |
|                                       |      | 432.55    | 29.87      | -16.13 | 46         | 36.53  | 22.68    | 2.82   | 32.16  | -      | -       | P     | V     |
|                                       |      | 666.32    | 30.76      | -15.24 | 46         | 32.97  | 26.4     | 3.55   | 32.16  | -      | -       | P     | V     |
|                                       |      | 953.44    | 34.7       | -11.3  | 46         | 30.52  | 30.72    | 4.32   | 30.86  | -      | -       | P     | V     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | V     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | V     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | V     |
|                                       |      |           |            |        |            |        |          |        |        |        |         |       | V     |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |      |           |            |        |            |        |          |        |        |        |         | V     |       |



**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>Peak</b> or <b>Average</b>                                                                                                                            |
| H/V | <b>Horizontal</b> or <b>Vertical</b>                                                                                                                     |





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”.



&lt;For Antenna 3&gt;

&lt;Chain 1+2&gt;

2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

| WIFI                                  | Note | Frequency | Level      | Over<br>Limit | Limit<br>Line | Read<br>Level | Antenna<br>Factor | Path<br>Loss | Preamp<br>Factor | Ant<br>Pos | Table<br>Pos | Peak<br>Avg. | Pol.    |
|---------------------------------------|------|-----------|------------|---------------|---------------|---------------|-------------------|--------------|------------------|------------|--------------|--------------|---------|
|                                       |      | ( MHz )   | ( dBμV/m ) | ( dB )        | ( dBμV/m )    | ( dBμV )      | ( dB/m )          | ( dB )       | ( dB )           | ( cm )     | ( deg )      | ( P/A )      | ( H/V ) |
| 802.11ac<br>VHT20<br>CH 01<br>2412MHz |      | 2366.28   | 52.86      | -21.14        | 74            | 42.36         | 27.53             | 16.61        | 33.64            | 100        | 21           | P            | H       |
|                                       |      | 2350.215  | 42.47      | -11.53        | 54            | 31.92         | 27.6              | 16.59        | 33.64            | 100        | 21           | A            | H       |
|                                       | *    | 2412      | 97.18      | -             | -             | 86.76         | 27.38             | 16.66        | 33.62            | 100        | 21           | P            | H       |
|                                       | *    | 2412      | 93.69      | -             | -             | 83.27         | 27.38             | 16.66        | 33.62            | 100        | 21           | A            | H       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | H       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | H       |
|                                       |      | 2389.59   | 54.85      | -19.15        | 74            | 44.4          | 27.44             | 16.64        | 33.63            | 119        | 155          | P            | V       |
|                                       |      | 2389.8    | 44.18      | -9.82         | 54            | 33.73         | 27.44             | 16.64        | 33.63            | 119        | 155          | A            | V       |
|                                       | *    | 2412      | 105.85     | -             | -             | 95.43         | 27.38             | 16.66        | 33.62            | 119        | 155          | P            | V       |
|                                       | *    | 2412      | 96.09      | -             | -             | 85.67         | 27.38             | 16.66        | 33.62            | 119        | 155          | A            | V       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | V       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | V       |
| 802.11ac<br>VHT20<br>CH 06<br>2437MHz |      | 2364.88   | 52.43      | -21.57        | 74            | 41.92         | 27.54             | 16.61        | 33.64            | 100        | 18           | P            | H       |
|                                       |      | 2384.4    | 42.59      | -11.41        | 54            | 32.13         | 27.46             | 16.63        | 33.63            | 100        | 18           | A            | H       |
|                                       | *    | 2437      | 104.46     | -             | -             | 94.05         | 27.33             | 16.69        | 33.61            | 100        | 18           | P            | H       |
|                                       | *    | 2437      | 96.43      | -             | -             | 86.02         | 27.33             | 16.69        | 33.61            | 100        | 18           | A            | H       |
|                                       |      | 2485.76   | 56.25      | -17.75        | 74            | 45.81         | 27.3              | 16.74        | 33.6             | 100        | 18           | P            | H       |
|                                       |      | 2485.04   | 42.75      | -11.25        | 54            | 32.31         | 27.3              | 16.74        | 33.6             | 100        | 18           | A            | H       |
|                                       |      | 2389.2    | 58.28      | -15.72        | 74            | 47.83         | 27.44             | 16.64        | 33.63            | 100        | 208          | P            | V       |
|                                       |      | 2389.52   | 43.32      | -10.68        | 54            | 32.87         | 27.44             | 16.64        | 33.63            | 100        | 208          | A            | V       |
|                                       | *    | 2437      | 109.6      | -             | -             | 99.19         | 27.33             | 16.69        | 33.61            | 100        | 208          | P            | V       |
|                                       | *    | 2437      | 104.62     | -             | -             | 94.21         | 27.33             | 16.69        | 33.61            | 100        | 208          | A            | V       |
|                                       |      | 2484.24   | 61.36      | -12.64        | 74            | 50.92         | 27.3              | 16.74        | 33.6             | 100        | 208          | P            | V       |
|                                       |      | 2484.72   | 45.11      | -8.89         | 54            | 34.67         | 27.3              | 16.74        | 33.6             | 100        | 208          | A            | V       |



|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |     |   |   |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|------|-------|------|-----|-----|---|---|
| <b>802.11ac</b><br><b>VHT20</b><br><b>CH 11</b><br><b>2462MHz</b> | *                                                                                           | 2462    | 100.19 | -      | -  | 89.77 | 27.3 | 16.72 | 33.6 | 110 | 11  | P | H |
|                                                                   | *                                                                                           | 2462    | 91.52  | -      | -  | 81.1  | 27.3 | 16.72 | 33.6 | 110 | 11  | A | H |
|                                                                   |                                                                                             | 2484.16 | 54.08  | -19.92 | 74 | 43.64 | 27.3 | 16.74 | 33.6 | 110 | 11  | P | H |
|                                                                   |                                                                                             | 2483.72 | 43.02  | -10.98 | 54 | 32.58 | 27.3 | 16.74 | 33.6 | 110 | 11  | A | H |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |     |   | H |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |     |   | H |
|                                                                   | *                                                                                           | 2462    | 107.98 | -      | -  | 97.56 | 27.3 | 16.72 | 33.6 | 100 | 156 | P | V |
|                                                                   | *                                                                                           | 2462    | 98.73  | -      | -  | 88.31 | 27.3 | 16.72 | 33.6 | 100 | 156 | A | V |
|                                                                   |                                                                                             | 2484.12 | 64.73  | -9.27  | 74 | 54.29 | 27.3 | 16.74 | 33.6 | 100 | 156 | P | V |
|                                                                   |                                                                                             | 2483.92 | 48.34  | -5.66  | 54 | 37.9  | 27.3 | 16.74 | 33.6 | 100 | 156 | A | V |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |     |   | V |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |      |     |     |   | V |
| <b>Remark</b>                                                     | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |      |       |      |     |     |   |   |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT20 (Harmonic @ 3m)

| WIFI                                  | 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 ) |
|---------------------------------------|--------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT20<br>CH 01<br>2412MHz |                                                              | 4824                 | 37.61               | -36.39                  | 74                          | 54.52                     | 31.1                          | 10.56                  | 58.57                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              | 4824                 | 38.81               | -35.19                  | 74                          | 55.72                     | 31.1                          | 10.56                  | 58.57                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT20<br>CH 06<br>2437MHz |                                                              | 4874                 | 37.65               | -36.35                  | 74                          | 54.54                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              | 7311                 | 42.71               | -31.29                  | 74                          | 51.89                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              | 4874                 | 43.42               | -30.58                  | 74                          | 60.31                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              | 7311                 | 42.69               | -31.31                  | 74                          | 51.87                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT20<br>CH 11<br>2462MHz |                                                              | 4924                 | 38.33               | -35.67                  | 74                          | 55.07                     | 31.14                         | 10.65                  | 58.53                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              | 7386                 | 42.11               | -31.89                  | 74                          | 51.32                     | 36.46                         | 13.05                  | 58.72                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              | 4924                 | 39.03               | -34.97                  | 74                          | 55.77                     | 31.14                         | 10.65                  | 58.53                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              | 7386                 | 42.57               | -31.43                  | 74                          | 51.78                     | 36.46                         | 13.05                  | 58.72                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| Remark                                | 1. No other spurious found.                                  |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                       | 2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (Band Edge @ 3m)

| WIFI                                  | 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 ) |
|---------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 03<br>2422MHz |      | 2389.68              | 53.76               | -20.24                  | 74                          | 43.31                     | 27.44                         | 16.64                  | 33.63                      | 111                  | 17                      | P                       | H               |
|                                       |      | 2388.24              | 44.28               | -9.72                   | 54                          | 33.82                     | 27.45                         | 16.64                  | 33.63                      | 111                  | 17                      | A                       | H               |
|                                       | *    | 2422                 | 96.99               | -                       | -                           | 86.58                     | 27.36                         | 16.67                  | 33.62                      | 111                  | 17                      | P                       | H               |
|                                       | *    | 2422                 | 90.11               | -                       | -                           | 79.7                      | 27.36                         | 16.67                  | 33.62                      | 111                  | 17                      | A                       | H               |
|                                       |      | 2486.48              | 54.72               | -19.28                  | 74                          | 44.27                     | 27.3                          | 16.74                  | 33.59                      | 111                  | 17                      | P                       | H               |
|                                       |      | 2498.96              | 43.32               | -10.68                  | 54                          | 32.86                     | 27.3                          | 16.75                  | 33.59                      | 111                  | 17                      | A                       | H               |
|                                       |      | 2389.52              | 62.05               | -11.95                  | 74                          | 51.6                      | 27.44                         | 16.64                  | 33.63                      | 112                  | 157                     | P                       | V               |
|                                       |      | 2389.84              | 52.73               | -1.27                   | 54                          | 42.28                     | 27.44                         | 16.64                  | 33.63                      | 112                  | 157                     | A                       | V               |
|                                       | *    | 2422                 | 103.02              | -                       | -                           | 92.61                     | 27.36                         | 16.67                  | 33.62                      | 112                  | 157                     | P                       | V               |
|                                       | *    | 2422                 | 95.29               | -                       | -                           | 84.88                     | 27.36                         | 16.67                  | 33.62                      | 112                  | 157                     | A                       | V               |
|                                       |      | 2485.84              | 56.83               | -17.17                  | 74                          | 46.39                     | 27.3                          | 16.74                  | 33.6                       | 112                  | 157                     | P                       | V               |
|                                       |      | 2486.64              | 44.41               | -9.59                   | 54                          | 33.96                     | 27.3                          | 16.74                  | 33.59                      | 112                  | 157                     | A                       | V               |
| 802.11ac<br>VHT40<br>CH 06<br>2437MHz |      | 2390                 | 53.38               | -20.62                  | 74                          | 42.93                     | 27.44                         | 16.64                  | 33.63                      | 115                  | 14                      | P                       | H               |
|                                       |      | 2390                 | 44.17               | -9.83                   | 54                          | 33.72                     | 27.44                         | 16.64                  | 33.63                      | 115                  | 14                      | A                       | H               |
|                                       | *    | 2437                 | 100.46              | -                       | -                           | 90.05                     | 27.33                         | 16.69                  | 33.61                      | 115                  | 14                      | P                       | H               |
|                                       | *    | 2437                 | 92.65               | -                       | -                           | 82.24                     | 27.33                         | 16.69                  | 33.61                      | 115                  | 14                      | A                       | H               |
|                                       |      | 2483.68              | 53.48               | -20.52                  | 74                          | 43.04                     | 27.3                          | 16.74                  | 33.6                       | 115                  | 14                      | P                       | H               |
|                                       |      | 2484.72              | 44.84               | -9.16                   | 54                          | 34.4                      | 27.3                          | 16.74                  | 33.6                       | 115                  | 14                      | A                       | H               |
|                                       |      | 2389.68              | 62.17               | -11.83                  | 74                          | 51.72                     | 27.44                         | 16.64                  | 33.63                      | 107                  | 158                     | P                       | V               |
|                                       |      | 2390                 | 50.05               | -3.95                   | 54                          | 39.6                      | 27.44                         | 16.64                  | 33.63                      | 107                  | 158                     | A                       | V               |
|                                       | *    | 2437                 | 106.08              | -                       | -                           | 95.67                     | 27.33                         | 16.69                  | 33.61                      | 107                  | 158                     | P                       | V               |
|                                       | *    | 2437                 | 98.04               | -                       | -                           | 87.63                     | 27.33                         | 16.69                  | 33.61                      | 107                  | 158                     | A                       | V               |
|                                       |      | 2484.16              | 60.75               | -13.25                  | 74                          | 50.31                     | 27.3                          | 16.74                  | 33.6                       | 107                  | 158                     | P                       | V               |
|                                       |      | 2483.52              | 51.02               | -2.98                   | 54                          | 40.58                     | 27.3                          | 16.74                  | 33.6                       | 107                  | 158                     | A                       | V               |



|                                                                               |                                                                                             |         |        |        |    |       |       |       |       |     |     |   |   |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|-------|-------|-------|-----|-----|---|---|
| <b>802.11ac</b><br><br><b>VHT40</b><br><br><b>CH 09</b><br><br><b>2452MHz</b> |                                                                                             | 2380.08 | 52.7   | -21.3  | 74 | 42.22 | 27.48 | 16.63 | 33.63 | 110 | 12  | P | H |
|                                                                               |                                                                                             | 2320.08 | 43.39  | -10.61 | 54 | 32.76 | 27.72 | 16.56 | 33.65 | 110 | 12  | A | H |
|                                                                               | *                                                                                           | 2452    | 94.95  | -      | -  | 84.56 | 27.3  | 16.7  | 33.61 | 110 | 12  | P | H |
|                                                                               | *                                                                                           | 2452    | 88.55  | -      | -  | 78.16 | 27.3  | 16.7  | 33.61 | 110 | 12  | A | H |
|                                                                               |                                                                                             | 2487.04 | 53.27  | -20.73 | 74 | 42.82 | 27.3  | 16.74 | 33.59 | 110 | 12  | P | H |
|                                                                               |                                                                                             | 2484.32 | 43.93  | -10.07 | 54 | 33.49 | 27.3  | 16.74 | 33.6  | 110 | 12  | A | H |
|                                                                               |                                                                                             | 2385.2  | 52.23  | -21.77 | 74 | 41.77 | 27.46 | 16.63 | 33.63 | 100 | 157 | P | V |
|                                                                               |                                                                                             | 2373.68 | 43.42  | -10.58 | 54 | 32.93 | 27.51 | 16.62 | 33.64 | 100 | 157 | A | V |
|                                                                               | *                                                                                           | 2452    | 101.45 | -      | -  | 91.06 | 27.3  | 16.7  | 33.61 | 100 | 157 | P | V |
|                                                                               | *                                                                                           | 2452    | 92.84  | -      | -  | 82.45 | 27.3  | 16.7  | 33.61 | 100 | 157 | A | V |
|                                                                               |                                                                                             | 2484.4  | 60.24  | -13.76 | 74 | 49.8  | 27.3  | 16.74 | 33.6  | 100 | 157 | P | V |
|                                                                               |                                                                                             | 2484.48 | 52.63  | -1.37  | 54 | 42.19 | 27.3  | 16.74 | 33.6  | 100 | 157 | A | V |
| <b>Remark</b>                                                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |       |       |       |     |     |   |   |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

| WIFI                                  | 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 ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 03<br>2422MHz |                                                                                             | 4844                 | 37.78               | -36.22                  | 74                          | 54.67                     | 31.1                          | 10.57                  | 58.56                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 7266                 | 42.21               | -31.79                  | 74                          | 51.45                     | 36.43                         | 13.2                   | 58.87                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             | 4844                 | 37.28               | -36.72                  | 74                          | 54.17                     | 31.1                          | 10.57                  | 58.56                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 7266                 | 42.42               | -31.58                  | 74                          | 51.66                     | 36.43                         | 13.2                   | 58.87                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT40<br>CH 06<br>2437MHz |                                                                                             | 4874                 | 37.09               | -36.91                  | 74                          | 53.98                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 7311                 | 42.3                | -31.7                   | 74                          | 51.48                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             | 4874                 | 37.34               | -36.66                  | 74                          | 54.23                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 7311                 | 42.18               | -31.82                  | 74                          | 51.36                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT40<br>CH 09<br>2452MHz |                                                                                             | 4904                 | 37.6                | -36.4                   | 74                          | 54.48                     | 31.02                         | 10.63                  | 58.53                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 7356                 | 42.02               | -31.98                  | 74                          | 51.13                     | 36.58                         | 13.08                  | 58.77                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             | 4904                 | 37.06               | -36.94                  | 74                          | 53.94                     | 31.02                         | 10.63                  | 58.53                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 7356                 | 41.38               | -32.62                  | 74                          | 50.49                     | 36.58                         | 13.08                  | 58.77                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| Remark                                | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |

## Emission below 1GHz

## 2.4GHz WIFI 802.11ac VHT40 (LF)

| WIFI                                  | Note                                                                       | Frequency | Level      | Over   | Limit      | Read   | Antenna  | Path   | Preamp | Ant    | Table   | Peak  | Pol.  |
|---------------------------------------|----------------------------------------------------------------------------|-----------|------------|--------|------------|--------|----------|--------|--------|--------|---------|-------|-------|
|                                       |                                                                            |           |            | Limit  | Line       | Level  | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
|                                       |                                                                            | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | (dBμV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| 2.4GHz<br>802.11ac<br><br>VHT40<br>LF |                                                                            | 30.97     | 23.68      | -16.32 | 40         | 31.69  | 23.58    | 0.78   | 32.37  | -      | -       | P     | H     |
|                                       |                                                                            | 71.71     | 22.47      | -17.53 | 40         | 41.48  | 12.19    | 1.15   | 32.35  | -      | -       | P     | H     |
|                                       |                                                                            | 120.21    | 25.66      | -17.84 | 43.5       | 39.14  | 17.36    | 1.46   | 32.3   | -      | -       | P     | H     |
|                                       |                                                                            | 557.68    | 28.51      | -17.49 | 46         | 31.59  | 25.88    | 3.23   | 32.19  | -      | -       | P     | H     |
|                                       |                                                                            | 624.61    | 34.44      | -11.56 | 46         | 37.3   | 25.91    | 3.42   | 32.19  | -      | -       | P     | H     |
|                                       |                                                                            | 958.29    | 34.68      | -11.32 | 46         | 30.22  | 30.93    | 4.34   | 30.81  | 100    | 0       | P     | H     |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                       |                                                                            | 36.79     | 33.19      | -6.81  | 40         | 43.93  | 20.81    | 0.79   | 32.37  | 100    | 0       | P     | V     |
|                                       |                                                                            | 48.43     | 33.07      | -6.93  | 40         | 49.65  | 14.87    | 1.19   | 32.37  | -      | -       | P     | V     |
|                                       |                                                                            | 68.8      | 33.18      | -6.82  | 40         | 52.49  | 11.91    | 1.48   | 32.35  | -      | -       | P     | V     |
|                                       |                                                                            | 622.67    | 31.09      | -14.91 | 46         | 34.03  | 25.84    | 3.33   | 32.19  | -      | -       | P     | V     |
|                                       |                                                                            | 663.41    | 31.45      | -14.55 | 46         | 33.7   | 26.36    | 3.52   | 32.16  | -      | -       | P     | V     |
|                                       |                                                                            | 946.65    | 34.63      | -11.37 | 46         | 30.88  | 30.37    | 4.54   | 30.92  | -      | -       | P     | V     |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         |       | V     |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         | V     |       |
|                                       |                                                                            |           |            |        |            |        |          |        |        |        |         | V     |       |
| Remark                                | 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>Peak</b> or <b>Average</b>                                                                                                                            |
| H/V | <b>Horizontal</b> or <b>Vertical</b>                                                                                                                     |

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”.**



&lt;For Antenna 4&gt;

&lt;Chain 1+2&gt;

2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

| WIFI<br>Ant.                          | Note | Frequency | Level      | Over<br>Limit | Limit<br>Line | Read<br>Level | Antenna<br>Factor | Path<br>Loss | Preamp<br>Factor | Ant<br>Pos | Table<br>Pos | Peak<br>Avg. | Pol.    |
|---------------------------------------|------|-----------|------------|---------------|---------------|---------------|-------------------|--------------|------------------|------------|--------------|--------------|---------|
| 1+2                                   |      | ( MHz )   | ( dBμV/m ) | ( dB )        | ( dBμV/m )    | ( dBμV )      | ( dB/m )          | ( dB )       | ( dB )           | ( cm )     | ( deg )      | ( P/A )      | ( H/V ) |
| 802.11ac<br>VHT20<br>CH 01<br>2412MHz |      | 2386.755  | 52.76      | -21.24        | 74            | 42.31         | 27.45             | 16.63        | 33.63            | 107        | 16           | P            | H       |
|                                       |      | 2389.485  | 43.11      | -10.89        | 54            | 32.66         | 27.44             | 16.64        | 33.63            | 107        | 16           | A            | H       |
|                                       | *    | 2412      | 98.93      | -             | -             | 88.51         | 27.38             | 16.66        | 33.62            | 107        | 16           | P            | H       |
|                                       | *    | 2412      | 95.49      | -             | -             | 85.07         | 27.38             | 16.66        | 33.62            | 107        | 16           | A            | H       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | H       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | H       |
|                                       |      | 2389.59   | 56.95      | -17.05        | 74            | 46.5          | 27.44             | 16.64        | 33.63            | 150        | 40           | P            | V       |
|                                       |      | 2389.905  | 45.88      | -8.12         | 54            | 35.43         | 27.44             | 16.64        | 33.63            | 150        | 40           | A            | V       |
|                                       | *    | 2412      | 107.53     | -             | -             | 97.11         | 27.38             | 16.66        | 33.62            | 150        | 40           | P            | V       |
|                                       | *    | 2412      | 98.88      | -             | -             | 88.46         | 27.38             | 16.66        | 33.62            | 150        | 40           | A            | V       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | V       |
|                                       |      |           |            |               |               |               |                   |              |                  |            |              |              | V       |
| 802.11ac<br>VHT20<br>CH 06<br>2437MHz |      | 2315.12   | 52.48      | -21.52        | 74            | 41.85         | 27.74             | 16.55        | 33.66            | 100        | 343          | P            | H       |
|                                       |      | 2328.72   | 42.61      | -11.39        | 54            | 32            | 27.69             | 16.57        | 33.65            | 100        | 343          | A            | H       |
|                                       | *    | 2437      | 102.6      | -             | -             | 92.19         | 27.33             | 16.69        | 33.61            | 100        | 343          | P            | H       |
|                                       | *    | 2437      | 95.63      | -             | -             | 85.22         | 27.33             | 16.69        | 33.61            | 100        | 343          | A            | H       |
|                                       |      | 2484.4    | 57.31      | -16.69        | 74            | 46.87         | 27.3              | 16.74        | 33.6             | 100        | 343          | P            | H       |
|                                       |      | 2485.2    | 43.17      | -10.83        | 54            | 32.73         | 27.3              | 16.74        | 33.6             | 100        | 343          | A            | H       |
|                                       |      | 2389.36   | 56.4       | -17.6         | 74            | 45.95         | 27.44             | 16.64        | 33.63            | 153        | 41           | P            | V       |
|                                       |      | 2389.36   | 43.81      | -10.19        | 54            | 33.36         | 27.44             | 16.64        | 33.63            | 153        | 41           | A            | V       |
|                                       | *    | 2437      | 113.07     | -             | -             | 102.66        | 27.33             | 16.69        | 33.61            | 153        | 41           | P            | V       |
|                                       | *    | 2437      | 104.49     | -             | -             | 94.08         | 27.33             | 16.69        | 33.61            | 153        | 41           | A            | V       |
|                                       |      | 2483.84   | 62.9       | -11.1         | 74            | 52.46         | 27.3              | 16.74        | 33.6             | 153        | 41           | P            | V       |
|                                       |      | 2484.32   | 46.82      | -7.18         | 54            | 36.38         | 27.3              | 16.74        | 33.6             | 153        | 41           | A            | V       |



|                                                                   |                                                                                             |         |        |        |    |       |      |       |       |     |     |   |   |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|--------|--------|----|-------|------|-------|-------|-----|-----|---|---|
| <b>802.11ac</b><br><b>VHT20</b><br><b>CH 11</b><br><b>2462MHz</b> | *                                                                                           | 2462    | 96.32  | -      | -  | 85.9  | 27.3 | 16.72 | 33.6  | 116 | 340 | P | H |
|                                                                   | *                                                                                           | 2462    | 92.3   | -      | -  | 81.88 | 27.3 | 16.72 | 33.6  | 116 | 340 | A | H |
|                                                                   |                                                                                             | 2486.68 | 54.29  | -19.71 | 74 | 43.84 | 27.3 | 16.74 | 33.59 | 116 | 340 | P | H |
|                                                                   |                                                                                             | 2488.2  | 42.85  | -11.15 | 54 | 32.4  | 27.3 | 16.74 | 33.59 | 116 | 340 | A | H |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |       |     |     |   | H |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |       |     |     |   | H |
|                                                                   | *                                                                                           | 2462    | 105.64 | -      | -  | 95.22 | 27.3 | 16.72 | 33.6  | 164 | 34  | P | V |
|                                                                   | *                                                                                           | 2462    | 101.57 | -      | -  | 91.15 | 27.3 | 16.72 | 33.6  | 164 | 34  | A | V |
|                                                                   |                                                                                             | 2487.16 | 60.93  | -13.07 | 74 | 50.48 | 27.3 | 16.74 | 33.59 | 164 | 34  | P | V |
|                                                                   |                                                                                             | 2484.56 | 45.96  | -8.04  | 54 | 35.52 | 27.3 | 16.74 | 33.6  | 164 | 34  | A | V |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |       |     |     |   | V |
|                                                                   |                                                                                             |         |        |        |    |       |      |       |       |     |     |   | V |
| <b>Remark</b>                                                     | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |        |        |    |       |      |       |       |     |     |   |   |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT20 (Harmonic @ 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 ) |
|---------------------------------------|--------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT20<br>CH 01<br>2412MHz |                                                              | 4824                 | 38.71               | -35.29                  | 74                          | 55.62                     | 31.1                          | 10.56                  | 58.57                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              | 4824                 | 37.99               | -36.01                  | 74                          | 54.9                      | 31.1                          | 10.56                  | 58.57                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT20<br>CH 06<br>2437MHz |                                                              | 4874                 | 37.38               | -36.62                  | 74                          | 54.27                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              | 7311                 | 41.77               | -32.23                  | 74                          | 50.95                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              | 4874                 | 41.42               | -32.58                  | 74                          | 58.31                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              | 7311                 | 41.99               | -32.01                  | 74                          | 51.17                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT20<br>CH 11<br>2462MHz |                                                              | 4924                 | 38.6                | -35.4                   | 74                          | 55.34                     | 31.14                         | 10.65                  | 58.53                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              | 7386                 | 42.06               | -31.94                  | 74                          | 51.27                     | 36.46                         | 13.05                  | 58.72                      | 100                  | 0                       | P                       | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                              | 4924                 | 38.83               | -35.17                  | 74                          | 55.57                     | 31.14                         | 10.65                  | 58.53                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              | 7386                 | 42.19               | -31.81                  | 74                          | 51.4                      | 36.46                         | 13.05                  | 58.72                      | 100                  | 0                       | P                       | V               |
|                                       |                                                              |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| Remark                                | 1. No other spurious found.                                  |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |
|                                       | 2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (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 ) |
|---------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 03<br>2422MHz |      | 2321.68              | 52.29               | -21.71                  | 74                          | 41.67                     | 27.71                         | 16.56                  | 33.65                      | 200                  | 348                     | P                       | H               |
|                                       |      | 2319.12              | 43.18               | -10.82                  | 54                          | 32.56                     | 27.72                         | 16.56                  | 33.66                      | 200                  | 348                     | A                       | H               |
|                                       | *    | 2422                 | 91.57               | -                       | -                           | 81.16                     | 27.36                         | 16.67                  | 33.62                      | 200                  | 348                     | P                       | H               |
|                                       | *    | 2422                 | 83.96               | -                       | -                           | 73.55                     | 27.36                         | 16.67                  | 33.62                      | 200                  | 348                     | A                       | H               |
|                                       |      | 2487.28              | 52.31               | -21.69                  | 74                          | 41.86                     | 27.3                          | 16.74                  | 33.59                      | 200                  | 348                     | P                       | H               |
|                                       |      | 2493.04              | 43.15               | -10.85                  | 54                          | 32.69                     | 27.3                          | 16.75                  | 33.59                      | 200                  | 348                     | P                       | H               |
|                                       |      | 2389.52              | 54.66               | -19.34                  | 74                          | 44.21                     | 27.44                         | 16.64                  | 33.63                      | 133                  | 334                     | P                       | V               |
|                                       |      | 2389.68              | 47.74               | -6.26                   | 54                          | 37.29                     | 27.44                         | 16.64                  | 33.63                      | 133                  | 334                     | A                       | V               |
|                                       | *    | 2422                 | 102.58              | -                       | -                           | 92.17                     | 27.36                         | 16.67                  | 33.62                      | 133                  | 334                     | P                       | V               |
|                                       | *    | 2422                 | 91.89               | -                       | -                           | 81.48                     | 27.36                         | 16.67                  | 33.62                      | 133                  | 334                     | P                       | V               |
|                                       |      | 2484.64              | 55.9                | -18.1                   | 74                          | 45.46                     | 27.3                          | 16.74                  | 33.6                       | 133                  | 334                     | P                       | V               |
|                                       |      | 2484.4               | 43.69               | -10.31                  | 54                          | 33.25                     | 27.3                          | 16.74                  | 33.6                       | 133                  | 334                     | A                       | V               |
| 802.11ac<br>VHT40<br>CH 06<br>2437MHz |      | 2357.04              | 52.66               | -21.34                  | 74                          | 42.13                     | 27.57                         | 16.6                   | 33.64                      | 178                  | 360                     | P                       | H               |
|                                       |      | 2339.44              | 43.27               | -10.73                  | 54                          | 32.7                      | 27.64                         | 16.58                  | 33.65                      | 178                  | 336                     | P                       | H               |
|                                       | *    | 2437                 | 95.25               | -                       | -                           | 84.84                     | 27.33                         | 16.69                  | 33.61                      | 178                  | 360                     | P                       | H               |
|                                       | *    | 2437                 | 88.37               | -                       | -                           | 77.96                     | 27.33                         | 16.69                  | 33.61                      | 178                  | 360                     | A                       | H               |
|                                       |      | 2499.44              | 52.63               | -21.37                  | 74                          | 42.17                     | 27.3                          | 16.75                  | 33.59                      | 178                  | 360                     | P                       | H               |
|                                       |      | 2483.68              | 43.25               | -10.75                  | 54                          | 32.81                     | 27.3                          | 16.74                  | 33.6                       | 178                  | 360                     | P                       | H               |
|                                       |      | 2389.36              | 54.27               | -19.73                  | 74                          | 43.82                     | 27.44                         | 16.64                  | 33.63                      | 103                  | 11                      | P                       | V               |
|                                       |      | 2390                 | 46.91               | -7.09                   | 54                          | 36.46                     | 27.44                         | 16.64                  | 33.63                      | 103                  | 11                      | A                       | V               |
|                                       | *    | 2437                 | 103.49              | -                       | -                           | 93.08                     | 27.33                         | 16.69                  | 33.61                      | 100                  | 333                     | P                       | V               |
|                                       | *    | 2437                 | 95.51               | -                       | -                           | 85.1                      | 27.33                         | 16.69                  | 33.61                      | 100                  | 333                     | A                       | V               |
|                                       |      | 2484.56              | 58.76               | -15.24                  | 74                          | 48.32                     | 27.3                          | 16.74                  | 33.6                       | 100                  | 333                     | P                       | V               |
|                                       |      | 2483.76              | 47.4                | -6.6                    | 54                          | 36.96                     | 27.3                          | 16.74                  | 33.6                       | 100                  | 333                     | P                       | V               |



|                                                                               |                                                                                             |         |       |        |    |       |       |       |       |     |     |   |   |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------|-------|--------|----|-------|-------|-------|-------|-----|-----|---|---|
| <b>802.11ac</b><br><br><b>VHT40</b><br><br><b>CH 09</b><br><br><b>2452MHz</b> |                                                                                             | 2345.36 | 52.34 | -21.66 | 74 | 41.78 | 27.62 | 16.59 | 33.65 | 116 | 360 | P | H |
|                                                                               |                                                                                             | 2342.16 | 43.21 | -10.79 | 54 | 32.65 | 27.63 | 16.58 | 33.65 | 116 | 360 | A | H |
|                                                                               | *                                                                                           | 2452    | 88    | -      | -  | 77.61 | 27.3  | 16.7  | 33.61 | 116 | 360 | P | H |
|                                                                               | *                                                                                           | 2452    | 79.84 | -      | -  | 69.45 | 27.3  | 16.7  | 33.61 | 116 | 360 | A | H |
|                                                                               |                                                                                             | 2483.84 | 53.07 | -20.93 | 74 | 42.63 | 27.3  | 16.74 | 33.6  | 116 | 360 | P | H |
|                                                                               |                                                                                             | 2499.12 | 43.29 | -10.71 | 54 | 32.83 | 27.3  | 16.75 | 33.59 | 116 | 360 | A | H |
|                                                                               |                                                                                             | 2380.08 | 52.17 | -21.83 | 74 | 41.69 | 27.48 | 16.63 | 33.63 | 100 | 335 | P | V |
|                                                                               |                                                                                             | 2314.32 | 43.05 | -10.95 | 54 | 32.42 | 27.74 | 16.55 | 33.66 | 100 | 335 | A | V |
|                                                                               | *                                                                                           | 2452    | 96.71 | -      | -  | 86.32 | 27.3  | 16.7  | 33.61 | 100 | 335 | P | V |
|                                                                               | *                                                                                           | 2452    | 89.52 | -      | -  | 79.13 | 27.3  | 16.7  | 33.61 | 100 | 335 | A | V |
|                                                                               |                                                                                             | 2483.6  | 59.76 | -14.24 | 74 | 49.32 | 27.3  | 16.74 | 33.6  | 100 | 335 | P | V |
|                                                                               |                                                                                             | 2484.64 | 47.09 | -6.91  | 54 | 36.65 | 27.3  | 16.74 | 33.6  | 100 | 335 | A | V |
| <b>Remark</b>                                                                 | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |         |       |        |    |       |       |       |       |     |     |   |   |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (Harmonic @ 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 ) |
|---------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|----------------------|-------------------------|-------------------------|-----------------|
| 802.11ac<br>VHT40<br>CH 03<br>2422MHz |                                                                                             | 4844                 | 39.39               | -34.61                  | 74                          | 56.28                     | 31.1                          | 10.57                  | 58.56                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 7266                 | 42.3                | -31.7                   | 74                          | 51.54                     | 36.43                         | 13.2                   | 58.87                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             | 4844                 | 38.33               | -35.67                  | 74                          | 55.22                     | 31.1                          | 10.57                  | 58.56                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 7266                 | 41.55               | -32.45                  | 74                          | 50.79                     | 36.43                         | 13.2                   | 58.87                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT40<br>CH 06<br>2437MHz |                                                                                             | 4874                 | 37.58               | -36.42                  | 74                          | 54.47                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 7311                 | 41.84               | -32.16                  | 74                          | 51.02                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             | 4874                 | 37.63               | -36.37                  | 74                          | 54.52                     | 31.05                         | 10.61                  | 58.55                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 7311                 | 42.68               | -31.32                  | 74                          | 51.86                     | 36.52                         | 13.13                  | 58.83                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| 802.11ac<br>VHT40<br>CH 09<br>2452MHz |                                                                                             | 4904                 | 37.52               | -36.48                  | 74                          | 54.4                      | 31.02                         | 10.63                  | 58.53                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             | 7356                 | 41.88               | -32.12                  | 74                          | 50.99                     | 36.58                         | 13.08                  | 58.77                      | 100                  | 0                       | P                       | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | H               |
|                                       |                                                                                             | 4904                 | 37.43               | -36.57                  | 74                          | 54.31                     | 31.02                         | 10.63                  | 58.53                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             | 7356                 | 41.5                | -32.5                   | 74                          | 50.61                     | 36.58                         | 13.08                  | 58.77                      | 100                  | 0                       | P                       | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
|                                       |                                                                                             |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         | V               |
| Remark                                | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line. |                      |                     |                         |                             |                           |                               |                        |                            |                      |                         |                         |                 |





## Emission below 1GHz

## 2.4GHz WIFI 802.11ac VHT40 (LF)

| 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 ) |
| 2.4GHz<br>802.11ac<br>VHT40<br>LF |                                                                            | 30.97     | 22.71      | -17.29 | 40         | 30.72    | 23.58    | 0.78   | 32.37  | -      | -       | P       | H       |
|                                   |                                                                            | 60.07     | 22.6       | -17.4  | 40         | 42.27    | 11.64    | 1.05   | 32.36  | -      | -       | P       | H       |
|                                   |                                                                            | 147.37    | 23.67      | -19.83 | 43.5       | 37.31    | 17       | 1.64   | 32.28  | -      | -       | P       | H       |
|                                   |                                                                            | 624.61    | 32.2       | -13.8  | 46         | 35.06    | 25.91    | 3.42   | 32.19  | -      | -       | P       | H       |
|                                   |                                                                            | 864.2     | 31.97      | -14.03 | 46         | 30.12    | 29.29    | 4.1    | 31.54  | -      | -       | P       | H       |
|                                   |                                                                            | 959.26    | 33.94      | -12.06 | 46         | 29.43    | 30.97    | 4.34   | 30.8   | 100    | 0       | P       | H       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                   |                                                                            | 47.46     | 33.99      | -6.01  | 40         | 50.1     | 15.35    | 0.91   | 32.37  | 100    | 0       | P       | V       |
|                                   |                                                                            | 67.83     | 32.73      | -7.27  | 40         | 52.13    | 11.83    | 1.12   | 32.35  | -      | -       | P       | V       |
|                                   |                                                                            | 124.09    | 30.35      | -13.15 | 43.5       | 43.79    | 17.38    | 1.48   | 32.3   | -      | -       | P       | V       |
|                                   |                                                                            | 334.58    | 28.04      | -17.96 | 46         | 38       | 19.72    | 2.49   | 32.17  | -      | -       | P       | V       |
|                                   |                                                                            | 663.41    | 33.24      | -12.76 | 46         | 35.49    | 26.36    | 3.55   | 32.16  | -      | -       | P       | V       |
|                                   |                                                                            | 949.56    | 33.77      | -12.23 | 46         | 29.8     | 30.55    | 4.31   | 30.89  | -      | -       | P       | V       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                   |                                                                            |           |            |        |            |          |          |        |        |        |         |         | V       |
| Remark                            | 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>Peak</b> or <b>Average</b>                                                                                                                            |
| H/V | <b>Horizontal</b> or <b>Vertical</b>                                                                                                                     |



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

|                 |                              |                     |         |
|-----------------|------------------------------|---------------------|---------|
| Test Engineer : | Hao Xu, Ken Wu, and JC Liang | Temperature :       | 21~26°C |
|                 |                              | Relative Humidity : | 52~57%  |

### Note symbol

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

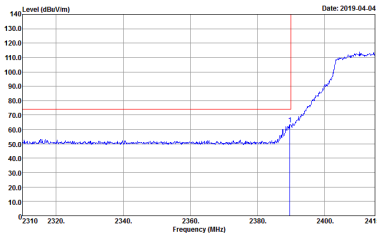
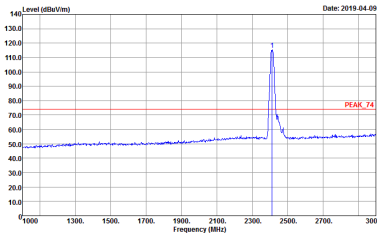
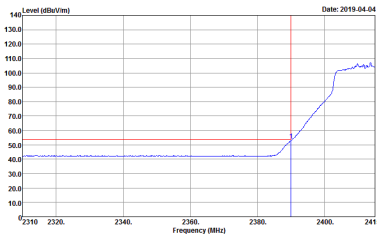
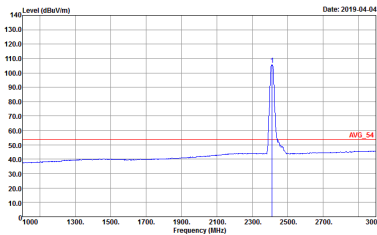


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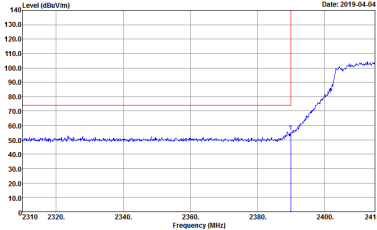
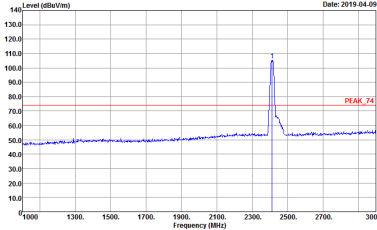
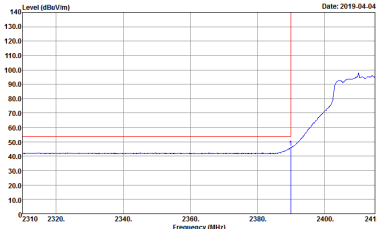
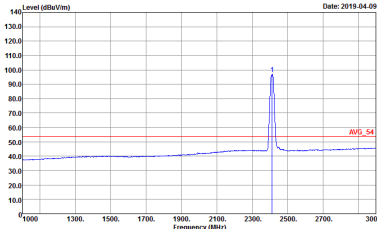
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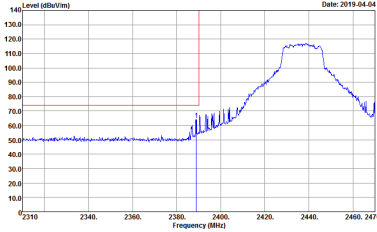
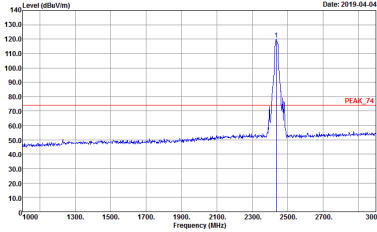
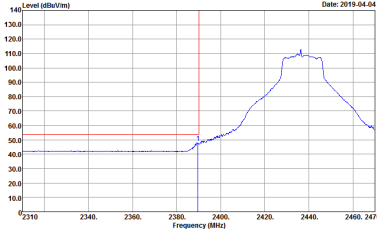
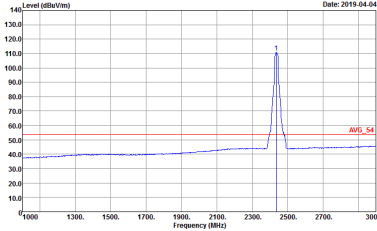
2.4GHz 2400~2483.5MHz

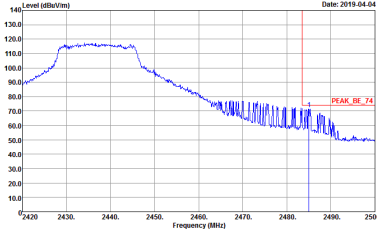
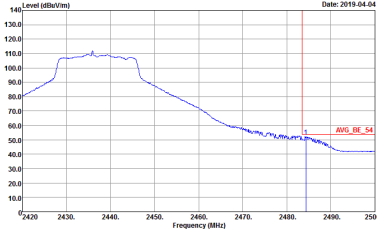
WIFI 802.11ac VHT20 (Band Edge @ 3m)

| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VHT20 CH01 2412MHz                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                          |
|      | Horizontal                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                              |
| Peak |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p> |
| Avg. |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p>    |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p>    |

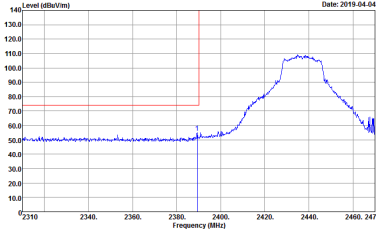
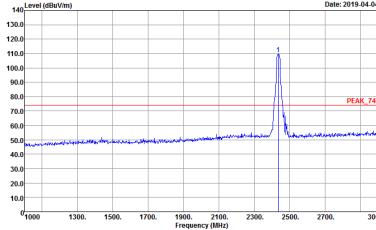
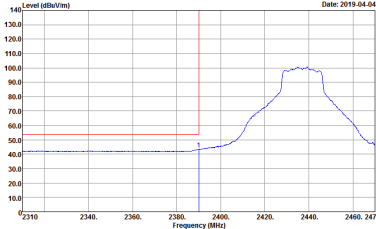
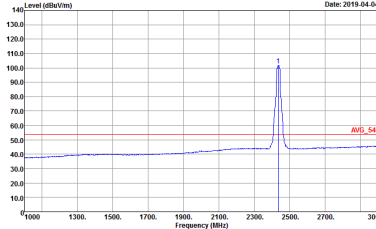


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                         |                                                                                                                                                                                                                            |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VHT20 CH01 2412MHz                                                                                                                                                                                                  |                                                                                                                                                                                                                            |
|      | Vertical                                                                                                                                                                                                                     | Fundamental                                                                                                                                                                                                                |
| Peak |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 14</p>  |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 14</p>  |
| Avg. |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 14</p> |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 14</p> |

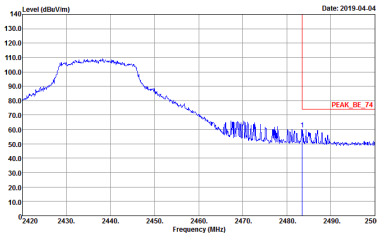
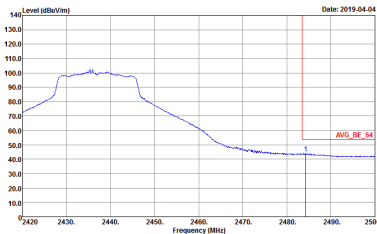
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                 |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VHT20 CH06 2437MHz - L                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                 |
|             | Horizontal                                                                                                                                                                                                                                                                        | Fundamental                                                                                                                                                                                                                                                                     |
| <b>Peak</b> |  <p>Site : 03CH11-HY<br/> Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 20</p> |  <p>Site : 03CH11-HY<br/> Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 20</p> |
| <b>Avg.</b> |  <p>Site : 03CH11-HY<br/> Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/> : RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 20</p>    |  <p>Site : 03CH11-HY<br/> Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/> : RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 20</p>    |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                           |             |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|             | 802.11ac VH20 CH06 2437MHz - R                                                                                                                                                                                                                                                                 |             |
|             | Horizontal                                                                                                                                                                                                                                                                                     | Fundamental |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : Z0         </p>  | Left blank  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : Z0         </p> | Left blank  |



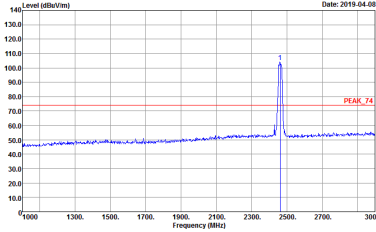
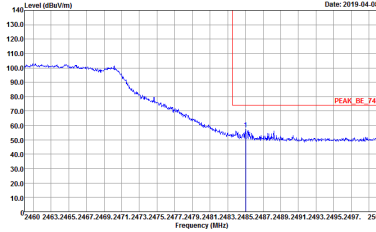
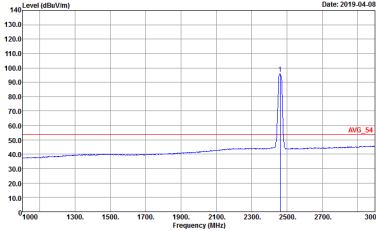
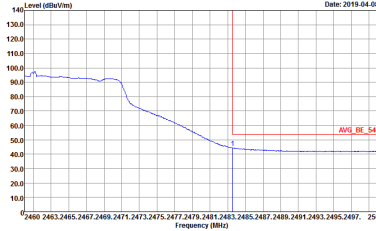
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH20 CH06 2437MHz - L                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                        |
|             | Vertical                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                            |
| <b>Peak</b> |  <p>Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 20</p>  |  <p>Site : 03CH11-HY<br/>           Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 20</p>  |
| <b>Avg.</b> |  <p>Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 20</p> |  <p>Site : 03CH11-HY<br/>           Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 20</p> |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                               |             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH20 CH06 2437MHz - R                                                                                                                                                                                                                                                     |             |
|      | Vertical                                                                                                                                                                                                                                                                           | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 20</p></div> | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 20</p></div>    | Left blank  |



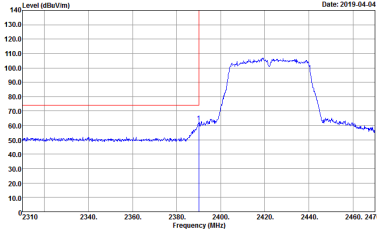
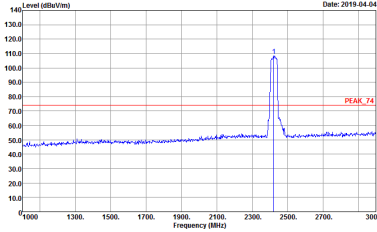
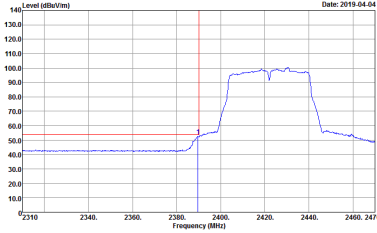
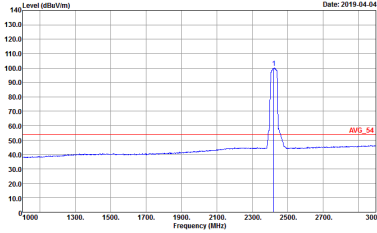
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                    |                                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VH20 CH11 2462MHz                                                                                                                                                              |                                                                                                                                                                                            |
|      | Horizontal                                                                                                                                                                              | Fundamental                                                                                                                                                                                |
| Peak | <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p> | <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p> |
| Avg. | <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p>      | <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p>      |

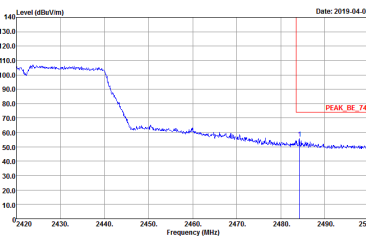
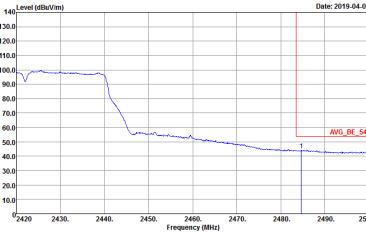
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                        |                                                                                                                                                                                                                                 |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH20 CH11 2462MHz                                                                                                                                                                                                  |                                                                                                                                                                                                                                 |
|             | Vertical                                                                                                                                                                                                                    | Fundamental                                                                                                                                                                                                                     |
| <b>Peak</b> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p>  |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p>  |
| <b>Avg.</b> |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p> |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p> |

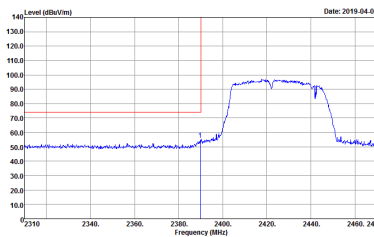
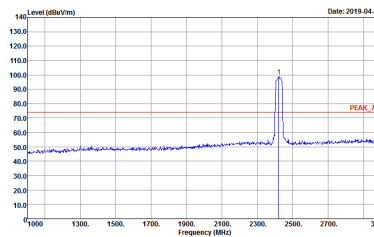
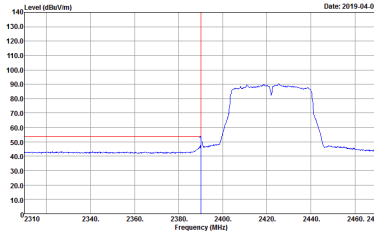
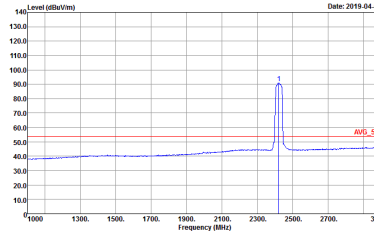


## 2.4GHz 2400~2483.5MHz

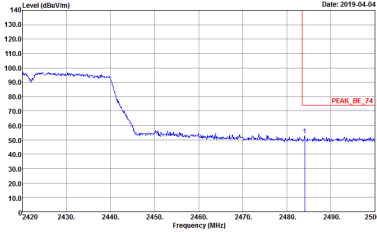
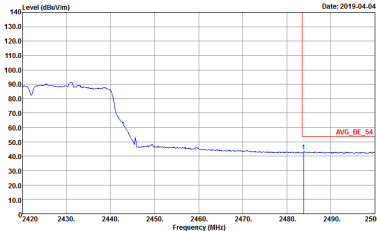
## WIFI 802.11ac VHT40 (Band Edge @ 3m)

| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                            |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VHT40 CH03 2422MHz - L                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                            |
|      | Horizontal                                                                                                                                                                                                                                                                   | Fundamental                                                                                                                                                                                                                                                                |
| Peak |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p> |
| Avg. |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p>   |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 10.5</p>   |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                             |             |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|             | 802.11ac VH40 CH03 2422MHz - R                                                                                                                                                                                                                                                                   |             |
|             | Horizontal                                                                                                                                                                                                                                                                                       | Fundamental |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 10.5         </p>  | Left blank  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 10.5         </p> | Left blank  |

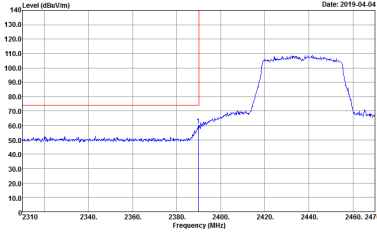
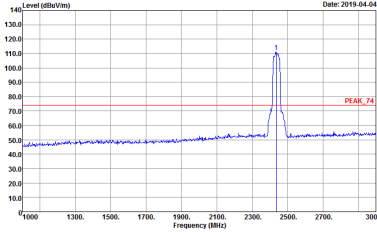
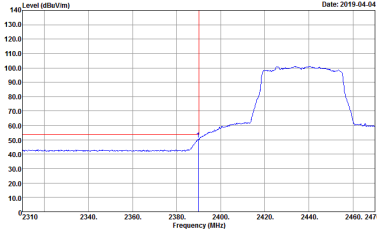
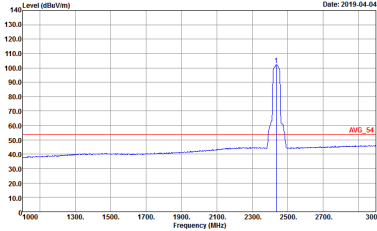
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                 |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH03 2422MHz - L                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                 |
|             | Vertical                                                                                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                                                                                     |
| <b>Peak</b> |  <p>Site : 03CH11-HY<br/> Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : 8N0846-03<br/> Setting : 10.5</p> |  <p>Site : 03CH11-HY<br/> Condition : PEAK_74 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : 8N0846-03<br/> Setting : 10.5</p> |
| <b>Avg.</b> |  <p>Site : 03CH11-HY<br/> Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : 8N0846-03<br/> Setting : 10.5</p>   |  <p>Site : 03CH11-HY<br/> Condition : AVG_54 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : 8N0846-03<br/> Setting : 10.5</p>   |



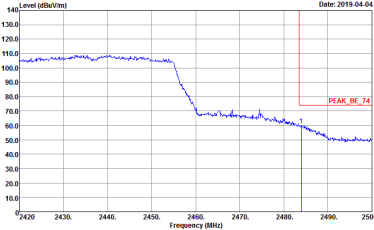
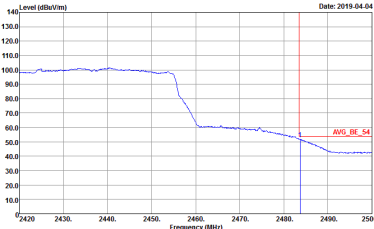
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                     |             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH03 2422MHz - R                                                                                                                                                                                                           |             |
|      | Vertical                                                                                                                                                                                                                                 | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p></div> | Left blank  |

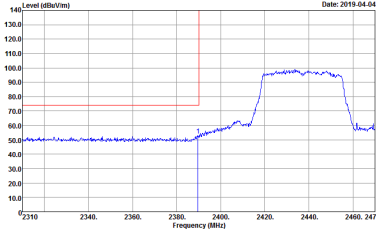
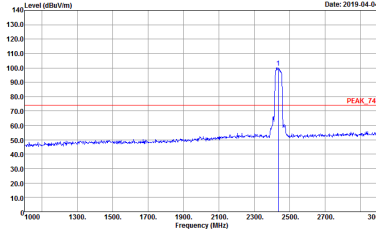
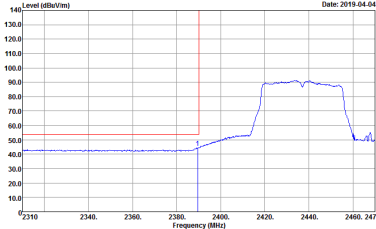
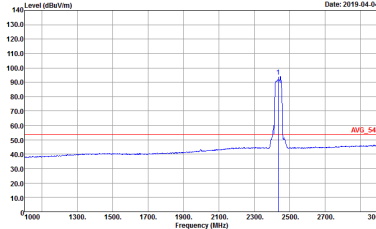




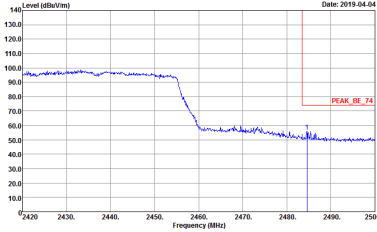
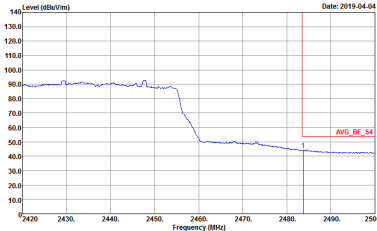
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                       |                                                                                                                                                                                                                                          |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VH40 CH06 2437MHz - L                                                                                                                                                                                                             |                                                                                                                                                                                                                                          |
|      | Horizontal                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                              |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p></div>  | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p></div>  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p></div> | <div><p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p></div> |

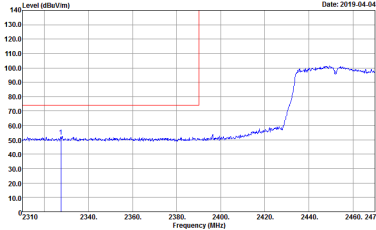
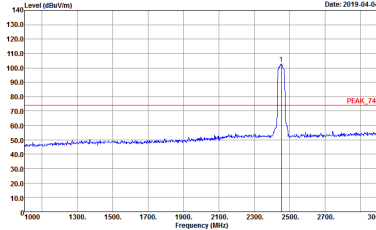
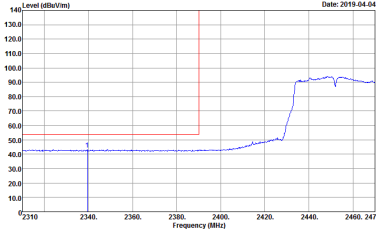
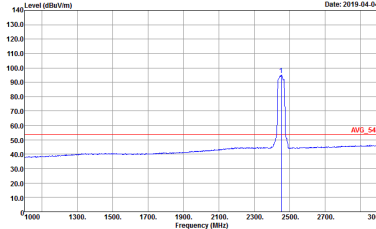


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                       |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH06 2437MHz - R                                                                                                                                                                                                             |             |
|      | Horizontal                                                                                                                                                                                                                                 | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div> | Left blank  |

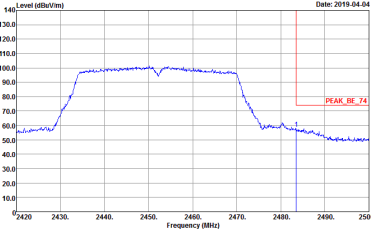
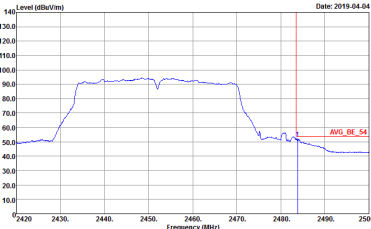
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                           |                                                                                                                                                                                                                              |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH06 2437MHz - L                                                                                                                                                                                                 |                                                                                                                                                                                                                              |
|             | Vertical                                                                                                                                                                                                                       | Fundamental                                                                                                                                                                                                                  |
| <b>Peak</b> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p>  |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p>  |
| <b>Avg.</b> |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p> |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p> |

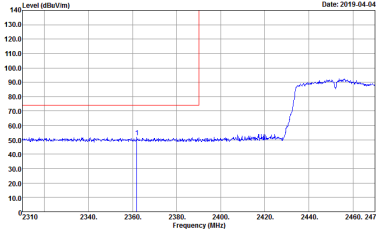
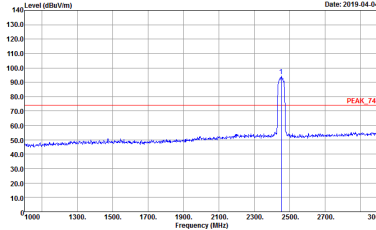
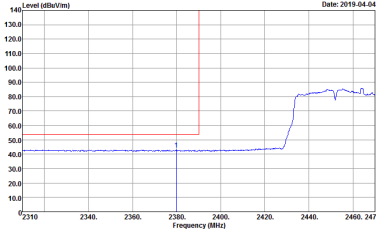
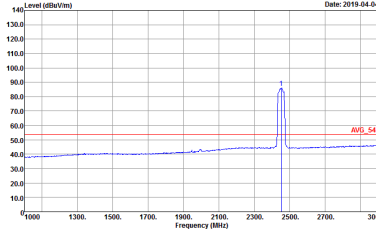


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                  |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH06 2437MHz - R                                                                                                                                                                                                                                                        |             |
|      | Vertical                                                                                                                                                                                                                                                                              | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div> | Left blank  |

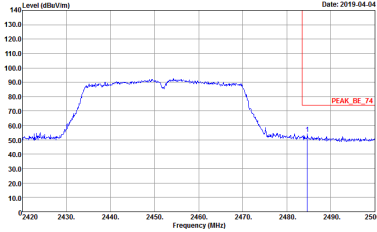
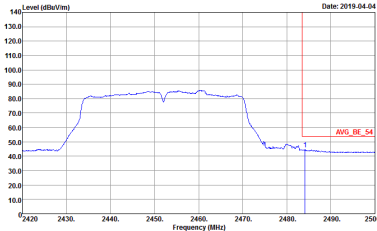
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH09 2452MHz - L                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                               |
|             | Horizontal                                                                                                                                                                                                                                                                                      | Fundamental                                                                                                                                                                                                                                                                                   |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 5.5         </p>  |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 5.5         </p>  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 5.5         </p> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_54 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 5.5         </p> |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                   |             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH09 2452MHz - R                                                                                                                                                                                                                                                         |             |
|      | Horizontal                                                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 5.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 5.5</p></div> | Left blank  |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH09 2452MHz - L                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                             |
|             | Vertical                                                                                                                                                                                                                                                                                      | Fundamental                                                                                                                                                                                                                                                                                 |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 5.5         </p>  |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_74 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 5.5         </p>  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 5.5         </p> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_54 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 5.5         </p> |



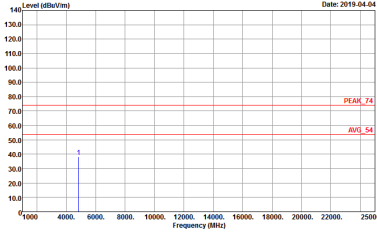
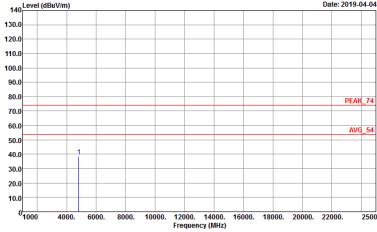
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                 |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH09 2452MHz - R                                                                                                                                                                                                                                                       |             |
|      | Vertical                                                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 5.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 5.5</p></div> | Left blank  |





## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT20 (Harmonic @ 3m)

| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                                        |                                                                                                                                                                                                                           |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 CH01 2412MHz                                                                                                                                                                                                |                                                                                                                                                                                                                           |
|              | Horizontal                                                                                                                                                                                                                 | Vertical                                                                                                                                                                                                                  |
| Peak<br>Avg. |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p> |



| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                              |                                                                                                                                                                                                |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 CH06 2437MHz                                                                                                                                                                      |                                                                                                                                                                                                |
|              | Horizontal                                                                                                                                                                                       | Vertical                                                                                                                                                                                       |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-04</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 20</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-04</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 91200-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 20</p></div> |

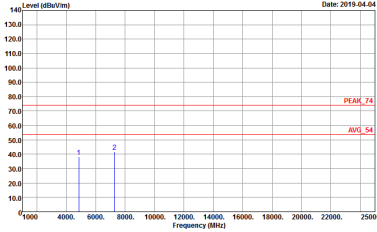
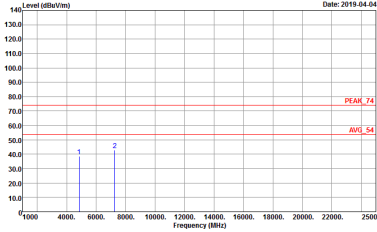


| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                            |                                                                                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 CH11 2462MHz                                                                                                                                                    |                                                                                                                                                                              |
|              | Horizontal                                                                                                                                                                     | Vertical                                                                                                                                                                     |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-04</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-04</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                                          |                                                                                                                                                                                                                             |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 CH03 2422MHz                                                                                                                                                                                                  |                                                                                                                                                                                                                             |
|              | Horizontal                                                                                                                                                                                                                   | Vertical                                                                                                                                                                                                                    |
| Peak<br>Avg. |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p> |

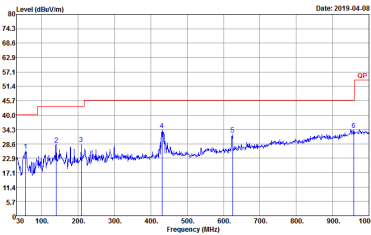
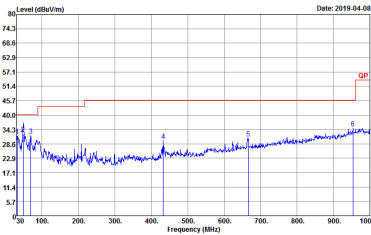


| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                                      |                                                                                                                                                                                                                        |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 CH06 2437MHz                                                                                                                                                                                              |                                                                                                                                                                                                                        |
|              | Horizontal                                                                                                                                                                                                               | Vertical                                                                                                                                                                                                               |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-04</p><p>Frequency (MHz)</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-04</p><p>Frequency (MHz)</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div> |



| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                               |                                                                                                                                                                                                 |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 CH09 2452MHz                                                                                                                                                                       |                                                                                                                                                                                                 |
|              | Horizontal                                                                                                                                                                                        | Vertical                                                                                                                                                                                        |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-04</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 5.5</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-04</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 5.5</p></div> |

**2.4GHz 2400~2483.5MHz**
**Emission below 1GHz**
**2.4GHz WIFI 802.11ac VHT20 (LF)**

| WIFI         | 2.4GHz 2400~2483.5MHz                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 LF                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                |
|              | Horizontal                                                                                                                                                                                                                                                      | Vertical                                                                                                                                                                                                                                                       |
| QP /<br>Peak |  <p>           Site : 03CH11-HY<br/>           Condition : QP 3m BE-LOG 6111D-LF_ETC HORIZONTAL<br/>           Detector : Peak<br/>           Project : 8N0846-03         </p> |  <p>           Site : 03CH11-HY<br/>           Condition : QP 3m BE-LOG 6111D-LF_ETC VERTICAL<br/>           Detector : Peak<br/>           Project : 8N0846-03         </p> |

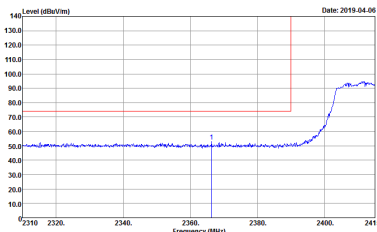
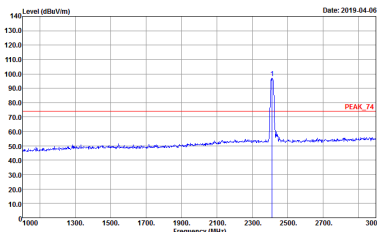
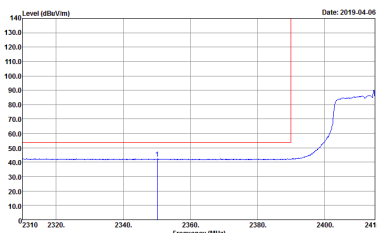
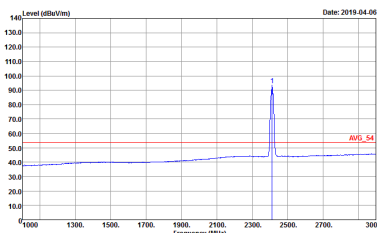


&lt;For Antenna 3&gt;

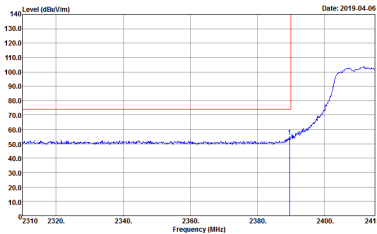
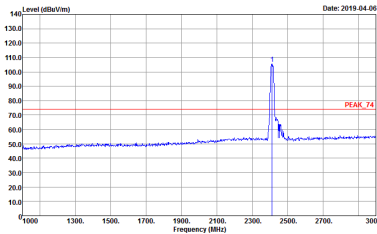
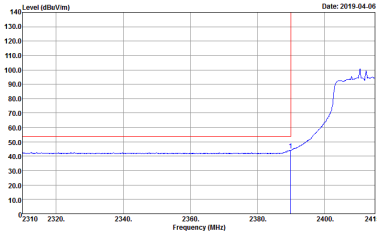
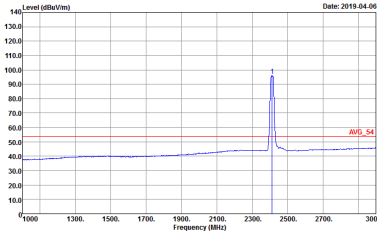
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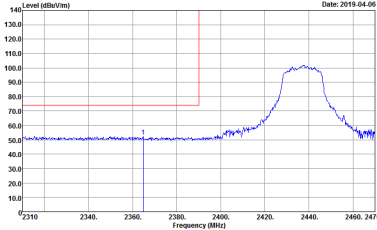
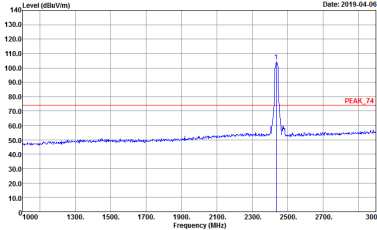
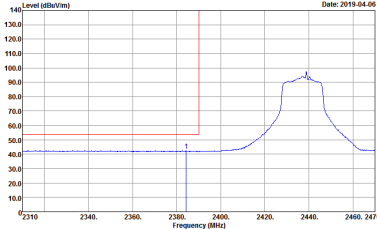
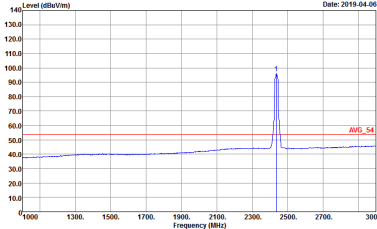
2.4GHz 2400~2483.5MHz

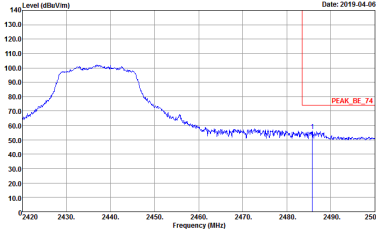
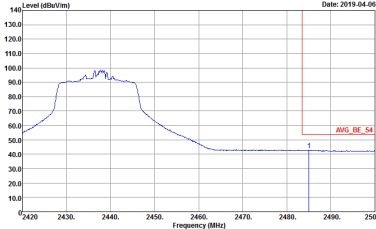
WIFI 802.11ac VHT20 (Band Edge @ 3m)

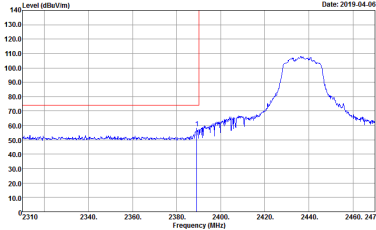
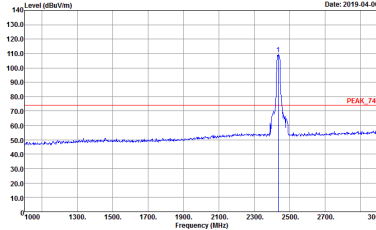
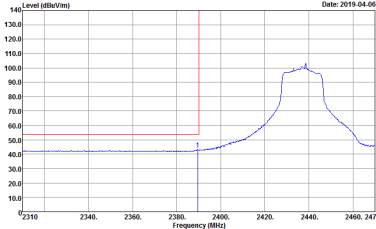
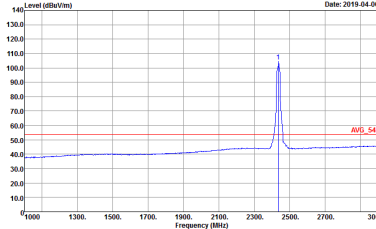
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VHT20 CH01 2412MHz                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                         |
|      | Horizontal                                                                                                                                                                                                                                                | Fundamental                                                                                                                                                                                                                                             |
| Peak |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03</p> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03</p> |
| Avg. |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000kHz VBW:1.000kHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03</p>   |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000kHz VBW:1.000kHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03</p>   |

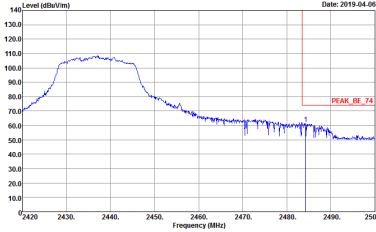
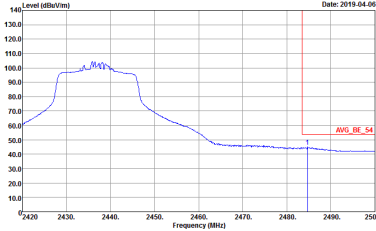


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                        |                                                                                                                                                                                                           |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VHT20 CH01 2412MHz                                                                                                                                                                                 |                                                                                                                                                                                                           |
|      | Vertical                                                                                                                                                                                                    | Fundamental                                                                                                                                                                                               |
| Peak |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p>  |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p>  |
| Avg. |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |

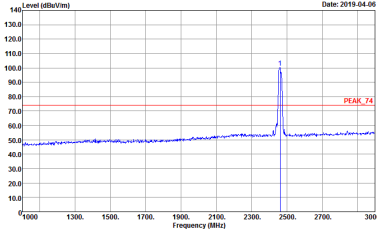
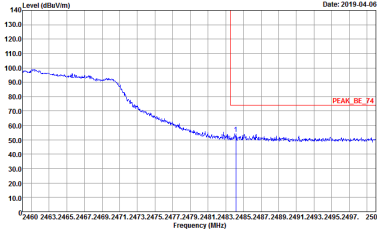
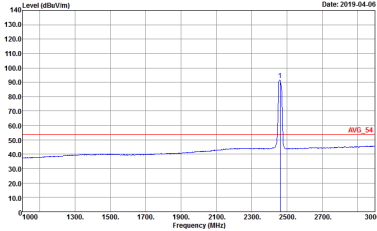
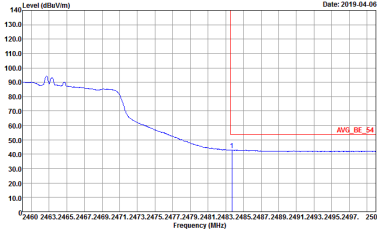
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                           |                                                                                                                                                                                                                                              |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VHT20 CH06 2437MHz - L                                                                                                                                                                                                                |                                                                                                                                                                                                                                              |
|             | Horizontal                                                                                                                                                                                                                                     | Fundamental                                                                                                                                                                                                                                  |
| <b>Peak</b> |  <p>Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03</p>  |  <p>Site : 03CH11-HY<br/>           Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03</p>  |
| <b>Avg.</b> |  <p>Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03</p> |  <p>Site : 03CH11-HY<br/>           Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03</p> |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                               |             |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|             | 802.11ac VH20 CH06 2437MHz - R                                                                                                                                                                                                                                     |             |
|             | Horizontal                                                                                                                                                                                                                                                         | Fundamental |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 8N0846-03         </p>  | Left blank  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 8N0846-03         </p> | Left blank  |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                           |                                                                                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH20 CH06 2437MHz - L                                                                                                                                                                                 |                                                                                                                                                                                                              |
|             | Vertical                                                                                                                                                                                                       | Fundamental                                                                                                                                                                                                  |
| <b>Peak</b> |  <p>Site : 03CH11-HY<br/> Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/> Detector : Peak<br/> Project : BN0846-03</p>  |  <p>Site : 03CH11-HY<br/> Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/> Detector : Peak<br/> Project : BN0846-03</p>  |
| <b>Avg.</b> |  <p>Site : 03CH11-HY<br/> Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/> Detector : Peak<br/> Project : BN0846-03</p> |  <p>Site : 03CH11-HY<br/> Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/> Detector : Peak<br/> Project : BN0846-03</p> |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                             |             |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|             | 802.11ac VH20 CH06 2437MHz - R                                                                                                                                                                                                                                   |             |
|             | Vertical                                                                                                                                                                                                                                                         | Fundamental |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 8N0846-03         </p>  | Left blank  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 8N0846-03         </p> | Left blank  |

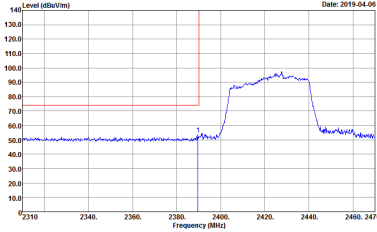
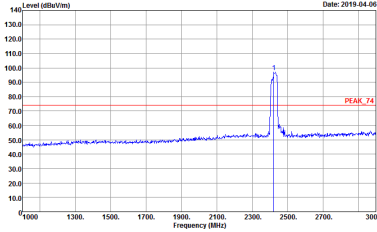
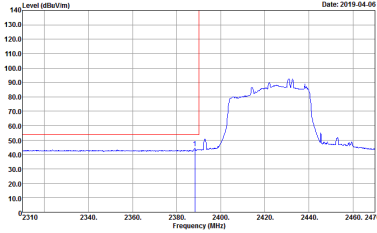
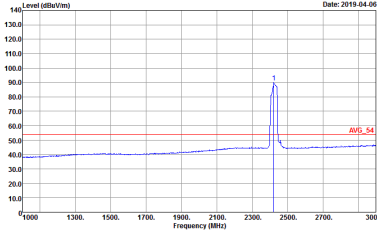


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                       |                                                                                                                                                                                                                |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VH20 CH11 2462MHz                                                                                                                                                                                 |                                                                                                                                                                                                                |
|      | Horizontal                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                    |
| Peak |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03</p>  |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03</p>  |
| Avg. |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |



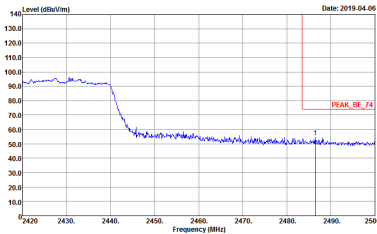
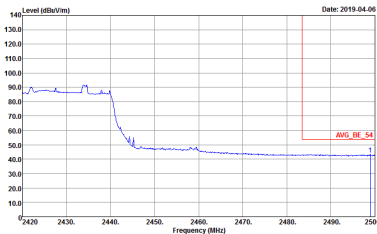
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                  |                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VH20 CH11 2462MHz                                                                                            |                                                                                                                          |
|      | Vertical                                                                                                              | Fundamental                                                                                                              |
| Peak | <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p> | <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |
| Avg. | <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p>  | <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p>  |

**2.4GHz 2400~2483.5MHz**
**WIFI 802.11ac VHT40 (Band Edge @ 3m)**

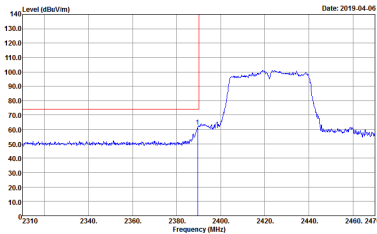
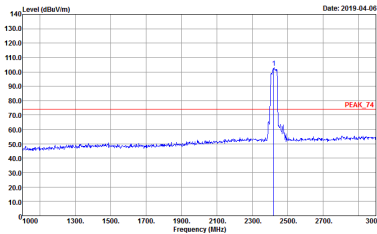
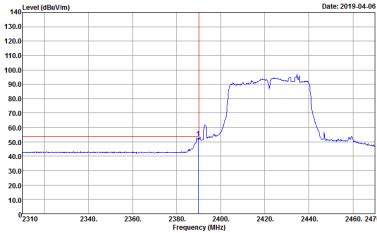
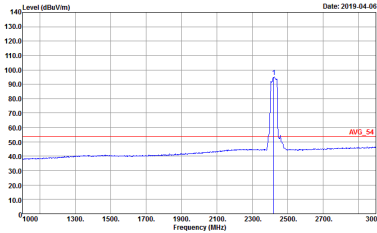
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                     |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VH40 CH03 2422MHz - L                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                     |
|      | Horizontal                                                                                                                                                                                                                                                                                                                                            | Fundamental                                                                                                                                                                                                                                                                                                                                         |
| Peak |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>           RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 14         </p> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>           RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 14         </p> |
| Avg. |  <p>           Site : 03CH11-HY<br/>           Condition : AV6_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>           RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 14         </p>   |  <p>           Site : 03CH11-HY<br/>           Condition : AV6_54 3m HORN 9120D-HF HORIZONTAL<br/>           RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 14         </p>   |



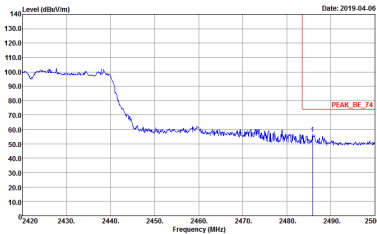
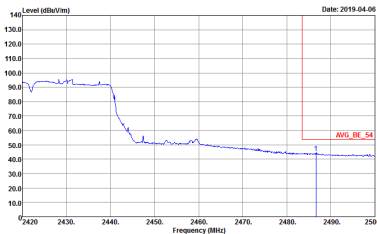


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                     |             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH03 2422MHz - R                                                                                                                                                                                                           |             |
|      | Horizontal                                                                                                                                                                                                                               | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p></div> | Left blank  |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                   |                                                                                                                                                                                                                                      |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VH40 CH03 2422MHz - L                                                                                                                                                                                                         |                                                                                                                                                                                                                                      |
|      | Vertical                                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                                          |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 14</p></div>  | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 14</p></div>  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 14</p></div> | <div><p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 14</p></div> |

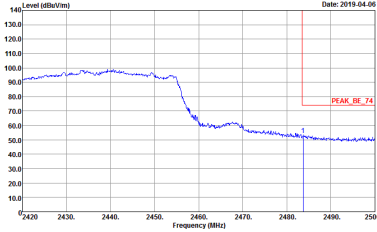
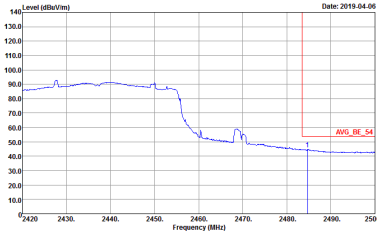


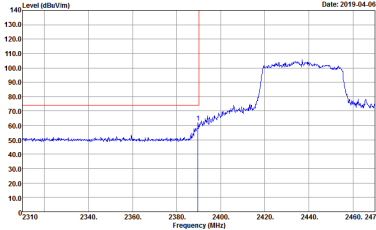
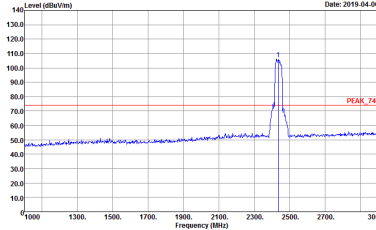
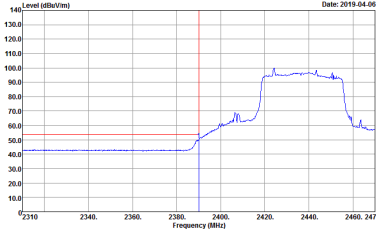
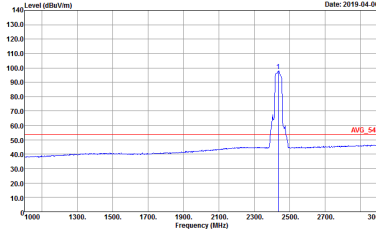
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                |             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH03 2422MHz - R                                                                                                                                                                                                                                                      |             |
|      | Vertical                                                                                                                                                                                                                                                                            | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p></div> | Left blank  |



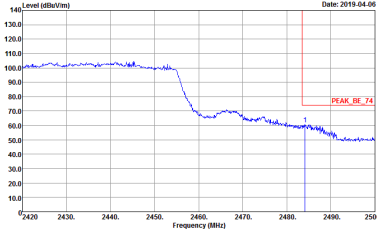
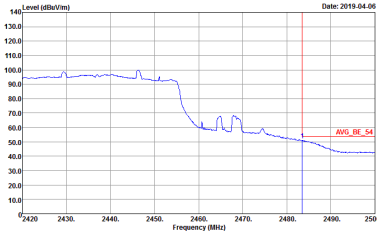
| WIFI |  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                        |                                                                                                                                          |
|------|--|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
|      |  | 802.11ac VH40 CH06 2437MHz - L                                                                                                              |                                                                                                                                          |
|      |  | Horizontal                                                                                                                                  | Fundamental                                                                                                                              |
| Peak |  | <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 17</p> | <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 17</p> |
| Avg. |  | <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 17</p>  | <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 17</p>  |

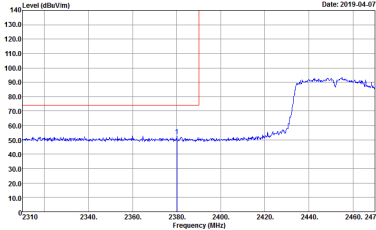
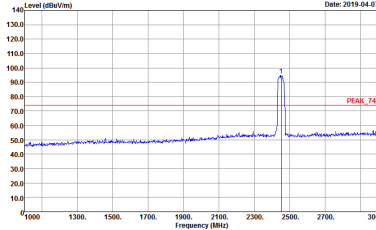
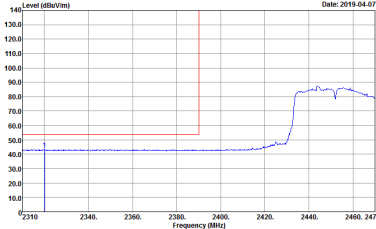
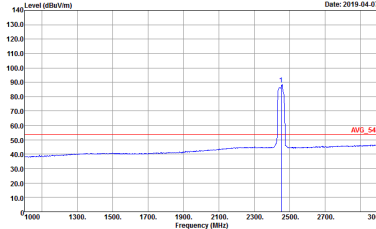


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                     |             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH06 2437MHz - R                                                                                                                                                                                                           |             |
|      | Horizontal                                                                                                                                                                                                                               | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 17</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 17</p></div> | Left blank  |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH06 2437MHz - L                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|             | Vertical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Fundamental                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Peak</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2437 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red vertical line marks the peak frequency.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 17</p>  |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2437 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red horizontal line marks the peak level at approximately 74 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_74 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 17</p>     |
| <b>Avg.</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing the average signal. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red vertical line marks the peak frequency.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 17</p> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing the average signal. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red horizontal line marks the average level at approximately 54 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_54 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 17</p> |

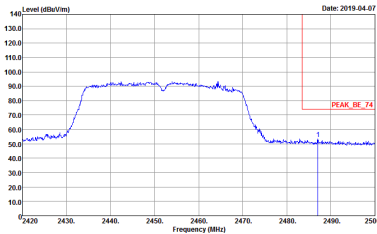
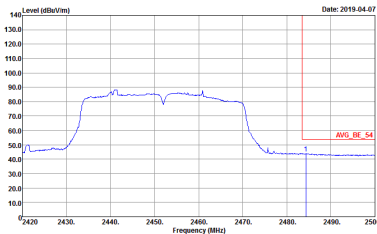


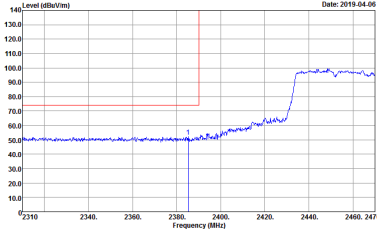
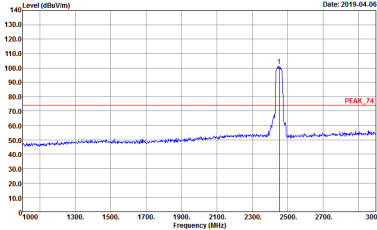
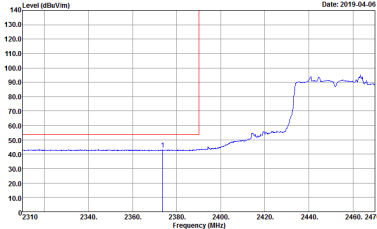
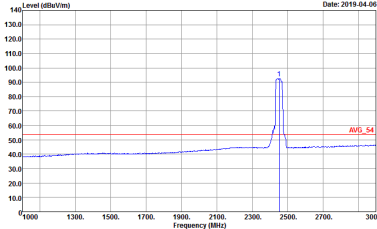
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                |             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH06 2437MHz - R                                                                                                                                                                                                                                                      |             |
|      | Vertical                                                                                                                                                                                                                                                                            | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 17</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 17</p></div> | Left blank  |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH09 2452MHz - L                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                |
|             | Horizontal                                                                                                                                                                                                                                                                                       | Fundamental                                                                                                                                                                                                                                                                                    |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 12.5         </p>  |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 12.5         </p>  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 12.5         </p> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : BN0846-03<br/>           Setting : 12.5         </p> |

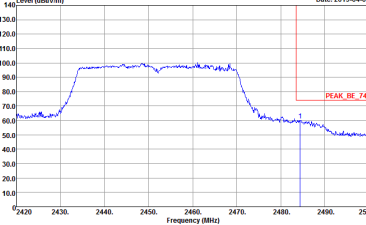
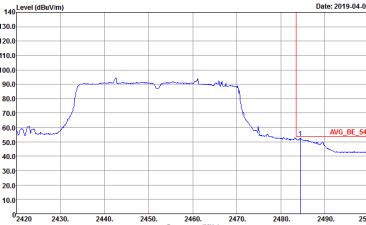




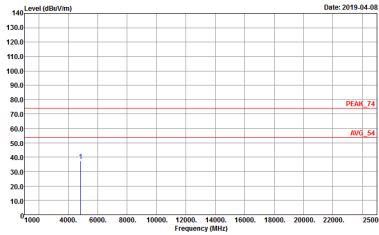
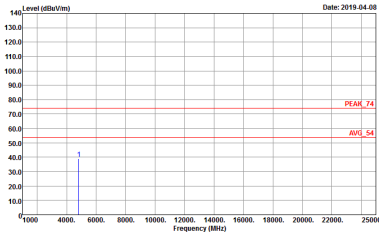
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                       |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH09 2452MHz - R                                                                                                                                                                                                             |             |
|      | Horizontal                                                                                                                                                                                                                                 | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div> | Left blank  |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH09 2452MHz - L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|             | Vertical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Fundamental                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Peak</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red line indicates the peak level at approximately 100 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 12.5</p>               |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line indicates the peak level at approximately 100 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_74 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 12.5</p>               |
| <b>Avg.</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing an average level at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red line indicates the average level at approximately 100 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 12.5</p> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing an average level at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line indicates the average level at approximately 100 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_54 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 12.5</p> |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                  |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH09 2452MHz - R                                                                                                                                                                                                                                                        |             |
|      | Vertical                                                                                                                                                                                                                                                                              | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div> | Left blank  |

**2.4GHz 2400~2483.5MHz****WIFI 802.11ac VHT20 (Harmonic @ 3m)**

| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                       |                                                                                                                                                                                                          |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 CH01 2412MHz                                                                                                                                                                               |                                                                                                                                                                                                          |
|              | Horizontal                                                                                                                                                                                                | Vertical                                                                                                                                                                                                 |
| Peak<br>Avg. |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |



| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                             |                                                                                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 CH06 2437MHz                                                                                                                                                     |                                                                                                                                                                               |
|              | Horizontal                                                                                                                                                                      | Vertical                                                                                                                                                                      |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |

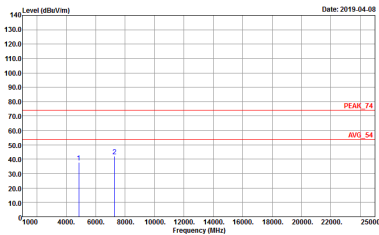
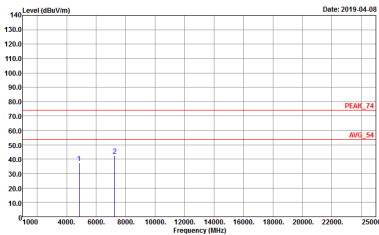


| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                  |                                                                                                                                                                                                    |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 CH11 2462MHz                                                                                                                                                                          |                                                                                                                                                                                                    |
|              | Horizontal                                                                                                                                                                                           | Vertical                                                                                                                                                                                           |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Frequency (MHz)</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Frequency (MHz)</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                       |                                                                                                                                                                                                          |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 CH03 2422MHz                                                                                                                                                                               |                                                                                                                                                                                                          |
|              | Horizontal                                                                                                                                                                                                | Vertical                                                                                                                                                                                                 |
| Peak<br>Avg. |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |



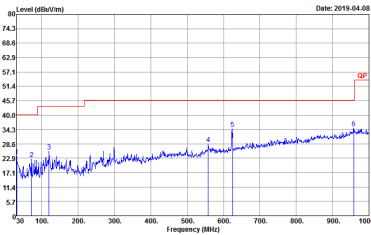
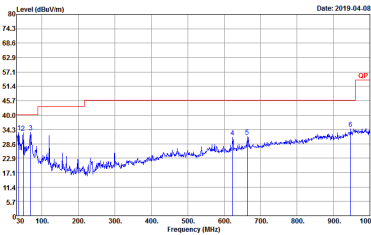
| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                            |                                                                                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 CH06 2437MHz                                                                                                                                                    |                                                                                                                                                                              |
|              | Horizontal                                                                                                                                                                     | Vertical                                                                                                                                                                     |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |





| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                   |                                                                                                                                                                                                     |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 CH09 2452MHz                                                                                                                                                                           |                                                                                                                                                                                                     |
|              | Horizontal                                                                                                                                                                                            | Vertical                                                                                                                                                                                            |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Frequency (MHz)</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Frequency (MHz)</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |

**2.4GHz 2400~2483.5MHz**
**Emission below 1GHz**
**2.4GHz WIFI 802.11ac VHT40 (LF)**

| WIFI         | 2.4GHz 2400~2483.5MHz                                                                                                                                                                                      |                                                                                                                                                                                                           |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 LF                                                                                                                                                                                          |                                                                                                                                                                                                           |
|              | Horizontal                                                                                                                                                                                                 | Vertical                                                                                                                                                                                                  |
| QP /<br>Peak |  <p>Site : 03CH11-HY<br/>Condition : QP 3m BE-LOG 6111D-LF_ETC HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |  <p>Site : 03CH11-HY<br/>Condition : QP 3m BE-LOG 6111D-LF_ETC VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |

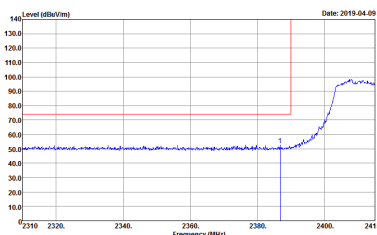
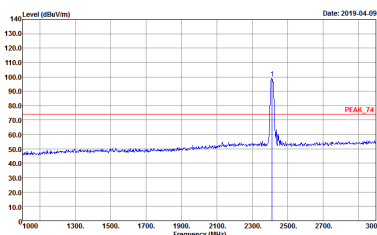
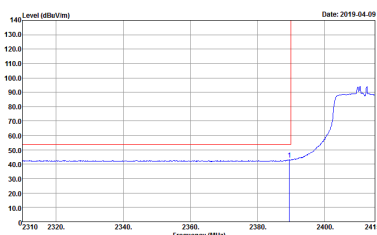
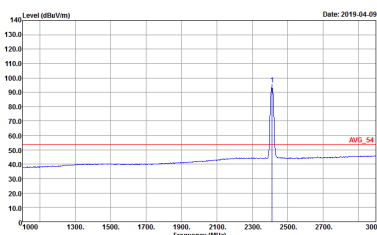


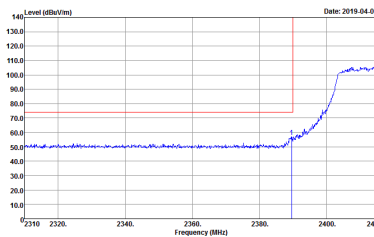
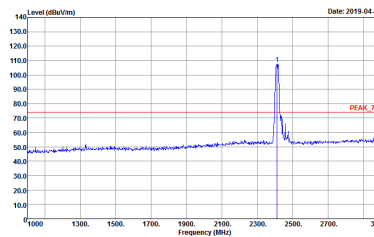
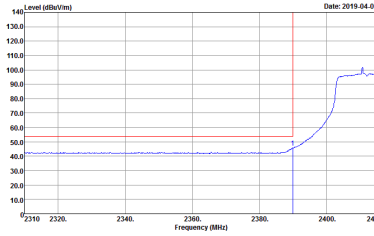
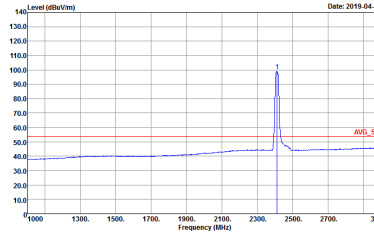
&lt;For Antenna 4&gt;

&lt;Chain 1+2&gt;

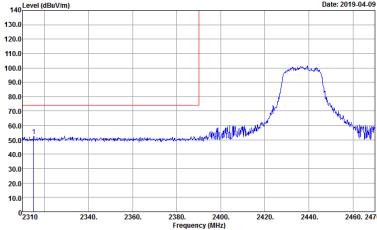
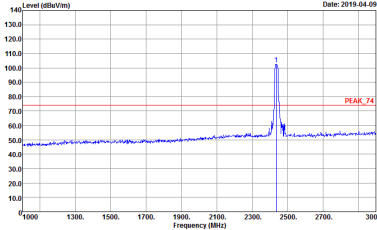
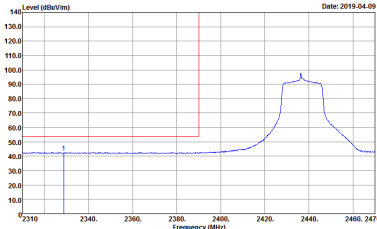
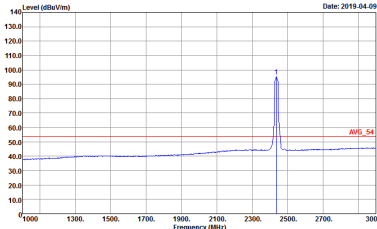
2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

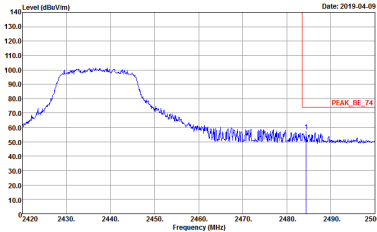
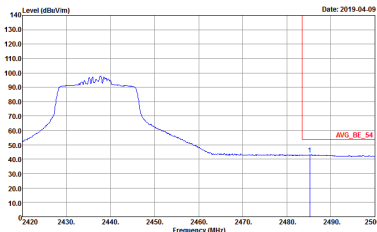
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                           |                                                                                                                                                                                                                              |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VHT20 CH01 2412MHz                                                                                                                                                                                                    |                                                                                                                                                                                                                              |
|      | Horizontal                                                                                                                                                                                                                     | Fundamental                                                                                                                                                                                                                  |
| Peak |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p>  |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p>  |
| Avg. |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p> |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 14</p> |

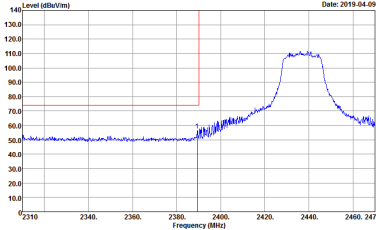
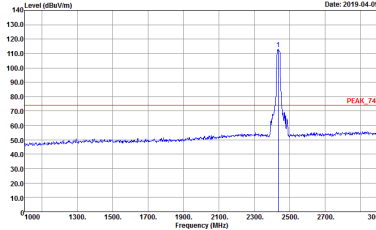
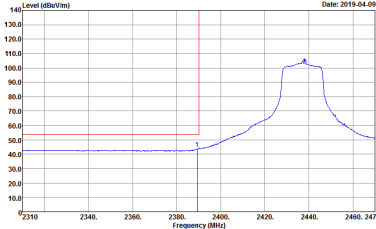
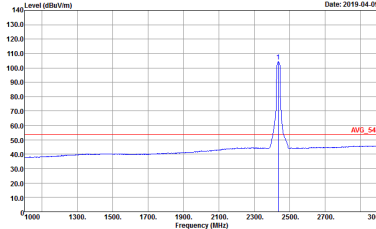
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VHT20 CH01 2412MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|             | Vertical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Fundamental                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Peak</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2415 MHz. A red line indicates the noise floor at approximately 50 dBuV/m. The signal level rises sharply starting around 2390 MHz, reaching a plateau of about 100 dBuV/m at 2412 MHz.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 14</p> |  <p>Level (dBuV/m) vs Frequency (MHz) plot. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1900 to 3000 MHz. A red line indicates the noise floor at approximately 50 dBuV/m. A sharp peak is visible at 2412 MHz, reaching a level of about 100 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 14</p> |
| <b>Avg.</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2415 MHz. A red line indicates the noise floor at approximately 50 dBuV/m. The signal level rises gradually starting around 2390 MHz, reaching a plateau of about 100 dBuV/m at 2412 MHz.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/> : RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 14</p>  |  <p>Level (dBuV/m) vs Frequency (MHz) plot. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1900 to 3000 MHz. A red line indicates the noise floor at approximately 50 dBuV/m. A broad peak is visible at 2412 MHz, reaching a level of about 100 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/> : RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 14</p>    |



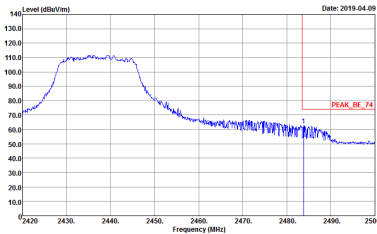
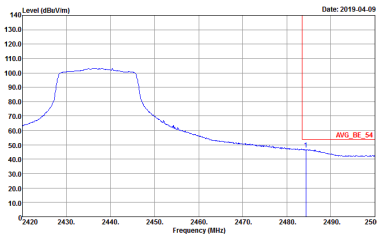
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                          |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VHT20 CH06 2437MHz - L                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                          |
|      | Horizontal                                                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                                                              |
| Peak |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : Z0</p> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : Z0</p> |
| Avg. |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : Z0</p>    |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : Z0</p>    |



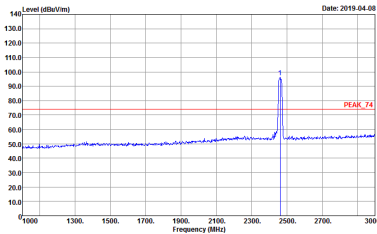
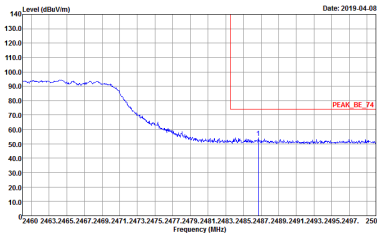
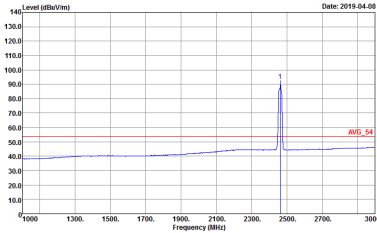
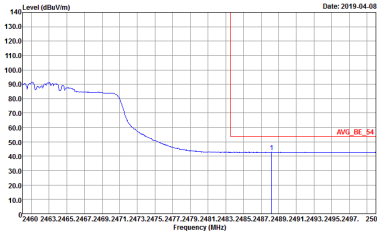
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                 |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH20 CH06 2437MHz - R                                                                                                                                                                                                                                                       |             |
|      | Horizontal                                                                                                                                                                                                                                                                           | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : Z0</p></div> | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : Z0</p></div>    | Left blank  |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH20 CH06 2437MHz - L                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                               |
|             | Vertical                                                                                                                                                                                                                                                                        | Fundamental                                                                                                                                                                                                                                                                   |
| <b>Peak</b> |  <p>Site : 03CH11-HY<br/> Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 20</p> |  <p>Site : 03CH11-HY<br/> Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 20</p> |
| <b>Avg.</b> |  <p>Site : 03CH11-HY<br/> Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/> : RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 20</p>    |  <p>Site : 03CH11-HY<br/> Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/> : RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 20</p>    |

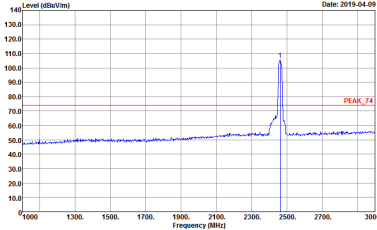
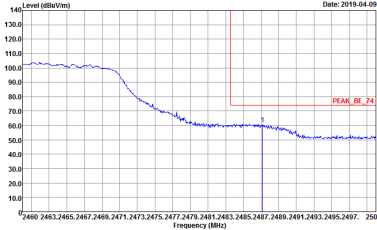
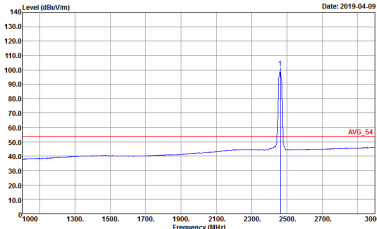
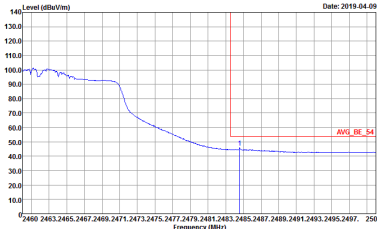


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                               |             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH20 CH06 2437MHz - R                                                                                                                                                                                                                                                     |             |
|      | Vertical                                                                                                                                                                                                                                                                           | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 20</p></div> | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:1000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 20</p></div>    | Left blank  |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                       |                                                                                                                                                                                                                |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VH20 CH11 2462MHz                                                                                                                                                                                 |                                                                                                                                                                                                                |
|      | Horizontal                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                    |
| Peak |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03</p>  |  <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03</p>  |
| Avg. |  <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |  <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VH20 CH11 2462MHz                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                   |
|      | Vertical                                                                                                                                                                                                                                                                                                                   | Fundamental                                                                                                                                                                                                                                                                                                                       |
| Peak |  <p>Level (dBm/100kHz) vs Frequency (MHz) plot showing a sharp peak at 2462 MHz. The peak is labeled 'PEAK_74'.</p> <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |  <p>Level (dBm/100kHz) vs Frequency (MHz) plot showing a sharp peak at 2462 MHz. The peak is labeled 'PEAK_BE_74'.</p> <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |
| Avg. |  <p>Level (dBm/100kHz) vs Frequency (MHz) plot showing a sharp peak at 2462 MHz. The peak is labeled 'AVG_54'.</p> <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |  <p>Level (dBm/100kHz) vs Frequency (MHz) plot showing a sharp peak at 2462 MHz. The peak is labeled 'AVG_BE_54'.</p> <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03</p> |

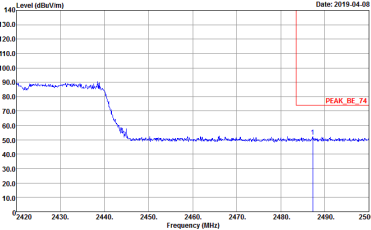
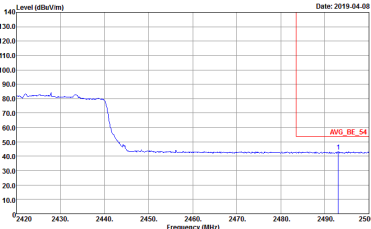


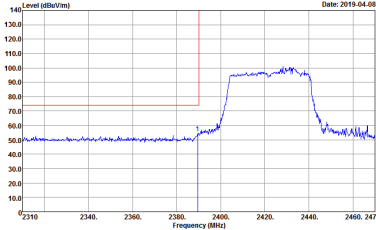
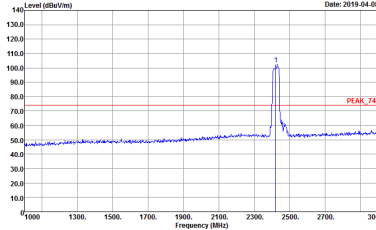
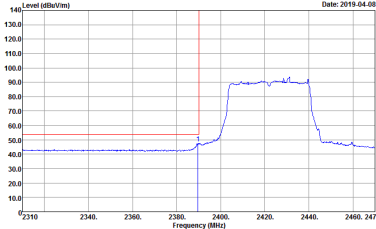
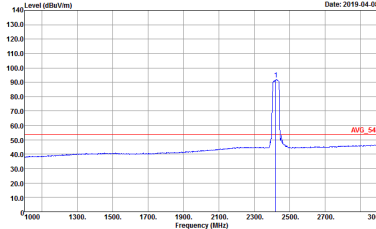
## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (Band Edge @ 3m)

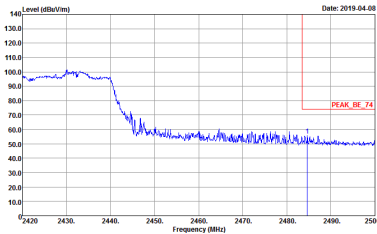
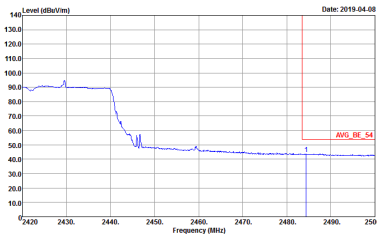
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                       |                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VHT40 CH03 2422MHz - L                                                                                                                                                            |                                                                                                                                                                                         |
|      | Horizontal                                                                                                                                                                                 | Fundamental                                                                                                                                                                             |
| Peak | <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p> | <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p> |
| Avg. | <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p>     | <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL<br/>RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p>     |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                       |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH03 2422MHz - R                                                                                                                                                                                                             |             |
|      | Horizontal                                                                                                                                                                                                                                 | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p></div> | Left blank  |

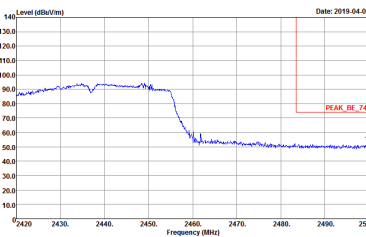
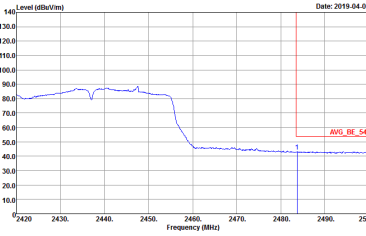
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                              |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH03 2422MHz - L                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                              |
|             | Vertical                                                                                                                                                                                                                                                                                       | Fundamental                                                                                                                                                                                                                                                                                  |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 10.5         </p>  |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_74 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 10.5         </p>  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 10.5         </p> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_54 3m HORN 91200-HF VERTICAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 10.5         </p> |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                  |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH03 2422MHz - R                                                                                                                                                                                                                                                        |             |
|      | Vertical                                                                                                                                                                                                                                                                              | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 10.5</p></div> | Left blank  |

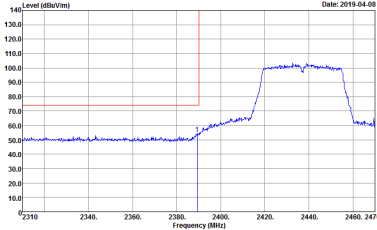
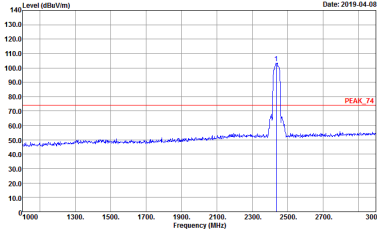
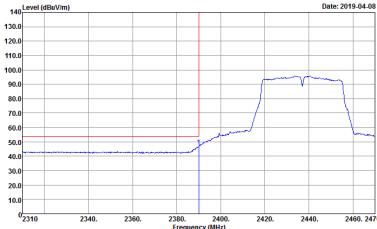
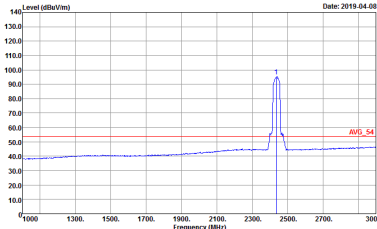


| WIFI |  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                          |                                                                                                                                            |
|------|--|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|      |  | 802.11ac VH40 CH06 2437MHz - L                                                                                                                |                                                                                                                                            |
|      |  | Horizontal                                                                                                                                    | Fundamental                                                                                                                                |
| Peak |  | <p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p> | <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p> |
| Avg. |  | <p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p>  | <p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 91200-HF HORIZONTAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p>  |

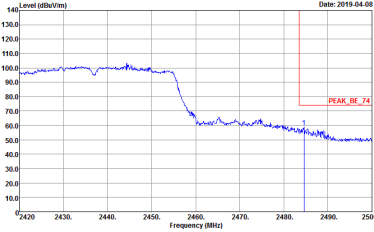
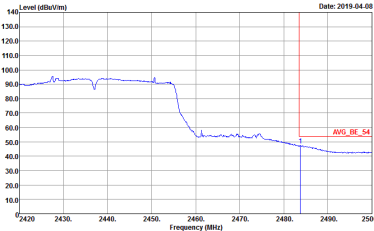
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                             |             |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|             | 802.11ac VH40 CH06 2437MHz - R                                                                                                                                                                                                                                                                   |             |
|             | Horizontal                                                                                                                                                                                                                                                                                       | Fundamental |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 12.5         </p>  | Left blank  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 12.5         </p> | Left blank  |

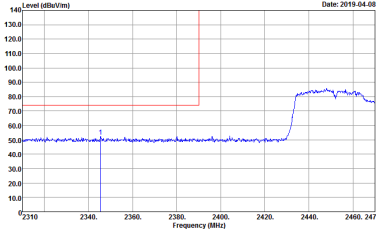
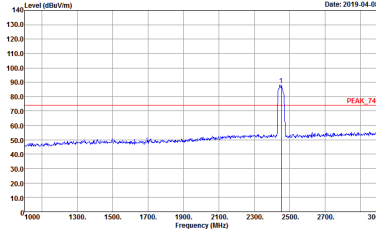
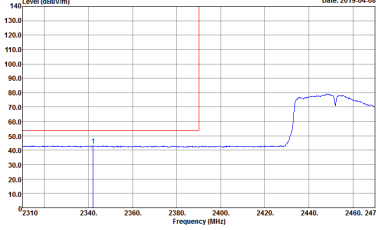
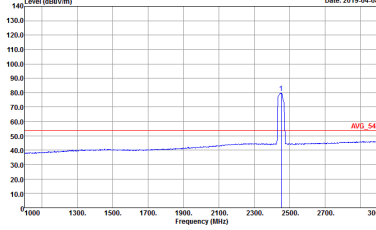


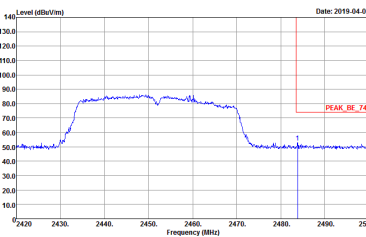
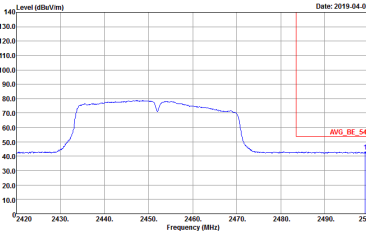


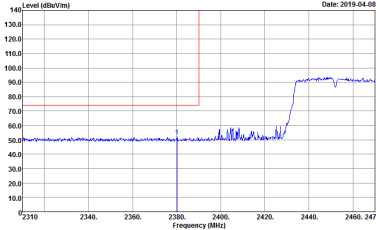
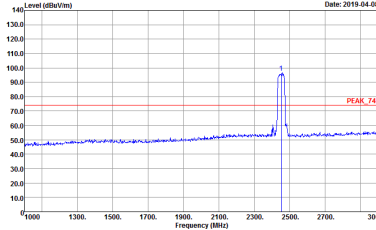
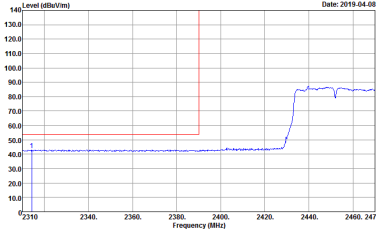
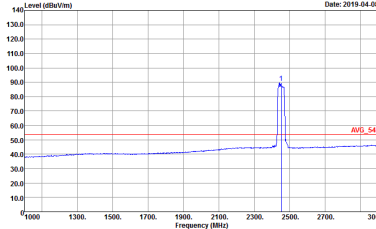
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                     |                                                                                                                                                                                                                                        |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 802.11ac VH40 CH06 2437MHz - L                                                                                                                                                                                                           |                                                                                                                                                                                                                                        |
|      | Vertical                                                                                                                                                                                                                                 | Fundamental                                                                                                                                                                                                                            |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p></div>  | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p></div>  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p></div> | <div><p>Site : 03CH11-HY<br/>Condition : AVG_54 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : BN0846-03<br/>Setting : 12.5</p></div> |



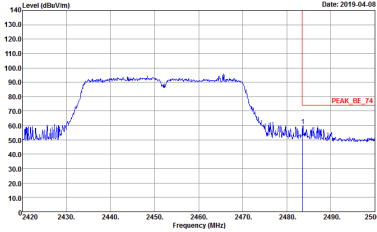
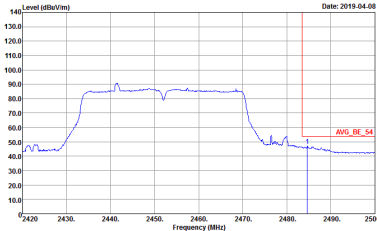
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                 |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH06 2437MHz - R                                                                                                                                                                                                                                                       |             |
|      | Vertical                                                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div> | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 12.5</p></div>   | Left blank  |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH09 2452MHz - L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|             | Horizontal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Fundamental                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Peak</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red line indicates the peak level at approximately 135 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 5.5</p>           |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line indicates the peak level at approximately 85 dBuV/m, labeled 'PEAK 74'.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 5.5</p>           |
| <b>Avg.</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing an average level at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red line indicates the average level at approximately 75 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/> : RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 5.5</p> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing an average level at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line indicates the average level at approximately 65 dBuV/m, labeled 'AVG 54'.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_54 3m HORN 91200-HF HORIZONTAL<br/> : RBW:1000.000KHz VBW:3.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 5.5</p> |

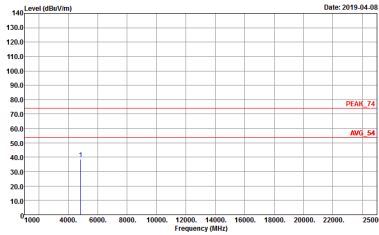
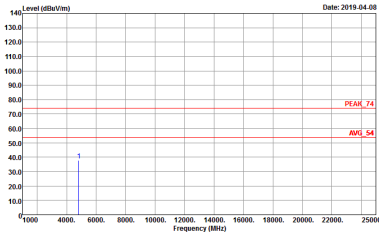
| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                            |             |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|             | 802.11ac VH40 CH09 2452MHz - R                                                                                                                                                                                                                                                                  |             |
|             | Horizontal                                                                                                                                                                                                                                                                                      | Fundamental |
| <b>Peak</b> |  <p>           Site : 03CH11-HY<br/>           Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 5.5         </p>  | Left blank  |
| <b>Avg.</b> |  <p>           Site : 03CH11-HY<br/>           Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL<br/>           Detector : Peak<br/>           Project : 8N0846-03<br/>           Setting : 5.5         </p> | Left blank  |

| WIFI        | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | 802.11ac VH40 CH09 2452MHz - L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|             | Vertical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Fundamental                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Peak</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing a sharp peak at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red line indicates the peak level at approximately 135 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 5.5</p> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing a sharp peak at 2452 MHz. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line indicates the peak level at approximately 135 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : PEAK_74 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 5.5</p> |
| <b>Avg.</b> |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing the average signal. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2310 to 2470 MHz. A red line indicates the average level at approximately 135 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 5.5</p>   |  <p>Level (dBuV/m) vs Frequency (MHz) plot showing the average signal. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red line indicates the average level at approximately 135 dBuV/m.</p> <p>Site : 03CH11-HY<br/> Condition : AVG_54 3m HORN 91200-HF VERTICAL<br/> : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/> Detector : Peak<br/> Project : BN0846-03<br/> Setting : 5.5</p>   |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                                                                 |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
|      | 802.11ac VH40 CH09 2452MHz - R                                                                                                                                                                                                                                                       |             |
|      | Vertical                                                                                                                                                                                                                                                                             | Fundamental |
| Peak | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 5.5</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH11-HY<br/>Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto<br/>Detector : Peak<br/>Project : 8N0846-03<br/>Setting : 5.5</p></div> | Left blank  |

**2.4GHz 2400~2483.5MHz****WIFI 802.11ac VHT20 (Harmonic @ 3m)**

| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                       |                                                                                                                                                                                                          |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 CH01 2412MHz                                                                                                                                                                               |                                                                                                                                                                                                          |
|              | Horizontal                                                                                                                                                                                                | Vertical                                                                                                                                                                                                 |
| Peak<br>Avg. |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |  <p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |



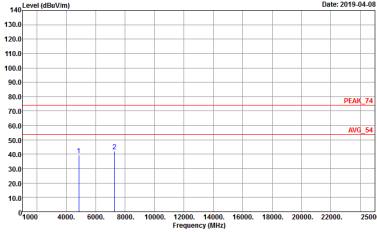
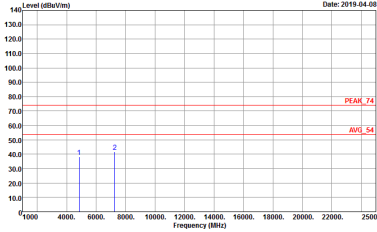
| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                            |                                                                                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 CH06 2437MHz                                                                                                                                                    |                                                                                                                                                                              |
|              | Horizontal                                                                                                                                                                     | Vertical                                                                                                                                                                     |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |





| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                            |                                                                                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT20 CH11 2462MHz                                                                                                                                                    |                                                                                                                                                                              |
|              | Horizontal                                                                                                                                                                     | Vertical                                                                                                                                                                     |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |

**2.4GHz 2400~2483.5MHz****WIFI 802.11ac VHT40 (Harmonic @ 3m)**

| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                                 |                                                                                                                                                                                                                    |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 CH03 2422MHz                                                                                                                                                                                         |                                                                                                                                                                                                                    |
|              | Horizontal                                                                                                                                                                                                          | Vertical                                                                                                                                                                                                           |
| Peak<br>Avg. | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Site : 03CH11-HY<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |



| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                                                  |                                                                                                                                                                                                    |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 CH06 2437MHz                                                                                                                                                                          |                                                                                                                                                                                                    |
|              | Horizontal                                                                                                                                                                                           | Vertical                                                                                                                                                                                           |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Frequency (MHz)</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Frequency (MHz)</p><p>Site : 03CH11-1F<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |



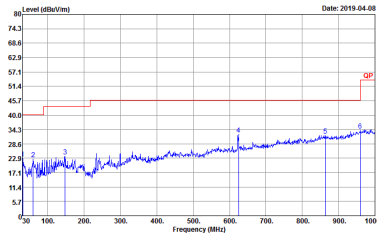
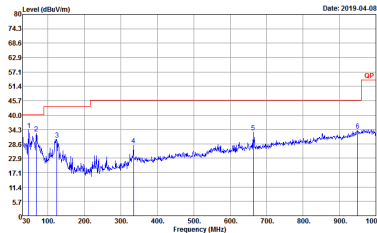
| WIFI         | 2.4GHz 2400~2483.5MHz Harmonic @ 3m                                                                                                                                             |                                                                                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 CH09 2452MHz                                                                                                                                                     |                                                                                                                                                                               |
|              | Horizontal                                                                                                                                                                      | Vertical                                                                                                                                                                      |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2019-04-08</p><p>Site : 03CH11-14Y<br/>Condition : PEAK_74 3m HORN 9120D-HF VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p></div> |



2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11ac VHT40 (LF)

| WIFI         | 2.4GHz 2400~2483.5MHz                                                                                                                                                                                      |                                                                                                                                                                                                           |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 802.11ac VHT40 LF                                                                                                                                                                                          |                                                                                                                                                                                                           |
|              | Horizontal                                                                                                                                                                                                 | Vertical                                                                                                                                                                                                  |
| QP /<br>Peak |  <p>Site : 03CH11-HY<br/>Condition : QP 3m BE-LOG 6111D-LF_ETC HORIZONTAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |  <p>Site : 03CH11-HY<br/>Condition : QP 3m BE-LOG 6111D-LF_ETC VERTICAL<br/>Detector : Peak<br/>Project : 8N0846-03</p> |