

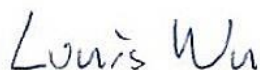


# FCC CO-LOCATION RADIO TEST REPORT

FCC ID : IHDT56AA6  
Equipment : Wearable Cellular Device  
Brand Name : Motorola  
Model Name : XT2209-1  
Applicant : Motorola Mobility, LLC  
222 W Merchandise Mart Plaza, Suite  
1800, Chicago, IL 60654, United States  
Manufacturer : Motorola Mobility, LLC  
222 W Merchandise Mart Plaza, Suite  
1800, Chicago, IL 60654, United States  
Standard : FCC Part 15 Subpart E §15.407

The product was received on Oct. 25, 2021 and testing was performed from Nov. 24, 2021 to Nov. 24, 2021. We, Sporton International Inc. Wensan 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 test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.



Approved by: Louis Wu

**Sporton International Inc. Wensan Laboratory**

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan

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## History of this test report

| Report No. | Version | Description                                                                                                                                      | Issued Date   |
|------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| FR1O2008F  | 01      | Initial issue of report                                                                                                                          | Dec. 06, 2021 |
| FR1O2008F  | 02      | 1. Revise typo in summary<br>2. Revise product specification of equipment under test in section 1.2<br>3. Revise test mode remark in section 2.2 | Dec. 08, 2021 |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |
|            |         |                                                                                                                                                  |               |



## Summary of Test Result

| Report Clause | Ref Std. Clause     | Test Items          | Result (PASS/FAIL) | Remark                                  |
|---------------|---------------------|---------------------|--------------------|-----------------------------------------|
| 3.1           | 15.407(b)           | Unwanted Emissions  | Pass               | 3.14 dB under the limit at 2483.530 MHz |
| 3.2           | 15.203<br>15.407(a) | Antenna Requirement | Pass               | -                                       |

**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: Keven Cheng**

**Report Producer: Cindy Liu**

# 1 General Description

## 1.1 Product Feature of Equipment Under Test

| Product Feature                 |                                                                                                                                           |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment                       | Wearable Cellular Device                                                                                                                  |
| Brand Name                      | Motorola                                                                                                                                  |
| Model Name                      | XT2209-1                                                                                                                                  |
| FCC ID                          | IHDT56AA6                                                                                                                                 |
| IMEI Code                       | 356636550004429                                                                                                                           |
| EUT supports Radios application | LTE/5G NR/GNSS<br>WLAN 11a/b/g/n HT20/HT40<br>WLAN 11ac VHT20/VHT40/VHT80/VHT160<br>WLAN 11ax HE20/HE40/HE80/HE160<br>Bluetooth BR/EDR/LE |
| HW Version                      | EVT1                                                                                                                                      |
| EUT Stage                       | Identical Prototype                                                                                                                       |

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

| Accessory List |              |          |
|----------------|--------------|----------|
| Battery        | Brand Name : | Motorola |
|                | Model Name : | NR70     |

## 1.2 Product Specification of Equipment Under Test

| Product Specification is subject to this standard |                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tx/Rx Frequency Range                             | 2400 MHz ~ 2483.5 MHz<br>5150 MHz ~ 5250 MHz                                                                                                                                                                                                                                     |
| Antenna Type / Gain                               | <2400 MHz ~ 2483.5 MHz><br>Ant. 4 : Printed ILA Antenna Type with gain -4.0 dBi<br>Ant. 5 : Printed ILA Antenna Type with gain -5.6 dBi<br><5150 MHz ~ 5250 MHz><br>Ant. 4 : Printed ILA Antenna Type with gain -0.6 dBi<br>Ant. 5 : Printed ILA Antenna Type with gain -2.5 dBi |
| Type of Modulation                                | Bluetooth LE : GFSK<br>802.11ax : OFDMA<br>(BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)                                                                                                                                                                                      |

**Note:** The above EUT's information is declared by manufacturer. Please refer to Comments and Explanations in report summary.

## 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. Wensan Laboratory                                                                                         |
| Test Site Location | No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan<br>TEL: +886-3-327-0868<br>FAX: +886-3-327-0855 |
| Test Site No.      | <b>Sporton Site No.</b><br>03CH15-HY                                                                                                 |

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

FCC designation No.: TW3786

## 1.5 Applicable Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

**Remark:**

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

## 2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). The measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find (X Plane for Mode 1 and Mode 3; Y Plane for Mode 2) as worst plane.

### 2.1 Carrier Frequency and Channel

| 2400-2483.5 MHz      |             |               |             | 5150-5250 MHz |             |
|----------------------|-------------|---------------|-------------|---------------|-------------|
| Bluetooth - LE 2Mbps |             | 802.11ax HE40 |             | 802.11ax HE20 |             |
| Channel              | Freq. (MHz) | Channel       | Freq. (MHz) | Channel       | Freq. (MHz) |
| 39                   | 2480        | 09            | 2452        | 36            | 5180        |

### 2.2 Test Mode

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

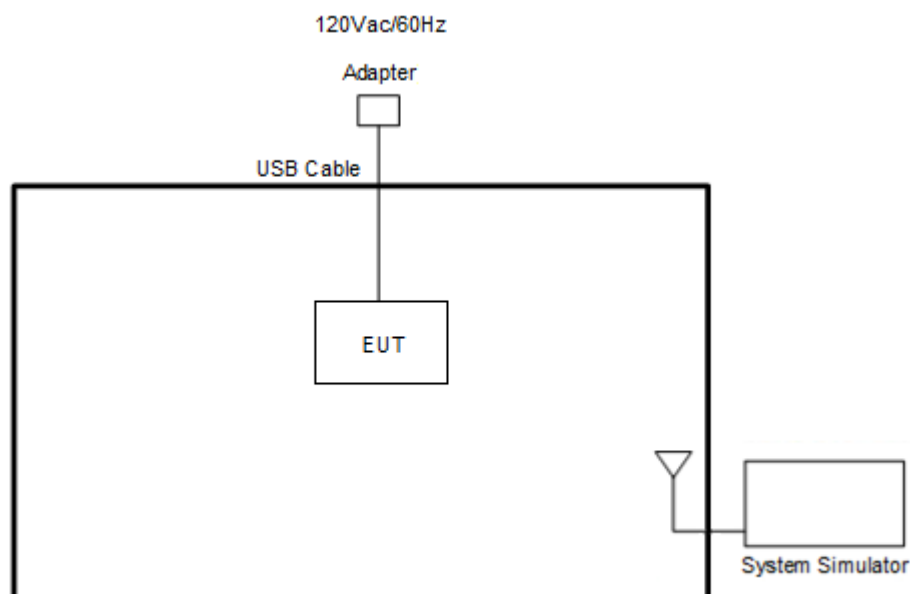
<Co-Location>

| Test Mode | Modulation                                                                                         | Plane | Data Rate                |
|-----------|----------------------------------------------------------------------------------------------------|-------|--------------------------|
| Mode 1    | WLAN 2.4GHz 802.11ax HE40 for Ant. 5 +<br>WLAN 5GHz 802.11ax HE20 for Ant. 4 +<br>LTE Band 66 Link | X     | MCS0 +<br>MCS0+<br>QPSK  |
| Mode 2    | Bluetooth-LE for Ant. 5 +<br>WLAN 2.4GHz 802.11ax HE40 for Ant. 4 +<br>LTE Band 66 Link            | Y     | 2Mbps +<br>MCS0+<br>QPSK |
| Mode 3    | Bluetooth-LE for Ant. 5 +<br>WLAN 5GHz 802.11ax HE20 for MIMO <Ant. 4+5> +<br>5G NR n77 Link       | X     | 2Mbps +<br>MCS0+<br>QPSK |

**Remark:** During the Radiated Spurious Emission test, the EUT turn on the WWAN functions simultaneously, the WWAN mode selected the frequency band with the closest transmission frequency and used the WLAN worst case output power.

## 2.3 Connection Diagram of Test System

<Co-Location Tx Mode>



## 2.4 Support Unit used in test configuration and system

| Item | Equipment        | Brand Name | Model Name | FCC ID | Data Cable      | Power Cord        |
|------|------------------|------------|------------|--------|-----------------|-------------------|
| 1.   | Adapter          | Samsung    | GT-N7000   | NA     | N/A             | N/A               |
| 2.   | USB Cable        | NA         | NA         | NA     | Unshielded,0.8m | N/A               |
| 3.   | System Simulator | Anritsu    | Anritsu    | N/A    | N/A             | Unshielded, 1.8 m |

## 2.5 EUT Operation Test Setup

The RF test items, utility "QRCT 4.0.00195.0" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

### 3 Test Result

#### 3.1 Unwanted Emissions Measurement

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

##### 3.1.1 Limit of Unwanted Emissions

- (1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27dBm/MHz.
- (2) Unwanted spurious emissions falls in restricted bands shall comply with the general field strength limits as below table:

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

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

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

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

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

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

(i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.

(ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

### 3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

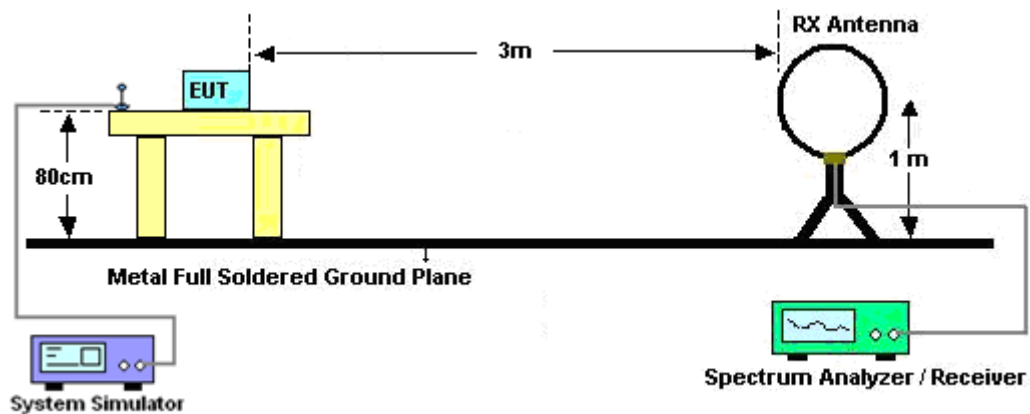
### 3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.
  - (1) Procedure for Unwanted Emissions Measurements Below 1000 MHz
    - RBW = 120 kHz
    - VBW = 300 kHz
    - Detector = Peak
    - Trace mode = max hold
  - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
    - RBW = 1 MHz
    - VBW  $\geq$  3 MHz
    - Detector = Peak
    - Sweep time = auto
    - Trace mode = max hold
  - (3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz
    - RBW = 1 MHz
    - VBW = 10 Hz, when duty cycle is no less than 98 percent.
    - VBW  $\geq$  1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.

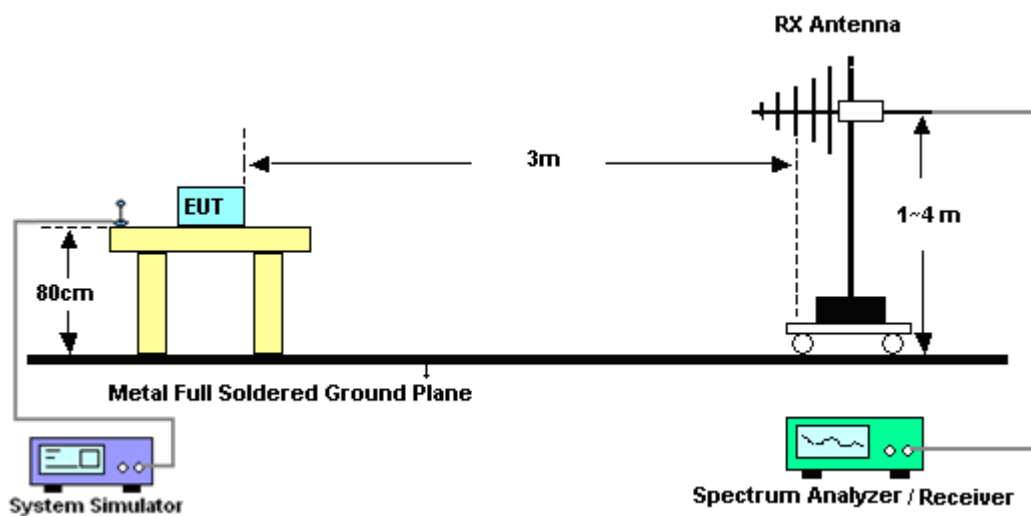
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-”.
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-”.

### 3.1.4 Test Setup

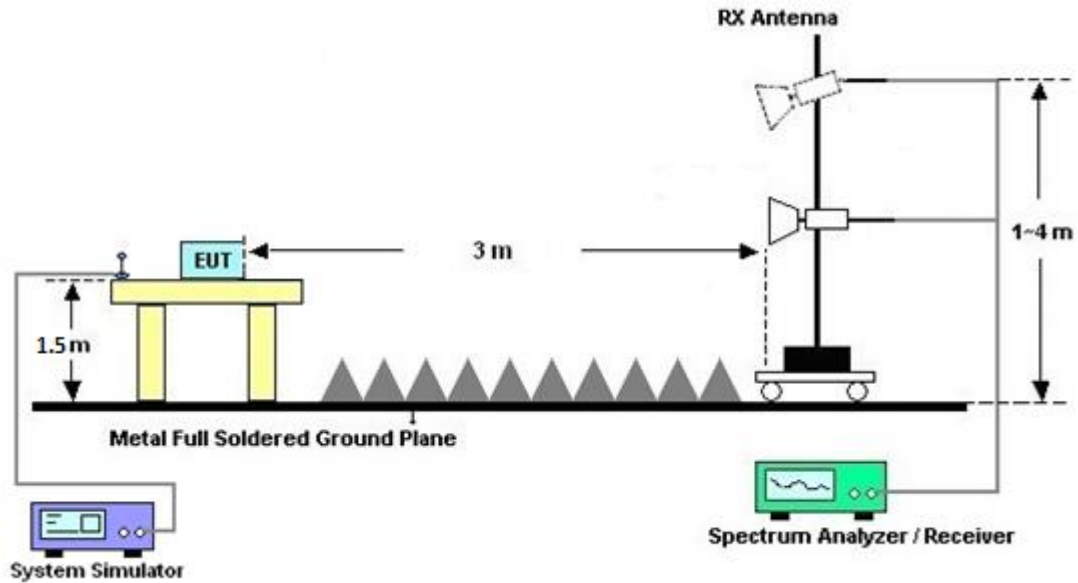
**For radiated emissions below 30MHz**



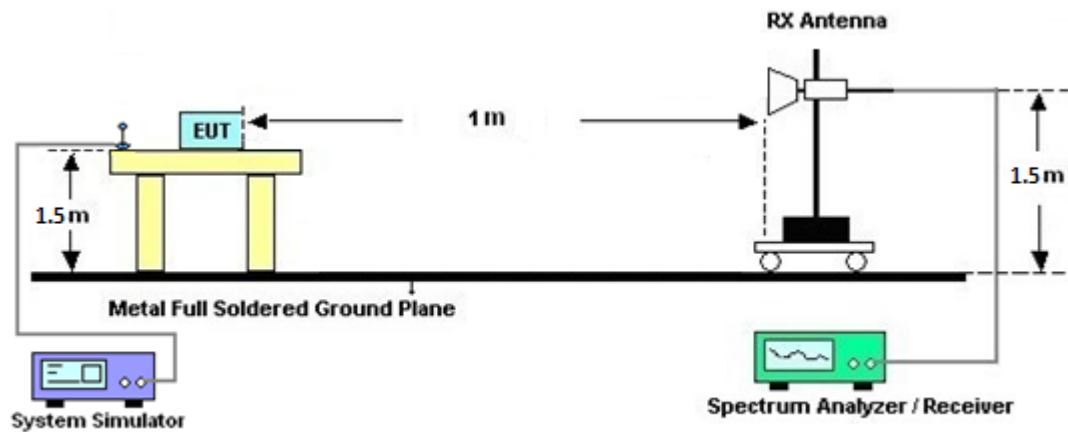
**For radiated emissions from 30MHz to 1GHz**



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz





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

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

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

### **3.1.6 Test Result of Radiated Band Edges**

Please refer to Appendix A and B.

### **3.1.7 Duty Cycle**

Please refer to Appendix C.

### **3.1.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)**

Please refer to Appendix A and B.



## **3.2 Antenna Requirements**

### **3.2.1 Standard Applicable**

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

An embedded-in antenna design is used.

### **3.2.3 Antenna Gain**

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



## 4 List of Measuring Equipment

| Instrument           | Brand Name      | Model No.                    | Serial No.                       | Characteristics          | Calibration Date | Test Date     | Due Date      | Remark                |
|----------------------|-----------------|------------------------------|----------------------------------|--------------------------|------------------|---------------|---------------|-----------------------|
| Loop Antenna         | Rohde & Schwarz | HFH2-Z2                      | 100315                           | 9 kHz~30 MHz             | Jan. 04, 2021    | Nov. 24, 2021 | Jan. 03, 2022 | Radiation (03CH15-HY) |
| Bilog Antenna        | TESEQ           | CBL 6111D & 00800N1D01N-06   | 41912 & 05                       | 30MHz~1GHz               | Feb. 08, 2021    | Nov. 24, 2021 | Feb. 07, 2022 | Radiation (03CH15-HY) |
| Amplifier            | SONOMA          | 310N                         | 363440                           | 9kHz~1GHz                | Dec. 28, 2020    | Nov. 24, 2021 | Dec. 27, 2021 | Radiation (03CH15-HY) |
| Horn Antenna         | SCHWARZBECK     | BBHA 9120 D                  | 9120D-01620                      | 1GHz~18GHz               | Oct. 25, 2021    | Nov. 24, 2021 | Oct. 24, 2022 | Radiation (03CH15-HY) |
| SHF-EHF Horn Antenna | SCHWARZBECK     | BBHA 9170                    | 00991                            | 18GHz~40GHz              | May 12, 2021     | Nov. 24, 2021 | May 11, 2022  | Radiation (03CH15-HY) |
| Preamplifier         | Jet-Power       | JPA0118-55-303               | 1710001800055006                 | 1GHz~18GHz               | May 06, 2021     | Nov. 24, 2021 | May 05, 2022  | Radiation (03CH15-HY) |
| Preamplifier         | Keysight        | 83017A                       | MY53270195                       | 1GHz~26.5GHz             | Aug. 19, 2021    | Nov. 24, 2021 | Aug. 18, 2022 | Radiation (03CH15-HY) |
| Preamplifier         | EMEC            | EM18G40G                     | 060801                           | 18-40GHz                 | Jun. 22, 2021    | Nov. 24, 2021 | Jun. 21, 2022 | Radiation (03CH15-HY) |
| EMI Test Receiver    | Keysight        | N9038A(MXE)                  | MY55420170                       | 20MHz~8.4GHz             | Jul. 15, 2021    | Nov. 24, 2021 | Jul. 14, 2022 | Radiation (03CH15-HY) |
| Spectrum Analyzer    | Agilent         | E4446A                       | MY50180136                       | 3Hz~44GHz                | May 07, 2021     | Nov. 24, 2021 | May 06, 2022  | Radiation (03CH15-HY) |
| Antenna Mast         | ChainTek        | MBS-520-1                    | N/A                              | 1m~4m                    | N/A              | Nov. 24, 2021 | N/A           | Radiation (03CH15-HY) |
| Turn Table           | ChainTek        | T-200-S-1                    | N/A                              | 0~360 Degree             | N/A              | Nov. 24, 2021 | N/A           | Radiation (03CH15-HY) |
| Software             | Audix           | E3 6.2009-8-24(k5)           | RK-000451                        | N/A                      | N/A              | Nov. 24, 2021 | N/A           | Radiation (03CH15-HY) |
| RF Cable             | HUBER + SUHNER  | SUCOFLEX 104, 102E           | MY36980/4, MY9838/4PE, 508405/2E | 30MHz~18G                | Nov. 15, 2021    | Nov. 24, 2021 | Nov. 14, 2022 | Radiation (03CH15-HY) |
| RF Cable             | HUBER + SUHNER  | SUCOFLEX 102                 | 505134/2                         | 30MHz~40GHz              | Feb. 22, 2021    | Nov. 24, 2021 | Feb. 21, 2022 | Radiation (03CH15-HY) |
| RF Cable             | HUBER + SUHNER  | SUCOFLEX 102                 | 800740/2                         | 30MHz~40GHz              | Feb. 22, 2021    | Nov. 24, 2021 | Feb. 21, 2022 | Radiation (03CH15-HY) |
| RF Cable             | HUBER + SUHNER  | SUCOFLEX 104                 | MY9837/4PE                       | 9kHz~30MHz               | Mar. 11, 2021    | Nov. 24, 2021 | Mar. 10, 2022 | Radiation (03CH15-HY) |
| Filter               | Wainwright      | WLJ4-1000-1530-6000-40ST     | SN4                              | 1.53GHz Low Pass Filter  | Jul. 02, 2021    | Nov. 24, 2021 | Jul. 01, 2022 | Radiation (03CH15-HY) |
| Filter               | Wainwright      | WHKX12-2700-3000-18000-60ST  | SN4                              | 3GHz High Pass Filter    | Sep. 15, 2021    | Nov. 24, 2021 | Sep. 14, 2022 | Radiation (03CH15-HY) |
| Filter               | Wainwright      | WHKX8-5872.5-6750-18000-40ST | SN6                              | 6.75GHz High Pass Filter | Jun. 30, 2021    | Nov. 24, 2021 | Jun. 29, 2022 | Radiation (03CH15-HY) |

## 5 Uncertainty of Evaluation

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

|                                                                            |        |
|----------------------------------------------------------------------------|--------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.3 dB |
|----------------------------------------------------------------------------|--------|

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

|                                                                            |        |
|----------------------------------------------------------------------------|--------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.8 dB |
|----------------------------------------------------------------------------|--------|

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

|                                                                            |        |
|----------------------------------------------------------------------------|--------|
| Measuring Uncertainty for a Level of Confidence<br>of 95% ( $U = 2Uc(y)$ ) | 5.6 dB |
|----------------------------------------------------------------------------|--------|



## Appendix A. Radiated Spurious Emission

|                 |                                      |                     |             |
|-----------------|--------------------------------------|---------------------|-------------|
| Test Engineer : | Leo Lee, Mancy Chou and Bigshow Wang | Temperature :       | 22.1~23.5°C |
|                 |                                      | Relative Humidity : | 55~65%      |

WLAN 802.11ax HE20\_Tx\_CH36 + WLAN 802.11ax HE40\_Tx\_CH09 + LTE Band 66 Link

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE40 Full (Band Edge @ 3m)

| WIFI<br>ANT<br>5                          | 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 ) | Chain<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|-------------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------|------------------------|----------------------------|------------------------|-------------------------|-------------------------|-----------------|
| 802.11ax<br>HE40 Full<br>CH 09<br>2452MHz |      | 2328.4               | 48.42               | -25.58                  | 74                          | 45.15                     | 27.94                         | 16.46                  | 41.13                      | 303                    | 125                     | P                       | H               |
|                                           |      | 2389.68              | 37.7                | -16.3                   | 54                          | 34.46                     | 27.82                         | 16.56                  | 41.14                      | 303                    | 125                     | A                       | H               |
|                                           | *    | 2452                 | 100.57              | -                       | -                           | 97.47                     | 27.6                          | 16.66                  | 41.16                      | 303                    | 125                     | P                       | H               |
|                                           | *    | 2452                 | 90.89               | -                       | -                           | 87.79                     | 27.6                          | 16.66                  | 41.16                      | 303                    | 125                     | A                       | H               |
|                                           |      | 2483.53              | 59.87               | -14.13                  | 74                          | 56.73                     | 27.6                          | 16.71                  | 41.17                      | 303                    | 125                     | P                       | H               |
|                                           |      | 2483.53              | 49.07               | -4.93                   | 54                          | 45.93                     | 27.6                          | 16.71                  | 41.17                      | 303                    | 125                     | A                       | H               |
|                                           |      | 2334.48              | 49.13               | -24.87                  | 74                          | 45.86                     | 27.93                         | 16.47                  | 41.13                      | 100                    | 240                     | P                       | V               |
|                                           |      | 2390                 | 37.94               | -16.06                  | 54                          | 34.7                      | 27.82                         | 16.56                  | 41.14                      | 100                    | 240                     | A                       | V               |
|                                           | *    | 2452                 | 100.7               | -                       | -                           | 97.6                      | 27.6                          | 16.66                  | 41.16                      | 100                    | 240                     | P                       | V               |
|                                           | *    | 2452                 | 92.02               | -                       | -                           | 88.92                     | 27.6                          | 16.66                  | 41.16                      | 100                    | 240                     | A                       | V               |
|                                           |      | 2484.7               | 61.31               | -12.69                  | 74                          | 58.17                     | 27.6                          | 16.71                  | 41.17                      | 100                    | 240                     | P                       | V               |
|                                           |      | 2483.53              | 50.86               | -3.14                   | 54                          | 47.72                     | 27.6                          | 16.71                  | 41.17                      | 100                    | 240                     | A                       | V               |

**Band 1 - 5150~5250MHz****WIFI 802.11ax HE20 Full (Band Edge @ 3m)**

| WIFI                                                | Note | Frequency | Level      | Over   | Limit      | Read   | Antenna  | Path   | Preamp | Chain  | Table   | Peak  | Pol.  |
|-----------------------------------------------------|------|-----------|------------|--------|------------|--------|----------|--------|--------|--------|---------|-------|-------|
| ANT                                                 |      |           |            | Limit  | Line       | Level  | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 4                                                   |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | (dBμV) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| <b>802.11ax<br/>HE20 Full<br/>CH 36<br/>5180MHz</b> |      | 5147.16   | 63.56      | -10.44 | 74         | 59.92  | 31.91    | 10.57  | 38.84  | 202    | 275     | P     | H     |
|                                                     |      | 5150      | 50.85      | -3.15  | 54         | 47.2   | 31.9     | 10.58  | 38.83  | 202    | 275     | A     | H     |
|                                                     | *    | 5180      | 109.45     | -      | -          | 105.66 | 31.9     | 10.64  | 38.75  | 202    | 275     | P     | H     |
|                                                     | *    | 5180      | 98.97      | -      | -          | 95.18  | 31.9     | 10.64  | 38.75  | 202    | 275     | A     | H     |
|                                                     |      |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                                     |      |           |            |        |            |        |          |        |        |        |         |       | H     |
|                                                     |      |           |            |        |            |        |          |        |        |        |         |       | V     |
|                                                     |      | 5149.24   | 61.07      | -12.93 | 74         | 57.42  | 31.9     | 10.58  | 38.83  | 300    | 57      | P     | V     |
|                                                     |      | 5150      | 48.53      | -5.47  | 54         | 44.88  | 31.9     | 10.58  | 38.83  | 300    | 57      | A     | V     |
|                                                     | *    | 5180      | 106.32     | -      | -          | 102.53 | 31.9     | 10.64  | 38.75  | 300    | 57      | P     | V     |
|                                                     | *    | 5180      | 93.7       | -      | -          | 89.91  | 31.9     | 10.64  | 38.75  | 300    | 57      | A     | V     |
|                                                     |      |           |            |        |            |        |          |        |        |        |         |       | V     |

**WLAN 802.11ax HE20\_Tx\_CH36 + WLAN 802.11ax HE40\_Tx\_CH09 + LTE Band 66 Link**

**(Harmonic @ 3m)**

[illegible]



## WLAN 802.11ax HE20\_Tx\_CH36 + WLAN 802.11ax HE40\_Tx\_CH09+ LTE Band 66 Link

## Emission below 1GHz (LF@ 3m)

| WIFI<br>ANT<br>5&4 | Note                                                                                                                                                                                                                                                  | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>( dBμV ) | Chainenn<br>a<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Chain<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>( P/A ) | Pol.<br>( H/V ) |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------|-------------------------|-----------------------------|---------------------------|-------------------------------------|------------------------|----------------------------|------------------------|-------------------------|-------------------------|-----------------|
| 802.11ax           |                                                                                                                                                                                                                                                       | 30                   | 23.61               | -16.39                  | 40                          | 30.9                      | 24.59                               | 0.61                   | 32.49                      | -                      | -                       | P                       | H               |
| HE20 Full          |                                                                                                                                                                                                                                                       | 123.12               | 32.18               | -11.32                  | 43.5                        | 45.76                     | 17.45                               | 1.51                   | 32.54                      | -                      | -                       | P                       | H               |
| CH 36              |                                                                                                                                                                                                                                                       | 164.83               | 21.44               | -22.06                  | 43.5                        | 36.1                      | 16.02                               | 1.82                   | 32.5                       | -                      | -                       | P                       | H               |
| 5180MHz            |                                                                                                                                                                                                                                                       | 254.07               | 21.64               | -24.36                  | 46                          | 32.84                     | 18.96                               | 2.25                   | 32.41                      | -                      | -                       | P                       | H               |
| +                  |                                                                                                                                                                                                                                                       | 520.82               | 24.96               | -21.04                  | 46                          | 30.51                     | 23.97                               | 3.08                   | 32.6                       | -                      | -                       | P                       | H               |
| 802.11ax           |                                                                                                                                                                                                                                                       | 861.29               | 31.28               | -14.72                  | 46                          | 30.04                     | 29.04                               | 4.02                   | 31.82                      | -                      | -                       | P                       | H               |
| HE40 Full          |                                                                                                                                                                                                                                                       | 30                   | 30.43               | -9.57                   | 40                          | 37.72                     | 24.59                               | 0.61                   | 32.49                      | -                      | -                       | P                       | V               |
| CH 09              |                                                                                                                                                                                                                                                       | 122.15               | 23.32               | -20.18                  | 43.5                        | 36.98                     | 17.39                               | 1.49                   | 32.54                      | -                      | -                       | P                       | V               |
| 2452MHz            |                                                                                                                                                                                                                                                       | 264.74               | 20.7                | -25.3                   | 46                          | 30.88                     | 19.97                               | 2.28                   | 32.43                      | -                      | -                       | P                       | V               |
| +                  |                                                                                                                                                                                                                                                       | 565.44               | 26.37               | -19.63                  | 46                          | 29.56                     | 26.14                               | 3.25                   | 32.58                      | -                      | -                       | P                       | V               |
| LTE Band           |                                                                                                                                                                                                                                                       | 752.65               | 29.66               | -16.34                  | 46                          | 30.44                     | 27.95                               | 3.7                    | 32.43                      | -                      | -                       | P                       | V               |
| 66 Link            |                                                                                                                                                                                                                                                       | 921.43               | 31.33               | -14.67                  | 46                          | 29.28                     | 29.36                               | 4.18                   | 31.49                      | -                      | -                       | P                       | V               |
| CH132322           |                                                                                                                                                                                                                                                       |                      |                     |                         |                             |                           |                                     |                        |                            |                        |                         |                         |                 |
| Remark             | 1. No other spurious found.<br>2. All results are PASS against Peak and Average limit line.<br>3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or noise floor only. |                      |                     |                         |                             |                           |                                     |                        |                            |                        |                         |                         |                 |

**WLAN 802.11ax HE40\_Tx\_CH09 + BLE 2Mbps\_Tx\_CH39 + LTE Band 66 Link****2.4GHz 2400~2483.5MHz****WIFI 802.11axHE40 Full (Band Edge @ 3m)**

| WIFI<br>ANT.<br>4                                   | Note | Frequency<br>( MHz ) | Level<br>( dBμV/m ) | Over<br>Limit<br>( dB ) | Limit<br>Line<br>( dBμV/m ) | Read<br>Level<br>(dBμV) | Antenna<br>Factor<br>( dB/m ) | Path<br>Loss<br>( dB ) | Preamp<br>Factor<br>( dB ) | Chain<br>Pos<br>( cm ) | Table<br>Pos<br>( deg ) | Peak<br>Avg.<br>(P/A) | Pol.<br>(H/V) |
|-----------------------------------------------------|------|----------------------|---------------------|-------------------------|-----------------------------|-------------------------|-------------------------------|------------------------|----------------------------|------------------------|-------------------------|-----------------------|---------------|
| <b>802.11ax<br/>HE40 Full<br/>CH 09<br/>2452MHz</b> |      | 2339.68              | 48.54               | -25.46                  | 74                          | 45.27                   | 27.92                         | 16.48                  | 41.13                      | 350                    | 294                     | P                     | H             |
|                                                     |      | 2357.04              | 40.91               | -13.09                  | 54                          | 37.64                   | 27.89                         | 16.51                  | 41.13                      | 350                    | 294                     | A                     | H             |
|                                                     | *    | 2452                 | 91.21               | -                       | -                           | 88.11                   | 27.6                          | 16.66                  | 41.16                      | 350                    | 294                     | P                     | H             |
|                                                     | *    | 2452                 | 83.54               | -                       | -                           | 80.44                   | 27.6                          | 16.66                  | 41.16                      | 350                    | 294                     | A                     | H             |
|                                                     |      | 2484.84              | 48.93               | -25.07                  | 74                          | 45.79                   | 27.6                          | 16.71                  | 41.17                      | 350                    | 294                     | P                     | H             |
|                                                     |      | 2488.6               | 41                  | -13                     | 54                          | 37.85                   | 27.6                          | 16.72                  | 41.17                      | 350                    | 294                     | A                     | H             |
|                                                     |      | 2364.18              | 48.2                | -25.8                   | 74                          | 44.94                   | 27.87                         | 16.52                  | 41.13                      | 347                    | 296                     | P                     | V             |
|                                                     |      | 2322.18              | 40.44               | -13.56                  | 54                          | 37.15                   | 27.96                         | 16.45                  | 41.12                      | 347                    | 296                     | A                     | V             |
|                                                     |      | 2452                 | 102.89              | 28.89                   | 74                          | 99.79                   | 27.6                          | 16.66                  | 41.16                      | 347                    | 296                     | P                     | V             |
|                                                     | *    | 2452                 | 93.49               | -                       | -                           | 90.39                   | 27.6                          | 16.66                  | 41.16                      | 347                    | 296                     | A                     | V             |
|                                                     | *    | 2484.76              | 57.25               | -                       | -                           | 54.11                   | 27.6                          | 16.71                  | 41.17                      | 347                    | 296                     | P                     | V             |
|                                                     |      | 2484.88              | 49.39               | -4.61                   | 54                          | 46.25                   | 27.6                          | 16.71                  | 41.17                      | 347                    | 296                     | A                     | V             |

**2.4GHz 2400~2483.5MHz****BLE 2Mbps (Band Edge @ 3m)**

| BLE                     | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Chain  | Table   | Peak    | Pol.    |
|-------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| ANT.                    |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 5                       |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| BLE<br>CH 39<br>2480MHz | *    | 2480      | 99.71      | -      | -          | 96.57    | 27.6     | 16.7   | 41.16  | 300    | 18      | P       | H       |
|                         | *    | 2480      | 98.37      | -      | -          | 95.23    | 27.6     | 16.7   | 41.16  | 300    | 18      | A       | H       |
|                         |      | 2486.52   | 55.04      | -18.96 | 74         | 51.9     | 27.6     | 16.71  | 41.17  | 300    | 18      | P       | H       |
|                         |      | 2484.32   | 47.12      | -6.88  | 54         | 43.98    | 27.6     | 16.71  | 41.17  | 300    | 18      | A       | H       |
|                         |      |           |            |        |            |          |          |        |        |        |         |         | H       |
|                         |      |           |            |        |            |          |          |        |        |        |         |         | H       |
|                         | *    | 2480      | 100.01     | -      | -          | 96.87    | 27.6     | 16.7   | 41.16  | 300    | 292     | P       | V       |
|                         | *    | 2480      | 98.63      | -      | -          | 95.49    | 27.6     | 16.7   | 41.16  | 300    | 292     | A       | V       |
|                         |      | 2484.72   | 55.05      | -18.95 | 74         | 51.91    | 27.6     | 16.71  | 41.17  | 300    | 292     | P       | V       |
|                         |      | 2484.72   | 46.93      | -7.07  | 54         | 43.79    | 27.6     | 16.71  | 41.17  | 300    | 292     | A       | V       |
|                         |      |           |            |        |            |          |          |        |        |        |         |         | V       |
|                         |      |           |            |        |            |          |          |        |        |        |         |         | V       |



**WLAN 802.11ax HE40\_Tx\_CH09 + BLE 2Mbps\_Tx\_CH39 + LTE Band 66 Link**  
**(Harmonic @ 3m)**

|                                                                                                                                                                                                       | Note                                                                                                                                                   | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Chain  | Table   | Peak    | Pol.    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| ANT.                                                                                                                                                                                                  |                                                                                                                                                        |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| 4&5                                                                                                                                                                                                   |                                                                                                                                                        | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| <b>802.11ax</b><br><b>HE40 Full</b><br><b>CH 09</b><br><b>2452MHz</b><br><b>+</b><br><b>BLE</b><br><b>CH 39</b><br><b>2480MHz</b><br><b>+</b><br><b>LTE Band</b><br><b>66 Link</b><br><b>CH132322</b> |                                                                                                                                                        | 4904      | 39.36      | -34.64 | 74         | 56.67    | 31.4     | 10.22  | 58.93  | -      | -       | P       | H       |
|                                                                                                                                                                                                       |                                                                                                                                                        | 4960      | 39.3       | -34.7  | 74         | 56.56    | 31.44    | 10.28  | 58.98  | -      | -       | P       | H       |
|                                                                                                                                                                                                       |                                                                                                                                                        | 7356      | 44.17      | -29.83 | 74         | 53.7     | 36.38    | 12.44  | 58.35  | -      | -       | P       | H       |
|                                                                                                                                                                                                       |                                                                                                                                                        | 7440      | 46.05      | -27.95 | 74         | 55.41    | 36.36    | 12.48  | 58.2   | -      | -       | P       | H       |
|                                                                                                                                                                                                       |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                                                                                                                                                                                       |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                                                                                                                                                                                       |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                                                                                                                                                                                       |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |         | H       |
|                                                                                                                                                                                                       |                                                                                                                                                        | 4904      | 39.09      | -34.91 | 74         | 56.4     | 31.4     | 10.22  | 58.93  | -      | -       | P       | V       |
|                                                                                                                                                                                                       |                                                                                                                                                        | 4960      | 38.76      | -35.24 | 74         | 56.02    | 31.44    | 10.28  | 58.98  | -      | -       | P       | V       |
|                                                                                                                                                                                                       |                                                                                                                                                        | 7356      | 44.58      | -29.42 | 74         | 54.11    | 36.38    | 12.44  | 58.35  | -      | -       | P       | V       |
|                                                                                                                                                                                                       |                                                                                                                                                        | 7440      | 45.41      | -28.59 | 74         | 54.77    | 36.36    | 12.48  | 58.2   | -      | -       | P       | V       |
|                                                                                                                                                                                                       |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                                                                                                                                                                                       |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                                                                                                                                                                                       |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |         | V       |
|                                                                                                                                                                                                       |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |         | V       |
| <b>Remark</b>                                                                                                                                                                                         | 1. No other spurious found.                                                                                                                            |           |            |        |            |          |          |        |        |        |         |         |         |
|                                                                                                                                                                                                       | 2. All results are PASS against Peak and Average limit line.                                                                                           |           |            |        |            |          |          |        |        |        |         |         |         |
|                                                                                                                                                                                                       | 3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or noise floor only. |           |            |        |            |          |          |        |        |        |         |         |         |
|                                                                                                                                                                                                       |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |         |         |



## WLAN 802.11ax HE20 Tx\_CH36 + BLE 2Mbps\_Tx\_CH39 + 5G NR n77 Link

## Band 1 - 5150~5250MHz

## WIFI 802.11axHE20 Full (Band Edge @ 3m)

| WIFI ANT                                  | Note | Frequency | Level      | Over Limit | Limit Line | Read Level | Antenna Factor | Path Loss | Preamp Factor | Chain Pos | Table Pos | Peak Avg. | Pol.  |
|-------------------------------------------|------|-----------|------------|------------|------------|------------|----------------|-----------|---------------|-----------|-----------|-----------|-------|
| 4+5                                       |      | ( MHz )   | ( dBμV/m ) | ( dB )     | ( dBμV/m ) | (dBμV)     | ( dB/m )       | ( dB )    | ( dB )        | ( cm )    | ( deg )   | (P/A)     | (H/V) |
| 802.11ax<br>HE20 Full<br>CH 36<br>5180MHz |      | 5149.76   | 63.61      | -10.39     | 74         | 59.96      | 31.9           | 10.58     | 38.83         | 221       | 284       | P         | H     |
|                                           |      | 5150      | 50.58      | -3.42      | 54         | 46.93      | 31.9           | 10.58     | 38.83         | 221       | 284       | A         | H     |
|                                           | *    | 5180      | 110.96     | -          | -          | 107.17     | 31.9           | 10.64     | 38.75         | 221       | 284       | P         | H     |
|                                           | *    | 5180      | 100.59     | -          | -          | 96.8       | 31.9           | 10.64     | 38.75         | 221       | 284       | A         | H     |
|                                           |      |           |            |            |            |            |                |           |               |           |           |           | H     |
|                                           |      |           |            |            |            |            |                |           |               |           |           |           | H     |
|                                           |      |           |            |            |            |            |                |           |               |           |           |           | V     |
|                                           |      | 5149.24   | 61.3       | -12.7      | 74         | 57.65      | 31.9           | 10.58     | 38.83         | 400       | 66        | P         | V     |
|                                           |      | 5150      | 48.93      | -5.07      | 54         | 45.28      | 31.9           | 10.58     | 38.83         | 400       | 66        | A         | V     |
|                                           | *    | 5180      | 108.83     | -          | -          | 105.04     | 31.9           | 10.64     | 38.75         | 400       | 66        | P         | V     |
|                                           | *    | 5180      | 97.82      | -          | -          | 94.03      | 31.9           | 10.64     | 38.75         | 400       | 66        | A         | V     |
|                                           |      |           |            |            |            |            |                |           |               |           |           |           | V     |



## 2.4GHz 2400~2483.5MHz

## BLE 2Mbps (Band Edge @ 3m)

| BLE                     | Note | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Chain  | Table   | Peak  | Pol.  |
|-------------------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| ANT                     |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 5                       |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| BLE<br>CH 39<br>2480MHz | *    | 2480      | 92.61      | -      | -          | 89.23    | 27.6     | 10.16  | 41.16  | 100    | 89      | P     | H     |
|                         | *    | 2480      | 92.07      | -      | -          | 88.69    | 27.6     | 10.16  | 41.16  | 100    | 89      | A     | H     |
|                         |      | 2496.88   | 48.45      | -25.55 | 74         | 45.05    | 27.6     | 10.16  | 41.17  | 100    | 89      | P     | H     |
|                         |      | 2485.6    | 39.53      | -14.47 | 54         | 36.15    | 27.6     | 10.16  | 41.17  | 100    | 89      | A     | H     |
|                         |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                         |      |           |            |        |            |          |          |        |        |        |         |       | H     |
|                         | *    | 2480      | 92.31      | -      | -          | 88.93    | 27.6     | 10.16  | 41.16  | 400    | 120     | P     | V     |
|                         | *    | 2480      | 91.79      | -      | -          | 88.41    | 27.6     | 10.16  | 41.16  | 400    | 120     | A     | V     |
|                         |      | 2493.92   | 48.42      | -25.58 | 74         | 45.02    | 27.6     | 10.16  | 41.17  | 400    | 120     | P     | V     |
|                         |      | 2489.8    | 39.56      | -14.44 | 54         | 36.17    | 27.6     | 10.16  | 41.17  | 400    | 120     | A     | V     |
|                         |      |           |            |        |            |          |          |        |        |        |         |       | V     |
|                         |      |           |            |        |            |          |          |        |        |        |         |       | V     |



**WLAN 802.11ax HE20 Tx\_CH36 + BLE 2Mbps\_Tx\_CH39 + 5G NR n77 Link  
(Harmonic @ 3m)**

|                                                                                                                                   | Note                                                                                                                                                   | Frequency | Level      | Over   | Limit      | Read     | Antenna  | Path   | Preamp | Chain  | Table   | Peak  | Pol.  |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|-------|-------|
| ANT                                                                                                                               |                                                                                                                                                        |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.  |       |
| 4+5                                                                                                                               |                                                                                                                                                        | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | (P/A) | (H/V) |
| <b>802.11ax<br/>HE20 Full<br/>CH 36<br/>5180MHz<br/>+<br/>BLE<br/>CH 39<br/>2480MHz<br/>+<br/>5G NR<br/>n77 Link<br/>CH656000</b> |                                                                                                                                                        | 4960      | 43.34      | -30.66 | 74         | 40.88    | 31.44    | 10.28  | 39.26  | -      | -       | P     | H     |
|                                                                                                                                   |                                                                                                                                                        | 7440      | 44.22      | -29.78 | 74         | 53.32    | 36.36    | 12.74  | 58.2   | -      | -       | P     | H     |
|                                                                                                                                   |                                                                                                                                                        | 10360     | 48.39      | -19.81 | 68.2       | 55.02    | 39.62    | 14.55  | 60.8   | -      | -       | P     | H     |
|                                                                                                                                   |                                                                                                                                                        | 15540     | 47.25      | -26.75 | 74         | 54.2     | 38.4     | 17.01  | 62.36  | -      | -       | P     | H     |
|                                                                                                                                   |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                                                                                                                   |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                                                                                                                   |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                                                                                                                   |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |       | H     |
|                                                                                                                                   |                                                                                                                                                        | 4960      | 43.31      | -30.69 | 74         | 40.85    | 31.44    | 10.28  | 39.26  | -      | -       | P     | V     |
|                                                                                                                                   |                                                                                                                                                        | 7440      | 43.68      | -30.32 | 74         | 52.78    | 36.36    | 12.74  | 58.2   | -      | -       | P     | V     |
|                                                                                                                                   |                                                                                                                                                        | 10360     | 47.38      | -20.82 | 68.2       | 54.01    | 39.62    | 14.55  | 60.8   | -      | -       | P     | V     |
|                                                                                                                                   |                                                                                                                                                        | 15540     | 46.89      | -27.11 | 74         | 53.84    | 38.4     | 17.01  | 62.36  | -      | -       | P     | V     |
|                                                                                                                                   |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                                                                                                                   |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                                                                                                                   |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |       | V     |
|                                                                                                                                   |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |       | V     |
| <b>Remark</b>                                                                                                                     | 1. No other spurious found.                                                                                                                            |           |            |        |            |          |          |        |        |        |         |       |       |
|                                                                                                                                   | 2. All results are PASS against Peak and Average limit line.                                                                                           |           |            |        |            |          |          |        |        |        |         |       |       |
|                                                                                                                                   | 3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or noise floor only. |           |            |        |            |          |          |        |        |        |         |       |       |
|                                                                                                                                   |                                                                                                                                                        |           |            |        |            |          |          |        |        |        |         |       |       |



**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. |
| -   | The signal is <b>Unintentional Radiators</b> .                                                                                                           |
| 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 | Chain  | Table   | Peak    | Pol.    |
|----------------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Chain.         |      |           |            | Limit  | Line       | Level    | Factor   | Loss   | Factor | Pos    | Pos     | Avg.    |         |
| Simultaneously |      | ( MHz )   | ( dBμV/m ) | ( dB ) | ( dBμV/m ) | ( dBμV ) | ( dB/m ) | ( dB ) | ( dB ) | ( cm ) | ( deg ) | ( P/A ) | ( H/V ) |
| 802.11b        |      | 2390      | 55.45      | -18.55 | 74         | 54.51    | 32.22    | 4.58   | 35.86  | 103    | 308     | P       | H       |
| CH 01          |      |           |            |        |            |          |          |        |        |        |         |         |         |
| 2412MHz        |      | 2390      | 43.54      | -10.46 | 54         | 42.6     | 32.22    | 4.58   | 35.86  | 103    | 308     | A       | H       |

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)  
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
 = 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)  
 = 55.45 (dBμV/m)
2. Over Limit(dB)  
 = Level(dBμV/m) – Limit Line(dBμV/m)  
 = 55.45(dBμV/m) – 74(dBμV/m)  
 = -18.55(dB)

**For Average Limit @ 2390MHz:**

1. Level(dBμV/m)  
 = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
 = 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)  
 = 43.54 (dBμV/m)
2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)  
 = 43.54(dBμV/m) – 54(dBμV/m)  
 = -10.46(dB)

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



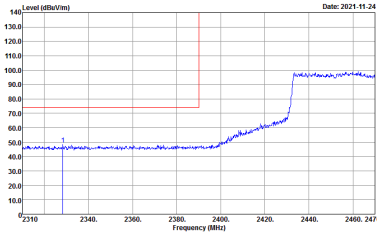
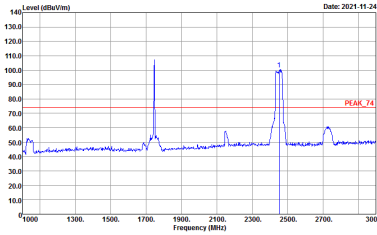
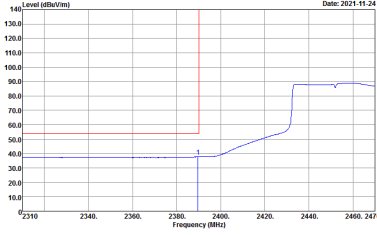
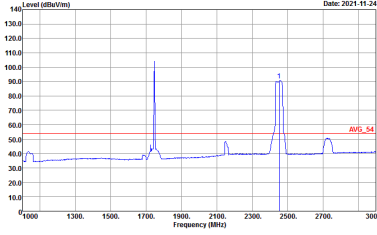
## Appendix B. Radiated Spurious Emission Plots

|                        |                                      |                            |             |
|------------------------|--------------------------------------|----------------------------|-------------|
| <b>Test Engineer :</b> | Leo Lee, Mancy Chou and Bigshow Wang | <b>Temperature :</b>       | 22.1~23.5°C |
|                        |                                      | <b>Relative Humidity :</b> | 55~65%      |

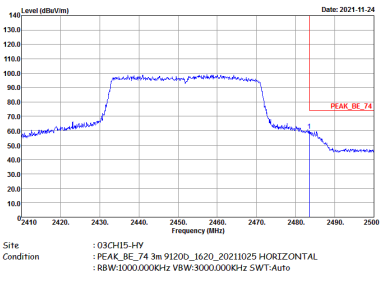
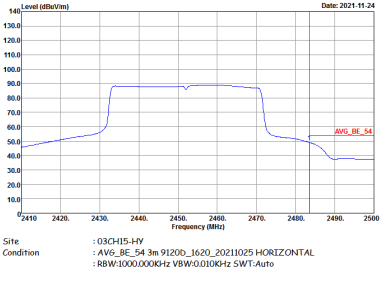
### Note symbol

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

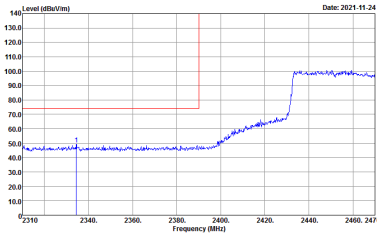
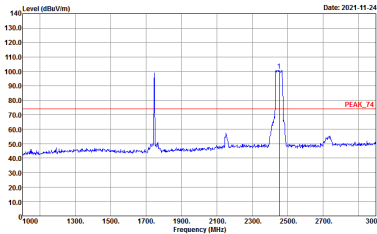
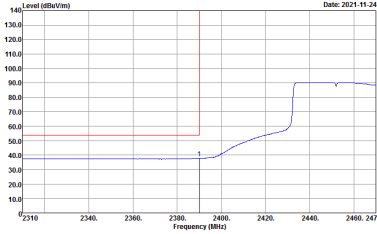
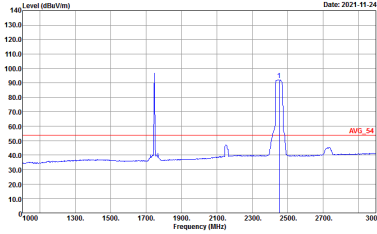
**WLAN 802.11ax HE20\_Tx\_CH36 + WLAN 802.11ax HE40\_Tx\_CH09 + LTE Band 66 Link**
**2.4GHz 2400~2483.5MHz**
**WIFI 802.11axHE40 Full (Band Edge @ 3m)**

| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                  |                                                                                                                                                                                                                     |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ax HE40 Full CH09 2452MHz - L                                                                                                                                                                                   |                                                                                                                                                                                                                     |
| 5    | Horizontal                                                                                                                                                                                                            | Fundamental                                                                                                                                                                                                         |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 HORIZONTAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK_74 3m 91200_1620_20211025 HORIZONTAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |
|      |  <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 HORIZONTAL<br/>: RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>   |  <p>Site : 03CH15-HY<br/>Condition : AVG_54 3m 91200_1620_20211025 HORIZONTAL<br/>: RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>   |
| Avg. |                                                                                                                                                                                                                       |                                                                                                                                                                                                                     |

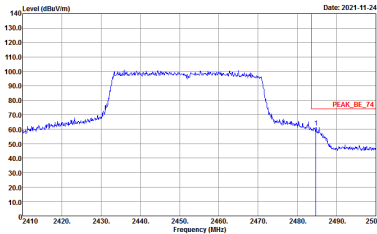
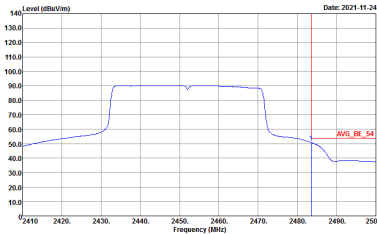


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                                        |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11ax HE40 Full CH09 2452MHz - R                                                                                                                                                                                                         |             |
| 5    | Horizontal                                                                                                                                                                                                                                  | Fundamental |
| Peak |  <p>Site: 03CH15-HY<br/>Condition: :PEAK_BE_74 3m 91200_1620_20211025 HORIZONTAL<br/>:RBW:3000.000kHz VBW:3000.000kHz SWT:Auto</p> <p>Date: 2021-11-24</p> | Left blank  |
| Avg. |  <p>Site: 03CH15-HY<br/>Condition: :AVG_BE_54 3m 91200_1620_20211025 HORIZONTAL<br/>:RBW:3000.000kHz VBW:0.010kHz SWT:Auto</p> <p>Date: 2021-11-24</p>   | Left blank  |

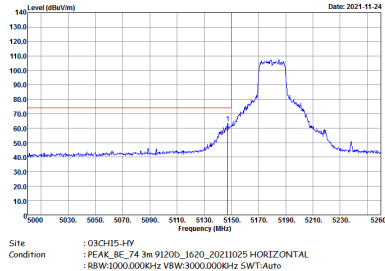
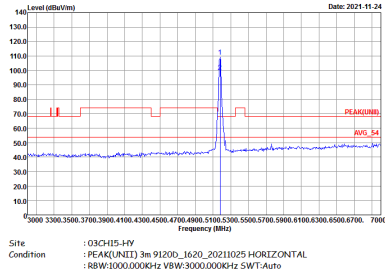
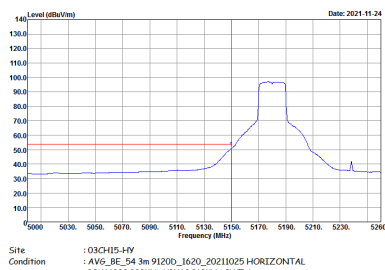


|      |                                                                                                                                                                                                                     |                                                                                                                                                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                |                                                                                                                                                                                                                   |
| ANT  | 802.11ax HE40 Full CH09 2452MHz - L                                                                                                                                                                                 |                                                                                                                                                                                                                   |
| 5    | Vertical                                                                                                                                                                                                            | Fundamental                                                                                                                                                                                                       |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK_F4 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>   |  <p>Site : 03CH15-HY<br/>Condition : AVG_F4 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>   |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                           |             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11ax HE40 Full CH09 2452MHz - R                                                                                                                                                                                            |             |
| 5    | Vertical                                                                                                                                                                                                                       | Fundamental |
| Peak | <div><p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p></div>  | Left blank  |
| Avg. | <div><p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p></div> | Left blank  |

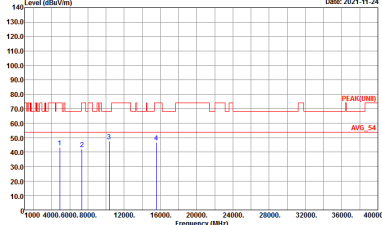
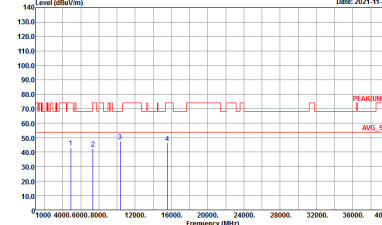
**Band 1 - 5150~5250MHz**
**WIFI 802.11axHE20 Full (Band Edge @ 3m)**

| WIFI | Band 1 5150~5250MHz Band Edge @ 3m                                                  |                                                                                    |
|------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| ANT  | 802.11ax HE20 Full CH36 5180MHz                                                     |                                                                                    |
| 4    | Horizontal                                                                          | Fundamental                                                                        |
| Peak |    |  |
| Avg. |  | Left blank                                                                         |



| WIFI | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                |                                                                                                                                   |
|------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ax HE20 Full CH36 5180MHz                                                                                                   |                                                                                                                                   |
| 4    | Vertical                                                                                                                          | Fundamental                                                                                                                       |
| Peak | <p>Site : 03CH15-HY<br/>Condition : PEAK_9C_74 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH15-HY<br/>Condition : PEAK(UNDI) 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>     | Left blank                                                                                                                        |

**WLAN 802.11ax HE20\_Tx\_CH36 + WLAN 802.11ax HE40\_Tx\_CH09 + LTE Band 66 Link**
**(Harmonic @ 3m)**

| ANT                            | 802.11ax HE20_Tx_CH36 + 802.11ax HE40_Tx_CH09+ LTE Band 66 Link                                                                                                                            |                                                                                                                                                                                           |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5&4                            | Horizontal                                                                                                                                                                                 | Vertical                                                                                                                                                                                  |
| <b>Peak</b><br><br><b>Avg.</b> |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_1620_20211025 HORIZONTAL<br/>Detector : Peak</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK(UNIT) 3m 91200_1620_20211025 VERTICAL<br/>Detector : Peak</p> |

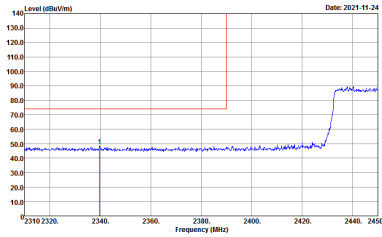
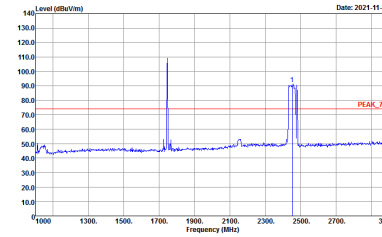
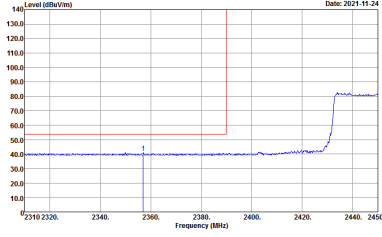
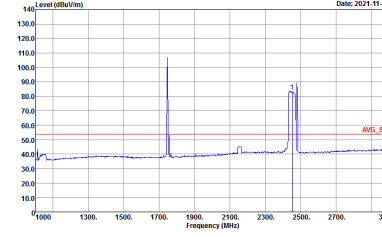


WLAN 802.11ax HE20\_Tx\_CH36 + WLAN 802.11ax HE40\_Tx\_CH09 + LTE Band 66 Link

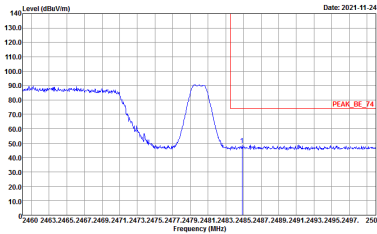
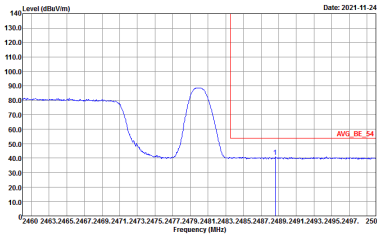
(LF@ 3m)

| ANT          | 802.11ax HE20_Tx_CH36 + 802.11ax HE40_Tx_CH09+ LTE Band 66 Link                                                                                         |                                                                                                                                                       |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5&4          | Horizontal                                                                                                                                              | Vertical                                                                                                                                              |
| Peak<br>Avg. | <div><p>Level (dBu/m)</p><p>Date: 2021-11-24</p><p>Site : 03CH15-HY<br/>Condition : QP 3m BIL06_41912_20210208 HORIZONTAL<br/>Detector : Peak</p></div> | <div><p>Level (dBu/m)</p><p>Date: 2021-11-24</p><p>Site : 03CH15-HY<br/>Condition : QP 3m BIL06_41912_20210208 VERTICAL<br/>Detector : Peak</p></div> |

**WLAN 802.11ax HE40\_Tx\_CH09 + BLE 2Mbps\_Tx\_CH39 + LTE Band 66 Link**
**2.4GHz 2400~2483.5MHz**
**WIFI 802.11axHE40 Full (Band Edge @ 3m)**

| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                |                                                                                                                                                                                                                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ax HE40 Full CH09 2452MHz - L                                                                                                                                                                                 |                                                                                                                                                                                                                   |
| 4    | Horizontal                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                       |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK_74 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000kHz VBW:10.000kHz SWT:Auto</p>  |  <p>Site : 03CH15-HY<br/>Condition : AVG_54 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000kHz VBW:10.000kHz SWT:Auto</p>  |

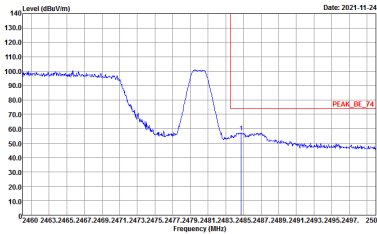
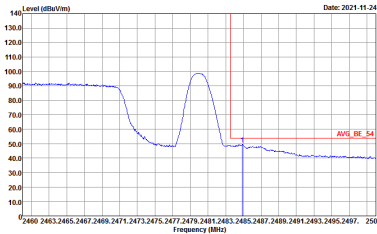


| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                |             |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11ax HE40 Full CH09 2452MHz - R                                                                                                                                                                                 |             |
| 4    | Horizontal                                                                                                                                                                                                          | Fundamental |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank  |
| Avg. |  <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000KHz VBW:10.000KHz SWT:Auto</p>  | Left blank  |

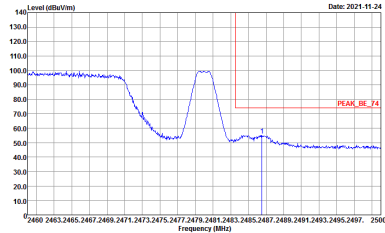
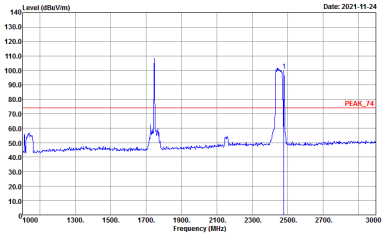
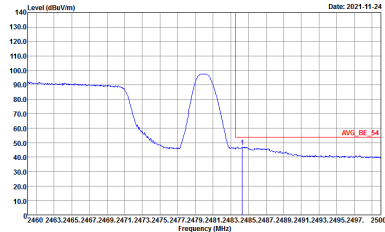
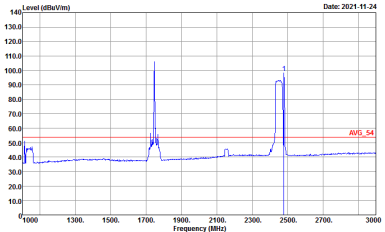


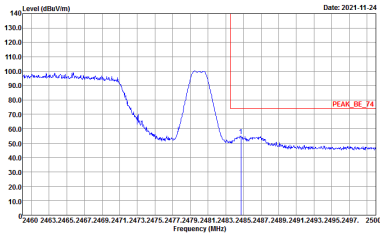
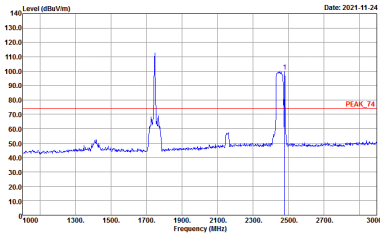
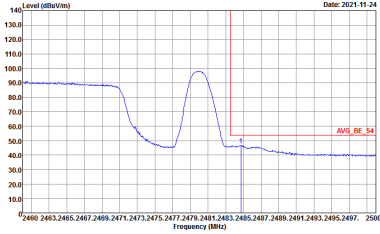
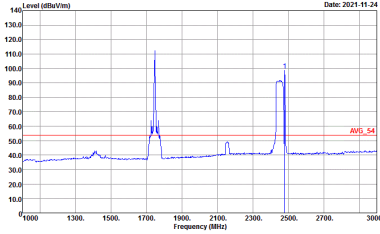
| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                            |                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ax HE40 Full CH09 2452MHz - L                                                                                             |                                                                                                                              |
| 4    | Vertical                                                                                                                        | Fundamental                                                                                                                  |
| Peak | <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH15-HY<br/>Condition : PEAK_74 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:10.000KHz SWT:Auto</p>    | <p>Site : 03CH15-HY<br/>Condition : AVG_54 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:10.000KHz SWT:Auto</p>    |



| WIFI | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                              |             |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| ANT  | 802.11ax HE40 Full CH09 2452MHz - R                                                                                                                                                                               |             |
| 4    | Vertical                                                                                                                                                                                                          | Fundamental |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | Left blank  |
| Avg. |  <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:10.000KHz SWT:Auto</p>  | Left blank  |

**2.4GHz 2400~2483.5MHz**
**BLE 2Mbps (Band Edge @ 3m)**

| BLE         | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                |                                                                                                                                                                                                                   |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT         | BLE CH39 2480MHz                                                                                                                                                                                                    |                                                                                                                                                                                                                   |
| 5           | Horizontal                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                       |
| <b>Peak</b> |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK_74 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |
|             |  <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000kHz VBW:10.000kHz SWT:Auto</p>  |  <p>Site : 03CH15-HY<br/>Condition : AVG_54 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:1000.000kHz VBW:10.000kHz SWT:Auto</p>  |
| <b>Avg.</b> |                                                                                                                                                                                                                     |                                                                                                                                                                                                                   |

| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                              |                                                                                                                                                                                                                 |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | BLE CH39 2480MHz                                                                                                                                                                                                  |                                                                                                                                                                                                                 |
| 5    | Vertical                                                                                                                                                                                                          | Fundamental                                                                                                                                                                                                     |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK_74 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
|      |  <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:10.000KHz SWT:Auto</p>  |  <p>Site : 03CH15-HY<br/>Condition : AVG_54 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:10.000KHz SWT:Auto</p>  |
| Avg. |                                                                                                                                                                                                                   |                                                                                                                                                                                                                 |

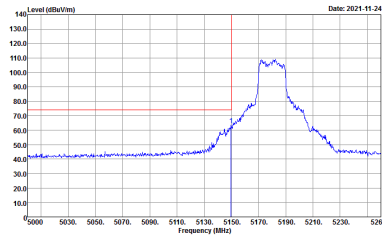
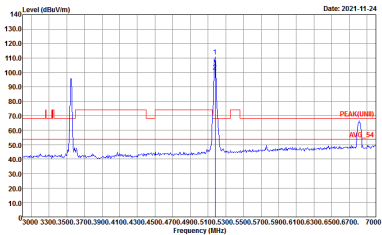
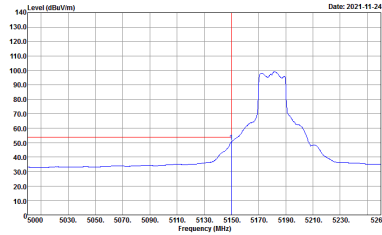


WLAN 802.11ax HE40\_Tx\_CH09 + BLE 2Mbps\_Tx\_CH39 + LTE Band 66 Link

(Harmonic @ 3m)

| ANT          | 802.11ax HE40_Tx_CH09 + BLE_Tx_CH39 + LTE Band 66 Link                                                                                                       |                                                                                                                                                            |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4&5          | Horizontal                                                                                                                                                   | Vertical                                                                                                                                                   |
| Peak<br>Avg. | <div><p>Level (dBuV/m)</p><p>Date: 2021-11-24</p><p>Site : 03CH15-HY<br/>Condition : PEAK_74 3m 91200_1620_20211025 HORIZONTAL<br/>Detector : Peak</p></div> | <div><p>Level (dBuV/m)</p><p>Date: 2021-11-24</p><p>Site : 03CH15-HY<br/>Condition : PEAK_74 3m 91200_1620_20211025 VERTICAL<br/>Detector : Peak</p></div> |

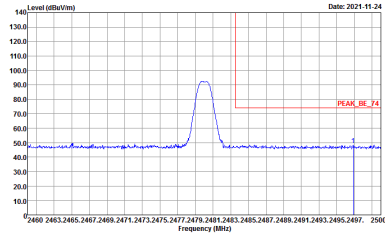
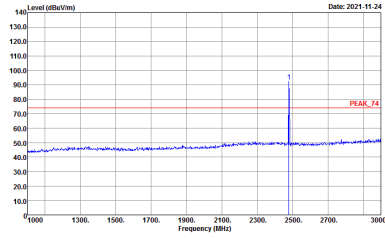
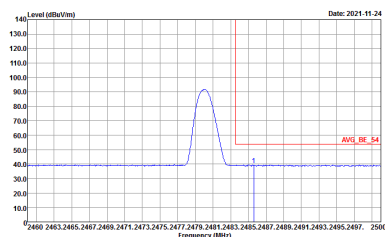
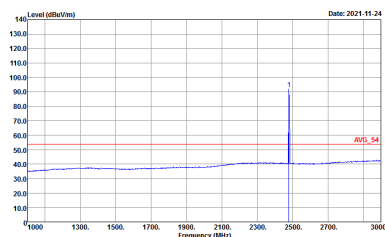
**WLAN 802.11ax HE20 Tx\_CH36 + BLE 2Mbps\_Tx\_CH39 + 5G NR n77 Link**
**Band 1 - 5150~5250MHz**
**WIFI 802.11axHE20 Full (Band Edge @ 3m)**

| WIFI | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                                                                                                    |                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ax HE20 Full CH36 5180MHz                                                                                                                                                                                       |                                                                                                                                                                                                                        |
| 4+5  | Horizontal                                                                                                                                                                                                            | Fundamental                                                                                                                                                                                                            |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 HORIZONTAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK(FUND) 3m 91200_1620_20211025 HORIZONTAL<br/>: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p> |
| Avg. |  <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 HORIZONTAL<br/>: RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>   | Left blank                                                                                                                                                                                                             |



| WIFI | Band 1 5150~5250MHz Band Edge @ 3m                                                                                                |                                                                                                                                   |
|------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| ANT  | 802.11ax HE20 Full CH36 5180MHz                                                                                                   |                                                                                                                                   |
| 4+5  | Vertical                                                                                                                          | Fundamental                                                                                                                       |
| Peak | <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH15-HY<br/>Condition : PEAK(FUND) 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. | <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 VERTICAL<br/>: RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>     | Left blank                                                                                                                        |

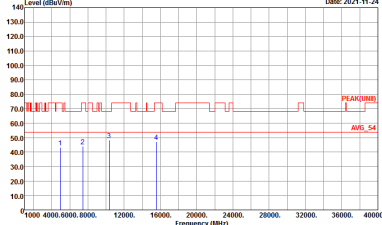
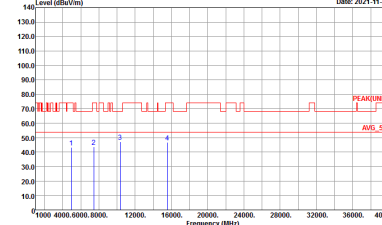
**2.4GHz 2400~2483.5MHz**
**BLE 2Mbps (Band Edge @ 3m)**

| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                                                                                                                 |                                                                                                                                                                                                                    |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ANT  | BLE CH39 2480MHz                                                                                                                                                                                                     |                                                                                                                                                                                                                    |
| 5    | Horizontal                                                                                                                                                                                                           | Fundamental                                                                                                                                                                                                        |
| Peak |  <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p>  |  <p>Site : 03CH15-HY<br/>Condition : PEAK_74 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p>  |
|      |  <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p> |  <p>Site : 03CH15-HY<br/>Condition : AVG_54 3m 91200_1620_20211025 HORIZONTAL<br/>RBW:3000.000KHz VBW:3000.000KHz SWT:Auto</p> |
| Avg. |                                                                                                                                                                                                                      |                                                                                                                                                                                                                    |



| BLE  | 2.4GHz 2400~2483.5MHz Band Edge @ 3m                                                                                            |                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| ANT  | BLE CH39 2480MHz                                                                                                                |                                                                                                                              |
| 5    | Vertical                                                                                                                        | Fundamental                                                                                                                  |
| Peak | <p>Site : 03CH15-HY<br/>Condition : PEAK_BE_74 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> | <p>Site : 03CH15-HY<br/>Condition : PEAK_74 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p> |
|      | <p>Site : 03CH15-HY<br/>Condition : AVG_BE_54 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>  | <p>Site : 03CH15-HY<br/>Condition : AVG_54 3m 91200_1620_20211025 VERTICAL<br/>RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>  |

**WLAN 802.11ax HE20 Tx\_CH36 + BLE 2Mbps\_Tx\_CH39 + 5G NR n77 Link  
(Harmonic @ 3m)**

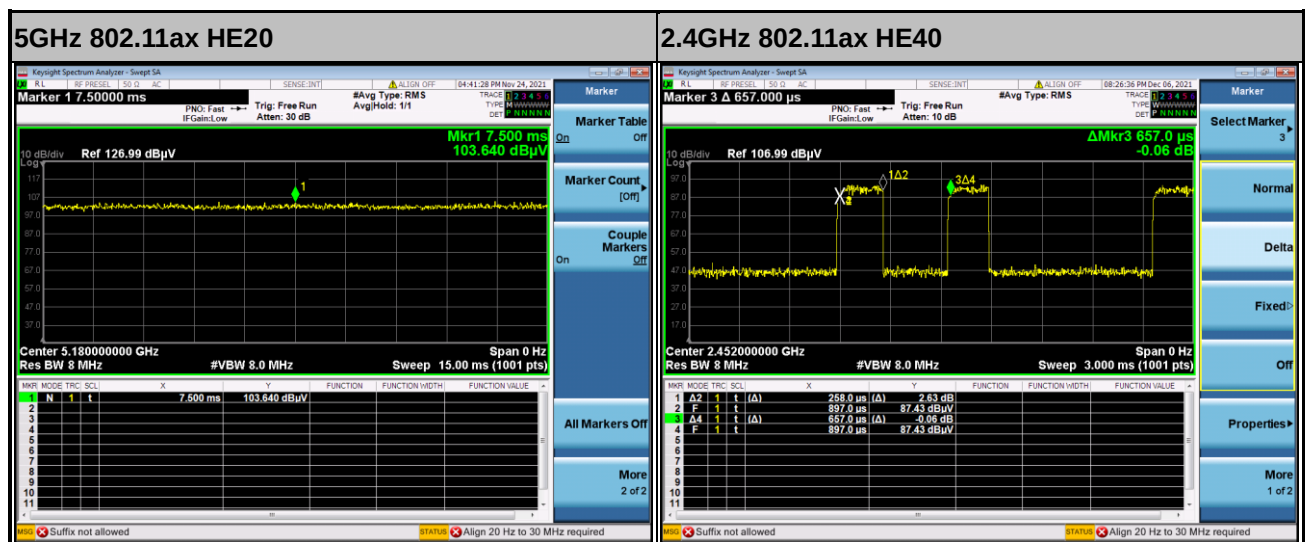
| ANT                            | 802.11ax HE20_Tx_CH36 + BLE_Tx_CH39+ 5GNR N77 Link                                                                                                                                         |                                                                                                                                                                                           |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4+5                            | Horizontal                                                                                                                                                                                 | Vertical                                                                                                                                                                                  |
| <b>Peak</b><br><br><b>Avg.</b> |  <p>Site : 03CH15-HY<br/>Condition : PEAK[UNIT] 3m 91200_1620_20211025 HORIZONTAL<br/>Detector : Peak</p> |  <p>Site : 03CH15-HY<br/>Condition : PEAK[UNIT] 3m 91200_1620_20211025 VERTICAL<br/>Detector : Peak</p> |



## Appendix E. Duty Cycle Plots

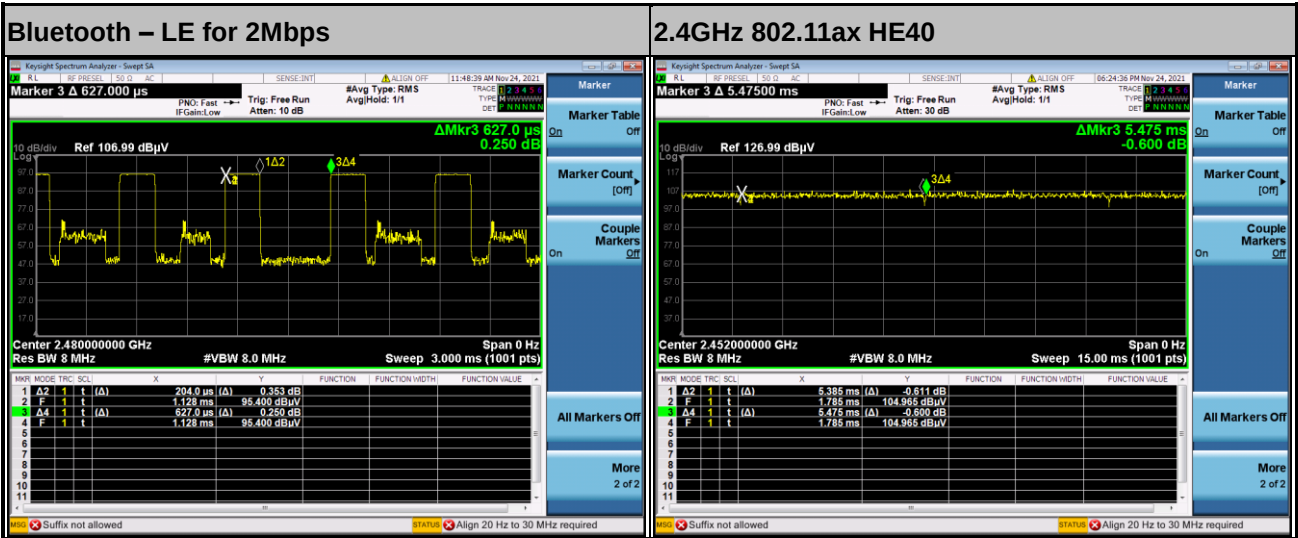
| Antenna | Band                         | Duty Cycle(%) | T(us) | 1/T(kHz) | VBW Setting |
|---------|------------------------------|---------------|-------|----------|-------------|
| 4       | 5GHz 802.11ax HE20 Full RU   | 100.00        | -     | -        | 10Hz        |
| 4       | 2.4GHz 802.11ax HE40 Full RU | 39.27         | 258   | 3.88     | 10kHz       |
| 5       | Bluetooth – LE for 2Mbps     | 32.54         | 204   | 4.90     | 10kHz       |
| 5       | 2.4GHz 802.11ax HE40 Full RU | 100.00        | -     | -        | 10Hz        |
| 4+5     | 5GHz 802.11ax HE20 Full RU   | 100.00        | -     | -        | 10Hz        |

&lt;Ant. 4&gt;

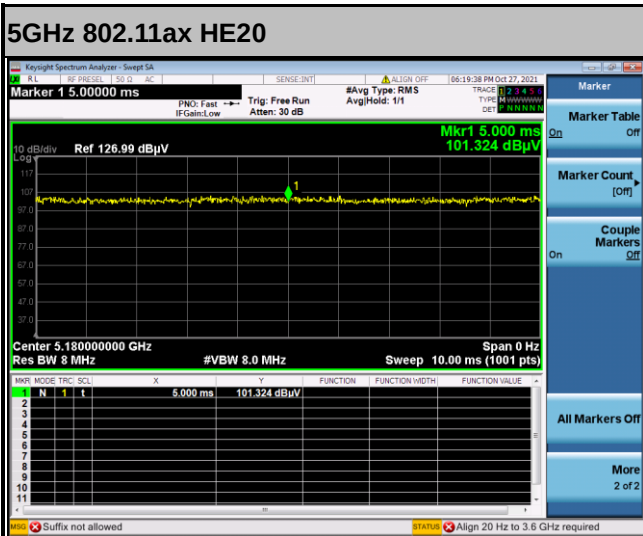




<Ant. 5>



MIMO <Ant. 4+5>



—THE END—