



# FCC RADIO TEST REPORT

**FCC ID** : QYLAX211NG  
**Equipment** : Wireless Module  
**Brand Name** : Getac  
**Model Name** : AX211NGW  
**Applicant** : Getac Technology Corporation.  
5F., Building A, No. 209, Sec.1, Nangang Rd., Nangang  
Dist., Taipei City 115018, Taiwan, R.O.C.  
**Standard** : FCC Part 15 Subpart E §15.407

The product was received on Aug. 10, 2023 and testing was performed from Aug. 29, 2023 to Sep. 18, 2023. 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 partial report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

*Louis Wu*

Approved by: Louis Wu

**Sporton International Inc. Wensan Laboratory**

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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### History of this test report

Report No.	Version	Description	Issue Date
FR381701-02D	01	Initial issue of report	Nov. 03, 2023



## Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	15.403(i)	26dB Bandwidth	-	See Note
-	2.1049	99% Occupied Bandwidth	-	See Note
3.1	15.407(a)	Maximum Conducted Output Power	Pass	-
-	15.407(a)	Power Spectral Density	-	See Note
3.2	15.407(b)	Unwanted Emissions	Pass	-
3.3	15.207	AC Conducted Emission	Pass	-
3.4	15.203	Antenna Requirement	Pass	-

**Note:**

1. For host device, Radiated Spurious Emission is verified and complies with the limit in this test report.
2. For host device, the Conducted Output Power is no difference after compared to module (Model: AX211NGW)

**Conformity Assessment Condition:**

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

**Disclaimer:**

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

**Reviewed by: Yun Huang**  
**Report Producer: Ming Chen**



# 1 General Description

## 1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs	Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ax, Wi-Fi 5GHz 802.11a/n/ac/ax and Wi-Fi 6GHz 802.11ax
Sample 1	EUT with Host 1
Sample 2	EUT with Host 2
Sample 3	EUT with Host 3
Antenna Type	WLAN: <Main>: PIFA Antenna <Aux.>: PIFA Antenna Bluetooth: PIFA Antenna

The product was installed into Tablet PC (Brand Name: Getac, Model Name: F110, F110G7, F110-701, F110-711, F110-721, F110-Exc, F110Y (Y= 10 characters, Y can be 0-9, a-z, A-Z, “-“, “\_” or blank for marketing purpose and no impact safety related critical components and constructions.)) during test, and the host information was recorded in the following table.

Host Information	
Host 1	Host with SKU A
Host 2	Host with SKU B
Host 3	Host with SKU C

Antenna Information for Host			
Antenna	Manufacturer	PULSE	
	Antenna Type	PIFA Antenna	PIFA Antenna
	Part number	422GA4500004	422GA4500009
	Peak gain (dBi)	Main Antenna : WLAN(5G B1): 1.96 WLAN(5G B2): 1.65 WLAN(5G B3): 1.88	Aux. Antenna : WLAN(5G B1): 1.76 WLAN(5G B2): 1.31 WLAN(5G B3): 2.07



<b>Sample Information for Host</b>			
	<b>SKU A</b>	<b>SKU B</b>	<b>SKU C</b>
<b>CPU</b>	i5-1335U	i5-1335U	I7-1365U
<b>DDR</b>	Kingston 8GB	Kingston 16GB	Kingston 32GB
<b>SSD</b>	256GB	512GB	1TB
<b>PANEL</b>	Full FHD AUO	Full FHD AUO	Full FHD AUO
<b>DIGITIZER</b>	Not Support	EMRright Digitizer	EMRright Digitizer
<b>OPTION BAY</b>	MicroSD Card	Barcode Reader	LAN
<b>Expansion Bay</b>	N/A	HID RFID	SMART CARD
<b>Right side option</b>	RFID (SN-NSVG7-C01)	Not Support	Fringer Print
<b>WLAN/BT</b>	Intel AX211	Intel AX211	Intel AX211
<b>WWAN(4G)</b>	NA	LN920A12-WW	LN920A12-WW
<b>GNSS</b>	GPS/GNSS (MC-1010-V2B)	LN920A12-WW	LN920A12-WW
<b>Rear 8M Camera</b>	Support	Support	Support
<b>Webcam FHD</b>	Support	Not Support	Support
<b>IR Webcam</b>	Not Support	Support	Support
<b>USB3.2 Gen2 x 1 Type-A</b>	Support	Support	Support
<b>Type-C (thunder bolt)</b>	Support	Support	Support
<b>Audio/MIC</b>	Support	Support	Support
<b>Fischer</b>	Not Support	Not Support	Not Support

**Remark:** The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

### 1.1.1 Antenna Directional Gain

**<For CDD Mode>**

Follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01 F2)f)ii)

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

For power measurements on IEEE 802.11 devices,

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

$G_{ANT}$  is set equal to the gain of the antenna having the highest gain.

For PSD measurements, the directional gain calculation.

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

where

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

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

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

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

As minimum  $N_{SS}=1$  is supported by EUT, the formula can be simplified as:

Directional gain =  $10 \cdot \log[(10^{G_1 / 20} + 10^{G_2 / 20} + \dots + 10^{G_N / 20})^2 / N_{ANT}]$  dBi

Where  $G_1, G_2, \dots, G_N$  denote single antenna gain.



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

			DG	DG	Power	PSD
			for	for	Limit	Limit
	Chain A	Chain B	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
<b>Band I</b>	1.76	1.96	1.96	4.87	0.00	0.00
<b>Band II</b>	1.31	1.65	1.65	4.49	0.00	0.00
<b>Band III</b>	2.07	1.88	2.07	4.99	0.00	0.00

Calculation example:

If a device has two antenna,  $G_{ANT1}= 2.07\text{dBi}$ ;  $G_{ANT2}=1.88\text{dBi}$

Directional gain of power measurement =  $\max(2.07, 1.88) + 0 = 2.07 \text{ dBi}$

Directional gain of PSD derived from formula which is

$$10 \times \log \left\{ \left[ 10^{(2.07 \text{ dBi} / 20)} + 10^{(1.88 \text{ dBi} / 20)} \right]^2 / 2 \right\}$$

= 4.99 dBi

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





### 1.2 Modification of EUT

No modifications made to the EUT during the testing.

### 1.3 Testing Location

<b>Test Site</b>	Sporton International Inc. EMC & Wireless Communications Laboratory
<b>Test Site Location</b>	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
<b>Test Site No.</b>	<b>Sporton Site No.</b> CO05-HY (TAF Code: 1190)
<b>Remark</b>	The AC Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory.

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

<b>Test Site</b>	Sporton International Inc. Wensan Laboratory
<b>Test Site Location</b>	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
<b>Test Site No.</b>	<b>Sporton Site No.</b> TH05-HY, 03CH11-HY

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

FCC designation No.: TW1190 and TW3786

### 1.4 Applicable Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

**Remark:**

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
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

- a. 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: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, 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 only the worst case emissions were reported in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

### 2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700



Frequency Band	Channel	Freq. (MHz)
5150-5350 MHz	50@	5250
5470-5725 MHz	114@	5570

Note:

1. The above Frequency and Channel with "\*" are 802.11ax HE40.
2. The above Frequency and Channel with "#" are 802.11ax HE80.
3. The above Frequency and Channel with "@" and 802.11ax HE160.

## 2.2 Test Mode

The final test modes include the worst data rates for each modulation shown in the table below.

### Single Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0
802.11ax HE160	MCS0

### MIMO Mode

Modulation	Data Rate
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0
802.11ax HE160	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : Bluetooth Link + WLAN (5GHz) Link + H-Pattern + Earphone + Battery 2 + Adapter 3 for Sample 3
<b>Remark:</b> For Radiated Test Cases, the tests were performed with Adapter 3, Battery 2 and Sample 3.	



<Chain A>

Ch. #		Band III : 5470-5725MHz
		802.11ax HE20
L	Low	-
M	Middle	-
H	High	140
Straddle		-

<Chain B>

Ch. #		Band II : 5250-5350 MHz
		802.11a
L	Low	52
M	Middle	-
H	High	-
Straddle		-

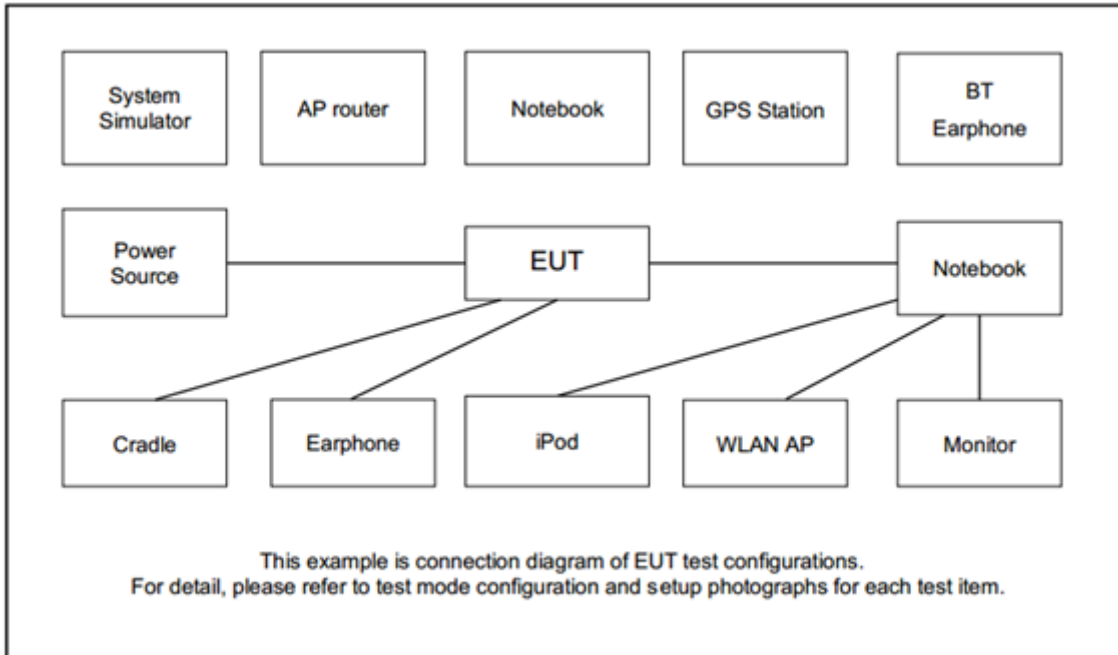
<Chain A+B>

Ch. #		Band III : 5470-5725MHz
		802.11ax HE20
L	Low	-
M	Middle	-
H	High	140
Straddle		-

Ch. #		Band I : 5150-5250 MHz
		802.11ax HE40
L	Low	38
M	Middle	-
H	High	-
Straddle		-

Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

### 2.3 Connection Diagram of Test System



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

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Bluetooth Earphone	Sony Ericsson	MW600	PY700A2029	N/A	N/A
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude 3420	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

### 2.5 EUT Operation Test Setup

The RF test items, utility “DRTU.03544.22.200.0” was installed in Host 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 Maximum Conducted Output Power Measurement

##### 3.1.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

**For the 5.15–5.25 GHz bands:**

■ For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

**For the 5.25–5.725 GHz bands:**

■ The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz.

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

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

##### 3.1.2 Measuring Instruments

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

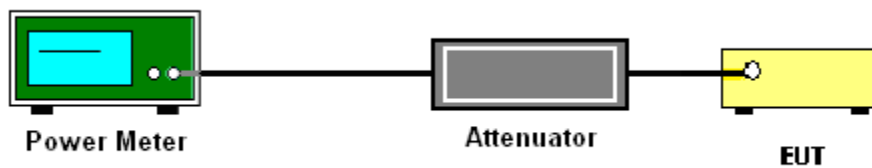
### 3.1.3 Test Procedures

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01

### 3.1.4 Test Setup



### 3.1.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



### 3.2 Unwanted Emissions Measurement

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

#### 3.2.1 Limit of Unwanted Emissions

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

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

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

(2) Unwanted spurious emissions falls in restricted bands shall comply with the general field strength limits as below table:

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

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

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





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.

### 3.2.2 Measuring Instruments

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

### 3.2.3 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 ≥ 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

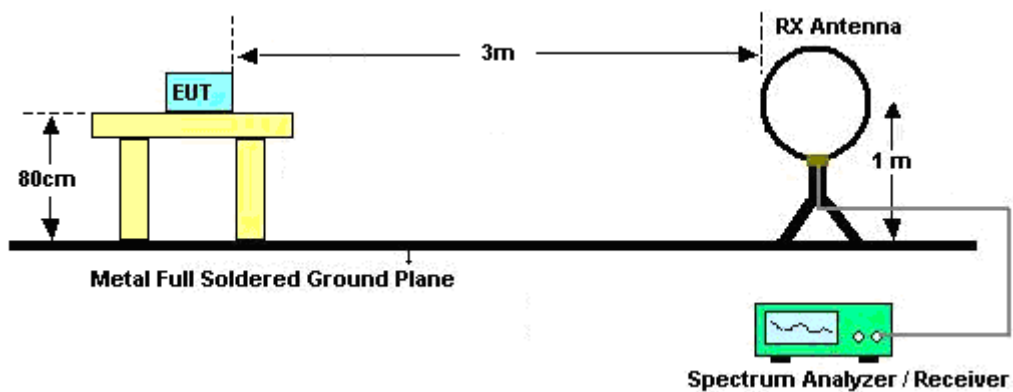
(3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz

- RBW = 1 MHz
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- VBW ≥ 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.

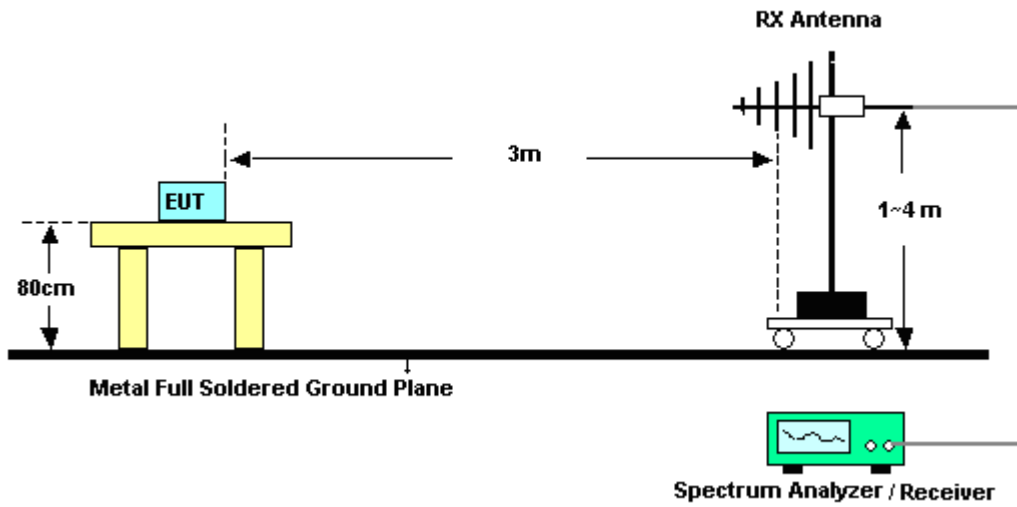
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna 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 “-”.

### 3.2.4 Test Setup

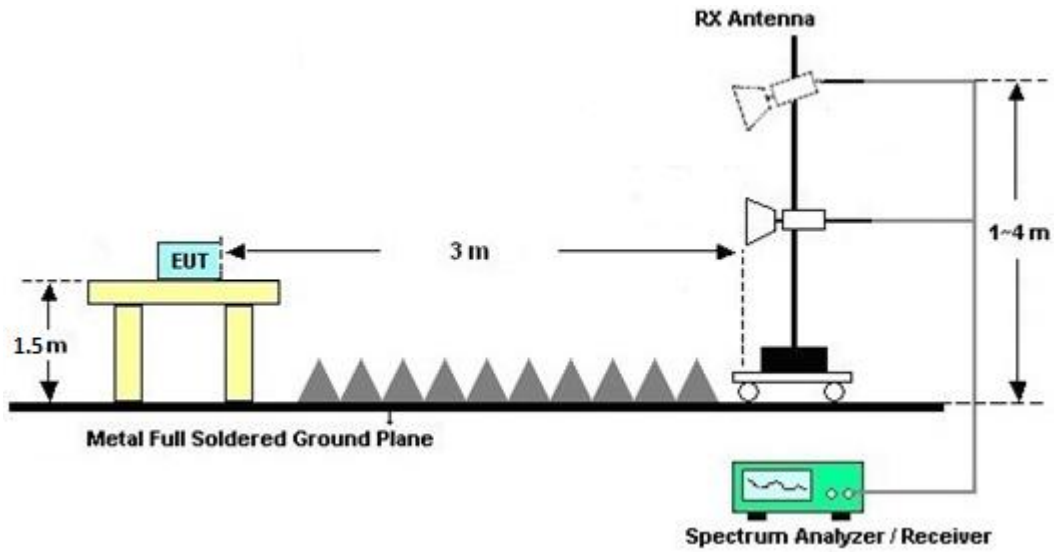
For radiated emissions below 30MHz



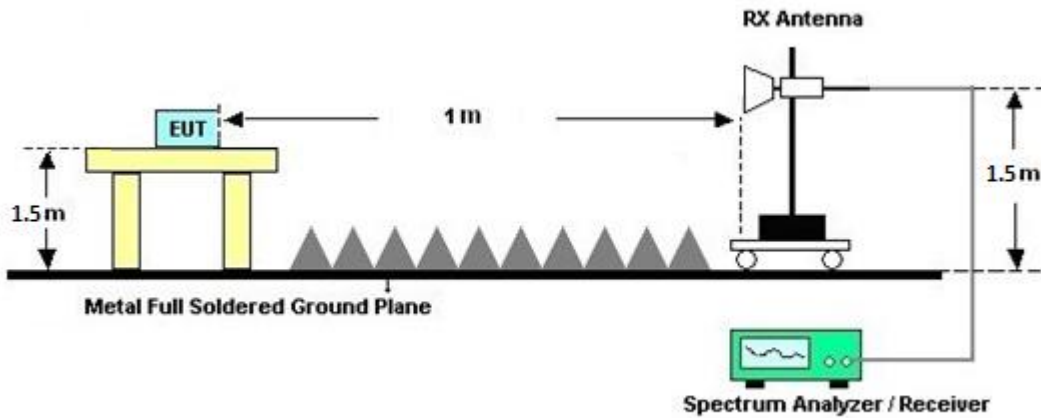
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



### 3.2.5 Test Results of Radiated Spurious 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.

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

Please refer to Appendix C and D.

### 3.2.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.



### 3.3 AC Conducted Emission Measurement

#### 3.3.1 Limit of AC Conducted Emission

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

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

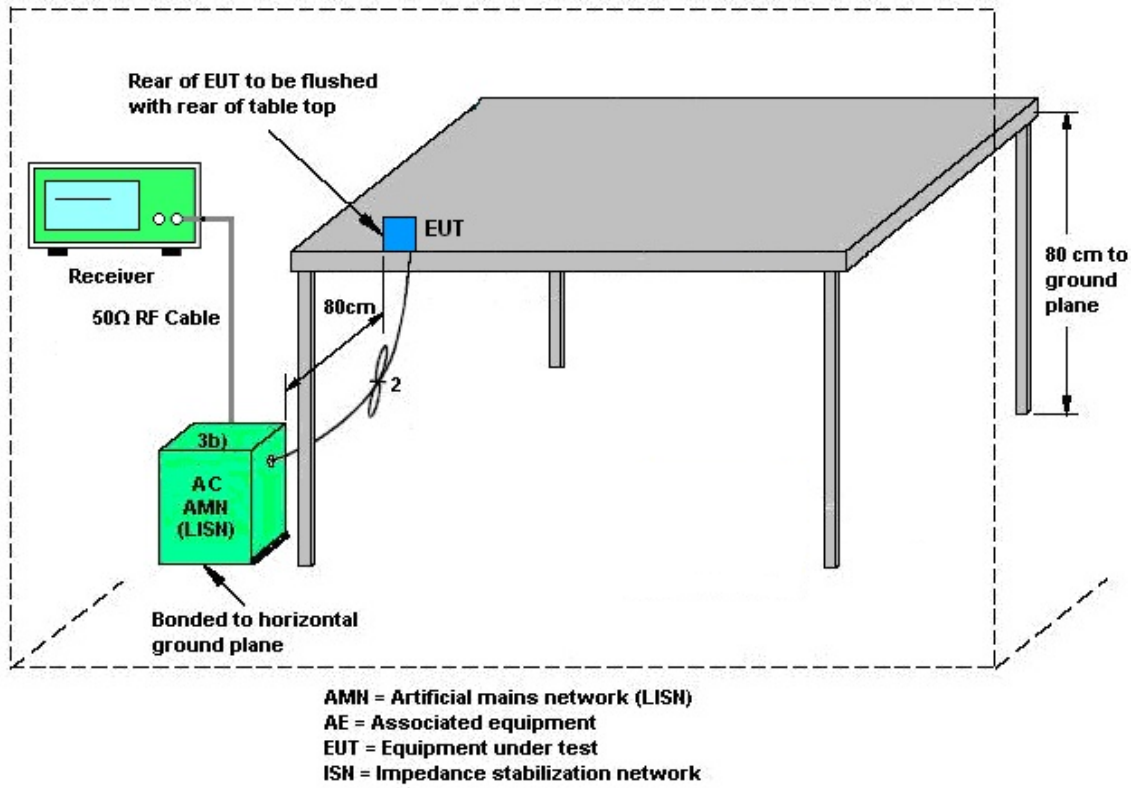
#### 3.3.2 Measuring Instruments

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

#### 3.3.3 Test Procedures

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

### 3.3.4 Test Setup



### 3.3.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



## **3.4 Antenna Requirements**

### **3.4.1 Standard Applicable**

The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

### **3.4.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.



## 4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Bilog Antenna	TESEQ	CBL 6111D & N-6-06	35414 & AT-N0602	30MHz~1GHz	Oct. 08, 2022	Sep. 11, 2023~ Sep. 16, 2023	Oct. 07, 2023	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	01620	1GHz~18GHz	Aug. 17, 2023	Sep. 11, 2023~ Sep. 16, 2023	Aug. 16, 2024	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00994	18GHz~40GHz	Nov. 04, 2022	Sep. 11, 2023~ Sep. 16, 2023	Nov. 03, 2023	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 09, 2022	Sep. 11, 2023~ Sep. 16, 2023	Dec. 08, 2023	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 09, 2022	Sep. 11, 2023~ Sep. 16, 2023	Nov. 08, 2023	Radiation (03CH11-HY)
Preamplifier	Jet-Power	JPA0118-55-303	17100018000 55007	1GHz~18GHz	Jun. 14, 2023	Sep. 11, 2023~ Sep. 16, 2023	Jun. 13, 2024	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 27, 2023	Sep. 11, 2023~ Sep. 16, 2023	Jun. 26, 2024	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 07, 2022	Sep. 11, 2023~ Sep. 16, 2023	Oct. 06, 2023	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Oct. 18, 2022	Sep. 11, 2023~ Sep. 16, 2023	Oct. 17, 2023	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Sep. 11, 2023~ Sep. 16, 2023	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Sep. 11, 2023~ Sep. 16, 2023	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Sep. 11, 2023~ Sep. 16, 2023	N/A	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Sep. 11, 2023~ Sep. 16, 2023	N/A	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz~40GHz	Mar. 07, 2023	Sep. 11, 2023~ Sep. 16, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	801595/2	30MHz~40GHz	Mar. 07, 2023	Sep. 11, 2023~ Sep. 16, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 07, 2023	Sep. 11, 2023~ Sep. 16, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	30M~40G	Mar. 07, 2023	Sep. 11, 2023~ Sep. 16, 2023	Mar. 06, 2024	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-153 0-8000-40SS	SN11	1.53G Low Pass	Sep. 11, 2023	Sep. 11, 2023~ Sep. 16, 2023	Sep. 10, 2024	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-2700-3 000-18000-60SS	SN3	3GHz High Pass Filter	Sep. 11, 2023	Sep. 11, 2023~ Sep. 16, 2023	Sep. 10, 2024	Radiation (03CH11-HY)
Filter	Wainwright	WHKX8-5872.5- 6750-18000 -40SS	SN3	6.75GHz High Pass Filter	Sep. 11, 2023	Sep. 11, 2023~ Sep. 16, 2023	Sep. 10, 2024	Radiation (03CH11-HY)





Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 17, 2022	Aug. 30, 2023~ Sep. 18, 2023	Nov. 16, 2023	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16100054SNO 12 (NO:113)	10MHz~6GHz	Dec. 13, 2022	Aug. 30, 2023~ Sep. 18, 2023	Dec. 12, 2023	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101564	10Hz ~ 40GHz	Sep. 13, 2022	Aug. 30, 2023~ Sep. 01, 2023	Sep. 12, 2023	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101565	10Hz ~ 40GHz	Dec. 26, 2022	Sep. 18, 2023	Dec. 25, 2023	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Aug. 29, 2023	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 01, 2022	Aug. 29, 2023	Nov. 30, 2023	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 17, 2022	Aug. 29, 2023	Nov. 16, 2023	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 17, 2022	Aug. 29, 2023	Nov. 16, 2023	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Aug. 29, 2023	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	9kHz-200MHz	Jul. 28, 2023	Aug. 29, 2023	Jul. 27, 2024	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 29, 2022	Aug. 29, 2023	Dec. 28, 2023	Conduction (CO05-HY)



## 5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	3.5 dB
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	6.3 dB
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### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.4 dB
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### Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.8 dB
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### Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.3 dB
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## Appendix A. Test Result of Conducted Test Items

Test Engineer:	Ching Chen	Temperature:	21~25	°C
Test Date:	2023/8/30-2023/9/18	Relative Humidity:	51~54	%

**Remark:** For Conducted Test Items, Ant. 1 means Chain A (Aux.) and Ant. 2 means Chain B (Main).

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

FCC U-NII-1 single antenna													
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	36	5180	19.50	17.90		24.00	24.00	1.76	1.96		Pass
11a	6Mbps	1	44	5220	20.90	20.50	-	24.00	24.00	1.76	1.96	-	Pass
11a	6Mbps	1	48	5240	20.90	20.50		24.00	24.00	1.76	1.96		Pass

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

FCC U-NII-2A single antenna													
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	52	5260	20.80	21.00	-	23.98	23.98	1.31	1.65	30	Pass
11a	6Mbps	1	60	5300	20.50	20.50		23.98	23.98	1.31	1.65	30	Pass
11a	6Mbps	1	64	5320	20.30	18.60		23.98	23.98	1.31	1.65	30	Pass

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

FCC U-NII-2C single antenna													
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	100	5500	19.60	19.50		23.98	23.98	2.07	1.88	30	Pass
11a	6Mbps	1	116	5580	19.90	20.00	-	23.98	23.98	2.07	1.88	30	Pass
11a	6Mbps	1	140	5700	19.60	19.60		23.98	23.98	2.07	1.88	30	Pass

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

FCC U-NII-1 single antenna													
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	1	36	5180	Full	19.30	18.30		24.00	24.00	1.76	1.96	Pass
HE20	MCS0	1	44	5220	Full	20.80	20.50		24.00	24.00	1.76	1.96	Pass
HE20	MCS0	1	48	5240	Full	20.70	20.50		24.00	24.00	1.76	1.96	Pass
HE40	MCS0	1	38	5190	Full	19.00	17.30	-	24.00	24.00	1.76	1.96	Pass
HE40	MCS0	1	46	5230	Full	20.80	18.50		24.00	24.00	1.76	1.96	Pass
HE80	MCS0	1	42	5210	Full	19.40	17.40		24.00	24.00	1.76	1.96	Pass
HE160	MCS0	1	50	5250	Full	16.20	14.70		24.00	24.00	1.76	1.96	Pass

FCC U-NII-1 MIMO													
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
HE20	MCS0	2	36	5180	Full	16.80	16.50	19.66	24.00		1.96		Pass
HE20	MCS0	2	44	5220	Full	18.30	18.40	21.36	24.00		1.96		Pass
HE20	MCS0	2	48	5240	Full	18.40	18.40	21.41	24.00		1.96		Pass
HE40	MCS0	2	38	5190	Full	15.20	15.10	18.16	24.00		1.96		Pass
HE40	MCS0	2	46	5230	Full	17.20	17.10	20.16	24.00		1.96		Pass
HE80	MCS0	2	42	5210	Full	15.90	15.80	18.86	24.00		1.96		Pass
HE160	MCS0	2	50	5250	Full	12.80	12.60	15.71	24.00		1.96		Pass

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

FCC U-NII-2A single antenna														
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	1	52	5260	Full	20.80	20.50	-	23.98	23.98	1.31	1.65	30	Pass
HE20	MCS0	1	60	5300	Full	20.70	21.00	-	23.98	23.98	1.31	1.65	30	Pass
HE20	MCS0	1	64	5320	Full	20.20	18.60	-	23.98	23.98	1.31	1.65	30	Pass
HE40	MCS0	1	54	5270	Full	20.70	19.60	-	23.98	23.98	1.31	1.65	30	Pass
HE40	MCS0	1	62	5310	Full	17.40	17.10	-	23.98	23.98	1.31	1.65	30	Pass
HE80	MCS0	1	58	5290	Full	17.90	17.40	-	23.98	23.98	1.31	1.65	30	Pass

FCC U-NII-2A MIMO														
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	52	5260	Full	18.40	18.20	21.31	23.98	23.98	1.65	1.65	30	Pass
HE20	MCS0	2	60	5300	Full	18.30	18.30	21.31	23.98	23.98	1.65	1.65	30	Pass
HE20	MCS0	2	64	5320	Full	16.80	16.70	19.76	23.98	23.98	1.65	1.65	30	Pass
HE40	MCS0	2	54	5270	Full	18.80	18.90	21.86	23.98	23.98	1.65	1.65	30	Pass
HE40	MCS0	2	62	5310	Full	15.70	15.60	18.66	23.98	23.98	1.65	1.65	30	Pass
HE80	MCS0	2	58	5290	Full	15.20	15.10	18.16	23.98	23.98	1.65	1.65	30	Pass



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

FCC U-NII-2C single antenna														
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	1	100	5500	Full	19.60	19.10	-	23.98	23.98	2.07	1.88	30	Pass
HE20	MCS0	1	116	5580	Full	19.90	20.00	-	23.98	23.98	2.07	1.88	30	Pass
HE20	MCS0	1	140	5700	Full	19.90	19.20	-	23.98	23.98	2.07	1.88	30	Pass
HE40	MCS0	1	102	5510	Full	18.70	17.60	-	23.98	23.98	2.07	1.88	30	Pass
HE40	MCS0	1	110	5550	Full	20.40	20.20	-	23.98	23.98	2.07	1.88	30	Pass
HE40	MCS0	1	134	5670	Full	19.70	20.00	-	23.98	23.98	2.07	1.88	30	Pass
HE80	MCS0	1	106	5530	Full	18.60	17.40	-	23.98	23.98	2.07	1.88	30	Pass
HE80	MCS0	1	122	5610	Full	20.30	20.20	-	23.98	23.98	2.07	1.88	30	Pass
HE160	MCS0	1	114	5570	Full	15.00	15.20	-	23.98	23.98	2.07	1.88	30	Pass

FCC U-NII-2C MIMO														
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	100	5500	Full	18.20	17.90	21.06	23.98	23.98	2.07	2.07	30	Pass
HE20	MCS0	2	116	5580	Full	17.90	17.90	20.91	23.98	23.98	2.07	2.07	30	Pass
HE20	MCS0	2	140	5700	Full	18.10	17.90	21.01	23.98	23.98	2.07	2.07	30	Pass
HE40	MCS0	2	102	5510	Full	16.50	16.00	19.27	23.98	23.98	2.07	2.07	30	Pass
HE40	MCS0	2	110	5550	Full	19.90	20.10	23.01	23.98	23.98	2.07	2.07	30	Pass
HE40	MCS0	2	134	5670	Full	19.50	19.30	22.41	23.98	23.98	2.07	2.07	30	Pass
HE80	MCS0	2	106	5530	Full	16.50	16.20	19.36	23.98	23.98	2.07	2.07	30	Pass
HE80	MCS0	2	122	5610	Full	19.40	19.50	22.46	23.98	23.98	2.07	2.07	30	Pass
HE160	MCS0	2	114	5570	Full	14.40	14.20	17.31	23.98	23.98	2.07	2.07	30	Pass



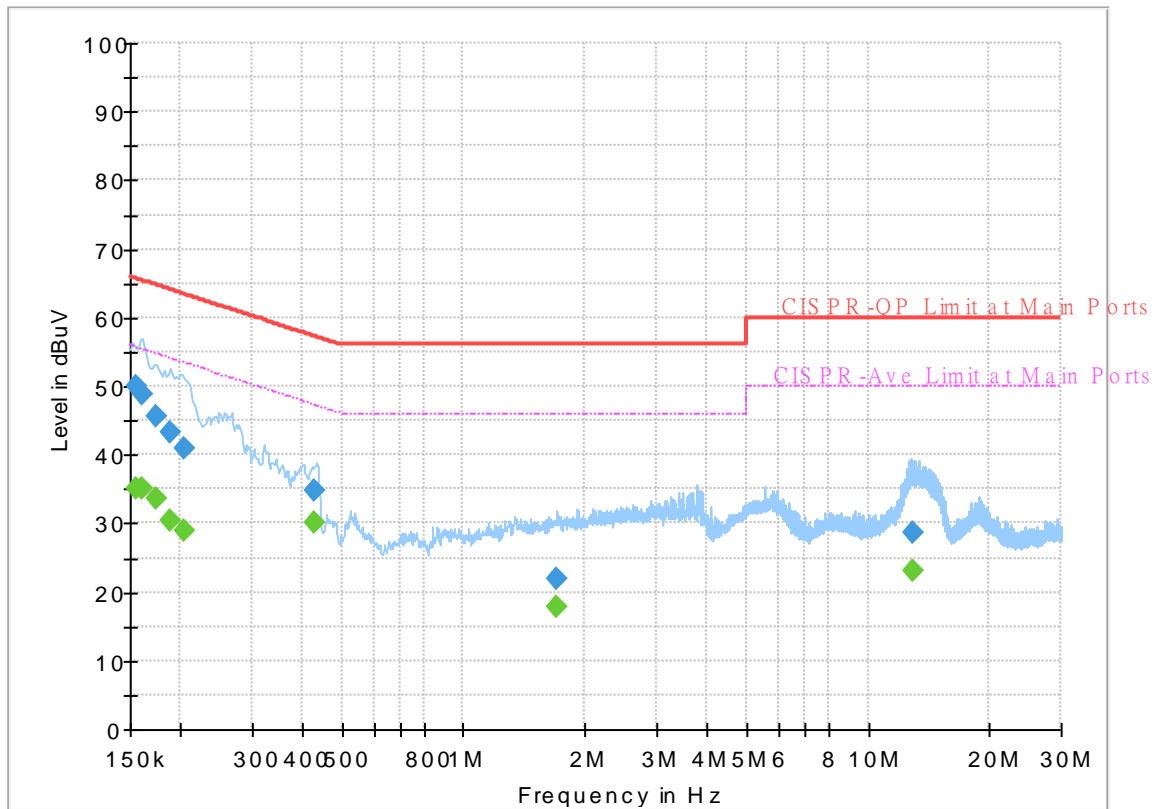
## Appendix B. AC Conducted Emission Test Results

Test Engineer :	Calvin Wang	Temperature :	23~26°C
		Relative Humidity :	45~55%

## EUT Information

Report NO : 381701-02  
 Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Line

Full Spectrum



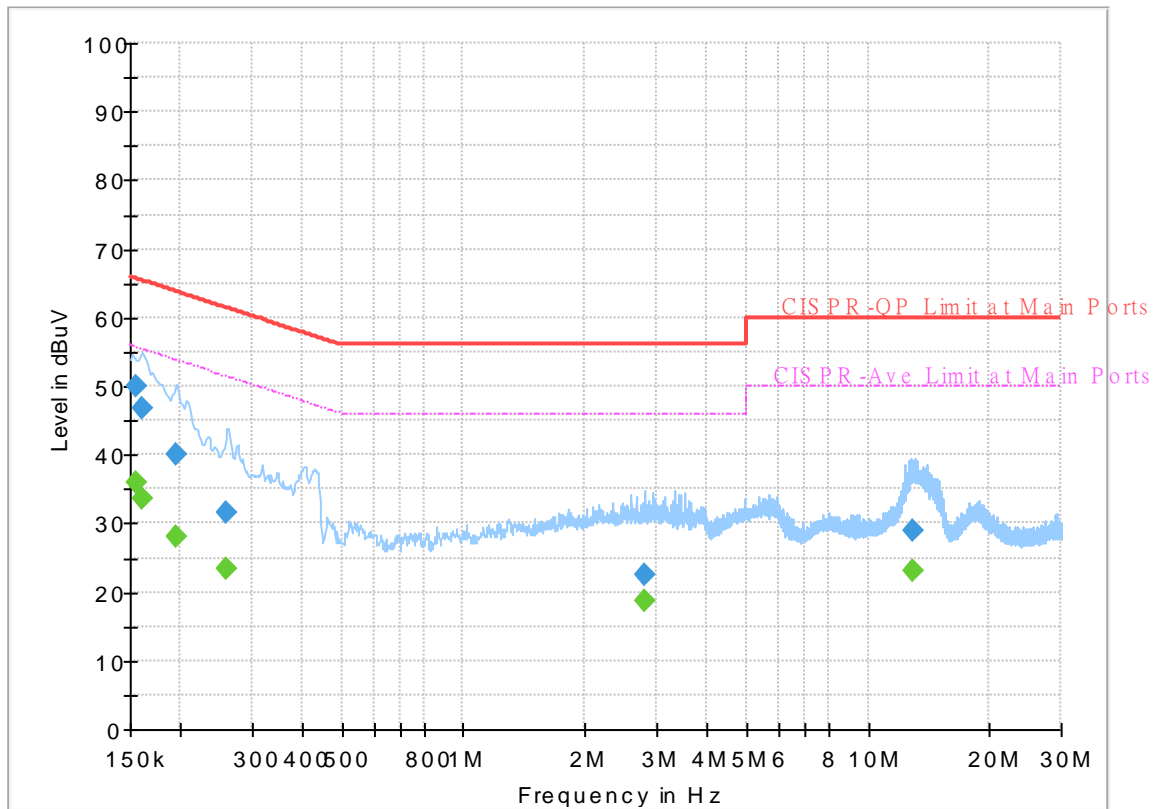
## Final\_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	---	35.06	55.75	20.69	L1	OFF	19.8
0.154500	49.88	---	65.75	15.87	L1	OFF	19.8
0.161250	---	35.21	55.40	20.19	L1	OFF	19.8
0.161250	48.83	---	65.40	16.57	L1	OFF	19.8
0.174750	---	33.58	54.73	21.15	L1	OFF	19.8
0.174750	45.58	---	64.73	19.15	L1	OFF	19.8
0.188250	---	30.29	54.11	23.82	L1	OFF	19.8
0.188250	43.33	---	64.11	20.78	L1	OFF	19.8
0.204000	---	29.09	53.45	24.36	L1	OFF	19.8
0.204000	40.89	---	63.45	22.56	L1	OFF	19.8
0.429000	---	29.98	47.27	17.29	L1	OFF	19.8
0.429000	34.73	---	57.27	22.54	L1	OFF	19.8
1.704750	---	17.77	46.00	28.23	L1	OFF	19.9
1.704750	21.87	---	56.00	34.13	L1	OFF	19.9
12.891750	---	23.10	50.00	26.90	L1	OFF	19.9
12.891750	28.75	---	60.00	31.25	L1	OFF	19.9

# EUT Information

Report NO : 381701-02  
 Test Mode : Mode 1  
 Test Voltage : 120Vac/60Hz  
 Phase : Neutral

Full Spectrum



## Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.154500	---	36.01	55.75	19.74	N	OFF	19.8
0.154500	49.93	---	65.75	15.82	N	OFF	19.8
0.161250	---	33.58	55.40	21.82	N	OFF	19.8
0.161250	46.80	---	65.40	18.60	N	OFF	19.8
0.195000	---	28.02	53.82	25.80	N	OFF	19.8
0.195000	40.13	---	63.82	23.69	N	OFF	19.8
0.260250	---	23.29	51.42	28.13	N	OFF	19.8
0.260250	31.51	---	61.42	29.91	N	OFF	19.8
2.802750	---	18.57	46.00	27.43	N	OFF	19.8
2.802750	22.58	---	56.00	33.42	N	OFF	19.8
12.961500	---	23.17	50.00	26.83	N	OFF	20.0
12.961500	28.85	---	60.00	31.15	N	OFF	20.0



## Appendix C. Radiated Spurious Emission

Test Engineer :	Yuan Lee, Sam Chou and Troye Hsieh	Temperature :	19.8~22.1°C
		Relative Humidity :	55.1~65.6%

Remark: For Radiated Spurious Emission Test Items, Ant. 1 means Chain A (Aux.) and Ant. 2 means Chain B (Main).

**Band 3 - 5470~5725MHz**

**WIFI 802.11ax HE20 Full (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Margin ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11ax HE20 Full CH 140 5700MHz	*	5700	113.9	-	-	102.76	33.5	11.28	33.64	250	270	P	H
	*	5700	106.15	-	-	95.01	33.5	11.28	33.64	250	270	A	H
		5727.16	66.78	-1.42	68.2	55.51	33.61	11.3	33.64	250	270	P	H
													H
													H
	*	5700	110.66	-	-	99.52	33.5	11.28	33.64	400	237	P	V
	*	5700	102.39	-	-	91.25	33.5	11.28	33.64	400	237	A	V
		5725.16	63.89	-4.31	68.2	52.63	33.6	11.3	33.64	400	237	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5470~5725MHz

WIFI 802.11ax HE20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Margin ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11ax HE20 Full CH 140 5700MHz		11400	47.76	-26.24	74	51.49	39.1	18.38	61.21	-	-	P	H	
		17100	48.06	-20.14	68.2	45.18	38	23.19	58.31	-	-	P	H	
													H	
													H	
													H	
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			11400	47.26	-26.74	74	50.99	39.1	18.38	61.21	-	-	P	V
			17100	47.45	-20.75	68.2	44.57	38	23.19	58.31	-	-	P	V
													V	
													V	
													V	
													V	
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													V	
													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 with sufficient margin against limit line or noise floor only.													



Band 2 - 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dBμV/m )	Margin ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 52 5260MHz		10520	45.06	-23.14	68.2	48.88	38.74	17.68	60.24	-	-	P	H
		15780	46.35	-27.65	74	48.03	37.54	22	61.22	-	-	P	H
													H
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			10520	45.3	-22.9	68.2	49.12	38.74	17.68	60.24	-	-	P
		15780	45.74	-28.26	74	47.42	37.54	22	61.22	-	-	P	V
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**Band 1 - 5150~5250MHz**

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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
<b>802.11ax HE40 Full CH 38 5190MHz</b>		5045.36	52.55	-21.45	74	42.47	33.2	10.53	33.65	101	280	P	H
		5148.77	41.66	-12.34	54	31.53	33.2	10.57	33.64	101	280	A	H
	*	5190	99.52	-	-	89.45	33.12	10.59	33.64	101	280	P	H
	*	5190	90.27	-	-	80.2	33.12	10.59	33.64	101	280	A	H
		5448.24	50.54	-23.46	74	40.05	33	11.11	33.62	101	280	P	H
		5459.16	40.6	-13.4	54	30.13	32.98	11.11	33.62	101	280	A	H
		5024.18	52.29	-21.71	74	42.22	33.2	10.52	33.65	399	243	P	V
		5065.52	41.63	-12.37	54	31.54	33.2	10.54	33.65	399	243	A	V
	*	5190	94.46	-	-	84.39	33.12	10.59	33.64	399	243	P	V
	*	5190	86.24	-	-	76.17	33.12	10.59	33.64	399	243	A	V
		5352.48	51.04	-22.96	74	40.71	33	10.96	33.63	399	243	P	V
		5459.44	40.54	-13.46	54	30.07	32.98	11.11	33.62	399	243	A	V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												





**Band 1 5150~5250MHz**

**WIFI 802.11ax HE40 Full (Harmonic @ 3m)**

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dBμV/m )	Margin ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)	
802.11ax HE40 Full CH 38 5190MHz		10380	45.51	-22.69	68.2	49.22	38.8	17.55	60.06	-	-	P	H	
		15570	46.24	-27.76	74	48.16	38	21.89	61.81	-	-	P	H	
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			10380	46.12	-22.08	68.2	49.83	38.8	17.55	60.06	-	-	P	V
			15570	45.85	-28.15	74	47.77	38	21.89	61.81	-	-	P	V
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**Band 3 - 5470~5725MHz**

**WIFI 802.11ax HE20 Full (Band Edge @ 3m)**

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dBμV/m )	Margin ( dB )	Limit Line ( dBμV/m )	Read Level (dBμV)	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 140 5700MHz	*	5700	105.53	-	-	94.39	33.5	11.28	33.64	100	269	P	H
	*	5700	97.83	-	-	86.69	33.5	11.28	33.64	100	269	A	H
		5732.68	55.32	-12.88	68.2	44.02	33.63	11.31	33.64	100	269	P	H
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													H
	*	5700	103.51	-	-	92.37	33.5	11.28	33.64	399	235	P	V
	*	5700	95.08	-	-	83.94	33.5	11.28	33.64	399	235	A	V
		5735.56	52.17	-16.03	68.2	40.86	33.64	11.31	33.64	399	235	P	V
													V
												V	
												V	
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5470~5725MHz

WIFI 802.11ax HE20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dBμV/m )	Margin ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )
802.11ax HE20 Full CH 140 5700MHz		11400	46.54	-27.46	74	50.27	39.1	18.38	61.21	-	-	P	H
		17100	47.26	-20.94	68.2	44.38	38	23.19	58.31	-	-	P	H
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	802.11ax HE20 Full CH 140 5700MHz		11400	46.61	-27.39	74	50.34	39.1	18.38	61.21	-	-	P
		17100	47.53	-20.67	68.2	44.65	38	23.19	58.31	-	-	P	V
													V
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													V
Remark	<ol style="list-style-type: none"> <li>No other spurious found.</li> <li>All results are PASS against Peak and Average limit line.</li> <li>The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.</li> </ol>												



Emission above 1GHz

5GHz WIFI 802.11ax HE20 Full (SHF @ 1m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11ax HE20 Full SHF		39846	51.34	-22.66	74	39	44.55	23.87	56.08	-	-	P	H
		39846	42.9	-11.1	54	30.56	44.55	23.87	56.08	-	-	A	H
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			39468	51.08	-22.92	74	39.11	44.49	24	56.52	-	-	P
		39468	43.81	-10.19	54	31.84	44.49	24	56.52	-	-	A	V
													V
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													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												



Emission below 1GHz

5GHz WIFI 802.11ax HE20 Full (LF @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dBμV/m )	Margin ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Path Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11ax HE20 Full LF		32.43	23.05	-16.95	40	31.55	22.79	0.88	32.17	-	-	P	H	
		104.52	19.14	-24.36	43.5	33.44	16.23	1.61	32.14	-	-	P	H	
		254.1	21.95	-24.05	46	32.93	18.57	2.48	32.03	-	-	P	H	
		850.2	34.38	-11.62	46	32.91	28.69	4.38	31.6	-	-	P	H	
		927.9	34.67	-11.33	46	31.99	29.13	4.54	30.99	-	-	P	H	
		960.1	36.35	-17.65	54	31.67	30.69	4.69	30.7	-	-	P	H	
														H
														H
														H
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														H
														H
			34.32	22.51	-17.49	40	31.75	22.04	0.91	32.19	-	-	P	V
			129.63	18.99	-24.51	43.5	31.97	17.35	1.83	32.16	-	-	P	V
			265.44	21.76	-24.24	46	31.85	19.42	2.51	32.02	-	-	P	V
			891.5	35.03	-10.97	46	33.38	28.56	4.39	31.3	-	-	P	V
			946.1	35.86	-10.14	46	32.07	29.98	4.64	30.83	-	-	P	V
			995.8	36.2	-17.8	54	31.8	29.94	4.79	30.33	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	
Remark	<ol style="list-style-type: none"> <li>No other spurious found.</li> <li>All results are PASS against limit line.</li> <li>The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.</li> </ol>													



**Band 3 5470~5725MHz**

**Note symbol**

*	<b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is <b>over limit</b> line.
P/A	<b>Peak</b> or <b>Average</b>
H/V	<b>Horizontal</b> or <b>Vertical</b>



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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11a		5150	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 36		5150	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H
5180MHz													

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 @ 5150MHz:**

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 @ 5150MHz:**

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 D. Radiated Spurious Emission Plots

<b>Test Engineer :</b>	Yuan Lee, Sam Chou and Troye Hsieh	<b>Temperature :</b>	19.8~22.1°C
		<b>Relative Humidity :</b>	55.1~65.6%

**Remark:** For Radiated Spurious Emission Test Items, Ant. 1 means Chain A (Aux.) and Ant. 2 means Chain B (Main).

### Note symbol

-L	Low channel location
-R	High channel location



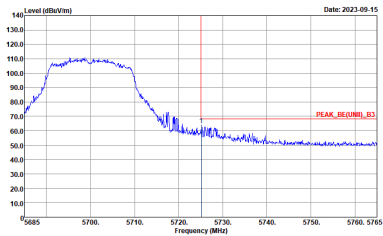
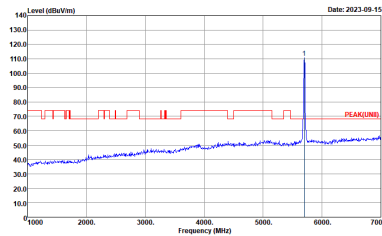
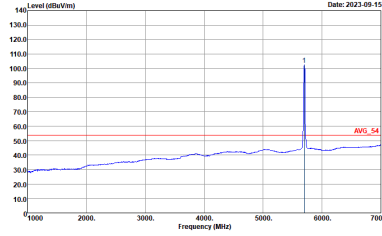


**Band 3 - 5470~5725MHz**

**WIFI 802.11ax HE20 Full (Band Edge @ 3m)**

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH140 5700MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(UNIT)_B3 3m 91200_01620_230817 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m 91200_01620_230817 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	Left blank	<p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>



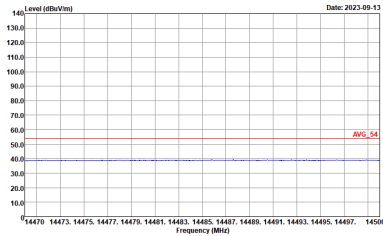
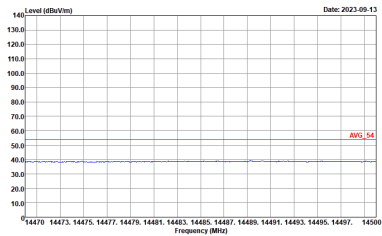
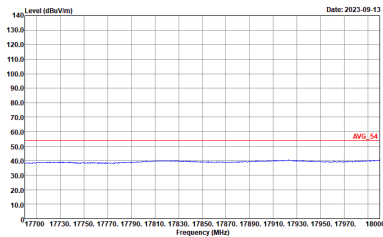
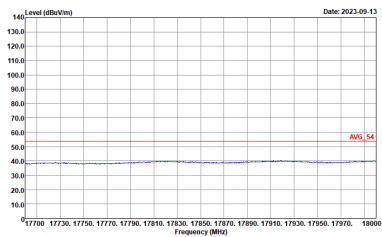
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH140 5700MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CHI1-HY Condition : PEAK_SEC(UNIT)_B3 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CHI1-HY Condition : PEAK(LINE) 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CHI1-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



**Band 3 - 5470~5725MHz**  
**WIFI 802.11ax HE20 Full (Harmonic @ 3m)**

<b>WIFI</b>	<b>Band 3 5470~5725MHz Harmonic @ 3m</b>	
<b>ANT</b>	<b>802.11ax HE20 Full CH140 5700MHz</b>	
<b>1</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak Avg.</b>	<p>Site : 03CH11-HY          Condition : PEAK[UNII] 3m 91200_01620_230817 HORIZONTAL</p>	<p>Site : 03CH11-HY          Condition : PEAK[UNII] 3m 91200_01620_230817 VERTICAL</p>



WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH140 5700MHZ	
1	Horizontal	Vertical
<p><b>14.47G</b> <b>~14.5G</b> <b>Avg.</b></p>	 <p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL</p>	 <p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL</p>
<p><b>17.7G</b> <b>~18G</b> <b>Avg</b></p>	 <p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL</p>	 <p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL</p>



**Band 2 - 5250~5350MHz**  
**WIFI 802.11a (Harmonic @ 3m)**

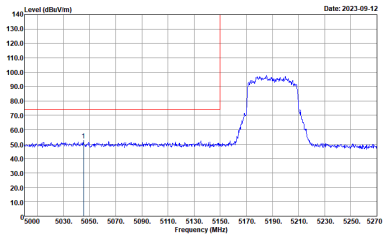
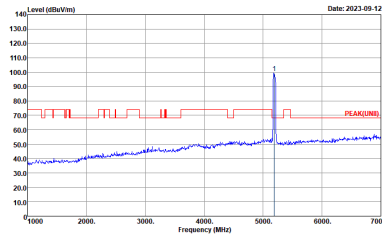
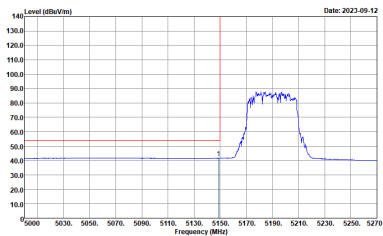
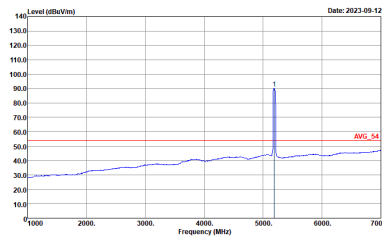
<b>WIFI</b>	<b>Band 2 5250~5350MHz Harmonic @ 3m</b>	
<b>ANT</b>	<b>802.11a CH52 5260MHz</b>	
<b>2</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak Avg.</b>	<p>Site : 03CH11-HY          Condition : PEAK(UNIT) 3m 91200_01620_230817 HORIZONTAL</p>	<p>Site : 03CH11-HY          Condition : PEAK(UNIT) 3m 91200_01620_230817 VERTICAL</p>



WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11a CH52 5260MHz	
2	Horizontal	Vertical
<b>14.47G</b> <b>~14.5G</b> <b>Avg.</b>	<p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL</p>	<p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL</p>
	<p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL</p>	<p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL</p>
<b>17.7G</b> <b>~18G</b> <b>Avg</b>		



**Band 1 - 5150~5250MHz**  
**WIFI 802.11ax HE40 Full (Band Edge @ 3m)**

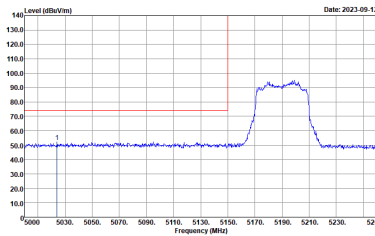
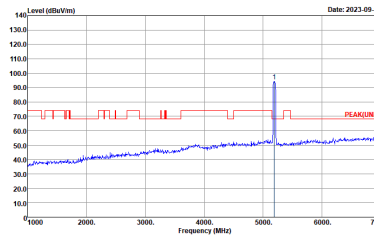
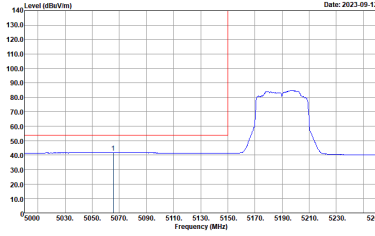
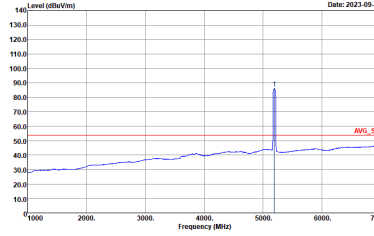
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - L	
1+2	Horizontal	Fundamental
Peak	 <p>Site : 03CH11-HY            Condition : PEAK_BE_74 3m 91200_01620_230817 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH11-HY            Condition : PEAK(UNIT) 3m 91200_01620_230817 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
	 <p>Site : 03CH11-HY            Condition : AV6_BE_54 3m 91200_01620_230817 HORIZONTAL            : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	 <p>Site : 03CH11-HY            Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL            : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



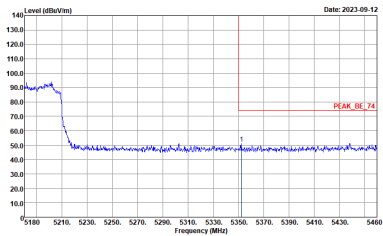
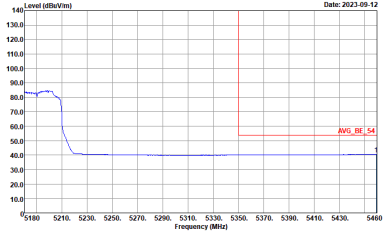
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - R	
1+2	Horizontal	Fundamental
<p><b>Peak</b></p>	<p>Site : 03CHI1-HY            Condition : PEAK_BE_74 3m 91200_01620_230817 HORIZONTAL            : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Left blank</p>
<p><b>Avg.</b></p>	<p>Site : 03CHI1-HY            Condition : AVG_BE_54 3m 91200_01620_230817 HORIZONTAL            : RBW:1000.000kHz VBW:0.100kHz SWT:Auto</p>	<p>Left blank</p>





WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - L	
1+2	Vertical	Fundamental
Peak	 <p>Site : 03CHI1-HY Condition : PEAK_BE_74 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CHI1-HY Condition : PEAK(LINE) 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CHI1-HY Condition : AV6_BE_54 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	 <p>Site : 03CHI1-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz - R	
1+2	Vertical	Fundamental
Peak	 <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank
Avg.	 <p>Site : 03CH11-HY Condition : AV6_BE_54 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:0.100KHz SWT:Auto</p>	Left blank



**Band 1 - 5150~5250MHz**  
**WIFI 802.11ax HE40 Full (Harmonic @ 3m)**

<b>WIFI</b>	<b>Band 1 5150~5250MHz Harmonic @ 3m</b>	
<b>ANT</b>	<b>802.11ax HE40 Full CH38 5190MHz</b>	
<b>1+2</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak Avg.</b>	<p>Site : 03CH11-HY Condition : PEAK(UNII) 3m 9120D_01620_230817 HORIZONTAL</p>	<p>Site : 03CH11-HY Condition : PEAK(UNII) 3m 9120D_01620_230817 VERTICAL</p>



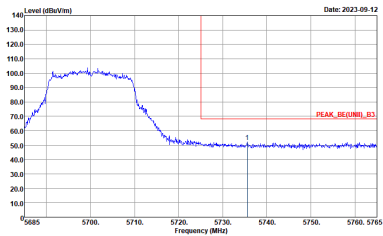
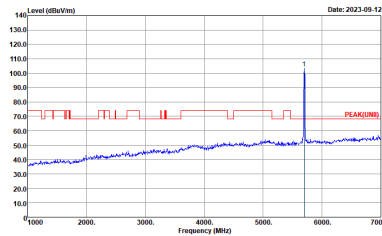
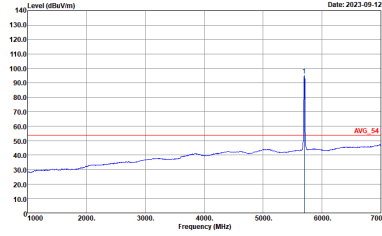
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH38 5190MHz	
1+2	Horizontal	Vertical
<b>14.47G</b> <b>~14.5G</b> <b>Avg.</b>	<p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL</p>	<p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL</p>
	<p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL</p>	<p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL</p>
<b>17.7G</b> <b>~18G</b> <b>Avg</b>		



**Band 3 - 5470~5725MHz**  
**WIFI 802.11ax HE20 Full (Band Edge @ 3m)**

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH140 5700MHz	
1+2	Horizontal	Fundamental
<b>Peak</b>	<p>Site : 03CH11-HY            Condition : PEAK_BE(UNI)_B3 3m 91200_01620_230817 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH11-HY            Condition : PEAK(UNI) 3m 91200_01620_230817 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
<b>Avg.</b>	Left blank	<p>Site : 03CH11-HY            Condition : AVG_54 3m 91200_01620_230817 HORIZONTAL            : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



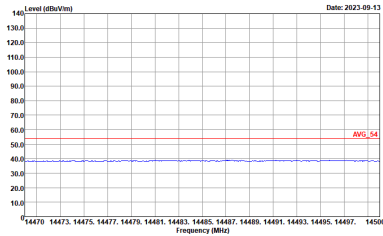
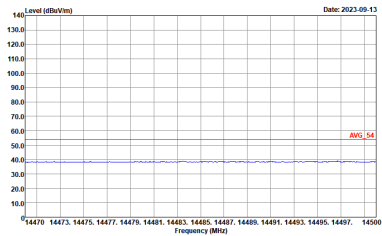
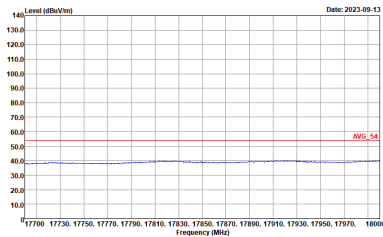
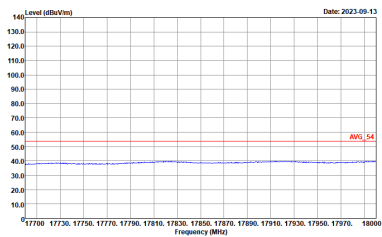
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH140 5700MHz	
1+2	Vertical	Fundamental
Peak	 <p>Site : 03CH11-HY Condition : PEAK_B3(UNIT)_B3 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH11-HY Condition : PEAK(LINE) 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



**Band 3 - 5470~5725MHz**  
**WIFI 802.11ax HE20 Full (Harmonic @ 3m)**

<b>WIFI</b>	<b>Band 3 5470~5725MHz Harmonic @ 3m</b>	
<b>ANT</b>	<b>802.11ax HE20 Full CH140 5700MHz</b>	
<b>1+2</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak Avg.</b>	<p>Site : 03CH11-HY          Condition : PEAK(UNII) 3m 9120D_01620_230817 HORIZONTAL</p>	<p>Site : 03CH11-HY          Condition : PEAK(UNII) 3m 9120D_01620_230817 VERTICAL</p>



WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH140 5700MHZ	
1+2	Horizontal	Vertical
<p><b>14.47G</b> <b>~14.5G</b> <b>Avg.</b></p>	 <p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL</p>	 <p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL</p>
<p><b>17.7G</b> <b>~18G</b> <b>Avg</b></p>	 <p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 HORIZONTAL</p>	 <p>Site : 03CH11-HY Condition : AV6_54 3m 91200_01620_230817 VERTICAL</p>





Emission above 18GHz

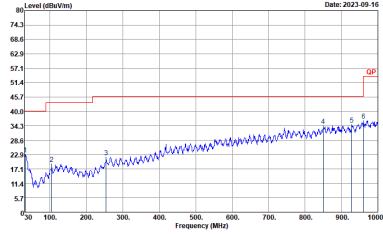
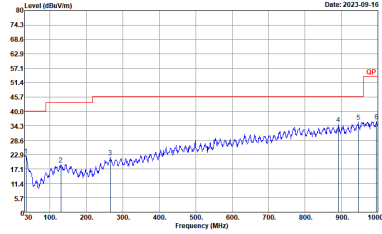
5GHz WIFI 802.11ax HE20 Full (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full SHF	
1+2	Horizontal	Vertical
<p><b>Peak</b></p> <p><b>Avg.</b></p>	<p>Site : 03CH11-HY Condition : PEAK(UNII) 1m SHF_00994_Z21104 HORIZONTAL</p>	<p>Site : 03CH11-HY Condition : PEAK(UNII) 1m SHF_00994_Z21104 VERTICAL</p>



Emission below 1GHz

5GHz WIFI 802.11ax HE20 Full (LF @ 3m)

WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full LF	
1+2	Horizontal	Vertical
QP / Peak	 <p>Site : 03CH11-HY Condition : QP 3m 2_BIL06_35414_221008 HORIZONTAL</p>	 <p>Site : 03CH11-HY Condition : QP 3m 2_BIL06_35414_221008 VERTICAL</p>

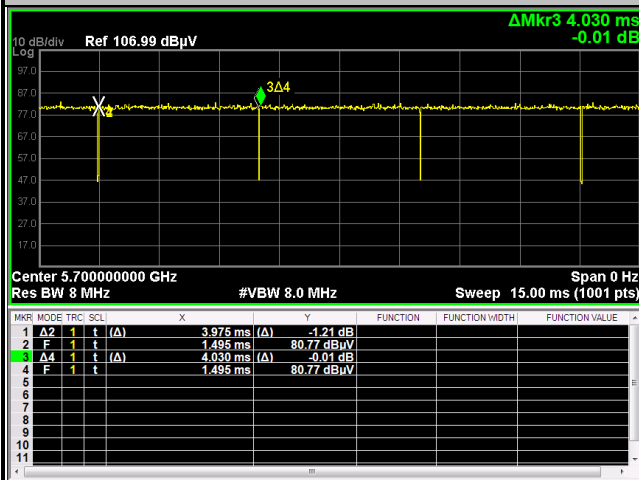


## Appendix E. Duty Cycle Plots

Chain	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
A	5GHz 802.11ax HE20 Full RU	98.64	-	-	10Hz
B	802.11a	97.66	2090	0.478	0.51KHz
A+B	5GHz 802.11ax HE20 Full RU	98.84	-	-	10Hz

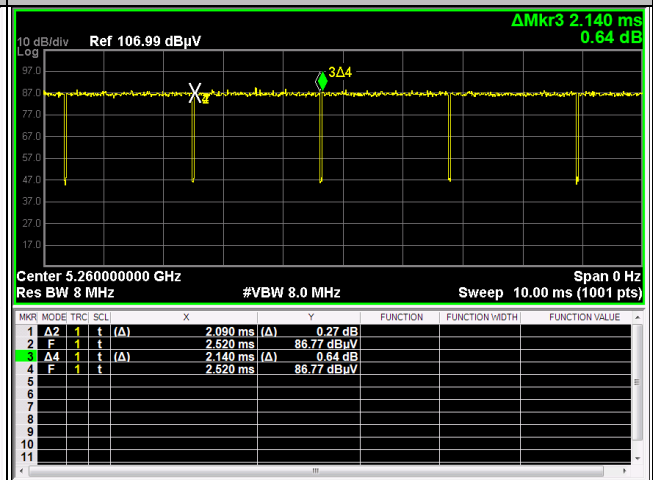
### <Chain A>

#### 5GHz 802.11ax HE20 Full RU



### <Chain B>

#### 802.11a



### MIMO <Chain A+B>

#### 5GHz 802.11ax HE20 Full RU

