



# FCC RADIO TEST REPORT

**FCC ID** : U4G-SGVNRNA  
**Equipment** : Mobile Computer/Barcode Reader  
**Brand Name** : Datalogic  
**Model Name** : SGVNRNA  
**Applicant** : Datalogic S.r.l.  
Via San Vitalino 13, 40012 Lippo di  
Calderara di Reno (BO) – Italy  
**Manufacturer** : Datalogic S.r.l.  
Via San Vitalino 13, 40012 Lippo di  
Calderara di Reno (BO) – Italy  
**Standard** : FCC Part 15 Subpart E §15.407

The product was received on Apr. 17, 2024 and testing was performed from Apr. 25, 2024 to Jun. 07, 2024. 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 from 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 (R.O.C.)



## Table of Contents

**History of this test report..... 3**

**Summary of Test Result..... 4**

**1 General Description ..... 5**

    1.1 Product Feature of Equipment Under Test..... 5

    1.2 Modification of EUT ..... 7

    1.3 Testing Location ..... 7

    1.4 Applicable Standards..... 7

**2 Test Configuration of Equipment Under Test ..... 8**

    2.1 Carrier Frequency and Channel ..... 8

    2.2 Test Mode ..... 9

    2.3 Connection Diagram of Test System ..... 10

    2.4 Support Unit used in test configuration and system ..... 11

    2.5 EUT Operation Test Setup ..... 11

    2.6 Measurement Results Explanation Example..... 11

**3 Test Result ..... 12**

    3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement ..... 12

    3.2 Maximum Conducted Output Power Measurement ..... 13

    3.3 Power Spectral Density Measurement ..... 14

    3.4 Unwanted Emissions Measurement ..... 16

    3.5 AC Conducted Emission Measurement..... 21

    3.6 Antenna Requirements ..... 23

**4 List of Measuring Equipment..... 24**

**5 Measurement Uncertainty ..... 26**

**Appendix A. Conducted Test Results**

**Appendix B. AC Conducted Emission Test Result**

**Appendix C. Radiated Spurious Emission**

**Appendix D. Radiated Spurious Emission Plots**

**Appendix E. Duty Cycle Plots**

**Appendix F. Setup Photographs**



### History of this test report

Report No.	Version	Description	Issue Date
FR440146F	01	Initial issue of report	Jul. 02, 2024
FR440146F	02	Revise Appendix E This report is an updated version, replacing the report issued on Jul. 02, 2024.	Jul. 10, 2024



### Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403(i)	6dB & 26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	4.12 dB under the limit at 5934.00 MHz
3.5	15.207	AC Conducted Emission	Pass	9.10 dB under the limit at 0.63 MHz
3.6	15.203	Antenna Requirement	Pass	-

**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:**

1. 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.
2. The purpose of different equipment name is for marketing segmentation.

**Reviewed by: Wei Chen**

**Report Producer: Wilda Wei**



# 1 General Description

## 1.1 Product Feature of Equipment Under Test

Product Feature	
<b>General Specs</b>	GSM/WCDMA/LTE/5G NR, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, Wi-Fi 5GHz 802.11a/n/ac/ax, Wi-Fi 6GHz 802.11a/ax, NFC, WPC Rx, and GNSS.
<b>Antenna Type</b>	WWAN: <Ant. 0>: Loop Antenna <Ant. 1>: Loop Antenna <Ant. 2+3>: Coupling monopole Antenna <Ant. 4>: PIFA Antenna <Ant. 5>: PIFA Antenna <Ant. 6>: Loop Antenna <Ant. 7>: Monopole Antenna WLAN: <Ant. 8>: Coupling monopole Antenna <Ant. 9>: Loop Antenna Bluetooth: Coupling monopole Antenna GPS/Glonass/BDS/Galileo: Coupling monopole Antenna NFC: Loop Antenna WPC Rx: Single Coil Antenna
<b>Sample 1</b>	scan (Argon)
<b>Sample 2</b>	scan (Xenon)
<b>HW Version</b>	DVT2
<b>SW Version</b>	dl4490_gms-userdebug_1.04.001.20240520_a13_qfil_fastboot

Antenna information		
<b>5725 MHz ~ 5850 MHz</b>	Peak Gain (dBi)	Ant. 8: 2.10 Ant. 9: 1.10

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

EUT Information List		
S/N	P/N	Performed Test Item
919f8e49	944850003	RF Conducted Measurement
V24D00530 V24D00429	944850003 944850006	Radiated Spurious Emission
V24D00547 V24D00390	944850003 944850006	AC Conducted Emission

### 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:

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

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

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

			<b>DG</b>	<b>DG</b>	<b>Power</b>	<b>PSD</b>
			<b>for</b>	<b>for</b>	<b>Limit</b>	<b>Limit</b>
	<b>Ant 8</b>	<b>Ant 9</b>	<b>Power</b>	<b>PSD</b>	<b>Reduction</b>	<b>Reduction</b>
	<b>(dBi)</b>	<b>(dBi)</b>	<b>(dBi)</b>	<b>(dBi)</b>	<b>(dB)</b>	<b>(dB)</b>
<b>Band IV</b>	2.10	1.10	2.10	4.62	0.00	0.00

Calculation example:

If a device has two antenna,  $G_{ANT8}= 2.10\text{dBi}$ ;  $G_{ANT9}=1.10\text{dBi}$

Directional gain of power measurement =  $\max(2.10, 1.10) + 0 = 2.10 \text{ dBi}$

Directional gain of PSD derived from formula which is

$$10 \times \log \left\{ \frac{[ 10^{(2.10 \text{ dBi} / 20)} + 10^{(1.10 \text{ dBi} / 20)} ]^2}{2} \right\}$$

$$= 4.62 \text{ dBi}$$

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 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, 03CH16-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)
5725-5850 MHz Band 4 (U-NII-3)	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155#	5775	165	5825

**Note:**

1. The above Frequency and Channel with "\*" are 802.11n HT40 and 802.11ac VHT40 and 802.11ax HE40.
2. The above Frequency and Channel with "#" are 802.11ac VHT80 and 802.11ax HE80.





## 2.2 Test Mode

This device support 26/52/106/242/484/996-tone RU.

The PSD of partial RU is reduced to be smaller than full RU according to TCB workshop interim guidance Oct. 2022.

The 802.11ax mode is investigated among different tones, full resource units (RU), partial resource units. The partial RU has no higher power than full RU's, thus the full RU is chosen as main test configuration.

The 242-tone RU is covered by 20MHz channel, 484-tone RU is covered by 40MHz channel and 996-tone RU is covered by 80MHz channel.

The SISO mode conducted power is covered by MIMO mode per chain, so only the MIMO mode is tested.

The power for 802.11n and 802.11ac mode is smaller than 802.11ax mode, so all other conducted and radiated test is covered by 802.11ax mode.

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

### MIMO Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20 (Covered by HE20)	MCS0
802.11n HT40 (Covered by HE40)	MCS0
802.11ac VHT20 (Covered by HE20)	MCS0
802.11ac VHT40 (Covered by HE40)	MCS0
802.11ac VHT80 (Covered by HE80)	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0
802.11ax HE80	MCS0

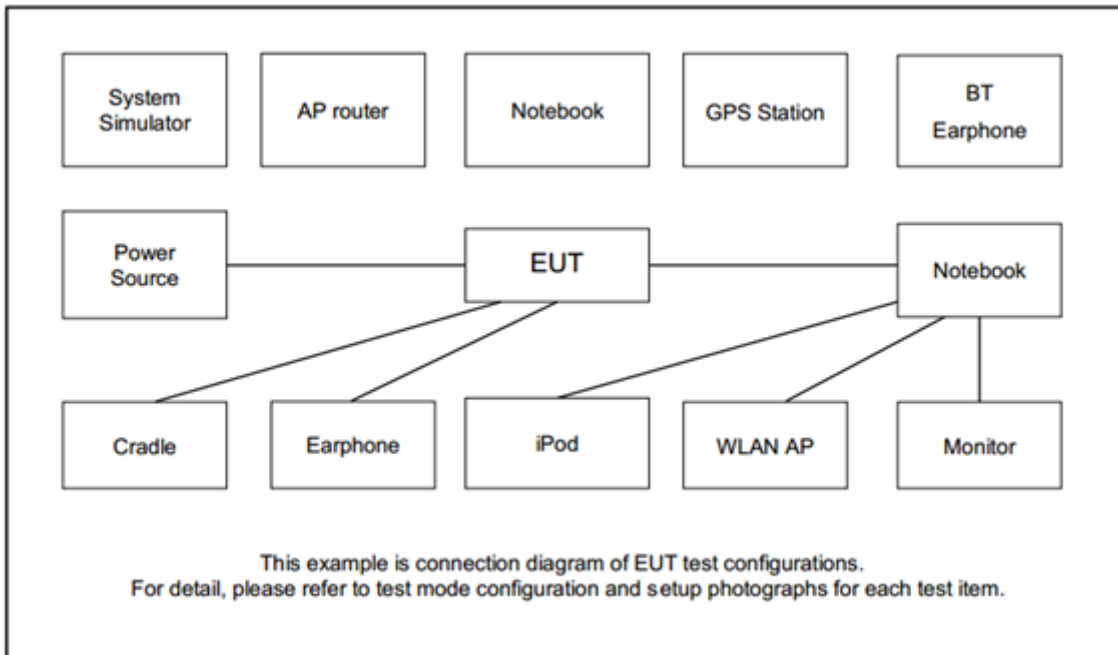
**Remark:** The conducted power level of each chain in MIMO mode is equal or higher than SISO mode.

Test Cases	
<b>AC Conducted Emission</b>	Mode 1: GSM 1800 Link + WLAN (5GHz) Link + Bluetooth Link + NFC Link + Scan + Battery (low power) + USB Cable (Charging with AC Adapter) for Sample 1  Mode 2: WCDMA Band I Link + WLAN (6GHz) Link + Bluetooth Link + NFC Link + Scan + Battery (low power) + USB Cable (Charging with AC Adapter) for Sample 1
<b>Remark:</b> 1. The worst case of Conducted Emission is mode 2; only the test data of it was reported. 2. For Radiated Test Cases, the tests were performed with Sample 1. 3. During the preliminary test, both charging modes (Adapter mode and WPC Rx mode) were verified. It is determined that the adaptor mode is the worst case for official test.	

Ch. #		Band IV : 5725-5850 MHz			
		802.11a	802.11ax HE20	802.11ax HE40	802.11ax HE80
L	Low	149	149	151	-
M	Middle	157	157	-	155
H	High	165	165	159	-

**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.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8m
2.	Earphone	Lenovo	TS300-01MS21-8S	N/A	N/A	N/A
3.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
4.	WLAN AP	ASUS	GT-AXE11000	FCC DoC	N/A	Unshielded, 1.8m
5.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
6.	SD Card	ADATA	MicroSD HC	FCC DoC	N/A	N/A
7.	NFC Card	Metro Taipei	Easy Card	N/A	N/A	N/A

## 2.5 EUT Operation Test Setup

The RF test items, utility “QRCT 4.0.95.1” 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.

## 2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example :

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

*Offset = RF cable loss + attenuator factor.*

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

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

### 3 Test Result

#### 3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

##### 3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

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

26dB and 99% Occupied bandwidth are reporting only.

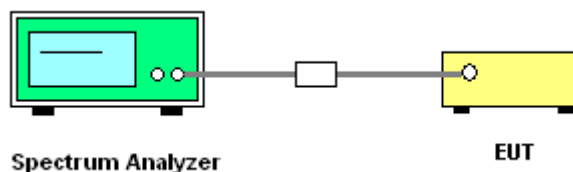
##### 3.1.2 Measuring Instruments

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 C) Emission bandwidth for the band 5.725-5.85 GHz
2. Set RBW = 100 kHz.
3. Set the VBW  $\geq 3 \times$  RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

##### 3.1.4 Test Setup



##### 3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.

## 3.2 Maximum Conducted Output Power Measurement

### 3.2.1 Limit of Maximum Conducted Output Power

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

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

### 3.2.2 Measuring Instruments

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

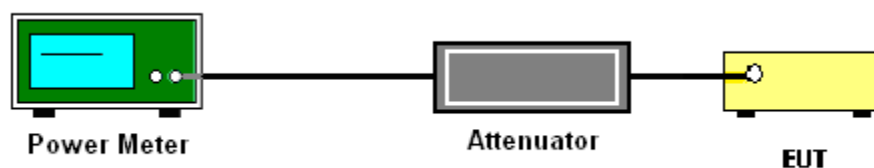
### 3.2.3 Test Procedures

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

Test Setup



### 3.2.4 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



### 3.3 Power Spectral Density Measurement

#### 3.3.1 Limit of Power Spectral Density

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

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

#### 3.3.2 Measuring Instruments

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

#### 3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section F) Maximum power spectral density.

##### # Method SA-2 #

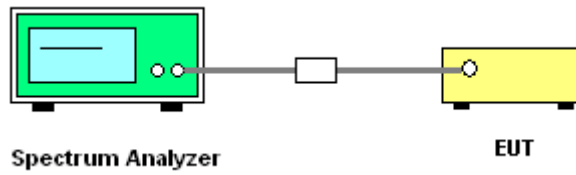
(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
  - Set span to encompass the entire emission bandwidth (EBW) of the signal.
  - Set RBW = 300kHz.
  - Set VBW  $\geq$  1 MHz.
  - Add  $10 \log(500 \text{ kHz/RBW})$  to the measured result, whereas RBW ( $<500 \text{ kHz}$ ) is the reduced resolution bandwidth of the spectrum analyzer set during measurement
  - Number of points in sweep  $\geq 2 \text{ Span} / \text{RBW}$ .
  - Sweep time = auto.
  - Detector = RMS
  - Trace average at least 100 traces in power averaging mode.
  - Add  $10 \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add  $10 \log(1/0.25) = 6 \text{ dB}$  if the duty cycle is 25 percent.
1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
  2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.
  3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (c): Measure and add  $10 \log(N_{\text{ANT}})$  dB.

With this technique, spectrum measurements are performed at each output of the device, but rather than summing the spectra or the spectral peaks across the outputs, the quantity  $10 \log(N_{\text{ANT}})$  dB is added to each spectrum value before comparing to the emission limit. The addition of  $10 \log(N_{\text{ANT}})$  dB serves to apportion the emission limit among the  $N_{\text{ANT}}$  outputs so that each output is permitted to contribute no more than  $1/N_{\text{ANT}}^{\text{th}}$  of the PSD limit.

### 3.3.4 Test Setup



### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



### 3.4 Unwanted Emissions Measurement

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

#### 3.4.1 Limit of Unwanted Emissions

(1) For transmitters operating in the 5.725-5.85 GHz band:

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(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.





### 3.4.2 Measuring Instruments

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

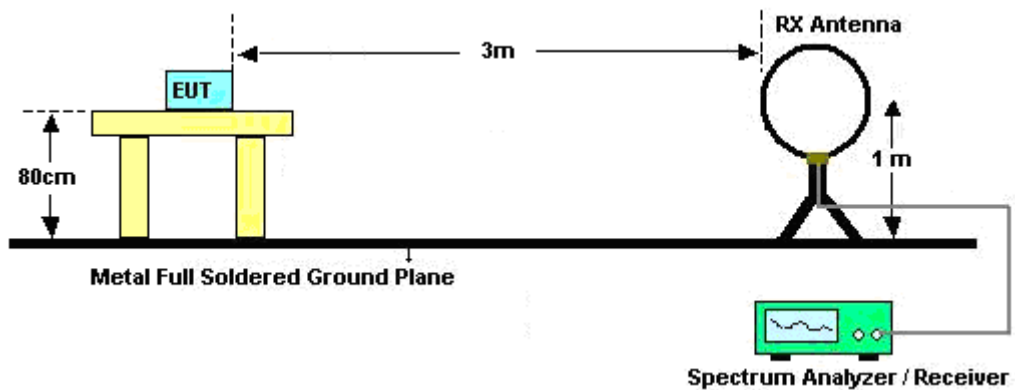
### 3.4.3 Test Procedures

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.

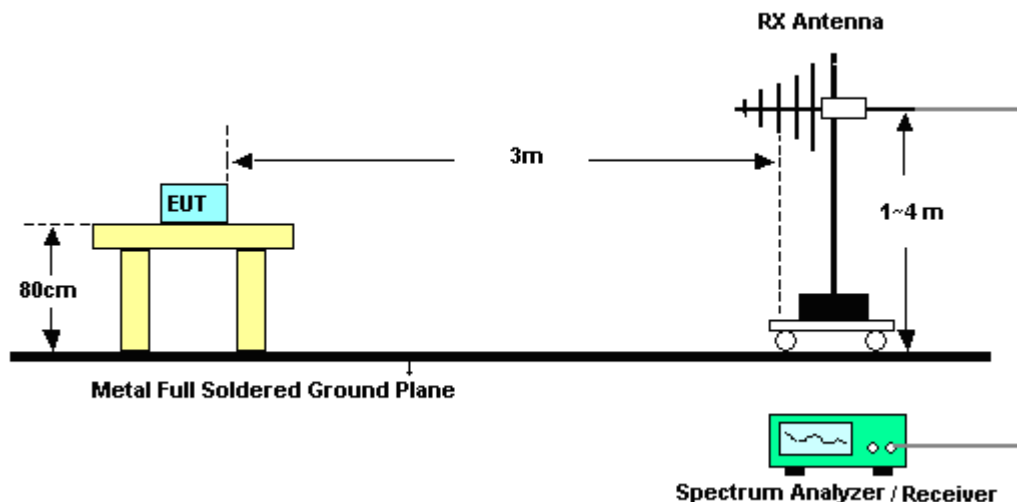
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit 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 “-“.

### 3.4.4 Test Setup

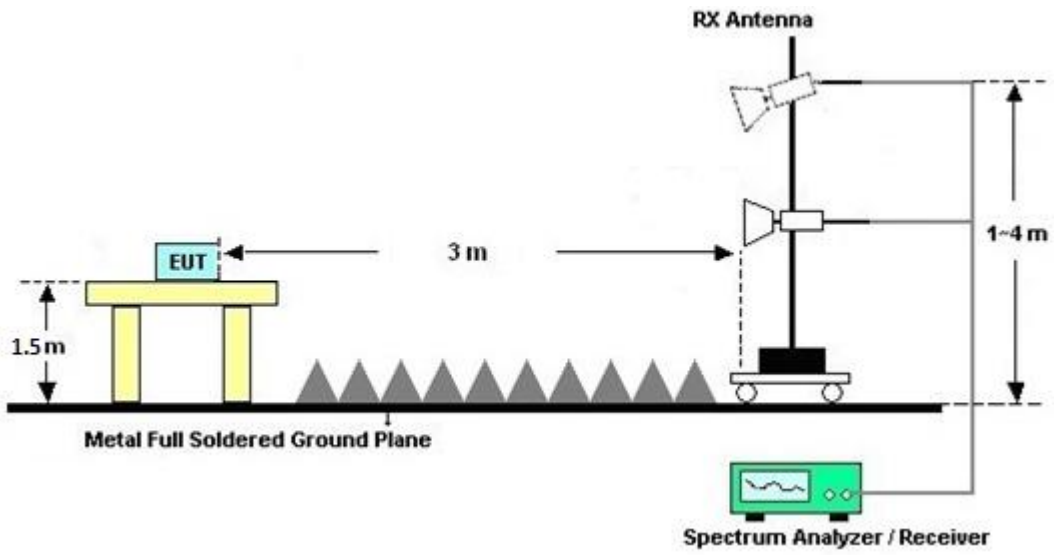
For radiated emissions below 30MHz



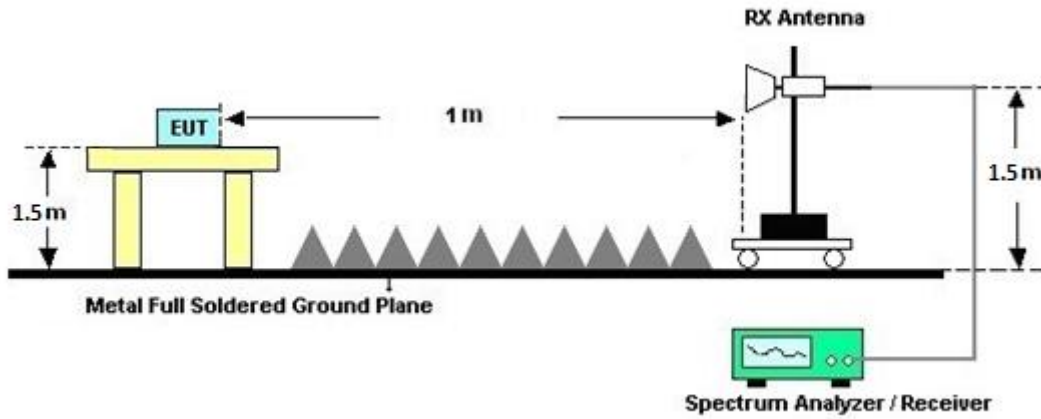
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz





### **3.4.5 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.

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

Please refer to Appendix C and D.

### **3.4.7 Duty Cycle**

Please refer to Appendix E.

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

Please refer to Appendix C and D.



### 3.5 AC Conducted Emission Measurement

#### 3.5.1 Limit of AC Conducted Emission

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

Frequency of emission (MHz)	Conducted limit (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.

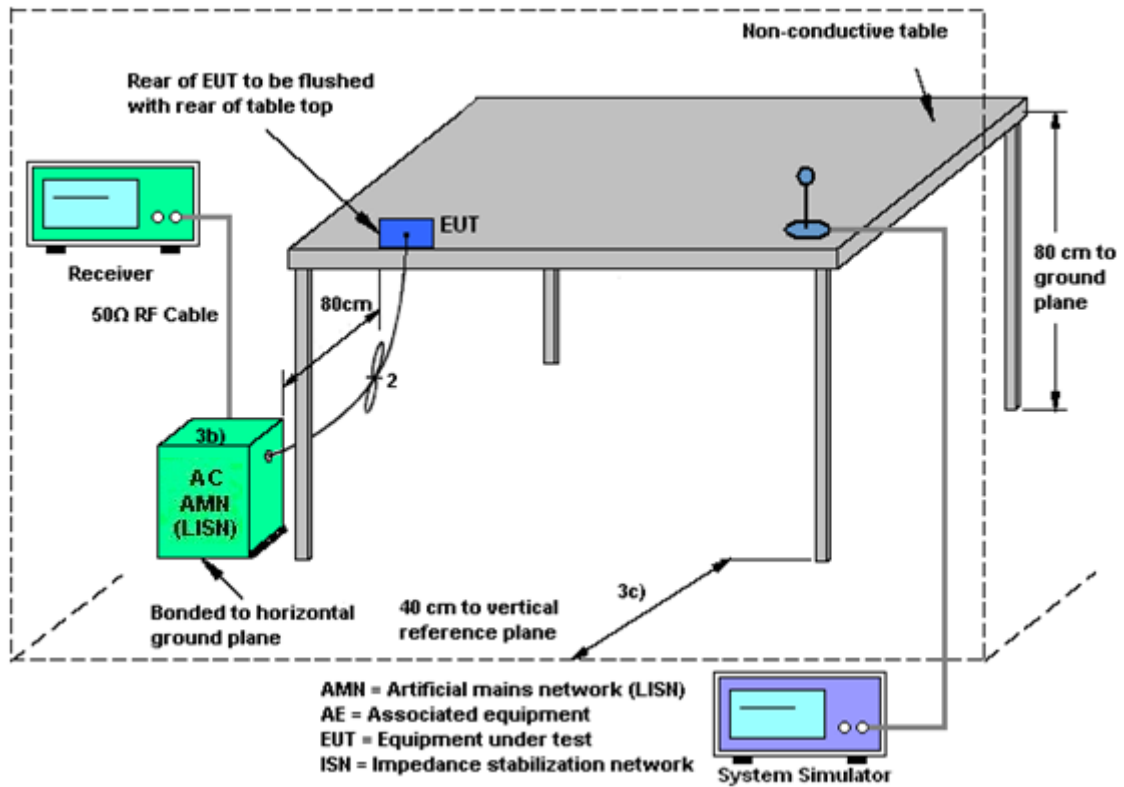
#### 3.5.2 Measuring Instruments

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

#### 3.5.3 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.

### 3.5.4 Test Setup



### 3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



## **3.6 Antenna Requirements**

### **3.6.1 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.

### **3.6.2 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
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 12, 2023	Apr. 25, 2024~ May 29, 2024	Sep. 11, 2024	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	1224	18GHz~40GHz	Jul. 10, 2023	Apr. 25, 2024~ May 29, 2024	Jul. 09, 2024	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01N -06	47020 & 06	30MHz to 1GHz	Oct. 07, 2023	Apr. 25, 2024~ May 29, 2024	Oct. 06, 2024	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1522	1G~18GHz	Mar. 28, 2024	Apr. 25, 2024~ May 29, 2024	Mar. 27, 2025	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1GHz	Jul. 03, 2023	Apr. 25, 2024~ May 29, 2024	Jul. 02, 2024	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec. 07, 2023	Apr. 25, 2024~ May 29, 2024	Dec. 06, 2024	Radiation (03CH16-HY)
Preamplifier	EMEC	EM1G18G	060812	1GHz~18GHz	Dec. 25, 2023	Apr. 25, 2024~ May 29, 2024	Dec. 24, 2024	Radiation (03CH16-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 27, 2023	Apr. 25, 2024~ May 29, 2024	Jun. 26, 2024	Radiation (03CH16-HY)
Filter	Wainwright	WLK4-1000-15 30-8000-40SS	SN17	1.53GHz Low Pass Filter	Jan. 15, 2024	Apr. 25, 2024~ May 29, 2024	Jan. 14, 2025	Radiation (03CH16-HY)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 0ST	SN3	3GHz High Pass Filter	Jun. 29, 2023	Apr. 25, 2024~ May 29, 2024	Jun. 28, 2024	Radiation (03CH16-HY)
Filter	Wainwright	WHKX8-5872. 5-6750-18000- 40ST	SN27	6.75GHz High Pass Filter	Nov. 13, 2023	Apr. 25, 2024~ May 29, 2024	Nov. 12, 2024	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	803951/2	9K~30M	Mar. 06, 2024	Apr. 25, 2024~ May 29, 2024	Mar. 05, 2025	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102/SUCOFLE X 104	EC-A5-300-5 757,805935/4 ,802434/4	30MHz~18GHz	Aug. 08, 2023	Apr. 25, 2024~ May 29, 2024	Aug. 07, 2024	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2,804 012/2	18-40GHz	Jan. 02, 2024	Apr. 25, 2024~ May 29, 2024	Jan. 01, 2025	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Apr. 25, 2024~ May 29, 2024	N/A	Radiation (03CH16-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Apr. 25, 2024~ May 29, 2024	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Apr. 25, 2024~ May 29, 2024	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Apr. 25, 2024~ May 29, 2024	N/A	Radiation (03CH16-HY)





Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 15, 2024~ May 28, 2024	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 06, 2023	May 15, 2024~ May 28, 2024	Dec. 05, 2024	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Oct. 26, 2023	May 15, 2024~ May 28, 2024	Oct. 25, 2024	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 22, 2023	May 15, 2024~ May 28, 2024	Nov. 21, 2024	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	May 15, 2024~ May 28, 2024	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	N/A	Jul. 28, 2023	May 15, 2024~ May 28, 2024	Jul. 27, 2024	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 28, 2023	May 15, 2024~ May 28, 2024	Dec. 27, 2024	Conduction (CO05-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 07, 2023	Apr. 30, 2024~ Jun. 07, 2024	Nov. 06, 2024	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	17I00015SNO 36 (NO:35)	10MHz~6GHz	Aug. 23, 2023	Apr. 30, 2024~ Jun. 07, 2024	Aug. 22, 2024	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101466	10HZ~44GHZ	Jan. 24, 2024	Apr. 30, 2024~ Jun. 07, 2024	Jan. 23, 2025	Conducted (TH05-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
---	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	6.50 dB
---	---------

### Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

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

### Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

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

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

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

**Appendix A. Test Result of Conducted Test Items**

Test Engineer:	Shiming Liu and Ju Chang	Temperature:	21~25	°C
Test Date:	2024/04/30-2024/06/07	Relative Humidity:	51~54	%

**TEST RESULTS DATA**  
**6dB and 26dB EBW and 99% OBW**

U-NII-3 MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
					Ant 8	Ant 9	Ant 8	Ant 9	Ant 8	Ant 9		
11a	6Mbps	2	149	5745	16.26	16.33	18.85	19.11	15.03	15.05	0.5	Pass
11a	6Mbps	2	157	5785	16.28	16.33	19.07	19.09	13.83	15.07	0.5	Pass
11a	6Mbps	2	165	5825	16.29	16.35	18.98	19.27	15.06	15.07	0.5	Pass

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

U-NII-3 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
					Ant 8	Ant 9	Ant 8	Ant 9	SUM	Ant 8	Ant 9	Ant 8	Ant 9	
11a	6Mbps	2	149	5745	0.03	0.03	16.57	16.68	19.64	30.00	30.00	2.10	2.10	Pass
11a	6Mbps	2	157	5785	0.03	0.03	16.71	16.65	19.69	30.00	30.00	2.10	2.10	Pass
11a	6Mbps	2	165	5825	0.03	0.03	16.64	16.74	19.70	30.00	30.00	2.10	2.10	Pass
HT20	MCS0	2	149	5745	0.00	0.00	15.60	15.74	18.68	30.00	30.00	2.10	2.10	Pass
HT20	MCS0	2	157	5785	0.00	0.00	15.50	15.71	18.62	30.00	30.00	2.10	2.10	Pass
HT20	MCS0	2	165	5825	0.00	0.00	15.62	15.65	18.65	30.00	30.00	2.10	2.10	Pass
HT40	MCS0	2	151	5755	0.00	0.00	15.78	15.52	18.66	30.00	30.00	2.10	2.10	Pass
HT40	MCS0	2	159	5795	0.00	0.00	15.62	15.51	18.58	30.00	30.00	2.10	2.10	Pass
VHT20	MCS0	2	149	5745	0.00	0.00	15.60	15.74	18.68	30.00	30.00	2.10	2.10	Pass
VHT20	MCS0	2	157	5785	0.00	0.00	15.50	15.71	18.62	30.00	30.00	2.10	2.10	Pass
VHT20	MCS0	2	165	5825	0.00	0.00	15.62	15.65	18.65	30.00	30.00	2.10	2.10	Pass
VHT40	MCS0	2	151	5755	0.00	0.00	15.75	15.58	18.68	30.00	30.00	2.10	2.10	Pass
VHT40	MCS0	2	159	5795	0.00	0.00	15.72	15.61	18.68	30.00	30.00	2.10	2.10	Pass
VHT80	MCS0	2	155	5775	0.00	0.00	15.67	15.50	18.60	30.00	30.00	2.10	2.10	Pass

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

U-NII-3 MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		10log (500kHz /RBW) Factor (dB)		Average Power Density with Duty Factor (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
					Ant 8	Ant 9	Ant 8	Ant 9	Ant 8	Ant 9	SUM	Ant 8	Ant 9	Ant 8	Ant 9	
11a	6Mbps	2	149	5745	0.03	0.03	2.22	4.20	4.38	7.39	30.00	4.62	Pass			
11a	6Mbps	2	157	5785	0.03	0.03	2.22	4.44	4.46	7.47	30.00	4.62	Pass			
11a	6Mbps	2	165	5825	0.03	0.03	2.22	3.94	4.12	7.13	30.00	4.62	Pass			

Note: PSD Sum = Max PSD(Ant. 8, Ant. 9) + 10 log (n)

**TEST RESULTS DATA**  
**6dB and 26dB EBW and 99% OBW**

U-NII-3 MIMO													
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	RU Config	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		6 dB Bandwidth (MHz)		6 dB Bandwidth Min. Limit (MHz)	Pass/Fail
						Ant 8	Ant 9	Ant 8	Ant 9	Ant 8	Ant 9		
HE20	MCS0	2	149	5745	Full	18.87	18.85	20.94	20.83	16.83	15.35	0.5	Pass
HE20	MCS0	2	149	5745	26/0	18.87	19.08	21.20	21.15	2.14	2.10	0.5	Pass
HE20	MCS0	2	149	5745	52/37	18.22	18.44	21.08	21.07	17.03	17.08	0.5	Pass
HE20	MCS0	2	149	5745	106/53	18.38	18.40	21.66	21.42	17.12	17.11	0.5	Pass
HE20	MCS0	2	157	5785	Full	18.85	18.81	21.02	20.94	15.06	16.10	0.5	Pass
HE20	MCS0	2	157	5785	26/4	17.33	17.22	18.95	18.59	2.64	2.64	0.5	Pass
HE20	MCS0	2	157	5785	52/38	17.35	17.18	19.66	18.74	15.02	12.90	0.5	Pass
HE20	MCS0	2	157	5785	106/53	18.38	18.43	21.93	21.45	15.91	18.09	0.5	Pass
HE20	MCS0	2	165	5825	Full	18.83	18.81	20.87	20.85	15.09	16.05	0.5	Pass
HE20	MCS0	2	165	5825	26/8	18.74	18.55	20.66	20.59	2.02	1.98	0.5	Pass
HE20	MCS0	2	165	5825	52/40	18.48	18.19	21.18	20.72	17.00	15.69	0.5	Pass
HE20	MCS0	2	165	5825	106/54	18.42	18.24	21.46	20.84	17.06	17.07	0.5	Pass
HE40	MCS0	2	151	5755	Full	37.79	37.75	41.17	41.02	36.07	35.93	0.5	Pass
HE40	MCS0	2	159	5795	Full	37.75	37.68	41.28	40.86	35.82	35.71	0.5	Pass
HE80	MCS0	2	155	5775	Full	76.82	76.67	81.92	81.47	70.06	75.06	0.5	Pass

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

U-NII-3 MIMO															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		Pass/Fail
						Ant 8	Ant 9	Ant 8	Ant 9	SUM	Ant 8	Ant 9	Ant 8	Ant 9	
HE20	MCS0	2	149	5745	Full	0.00	0.00	15.60	15.74	18.68	30.00		2.10		Pass
HE20	MCS0	2	149	5745	26/0	0.00	0.00	14.45	13.85	17.17	30.00		2.10		Pass
HE20	MCS0	2	149	5745	52/37	0.00	0.00	14.40	13.80	17.12	30.00		2.10		Pass
HE20	MCS0	2	149	5745	106/53	0.00	0.00	15.58	15.78	18.69	30.00		2.10		Pass
HE20	MCS0	2	157	5785	Full	0.00	0.00	15.50	15.71	18.62	30.00		2.10		Pass
HE20	MCS0	2	157	5785	26/4	0.00	0.00	15.50	15.60	18.56	30.00		2.10		Pass
HE20	MCS0	2	157	5785	52/38	0.00	0.00	14.89	16.24	18.63	30.00		2.10		Pass
HE20	MCS0	2	157	5785	106/53	0.00	0.00	15.65	15.66	18.67	30.00		2.10		Pass
HE20	MCS0	2	165	5825	Full	0.00	0.00	15.62	15.65	18.65	30.00		2.10		Pass
HE20	MCS0	2	165	5825	26/8	0.00	0.00	13.52	14.75	17.19	30.00		2.10		Pass
HE20	MCS0	2	165	5825	52/40	0.00	0.00	14.90	15.45	18.19	30.00		2.10		Pass
HE20	MCS0	2	165	5825	106/54	0.00	0.00	15.68	15.67	18.69	30.00		2.10		Pass
HE40	MCS0	2	151	5755	Full	0.00	0.00	15.81	15.55	18.69	30.00		2.10		Pass
HE40	MCS0	2	159	5795	Full	0.00	0.00	15.73	15.62	18.69	30.00		2.10		Pass
HE80	MCS0	2	155	5775	Full	0.00	0.00	15.67	15.53	18.61	30.00		2.10		Pass



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

U-NII-3 MIMO																	
Mod.	Data Rate	N <sub>Tx</sub>	CH.	Freq. (MHz)	RU Config	Duty Factor (dB)		10log (500kHz /RBW) Factor (dB)		Average Power Density with Duty Factor (dBm/500kHz)			Average PSD Limit (dBm/500kHz)		DG (dBi)		Pass /Fail
						Ant 8	Ant 9	Ant 8	Ant 9	Ant 8	Ant 9	SUM	Ant 8	Ant 9	Ant 8	Ant 9	
HE20	MCS0	2	149	5745	Full	0.00	0.00	2.22	2.90	2.82	5.91	30.00	4.62	4.62	Pass		
HE20	MCS0	2	149	5745	26/0	0.00	0.00	2.22	8.72	8.20	11.73	30.00	4.62	4.62	Pass		
HE20	MCS0	2	149	5745	52/37	0.00	0.00	2.22	5.61	5.17	8.62	30.00	4.62	4.62	Pass		
HE20	MCS0	2	149	5745	106/53	0.00	0.00	2.22	4.20	4.53	7.54	30.00	4.62	4.62	Pass		
HE20	MCS0	2	157	5785	Full	0.00	0.00	2.22	2.44	2.52	5.53	30.00	4.62	4.62	Pass		
HE20	MCS0	2	157	5785	26/4	0.00	0.00	2.22	9.70	9.93	12.94	30.00	4.62	4.62	Pass		
HE20	MCS0	2	157	5785	52/38	0.00	0.00	2.22	6.09	7.37	10.38	30.00	4.62	4.62	Pass		
HE20	MCS0	2	157	5785	106/53	0.00	0.00	2.22	4.33	4.36	7.37	30.00	4.62	4.62	Pass		
HE20	MCS0	2	165	5825	Full	0.00	0.00	2.22	2.52	2.58	5.59	30.00	4.62	4.62	Pass		
HE20	MCS0	2	165	5825	26/8	0.00	0.00	2.22	8.20	9.50	12.51	30.00	4.62	4.62	Pass		
HE20	MCS0	2	165	5825	52/40	0.00	0.00	2.22	5.96	7.37	10.38	30.00	4.62	4.62	Pass		
HE20	MCS0	2	165	5825	106/54	0.00	0.00	2.22	4.11	4.47	7.48	30.00	4.62	4.62	Pass		
HE40	MCS0	2	151	5755	Full	0.00	0.00	2.22	0.34	-0.10	3.35	30.00	4.62	4.62	Pass		
HE40	MCS0	2	159	5795	Full	0.00	0.00	2.22	0.01	-0.24	3.02	30.00	4.62	4.62	Pass		
HE80	MCS0	2	155	5775	Full	0.00	0.00	2.22	-2.28	-2.28	0.73	30.00	4.62	4.62	Pass		

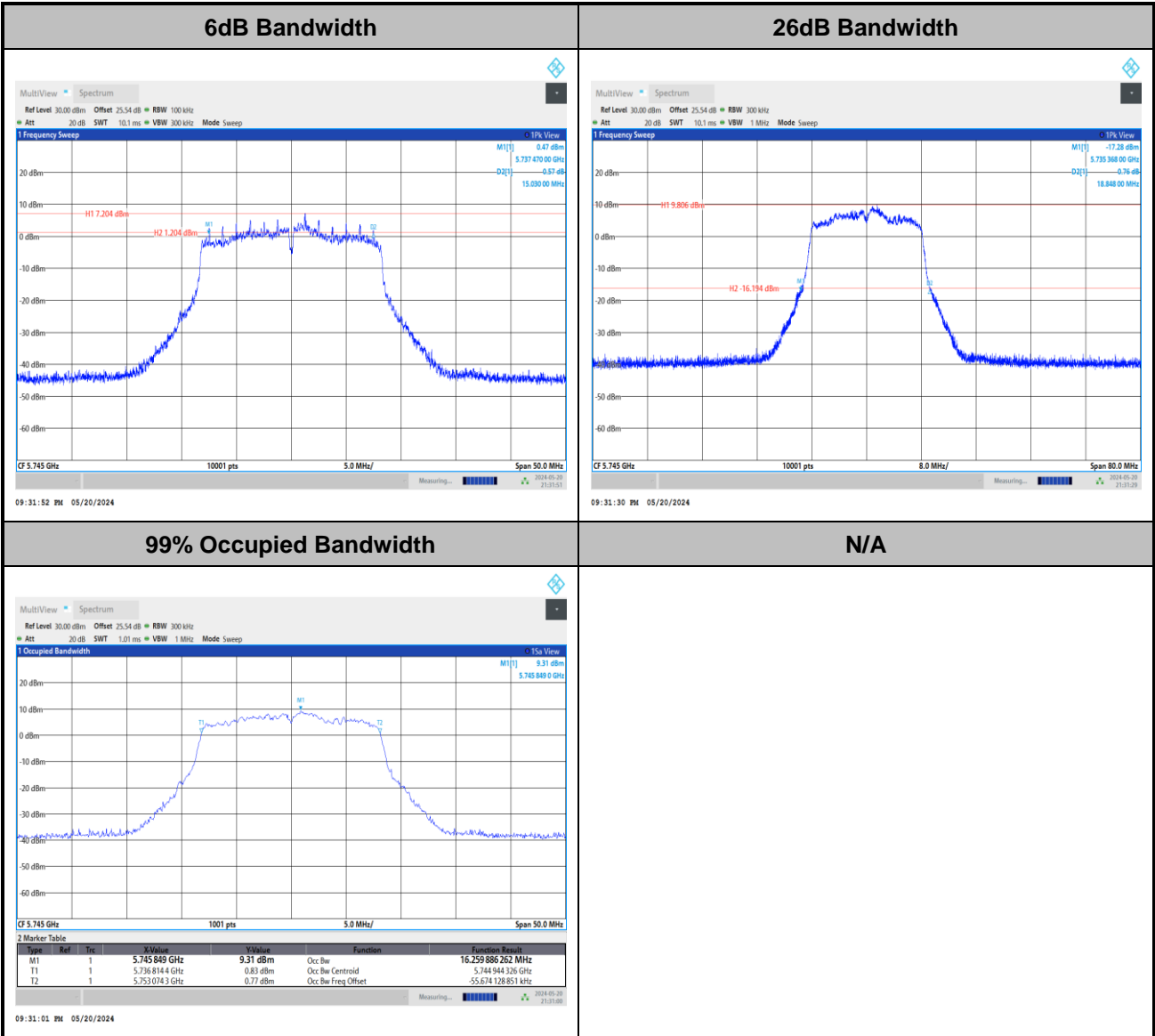
Note: PSD Sum = Max PSD(Ant. 8, Ant. 9) + 10 log (n)



# Test Result of 6dB and 26dB and 99% Occupied Bandwidth

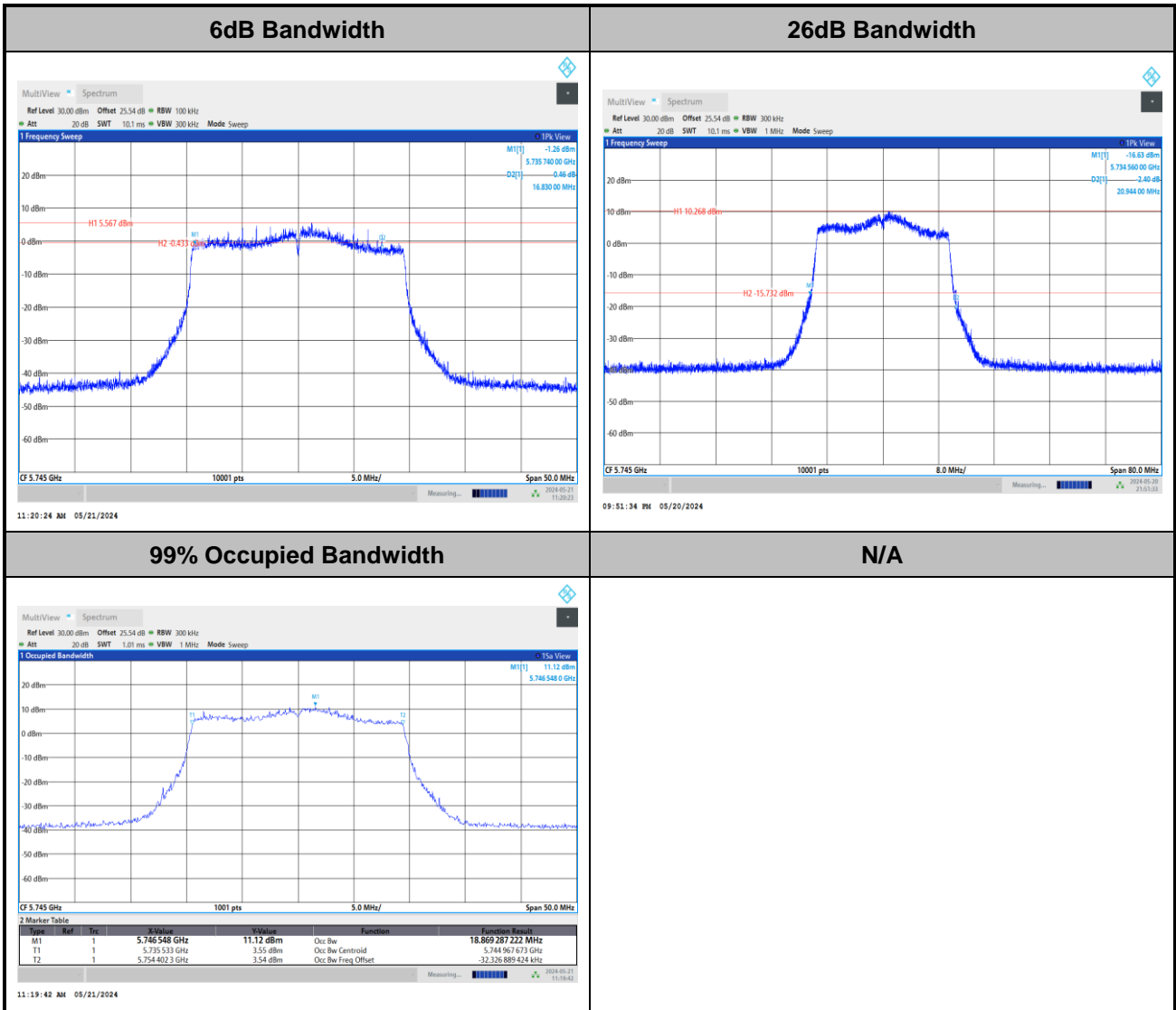
MIMO <Ant. 8+9>

<802.11a>



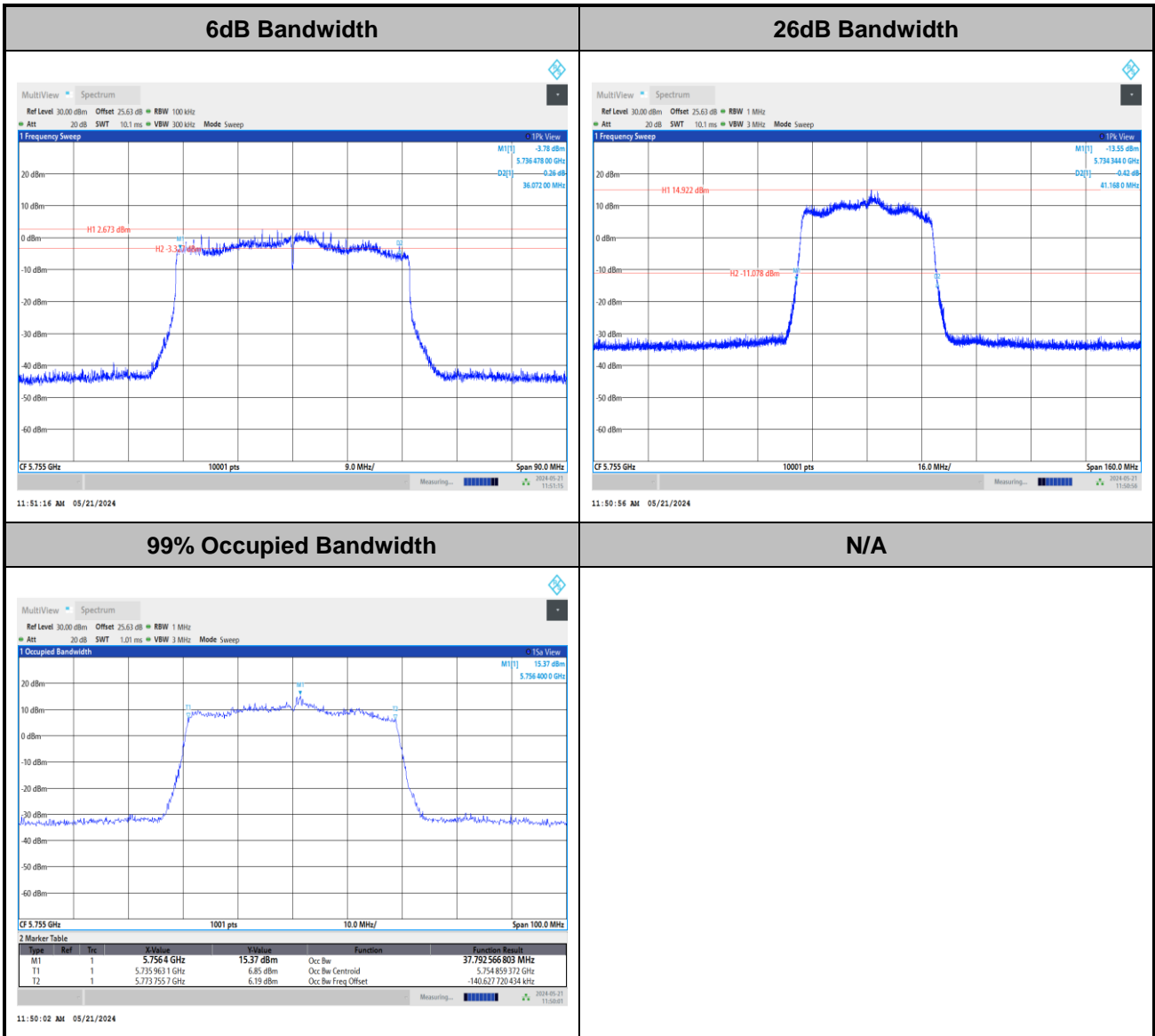


<802.11ax HE20>





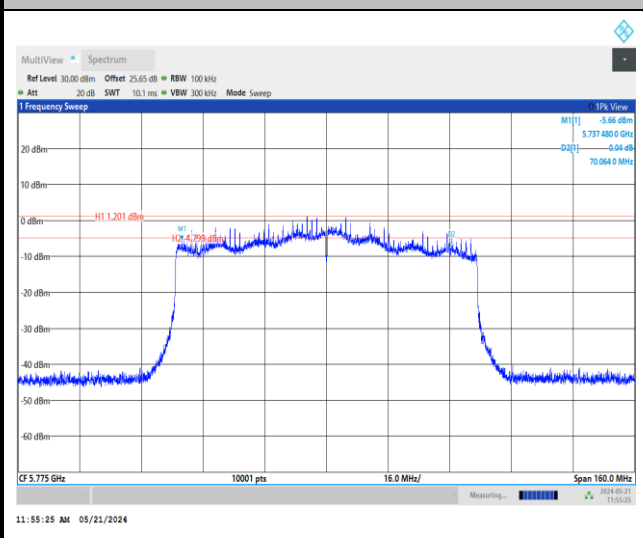
<802.11ax HE40>



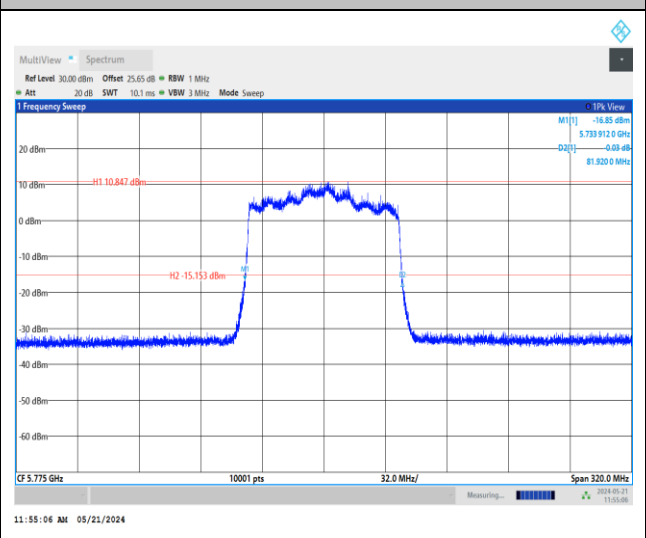


<802.11ax HE80>

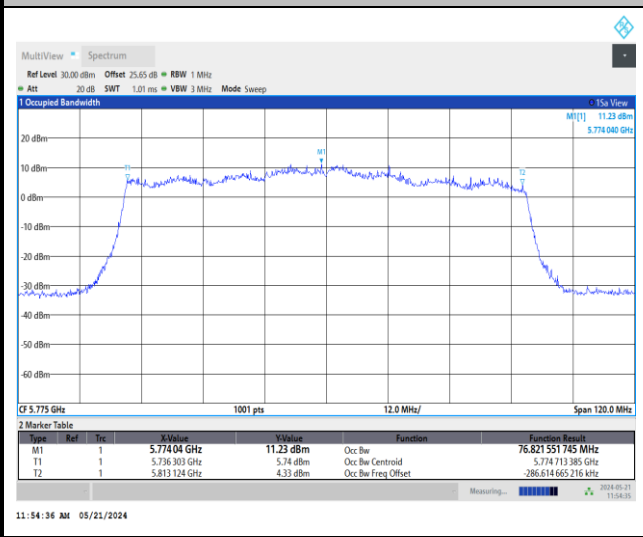
6dB Bandwidth



26dB Bandwidth



99% Occupied Bandwidth

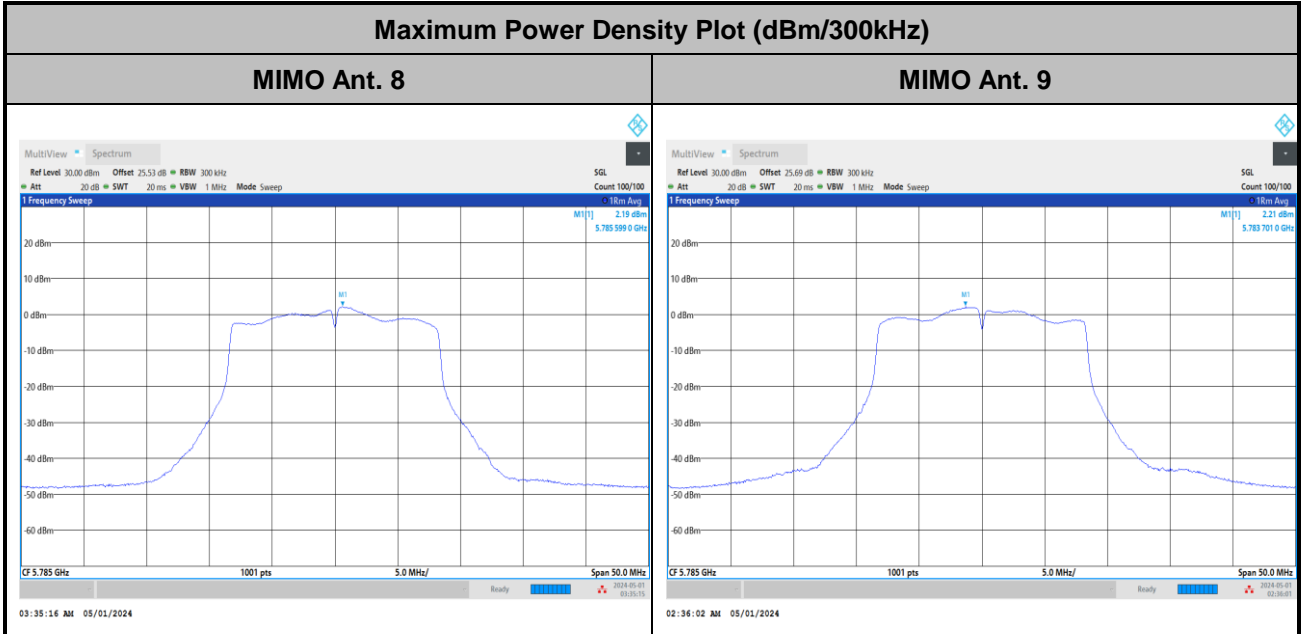


N/A

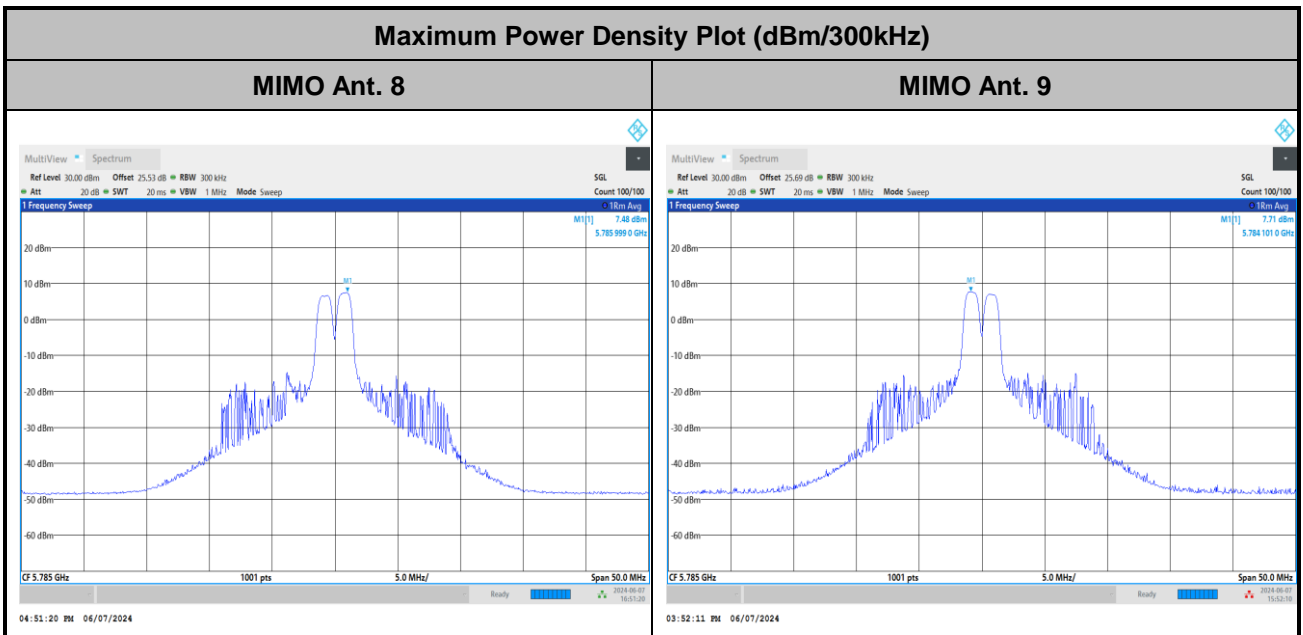


# Test Result of Power Spectral Density

<802.11a>

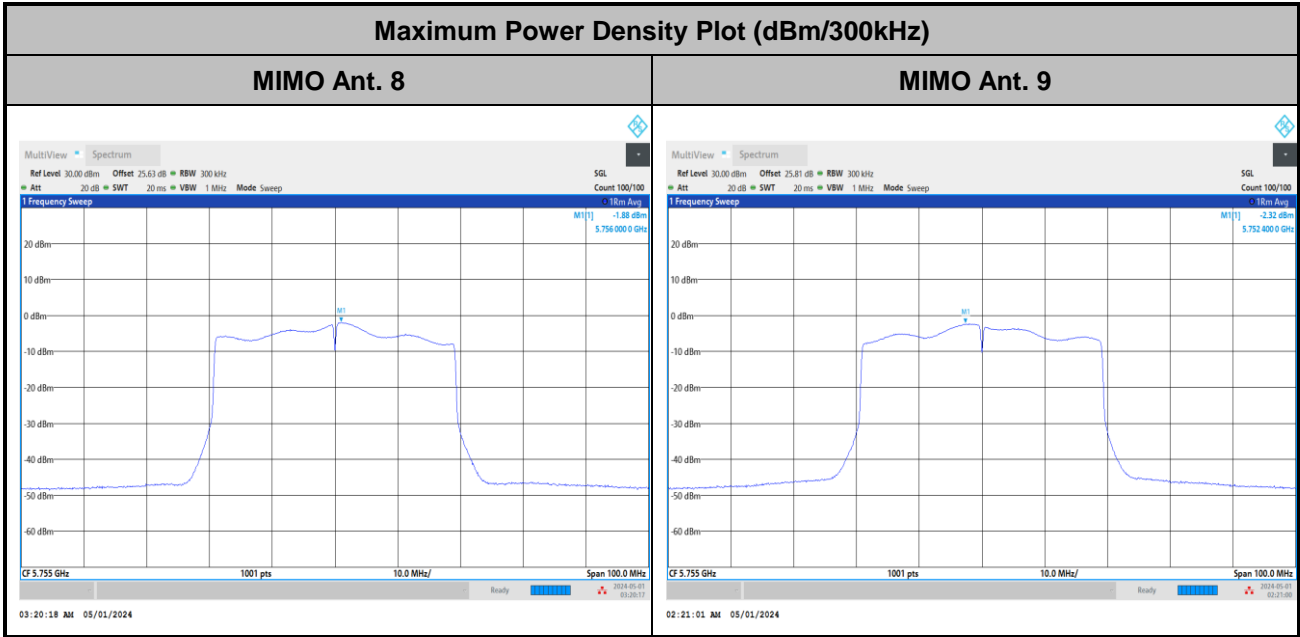


<802.11ax HE20>

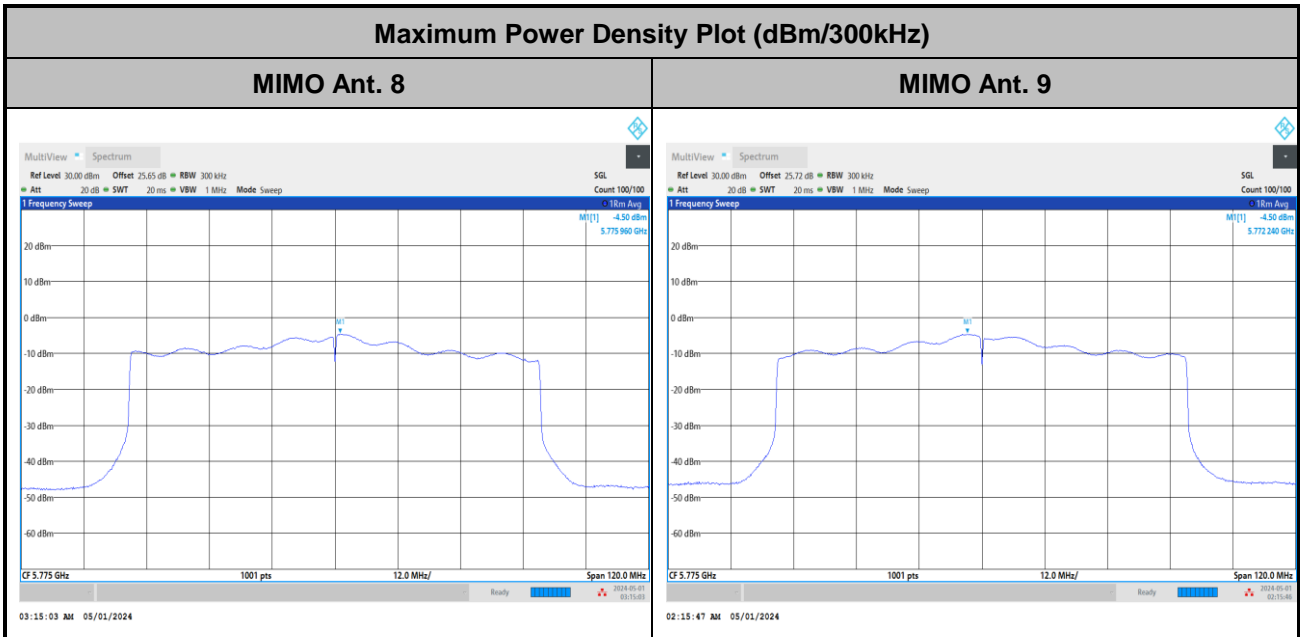




<802.11ax HE40>



<802.11ax HE80>





## Appendix B. AC Conducted Emission Test Results

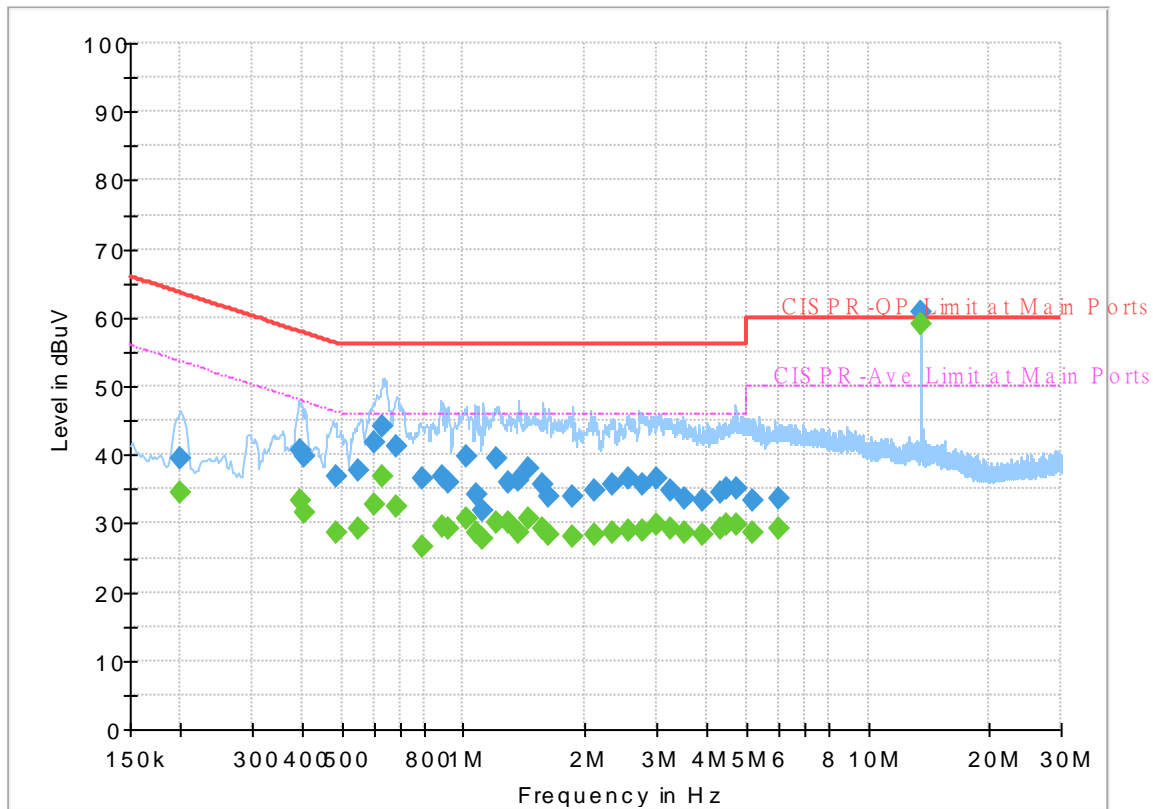
Test Engineer :	Calvin Wang	Temperature :	23~26°C
		Relative Humidity :	45~55%



# Original

Report NO : 440146  
 Test Mode : Mode 2  
 Test Voltage : 120Vac/60Hz  
 Phase : Line

Full Spectrum



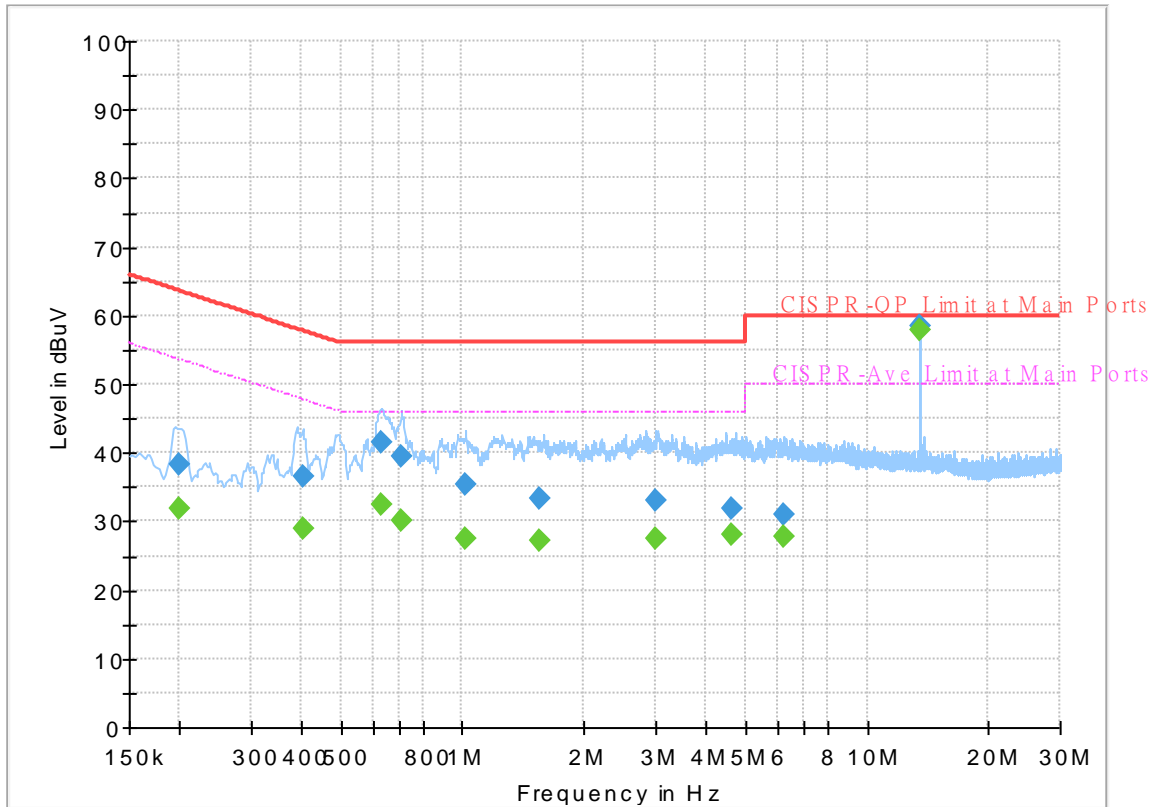
# Final\_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.199500	---	34.53	53.63	19.10	L1	OFF	19.8
0.199500	39.43	---	63.63	24.20	L1	OFF	19.8
0.393000	---	33.22	48.00	14.78	L1	OFF	19.8
0.393000	40.68	---	58.00	17.32	L1	OFF	19.8
0.406500	---	31.57	47.72	16.15	L1	OFF	19.8
0.406500	39.78	---	57.72	17.94	L1	OFF	19.8
0.483000	---	28.59	46.29	17.70	L1	OFF	19.8
0.483000	36.96	---	56.29	19.33	L1	OFF	19.8
0.548250	---	29.22	46.00	16.78	L1	OFF	19.8
0.548250	37.73	---	56.00	18.27	L1	OFF	19.8
0.604500	---	32.86	46.00	13.14	L1	OFF	19.8
0.604500	41.68	---	56.00	14.32	L1	OFF	19.8
0.633750	---	36.90	46.00	9.10	L1	OFF	19.8
0.633750	44.23	---	56.00	11.77	L1	OFF	19.8
0.685500	---	32.44	46.00	13.56	L1	OFF	19.8
0.685500	41.24	---	56.00	14.76	L1	OFF	19.8
0.795750	---	26.57	46.00	19.43	L1	OFF	19.8
0.795750	36.50	---	56.00	19.50	L1	OFF	19.8
0.890250	---	29.57	46.00	16.43	L1	OFF	19.8
0.890250	36.96	---	56.00	19.04	L1	OFF	19.8
0.915000	---	29.27	46.00	16.73	L1	OFF	19.8

0.915000	35.97	---	56.00	20.03	L1	OFF	19.8
1.016250	---	30.82	46.00	15.18	L1	OFF	19.8
1.016250	39.69	---	56.00	16.31	L1	OFF	19.8
1.077000	---	28.63	46.00	17.37	L1	OFF	19.8
1.077000	34.28	---	56.00	21.72	L1	OFF	19.8
1.117500	---	27.69	46.00	18.31	L1	OFF	19.8
1.117500	31.86	---	56.00	24.14	L1	OFF	19.8
1.212000	---	30.05	46.00	15.95	L1	OFF	19.8
1.212000	39.44	---	56.00	16.56	L1	OFF	19.8
1.288500	---	30.09	46.00	15.91	L1	OFF	19.9
1.288500	36.01	---	56.00	19.99	L1	OFF	19.9
1.369500	---	28.64	46.00	17.36	L1	OFF	19.9
1.369500	36.24	---	56.00	19.76	L1	OFF	19.9
1.455000	---	30.71	46.00	15.29	L1	OFF	19.9
1.455000	38.06	---	56.00	17.94	L1	OFF	19.9
1.567500	---	29.18	46.00	16.82	L1	OFF	19.9
1.567500	35.74	---	56.00	20.26	L1	OFF	19.9
1.628250	---	28.33	46.00	17.67	L1	OFF	19.9
1.628250	33.84	---	56.00	22.16	L1	OFF	19.9
1.860000	---	28.17	46.00	17.83	L1	OFF	19.9
1.860000	33.89	---	56.00	22.11	L1	OFF	19.9
2.116500	---	28.31	46.00	17.69	L1	OFF	19.9
2.116500	34.71	---	56.00	21.29	L1	OFF	19.9
2.325750	---	28.59	46.00	17.41	L1	OFF	19.9
2.325750	35.60	---	56.00	20.40	L1	OFF	19.9
2.546250	---	29.03	46.00	16.97	L1	OFF	19.9
2.546250	36.41	---	56.00	19.59	L1	OFF	19.9
2.771250	---	28.85	46.00	17.15	L1	OFF	19.9
2.771250	35.72	---	56.00	20.28	L1	OFF	19.9
3.007500	---	29.85	46.00	16.15	L1	OFF	19.9
3.007500	36.57	---	56.00	19.43	L1	OFF	19.9
3.257250	---	29.38	46.00	16.62	L1	OFF	19.9
3.257250	34.84	---	56.00	21.16	L1	OFF	19.9
3.525000	---	28.71	46.00	17.29	L1	OFF	19.9
3.525000	33.61	---	56.00	22.39	L1	OFF	19.9
3.905250	---	28.40	46.00	17.60	L1	OFF	20.0
3.905250	33.36	---	56.00	22.64	L1	OFF	20.0
4.321500	---	29.31	46.00	16.69	L1	OFF	20.0
4.321500	34.46	---	56.00	21.54	L1	OFF	20.0
4.481250	---	29.71	46.00	16.29	L1	OFF	20.0
4.481250	35.07	---	56.00	20.93	L1	OFF	20.0
4.710750	---	29.68	46.00	16.32	L1	OFF	20.0
4.710750	35.14	---	56.00	20.86	L1	OFF	20.0
5.212500	---	28.65	50.00	21.35	L1	OFF	20.0
5.212500	33.36	---	60.00	26.64	L1	OFF	20.0
6.042750	---	29.24	50.00	20.76	L1	OFF	20.1
6.042750	33.72	---	60.00	26.28	L1	OFF	20.1
13.560000	---	59.10	50.00	-9.10	L1	OFF	20.5
13.560000	60.96	---	60.00	-0.96	L1	OFF	20.5

Report NO : 440146  
 Test Mode : Mode 2  
 Test Voltage : 120Vac/60Hz  
 Phase : Neutral

Full Spectrum



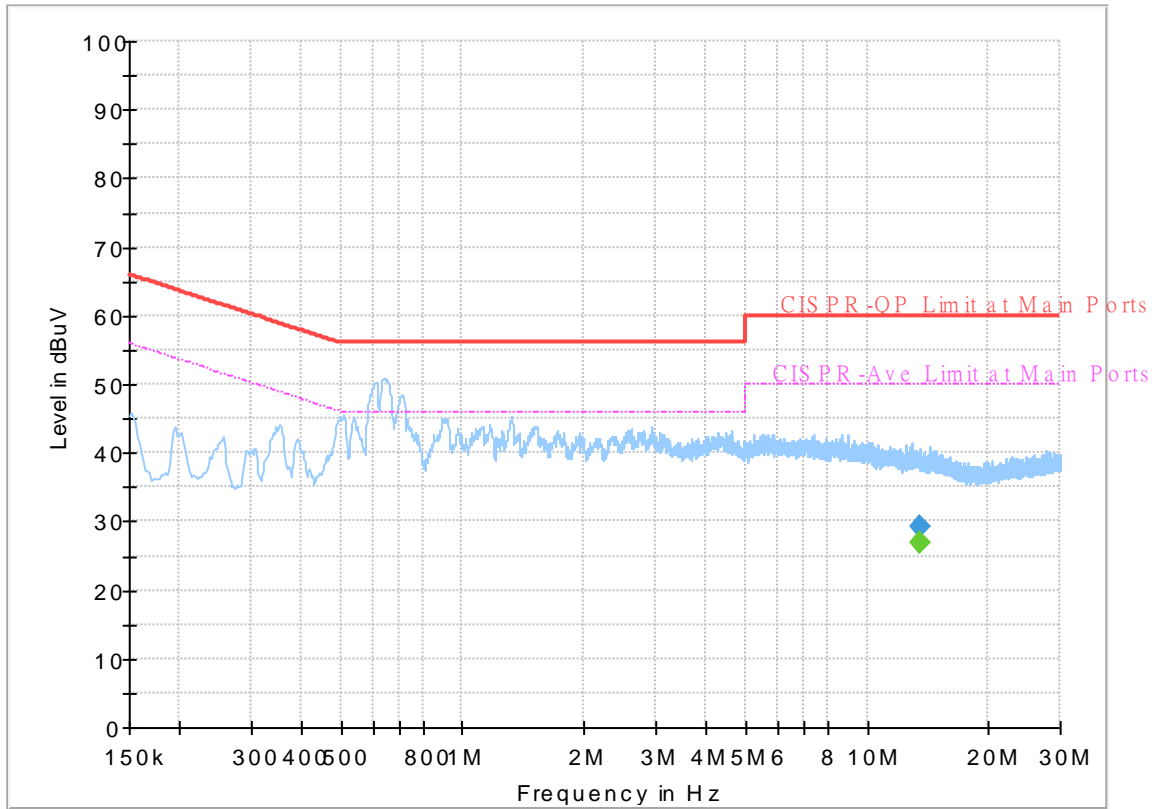
Final\_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.199500	---	31.79	53.63	21.84	N	OFF	19.8
0.199500	38.17	---	63.63	25.46	N	OFF	19.8
0.402000	---	29.08	47.81	18.73	N	OFF	19.8
0.402000	36.59	---	57.81	21.22	N	OFF	19.8
0.633750	---	32.48	46.00	13.52	N	OFF	19.8
0.633750	41.44	---	56.00	14.56	N	OFF	19.8
0.705750	---	30.14	46.00	15.86	N	OFF	19.8
0.705750	39.45	---	56.00	16.55	N	OFF	19.8
1.020750	---	27.47	46.00	18.53	N	OFF	19.8
1.020750	35.44	---	56.00	20.56	N	OFF	19.8
1.554000	---	27.08	46.00	18.92	N	OFF	19.9
1.554000	33.22	---	56.00	22.78	N	OFF	19.9
3.014250	---	27.57	46.00	18.43	N	OFF	19.9
3.014250	33.12	---	56.00	22.88	N	OFF	19.9
4.607250	---	27.95	46.00	18.05	N	OFF	20.0
4.607250	31.99	---	56.00	24.01	N	OFF	20.0
6.249750	---	27.69	50.00	22.31	N	OFF	20.1
6.249750	31.06	---	60.00	28.94	N	OFF	20.1
13.560000	---	57.99	50.00	-7.99	N	OFF	20.5
13.560000	58.39	---	60.00	1.61	N	OFF	20.5

# Terminal

Report NO : 440146  
 Test Mode : Mode 2  
 Test Voltage : 120Vac/60Hz  
 Phase : Line

Full Spectrum

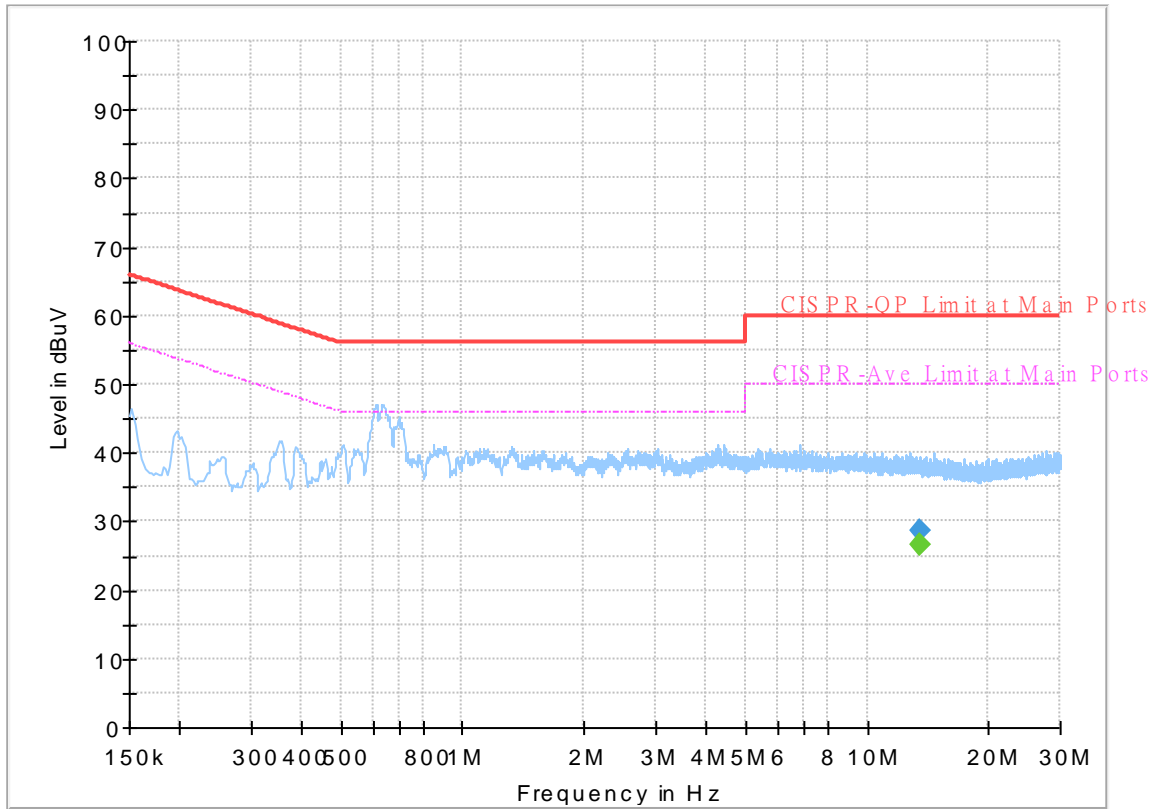


## Final\_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
13.560000	---	26.76	50.00	23.24	L1	OFF	20.5
13.560000	29.20	---	60.00	30.80	L1	OFF	20.5

Report NO : 440146  
 Test Mode : Mode 2  
 Test Voltage : 120Vac/60Hz  
 Phase : Neutral

Full Spectrum



Final\_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
13.560000	---	26.56	50.00	23.44	N	OFF	20.5
13.560000	28.58	---	60.00	31.42	N	OFF	20.5



### Appendix C. Radiated Spurious Emission

Test Engineer :	Bill Chang, Gary Guo and Steven Wu	Temperature :	20.1~20.8°C
		Relative Humidity :	50.1~67.6%

**Band 4 - 5725~5850MHz**  
**WIFI 802.11a (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.		
8+9		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )	
802.11a CH 149 5745MHz		5625.8	54.26	-13.94	68.2	38.87	32.9	11.87	29.38	274	357	P	H	
		5699.2	55.35	-49.26	104.61	39.42	33.39	11.93	29.39	274	357	P	H	
		5718.2	57.9	-52.4	110.3	41.91	33.44	11.94	29.39	274	357	P	H	
		5725	63.38	-58.82	122.2	47.38	33.45	11.95	29.4	274	357	P	H	
	*	5745	115.56	-	-	99.5	33.49	11.97	29.4	274	357	P	H	
	*	5745	108.5	-	-	92.44	33.49	11.97	29.4	274	357	A	H	
														H
														H
			5602.2	55	-13.2	68.2	39.71	32.81	11.85	29.37	400	245	P	V
			5680	55.33	-35.11	90.44	39.57	33.24	11.91	29.39	400	245	P	V
			5711	55.17	-53.11	108.28	39.2	33.42	11.94	29.39	400	245	P	V
			5725	58.94	-63.26	122.2	42.94	33.45	11.95	29.4	400	245	P	V
	*		5745	108.02	-	-	91.96	33.49	11.97	29.4	400	245	P	V
	*		5745	102.1	-	-	86.04	33.49	11.97	29.4	400	245	A	V
													V	
													V	



WIFI Ant. 8+9	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 )
		5623	55.24	-12.96	68.2	39.85	32.89	11.87	29.37	271	358	P	H
		5661.2	55.99	-20.53	76.52	40.38	33.09	11.9	29.38	271	358	P	H
		5718.6	57.08	-53.33	110.41	41.09	33.44	11.94	29.39	271	358	P	H
		5720.6	56.77	-55.4	112.17	40.77	33.44	11.95	29.39	271	358	P	H
	*	5785	114.12	-	-	97.82	33.71	12	29.41	271	358	P	H
	*	5785	107.99	-	-	91.69	33.71	12	29.41	271	358	A	H
		5852.2	56.16	-61.02	117.18	39.53	33.91	12.14	29.42	271	358	P	H
		5865.2	57.09	-50.85	107.94	40.38	33.96	12.17	29.42	271	358	P	H
		5888	57.93	-37.62	95.55	41.08	34.05	12.23	29.43	271	358	P	H
		5932	56.39	-11.81	68.2	39.4	34.1	12.33	29.44	271	358	P	H
													H
													H
<b>802.11a</b>													
<b>CH 157</b>													
<b>5785MHz</b>		5610.6	56.18	-12.02	68.2	40.85	32.84	11.86	29.37	400	303	P	V
		5683.8	55.87	-37.38	93.25	40.07	33.27	11.92	29.39	400	303	P	V
		5705.8	55.44	-51.39	106.83	39.49	33.41	11.93	29.39	400	303	P	V
		5720.8	54.92	-57.7	112.62	38.92	33.44	11.95	29.39	400	303	P	V
	*	5785	107.16	-	-	90.86	33.71	12	29.41	400	303	P	V
	*	5785	102.85	-	-	86.55	33.71	12	29.41	400	303	A	V
		5851.2	55.5	-63.96	119.46	38.88	33.9	12.14	29.42	400	303	P	V
		5860.4	56.81	-52.48	109.29	40.13	33.94	12.16	29.42	400	303	P	V
		5903.2	57.36	-26.93	84.29	40.43	34.1	12.26	29.43	400	303	P	V
		5937	56.74	-11.46	68.2	39.73	34.1	12.35	29.44	400	303	P	V
													V
													V



WiFi Ant. 8+9	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 165 5825MHz	*	5825	114.02	-	-	97.52	33.85	12.07	29.42	268	359	P	H	
	*	5825	106.93	-	-	90.43	33.85	12.07	29.42	268	359	A	H	
		5853.4	58.62	-55.83	114.45	41.99	33.91	12.14	29.42	268	359	P	H	
		5858	59	-50.96	109.96	42.34	33.93	12.15	29.42	268	359	P	H	
		5901.2	57.18	-28.59	85.77	40.25	34.1	12.26	29.43	268	359	P	H	
		5936.6	57.1	-11.1	68.2	40.1	34.1	12.34	29.44	268	359	P	H	
														H
														H
	*	5825	107.32	-	-	90.82	33.85	12.07	29.42	364	299	P	V	
	*	5825	101.05	-	-	84.55	33.85	12.07	29.42	364	299	A	V	
		5851.4	56.22	-62.79	119.01	39.59	33.91	12.14	29.42	364	299	P	V	
		5868	56.4	-50.76	107.16	39.67	33.97	12.18	29.42	364	299	P	V	
		5890.4	56.96	-36.81	93.77	40.1	34.06	12.23	29.43	364	299	P	V	
		5933	57.47	-10.73	68.2	40.47	34.1	12.34	29.44	364	299	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 4 5725~5850MHz  
WIFI 802.11a (Harmonic @ 3m)**

WIFI Ant. 8+9	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 149 5745MHz		11490	47.84	-26.16	74	57.15	38.98	17.48	65.77	-	-	P	H	
		17235	48.99	-19.21	68.2	54.21	38.44	21.95	65.61	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			11490	47.87	-26.13	74	57.18	38.98	17.48	65.77	-	-	P	V
			17235	49.93	-18.27	68.2	55.15	38.44	21.95	65.61	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	



WIFI Ant. 8+9	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 157 5785MHz		11570	47.67	-26.33	74	57.36	38.58	17.54	65.81	-	-	P	H
		17355	47.93	-20.27	68.2	52.8	38.61	22	65.48	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
			11570	47.91	-26.09	74	57.6	38.58	17.54	65.81	-	-	P
		17355	49.22	-18.98	68.2	54.09	38.61	22	65.48	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V



WIFI Ant. 8+9	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 165 5825MHz		7770	54.53	-13.67	68.2	68.87	36.52	14.76	65.62	100	8	P	H	
		11650	46.19	-27.81	74	56.13	38.3	17.61	65.85	-	-	P	H	
		17475	49.03	-19.17	68.2	53.52	38.8	22.06	65.35	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			7770	53.71	-14.49	68.2	68.05	36.52	14.76	65.62	100	161	P	V
			11650	46.53	-27.47	74	56.47	38.3	17.61	65.85	-	-	P	V
			17475	49.6	-18.6	68.2	54.09	38.8	22.06	65.35	-	-	P	V
														V
														V
														V
														V
														V
														V
													V	
<b>Remark</b>	<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>													



**Band 4 5725~5850MHz  
WIFI 802.11ax HE20\_Full (Band Edge @ 3m)**

WIFI Ant. 8+9	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 149 5745MHz		5641.2	54.82	-13.38	68.2	39.36	32.96	11.88	29.38	226	18	P	H	
		5670.4	54.67	-28.67	83.34	38.98	33.16	11.91	29.38	226	18	P	H	
		5719.4	56.03	-54.6	110.63	40.03	33.44	11.95	29.39	226	18	P	H	
		5724.6	60.29	-61	121.29	44.28	33.45	11.95	29.39	226	18	P	H	
	*	5745	111.71	-	-	95.65	33.49	11.97	29.4	226	18	P	H	
	*	5745	105.85	-	-	89.79	33.49	11.97	29.4	226	18	A	H	
														H
														H
			5638	54.36	-13.84	68.2	38.91	32.95	11.88	29.38	100	284	P	V
			5659.4	55.29	-19.89	75.18	39.69	33.08	11.9	29.38	100	284	P	V
			5715.6	55.12	-54.45	109.57	39.14	33.43	11.94	29.39	100	284	P	V
			5720.4	56.15	-55.56	111.71	40.15	33.44	11.95	29.39	100	284	P	V
		*	5745	107.25	-	-	91.19	33.49	11.97	29.4	100	284	P	V
		*	5745	101.74	-	-	85.68	33.49	11.97	29.4	100	284	A	V
													V	
													V	



WIFI Ant. 8+9	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)
		5625.4	56.02	-12.18	68.2	40.63	32.9	11.87	29.38	272	6	P	H
		5682.8	55.56	-36.95	92.51	39.77	33.26	11.92	29.39	272	6	P	H
		5704.8	55.71	-50.84	106.55	39.76	33.41	11.93	29.39	272	6	P	H
		5723.6	55.65	-63.36	119.01	39.64	33.45	11.95	29.39	272	6	P	H
	*	5785	112.46	-	-	96.16	33.71	12	29.41	272	6	P	H
	*	5785	105.86	-	-	89.56	33.71	12	29.41	272	6	A	H
		5854.6	55.63	-56.08	111.71	38.99	33.92	12.14	29.42	272	6	P	H
		5865.2	57.2	-50.74	107.94	40.49	33.96	12.17	29.42	272	6	P	H
		5918	57.12	-16.24	73.36	40.15	34.1	12.3	29.43	272	6	P	H
		5926.6	56.23	-11.97	68.2	39.25	34.1	12.32	29.44	272	6	P	H
<b>802.11ax</b>													H
<b>HE20 Full</b>													H
<b>CH 157</b>		5645.6	55.72	-12.48	68.2	40.23	32.98	11.89	29.38	100	273	P	V
<b>5785MHz</b>		5694.6	56.29	-44.93	101.22	40.39	33.36	11.93	29.39	100	273	P	V
		5713.6	55.82	-53.19	109.01	39.84	33.43	11.94	29.39	100	273	P	V
		5721.4	56.48	-57.51	113.99	40.48	33.44	11.95	29.39	100	273	P	V
	*	5785	108.94	-	-	92.64	33.71	12	29.41	100	273	P	V
	*	5785	102	-	-	85.7	33.71	12	29.41	100	273	A	V
		5854.2	55.66	-56.96	112.62	39.02	33.92	12.14	29.42	100	273	P	V
		5860.4	56.28	-53.01	109.29	39.6	33.94	12.16	29.42	100	273	P	V
		5898.6	57.44	-30.26	87.7	40.53	34.09	12.25	29.43	100	273	P	V
		5932	56.39	-11.81	68.2	39.4	34.1	12.33	29.44	100	273	P	V
													V
													V



WIFI Ant. 8+9	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 165 5825MHz	*	5825	114.16	-	-	97.66	33.85	12.07	29.42	265	5	P	H	
	*	5825	105.02	-	-	88.52	33.85	12.07	29.42	265	5	A	H	
		5851	59.41	-60.51	119.92	42.8	33.9	12.13	29.42	265	5	P	H	
		5870.4	57.15	-49.34	106.49	40.41	33.98	12.18	29.42	265	5	P	H	
		5886.8	57.37	-39.07	96.44	40.53	34.05	12.22	29.43	265	5	P	H	
		5936	56.31	-11.89	68.2	39.31	34.1	12.34	29.44	265	5	P	H	
														H
														H
	*	5825	108.77	-	-	92.27	33.85	12.07	29.42	100	279	P	V	
	*	5825	101.29	-	-	84.79	33.85	12.07	29.42	100	279	A	V	
		5852.6	56.36	-59.91	116.27	39.73	33.91	12.14	29.42	100	279	P	V	
		5862.2	56.08	-52.7	108.78	39.39	33.95	12.16	29.42	100	279	P	V	
		5875.6	56.6	-48.15	104.75	39.83	34	12.2	29.43	100	279	P	V	
		5939.8	56.6	-11.6	68.2	39.59	34.1	12.35	29.44	100	279	P	V	
														V
														V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													





WIFI Ant. 8+9	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 157 5785MHz		11570	47.45	-26.55	74	57.14	38.58	17.54	65.81	-	-	P	H	
		17355	47.64	-20.56	68.2	52.51	38.61	22	65.48	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			11570	47.48	-26.52	74	57.17	38.58	17.54	65.81	-	-	P	V
			17355	48.21	-19.99	68.2	53.08	38.61	22	65.48	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	





WIFI Ant. 8+9	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 165 5825MHz		7770	55.07	-13.13	68.2	69.41	36.52	14.76	65.62	100	3	P	H	
		11650	47.69	-26.31	74	57.63	38.3	17.61	65.85	-	-	P	H	
		17475	49.76	-18.44	68.2	54.25	38.8	22.06	65.35	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			7770	52.4	-15.8	68.2	66.74	36.52	14.76	65.62	400	54	P	V
			11650	46.71	-27.29	74	56.65	38.3	17.61	65.85	-	-	P	V
			17475	49.27	-18.93	68.2	53.76	38.8	22.06	65.35	-	-	P	V
														V
														V
														V
														V
														V
													V	
													V	
<b>Remark</b>	<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>													



**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE20\_Partial 26 (Band Edge @ 3m)**

WIFI Ant. 8+9	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 Partial 26/0 CH 149 5745MHz		5648.2	56.75	-11.45	68.2	41.25	32.99	11.89	29.38	275	360	P	H	
		5699.6	82.46	-22.45	104.91	66.52	33.4	11.93	29.39	275	360	P	H	
		5702	92.5	-13.26	105.76	76.56	33.4	11.93	29.39	275	360	P	H	
		5724	82.36	-37.56	119.92	66.35	33.45	11.95	29.39	275	360	P	H	
	*	5745	120.25	-	-	104.19	33.49	11.97	29.4	275	360	P	H	
	*	5745	114	-	-	97.94	33.49	11.97	29.4	275	360	A	H	
														H
														H
			5632.8	56.8	-11.4	68.2	41.37	32.93	11.88	29.38	378	293	P	V
			5700	80.01	-25.19	105.2	64.07	33.4	11.93	29.39	378	293	P	V
			5702.6	88.64	-17.29	105.93	72.69	33.41	11.93	29.39	378	293	P	V
			5725	76.94	-45.26	122.2	60.94	33.45	11.95	29.4	378	293	P	V
	*		5745	114.41	-	-	98.35	33.49	11.97	29.4	378	293	P	V
	*		5745	109.04	-	-	92.98	33.49	11.97	29.4	378	293	A	V
													V	
													V	



WIFI Ant. 8+9	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 Partial 26/8 CH 165 5825MHz	*	5825	118.12	-	-	101.62	33.85	12.07	29.42	123	349	P	H	
	*	5825	110.77	-	-	94.27	33.85	12.07	29.42	123	349	A	H	
		5852.8	69.83	-45.99	115.82	53.2	33.91	12.14	29.42	123	349	P	H	
		5868.8	86.66	-20.27	106.93	69.92	33.98	12.18	29.42	123	349	P	H	
		5902	79.98	-5.2	85.18	63.05	34.1	12.26	29.43	123	349	P	H	
		5934	64.08	-4.12	68.2	47.08	34.1	12.34	29.44	123	349	P	H	
														H
														H
	*	5825	113.61	-	-	97.11	33.85	12.07	29.42	100	324	P	V	
	*	5825	106.27	-	-	89.77	33.85	12.07	29.42	100	324	A	V	
		5851.2	70.64	-48.82	119.46	54.02	33.9	12.14	29.42	100	324	P	V	
		5868	89.52	-17.64	107.16	72.79	33.97	12.18	29.42	100	324	P	V	
		5902.8	75.44	-9.15	84.59	58.51	34.1	12.26	29.43	100	324	P	V	
		5930.6	57.14	-11.06	68.2	40.15	34.1	12.33	29.44	100	324	P	V	
													V	
													V	
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



**Band 4 5725~5850MHz  
WIFI 802.11ax HE20\_Partial 52 (Band Edge @ 3m)**

WIFI Ant. 8+9	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 Partial 52/37 CH 149 5745MHz		5644.2	58.39	-9.81	68.2	42.9	32.98	11.89	29.38	209	360	P	H	
		5677.6	73.94	-14.72	88.66	58.2	33.22	11.91	29.39	209	360	P	H	
		5704.6	91.13	-15.36	106.49	75.18	33.41	11.93	29.39	209	360	P	H	
		5723.2	80.07	-38.03	118.1	64.06	33.45	11.95	29.39	209	360	P	H	
		5745	118.62	50.42	68.2	102.56	33.49	11.97	29.4	209	360	P	H	
		5745	110.72	56.72	54	94.66	33.49	11.97	29.4	209	360	A	H	
														H
														H
			5633.2	55.87	-12.33	68.2	40.44	32.93	11.88	29.38	378	295	P	V
			5698.6	71.92	-32.25	104.17	55.99	33.39	11.93	29.39	378	295	P	V
			5710.6	84.29	-23.88	108.17	68.32	33.42	11.94	29.39	378	295	P	V
			5720.8	72.82	-39.8	112.62	56.82	33.44	11.95	29.39	378	295	P	V
			5745	114.27	46.07	68.2	98.21	33.49	11.97	29.4	378	295	P	V
			5745	105.89	51.89	54	89.83	33.49	11.97	29.4	378	295	A	V
														V
													V	



WIFI Ant. 8+9	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 Partial 52/40 CH 165 5825MHz	*	5825	116.68	-	-	100.18	33.85	12.07	29.42	193	357	P	H	
	*	5825	110.82	-	-	94.32	33.85	12.07	29.42	193	357	A	H	
		5853.6	80.34	-33.65	113.99	63.71	33.91	12.14	29.42	193	357	P	H	
		5862	88.6	-20.24	108.84	71.91	33.95	12.16	29.42	193	357	P	H	
		5890	73.92	-20.15	94.07	57.06	34.06	12.23	29.43	193	357	P	H	
		5939.2	58.03	-10.17	68.2	41.02	34.1	12.35	29.44	193	357	P	H	
														H
														H
	*	5825	110.58	-	-	94.08	33.85	12.07	29.42	107	212	P	V	
	*	5825	103.89	-	-	87.39	33.85	12.07	29.42	107	212	A	V	
		5854.8	69.62	-41.64	111.26	52.98	33.92	12.14	29.42	107	212	P	V	
		5863.2	78.69	-29.81	108.5	62	33.95	12.16	29.42	107	212	P	V	
		5893.2	65.58	-26.12	91.7	48.7	34.07	12.24	29.43	107	212	P	V	
		5929.8	57.39	-10.81	68.2	40.4	34.1	12.33	29.44	107	212	P	V	
														V
													V	
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE20\_Partial 106 (Band Edge @ 3m)**

WIFI Ant. 8+9	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 Partial 106/53 CH 149 5745MHz		5641	55.96	-12.24	68.2	40.5	32.96	11.88	29.38	201	360	P	H	
		5696.2	74.25	-28.15	102.4	58.34	33.37	11.93	29.39	201	360	P	H	
		5716.4	83.71	-26.08	109.79	67.73	33.43	11.94	29.39	201	360	P	H	
		5720.2	85.5	-25.76	111.26	69.5	33.44	11.95	29.39	201	360	P	H	
	*	5745	116.04	-	-	99.98	33.49	11.97	29.4	201	360	P	H	
	*	5745	108.34	-	-	92.28	33.49	11.97	29.4	201	360	A	H	
														H
														H
			5624	57.12	-11.08	68.2	41.72	32.9	11.87	29.37	378	295	P	V
			5697.6	71.89	-31.54	103.43	55.97	33.38	11.93	29.39	378	295	P	V
			5718	79.86	-30.38	110.24	63.87	33.44	11.94	29.39	378	295	P	V
			5722.2	80.94	-34.88	115.82	64.94	33.44	11.95	29.39	378	295	P	V
		*	5745	110.67	-	-	94.61	33.49	11.97	29.4	378	295	P	V
		*	5745	103.66	-	-	87.6	33.49	11.97	29.4	378	295	A	V
													V	
													V	



WIFI Ant. 8+9	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 Partial 106/54 CH 165 5825MHz	*	5825	115.89	-	-	99.39	33.85	12.07	29.42	204	358	P	H	
	*	5825	108.72	-	-	92.22	33.85	12.07	29.42	204	358	A	H	
		5851.8	80.71	-37.39	118.1	64.08	33.91	12.14	29.42	204	358	P	H	
		5855.4	79.75	-30.94	110.69	63.1	33.92	12.15	29.42	204	358	P	H	
		5875.2	65.65	-39.4	105.05	48.89	34	12.19	29.43	204	358	P	H	
		5935.2	59.13	-9.07	68.2	42.13	34.1	12.34	29.44	204	358	P	H	
														H
														H
	*	5825	111.28	-	-	94.78	33.85	12.07	29.42	100	275	P	V	
	*	5825	103.44	-	-	86.94	33.85	12.07	29.42	100	275	A	V	
		5852.2	74.77	-42.41	117.18	58.14	33.91	12.14	29.42	100	275	P	V	
		5859.2	74.88	-34.74	109.62	58.2	33.94	12.16	29.42	100	275	P	V	
		5875.2	61.24	-43.81	105.05	44.48	34	12.19	29.43	100	275	P	V	
		5935.2	57.59	-10.61	68.2	40.59	34.1	12.34	29.44	100	275	P	V	
														V
													V	
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE40\_Full (Band Edge @ 3m)**

WIFI Ant. 8+9	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 )
		5640.6	55.62	-12.58	68.2	40.16	32.96	11.88	29.38	199	2	P	H
		5661	56.49	-19.88	76.37	40.88	33.09	11.9	29.38	199	2	P	H
		5720	61.33	-49.47	110.8	45.33	33.44	11.95	29.39	199	2	P	H
		5721	62.4	-50.68	113.08	46.4	33.44	11.95	29.39	199	2	P	H
	*	5755	109.82	-	-	93.72	33.53	11.97	29.4	199	2	P	H
	*	5755	103.34	-	-	87.24	33.53	11.97	29.4	199	2	A	H
		5854.2	56.9	-55.72	112.62	40.26	33.92	12.14	29.42	199	2	P	H
		5857.2	56.9	-53.28	110.18	40.24	33.93	12.15	29.42	199	2	P	H
		5903.4	56.72	-27.43	84.15	39.79	34.1	12.26	29.43	199	2	P	H
		5945.2	56.86	-11.34	68.2	39.83	34.1	12.37	29.44	199	2	P	H
<b>802.11ax</b>													H
<b>HE40 Full</b>													H
<b>CH 151</b>		5627.2	55.41	-12.79	68.2	40.01	32.91	11.87	29.38	400	246	P	V
<b>5755MHz</b>		5655.6	55.91	-16.45	72.36	40.36	33.04	11.89	29.38	400	246	P	V
		5714.6	57.42	-51.87	109.29	41.44	33.43	11.94	29.39	400	246	P	V
		5725	58.12	-64.08	122.2	42.12	33.45	11.95	29.4	400	246	P	V
	*	5755	104.24	-	-	88.14	33.53	11.97	29.4	400	246	P	V
	*	5755	98.69	-	-	82.59	33.53	11.97	29.4	400	246	A	V
		5850.6	56.55	-64.28	120.83	39.94	33.9	12.13	29.42	400	246	P	V
		5860.6	56.37	-52.86	109.23	39.69	33.94	12.16	29.42	400	246	P	V
		5907.4	56.78	-24.41	81.19	39.84	34.1	12.27	29.43	400	246	P	V
		5942.4	57.08	-11.12	68.2	40.06	34.1	12.36	29.44	400	246	P	V
													V
													V





WIFI Ant. 8+9	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 )
		5615.6	55.48	-12.72	68.2	40.13	32.86	11.86	29.37	205	1	P	H
		5686	56.79	-38.08	94.87	40.97	33.29	11.92	29.39	205	1	P	H
		5717.8	57.04	-53.14	110.18	41.05	33.44	11.94	29.39	205	1	P	H
		5721.4	56.27	-57.72	113.99	40.27	33.44	11.95	29.39	205	1	P	H
	*	5795	109.64	-	-	93.27	33.77	12.01	29.41	205	1	P	H
	*	5795	103.01	-	-	86.64	33.77	12.01	29.41	205	1	A	H
		5850.2	56.63	-65.11	121.74	40.02	33.9	12.13	29.42	205	1	P	H
		5860.4	57.95	-51.34	109.29	41.27	33.94	12.16	29.42	205	1	P	H
		5878.4	57.79	-44.88	102.67	41.01	34.01	12.2	29.43	205	1	P	H
		5933.6	57.66	-10.54	68.2	40.66	34.1	12.34	29.44	205	1	P	H
802.11ax													H
HE40 Full													H
CH 159		5637.6	54.94	-13.26	68.2	39.49	32.95	11.88	29.38	400	301	P	V
5795MHz		5693.2	55.53	-44.66	100.19	39.65	33.35	11.92	29.39	400	301	P	V
		5701.8	55.93	-49.77	105.7	39.99	33.4	11.93	29.39	400	301	P	V
		5721.6	55.29	-59.16	114.45	39.29	33.44	11.95	29.39	400	301	P	V
	*	5795	105.13	-	-	88.76	33.77	12.01	29.41	400	301	P	V
	*	5795	98.32	-	-	81.95	33.77	12.01	29.41	400	301	A	V
		5853	55.97	-59.39	115.36	39.34	33.91	12.14	29.42	400	301	P	V
		5866	56.42	-51.3	107.72	39.71	33.96	12.17	29.42	400	301	P	V
		5916.6	56.96	-17.43	74.39	39.99	34.1	12.3	29.43	400	301	P	V
		5938	55.9	-12.3	68.2	38.89	34.1	12.35	29.44	400	301	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11ax HE40\_Full (Harmonic @ 3m)

WIFI Ant. 8+9	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 151 5755MHz		11510	47.73	-26.27	74	57.07	38.94	17.5	65.78	-	-	P	H	
		17265	48.31	-19.89	68.2	53.45	38.47	21.96	65.57	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			11510	47.46	-26.54	74	56.8	38.94	17.5	65.78	-	-	P	V
			17265	47.87	-20.33	68.2	53.01	38.47	21.96	65.57	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	



WiFi Ant. 8+9	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 159 5795MHz		11587	46.7	-27.3	74	56.48	38.48	17.56	65.82	-	-	P	H	
		17384	48.64	-19.56	68.2	53.4	38.67	22.02	65.45	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			11587	47.8	-26.2	74	57.58	38.48	17.56	65.82	-	-	P	V
			17384	48.11	-20.09	68.2	52.87	38.67	22.02	65.45	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
													V	
<b>Remark</b>	<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>													



**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE80\_Full (Band Edge @ 3m)**

WIFI Ant. 8+9	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 )
		5649.2	56.45	-11.75	68.2	40.94	33	11.89	29.38	271	357	P	H
		5698.4	64.54	-39.48	104.02	48.61	33.39	11.93	29.39	271	357	P	H
		5711.2	64.29	-44.05	108.34	48.32	33.42	11.94	29.39	271	357	P	H
		5720.6	64.26	-47.91	112.17	48.26	33.44	11.95	29.39	271	357	P	H
	*	5775	108.76	-	-	92.53	33.65	11.99	29.41	271	357	P	H
	*	5775	101.82	-	-	85.59	33.65	11.99	29.41	271	357	A	H
		5850.4	60.85	-60.44	121.29	44.24	33.9	12.13	29.42	271	357	P	H
		5859.6	60.02	-49.49	109.51	43.34	33.94	12.16	29.42	271	357	P	H
		5879	58.11	-44.12	102.23	41.32	34.02	12.2	29.43	271	357	P	H
		5925.2	57.02	-11.18	68.2	40.04	34.1	12.32	29.44	271	357	P	H
<b>802.11ax</b>													H
<b>HE80 Full</b>													H
<b>CH 155</b>		5638.8	55.39	-12.81	68.2	39.93	32.96	11.88	29.38	100	274	P	V
<b>5775MHz</b>		5693.2	57	-43.19	100.19	41.12	33.35	11.92	29.39	100	274	P	V
		5717.2	58.77	-51.25	110.02	42.79	33.43	11.94	29.39	100	274	P	V
		5724.4	58.12	-62.71	120.83	42.11	33.45	11.95	29.39	100	274	P	V
	*	5775	103.86	-	-	87.63	33.65	11.99	29.41	100	274	P	V
	*	5775	96.74	-	-	80.51	33.65	11.99	29.41	100	274	A	V
		5851.2	58.27	-61.19	119.46	41.65	33.9	12.14	29.42	100	274	P	V
		5859.8	59.05	-50.4	109.45	42.37	33.94	12.16	29.42	100	274	P	V
		5901	57.68	-28.24	85.92	40.75	34.1	12.26	29.43	100	274	P	V
		5945.6	56.76	-11.44	68.2	39.73	34.1	12.37	29.44	100	274	P	V
													V
													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE80\_Full (Harmonic @ 3m)**

WIFI Ant. 8+9	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 HE80 Full CH 155 5775MHz		11550	47.97	-26.03	74	57.54	38.7	17.53	65.8	-	-	P	H	
		17325	47.77	-20.43	68.2	52.79	38.5	21.99	65.51	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			11550	47.91	-26.09	74	57.48	38.7	17.53	65.8	-	-	P	V
			17325	47.56	-20.64	68.2	52.58	38.5	21.99	65.51	-	-	P	V
													V	
													V	
													V	
													V	
													V	
													V	
													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.													



Emission below 1GHz

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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.		
8+9		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )	
802.11ax HE20 Full LF		32.97	22.53	-17.47	40	31.11	23.08	0.79	32.45	-	-	P	H	
		123.15	31.93	-11.57	43.5	45.17	17.51	1.64	32.39	-	-	P	H	
		217.65	26.62	-19.38	46	41.71	15.21	2.1	32.4	-	-	P	H	
		601	27.68	-18.32	46	31.17	25.58	3.73	32.8	-	-	P	H	
		717.9	32.45	-13.55	46	33.9	27.02	4.2	32.67	-	-	P	H	
		936.3	33.41	-12.59	46	29.99	30.26	4.79	31.63	-	-	P	H	
														H
														H
														H
														H
														H
														H
			58.35	30.7	-9.3	40	50.05	11.95	1.12	32.42	-	-	P	V
			183.63	31.03	-12.47	43.5	46.45	14.98	1.95	32.35	-	-	P	V
			217.92	25.1	-20.9	46	40.17	15.23	2.1	32.4	-	-	P	V
			577.9	27.03	-18.97	46	30.44	25.66	3.61	32.68	-	-	P	V
			717.2	31.93	-14.07	46	33.41	26.99	4.2	32.67	-	-	P	V
			921.6	32.72	-13.28	46	30.05	29.7	4.72	31.75	-	-	P	V
														V
														V
													V	
													V	
													V	
													V	

**Remark**

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



**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>Margin</b> line.
P/A	<b>Peak</b> or <b>Av</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.	
8+9		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11a		5650	55.45	-12.75	68.2	54.51	32.22	4.58	35.86	103	308	P	H
CH 149		5650	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H
5745MHz													

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

**For Peak Limit @ 5650MHz:**

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. Margin(dB)
  - = Level(dBμV/m) – Limit Line(dBμV/m)
  - = 55.45(dBμV/m) – 68.2(dBμV/m)
  - = -12.75 (dB)

**For Average Limit @ 5650MHz:**

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. Margin (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

Test Engineer :	Bill Chang, Gary Guo and Steven Wu	Temperature :	20.1~20.8°C
		Relative Humidity :	50.1~67.6%

### Note symbol

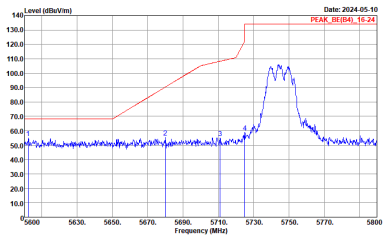
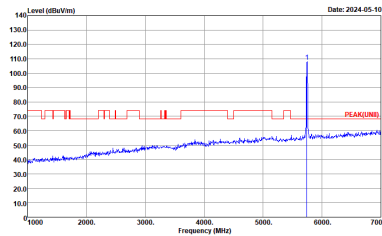
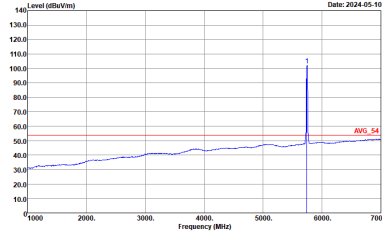
-L	Low channel location
-R	High channel location



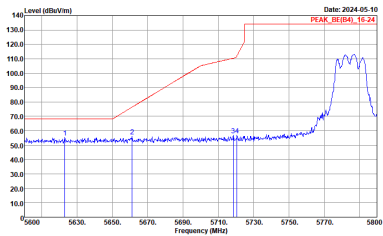
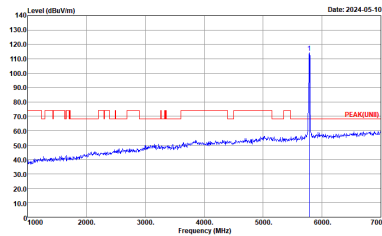
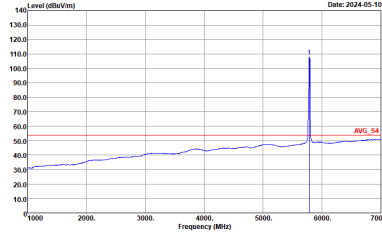
**Band 4 - 5725~5850MHz**  
**WIFI 802.11a (Band Edge @ 3m)**

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
8+9	Horizontal	Fundamental
Peak		
Avg.	Left blank	



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH149 5745MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8C(94)_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

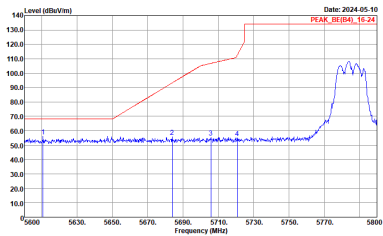
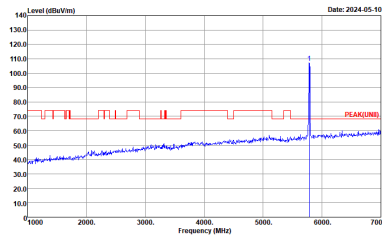
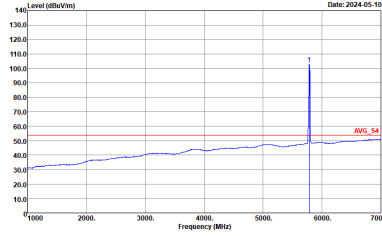


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8C(94)_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
8+9	Horizontal	Fundamental
Peak	<p>Site : 09CH16-HV Condition : PEAK_SC(94)_16-24 3m 91200_1522_240228 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	Left blank

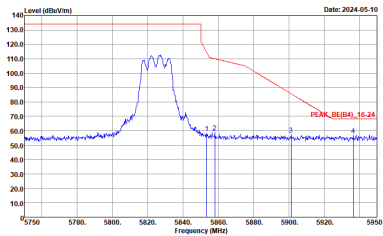
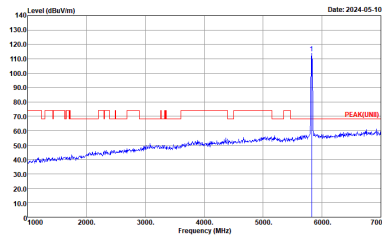
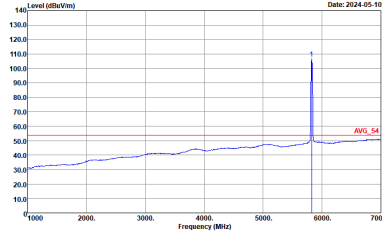


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8E[9A]_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK[LINE] 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



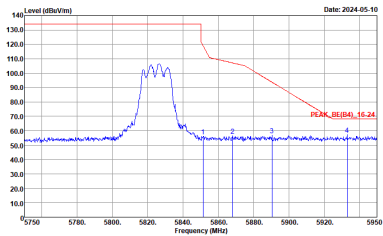
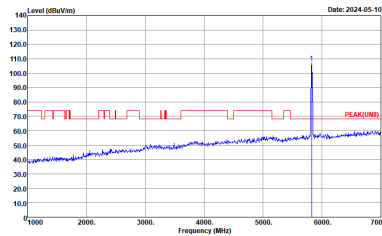
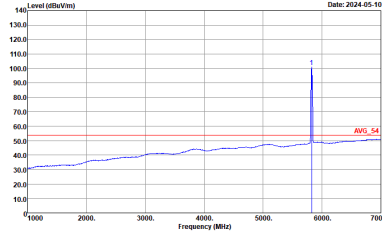
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
8+9	Vertical	Fundamental
Peak	<p>Site : 09CH16-HV Condition : PEAK_80211a_16-24 3m 91200_1522_240928 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8E(S4)_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>





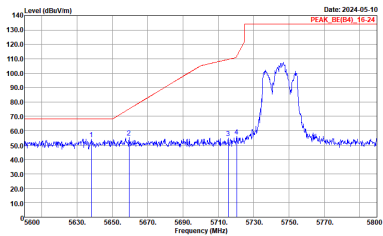
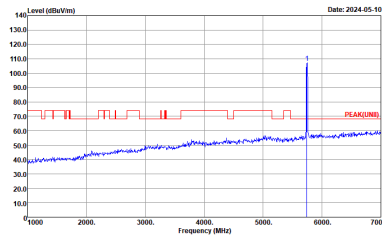
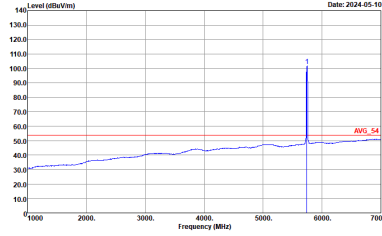
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH165 5825MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8C(94)_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



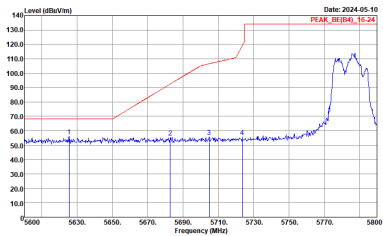
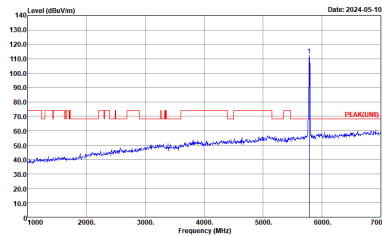
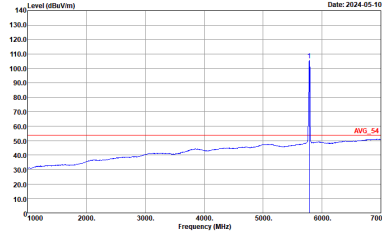
**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE20 Full (Band Edge @ 3m)**

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH149 5745MHz	
8+9	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY            Condition : PEAK_BE(B4)_16-24 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH16-HY            Condition : PEAK(UNID) 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site : 03CH16-HY            Condition : AVG_54 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	<b>Band 4 5725~5850MHz Band Edge @ 3m</b>	
ANT	<b>802.11ax HE20 Full CH149 5745MHz</b>	
8+9	<b>Vertical</b>	<b>Fundamental</b>
<b>Peak</b>	 <p>Site : 03CH16-HY Condition : PEAK_8C(94)_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
<b>Avg.</b>	<b>Left blank</b>	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

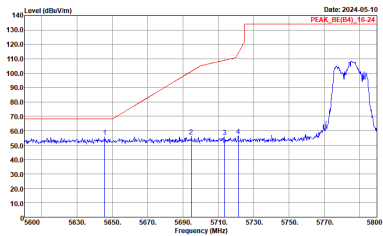
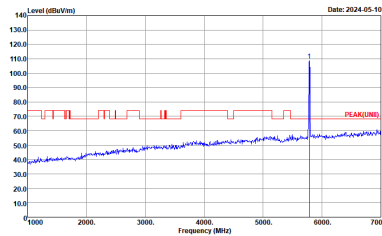
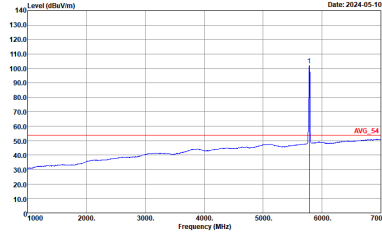


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8E(84)_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
8+9	Horizontal	Fundamental
Peak	<p>Site : 09CH16-HV Condition : PEAK_BC(94)_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	Left blank

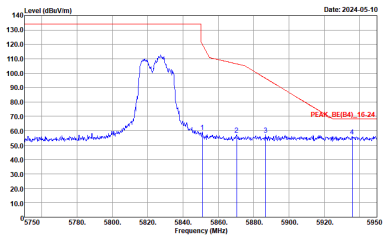
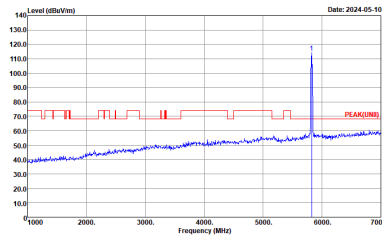
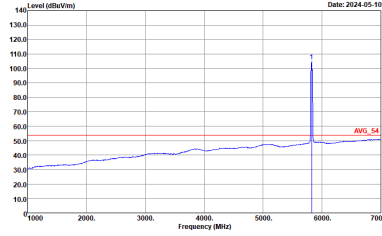


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



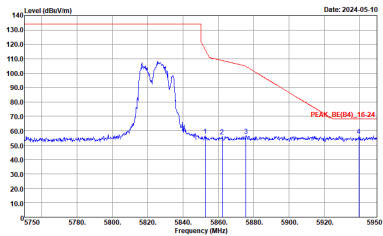
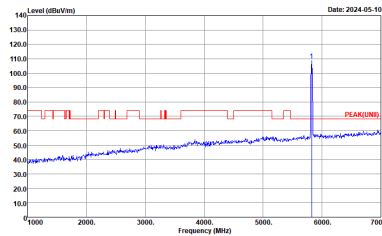
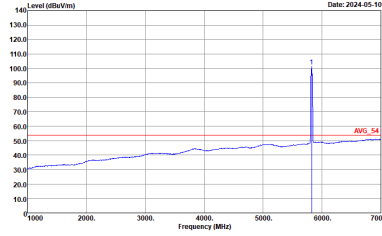
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
8+9	Vertical	Fundamental
Peak	<p>Site : 09CH16-HV Condition : PEAK_B0(B4)_16-24 3m 91200_1522_240928 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_06[94]_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK[LINE] 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>





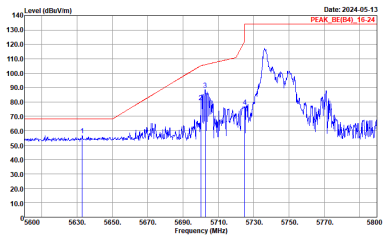
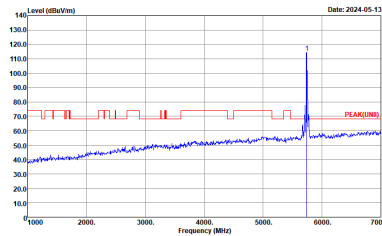
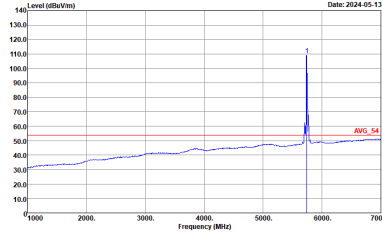
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8E[94]_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK[LINE] 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



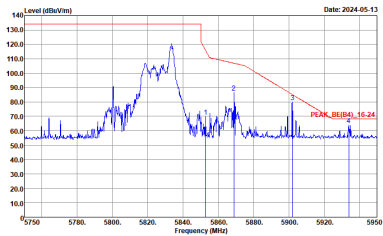
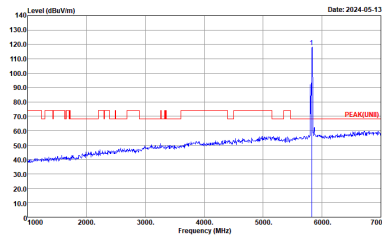
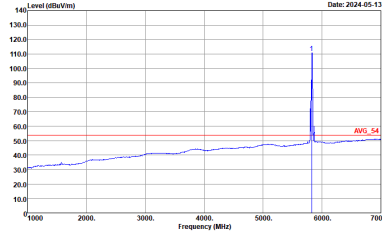
**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)**

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH149 5745MHz	
8+9	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY            Condition : PEAK_BE(84)_16-24 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH16-HY            Condition : PEAK(UNID) 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site : 03CH16-HY            Condition : AVG_54 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

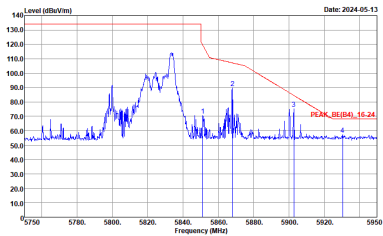
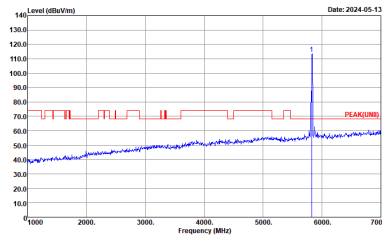
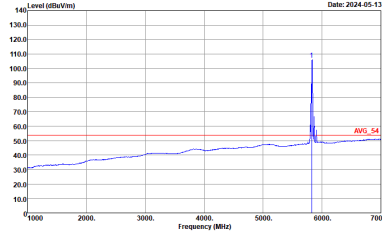


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH149 5745MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522_240328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_240328 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH165 5825MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8E(S4)_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



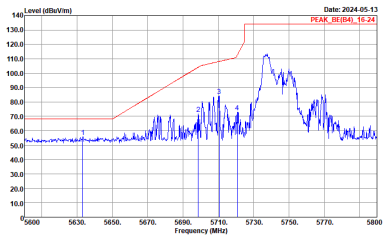
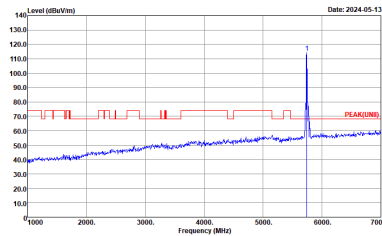
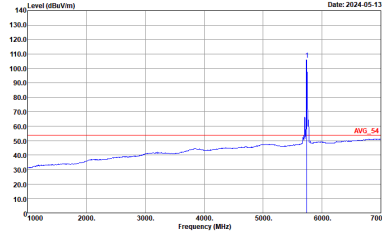
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH165 5825MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8E(84)_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



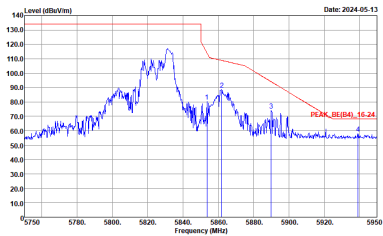
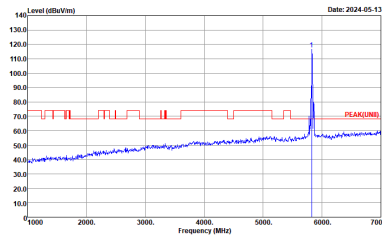
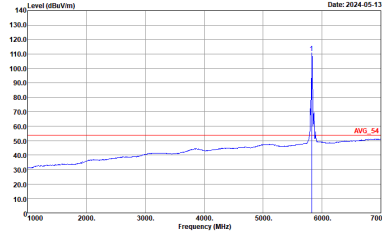
**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE20 Partial 52 (Band Edge @ 3m)**

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH149 5745MHz	
8+9	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY            Condition : PEAK_BE(84)_16-24 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH16-HY            Condition : PEAK(UNID) 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site : 03CH16-HY            Condition : AVG_54 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



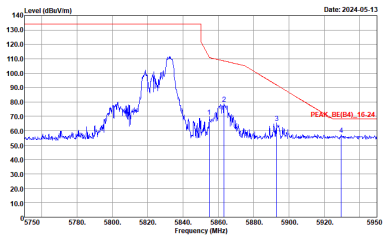
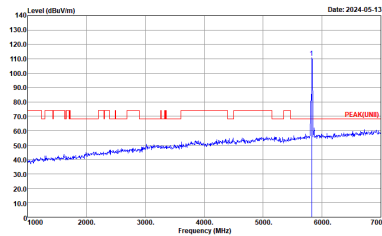
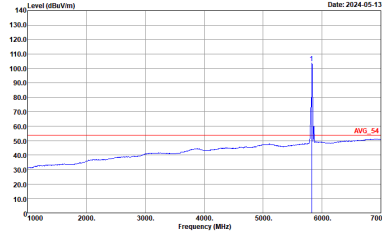
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH149 5745MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8C(94)_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/40 CH165 5825MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8E(84)_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

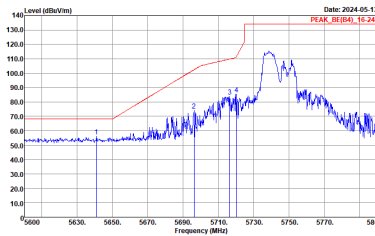
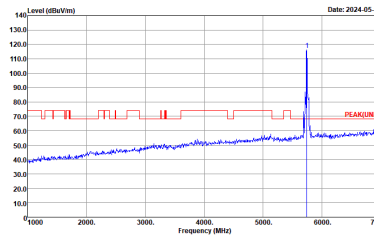
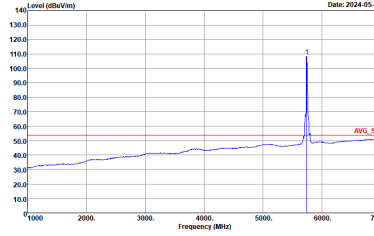




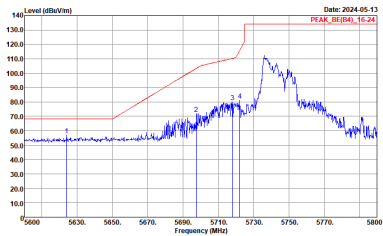
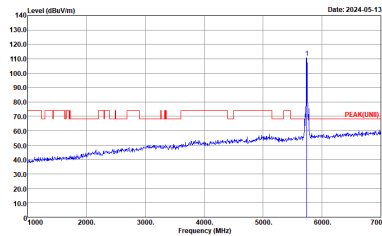
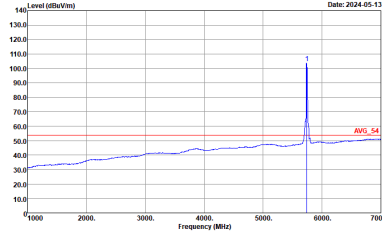
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/40 CH165 5825MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8C(84)_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



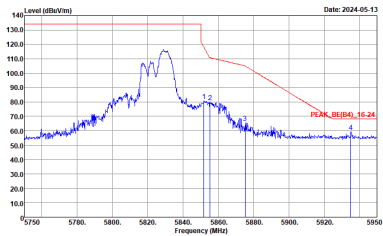
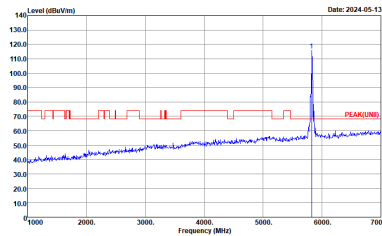
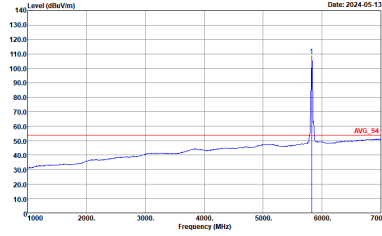
**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE20 Partial 106 (Band Edge @ 3m)**

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH149 5745MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Date: 2024-05-13 PEAK_BE(84)_16-24</p> <p>Site : 03CH16-HY Condition : PEAK_BE(84)_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Date: 2024-05-13 PEAK(UNII)</p> <p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Date: 2024-05-13 AVG_54</p> <p>Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

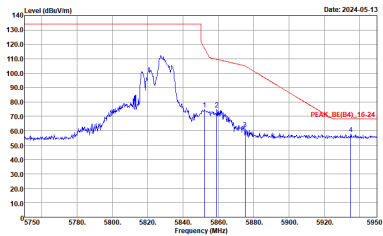
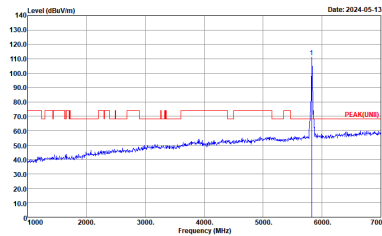
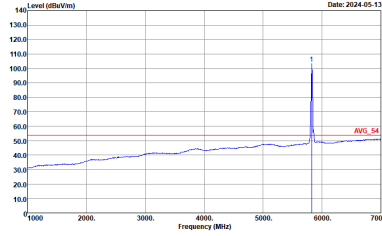


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH149 5745MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522_240328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_240328 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH165 5825MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8C(94)_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH165 5825MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_B0(B4)_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



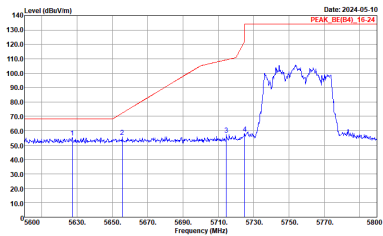
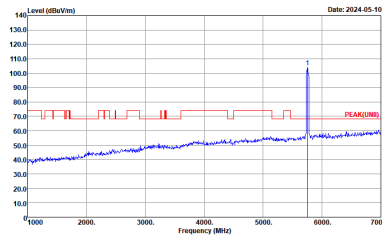
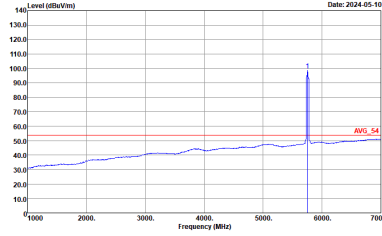
**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE40 Full (Band Edge @ 3m)**

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
8+9	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY            Condition : PEAK_BE(B4)_16-24 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH16-HY            Condition : PEAK(UNB) 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site : 03CH16-HY            Condition : AVG_54 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



<b>WIFI</b>	<b>Band 4 5725~5850MHz Band Edge @ 3m</b>	
<b>ANT</b>	<b>802.11ax HE40 Full CH151 5755MHz</b>	
<b>8+9</b>	<b>Horizontal</b>	<b>Fundamental</b>
<b>Peak</b>	<p>Site : 09CH16-HV Condition : PEAK_SC(94)_16-24 3m 91200_1522_240228 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	<b>Left blank</b>



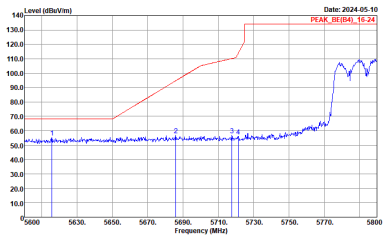
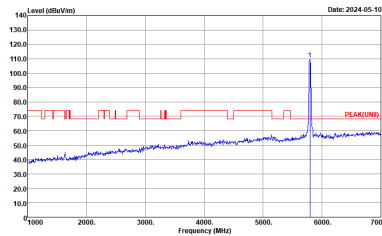
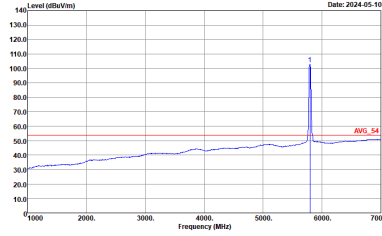
WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_06[94]_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK[LINE] 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



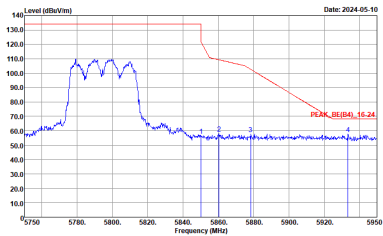


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH151 5755MHz	
8+9	Vertical	Fundamental
Peak	<p>Site : 09CH16-HV Condition : PEAK_BC(94)_16-24 3m 91200_1522_240928 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full HT40 CH159 5795MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_06[94]_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK[LINE3] 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full HT40 CH159 5795MHz	
8+9	Horizontal	Fundamental
Peak	 <p>Site : 09CH16-HV Condition : PEAK_B0(B4)_16-24 3m 91200_1522_240228 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
8+9	Vertical	Fundamental
Peak	<p>Site : 03CH16-HY Condition : PEAK_RE(B4)_15-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site : 03CH16-HY Condition : AVG_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
8+9	Vertical	Fundamental
Peak	<p>Site : 09CH16-HV Condition : PEAK_06(04)_16-24 3m 91200_1522_240228 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	Left blank



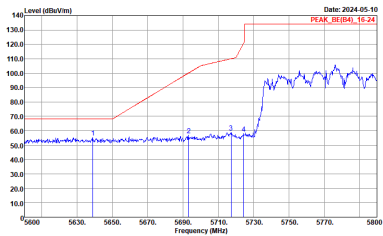
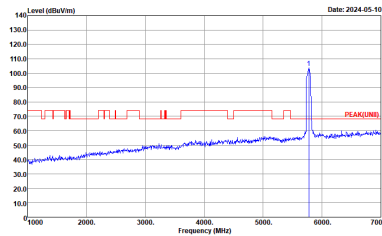
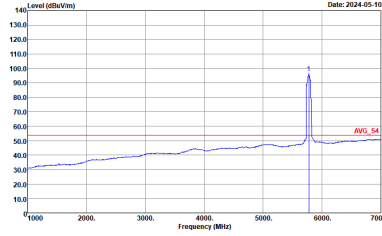
**Band 4 5725~5850MHz**  
**WIFI 802.11ax HE80 Full (Band Edge @ 3m)**

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
8+9	Horizontal	Fundamental
Peak	<p>Site : 03CH16-HY            Condition : PEAK_BE(B4)_16-24 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH16-HY            Condition : PEAK(UNII) 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	<p>Site : 03CH16-HY            Condition : AVG_54 3m 91200_1522_240328 HORIZONTAL            : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
8+9	Horizontal	Fundamental
Peak	<p>Site : 09CH16-HV Condition : PEAK_BC(84)_16-24 3m 91200_1522_240328 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	Left blank



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
8+9	Vertical	Fundamental
Peak	 <p>Site : 03CH16-HY Condition : PEAK_8E(84)_16-24 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH16-HY Condition : PEAK(LINE) 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	Left blank	 <p>Site : 03CH16-HY Condition : AV6_54 3m 91200_1522_240328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>





WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ax HE80 Full CH155 5775MHz	
8+9	Vertical	Fundamental
Peak	<p>Site : 09CH16-HV Condition : PEAK_06(94)_16-24 3m 91200_1522_240928 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWF:Auto</p>	Left blank



Band 4 - 5725~5850MHz

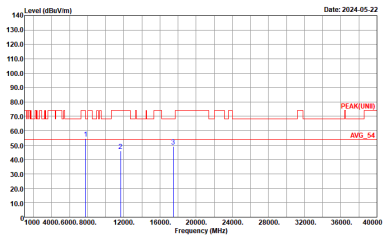
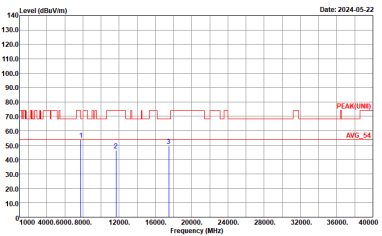
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH149 5745MHz	
8+9	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK[UNII] 3m 91200_1522_240328 HORIZONTAL</p>	<p>Site : 03CH16-HY Condition : PEAK[UNII] 3m 91200_1522_240328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
8+9	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 HORIZONTAL :</p>	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 VERTICAL :</p>



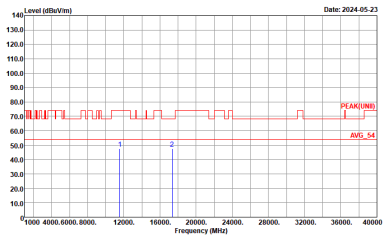
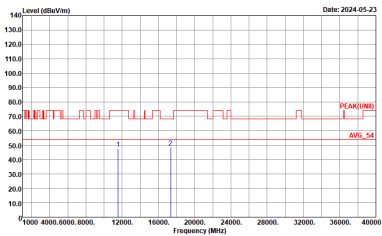
WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH165 5825MHz	
8+9	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 HORIZONTAL :</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 VERTICAL :</p>



**Band 4 5725~5850MHz  
WIFI 802.11ax HE20 Full (Harmonic @ 3m)**

<b>WIFI</b>	<b>Band 4 5725~5850MHz Harmonic @ 3m</b>	
<b>ANT</b>	<b>802.11ax HE20 Full CH149 5745MHz</b>	
<b>8+9</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak Avg.</b>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522_240328 HORIZONTAL</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522_240328 VERTICAL</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH157 5785MHz	
8+9	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 HORIZONTAL :</p>	 <p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 VERTICAL :</p>



WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH165 5825MHz	
8+9	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 HORIZONTAL :</p>	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 VERTICAL :</p>



Band 4 5725~5850MHz
WIFI 802.11ax HE40 Full (Harmonic @ 3m)

Table with 3 columns: WIFI, ANT, 8+9. It contains two spectral plots: Horizontal and Vertical. Each plot shows Level (dBm/100MHz) vs Frequency (MHz) with peak and average markers.





WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ax HE40 Full CH159 5795MHz	
8+9	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 HORIZONTAL :</p>	<p>Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522_240328 VERTICAL :</p>



**Band 4 5725~5850MHz  
WIFI 802.11ax HE80 Full (Harmonic @ 3m)**

<b>WIFI</b>	<b>Band 4 5725~5850MHz Harmonic @ 3m</b>	
<b>ANT</b>	<b>802.11ax HE80 Full CH155 5775MHz</b>	
<b>8+9</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak Avg.</b>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522_240328 HORIZONTAL :</p>	<p>Site : 03CH16-HY Condition : PEAK(UNII) 3m 91200_1522_240328 VERTICAL :</p>



Emission below 1GHz

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

WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full LF	
8+9	Horizontal	Vertical
QP / Peak	<p>Site : 03CH16-HY Condition : QP 3m BIL06_47020_231007_H HORIZONTAL</p>	<p>Site : 03CH16-HY Condition : QP 3m BIL06_47020_231007_H VERTICAL</p>

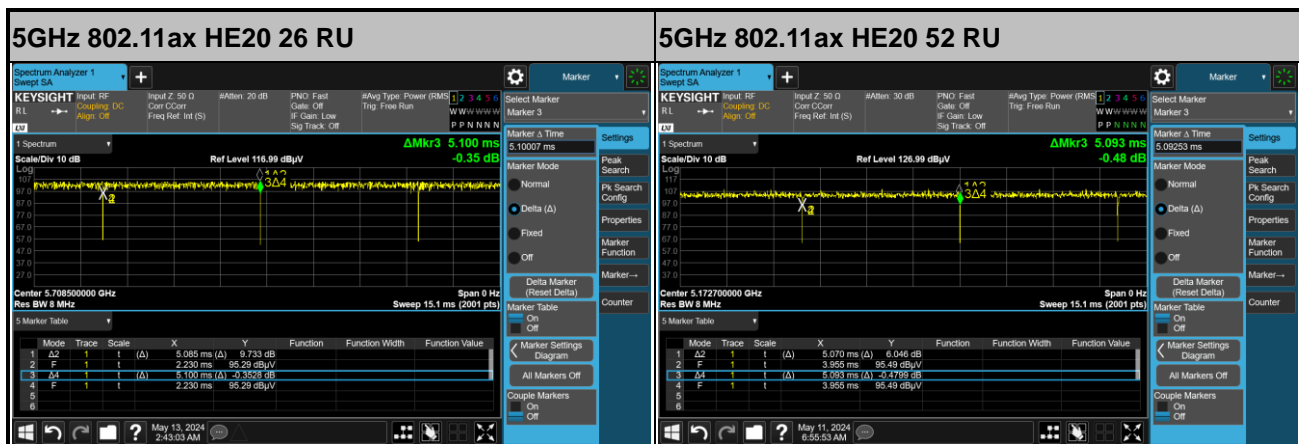
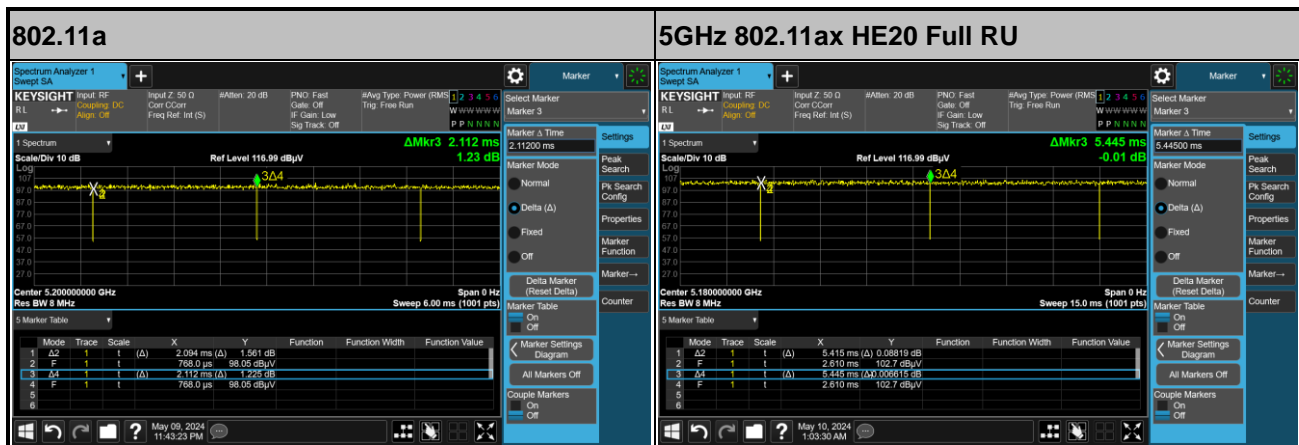


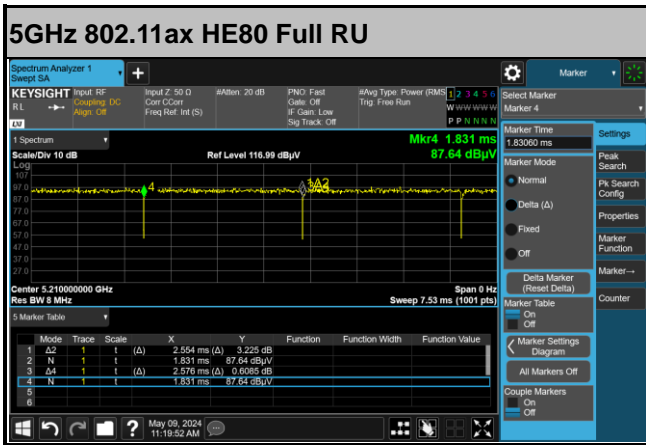
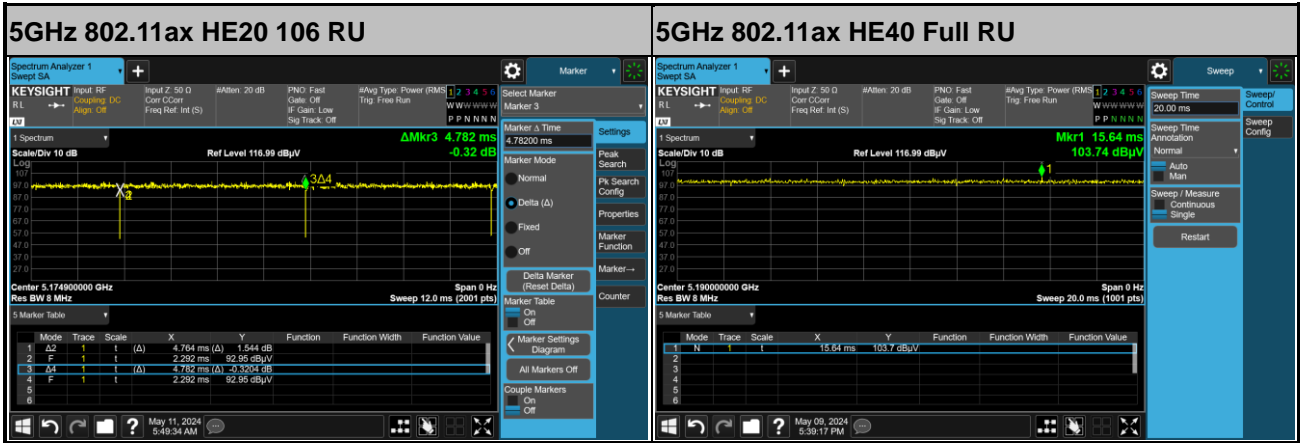
# Appendix E. Duty Cycle Plots

<For Radiated Spurious Emission test>

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
8+9	802.11a	99.15	-	-	10Hz
8+9	5GHz 802.11ax HE20 Full RU	99.45	-	-	10Hz
8+9	5GHz 802.11ax HE20 26 RU	99.71	-	-	10Hz
8+9	5GHz 802.11ax HE20 52 RU	99.55	-	-	10Hz
8+9	5GHz 802.11ax HE20 106 RU	99.62	-	-	10Hz
8+9	5GHz 802.11ax HE40 Full RU	100.00	-	-	10Hz
8+9	5GHz 802.11ax HE80 Full RU	99.15	-	-	10Hz

## MIMO <Ant.8+9>







<For Conducted test>

Antenna	Band	Duty Cycle(%)	T(us)	Duty Factor(dB)
8+9	802.11a for Ant 8	99.24	-	0.03
8+9	802.11a for Ant 9	99.25	-	0.03
8+9	5GHz 802.11ax HE20 Full RU for Ant 8	100.00	-	0.00
8+9	5GHz 802.11ax HE20 Full RU for Ant 9	100.00	-	0.00
8+9	5GHz 802.11ax HE20 26 RU 0 for Ant 8	100.00	-	0.00
8+9	5GHz 802.11ax HE20 26 RU 0 for Ant 9	100.00	-	0.00
8+9	5GHz 802.11ax HE20 52 RU 37 for Ant 8	100.00	-	0.00
8+9	5GHz 802.11ax HE20 52 RU 37 for Ant 9	100.00	-	0.00
8+9	5GHz 802.11ax HE20 106 RU 53 for Ant 8	100.00	-	0.00
8+9	5GHz 802.11ax HE20 106 RU 53 for Ant 9	100.00	-	0.00
8+9	5GHz 802.11ax HE40 Full RU for Ant 8	100.00	-	0.00
8+9	5GHz 802.11ax HE40 Full RU for Ant 9	100.00	-	0.00
8+9	5GHz 802.11ax HE80 Full RU for Ant 8	100.00	-	0.00
8+9	5GHz 802.11ax HE80 Full RU for Ant 9	100.00	-	0.00



MIMO <Ant. 8>

MIMO <Ant. 9>

