FCC RADIO TEST REPORT

FCC ID	:	**J9C-QCNFA765**
Equipment	:	**Wi-Fi 6E BT 5.2 M.2 2230 Module**
Brand Name	:	**Qualcomm**
Model Name	:	**QCNFA765**
Applicant	:	**Qualcomm Technologies, Inc. 5775 Morehouse Drive, San Diego, CA 92121-1714**
Manufacturer	:	**Qualcomm Technologies, Inc. 5775 Morehouse Drive, San Diego, CA 92121-1714**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on Oct. 13, 2021 and testing was performed from Oct. 22, 2021 to Dec. 07, 2021. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

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History of this test report

Report No.	Version	Description	Issue Date
FR1O1349D	01	Initial issue of report	Dec. 17, 2021

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.407(a)(8)	Maximum Conducted Output Power	Reporting only	-
3.1	15.407(a)(8)	Fundamental Maximum EIRP	Pass	-
3.2	15.407(b)	Unwanted Emissions	Pass	3.99 dB under the limit at 7125.020 MHz
3.3	15.203 15.407(a)	Antenna Requirement	Pass	-

Note: The test plan for power and Radiated Spurious Emission measurement are designated by manufacturer as worst case for Test Lab. measurement. Then, all test cases are performed, based on the worst power measured by Test Lab, and reported accordingly.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sheng Kuo

Report Producer: Celery Wei

1 General Description

1.1 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax and Wi-Fi 5GHz 802.11a/n/ac/ax

Product Feature	
Sample 1	EUT with Host 1
Sample 2	EUT with Host 2
Antenna Type	**WLAN** <Main>: PIFA Antenna <Aux.> : PIFA Antenna **Bluetooth:** PIFA Antenna

The product was installed into Portable Computer (Brand Name: DELL, Model Name: P161G) during test, and the host information was recorded in the following table.

Host Information	
Host 1	Host with WNC Antenna
Host 2	Host with Hong-Bo Antenna

Antenna Information				
NB Mode	**Antenna 1**	**Manufacturer**	WNC	
		Antenna Type	PIFA Antenna	PIFA Antenna
		Part number	81EABJ15.G49	81EABJ15.G50
		Peak gain (dBi)	Main Antenna :	Aux. Antenna :
			WLAN(5GHz Band 5): 1.79	WLAN(5GHz Band 5): 2.13
			WLAN(5GHz Band 6): 1.67	WLAN(5GHz Band 6): 0.21
			WLAN(5GHz Band 7): 1.79	WLAN(5GHz Band 7): 1.55
			WLAN(5GHz Band 8): 2.41	WLAN(5GHz Band 8): 1.88
	Antenna 2	**Manufacturer**	Hong-Bo	
		Antenna Type	PIFA Antenna	PIFA Antenna
		Part number	260-29100	260-29101
		Peak gain (dBi)	Main Antenna :	Aux. Antenna :
			WLAN(5GHz Band 5): 1.79	WLAN(5GHz Band 5): 2.13
			WLAN(5GHz Band 6): 1.67	WLAN(5GHz Band 6): 0.21
			WLAN(5GHz Band 7): 1.79	WLAN(5GHz Band 7): 1.55
			WLAN(5GHz Band 8): 2.41	WLAN(5GHz Band 8): 1.88
TB Mode	**Antenna 1**	**Manufacturer**	WNC	
		Antenna Type	PIFA Antenna	PIFA Antenna
		Part number	81EABJ15.G49	81EABJ15.G50
		Peak gain (dBi)	Main Antenna :	Aux. Antenna :
			WLAN(5GHz Band 5): -0.93	WLAN(5GHz Band 5): -0.10
			WLAN(5GHz Band 6): -0.66	WLAN(5GHz Band 6): -2.07
			WLAN(5GHz Band 7): -0.07	WLAN(5GHz Band 7): -0.34
			WLAN(5GHz Band 8): 0.14	WLAN(5GHz Band 8): -1.33
	Antenna 2	**Manufacturer**	Hong-Bo	
		Antenna Type	PIFA Antenna	PIFA Antenna
		Part number	260-29100	260-29101
		Peak gain (dBi)	Main Antenna :	Aux. Antenna :
			WLAN(5GHz Band 5): -0.93	WLAN(5GHz Band 5): -0.10
			WLAN(5GHz Band 6): -0.66	WLAN(5GHz Band 6): -2.07
			WLAN(5GHz Band 7): -0.07	WLAN(5GHz Band 7): -0.34
			WLAN(5GHz Band 8): 0.14	WLAN(5GHz Band 8): -1.33

Remark:

1. The above EUT's information is declared by manufacturer. Please refer to Comments and Explanations in report summary.
2. All the tests were performed with “WNC Antenna”.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

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

FCC designation No.: 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 987594 D02 U-NII 6 GHz EMC Measurement v01
- 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.

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (1 GHz 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 Notebook Type, and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find X plane as worst plane.

2.1 Carrier Frequency and Channel

BW 20M	**Channel**	2	1	5	9	13	17	21	25	29
	Freq. (MHz)	5935	5955	5975	5995	6015	6035	6055	6075	6095
BW 40M	**Channel**	3		11		19		27		
	Freq. (MHz)	5965		6005		6045		6085		
BW 80M	**Channel**	7				23				
	Freq. (MHz)	5985				6065				
BW 160M	**Channel**	15								
	Freq. (MHz)	6025								

BW 20M	**Channel**	33	37	41	45	49	53	57	61
	Freq. (MHz)	6115	6135	6155	6175	6195	6215	6235	6255
BW 40M	**Channel**	35		43		51		59	
	Freq. (MHz)	6125		6165		6205		6245	
BW 80M	**Channel**	39				55			
	Freq. (MHz)	6145				6225			
BW 160M	**Channel**	47							
	Freq. (MHz)	6185							

BW 20M	**Channel**	65	69	73	77	81	85	89	93
	Freq. (MHz)	6275	6295	6315	6335	6355	6375	6395	6415
BW 40M	**Channel**	67		75		83		91	
	Freq. (MHz)	6285		6325		6365		6405	
BW 80M	**Channel**	71				87			
	Freq. (MHz)	6305				6385			
BW 160M	**Channel**	79							
	Freq. (MHz)	6345							

BW 20M	Channel	97	101	105	109	113	117	121	125
	Freq. (MHz)	6435	6455	6475	6495	6515	6535	6555	6575
BW 40M	Channel	99		107		115		123	
	Freq. (MHz)	6445		6485		6525		6565	
BW 80M	Channel	103				119			
	Freq. (MHz)	6465				6545			
BW 160M	Channel	111							
	Freq. (MHz)	6505							

BW 20M	Channel	129	133	137	141	145	149	153	157
	Freq. (MHz)	6595	6615	6635	6655	6675	6695	6715	6735
BW 40M	Channel	131		139		147		155	
	Freq. (MHz)	6605		6645		6685		6725	
BW 80M	Channel	135				151			
	Freq. (MHz)	6625				6705			
BW 160M	Channel	143							
	Freq. (MHz)	6665							

BW 20M	Channel	161	165	169	173	177	181	185	189
	Freq. (MHz)	6755	6775	6795	6815	6835	6855	6875	6895
BW 40M	Channel	163		171		179		187	
	Freq. (MHz)	6765		6805		6845		6885	
BW 80M	Channel	167				183			
	Freq. (MHz)	6785				6865			
BW 160M	Channel	175							
	Freq. (MHz)	6825							

BW 20M	Channel	193	197	201	205	209	213	217	221
	Freq. (MHz)	6915	6935	6955	6975	6995	7015	7035	7055
BW 40M	Channel	195		203		211		219	
	Freq. (MHz)	6925		6965		7005		7045	
BW 80M	Channel	199				215			
	Freq. (MHz)	6945				7025			
BW 160M	Channel	207							
	Freq. (MHz)	6985							

BW 20M	Channel	225	229	233
	Freq. (MHz)	7075	7095	7115
BW 40M	Channel	227		
	Freq. (MHz)	7085		

2.2 Test Mode

The final test modes consider the modulation and the worst data rates as shown in the table below.

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

<Chain 0>

Ch. #		UNII-5 (5925-6425 MHz)			
		802.11a	802.11ax HE20	802.11ax HE40	802.11ax HE160
L	Low	001	001	003	015
		002	002	-	-
M	Middle	-	-	-	-
H	High	-	-	-	-

<Chain 1>

Ch. #		UNII-7 (6525-6875 MHz)	UNII-8 (6875-7125 MHz)		
		802.11ax HE20	802.11a	802.11ax HE20	802.11ax HE40
L	Low	-	-	-	-
M	Middle	149	-	-	-
H	High	-	223	223	227

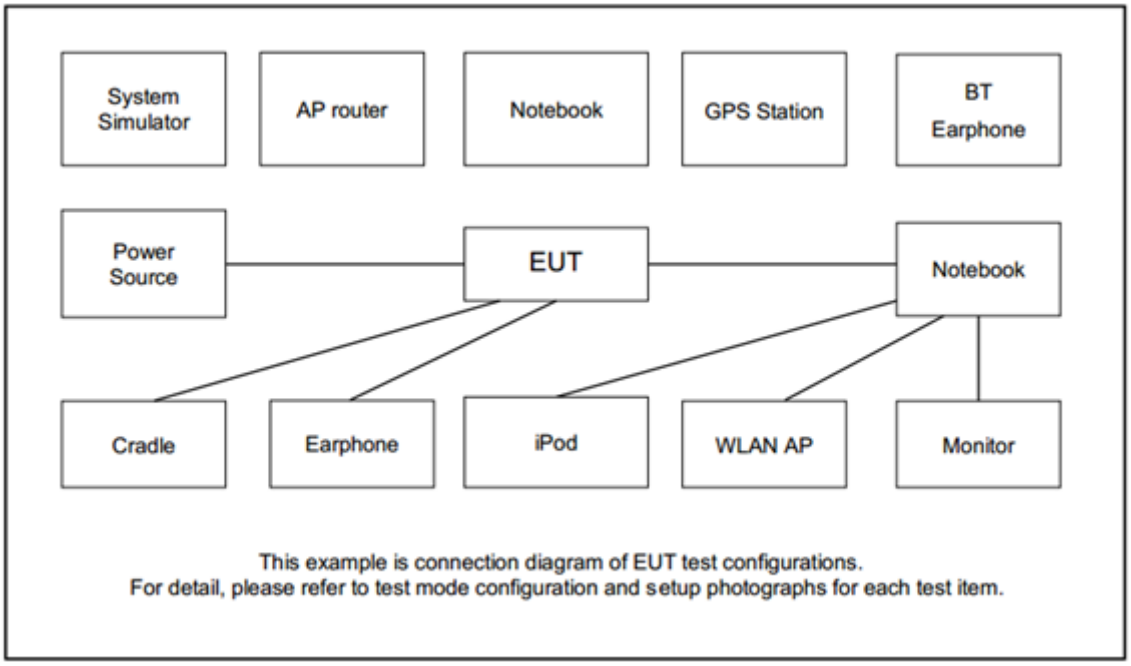
MIMO <Chain 0+1>

Ch. #		UNII-5 (5925-6425 MHz)			
		802.11a	802.11ax HE20	802.11ax HE40	802.11ax HE160
L	Low	001	001	003	015
		002	002	-	-
M	Middle	-	-	-	-
H	High	-	-	-	-

Ch. #		UNII-7 (6525-6875 MHz)			
		802.11a	802.11ax HE20	802.11ax HE40	802.11ax HE160
L	Low	-	-	-	-
M	Middle	-	149	-	-
H	High	181	181	179	-

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.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “QRCT 4.0.00194.0” was installed in Host which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Maximum conducted Output Power and Fundamental Maximum EIRP Measurement

3.1.1 Limit of Fundamental Maximum EIRP

<FCC 14-30 CFR 15.407>

(a)(8) For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

3.1.2 Measuring Instruments

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

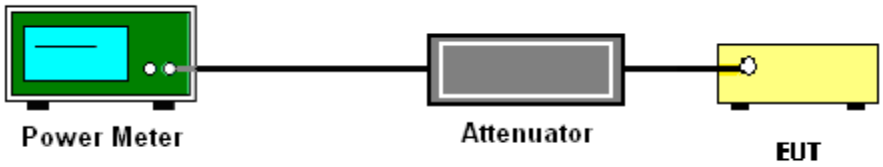
3.1.3 Test Procedures

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

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

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.1.1 Test Setup



3.1.2 Test Result of Fundamental Maximum EIRP

Please refer to Appendix A.

3.2 Unwanted Emissions Measurement

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

3.2.1 Limit of Unwanted Emissions

(1) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27 (RMS)	68.3
- 7 (Peak)	88.3

According 987594 D02 U-NII 6GHz EMC Measurement v01 section G:
Unwanted emissions outside of restricted bands are measured with a RMS detector.
In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit

(2) Unwanted spurious emissions fallen 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.

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

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

   (1) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

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

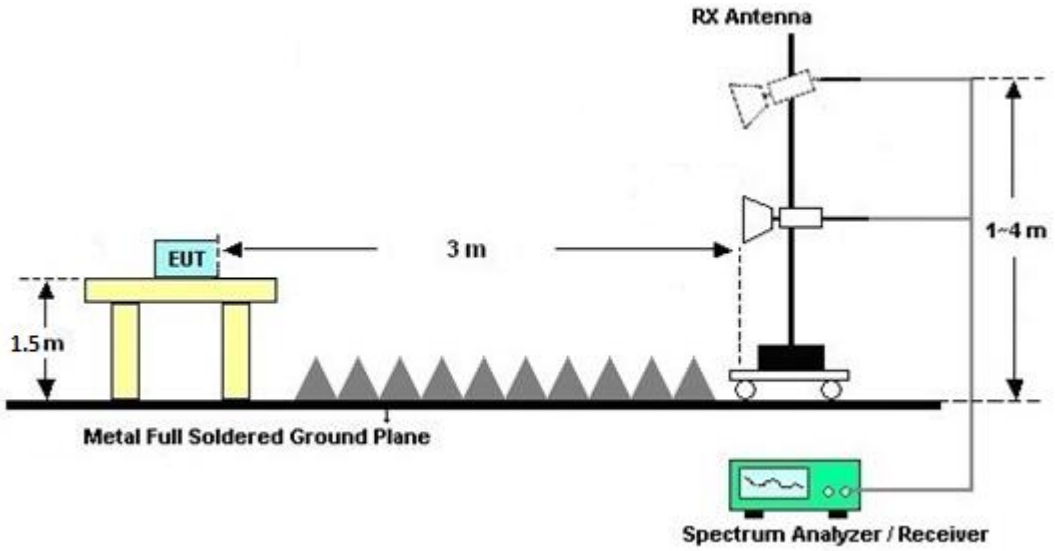
   (2) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

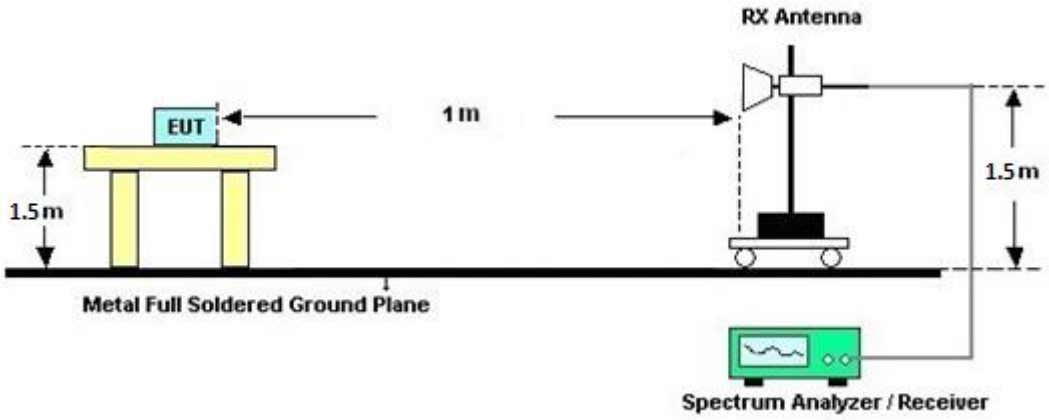
2. The EUT is placed on a turntable with 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one 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 above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as "-"..

3.2.4 Test Setup

For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



3.2.5 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.2.6 Duty Cycle

Please refer to Appendix D.

3.2.7 Test Result of Radiated Spurious Emissions

Please refer to Appendix B and C.

3.3 Antenna Requirements

3.3.1 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.3.2 Antenna Gain

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

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02114	1GHz ~ 18GHz	Aug. 04, 2021	Nov. 18, 2021~ Dec. 07, 2021	Aug. 03, 2022	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00993	18GHz~40GHz	Nov. 27, 2020	Nov. 18, 2021~ Nov. 26, 2021	Nov. 26, 2021	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz~40GHz	May 21, 2021	Dec. 06, 2021~ Dec. 07, 2021	May 20, 2022	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 10, 2021	Nov. 18, 2021~ Dec. 07, 2021	Nov. 09, 2022	Radiation (03CH11-HY)
Preamplifier	Jet-Power	JPA0118-55-303	17100018000 55007	1GHz~18GHz	Jun. 16, 2021	Nov. 18, 2021~ Dec. 07, 2021	Jun. 15, 2022	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 22, 2021	Nov. 18, 2021~ Dec. 07, 2021	Jun. 21, 2022	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz~44GHz	Oct. 15, 2021	Nov. 18, 2021~ Dec. 07, 2021	Oct. 14, 2022	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY55420170	20MHz~8.4GHz	Jul. 15, 2021	Nov. 18, 2021~ Dec. 07, 2021	Jul. 14, 2022	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Nov. 18, 2021~ Dec. 07, 2021	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Nov. 18, 2021~ Dec. 07, 2021	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Nov. 18, 2021~ Dec. 07, 2021	N/A	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Nov. 18, 2021~ Dec. 07, 2021	N/A	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz-40GHz	Mar. 11, 2021	Nov. 18, 2021~ Nov. 26, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30MHz~40GHz	Mar. 11, 2021	Dec. 06, 2021~ Dec. 07, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	30M-18G	Mar. 11, 2021	Nov. 18, 2021~ Dec. 07, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11681/4PE	30MHz-18GHz	Mar. 11, 2021	Nov. 18, 2021~ Nov. 26, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102，SUCOFLEX 104	811852/4,MY2859/2,MY9837/4PE	30MHz~18GHz	Nov. 15, 2021	Dec. 06, 2021~ Dec. 07, 2021	Nov. 14, 2022	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1.53G Low Pass	Sep. 13, 2021	Nov. 18, 2021~ Dec. 07, 2021	Sep. 12, 2022	Radiation (03CH11-HY)
Filter	Wainwright	WHW2-7100-10000-18000-40CC	SN2	10GHz High Pass Filter	May 25, 2021	Nov. 18, 2021~ Dec. 07, 2021	May 24, 2022	Radiation (03CH11-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40SS	SN3	6.75GHz High Pass Filter	Sep. 13, 2021	Nov. 18, 2021~ Dec. 07, 2021	Sep. 12, 2022	Radiation (03CH11-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 01, 2021	Oct. 22, 2021~ Nov. 09, 2021	Feb. 28, 2022	Conducted (TH05-HY)
Hygrometer	TECPEL	TR-32	HE17XB2468	N/A	Mar. 09, 2021	Dec. 03, 2021~ Dec. 04, 2021	Mar. 08, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO 12	10MHz~6GHz	Dec. 16, 2020	Oct. 22, 2021~ Nov. 09, 2021	Dec. 15, 2021	Conducted (TH05-HY)
Power Meter	Anritsu	ML2495A	1036004	N/A	Aug. 01, 2021	Oct. 22, 2021~ Nov. 09, 2021	Jul. 31, 2022	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Aug. 01, 2021	Oct. 22, 2021~ Nov. 09, 2021	Jul. 31, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101565	10Hz ~ 40GHz	Nov. 13, 2020	Oct. 22, 2021~ Nov. 09, 2021	Nov. 12, 2021	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W #010	RPR6W-2101 001(NO:206)	10MHz~8GHz	Feb. 03, 2021	Dec. 03, 2021~ Dec. 04 2021	Feb. 02, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101564	10Hz~40GHz	Aug. 30, 2021	Dec. 03, 2021~ Dec. 04 2021	Aug. 29, 2022	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302 (Box9)	N/A	Mar. 17, 2021	Oct. 22, 2021~ Dec. 04, 2021	Mar. 16, 2022	Conducted (TH05-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.4 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.9 dB**

Appendix A. Test Result of Conducted Test Items

<SISO Mode>

Test Engineer:	Hank Hsu	Temperature:	21~25	°C
Test Date:	2021/10/22~11/09	Relative Humidity:	51~54	%

Remark: For Conducted Test Items, Ant. 1 means Chain 0 (Aux.) and Ant. 2 means Chain 1 (Main).

Report Number : FR1O1349D

TEST RESULTS DATA
EIRP Power Table

FCC Band V single antenna												
Mod.	Data Rate	NTX	Freq. (MHz)	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail
				Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	5935	-1.70	-1.90		2.13	1.79	0.43	-0.11	24.00	Pass
11a	6Mbps	1	5955	0.40	0.50		2.13	1.79	2.53	2.29	24.00	Pass

Report Number : FR1O1349D

TEST RESULTS DATA
EIRP Power Table

FCC Band VIII single antenna												
Mod.	Data Rate	NTX	Freq. (MHz)	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail
				Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	7115	-0.30	0.00		1.88	2.41	1.58	2.41	24.00	Pass

TEST RESULTS DATA
EIRP Power Table

FCC Band V single antenna														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	1	002	5935	Full	-4.90	-4.60		2.13	1.79	-2.77	-2.81	24.00	Pass
HE20	MCS0	1	002	5935	26/0	-15.40	-15.10		2.13	1.79	-13.27	-13.31	24.00	Pass
HE20	MCS0	1	002	5935	242/61	-8.30	-8.30		2.13	1.79	-6.17	-6.51	24.00	Pass
HE20	MCS0	1	001	5955	Full	1.40	1.10		2.13	1.79	3.53	2.89	24.00	Pass
HE20	MCS0	1	001	5955	242/61	2.30	2.50		2.13	1.79	4.43	4.29	24.00	Pass
HE40	MCS0	1	003	5965	Full	4.10	4.30		2.13	1.79	6.23	6.09	24.00	Pass
HE40	MCS0	1	003	5965	484/65	5.40	5.50		2.13	1.79	7.53	7.29	24.00	Pass
HE160	MCS0	1	015	6025	Full	7.70	7.90		2.13	1.79	9.83	9.69	24.00	Pass
HE160	MCS0	1	015	6025	1992/68	10.60	11.00		2.13	1.79	12.73	12.79	24.00	Pass

TEST RESULTS DATA
EIRP Power Table

FCC Band VII single antenna													
Mod.	Data Rate	NTX	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	1	6695	Full	1.20	1.50		1.55	1.79	2.75	3.29	24.00	Pass
HE20	MCS0	1	6695	26/4	-6.90	-6.90		1.55	1.79	-5.35	-5.11	24.00	Pass

TEST RESULTS DATA
EIRP Power Table

Band VIII single antenna														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	1	209	7115	Full	-2.10	-2.20		1.88	2.41	-0.22	0.21	24.00	Pass
HE20	MCS0	1	33	7115	26/8	-15.10	-15.40		1.88	2.41	-13.22	-12.99	24.00	Pass
HE20	MCS0	1	229	7115	242/61	-8.00	-8.40		1.88	2.41	-6.12	-5.99	24.00	Pass
HE40	MCS0	1	227	7085	Full	4.40	4.30		1.88	2.41	6.28	6.71	24.00	Pass
HE40	MCS0	1	227	7085	484/65	5.20	5.10		1.88	2.41	7.08	7.51	24.00	Pass

<MIMO Mode>

Test Engineer:	Shiming Liu	Temperature:	21-25	°C
Test Date:	2021/12/03~2021/12/04	Relative Humidity:	51-54	%

Remark: For Conducted Test Items, Ant. 1 means Chain 0 (Aux.) and Ant. 2 means Chain 1 (Main).

TEST RESULTS DATA
EIRP Power Table

FCC Band V MIMO											
Mod.	Data Rate	NTX	Freq. (MHz)	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
				Ant 1	Ant 2	SUM	Ant 1	Ant 2	SUM		
11a	6Mbps	2	5935	10.60	10.90	13.76	2.13		15.89	30.00	Pass
11a	6Mbps	2	5955	10.60	10.90	13.76	2.13		15.89	30.00	Pass
11a	6Mbps	2	6195	10.90	10.80	13.86	2.13		15.99	30.00	Pass

TEST RESULTS DATA
EIRP Power Table

FCC Band VII MIMO											
Mod.	Data Rate	NTX	Freq. (MHz)	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
				Ant 1	Ant 2	SUM	Ant 1	Ant 2	SUM		
11a	6Mbps	2	6855	10.90	10.80	13.86	1.79		15.65	30.00	Pass

TEST RESULTS DATA
EIRP Power Table

FCC Band V MIMO												
Mod.	Data Rate	NTX	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	SUM		
HE20	MCS0	2	5935	Full	-4.90	-4.60	-1.74	2.13		0.39	30.00	Pass
HE20	MCS0	2	5935	26/0	-15.40	-15.40	-12.39	2.13		-10.26	30.00	Pass
HE20	MCS0	2	5935	242/61	-8.40	-8.10	-5.24	2.13		-3.11	30.00	Pass
HE20	MCS0	2	5955	Full	10.60	10.90	13.76	2.13		15.89	30.00	Pass
HE20	MCS0	2	5955	242/61	10.60	10.60	13.61	2.13		15.74	30.00	Pass
HE40	MCS0	2	5965	Full	10.60	10.90	13.76	2.13		15.89	30.00	Pass
HE40	MCS0	2	5965	484/65	10.60	10.70	13.66	2.13		15.79	30.00	Pass
HE160	MCS0	2	6025	Full	10.60	10.90	13.76	2.13		15.89	30.00	Pass
HE160	MCS0	2	6025	1992/68	10.60	10.80	13.71	2.13		15.84	30.00	Pass

Report Number : FR1O1349D

TEST RESULTS DATA
EIRP Power Table

FCC Band VII MIMO												
Mod.	Data Rate	NTX	Freq. (MHz)	RU Config.	Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	SUM		
HE20	MCS0	2	6695	Full	10.60	10.90	13.76	1.79		15.55	30.00	Pass
HE20	MCS0	2	6695	26/4	10.60	10.90	13.76	1.79		15.55	30.00	Pass
HE20	MCS0	2	6695	52/38	10.60	10.80	13.71	1.79		15.50	30.00	Pass
HE20	MCS0	2	6855	Full	10.90	10.60	13.76	1.79		15.55	30.00	Pass
HE20	MCS0	2	6855	26/8	10.80	10.90	13.86	1.79		15.65	30.00	Pass
HE20	MCS0	2	6855	52/40	10.60	10.60	13.61	1.79		15.40	30.00	Pass
HE40	MCS0	2	6845	Full	10.60	10.90	13.76	1.79		15.55	30.00	Pass
HE40	MCS0	2	6845	242/62	10.90	10.60	13.76	1.79		15.55	30.00	Pass

Appendix B. Radiated Spurious Emission

Test Engineer :	Garvey Guo and Troye Hseih	**Temperature :**	20.1 ~ 21.8°C
		Relative Humidity :	53.2 ~ 66.1%

Remark: For Radiated Spurious Emission Test Items, Ant. 1 means Chain 0 (Aux.) and Ant. 2 means Chain 1 (Main).

Band 5 - 5925~6425MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 02 5935MHz		5924.96	59.87	-28.33	88.2	46.86	34.05	12.53	33.57	118	214	P	V
		5924.96	49.41	-18.79	68.2	36.4	34.05	12.53	33.57	118	214	A	V
	*	5935	88.92	-	-	75.88	34.07	12.54	33.57	118	214	P	V
	*	5935	80.35	-	-	67.31	34.07	12.54	33.57	118	214	A	V
													V
													V
802.11a CH 01 5955MHz		5852.72	53.96	-34.24	88.2	41	34	12.51	33.55	122	214	P	V
		5852.44	43.12	-25.08	68.2	30.16	34	12.51	33.55	122	214	A	V
	*	5955	90.87	-	-	77.84	34.07	12.54	33.58	122	214	P	V
	*	5955	83.43	-	-	70.4	34.07	12.54	33.58	122	214	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 5 - 5925~6425MHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5924.96	65.86	-22.34	88.2	52.85	34.05	12.53	33.57	115	213	P	V
802.11ax		5924.96	61.56	-6.64	68.2	48.55	34.05	12.53	33.57	115	213	A	V
HE20 Full	*	5935	87.18	-	-	74.14	34.07	12.54	33.57	115	213	P	V
CH 02	*	5935	77.14	-	-	64.1	34.07	12.54	33.57	115	213	A	V
5935MHz													V
													V
		5909.56	53.35	-34.85	88.2	40.37	34.02	12.53	33.57	121	214	P	V
802.11ax		5852.16	43.14	-25.06	68.2	30.18	34	12.51	33.55	121	214	A	V
HE20 Full	*	5955	93.91	-	-	80.88	34.07	12.54	33.58	121	214	P	V
CH 01	*	5955	83.83	-	-	70.8	34.07	12.54	33.58	121	214	A	V
5955MHz													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 5 - 5925~6425MHz

WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5924.96	63.74	-24.46	88.2	50.73	34.05	12.53	33.57	128	213	P	V
802.11ax		5924.96	58.96	-9.24	68.2	45.95	34.05	12.53	33.57	128	213	A	V
HE20	*	5935	84.9	-	-	71.86	34.07	12.54	33.57	128	213	P	V
Partial 26/0	*	5935	75.63	-	-	62.59	34.07	12.54	33.57	128	213	A	V
CH 02													V
5935MHz													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 5 - 5925~6425MHz

WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax		5895.84	54.14	-34.06	88.2	41.18	34	12.52	33.56	350	189	P	V
HE20		5851.18	43.45	-24.75	68.2	30.49	34	12.51	33.55	350	189	A	V
Partial	*	5955	86.44	-	-	73.41	34.07	12.54	33.58	350	189	P	V
242/61	*	5955	77.67	-	-	64.64	34.07	12.54	33.58	350	189	A	V
CH 01													V
5955MHz													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 5 - 5925~6425MHz

WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax		5924.96	68.65	-19.55	88.2	55.64	34.05	12.53	33.57	100	3	P	V
HE20		5924.96	60.43	-7.77	68.2	47.42	34.05	12.53	33.57	100	3	A	V
Partial	*	5935	83.39	-	-	70.35	34.07	12.54	33.57	100	3	P	V
242/61	*	5935	73.5	-	-	60.46	34.07	12.54	33.57	100	3	A	V
CH 02													V
5935MHz													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 5 - 5925~6425MHz

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

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5810.4	53.65	-34.55	88.2	40.94	33.76	12.49	33.54	118	213	P	V
802.11ax		5852.88	43.15	-25.05	68.2	30.19	34	12.51	33.55	118	213	A	V
HE40 Full	*	5965	93.13	-	-	80.15	34.01	12.55	33.58	118	213	P	V
CH 03	*	5965	84.42	-	-	71.44	34.01	12.55	33.58	118	213	A	V
5965MHz													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 5 - 5925~6425MHz

WIFI 802.11ax HE40 Partial 484 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax		5815.8	52.87	-35.33	88.2	40.12	33.79	12.5	33.54	350	189	P	V
HE40		5853.42	43.47	-24.73	68.2	30.51	34	12.51	33.55	350	189	A	V
Partial	*	5965	98.86	-	-	85.88	34.01	12.55	33.58	350	189	P	V
484/65	*	5965	90.08	-	-	77.1	34.01	12.55	33.58	350	189	A	V
CH 03													V
5965MHz													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 5 - 5925~6425MHz

WIFI 802.11ax HE160 Full (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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 HE160 Full CH 15 6025MHz		5881	54.66	-33.54	88.2	41.7	34	12.52	33.56	117	215	P	V
		5893.8	43.8	-24.4	68.2	30.84	34	12.52	33.56	117	215	A	V
	*	6025	93.04	-	-	80.14	33.9	12.6	33.6	117	215	P	V
	*	6025	83.63	-	-	70.73	33.9	12.6	33.6	117	215		V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 5 - 5925~6425MHz

WIFI 802.11ax HE160 Partial 1992 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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 HE160 Partial 1992/68 CH 15 6025MHz		5900.52	58.23	-29.97	88.2	45.26	34	12.53	33.56	350	189	P	V
		5867.56	43.62	-24.58	68.2	30.67	34	12.51	33.56	350	189	A	V
	*	6025	103.92	-	-	91.02	33.9	12.6	33.6	350	189	P	V
	*	6025	95.55	-	-	82.65	33.9	12.6	33.6	350	189	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 8 - 6875~7125MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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 233 7115MHz	*	7115	90.35	-	-	74.24	36.39	13.99	34.27	100	307	P	V
	*	7115	81.52	-	-	65.41	36.39	13.99	34.27	100	307	A	V
		7125.02	64.22	-23.98	88.2	48.07	36.45	13.98	34.28	100	307	P	V
		7125.02	53.81	-14.39	68.2	37.66	36.45	13.98	34.28	100	307	A	V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 8 - 6875~7125MHz

WIFI 802.11ax HE20_Full (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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 233 7115MHz	*	7115	86.43	-	-	70.32	36.39	13.99	34.27	100	309	P	V
	*	7115	77.61	-	-	61.5	36.39	13.99	34.27	100	309	A	V
		7125.02	68.32	-19.88	88.2	52.17	36.45	13.98	34.28	100	309	P	V
		7125.02	64.21	-3.99	68.2	48.06	36.45	13.98	34.28	100	309	A	V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 8 - 6875~7125MHz

WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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	*	7115	73.82	-	-	57.71	36.39	13.99	34.27	100	305	P	V
HE20	*	7115	64.07	-	-	47.96	36.39	13.99	34.27	100	305	A	V
Partial		7125.02	61.2	-27	88.2	45.05	36.45	13.98	34.28	100	305	P	V
26/8		7125.02	53.66	-14.54	68.2	37.51	36.45	13.98	34.28	100	305	A	V
CH 233													V
7115MHz													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 8 - 6875~7125MHz

WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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	*	7115	81.96	-	-	65.85	36.39	13.99	34.27	100	305	P	V
HE20	*	7115	71.41	-	-	55.3	36.39	13.99	34.27	100	305	A	V
Partial		7125.02	64.18	-24.02	88.2	48.03	36.45	13.98	34.28	100	305	P	V
242/61		7125.02	60.18	-8.02	68.2	44.03	36.45	13.98	34.28	100	305	A	V
CH 233													V
7115MHz													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 7 - 6525~6875MHz

WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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 6695MHz		13390	46.18	-27.82	74	50.35	39.86	19.05	63.08	-	-	P	V
		20085	35.23	-38.77	74	55.78	37.87	-3.52	54.9	-	-	P	V
													V
													V
													V
													V
Remark	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. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												

Band 7 - 6525~6875MHz

WIFI 802.11ax HE20 Partial 26 (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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 26/4 CH 149 6695MHz		13390	45.05	-28.95	74	49.51	39.95	18.67	63.08	-	-	P	V
		20085	37.16	-36.84	74	57.41	38.17	-3.52	54.9	-	-	P	V
													V
													V
													V
													V
Remark	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. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												

Band 8 - 6875~7125MHz

WIFI 802.11ax HE40_Full (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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)
	*	7085	85.31	-	-	69.36	36.21	13.99	34.25	300	135	P	V
	*	7085	76.49	-	-	60.54	36.21	13.99	34.25	300	135	A	V
802.11ax		7223.94	57.29	-30.91	88.2	40.96	36.69	13.98	34.34	300	135	P	V
HE40 Full		7151.94	47.04	-21.16	68.2	30.76	36.6	13.98	34.3	300	135	A	V
CH 227													V
7085MHz													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 8 - 6875~7125MHz

WIFI 802.11ax HE40 Partial 484 (Band Edge @ 3m)

WIFI Ant. 2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (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)
	*	7085	98.02	-	-	82.07	36.21	13.99	34.25	100	228	P	V
802.11ax	*	7085	89.2	-	-	73.25	36.21	13.99	34.25	100	228	A	V
HE40		7227.72	57.61	-30.59	88.2	41.26	36.72	13.98	34.35	100	228	P	V
Partial		7158.96	47.01	-21.19	68.2	30.75	36.58	13.98	34.3	100	228	A	V
484/65													V
CH 277													V
7085MHz													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Test Engineer :	Garvey Guo and Troye Hseih	Temperature :	20.1 ~ 21.5°C
		Relative Humidity :	55.4 ~ 68.4%

Remark: For Radiated Spurious Emission Test Items, Ant. 1 means Chain 0 (Aux.) and Ant. 2 means Chain 1 (Main).

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 01 5955MHz		5914.32	50.56	-37.64	88.2	40.39	32.73	11.01	33.57	100	90	P	V
		5924.82	41.68	-26.52	68.2	31.48	32.75	11.02	33.57	100	90	A	V
	*	5955	101.09	-	-	90.82	32.8	11.05	33.58	100	90	P	V
	*	5955	94.24	-	-	83.97	32.8	11.05	33.58	100	90	A	V
													V
													V
802.11a CH 02 5935MHz		5924.96	69.05	-19.15	88.2	58.85	32.75	11.02	33.57	100	278	P	V
		5924.96	59.65	-8.55	68.2	49.45	32.75	11.02	33.57	100	278	A	V
	*	5935	99.96	-	-	89.73	32.77	11.03	33.57	100	278	P	V
	*	5935	93.07	-	-	82.84	32.77	11.03	33.57	100	278	A	V
													V
													V
802.11a CH 181 6855MHz	*	6855	102	-	-	89.34	34.92	11.84	34.1	100	303	P	V
	*	6855	94.75	-	-	82.09	34.92	11.84	34.1	100	303	A	V
		7175	55.22	-32.98	88.2	41.04	36.35	12.14	34.31	100	303	P	V
		7157.8	45.81	-22.39	68.2	31.63	36.32	12.16	34.3	100	303	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

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

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5924.96	67.5	-20.7	88.2	57.3	32.75	11.02	33.57	100	278	P	V
802.11ax		5924.96	59.05	-9.15	68.2	48.85	32.75	11.02	33.57	100	278	A	V
HE20 Full	*	5935	87.04	-	-	76.81	32.77	11.03	33.57	100	278	P	V
CH 02	*	5935	77.3	-	-	67.07	32.77	11.03	33.57	100	278	A	V
5935MHz													V
													V
		5888.28	50.82	-37.38	88.2	40.74	32.65	10.99	33.56	100	276	P	V
802.11ax		5922.16	41.01	-27.19	68.2	30.82	32.74	11.02	33.57	100	276	A	V
HE20 Full	*	5955	101.07	-	-	90.8	32.8	11.05	33.58	100	276	P	V
CH 01	*	5955	91.77	-	-	81.5	32.8	11.05	33.58	100	276	A	V
5955MHz													V
													V
	*	6855	103.43	-	-	90.77	34.92	11.84	34.1	100	303	P	V
802.11ax	*	6855	94.07	-	-	81.41	34.92	11.84	34.1	100	303	A	V
HE20 Full		7210.2	55.11	-33.09	88.2	40.88	36.44	12.12	34.33	100	303	P	V
CH 181		7244.6	45.29	-22.91	68.2	30.93	36.58	12.14	34.36	100	303	A	V
6855MHz													V
													V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		13192	45.59	-42.61	88.2	50.51	39.49	18.56	63.11	-	-	P	V
		13390	44.4	-29.6	74	48.86	39.95	18.62	63.13	-	-	P	V
		14576	47.02	-41.18	88.2	50.27	40.25	19.54	63.06	-	-	P	V
		17992	49.28	-24.72	74	40.62	42.94	22.27	56.69	-	-	P	V
802.11ax		17992	38.89	-15.11	54	30.23	42.94	22.27	56.69	-	-	A	V
HE20 Full		20085	35.23	-38.77	74	55.78	37.87	6.02	45.36	-	-	P	V
CH 149													V
6695MHz													V
													V
													V
													V
													V
													V

Remark

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.
4. The emission level close to 18GHz is checked that the average emission level is noise floor only.

WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE20 Partial 26/0 CH 02 5935MHz		5924.96	67.24	-20.96	88.2	57.04	32.75	11.02	33.57	107	279	P	V
		5924.96	58.02	-10.18	68.2	47.82	32.75	11.02	33.57	107	279	A	V
	*	5935	79.81	-	-	69.58	32.77	11.03	33.57	107	279	P	V
	*	5935	78.21	-	-	67.98	32.77	11.03	33.57	107	279	A	V
													V
													V
802.11ax HE20 Partial 26/8 CH 181 6855MHz	*	6855	109.68	-	-	97.02	34.92	11.84	34.1	100	109	P	V
	*	6855	101.32	-	-	88.66	34.92	11.84	34.1	100	109	A	V
		7223.8	56.3	-31.9	88.2	42.01	36.5	12.13	34.34	100	109	P	V
		7227	45.41	-22.79	68.2	31.12	36.51	12.13	34.35	100	109	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI 802.11ax HE20 Partial 26 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE20 Partial 26/4 CH 149 6695MHz		13168	46.19	-42.01	88.2	51.12	39.47	18.56	63.1	-	-	P	V
		13390	45.73	-28.27	74	50.19	39.95	18.62	63.13	-	-	P	V
		14592	47.16	-41.04	88.2	50.43	40.22	19.56	63.07	-	-	P	V
		17960	49.2	-24.8	74	40.91	42.68	22.24	56.77	-	-	P	V
		17960	38.62	-15.38	54	30.33	42.68	22.24	56.77	-	-	A	V
		20085	37.16	-36.84	74	57.41	38.17	6.02	45.36	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

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.
4. The emission level close to 18GHz is checked that the average emission level is noise floor only.

WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax		5924.96	64.41	-23.79	88.2	54.21	32.75	11.02	33.57	103	279	P	V
HE20		5924.96	60.77	-7.43	68.2	50.57	32.75	11.02	33.57	103	279	A	V
Partial	*	5935	81.21	-	-	70.98	32.77	11.03	33.57	103	279	P	V
242/61	*	5935	80.03	-	-	69.8	32.77	11.03	33.57	103	279	A	V
CH 02													V
5935MHz													V
802.11ax		5897.24	51.03	-37.17	88.2	40.9	32.69	11	33.56	100	278	P	V
HE20		5924.82	41.39	-26.81	68.2	31.19	32.75	11.02	33.57	100	278	A	V
Partial	*	5955	99.37	-	-	89.1	32.8	11.05	33.58	100	278	P	V
242/61	*	5955	90.53	-	-	80.26	32.8	11.05	33.58	100	278	A	V
CH 01													V
5955MHz													V
802.11ax	*	6855	100.73	-	-	88.07	34.92	11.84	34.1	100	97	P	V
HE20	*	6855	91.48	-	-	78.82	34.92	11.84	34.1	100	97	A	V
Partial		7241	57.16	-31.04	88.2	42.81	36.56	12.14	34.35	100	97	P	V
242/61		7161	45.32	-22.88	68.2	31.15	36.32	12.15	34.3	100	97	A	V
CH 181													V
6855MHz													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI 802.11ax HE20 Partial 242 (Harmonic @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		12928	45.83	-42.37	88.2	51.07	39.33	18.46	63.17	-	-	P	V
		13390	44.62	-29.38	74	49.08	39.95	18.62	63.13	-	-	P	V
		14592	47.2	-41	88.2	50.47	40.22	19.56	63.07	-	-	P	V
802.11ax		17968	48.97	-25.03	74	40.59	42.74	22.25	56.75	-	-	P	V
HE20		17968	38.63	-15.37	54	30.25	42.74	22.25	56.75	-	-	A	V
Partial		20085	37.16	-36.84	74	57.91	37.67	6.02	45.36	-	-	P	V
242/61													V
CH 149													V
6695MHz													V
													V
													V
													V

Remark

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.
4. The emission level close to 18GHz is checked that the average emission level is noise floor only.

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

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5920.38	51.61	-36.59	88.2	41.42	32.74	11.02	33.57	100	91	P	V
802.11ax		5921.82	42.7	-25.5	68.2	32.51	32.74	11.02	33.57	100	91	A	V
HE40 Full	*	5965	101.28	-	-	91	32.8	11.06	33.58	100	91	P	V
CH 03	*	5965	91.52	-	-	81.24	32.8	11.06	33.58	100	91	A	V
5965MHz													V
													V
	*	6845	101.32	-	-	88.74	34.87	11.8	34.09	100	96	P	V
802.11ax	*	6845	91.48	-	-	78.9	34.87	11.8	34.09	100	96	A	V
HE40 Full		7146.72	54.88	-33.32	88.2	40.72	36.28	12.17	34.29	100	96	P	V
CH 179		7176.12	46.08	-22.12	68.2	31.9	36.35	12.14	34.31	100	96	A	V
6845MHz													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI 802.11ax HE40 Partial 484 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax		5916.78	53.68	-34.52	88.2	43.5	32.73	11.02	33.57	100	279	P	H
HE40		5924.7	44.16	-24.04	68.2	33.96	32.75	11.02	33.57	100	279	A	H
Partial	*	5965	98.51	-	-	88.23	32.8	11.06	33.58	100	279	P	H
484/65	*	5965	89.49	-	-	79.21	32.8	11.06	33.58	100	279	A	H
CH 03													H
5965MHz													H
802.11ax	*	6845	97.27	-	-	84.69	34.87	11.8	34.09	100	324	P	V
HE40	*	6845	87.22	-	-	74.64	34.87	11.8	34.09	100	324	A	V
Partial		7177.8	54.74	-33.46	88.2	40.56	36.36	12.13	34.31	100	324	P	V
484/65		7171.08	45.91	-22.29	68.2	31.74	36.34	12.14	34.31	100	324	A	V
CH 179													V
6845MHz													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI 802.11ax HE160 Full (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE160 Full CH 15 6025MHz		5895.4	55.18	-33.02	88.2	45.06	32.68	11	33.56	100	276	P	V
		5886.76	47.48	-20.72	68.2	37.4	32.65	10.99	33.56	100	276	A	V
	*	6025	94.74	-	-	84.39	32.85	11.1	33.6	100	276	P	V
	*	6025	87.09	-	-	76.74	32.85	11.1	33.6	100	276	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

WIFI 802.11ax HE160 Partial 1992 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ax HE160 Partial 1992/68 CH 15 6025MHz		5901.48	64.07	-24.13	88.2	53.93	32.7	11	33.56	100	279	P	V
		5896.04	52.92	-15.28	68.2	42.8	32.68	11	33.56	100	279	A	V
	*	6025	94.22	-	-	83.87	32.85	11.1	33.6	100	279	P	V
	*	6025	84.87	-	-	74.52	32.85	11.1	33.6	100	279	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Note symbol

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

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (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)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

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

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix C. Radiated Spurious Emission

Test Engineer :	Garvey Guo and Troye Hseih	**Temperature :**	20.1 ~ 21.8°C
		Relative Humidity :	53.2 ~ 66.1%

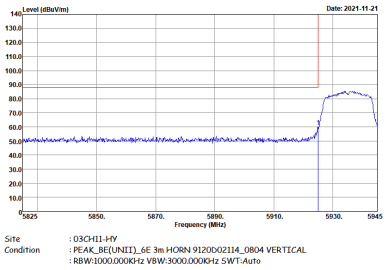
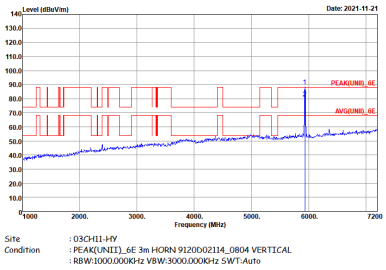
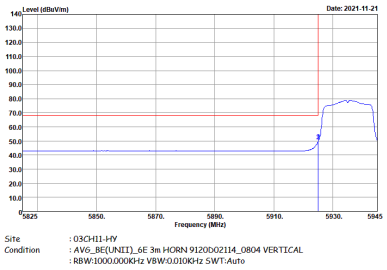
Remark: For Radiated Spurious Emission Test Items, Ant. 1 means Chain 0 (Aux.) and Ant. 2 means Chain 1 (Main).

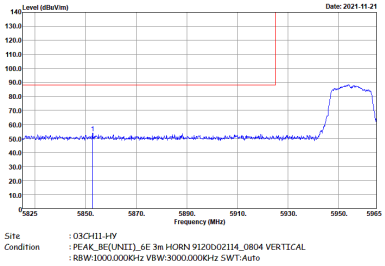
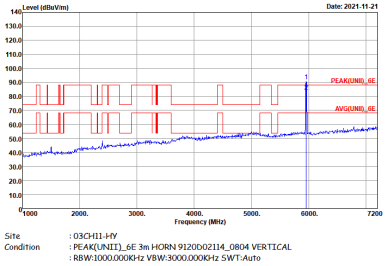
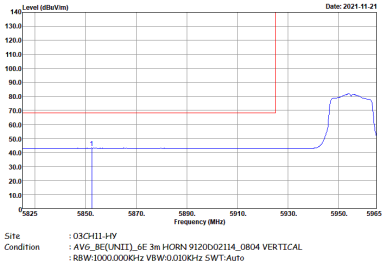
Note symbol

-L	**Low channel location**
-R	**High channel location**

Band 5 - 5925~6425MHz

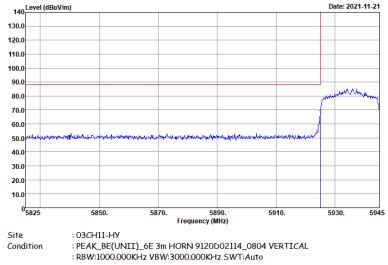
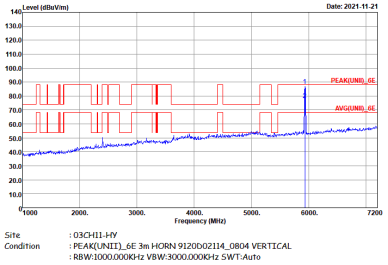
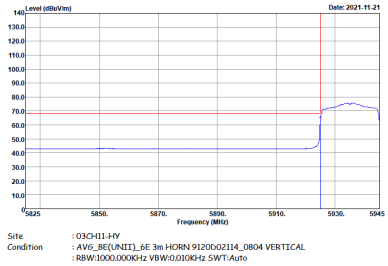
WIFI 802.11a (Band Edge @ 3m)

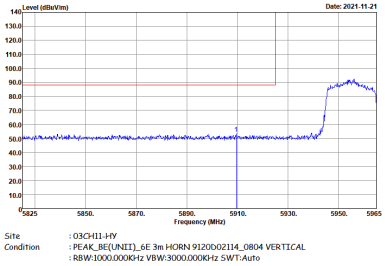
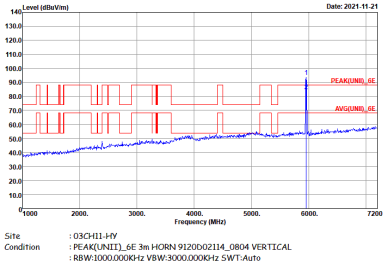
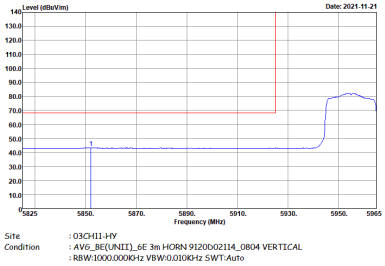
WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11a CH02 5935MHz	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11a CH01 5955MHz	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

Band 5 - 5925~6425MHz

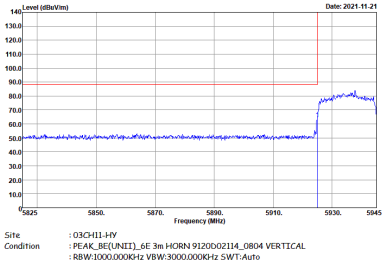
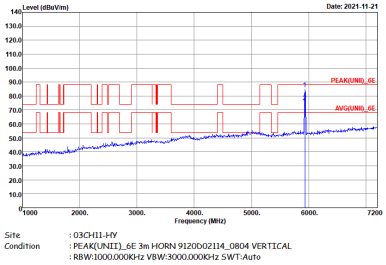
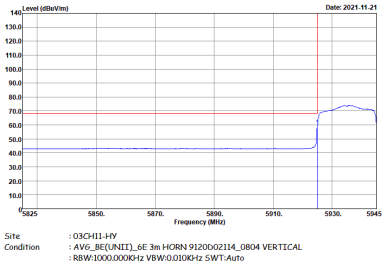
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH02 5935MHz	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 5955MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

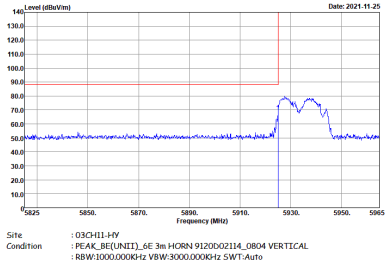
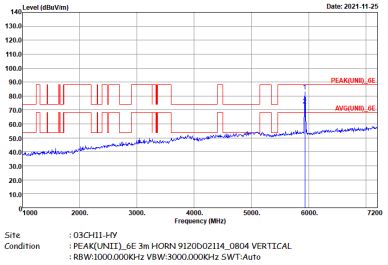
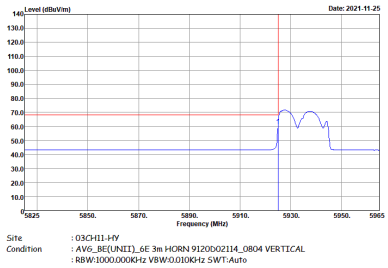
Band 5 - 5925~6425MHz

WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH02 5935MHz	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

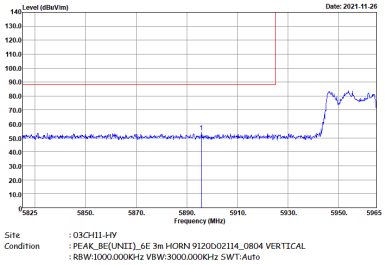
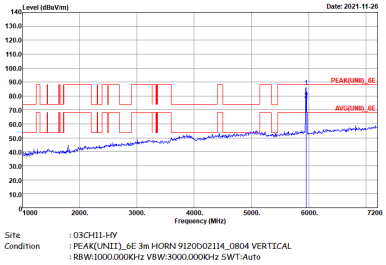
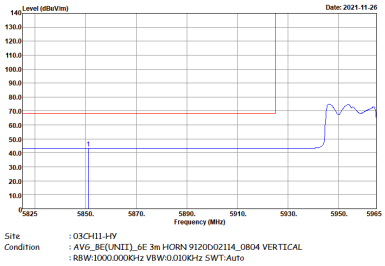
Band 5 - 5925~6425MHz

WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 242/61 CH02 5935MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

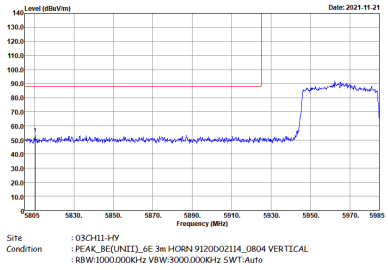
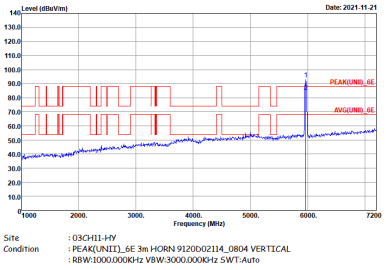
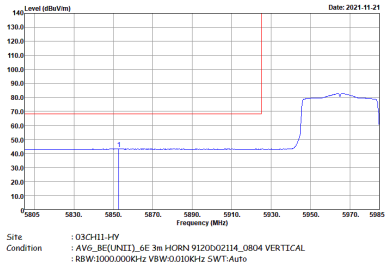
Band 5 - 5925~6425MHz

WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 242/61 CH01 5955MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

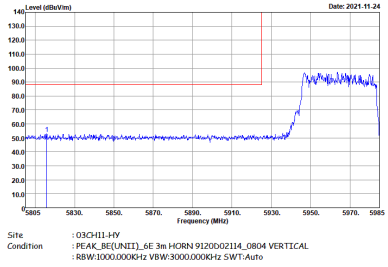
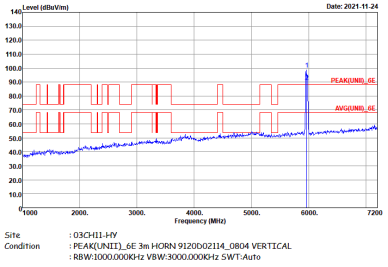
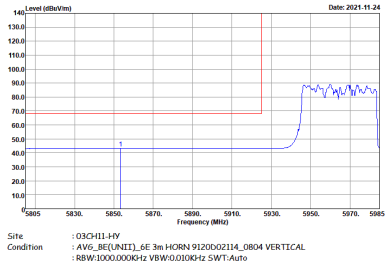
Band 5 - 5925~6425MHz

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

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 5965MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

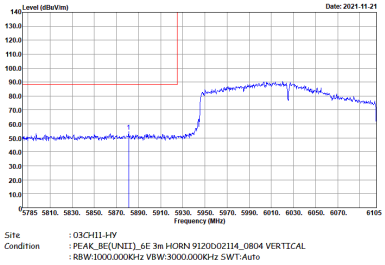
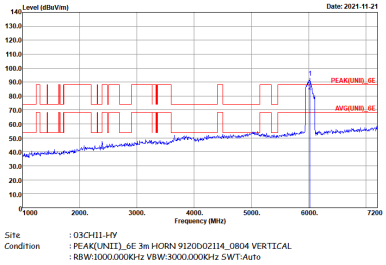
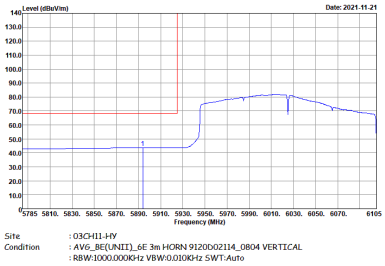
Band 5 - 5925~6425MHz

WIFI 802.11ax HE40 Partial 484 (Band Edge @ 3m)

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 484/65 CH03 5965MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

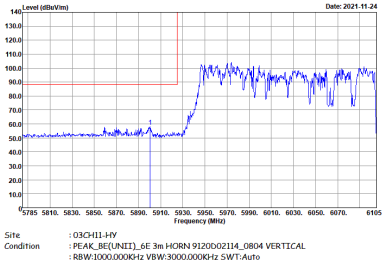
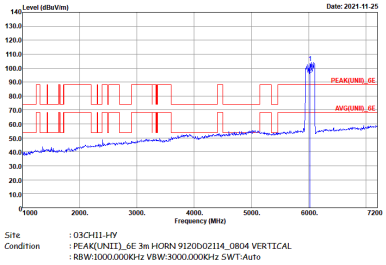
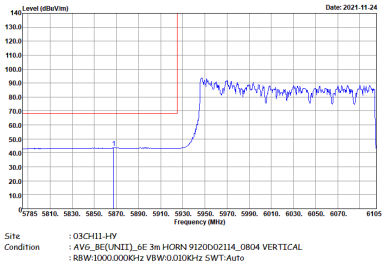
Band 5 - 5925~6425MHz

WIFI 802.11ax HE160 Full (Band Edge @ 3m)

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE160 Full CH15 6025MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

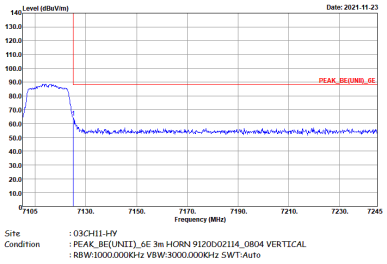
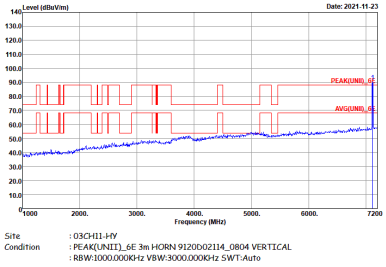
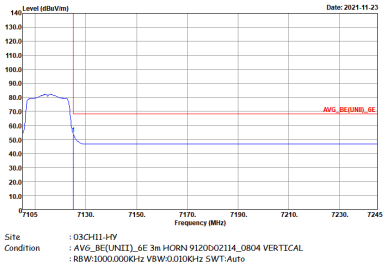
Band 5 - 5925~6425MHz

WIFI 802.11ax HE160 Partial 1992 (Band Edge @ 3m)

WIFI	Band 5 5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE160 Partial 1992/68 CH15 6025MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank

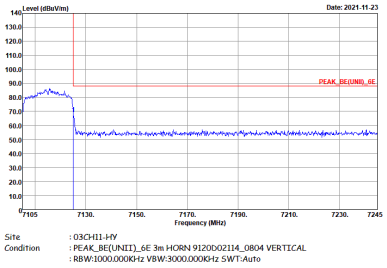
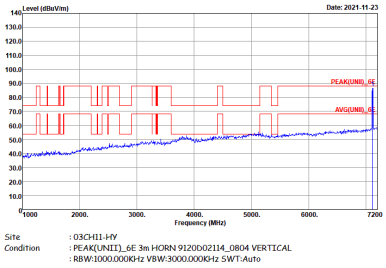
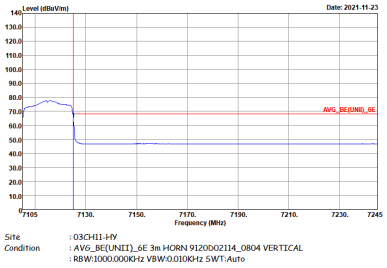
Band 8 - 6875~7125MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Band 8 6875~7125MHz Band Edge @ 3m	
ANT	802.11a CH233 7115MHz	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

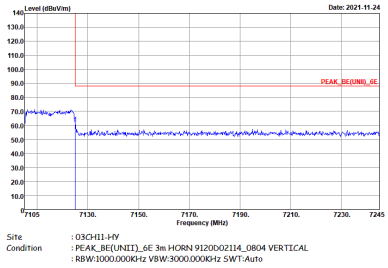
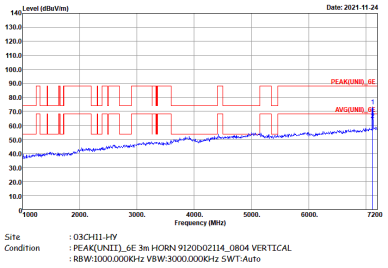
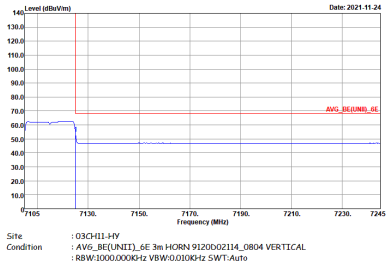
Band 8 - 6875~7125MHz

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

WIFI	Band 8 6875~7125MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH233 7115MHz	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

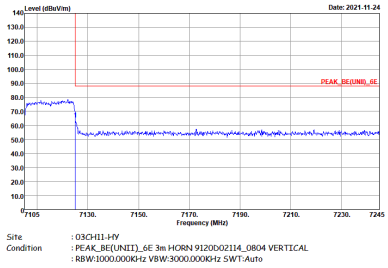
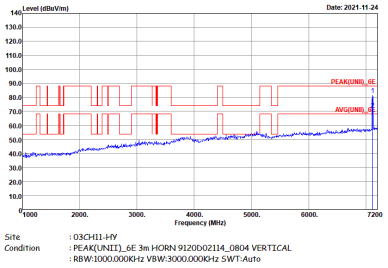
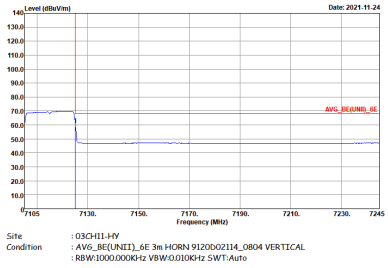
Band 8 - 6875~7125MHz

WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI	Band 8 6875~7125MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH233 7115MHz	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

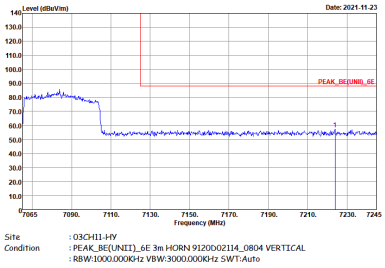
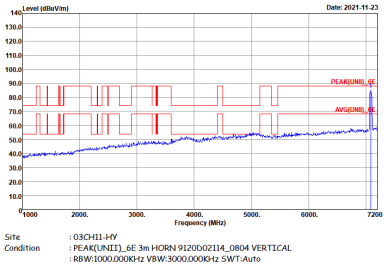
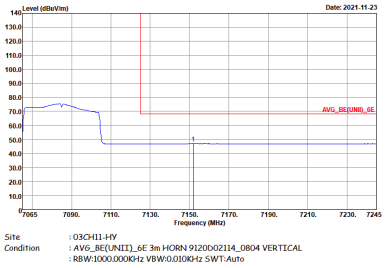
Band 8 - 6875~7125MHz

WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

WIFI	Band 8 6875~7125MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 242/61 CH233 7115MHz - R	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

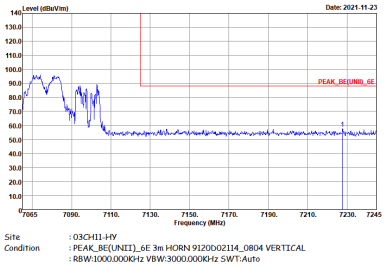
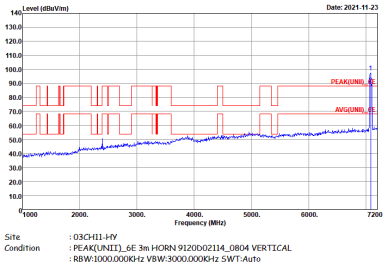
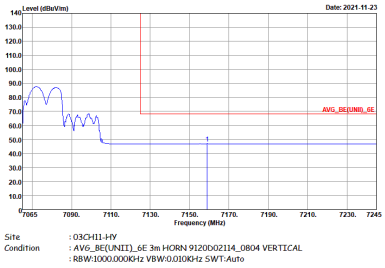
Band 8 - 6875~7125MHz

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

WIFI	Band 8 6875~7125MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH227 7085MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

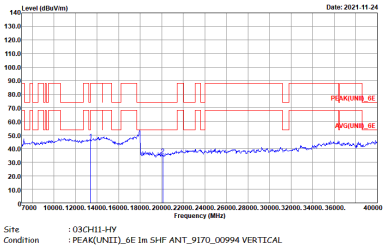
Band 8 - 6875~7125MHz

WIFI 802.11ax HE40 Partial 484 (Band Edge @ 3m)

WIFI	Band 8 6875~7125MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 484/65 CH227 7085MHz - L	
2	Vertical	Fundamental
Peak		
Avg.		Left blank

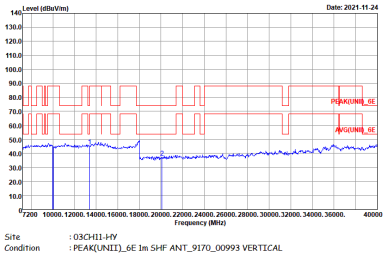
Band 7 - 6525~6875MHz

WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI	Band 7 6525~6875MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 6695MHz	
2	Horizontal	Vertical
Peak Avg.	Left blank	

Band 7 - 6525~6875MHz

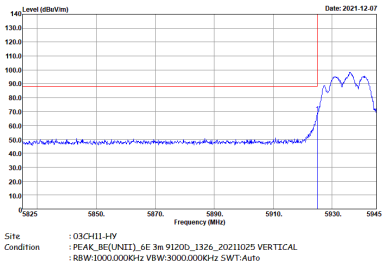
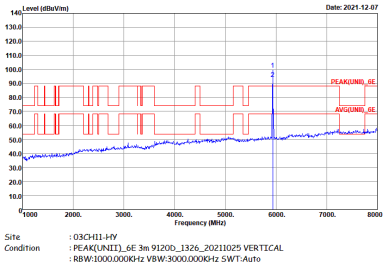
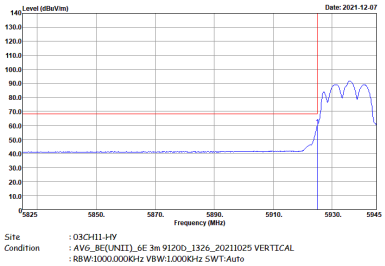
WIFI 802.11ax HE20 Partial 26 (Harmonic @ 3m)

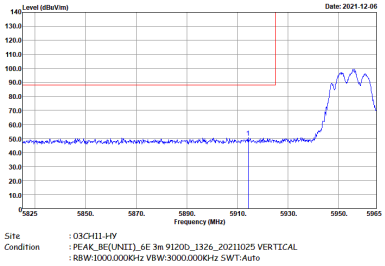
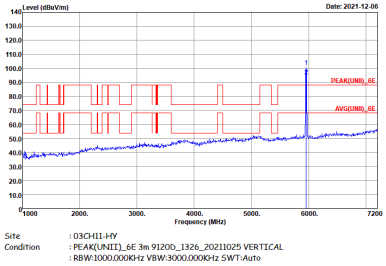
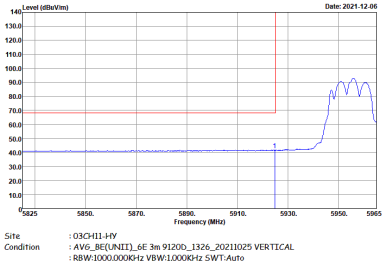
WIFI	Band 7 6525~6875MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 26/4 CH149 6695MHz	
2	Horizontal	Vertical
Peak Avg.	Left blank	

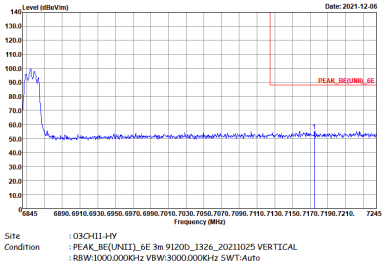
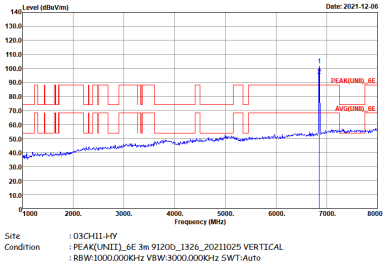
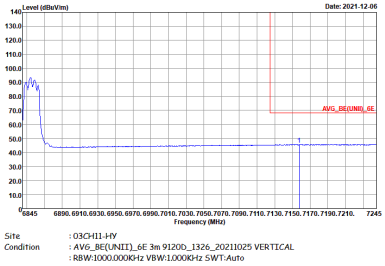
Test Engineer :	Garvey Guo and Troye Hseih	Temperature :	20.1 ~ 21.5°C
		Relative Humidity :	55.4 ~ 68.4%

Remark: For Radiated Spurious Emission Test Items, Ant. 1 means Chain 0 (Aux.) and Ant. 2 means Chain 1 (Main).

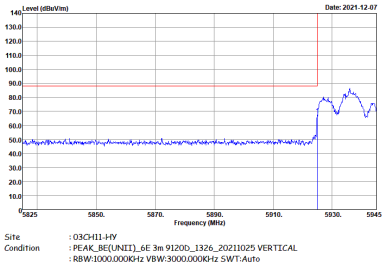
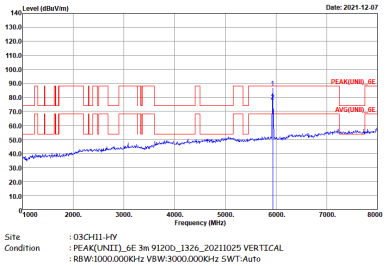
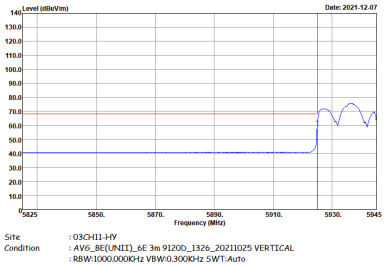
WIFI 802.11a (Band Edge @ 3m)

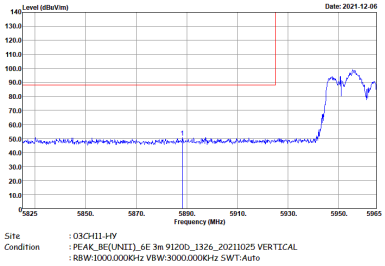
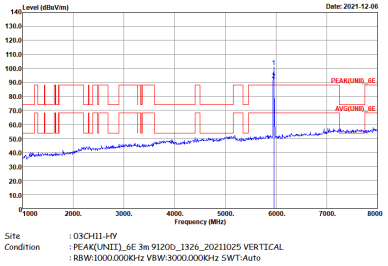
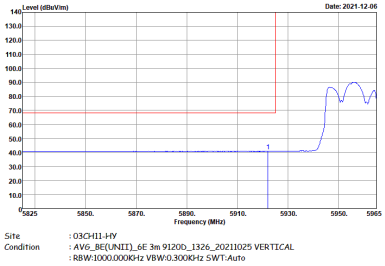
WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11a CH02 5935MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

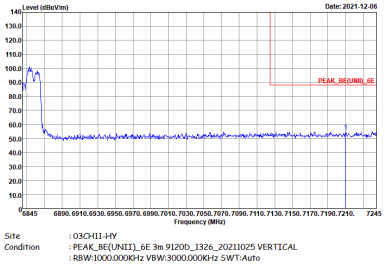
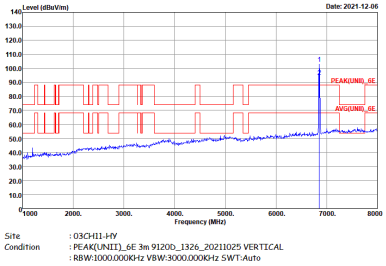
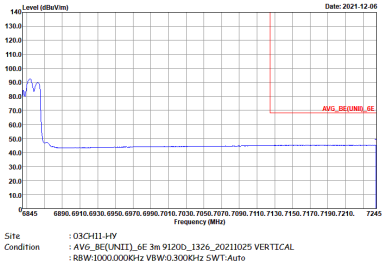
WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11a CH01 5955MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	6525~6875MHz Band Edge @ 3m	
ANT	802.11a CH181 6855MHz	
1+2	Vertical	Vertical
Peak Avg.		
Avg.		Left blank

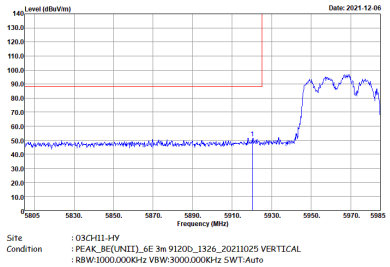
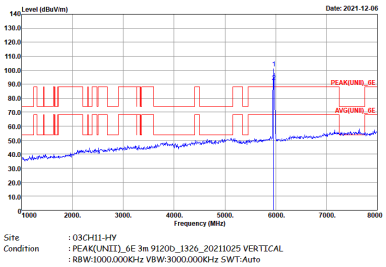
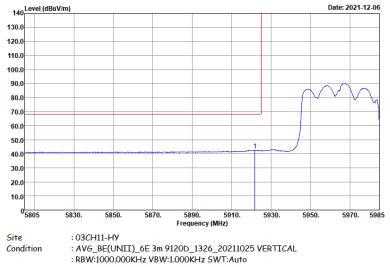
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

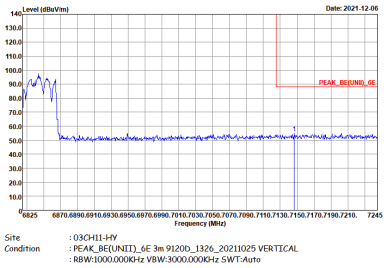
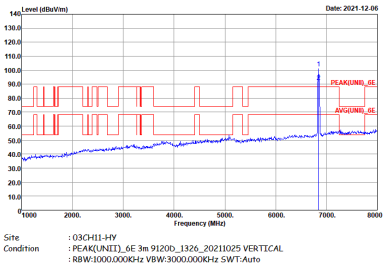
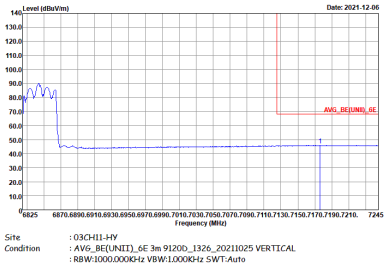
WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH02 5935MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 5955MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

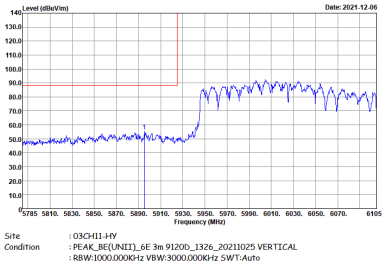
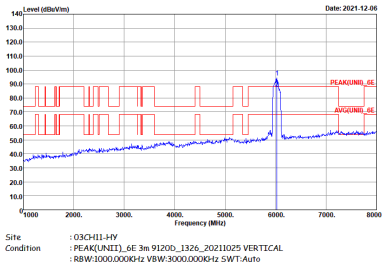
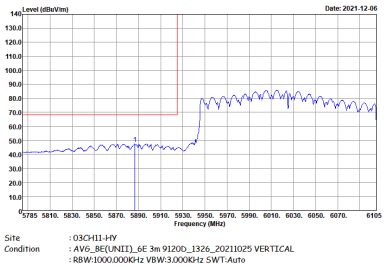
WIFI	6525-6875MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH181 6855MHz	
1+2	Vertical	Vertical
Peak Avg.		
Avg.		Left blank

WIFI 802.11ax HE40 (Band Edge @ 3m)

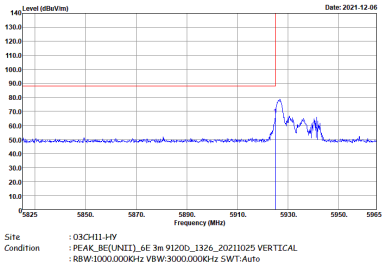
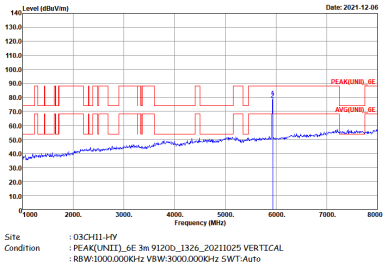
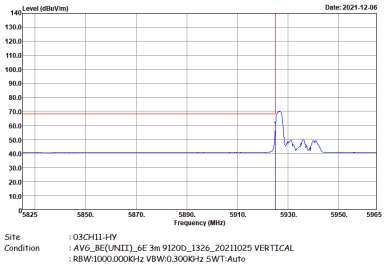
WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 5965MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

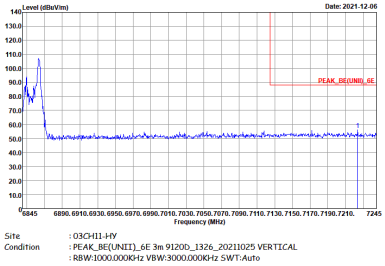
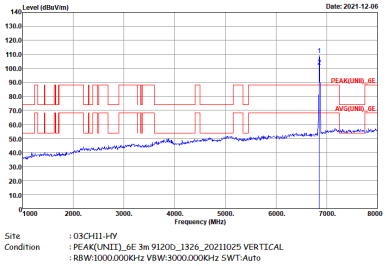
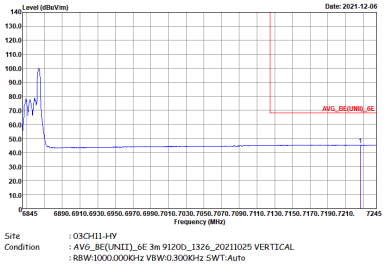
WIFI	6525~6875MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH179 6845MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE(UNII)_6E 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK(UNII)_6E 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE(UNII)_6E 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

WIFI 802.11ax HE160 Full (Band Edge @ 3m)

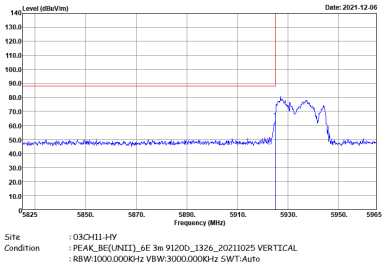
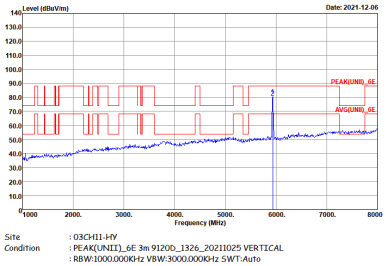
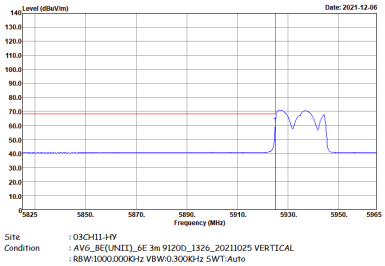
WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE160 Full CH15 6025MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

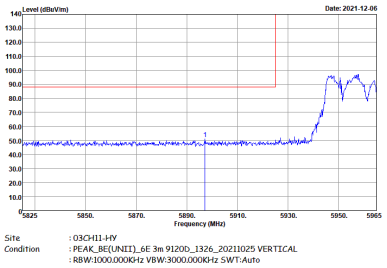
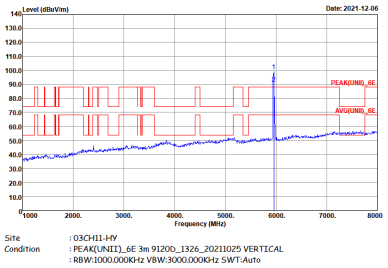
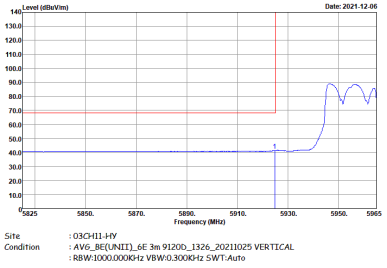
WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

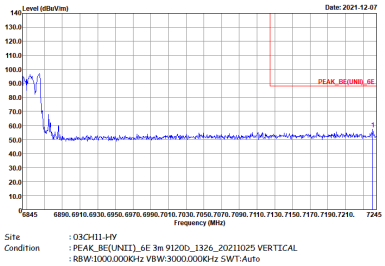
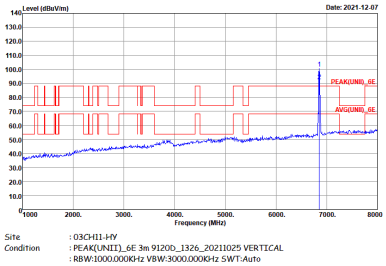
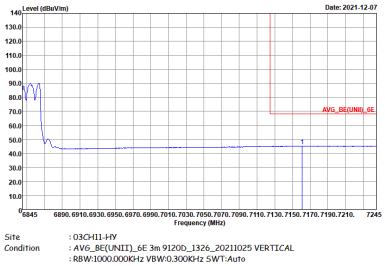
WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH02 5935MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	6525-6875MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH181 6855MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

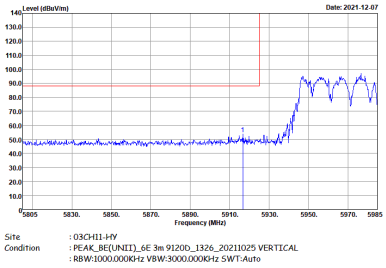
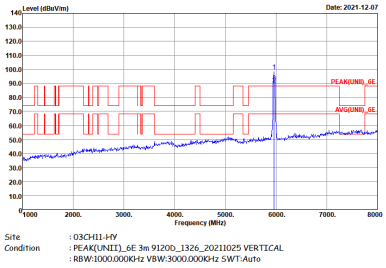
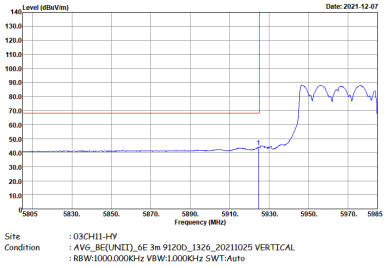
WIFI 802.11ax HE20 Partial 242 (Band Edge @ 3m)

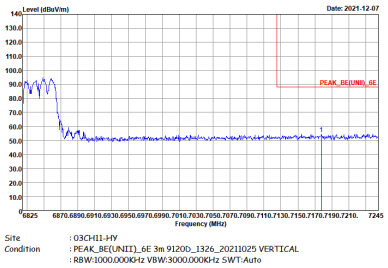
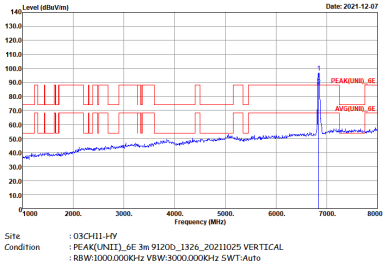
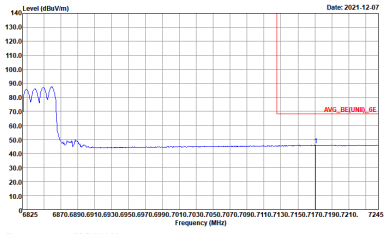
WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 242/61 CH02 5935MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 242/61 CH01 5955MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

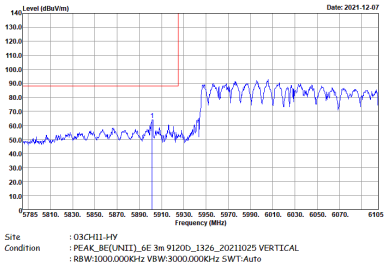
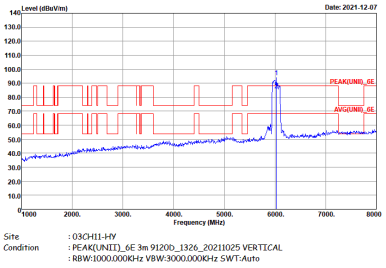
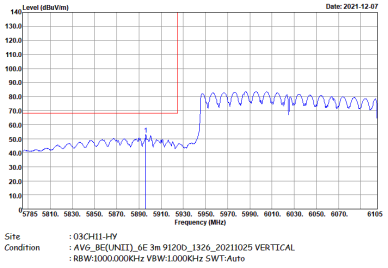
WIFI	6525-6875MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 242/61 CH181 6855MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI 802.11ax HE40 Partial 484 (Band Edge @ 3m)

WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 484/65 CH03 5965MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

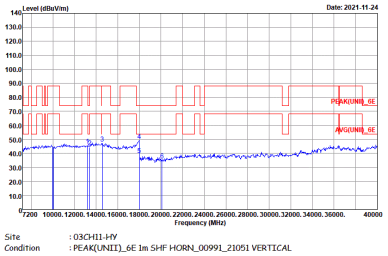
WIFI	6525~6875MHz Band Edge @ 3m	
ANT	802.11ax HE40 Partial 484/65 CH179 6845MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE(UNII)_6E 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK(UNII)_6E 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE(UNII)_6E 3m 9120D_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Left blank

WIFI 802.11ax HE160 Partial 1992 (Band Edge @ 3m)

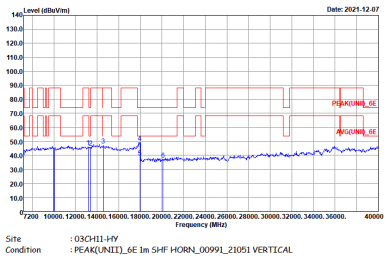
WIFI	5925~6425MHz Band Edge @ 3m	
ANT	802.11ax HE160 Partial 1992/68 CH15 6025MHz	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

Band 5 - 5925~6425MHz

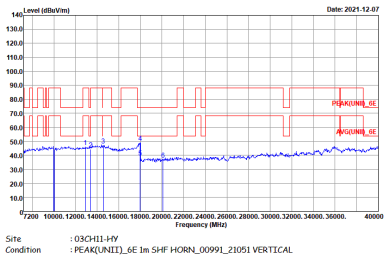
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

WIFI	Band 8 6525~6875MHz Harmonic @ 3m	
ANT	802.11ax HE20 Full CH149 6695MHz	
1+2	Horizontal	Vertical
Peak Avg.	Left blank	

WIFI 802.11ax HE20 Partial 26 (Harmonic @ 3m)

WIFI	6525~6875MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 26/4 CH149 6695MHz	
1+2	Horizontal	Vertical
Peak Avg.	Left blank	

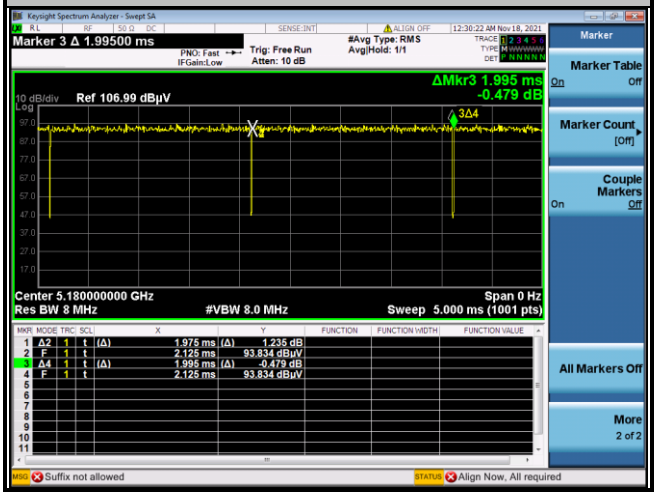
WIFI 802.11ax HE20 Partial 242 (Harmonic @ 3m)

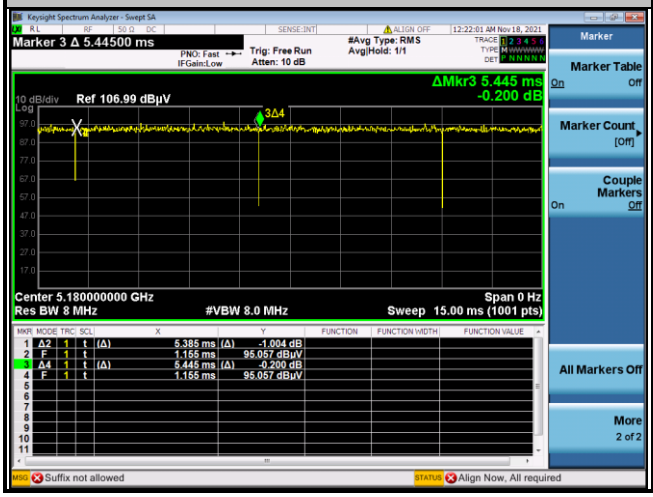
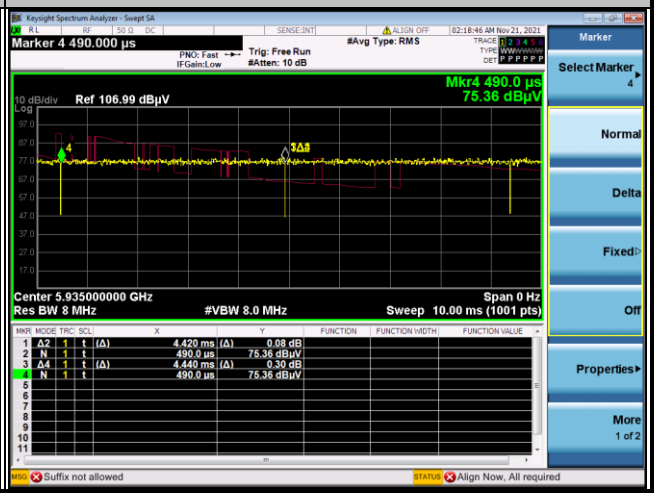
WIFI	6525~6875MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 242/61 CH149 6695MHz	
1+2	Horizontal	Vertical
Peak Avg.	Left blank	

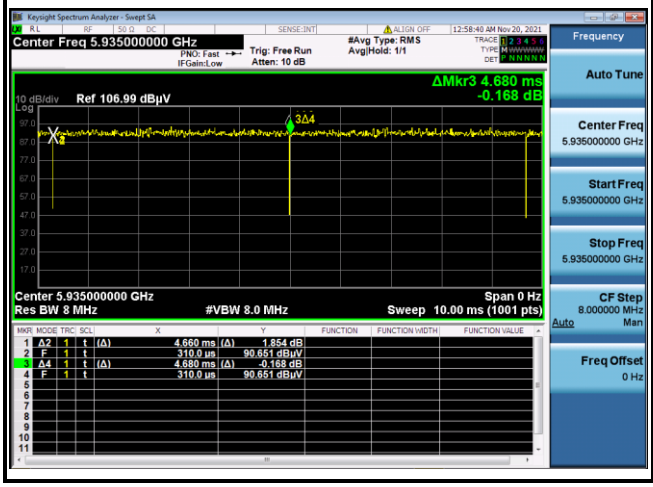
Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting
1	802.11a	99.00	-	-	10Hz
1	5GHz 802.11ax HE20 Full RU	98.90	-	-	10Hz
1	5GHz 802.11ax HE20 Partial 26 RU	99.55	-	-	10Hz
1	5GHz 802.11ax HE20 Partial 242 RU	99.57	-	-	10Hz
1	5GHz 802.11ax HE40 Full RU	98.41	-	-	10Hz
1	5GHz 802.11ax HE40 Partial 484 RU	98.21	-	-	10Hz
1	5GHz 802.11ax HE80 Full RU	98.64	-	-	10Hz
1	5GHz 802.11ax HE80 Partial 996 RU	98.17	-	-	10Hz
1	5GHz 802.11ax HE160 Full RU	98.43	-	-	10Hz
1	5GHz 802.11ax HE160 Partial 1992 RU	98.39	-	-	10Hz

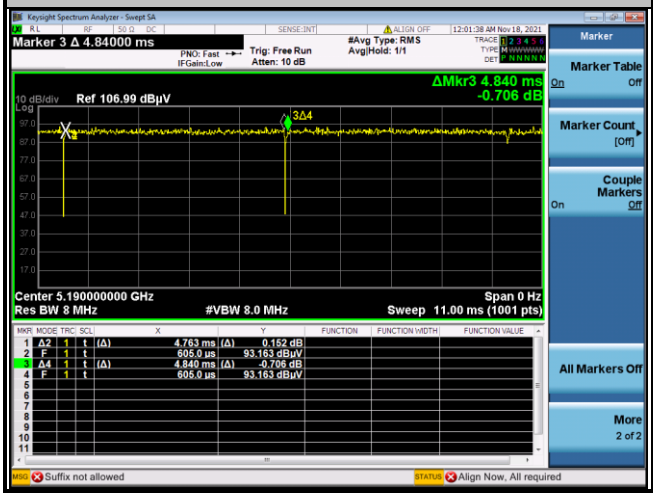
802.11a



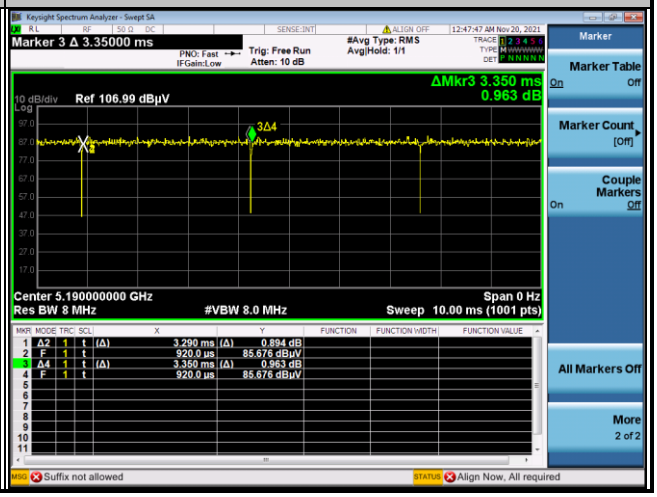
802.11ax HE20 Full RU	802.11ax HE20 Partial 26 RU
	

802.11ax HE20 Partial 242 RU	
	

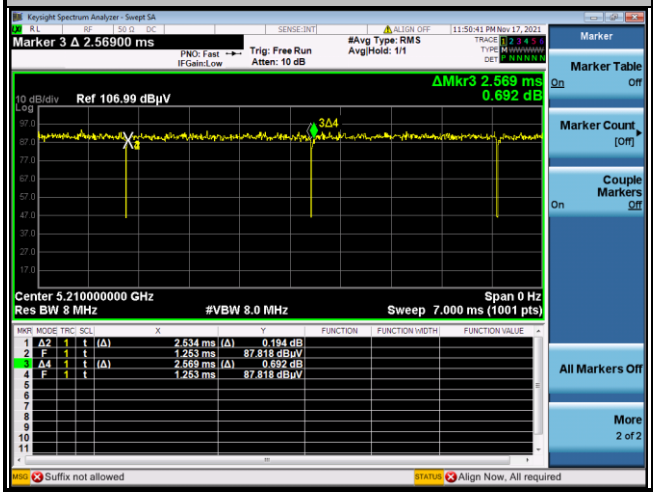
802.11ax HE40 Full RU



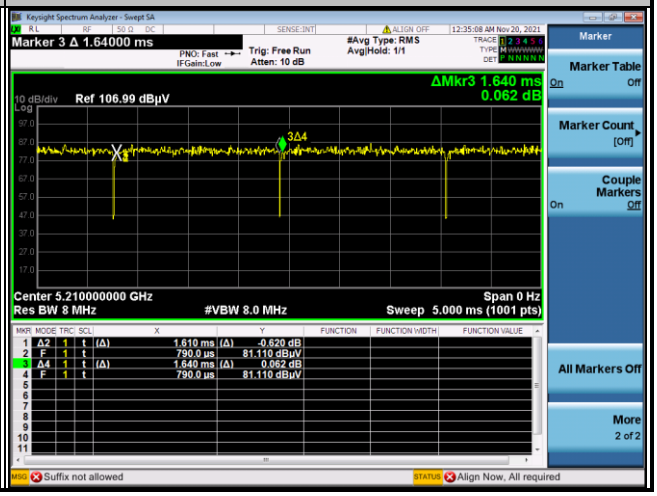
802.11ax HE40 Partial 484 RU



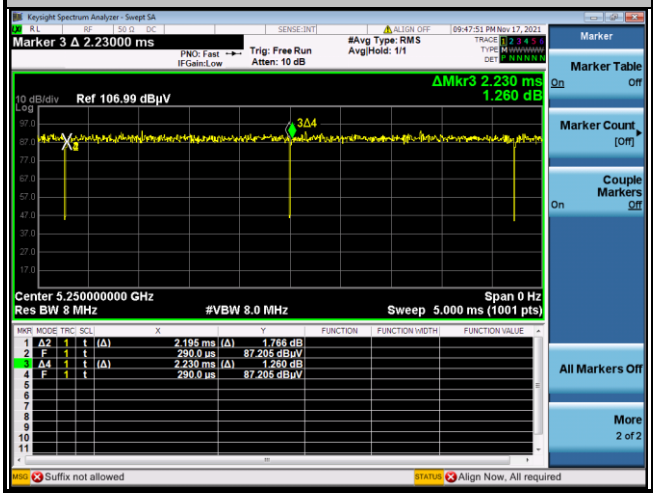
802.11ax HE80 Full RU



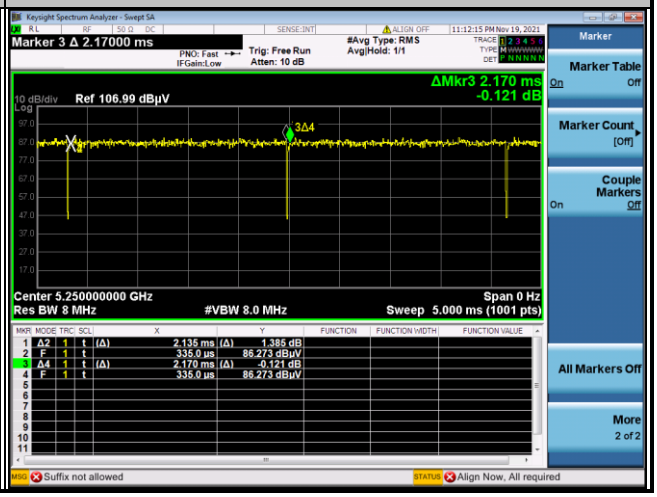
802.11ax HE80 Partial 996 RU



802.11ax HE160 Full RU

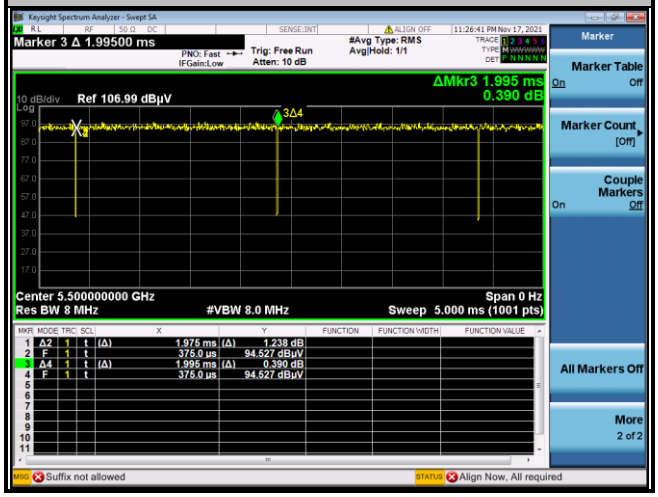


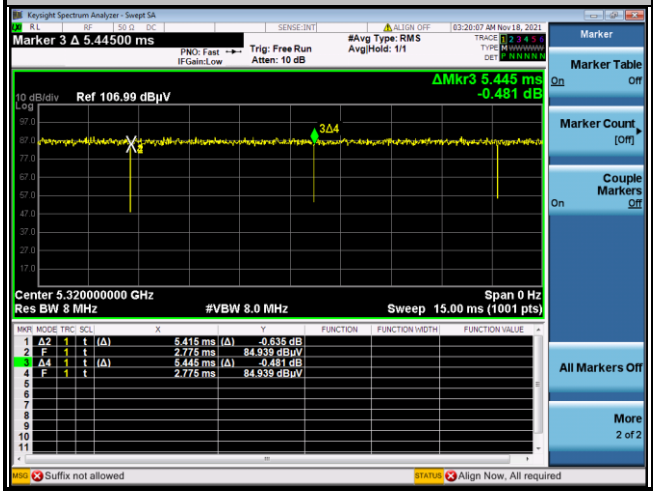
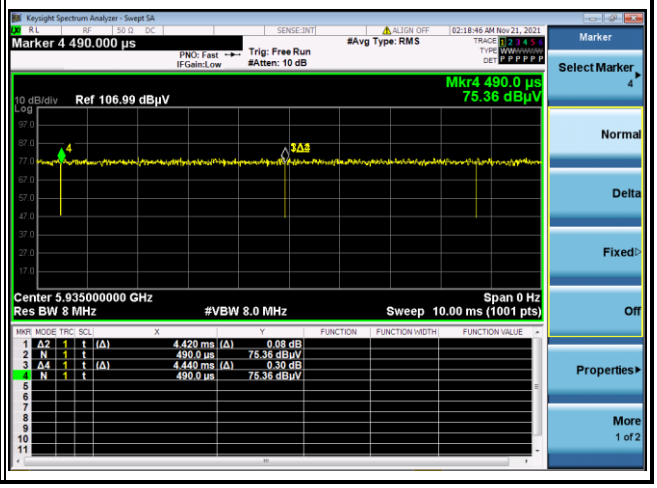
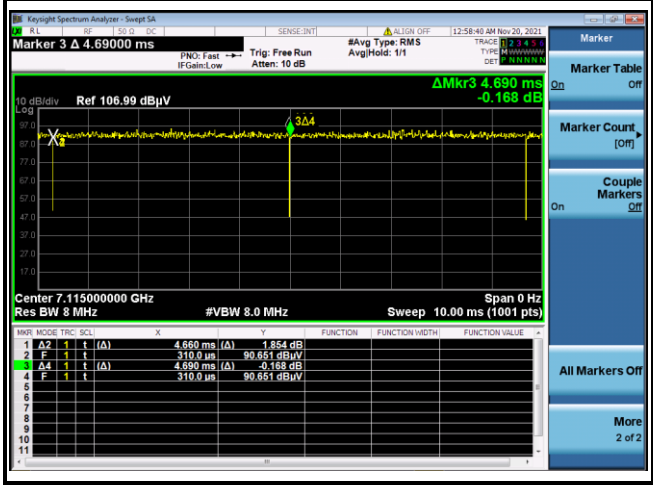
802.11ax HE160 Partial 1992 RU

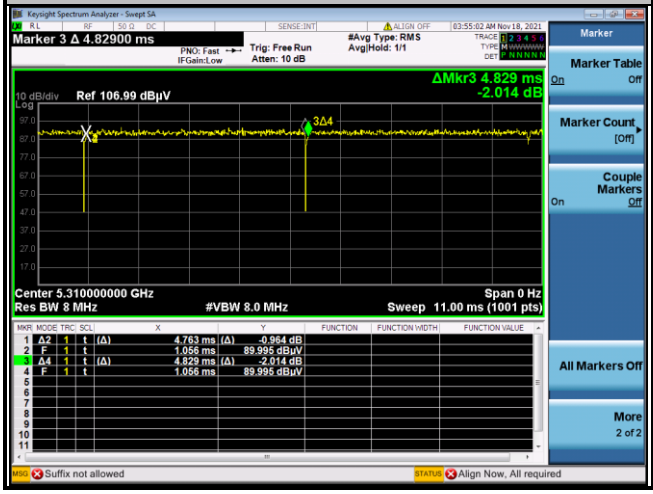
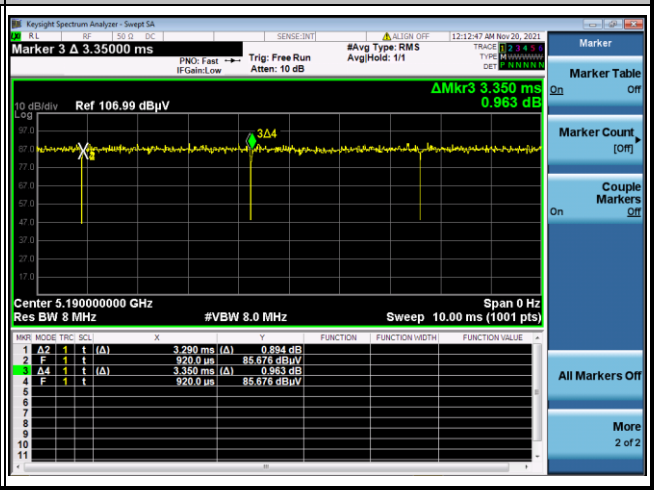
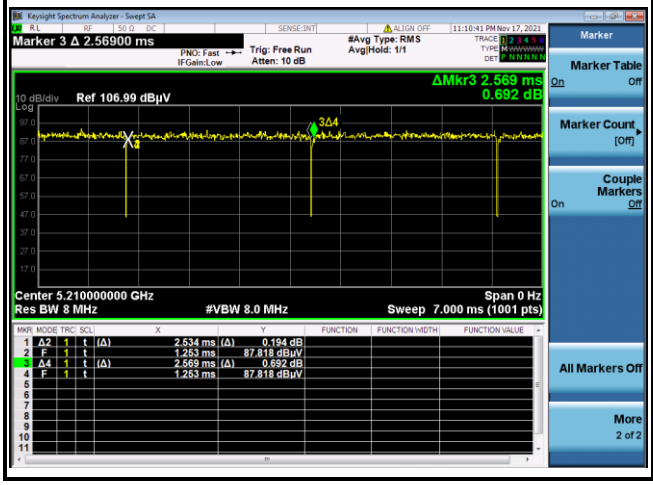
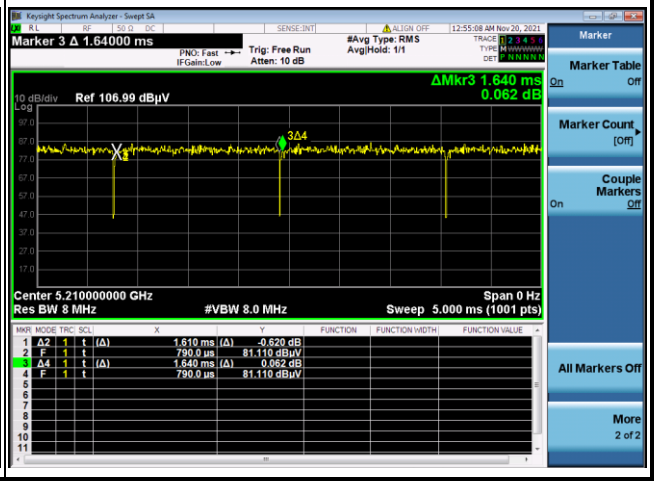
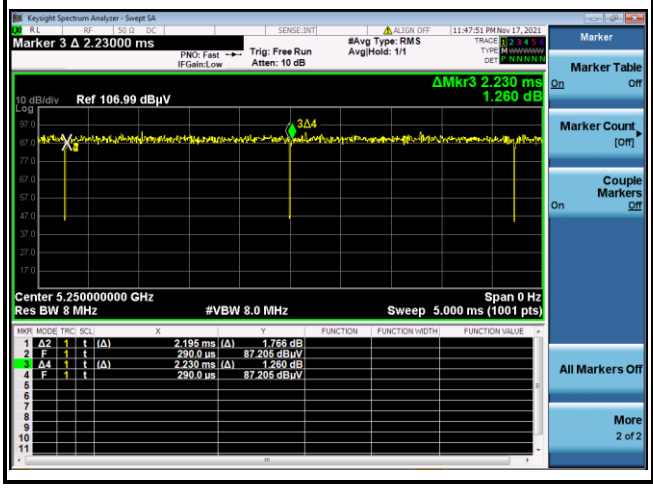
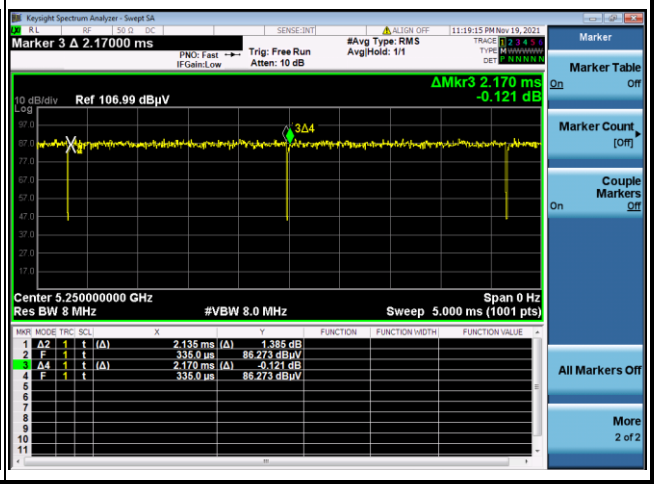


Antenna	Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting
2	802.11a	99.00	-	-	10Hz
2	5GHz 802.11ax HE20 Full RU	99.45	-	-	10Hz
2	5GHz 802.11ax HE20 Partial 26 RU	99.55	-	-	10Hz
2	5GHz 802.11ax HE20 Partial 242 RU	99.36	-	-	10Hz
2	5GHz 802.11ax HE40 Full RU	98.63	-	-	10Hz
2	5GHz 802.11ax HE40 Partial 484 RU	98.21	-	-	10Hz
2	5GHz 802.11ax HE80 Full RU	98.64	-	-	10Hz
2	5GHz 802.11ax HE80 Partial 996 RU	98.17	-	-	10Hz
2	5GHz 802.11ax HE160 Full RU	98.43	-	-	10Hz
2	5GHz 802.11ax HE160 Partial 1992 RU	98.39	-	-	10Hz

802.11a

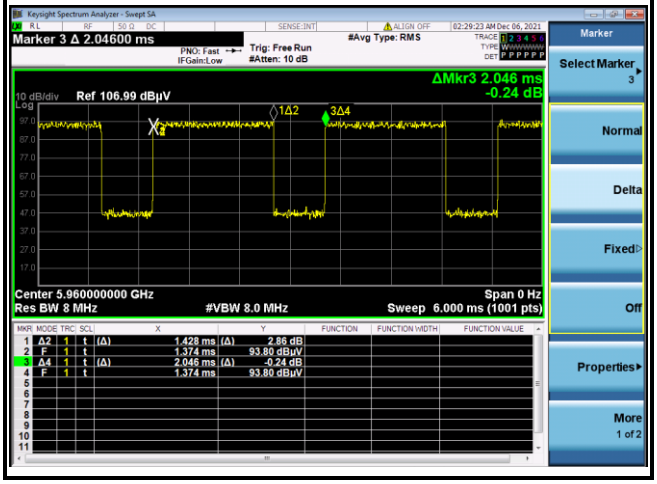


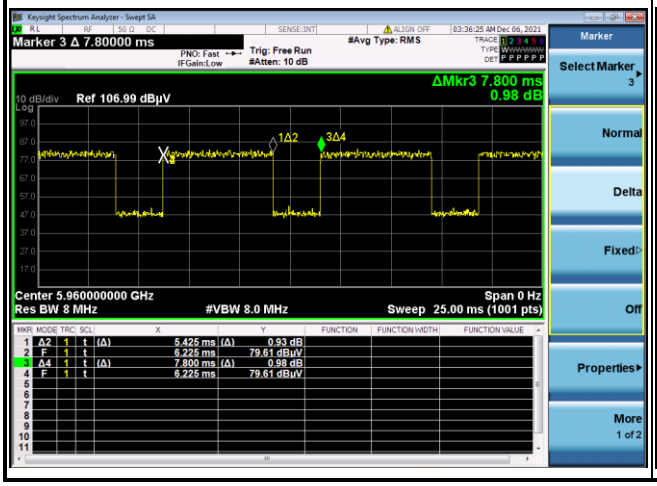
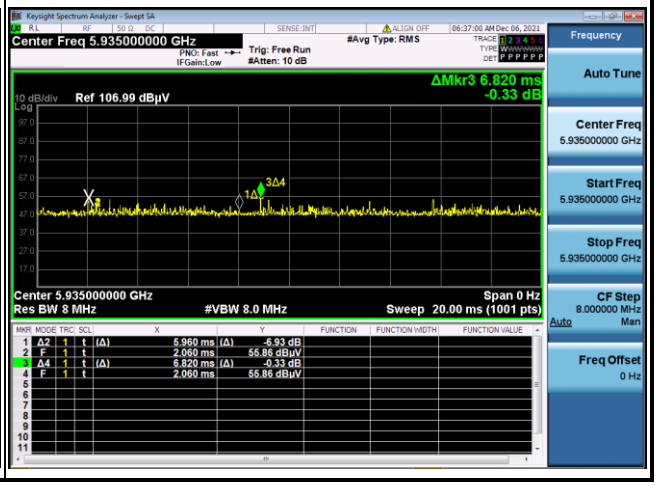
802.11ax HE20 Full RU	802.11ax HE20 Partial 26 RU
	
802.11ax HE20 Partial 242 RU	
	

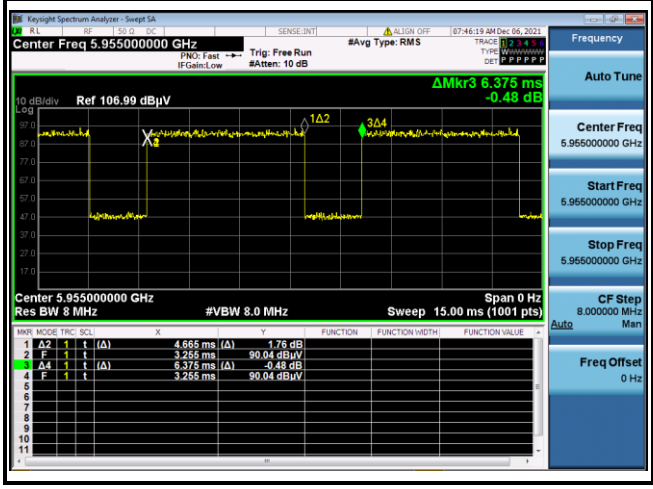
802.11ax HE40 Full RU	802.11ax HE40 Partial 484 RU
	
802.11ax HE80 Full RU	**802.11ax HE80 Partial 996 RU**
	
802.11ax HE160 Full RU	**802.11ax HE160 Partial 1992 RU**
	

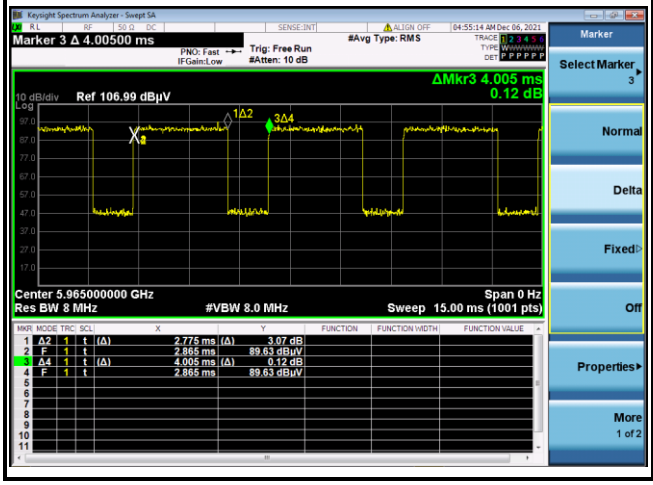
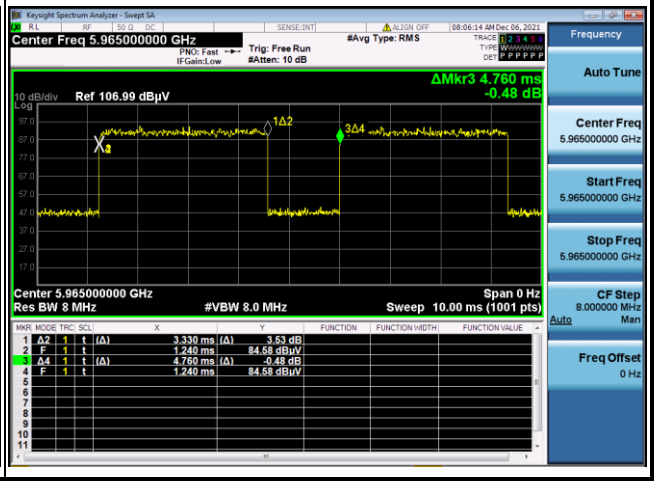
Antenna	Band	Duty Cycle (%)	T(us)	1/T(kHz)	VBW Setting
1+2	802.11a	69.79	1428	0.70	1kHz
1+2	5GHz 802.11ax HE20 Full RU	69.55	5425	0.18	3kHz
1+2	5GHz 802.11ax HE20 Partial 26 RU	87.39	5960	0.17	3kHz
1+2	5GHz 802.11ax HE20 Partial 242 RU	73.18	4665	0.21	3kHz
1+2	5GHz 802.11ax HE40 Full RU	69.29	2775	0.36	1kHz
1+2	5GHz 802.11ax HE40 Partial 484 RU	69.96	3330	0.30	1kHz
1+2	5GHz 802.11ax HE160 Full RU	68.49	815	1.23	3kHz
1+2	5GHz 802.11ax HE160 Partial 1992 RU	69.84	2130	0.47	1kHz

802.11a



802.11ax HE20 Full RU	802.11ax HE20 Partial 26 RU
	

802.11ax HE20 Partial 242 RU	
	

802.11ax HE40 Full RU	802.11ax HE40 Partial 484 RU
	

802.11ax HE160 Full RU	802.11ax HE160 Partial 1992 RU