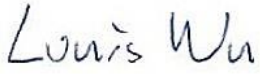
FCC CO-LOCATION RADIO TEST REPORT

FCC ID	:	**U8G-P1MT01**
Equipment	:	**Peplink Pepwave Wireless Product**
Brand Name	:	
Model Name	:	**MAX BR1 Mini** **MAX-BR1-MINI-LTE-US-T-PRM** **MAX-BR1-MINI-LTEA-W-T-PRM** **MAX-BR1-MINI-LTEA-US-T-PRM** **MAX-BR1-MINI-LTE-US-DC-T-PRM** **MAX-BR1-MINI-LTEA-W-DC-T-PRM** **MAX-BR1-MINI-LTEA-US-DC-T-PRM** **AP One Rugged** **APO-AC-RUG**
Applicant	:	**PISMO LABS TECHNOLOGY LIMITED** **A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle Peak Road, Cheung Sha Wan, Hong Kong**
Manufacturer	:	**PISMO LABS TECHNOLOGY LIMITED** **A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle Peak Road, Cheung Sha Wan, Hong Kong**
Standard	:	**FCC Part 15 Subpart E §15.407**

The product was received on May 11, 2022 and testing was started from Oct. 11, 2022 to Oct. 27, 2022. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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



Approved by: Louis Wu

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History of this test report

Report No.	Version	Description	Issue Date
FR250205D	01	Initial issue of report	Oct. 27, 2022

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.407(b)	Unwanted Emissions	Pass	1.06 dB under the limit at 4874.000 MHz
3.2	15.203 15.407(a)	Antenna Requirement	Pass	-

Declaration of Conformity:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results. 2. The measurement uncertainty please refer to this report "Uncertainty of Evaluation".
Comments and Explanations:
1. The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity. 2. The purpose of different model name is for marketing segmentation.

Reviewed by: Lewis Ho

Report Producer: Clio Lo

1 General Description

1.1 Product Feature of Equipment Under Test

WCDMA/LTE, Wi-Fi 2.4GHz 802.11b/g/n, WiFi 5GHz 802.11a/n/ac, and GPS.

Product Feature	
Integrated WWAN Module 1	**Brand Name:** Sierra **Model Name:** EM7411 **FCC ID:** N7NEM74B
Integrated WWAN Module 2	**Brand Name:** Sierra **Model Name:** MC7455 **FCC ID:** N7NMC7455
Integrated WWAN Module 3	**Brand Name:** Telit **Model Name:** LE910C4-NF **FCC ID:** RI7LE910CXNF
Sample 1	EUT with WWAN Module 1 (EM7411) + GPS
Sample 2	EUT with WWAN Module 2 (MC7455) + GPS
Sample 3	EUT with WWAN Module 3 (LE910C4-NF) + GPS
Sample 4	EUT without WWAN Module + GPS
Antenna Type	WWAN **<For EM7411>:** Omni-directional Antenna **<For MC7455>:** Omni-directional Antenna **<For LE910C4-NF >:** Omni-directional Antenna WLAN: **<Ant. 1>:** Omni-directional Antenna **<Ant. 2>:** Omni-directional Antenna GPS: Directional Antenna

WLAN Antenna information		
2412 MHz ~ 2462 MHz	Peak Gain (dBi)	Ant. 1: 3.15 Ant. 2: 3.15
5180 MHz ~ 5240 MHz	Peak Gain (dBi)	Ant. 1: 3.29 Ant. 2: 3.29

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

1.2 Modification of EUT

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

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.**
	03CH12-HY

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

FCC designation No.: TW3786

1.4 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). 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 two antenna polarization (Horizontal and Vertical), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.

2.1 Carrier Frequency and Channel

2412-2462 MHz		5180~5240 MHz	
802.11n HT20		802.11ac VHT20	
Channel	Freq. (MHz)	Channel	Freq. (MHz)
06	2437	44	5220

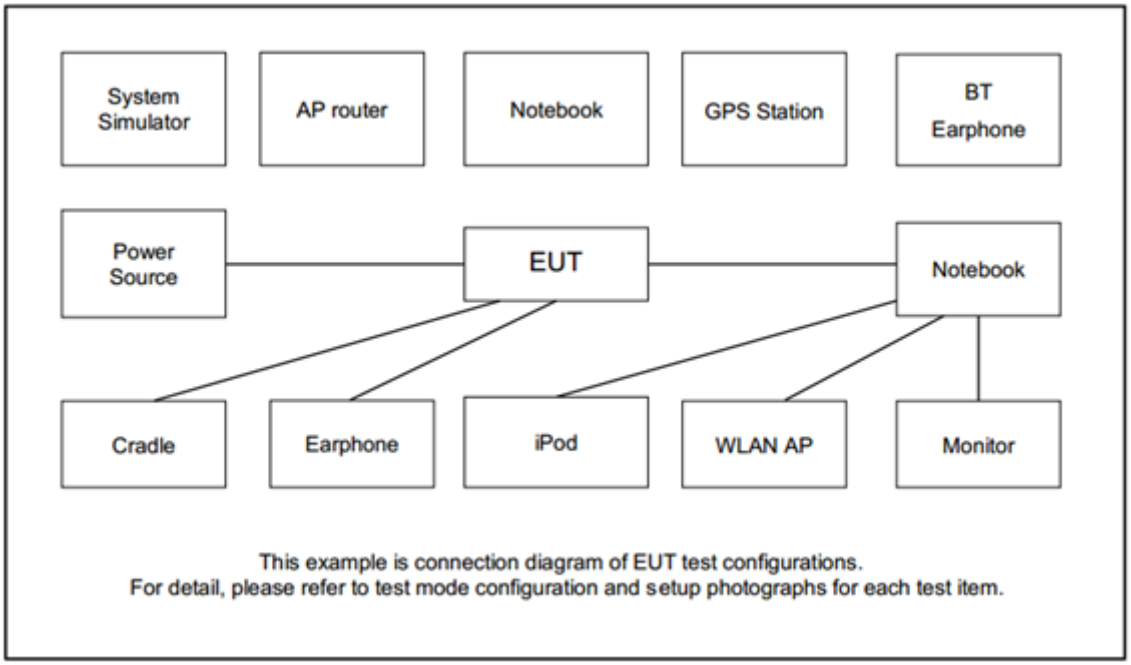
Remark: During the Radiated Spurious Emission test, the EUT turn on the WWAN functions simultaneously.

2.2 Test Mode

<Co-Location>

Test Mode	Modulation	Data Rate
Mode 1	LTE Band 13 + WLAN 2.4GHz 802.11n HT20 MIMO <Ant. 1+2> + WLAN 5GHz 802.11ac VHT20 MIMO <Ant. 1+2> for Sample 1	QPSK + MCS0 + MCS0
Mode 2	LTE Band 12 + WLAN 2.4GHz 802.11n HT20 MIMO <Ant. 1+2> + WLAN 5GHz 802.11ac VHT20 MIMO <Ant. 1+2> for Sample 2	QPSK + MCS0 + MCS0
Mode 3	LTE Band 5 + 8 WLAN 2.4GHz 02.11n HT20 MIMO <Ant. 1+2> + WLAN 5GHz 802.11ac VHT20 MIMO <Ant. 1+2> for Sample 3	QPSK + MCS0 + MCS0
Mode 4	WLAN 2.4GHz 802.11n HT20 MIMO <Ant. 1+2> + WLAN 5GHz 802.11ac VHT20 MIMO <Ant. 1+2> for Sample 4	QPSK + MCS0 + MCS0

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8821C	N/A	N/A	Unshielded, 1.8m
2.	Notebook	Asus	B1408	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

For WLAN test items, the EUT links with Notebook, and test program was provided and enabled EUT to transmit and receive signals continuously.

3 Test Result

3.1 Unwanted Emissions Measurement

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

3.1.1 Limit of Unwanted Emissions

(1) 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)

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

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

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

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

3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

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

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

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

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

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

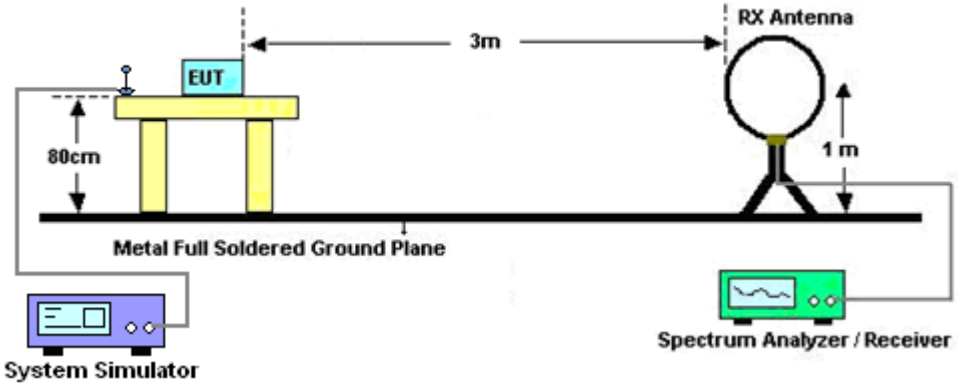
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was 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 was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as "-".

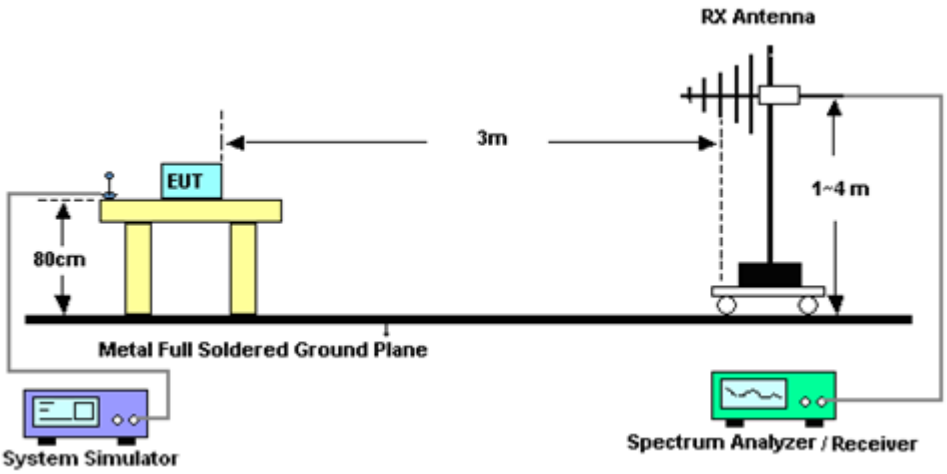
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with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

3.1.4 Test Setup

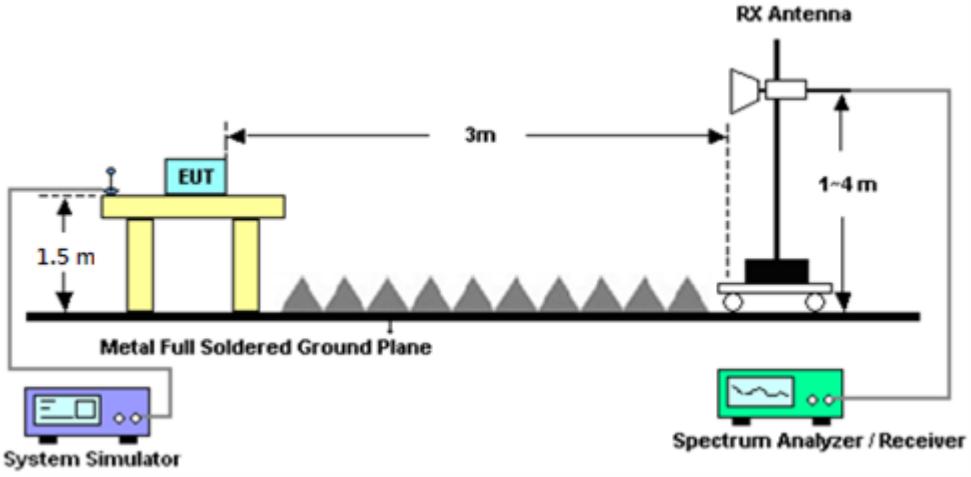
For radiated emissions below 30MHz



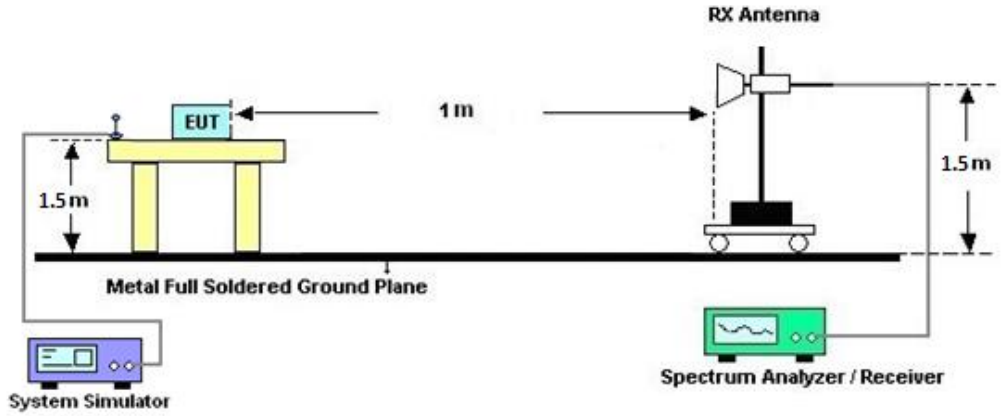
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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

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

3.1.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A and B.

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

Please refer to Appendix A and B.

3.2 Antenna Requirements

3.2.1 Standard Applicable

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

3.2.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	May 13, 2022	Oct. 11, 2022~ Oct. 27, 2022	May 12, 2023	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	40103 & 01	30MHz~1GHz	Apr. 24, 2022	Oct. 11, 2022~ Oct. 27, 2022	Apr. 23, 2023	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Dec. 03, 2021	Oct. 11, 2022~ Oct. 27, 2022	Dec. 02, 2022	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA9170	00993	18GHz~40GHz	Nov. 30, 2021	Oct. 11, 2022~ Oct. 27, 2022	Nov. 29, 2022	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 23, 2022	Oct. 11, 2022~ Oct. 27, 2022	Mar. 22, 2023	Radiation (03CH12-HY)
Preamplifier	Aglient	8449B	3008A02375	1GHz~26.5GHz	May 24, 2022	Oct. 11, 2022~ Oct. 27, 2022	May 23, 2023	Radiation (03CH12-HY)
Preamplifier	E-INSTRUMENT TECH LTD.	ERA-100M-18G-56-01-A70	EC1900249	1GHz-18GHz	Dec. 22, 2021	Oct. 11, 2022~ Oct. 27, 2022	Dec. 21, 2022	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 24, 2021	Oct. 11, 2022~ Oct. 27, 2022	Dec. 23, 2022	Radiation (03CH12-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 12, 2022	Oct. 11, 2022~ Oct. 27, 2022	Jan. 11, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12SS	SN2	1.2GHz Low Pass Filter	Mar. 15, 2022	Oct. 11, 2022~ Oct. 27, 2022	Mar. 14, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN2	3GHz High Pass Filter	Jul. 11, 2022	Oct. 11, 2022~ Oct. 27, 2022	Jul. 10, 2023	Radiation (03CH12-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN2	6.75GHz High Pass Filter	Mar. 15, 2022	Oct. 11, 2022~ Oct. 27, 2022	Mar. 14, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Oct. 11, 2022~ Oct. 27, 2022	Mar. 09, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 10, 2021	Oct. 11, 2022~ Oct. 27, 2022	Dec. 09, 2022	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 21, 2022	Oct. 11, 2022~ Oct. 27, 2022	Feb. 20, 2023	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz~40GHz	Feb. 21, 2022	Oct. 11, 2022~ Oct. 27, 2022	Feb. 20, 2023	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP140325	N/A	Aug. 15, 2022	Oct. 11, 2022~ Oct. 27, 2022	Aug. 14, 2023	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Oct. 11, 2022~ Oct. 27, 2022	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Oct. 11, 2022~ Oct. 27, 2022	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Oct. 11, 2022~ Oct. 27, 2022	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Oct. 11, 2022~ Oct. 27, 2022	N/A	Radiation (03CH12-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**6.4 dB**

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. Radiated Spurious Emission

Test Engineer :	Jesse Fan, Tim Lee and Jack Cheng	Temperature :	22.1~23.1°C
		Relative Humidity :	55~60%

<Sample 1>

LTE Band 13 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 06 2437MHz		2355.08	57.71	-16.29	74	47.15	27.48	16.55	33.47	179	352	P	H
		2375.1	52.52	-1.48	54	42.03	27.4	16.58	33.49	179	352	A	H
	*	2437	114.06	40.06	74	103.68	27.23	16.67	33.52	179	352	P	H
	*	2437	111.01	57.01	54	100.63	27.23	16.67	33.52	179	352	A	H
		2497.06	55.75	-18.25	74	45.25	27.29	16.76	33.55	179	352	P	H
		2484.11	47.64	-6.36	54	37.17	27.27	16.74	33.54	179	352	A	H
		2351.16	55.67	-18.33	74	45.09	27.5	16.55	33.47	104	333	P	V
		2348.64	47.96	-6.04	54	37.37	27.51	16.55	33.47	104	333	A	V
	*	2437	103.71	29.71	74	93.33	27.23	16.67	33.52	104	333	P	V
	*	2437	100.68	46.68	54	90.3	27.23	16.67	33.52	104	333	A	V
		2492.3	55.92	-18.08	74	45.44	27.28	16.75	33.55	104	333	P	V
		2488.73	47.72	-6.28	54	37.24	27.28	16.74	33.54	104	333	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 -5150~5250 MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5138.06	59.55	-14.45	74	50.75	32	10.45	33.65	115	201	P	H
		5146.64	52.57	-1.43	54	43.76	32	10.46	33.65	115	201	A	H
	*	5220	114.62	46.42	68.2	106	31.72	10.54	33.64	115	201	P	H
	*	5220	108.56	54.56	54	99.94	31.72	10.54	33.64	115	201	A	H
		5357.52	56.97	-17.03	74	48.36	31.45	10.77	33.61	115	201	P	H
		5357.52	51.21	-2.79	54	42.6	31.45	10.77	33.61	115	201	A	H
802.11ac													H
VHT20													H
CH 44		5103.74	54.68	-19.32	74	45.92	32	10.42	33.66	357	270	P	V
5220MHz		5099.32	48.6	-5.4	54	39.84	32	10.42	33.66	357	270	A	V
	*	5220	110.07	41.87	68.2	101.45	31.72	10.54	33.64	357	270	P	V
	*	5220	105.3	51.3	54	96.68	31.72	10.54	33.64	357	270	A	V
		5358.92	52.65	-21.35	74	44.04	31.45	10.77	33.61	357	270	P	V
		5363.4	47.63	-6.37	54	38.99	31.48	10.77	33.61	357	270	A	V
													V
													V

Remark

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

LTE Band 13 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2> (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
LTE Band 13 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		4874	54.45	-19.55	74	46.58	31.2	10.31	33.64	125	196	P	H
		4874	52.94	-1.06	54	45.07	31.2	10.31	33.64	125	196	A	H
		7311	44.27	-29.73	74	59.65	36.34	14.22	65.94	-	-	P	H
		10440	50.65	-17.55	68.2	61.54	39.82	16.64	67.35	123	261	P	H
		10440	41.62	-12.38	54	52.51	39.82	16.64	67.35	123	261	A	H
		10971	51.72	-22.28	74	61.01	40.46	17.09	66.84	-	-	P	H
		10971	43.55	-10.45	54	52.84	40.46	17.09	66.84	-	-	A	H
		14513	53.05	-15.15	68.2	57.7	41.71	19.81	66.17	-	-	P	H
		14513	44.1	-9.9	54	48.75	41.71	19.81	66.17	-	-	A	H
		15660	49.12	-24.88	74	58.28	37.88	20.34	67.38	254	164	P	H
		15660	40.05	-13.95	54	49.21	37.88	20.34	67.38	254	164	A	H
		17989	61.66	-12.34	74	59.19	49.7	22.02	69.25	-	-	P	H
		17989	50.48	-3.52	54	48.01	49.7	22.02	69.25	-	-	A	H
		4874	52.55	-21.45	74	44.68	31.2	10.31	33.64	245	261	P	V
		4874	43.15	-10.85	54	35.28	31.2	10.31	33.64	245	261	A	V
		7311	45.04	-28.96	74	60.42	36.34	14.22	65.94	-	-	P	V
		10440	50.37	-17.83	68.2	61.26	39.82	16.64	67.35	246	213	P	V
		10440	41.5	-12.5	54	52.39	39.82	16.64	67.35	246	213	A	V
		10916	52.2	-21.8	74	61.48	40.57	17.04	66.89	-	-	P	V
		10916	52.2	-1.8	54	61.48	40.57	17.04	66.89	-	-	A	V
		14502	52.85	-15.35	68.2	57.51	41.7	19.8	66.16	-	-	P	V
		14502	43.92	-10.08	54	48.58	41.7	19.8	66.16	-	-	A	V
		15660	49.89	-24.11	74	59.05	37.88	20.34	67.38	184	165	P	V
		15660	41.41	-12.59	54	50.57	37.88	20.34	67.38	184	165	A	V
		17978	62.07	-11.93	74	59.87	49.41	22.01	69.22	-	-	P	V
		17978	50.32	-3.68	54	48.12	49.41	22.01	69.22	-	-	A	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.												

Emission above 18GHz

LTE Band 13 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(SHF)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
Simultaneously		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
LTE Band 13 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		28733.7	42.5	-25.7	68.2	41.04	40.69	15.16	54.39	-	-	P	H
		39681	49.63	-24.37	74	39.56	44.56	19.86	54.35	-	-	P	H
		39681	40.42	-13.58	54	30.35	44.56	19.86	54.35	-	-	A	H
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													H
													H
		28767	41.82	-26.38	68.2	40.32	40.73	15.18	54.41	-	-	P	V
		39560	49.21	-24.79	74	39.23	44.65	19.85	54.52	-	-	P	V
		39560	39.34	-14.66	54	29.36	44.65	19.85	54.52	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												

Emission below 1GHz

LTE Band 13 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(LF)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
Simultaneously		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
LTE Band 13 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		30	23.75	-16.25	40	28.09	24.53	0.77	29.64	-	-	P	H
		176.47	24.41	-19.09	43.5	36.75	15.31	1.89	29.54	-	-	P	H
		457.77	36.98	-9.02	46	39.54	23.42	3.1	29.08	-	-	P	H
		547.01	32.38	-13.62	46	32.84	24.96	3.43	28.85	-	-	P	H
		815.7	38.08	-7.92	46	34.5	27.82	4.2	28.44	-	-	P	H
		975.75	36.79	-17.21	54	29.37	30.85	4.65	28.08	-	-	P	H
													H
													H
													H
													H
													H
		30	24.54	-15.46	40	28.88	24.53	0.77	29.64	-	-	P	V
		127	20.3	-23.2	43.5	30.94	17.41	1.58	29.63	-	-	P	V
		460.68	31.27	-14.73	46	33.72	23.51	3.11	29.07	-	-	P	V
		566.41	33.48	-12.52	46	32.75	26.09	3.49	28.85	-	-	P	V
		903.97	38.91	-7.09	46	33.46	29.16	4.48	28.19	-	-	P	V
		967.99	36.27	-17.73	54	28.85	30.9	4.62	28.1	-	-	P	V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.

<Sample 2>

LTE Band 12 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 06 2437MHz		2374.82	56.35	-17.65	74	45.85	27.4	16.58	33.48	100	177	P	H
		2358.16	49.46	-4.54	54	38.91	27.47	16.58	33.48	100	177	A	H
	*	2437	113.53	39.53	74	103.15	27.23	16.67	33.52	100	177	P	H
	*	2437	110.95	56.95	54	100.57	27.23	16.67	33.52	100	177	A	H
		2498.25	55.35	-18.65	74	44.84	27.3	16.76	33.55	100	177	P	H
		2486.84	48.5	-5.5	54	38.03	27.27	16.74	33.54	100	177	A	H
		2367.96	55.88	-18.12	74	45.36	27.43	16.57	33.48	300	123	P	V
		2314.48	47.97	-6.03	54	37.14	27.78	16.5	33.45	300	123	A	V
	*	2437	103.04	29.04	74	92.66	27.23	16.67	33.52	300	123	P	V
	*	2437	100.26	46.26	54	89.88	27.23	16.67	33.52	300	123	A	V
		2497.69	55.44	-18.56	74	44.93	27.3	16.76	33.55	300	123	P	V
		2493.21	47.81	-6.19	54	37.32	27.29	16.75	33.55	300	123	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 -5150~5250 MHz

WIFI 802. 11ac VHT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5144.04	55.06	-18.94	74	46.25	32	10.46	33.65	100	338	P	H
		5136.76	49.4	-4.6	54	40.6	32	10.45	33.65	100	338	A	H
	*	5220	111.35	43.15	68.2	102.73	31.72	10.54	33.64	100	338	P	H
	*	5220	104.79	50.79	54	96.17	31.72	10.54	33.64	100	338	A	H
		5437.88	52.14	-21.86	74	43.03	31.85	10.85	33.59	100	338	P	H
		5360.6	47.64	-6.36	54	39.02	31.46	10.77	33.61	100	338	A	H
802.11ac													H
VHT20													H
CH 44		5106.6	53.82	-20.18	74	45.05	32	10.43	33.66	400	281	P	V
5220MHz		5129.74	46.26	-7.74	54	37.46	32	10.45	33.65	400	281	A	V
	*	5220	107.64	39.44	68.2	99.02	31.72	10.54	33.64	400	281	P	V
	*	5220	100.21	46.21	54	91.59	31.72	10.54	33.64	400	281	A	V
		5447.12	51.92	-22.08	74	42.76	31.89	10.86	33.59	400	281	P	V
		5412.4	46.12	-7.88	54	37.13	31.75	10.84	33.6	400	281	A	V
													V
													V

Remark

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

LTE Band 12 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2> (Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
LTE Band 12 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		4874	57.59	-16.41	74	49.72	31.2	10.31	33.64	100	338	P	H
		4874	48.58	-5.42	54	40.71	31.2	10.31	33.64	100	338	A	H
		7311	44.57	-29.43	74	59.95	36.34	14.22	65.94	-	-	P	H
		10440	51.09	-17.11	68.2	61.98	39.82	16.64	67.35	100	84	P	H
		10440	42.83	-11.17	54	53.72	39.82	16.64	67.35	100	84	A	H
		11895	51.66	-22.34	74	61.32	38.72	17.78	66.16	-	-	P	H
		11895	42.92	-11.08	54	52.58	38.72	17.78	66.16	-	-	A	H
		14491	51.71	-22.29	74	56.41	41.67	19.8	66.17	-	-	P	H
		14491	42.71	-11.29	54	47.41	41.67	19.8	66.17	-	-	A	H
		15660	49.39	-24.61	74	58.55	37.89	20.33	67.38	200	225	P	H
		15660	40.4	-13.6	54	49.56	37.89	20.33	67.38	200	225	A	H
		17967	61.85	-12.15	74	59.93	49.11	22.01	69.2	-	-	P	H
		17967	48.15	-5.85	54	46.23	49.11	22.01	69.2	-	-	A	H
		4874	53.81	-20.19	74	45.94	31.2	10.31	33.64	400	281	P	V
		4874	45.79	-8.21	54	37.92	31.2	10.31	33.64	400	281	A	V
		7311	44.06	-29.94	74	59.44	36.34	14.22	65.94	-	-	P	V
		10440	49.76	-18.44	68.2	60.65	39.82	16.64	67.35	200	75	P	V
		10440	40.32	-13.68	54	51.21	39.82	16.64	67.35	200	75	A	V
		10993	51.98	-22.02	74	61.29	40.41	17.1	66.82	-	-	P	V
		10993	42.98	-11.02	54	52.29	40.41	17.1	66.82	-	-	A	V
		14491	52.58	-21.42	74	57.28	41.67	19.8	66.17	-	-	P	V
		14491	43.66	-10.34	54	48.36	41.67	19.8	66.17	-	-	A	V
		15660	48.91	-25.09	74	58.07	37.88	20.34	67.38	400	337	P	V
		15660	40.71	-13.29	54	49.87	37.88	20.34	67.38	400	337	A	V
		17956	61.37	-12.63	74	59.73	48.81	22	69.17	-	-	P	V
		17956	48.17	-5.83	54	46.53	48.81	22	69.17	-	-	A	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.												

Emission above 18GHz

LTE Band 12 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(SHF)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
Simultaneously		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
LTE Band 12 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		28744.8	41.3	-26.9	68.2	39.83	40.7	24.71	54.4	-	-	P	H
		39868	49.54	-24.46	74	39.25	44.5	29.41	54.08	-	-	P	H
		39868	40.33	-13.67	54	30.04	44.5	29.41	54.08	-	-	A	H
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													H
													H
		28866.9	41.19	-27.01	68.2	39.55	40.89	24.78	54.49	-	-	P	V
		39901	49.52	-24.48	74	39.19	44.5	29.41	54.04	-	-	P	V
		39901	38.5	-15.5	54	28.17	44.5	29.41	54.04	-	-	A	V
													V
													V
													V
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													V
													V
													V
													V

Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Emission below 1GHz

LTE Band 12 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(LF)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
Simultaneously		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
LTE Band 12 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		36.79	29.8	-10.2	40	37.21	21.38	0.86	29.65	-	-	P	H
		157.07	27.96	-15.54	43.5	39.06	16.72	1.74	29.56	-	-	P	H
		408.3	36.29	-9.71	46	40.27	22.3	2.9	29.18	-	-	P	H
		460.68	36.26	-9.74	46	38.71	23.51	3.11	29.07	-	-	P	H
		848.68	38.74	-7.26	46	33.82	29.05	4.26	28.39	-	-	P	H
		986.42	36.21	-17.79	54	29.1	30.48	4.68	28.05	-	-	P	H
													H
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													H
													H
													H
													H
		30	24.24	-15.76	40	28.58	24.53	0.77	29.64	-	-	P	V
		127	20.27	-23.23	43.5	30.91	17.41	1.58	29.63	-	-	P	V
		457.77	30.7	-15.3	46	33.26	23.42	3.1	29.08	-	-	P	V
		563.5	32.1	-13.9	46	31.31	26.16	3.48	28.85	-	-	P	V
		746.83	36.95	-9.05	46	33.63	27.93	4	28.61	-	-	P	V
		981.57	36.38	-17.62	54	29.15	30.62	4.67	28.06	-	-	P	V
													V
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													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.

<Sample 3>

LTE Band 5 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 06 2437MHz		2352.14	55.66	-18.34	74	45.09	27.49	6.52	33.47	164	134	P	H
		2338.7	47.83	-6.17	54	37.18	27.59	6.5	33.47	164	134	A	H
	*	2437	107.8	-	-	97.42	27.23	6.64	33.52	164	134	P	H
	*	2437	105.11	-	-	94.73	27.23	6.64	33.52	164	134	A	H
		2498.11	55.84	-18.16	74	45.33	27.3	6.73	33.55	164	134	P	H
		2490.76	47.5	-6.5	54	37.02	27.28	6.72	33.55	164	134	A	H
		2363.06	56.04	-17.96	74	45.5	27.45	6.54	33.48	256	121	P	V
		2388.68	49.69	-4.31	54	39.23	27.35	6.57	33.49	256	121	A	V
	*	2437	115.32	-	-	104.94	27.23	6.64	33.52	256	121	P	V
	*	2437	112.11	-	-	101.73	27.23	6.64	33.52	256	121	A	V
		2487.61	55.74	-18.26	74	45.26	27.28	6.71	33.54	256	121	P	V
		2483.62	48.56	-5.44	54	38.09	27.27	6.71	33.54	256	121	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 -5150~5250 MHz

WIFI 802. 11ac VHT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5092.3	54.48	-19.52	74	45.78	31.95	9.91	33.66	124	135	P	H
		5133.9	47.11	-6.89	54	38.31	32	9.95	33.65	124	135	A	H
	*	5220	104.91	-	-	96.29	31.72	10.03	33.64	124	135	P	H
	*	5220	99.69	-	-	91.07	31.72	10.03	33.64	124	135	A	H
		5435.64	52.27	-21.73	74	43.17	31.84	10.29	33.59	124	135	P	H
		5428.08	45.29	-8.71	54	36.22	31.81	10.29	33.59	124	135	A	H
802.11ac													H
VHT20													H
CH 44		5145.6	57.29	-16.71	74	48.48	32	9.96	33.65	359	160	P	V
5220MHz		5140.92	52.88	-1.12	54	44.07	32	9.96	33.65	359	160	A	V
	*	5220	113.3	-	-	104.68	31.72	10.03	33.64	359	160	P	V
	*	5220	109.93	-	-	101.31	31.72	10.03	33.64	359	160	A	V
		5366.48	56.86	-17.14	74	48.19	31.5	10.22	33.61	359	160	P	V
		5351.92	51.83	-2.17	54	43.28	31.41	10.2	33.61	359	160	A	V
													V
													V

Remark

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

LTE Band 5 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>
(Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
LTE Band 5 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		4874	52.45	-21.55	74	44.58	31.2	10.31	33.64	124	135	P	H
		4874	43.01	-10.99	54	35.14	31.2	10.31	33.64	124	135	A	H
		7311	44.44	-29.56	74	59.82	36.34	14.22	65.94	-	-	P	H
		10440	50.19	-18.01	68.2	61.08	39.82	16.64	67.35	253	164	P	H
		10440	41.34	-12.66	54	52.23	39.82	16.64	67.35	253	164	A	H
		11356	51.38	-22.62	74	60.59	39.91	17.38	66.5	-	-	P	H
		11356	41.89	-12.11	54	51.1	39.91	17.38	66.5	-	-	A	H
		14491	52.94	-21.06	74	57.64	41.67	19.8	66.17	-	-	P	H
		14491	43.5	-10.5	54	48.2	41.67	19.8	66.17	-	-	A	H
		15660	49.86	-24.14	74	59.02	37.88	20.34	67.38	168	36	P	H
		15660	40.9	-13.1	54	50.06	37.88	20.34	67.38	168	36	A	H
		17989	62.31	-11.69	74	59.84	49.7	22.02	69.25	-	-	P	H
		17989	48.27	-5.73	54	45.8	49.7	22.02	69.25	-	-	A	H
		4874	52.15	-21.85	74	44.28	31.2	10.31	33.64	359	160	P	V
		4874	43.14	-10.86	54	35.27	31.2	10.31	33.64	359	160	A	V
		7311	44.3	-29.7	74	59.68	36.34	14.22	65.94	-	-	P	V
		10440	49.34	-18.86	68.2	60.23	39.82	16.64	67.35	158	241	P	V
		10440	40.35	-13.65	54	51.24	39.82	16.64	67.35	158	241	A	V
		10938	51.53	-22.47	74	60.82	40.52	17.06	66.87	-	-	P	V
		10938	41.85	-12.15	54	51.14	40.52	17.06	66.87	-	-	A	V
		14491	53.11	-20.89	74	57.81	41.67	19.8	66.17	-	-	P	V
		14491	43.4	-10.6	54	48.1	41.67	19.8	66.17	-	-	A	V
		15660	49.73	-24.27	74	58.89	37.88	20.34	67.38	139	92	P	V
		15660	40.99	-13.01	54	50.15	37.88	20.34	67.38	139	92	A	V
		17967	61.87	-12.13	74	59.95	49.11	22.01	69.2	-	-	P	V
		17967	48.02	-5.98	54	46.1	49.11	22.01	69.2	-	-	A	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.

Emission above 18GHz

LTE Band 5 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(SHF)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
Simultaneously		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
LTE Band 5 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		28711.5	41.21	-26.99	68.2	39.76	40.67	24.69	54.37	-	-	P	H
		39703	50.16	-23.84	74	40.08	44.54	29.4	54.32	-	-	P	H
		39703	40.95	-13.05	54	30.87	44.54	29.4	54.32	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
		28889.1	41.43	-26.77	68.2	39.77	40.92	24.79	54.51	-	-	P	V
		39857	49.19	-24.81	74	38.92	44.5	29.41	54.1	-	-	P	V
		39857	38.09	-15.91	54	27.82	44.5	29.41	54.1	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Emission below 1GHz

LTE Band 5 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(LF)

WIFI Ant.	Note	Frequency	Level	Margin	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
Simultaneously		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
LTE Band 5 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		30.97	24.27	-15.73	40	28.89	24.24	0.74	29.64	-	-	P	H
		169.68	24.58	-18.92	43.5	36.5	15.8	1.72	29.55	-	-	P	H
		239.52	27.14	-18.86	46	37.26	17.15	2.02	29.42	-	-	P	H
		555.74	30.92	-15.08	46	30.33	25.97	3.18	28.84	-	-	P	H
		903.97	35.61	-10.39	46	30.16	29.16	4.03	28.19	-	-	P	H
		962.17	36.29	-17.71	54	28.9	30.9	4.12	28.11	-	-	P	H
													H
													H
													H
													H
													H
													H
		30.97	23.75	-16.25	40	28.37	24.24	0.74	29.64	-	-	P	V
		122.15	20.8	-22.7	43.5	31.85	17.04	1.43	29.64	-	-	P	V
		666.32	30.33	-15.67	46	28.96	26.27	3.47	28.68	-	-	P	V
		717.73	30.55	-15.45	46	28.33	26.87	3.6	28.57	-	-	P	V
		953.44	37.06	-8.94	46	29.73	30.89	4.1	28.13	-	-	P	V
		991.27	36.4	-17.6	54	29.38	30.36	4.18	28.04	-	-	P	V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.												

<Sample 4>

802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 06 2437MHz		2354.8	56.73	-17.27	74	46.17	27.48	16.55	33.47	300	197	P	H
		2356.34	47.5	-6.5	54	36.95	27.47	16.56	33.48	300	197	A	H
	*	2437	115.36	41.36	74	104.98	27.23	16.67	33.52	300	197	P	H
	*	2437	112.42	58.42	54	102.04	27.23	16.67	33.52	300	197	A	H
		2494.26	54.67	-19.33	74	44.18	27.29	16.75	33.55	300	197	P	H
		2487.89	48.17	-5.83	54	37.69	27.28	16.74	33.54	300	197	A	H
		2314.06	55.04	-18.96	74	44.2	27.79	16.5	33.45	311	100	P	V
		2316.72	47.9	-6.1	54	37.08	27.77	16.5	33.45	311	100	A	V
	*	2437	101.76	27.76	74	91.38	27.22	16.68	33.52	311	100	P	V
	*	2437	98.76	44.76	54	88.39	27.22	16.67	33.52	311	100	A	V
		2483.62	55.17	-18.83	74	44.7	27.27	16.74	33.54	311	100	P	V
		2488.87	48	-6	54	37.52	27.28	16.74	33.54	311	100	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 -5150~5250 MHz

WIFI 802. 11ac VHT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		5143.78	58.32	-15.68	74	49.51	32	10.46	33.65	100	346	P	H
		5147.16	52.22	-1.78	54	43.41	32	10.46	33.65	100	346	A	H
	*	5220	116.98	48.78	68.2	108.36	31.72	10.54	33.64	100	346	P	H
	*	5220	108.26	54.26	54	99.64	31.72	10.54	33.64	100	346	A	H
		5356.4	54.41	-19.59	74	45.82	31.44	10.76	33.61	100	346	P	H
		5357.8	52.12	-1.88	54	43.51	31.45	10.77	33.61	100	346	A	H
802.11ac													H
VHT20													H
CH 44		5122.72	56.32	-17.68	74	47.54	32	10.44	33.66	400	297	P	V
5220MHz		5087.36	48.48	-5.52	54	39.81	31.92	10.41	33.66	400	297	A	V
	*	5220	113.7	45.5	68.2	105.08	31.72	10.54	33.64	400	297	P	V
	*	5220	105.47	51.47	54	96.85	31.72	10.54	33.64	400	297	A	V
		5445.16	52	-22	74	42.85	31.88	10.86	33.59	400	297	P	V
		5371.8	47.57	-6.43	54	38.87	31.53	10.78	33.61	400	297	A	V
													V
													V

Remark

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

802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(Harmonic @ 3m)

WIFI Ant. Simultaneously	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20_ TX_Ch06 + 802.11ac VHT20_ TX_Ch44		4874	58.22	-15.78	74	50.35	31.2	10.31	33.64	100	346	P	H
		4874	49.45	-4.55	54	41.58	31.2	10.31	33.64	100	346	A	H
		7311	44.88	-29.12	74	60.26	36.34	14.22	65.94	-	-	P	H
		10440	49.31	-18.89	68.2	60.2	39.82	16.64	67.35	400	122	P	H
		10440	40.36	-13.64	54	51.25	39.82	16.64	67.35	400	122	A	H
		10971	51.44	-22.56	74	60.73	40.46	17.09	66.84	-	-	P	H
		10971	41.96	-12.04	54	51.25	40.46	17.09	66.84	-	-	A	H
		14491	51.94	-22.06	74	56.64	41.67	19.8	66.17	-	-	P	H
		14491	42.75	-11.25	54	47.45	41.67	19.8	66.17	-	-	A	H
		15660	48.56	-25.44	74	57.72	37.88	20.34	67.38	100	66	P	H
		15660	37.69	-16.31	54	46.85	37.88	20.34	67.38	100	66	A	H
		17945	61.03	-12.97	74	59.67	48.51	21.99	69.14	-	-	P	H
		17945	48.62	-5.38	54	47.26	48.51	21.99	69.14	-	-	A	H
		4874	52.63	-21.37	74	44.76	31.2	10.31	33.64	400	122	P	V
		4874	43.72	-10.28	54	35.85	31.2	10.31	33.64	400	122	A	V
		7311	44.51	-29.49	74	59.89	36.34	14.22	65.94	-	-	P	V
		10440	50.27	-17.93	68.2	61.16	39.82	16.64	67.35	100	75	P	V
		10440	41.43	-12.57	54	52.32	39.82	16.64	67.35	100	75	A	V
		10927	51.38	-22.62	74	60.66	40.55	17.05	66.88	-	-	P	V
		10927	42.38	-11.62	54	51.66	40.55	17.05	66.88	-	-	A	V
		14480	52.35	-21.65	74	57.1	41.64	19.79	66.18	-	-	P	V
		14480	43.79	-10.21	54	48.54	41.64	19.79	66.18	-	-	A	V
		15660	48.54	-25.46	74	57.7	37.88	20.34	67.38	300	180	P	V
		15660	39.25	-14.75	54	48.41	37.88	20.34	67.38	300	180	A	V
		17945	60.76	-13.24	74	59.4	48.51	21.99	69.14	-	-	P	V
		17945	50.62	-3.38	54	49.26	48.51	21.99	69.14	-	-	A	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.

Emission above 18GHz

802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2> (SHF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
Simultaneously		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20_ TX_Ch06 + 802.11ac VHT20_ TX_Ch44		28411.8	41.5	-26.7	68.2	40.3	40.32	14.97	54.09	-	-	P	H
		39725	48.87	-25.13	74	38.77	44.52	19.86	54.28	-	-	P	H
		39725	38.66	-15.34	54	28.56	44.52	19.86	54.28	-	-	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
		28833.6	41.52	-26.68	68.2	39.94	40.83	15.22	54.47	-	-	P	V
		39241	49.31	-24.69	74	39.83	44.46	19.83	54.81	-	-	P	V
		39241	40.43	-13.57	54	30.95	44.46	19.83	54.81	-	-	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.

Emission below 1GHz

802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2> (LF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
Simultaneously		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44		30.97	23.58	-16.42	40	28.2	24.24	0.78	29.64	-	-	P	H
		169.68	24.13	-19.37	43.5	36.05	15.8	1.83	29.55	-	-	P	H
		475.23	29.86	-16.14	46	31.98	23.76	3.16	29.04	-	-	P	H
		843.83	34.68	-11.32	46	29.93	28.9	4.25	28.4	-	-	P	H
		855.47	35.99	-10.01	46	30.85	29.23	4.28	28.37	-	-	P	H
		966.05	36.93	-17.07	54	29.52	30.89	4.62	28.1	-	-	P	H
													H
													H
													H
													H
													H
													H
		30.97	23.24	-16.76	40	27.86	24.24	0.78	29.64	-	-	P	V
		121.18	19.61	-23.89	43.5	30.54	17.17	1.54	29.64	-	-	P	V
		567.38	29.51	-16.49	46	28.81	26.06	3.49	28.85	-	-	P	V
		839.95	34.93	-11.07	46	30.29	28.81	4.24	28.41	-	-	P	V
		953.44	35.91	-10.09	46	28.58	30.89	4.57	28.13	-	-	P	V
		966.05	36.4	-17.6	54	28.99	30.89	4.62	28.1	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against limit line.
3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.

Note symbol

*	**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	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b 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. Margin(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. Margin(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. Margin(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

Appendix B. Radiated Spurious Emission Plots

Test Engineer :	Jesse Fan, Tim Lee and Jack Cheng	**Temperature :**	22.1~23.1°C
		Relative Humidity :	55~60%

Note symbol

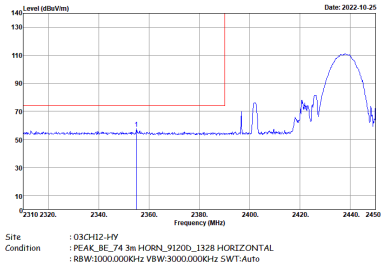
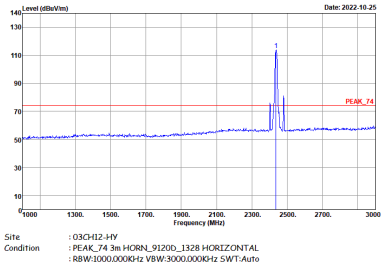
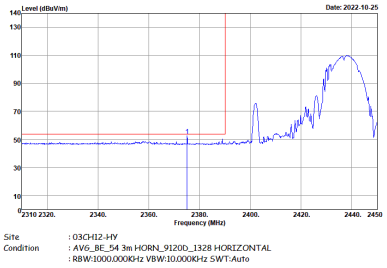
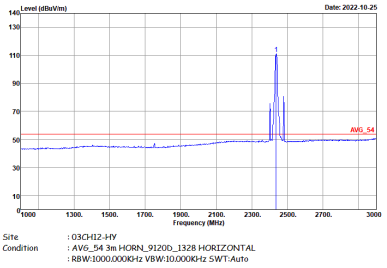
-L	**Low channel location**
-R	**High channel location**

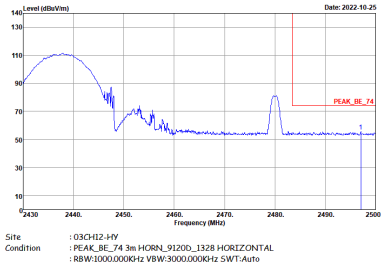
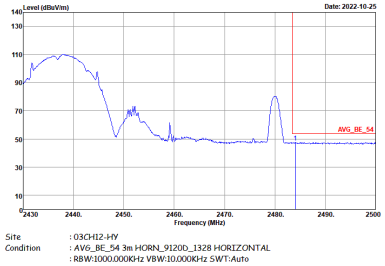
<Sample 1>

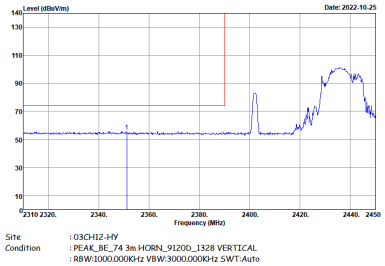
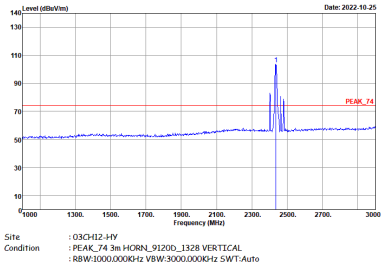
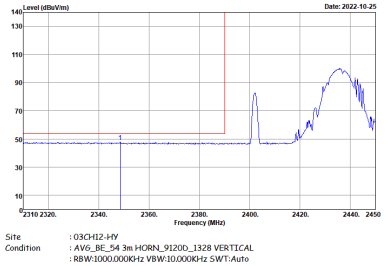
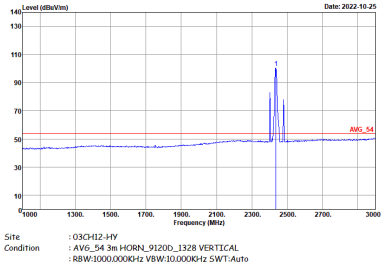
LTE Band 13 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

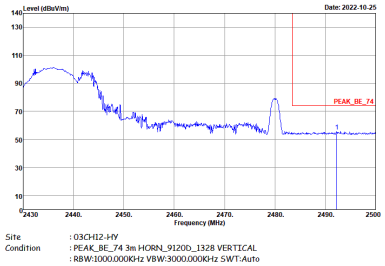
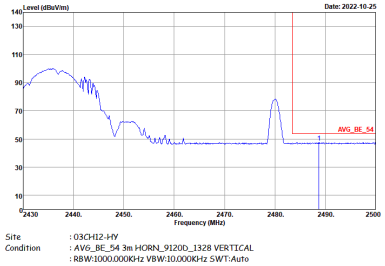
2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		

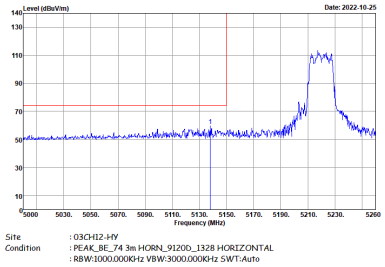
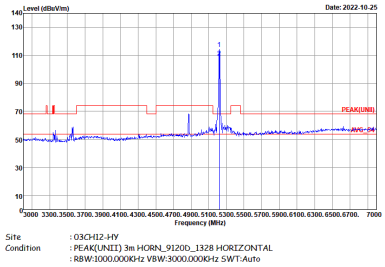
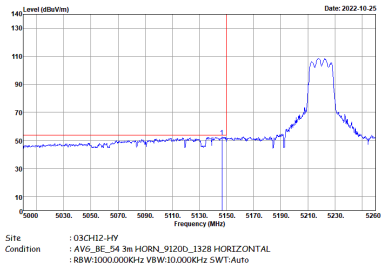
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

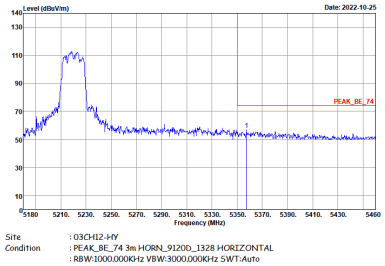
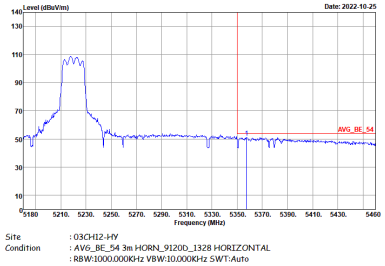
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		

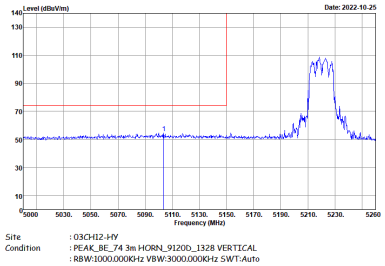
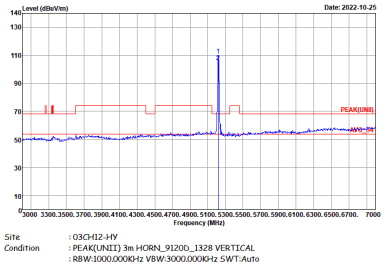
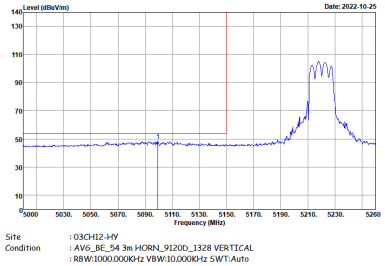
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

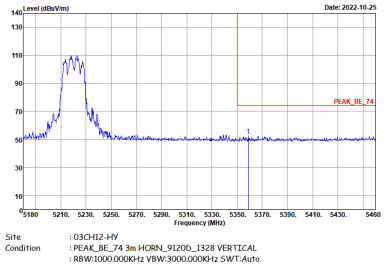
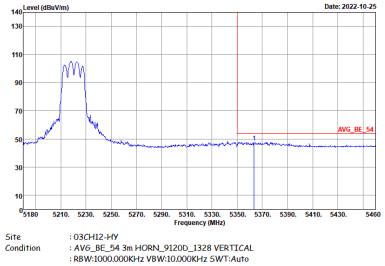
Band 1 - 5150~5250MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

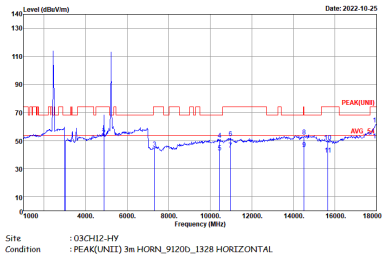
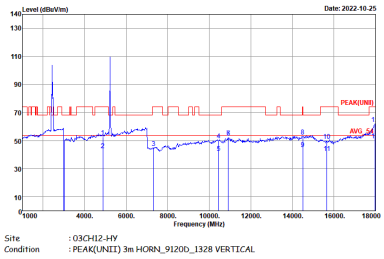
WIFI	Band 1- 5150~5250 MHz Band Edge @ 3m	
ANT	802. 11ac VHT20 CH44 5220MHz	
1+2	Horizontal	Fundamental
Peak		
Avg		Left blank

WIFI	Band 1- 5150~5250 MHz Band Edge @ 3m	
ANT	802. 11ac VHT20 CH44 5220MHz	
1+2	Vertical	Fundamental
Peak		Left blank
Avg		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH44 5220MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

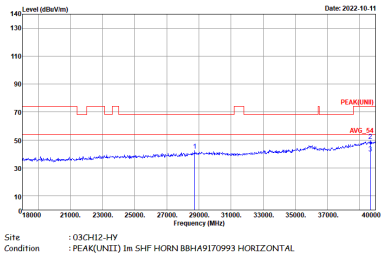
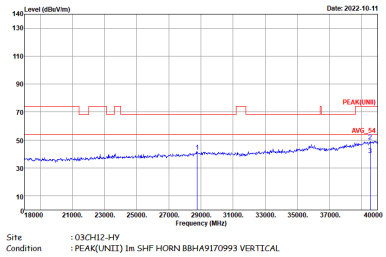
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH44 5220MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

LTE Band 13 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2> (Harmonic @ 3m)

ANT	LTE Band 13 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
Peak Avg.		

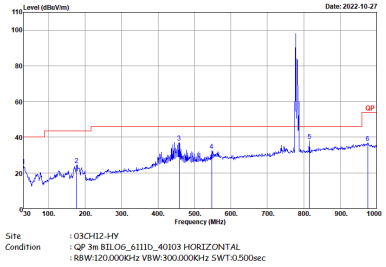
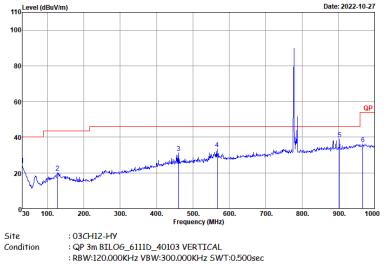
Emission above 18GHz

LTE Band 13 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2> (SHF)

ANT	LTE Band 13 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

LTE Band 13 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2> (LF)

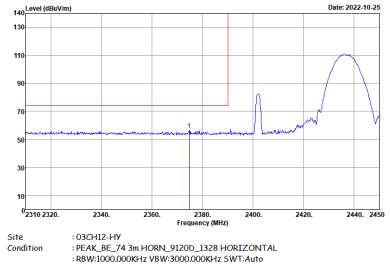
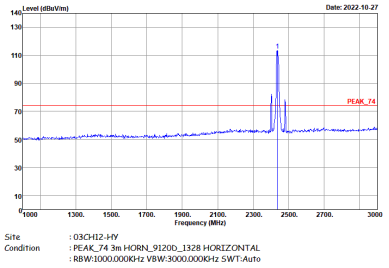
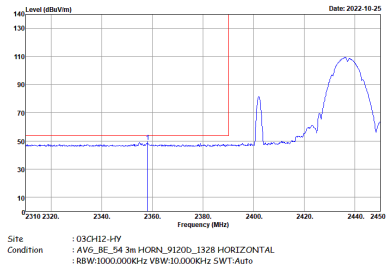
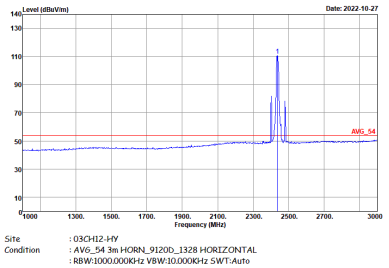
ANT	LTE Band 13 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
QP / Peak		

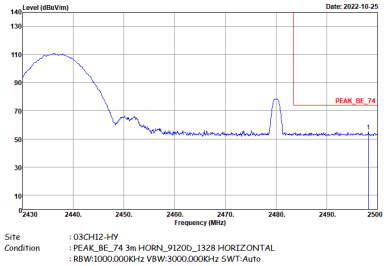
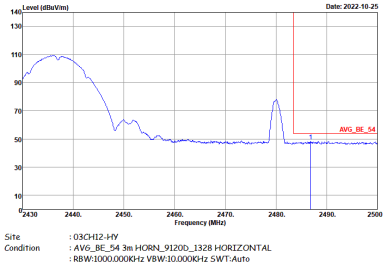
<Sample 2>

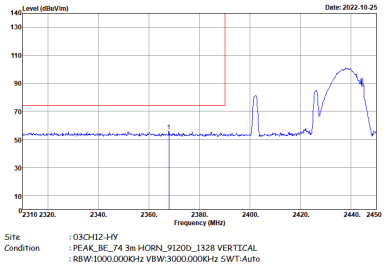
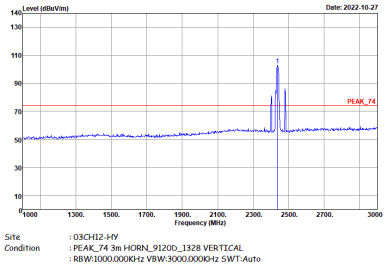
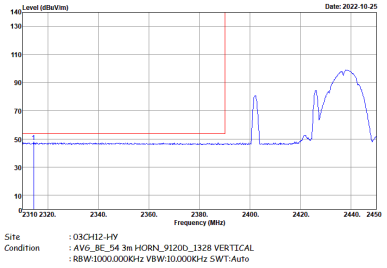
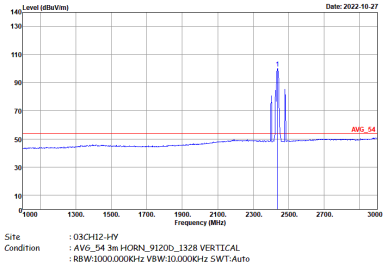
LTE Band 12 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

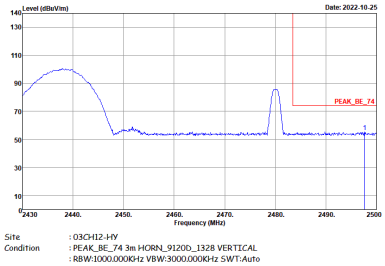
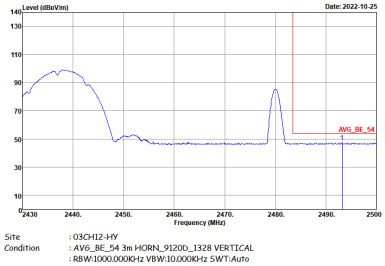
2.4GHz 2400~2483.5MHz

WIFI 802. 11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		

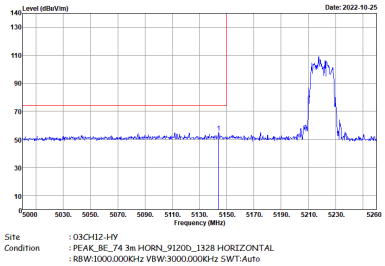
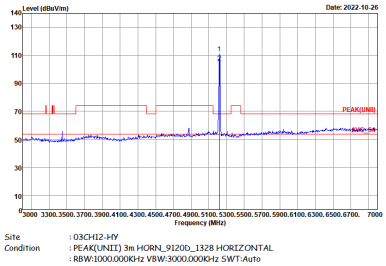
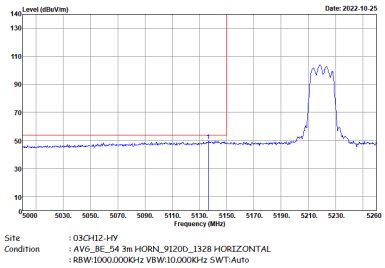
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

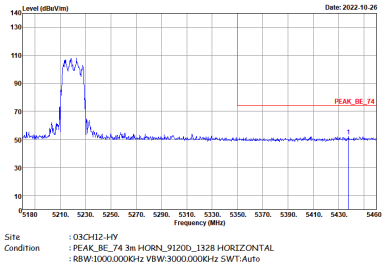
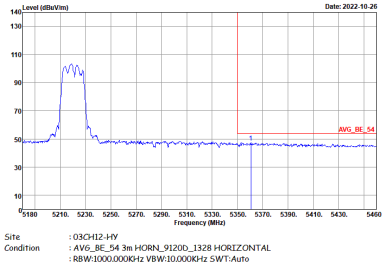
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		

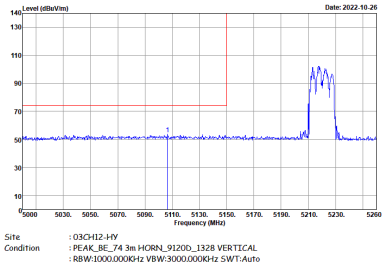
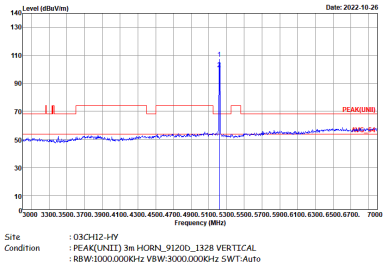
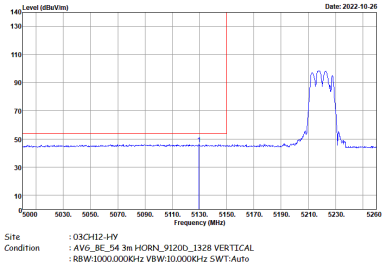
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

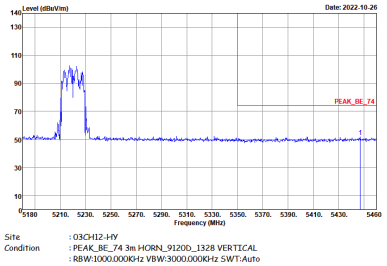
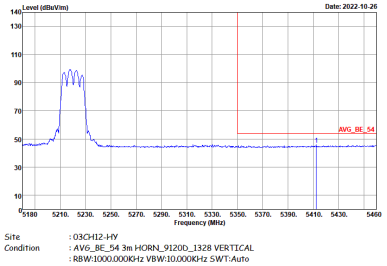
Band 1 - 5150~5250MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Band 1- 5150~5250 MHz Band Edge @ 3m	
ANT	802. 11ac VHT20 CH44 5220MHz	
1+2	Horizontal	Fundamental
Peak		
Avg		Left blank

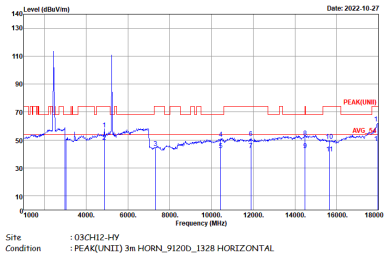
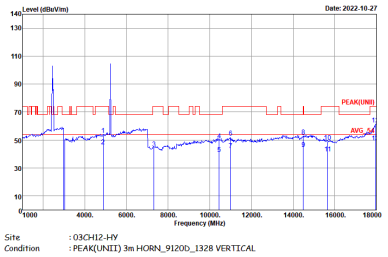
WIFI	Band 1- 5150~5250 MHz Band Edge @ 3m	
ANT	802. 11ac VHT20 CH44 5220MHz	
1+2	Vertical	Fundamental
Peak		Left blank
Avg		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH44 5220MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH44 5220MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

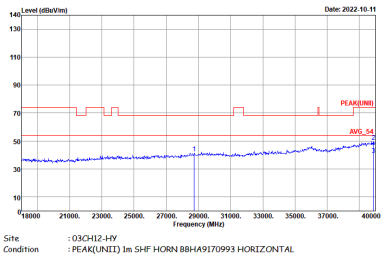
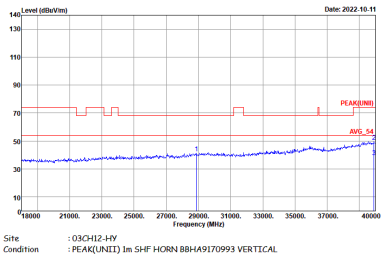
LTE Band 12 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(Harmonic @ 3m)

ANT	LTE Band 12 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
Peak Avg.		

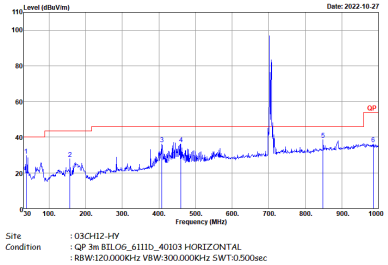
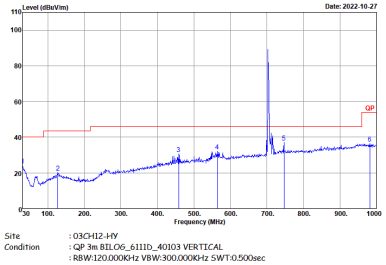
Emission above 18GHz

LTE Band 12 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2> (SHF)

ANT	LTE Band 12 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

LTE Band 12 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2> (LF)

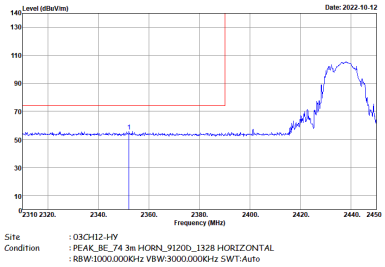
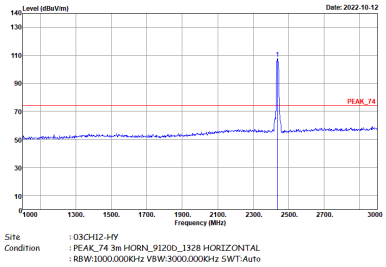
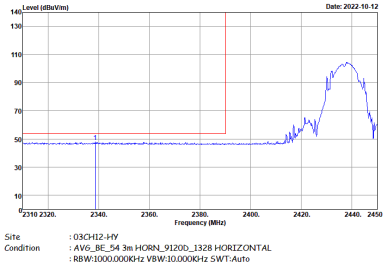
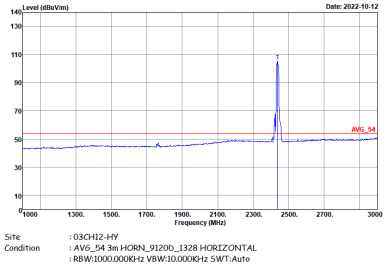
ANT	LTE Band 12 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
QP / Peak		

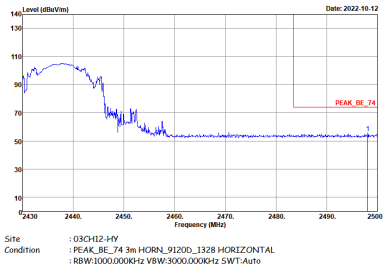
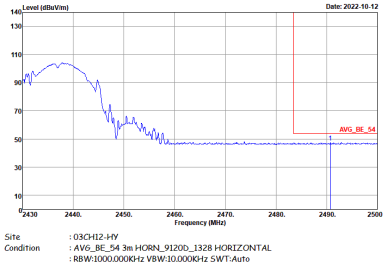
<Sample 3>

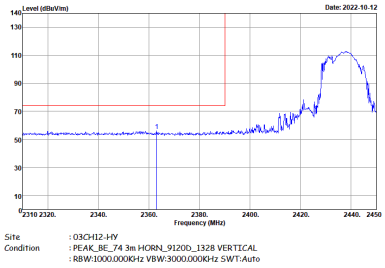
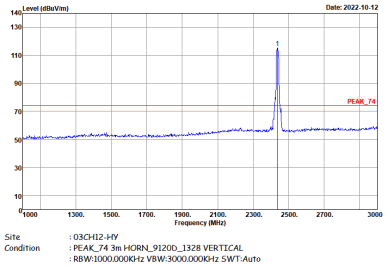
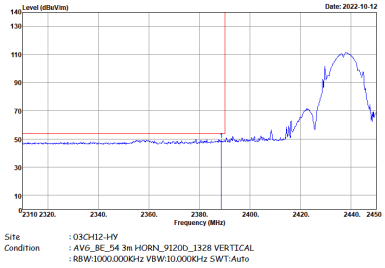
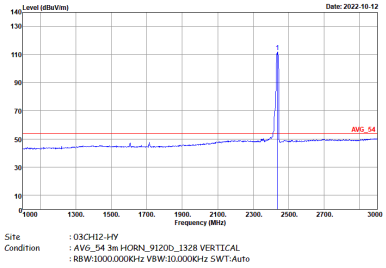
LTE Band 5 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

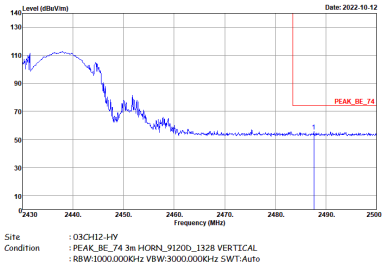
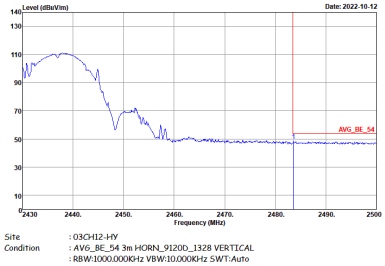
2.4GHz 2400~2483.5MHz

WIFI 802. 11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		

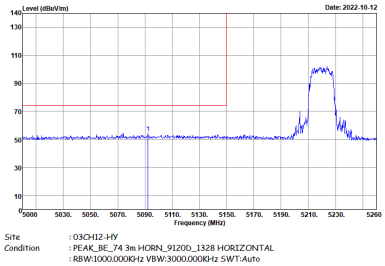
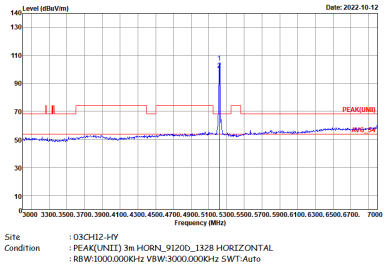
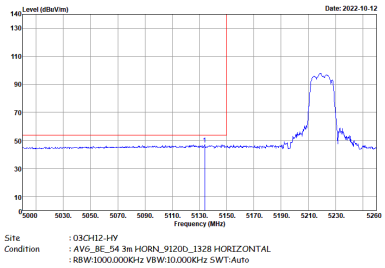
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

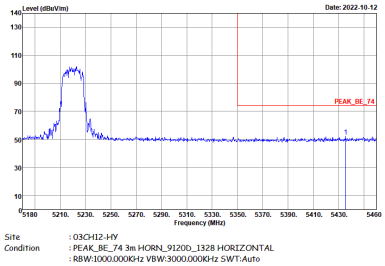
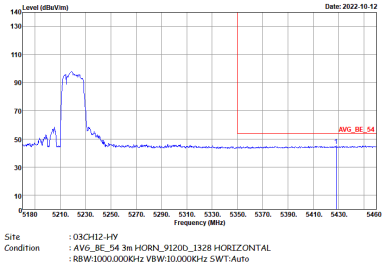
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		

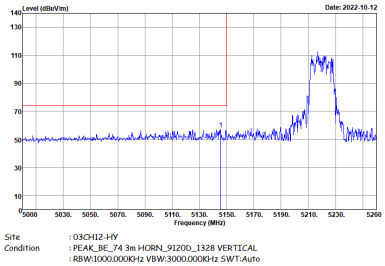
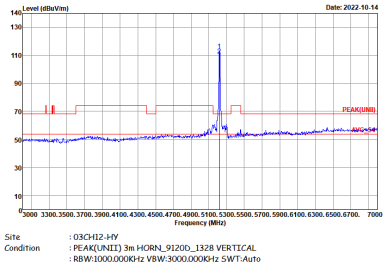
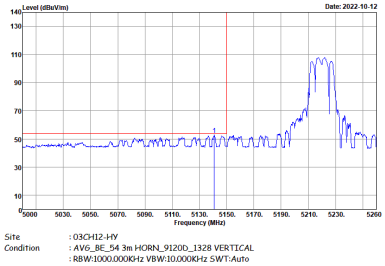
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

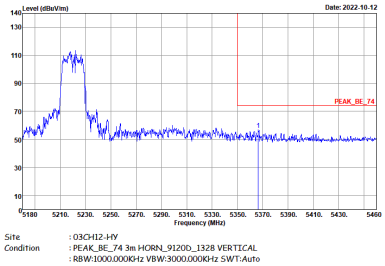
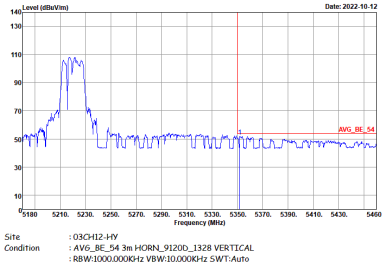
Band 1 - 5150~5250MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Band 1- 5150~5250 MHz Band Edge @ 3m	
ANT	802. 11ac VHT20 CH44 5220MHz	
1+2	Horizontal	Fundamental
Peak		
Avg		Left blank

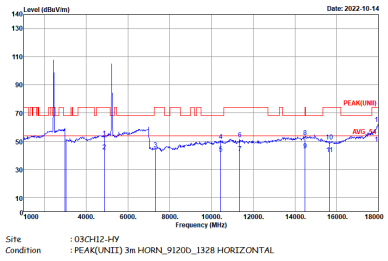
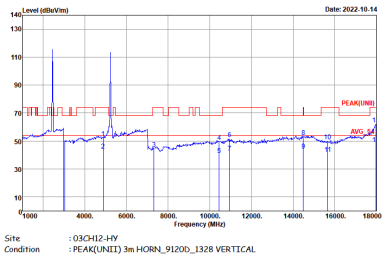
WIFI	Band 1- 5150~5250 MHz Band Edge @ 3m	
ANT	802. 11ac VHT20 CH44 5220MHz	
1+2	Vertical	Fundamental
Peak		Left blank
Avg		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH44 5220MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH44 5220MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

LTE Band 5 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

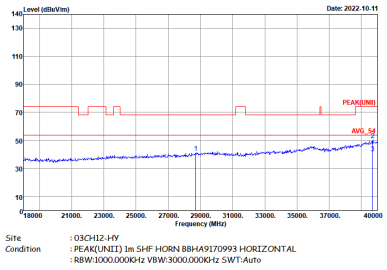
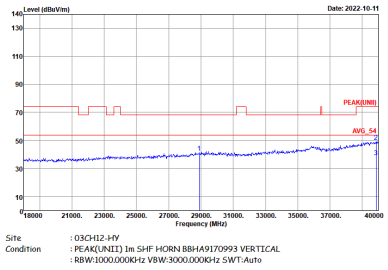
(Harmonic @ 3m)

ANT	LTE Band 5 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
Peak Avg.		

Emission above 18GHz

LTE Band 5 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

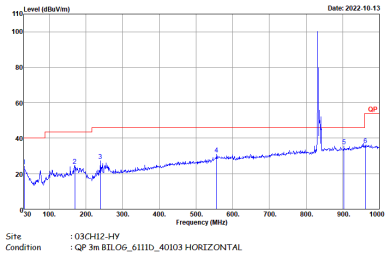
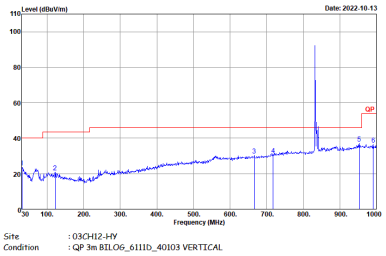
(SHF)

ANT	LTE Band 5 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

LTE Band 5 + 802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(LF)

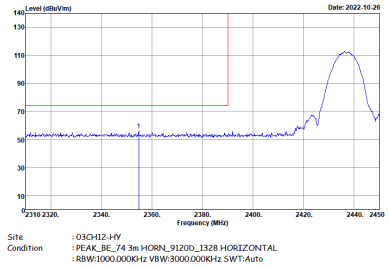
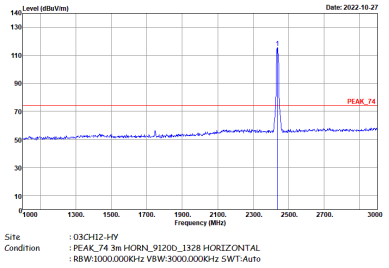
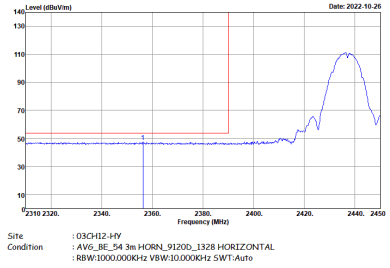
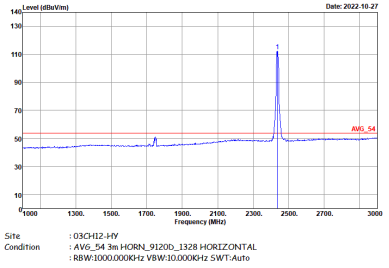
ANT	LTE Band 5 + 802.11n HT20_TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
QP / Peak		

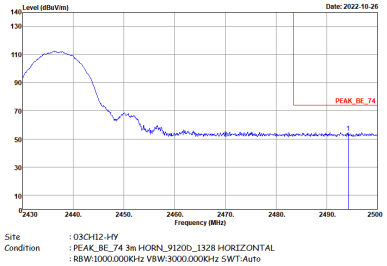
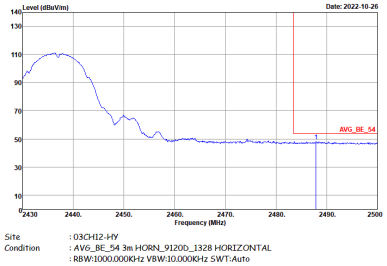
<Sample 4>

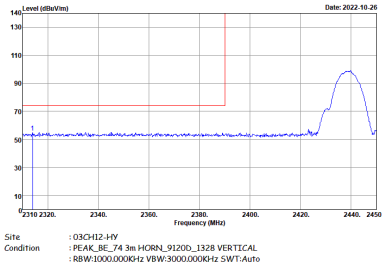
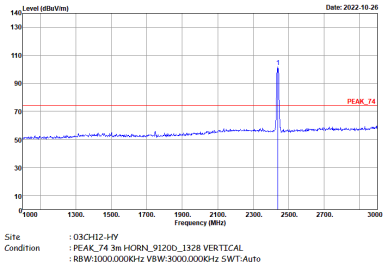
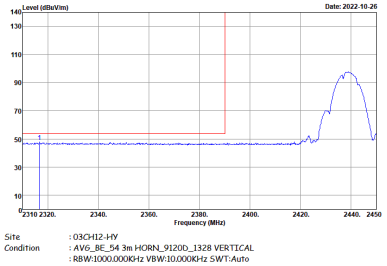
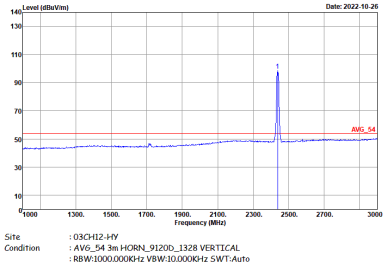
802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

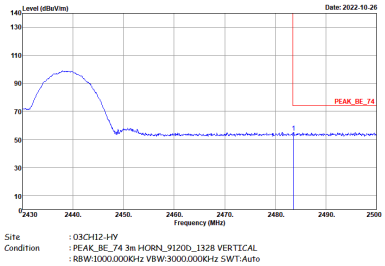
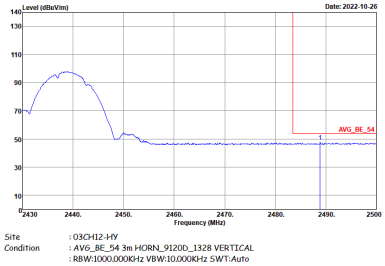
2.4GHz 2400~2483.5MHz

WIFI 802. 11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		

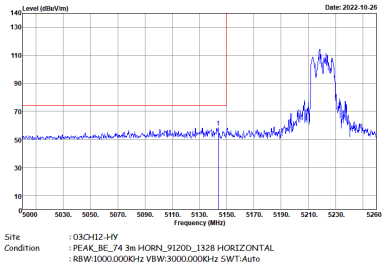
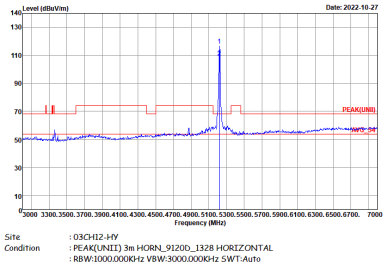
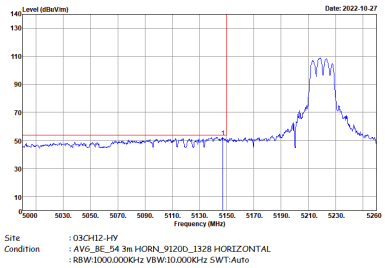
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

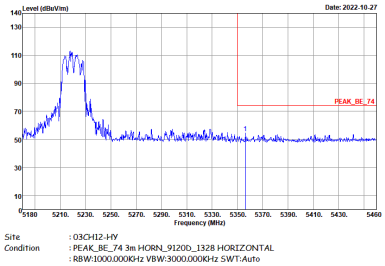
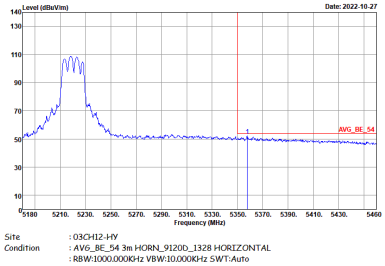
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		

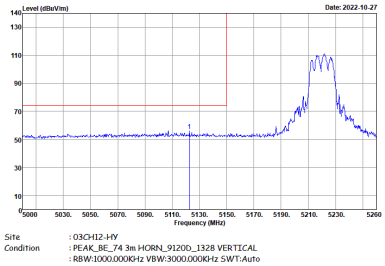
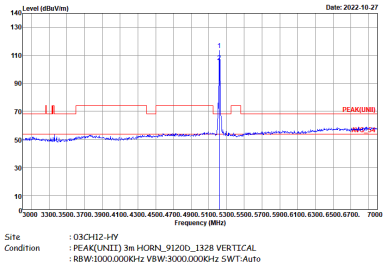
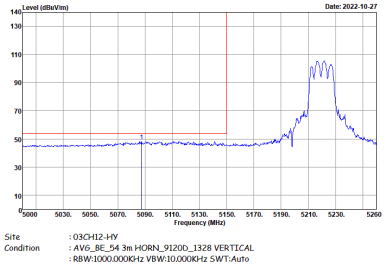
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802. 11n HT20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

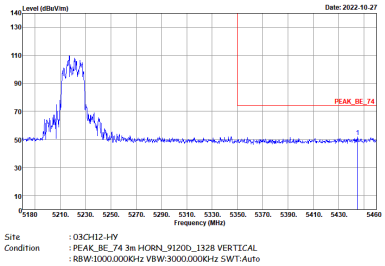
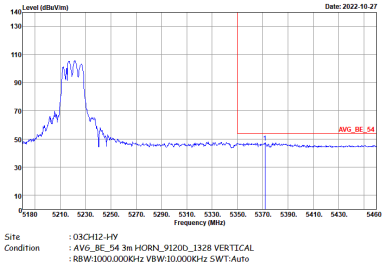
Band 1 - 5150~5250MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Band 1- 5150~5250 MHz Band Edge @ 3m	
ANT	802. 11ac VHT20 CH44 5220MHz	
1+2	Horizontal	Fundamental
Peak		
Avg		Left blank

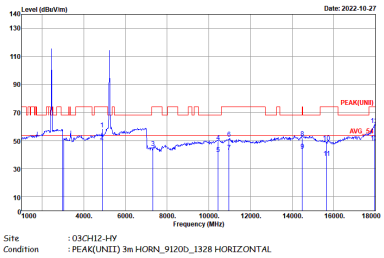
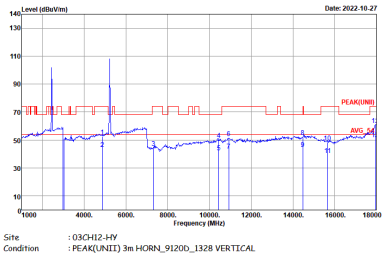
WIFI	Band 1- 5150~5250 MHz Band Edge @ 3m	
ANT	802. 11ac VHT20 CH44 5220MHz	
1+2	Vertical	Fundamental
Peak		Left blank
Avg		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH44 5220MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH44 5220MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

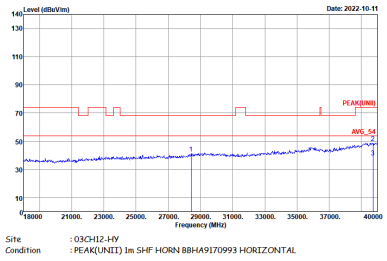
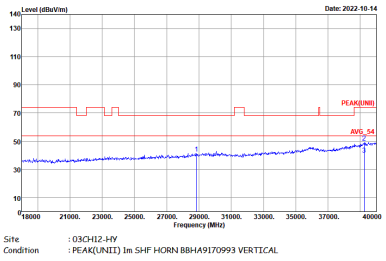
(Harmonic @ 3m)

ANT	802.11n HT20_ TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
Peak Avg.		

Emission above 18GHz

802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(SHF)

ANT	802.11n HT20_ TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

802.11n HT20_TX_Ch06 MIMO <Ant. 1+2> + 802.11ac VHT20_TX_Ch44 MIMO <Ant. 1+2>

(LF)

ANT	802.11n HT20_ TX_Ch06 + 802.11ac VHT20_TX_Ch44	
Simultaneously	Horizontal	Vertical
QP / Peak