FCC RADIO TEST REPORT

FCC ID	:	PY7-23855M
Equipment	:	GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac/ax, GPS, and NFC
Brand Name	:	Sony
Model Name	:	PM-1324-BV
Applicant	:	Sony Mobile Communications Inc. 4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Manufacturer	:	Sony Mobile Communications Inc. 4-12-3 Higashi-Shinagawa, Shinagawa-ku, Tokyo, 140-0002, Japan
Standard	:	FCC Part 15 Subpart E §15.407

The product was received on Jul. 10, 2020 and testing was started from Jul. 25, 2020 and completed on Aug. 14, 2020. We, SPORTON INTERNATIONAL INC., EMC & Wireless Communications 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 spot check data report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR042245-02E	01	Initial issue of report	Aug. 24, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
-	15.403(i)	26dB Bandwidth	-	See Note
-	2.1049	99% Occupied Bandwidth	-	See Note
3.1	15.407(a)	Maximum Conducted Output Power	Pass	-
-	15.407(a)	Power Spectral Density	-	See Note
3.2	15.407(b)	Unwanted Emissions	Pass	Under limit 4.09 dB at 10625.000 MHz
-	15.207	AC Conducted Emission	-	See Note
3.3	15.407(c)	Automatically Discontinue Transmission	Pass	-
3.4	15.203 15.407(a)	Antenna Requirement	Pass	-

Note: The RF circuit, output power level and antenna performance is the same in WLAN function across all two FCC ID PY7-23855M and PY7-08372L, since the change, only verify RF output power and radiated spurious emission test data the worst mode was reported in this report.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Ruby Zou

1 General Description

1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n/ac/ax, FM Receiver, NFC, and GNSS.

Product Specification subjective to this standard	
Antenna Type	**<Ant. 0>:** Loop Antenna **<Ant. 1>:** Loop Antenna
Antenna Gain	**<5150 MHz ~ 5250 MHz>** **<Ant. 0>:** -2.90 dBi **<Ant. 1>:** -3.30 dBi **<5250 MHz ~ 5350 MHz>** **<Ant. 0>:** -3.00 dBi **<Ant. 1>:** -2.10 dBi **<5470 MHz ~ 5725 MHz>** **<Ant. 0>:** -2.40 dBi **<Ant. 1>:** -2.90 dBi

EUT Information List			
HW Version	**SW Version**	**S/N**	**Performed Test Item**
A	1.130	QV71004F3Z	RF conducted measurement
		QV71009Y3Z	Radiated Spurious Emission

Accessory List	
AC Adapter	Model Name : UCH32
	S/N: 6218W30200215
Earphone	Model Name : STH40D
	S/N : N/A
USB Cable	Model Name : UCB24
	S/N : N/A

Note:

1. Above EUT list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test, and the serial number of each type of accessories is listed in each section of this report.
3. For other wireless features of this EUT, test report will be issued separately.

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. EMC & Wireless Communications Laboratory	
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	**Sporton Site No.**	
	TH05-HY	DFS02-HY

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH15-HY

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

FCC designation No.: TW1190 and TW0007

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

Remark:

1. All 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

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.

2.1 Carrier Frequency and Channel

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

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

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

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122#	5610	128	5640

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138#	5690	144	5720
	142*	5710		

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40, 802.11ac VHT40 and 802.11ax HE80
2. The above Frequency and Channel in "#" were 802.11ac VHT80 and 802.11ax HE80

2.2 Test Mode

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

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

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz
		802.11ac VHT80	802.11ac VHT80
L	Low	-	-
M	Middle	42	58
H	High	-	-

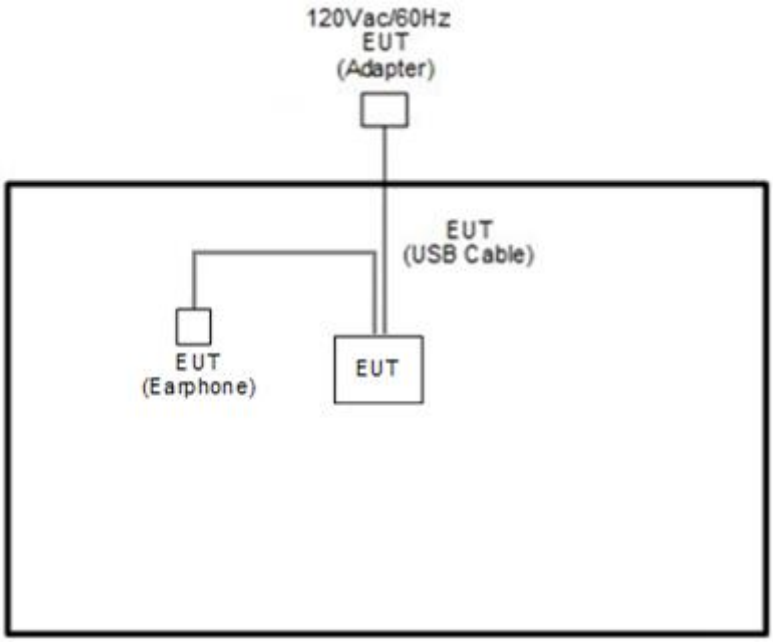
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ax HE20	802.11ax HE20	802.11ax HE20
L	Low	36	-	100
M	Middle	-	-	-
H	High	-	64	-

Ch. #		Band III：5470-5725MHz
		802.11ax HE80
L	Low	106
M	Middle	-
H	High	-

Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System

<WLAN Tx Mode >



2.4 EUT Operation Test Setup

The RF test items, utility “FTMC_bridge_v0.39” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

3 Test Result

3.1 Maximum Conducted Output Power Measurement

3.1.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For the 5.15–5.25 GHz bands:

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

For the 5.25–5.725 GHz bands:

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

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

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

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

3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

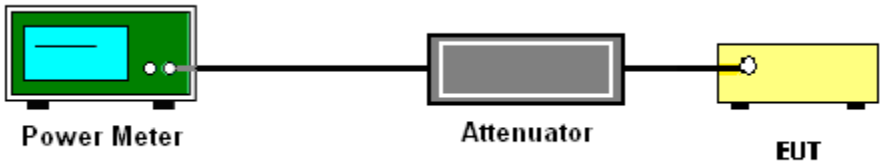
The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using an 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.

For Straddle Channel, according to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, if the power and PSD of the devices are uniform and comply with the lower limits specified for the U-NII-2 bands, a single measurement over the entire emission bandwidth can be performed to show compliance.

3.1.4 Test Setup



3.1.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.2 Unwanted Emissions Measurement

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

3.2.1 Limit of Unwanted Emissions

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

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

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

(2) Unwanted spurious emissions 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

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

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

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

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section G) Unwanted emissions measurement.

(1) Procedure for Unwanted Emissions Measurements Below 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

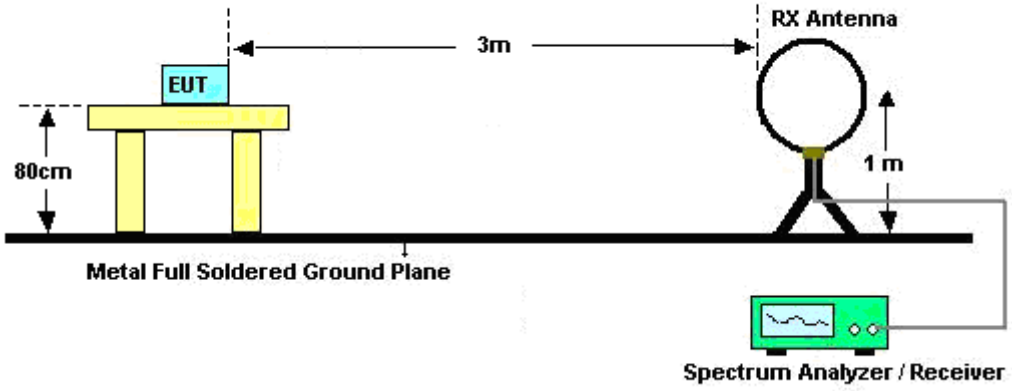
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

- 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.

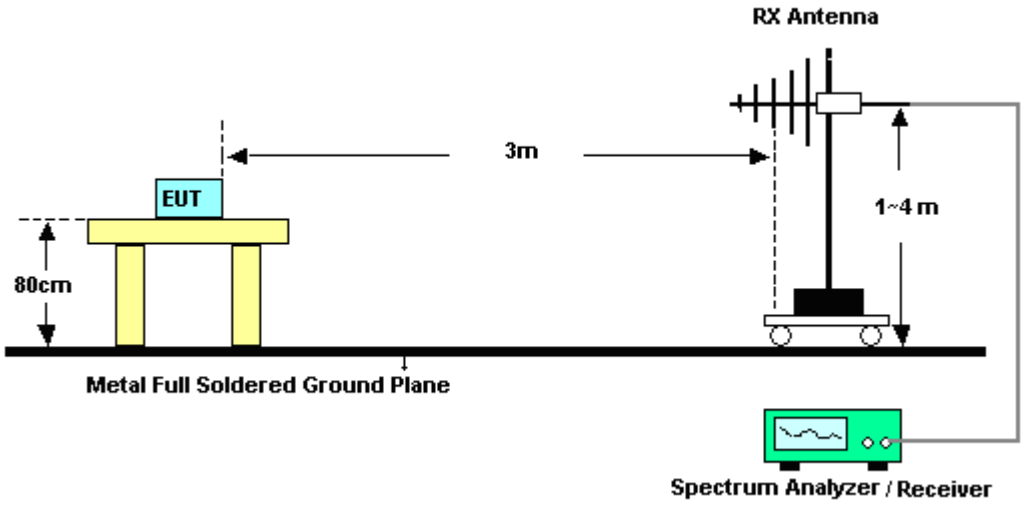
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.2.4 Test Setup

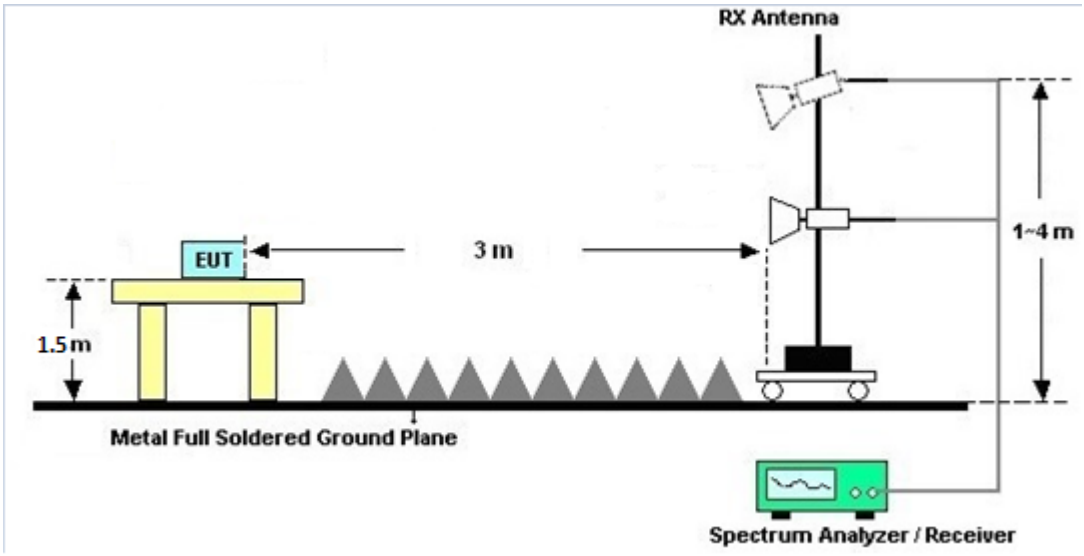
For radiated emissions below 30MHz



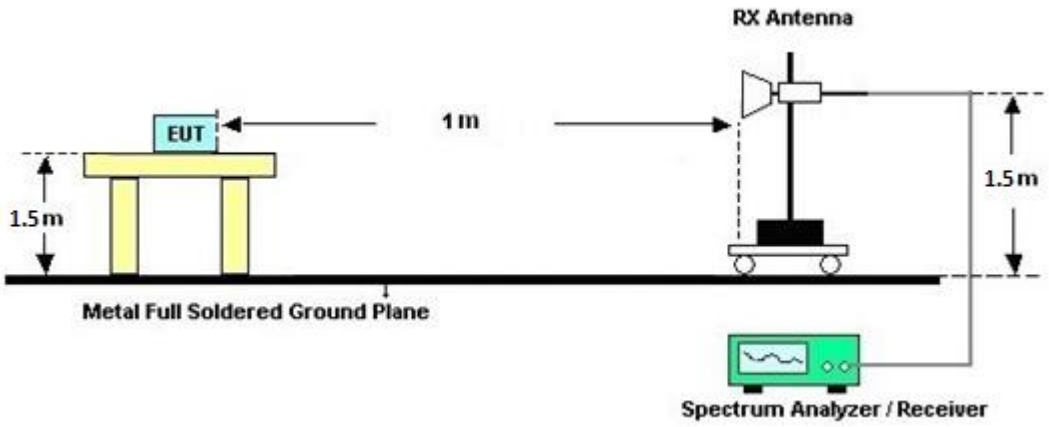
For radiated emissions from 30MHz to 1GHz



For radiated emissions from 1GHz to 18GHz



For radiated emissions above 18GHz



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

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.2.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B and C.

3.3 Automatically Discontinue Transmission

3.3.1 Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Result of Automatically Discontinue Transmission

EUT is verified this characteristic during the function check of normal sample associated with an access point:

A. Information start: make EUT supply information to the access point.

B. Information stop: stop supplying information to the access point.

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving.

C. Information start: make EUT supply information to the access point again.

The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

5180MHz

Note : The control / signalling information during the period B is precluded.

3.4 Antenna Requirements

3.4.1 Standard Applicable

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

3.4.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.4.3 Antenna Gain

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

4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 02. 2020	Aug. 04, 2020~ Aug. 05, 2020	Mar. 01. 2021	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO10	10MHz~6GHz	Dec. 23, 2019	Aug. 04, 2020~ Aug. 05, 2020	Dec. 22, 2020	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10Hz~40GHz	Nov. 15, 2019	Aug. 04, 2020~ Aug. 05, 2020	Nov. 14, 2020	Conducted (TH05-HY)
Switch Box & RF Cable	Burgeon	ETF-058	EC1300484	N/A	Aug. 22, 2019	Aug. 04, 2020~ Aug. 05, 2020	Aug. 21, 2020	Conducted (TH05-HY)
DC Power Supply	GW Instek	GPE2323	GEU810968	N/A	Jul. 30, 2020	Aug. 04, 2020~ Aug. 05, 2020	Jul. 29, 2021	Conducted (TH05-HY)
Spectrum Analyzer	Keysight	N9010A	MY56070412	10Hz~7GHz	Aug. 27, 2019	Jul. 25, 2020	Aug. 26, 2020	Conducted (DFS02-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jan. 09, 2020	Aug. 10, 2020~ Aug. 14, 2020	Jan. 08, 2021	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&00800N1D01N-06	41912&05	30MHz to 1GHz	Feb. 09, 2020	Aug. 10, 2020~ Aug. 14, 2020	Feb. 08, 2021	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 27, 2019	Aug. 10, 2020~ Aug. 14, 2020	Dec. 26, 2020	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1620	1-18GHz	Oct. 28, 2019	Aug. 10, 2020~ Aug. 14, 2020	Oct. 27, 2020	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Dec. 10, 2019	Aug. 10, 2020~ Aug. 14, 2020	Dec. 09, 2020	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055006	1GHz~18GHz	May 07, 2020	Aug. 10, 2020~ Aug. 14, 2020	May 06, 2021	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 23, 2019	Aug. 10, 2020~ Aug. 14, 2020	Aug. 22, 2020	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 13, 2019	Aug. 10, 2020~ Aug. 14, 2020	Dec. 12, 2020	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A (MXE)	MY54130085	20MHz~8.4GHz	Nov. 01, 2019	Aug. 10, 2020~ Aug. 14, 2020	Oct. 31, 2020	Radiation (03CH15-HY
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	May 04, 2020	Aug. 10, 2020~ Aug. 14, 2020	May 03, 2021	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Aug. 10, 2020~ Aug. 14, 2020	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Aug. 10, 2020~ Aug. 14, 2020	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24 (k5)	RK-000451	N/A	N/A	Aug. 10, 2020~ Aug. 14, 2020	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY36980/4	30M-18G	Apr. 14, 2020	Aug. 10, 2020~ Aug. 14, 2020	Apr. 13, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9838/4PE	30M-18G	Apr. 14, 2020	Aug. 10, 2020~ Aug. 14, 2020	Apr. 13, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY37710/4	30M-18G	Apr. 17, 2020	Aug. 10, 2020~ Aug. 14, 2020	Apr. 16, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz-40GHz	Feb. 25, 2020	Aug. 10, 2020~ Aug. 14, 2020	Feb. 24, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz-40GHz	Feb. 25, 2020	Aug. 10, 2020~ Aug. 14, 2020	Feb. 24, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN4	1.53G Low Pass	Jul. 03, 2020	Aug. 10, 2020~ Aug. 14, 2020	Jul. 02, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN6	6.75GHz High Pass Filter	Jul. 03, 2020	Aug. 10, 2020~ Aug. 14, 2020	Jul. 02, 2021	Radiation (03CH15-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))	**5.0**

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0**

Appendix A. Test Result of Conducted Test Items

Test Engineer:	HaoHsiang Chang	Temperature:	23.5~23.6	°C
Test Date:	2020/08/04~2020/08/05	Relative Humidity:	49.0~53.0	%

TEST RESULTS DATA
Average Power Table

FCC Band I single antenna													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	36	5180	11.10	11.00		24.00	24.00	-2.90	-3.30		Pass
11a	6Mbps	1	44	5220	11.10	10.80		24.00	24.00	-2.90	-3.30		Pass
11a	6Mbps	1	48	5240	11.10	10.80		24.00	24.00	-2.90	-3.30		Pass
HT20	MCS0	1	36	5180	11.00	11.10		24.00	24.00	-2.90	-3.30		Pass
HT20	MCS0	1	44	5220	10.80	10.80		24.00	24.00	-2.90	-3.30		Pass
HT20	MCS0	1	48	5240	11.00	10.80		24.00	24.00	-2.90	-3.30		Pass
HT40	MCS0	1	38	5190	11.00	11.20		24.00	24.00	-2.90	-3.30		Pass
HT40	MCS0	1	46	5230	10.90	11.00		24.00	24.00	-2.90	-3.30		Pass
VHT20	MCS0	1	36	5180	10.90	11.00		24.00	24.00	-2.90	-3.30		Pass
VHT20	MCS0	1	44	5220	10.70	10.70		24.00	24.00	-2.90	-3.30		Pass
VHT20	MCS0	1	48	5240	10.90	10.70		24.00	24.00	-2.90	-3.30		Pass
VHT40	MCS0	1	38	5190	10.90	11.10		24.00	24.00	-2.90	-3.30		Pass
VHT40	MCS0	1	46	5230	10.80	10.90		24.00	24.00	-2.90	-3.30		Pass
VHT80	MCS0	1	42	5210	10.90	11.00		24.00	24.00	-2.90	-3.30		Pass

FCC Band I MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	36	5180	11.20	11.10	14.16	24.00		-2.90			Pass
11a	6Mbps	2	44	5220	10.90	11.10	14.01	24.00		-2.90			Pass
11a	6Mbps	2	48	5240	11.10	10.90	14.01	24.00		-2.90			Pass
HT20	MCS0	2	36	5180	11.00	11.20	14.11	24.00		-2.90			Pass
HT20	MCS0	2	44	5220	10.80	11.00	13.91	24.00		-2.90			Pass
HT20	MCS0	2	48	5240	11.00	10.90	13.96	24.00		-2.90			Pass
HT40	MCS0	2	38	5190	11.10	11.30	14.21	24.00		-2.90			Pass
HT40	MCS0	2	46	5230	11.00	11.10	14.06	24.00		-2.90			Pass
VHT20	MCS0	2	36	5180	10.90	11.10	14.01	24.00		-2.90			Pass
VHT20	MCS0	2	44	5220	10.70	10.90	13.81	24.00		-2.90			Pass
VHT20	MCS0	2	48	5240	10.90	10.80	13.86	24.00		-2.90			Pass
VHT40	MCS0	2	38	5190	11.00	11.20	14.11	24.00		-2.90			Pass
VHT40	MCS0	2	46	5230	10.90	11.00	13.96	24.00		-2.90			Pass
VHT80	MCS0	2	42	5210	11.00	11.00	14.01	24.00		-2.90			Pass

TEST RESULTS DATA
Average Power Table

FCC Band II single antenna													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	52	5260	11.10	10.90		23.98	23.98	-3.00	-2.10	30	Pass
11a	6Mbps	1	60	5300	10.80	10.70		23.98	23.98	-3.00	-2.10	30	Pass
11a	6Mbps	1	64	5320	10.90	10.70		23.98	23.98	-3.00	-2.10	30	Pass
HT20	MCS0	1	52	5260	11.00	10.90		23.98	23.98	-3.00	-2.10	30	Pass
HT20	MCS0	1	60	5300	10.90	11.00		23.98	23.98	-3.00	-2.10	30	Pass
HT20	MCS0	1	64	5320	11.00	11.00		23.98	23.98	-3.00	-2.10	30	Pass
HT40	MCS0	1	54	5270	11.10	11.20		23.98	23.98	-3.00	-2.10	30	Pass
HT40	MCS0	1	62	5310	10.90	10.90		23.98	23.98	-3.00	-2.10	30	Pass
VHT20	MCS0	1	52	5260	10.90	10.80		23.98	23.98	-3.00	-2.10	30	Pass
VHT20	MCS0	1	60	5300	10.80	10.90		23.98	23.98	-3.00	-2.10	30	Pass
VHT20	MCS0	1	64	5320	10.90	10.90		23.98	23.98	-3.00	-2.10	30	Pass
VHT40	MCS0	1	54	5270	11.00	11.10		23.98	23.98	-3.00	-2.10	30	Pass
VHT40	MCS0	1	62	5310	10.80	10.80		23.98	23.98	-3.00	-2.10	30	Pass
VHT80	MCS0	1	58	5290	10.90	10.80		23.98	23.98	-3.00	-2.10	30	Pass

FCC Band II MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	52	5260	11.20	11.00	14.11	23.98		-2.10		30	Pass
11a	6Mbps	2	60	5300	11.30	11.20	14.26	23.98		-2.10		30	Pass
11a	6Mbps	2	64	5320	11.50	11.10	14.31	23.98		-2.10		30	Pass
HT20	MCS0	2	52	5260	11.10	11.00	14.06	23.98		-2.10		30	Pass
HT20	MCS0	2	60	5300	11.20	11.00	14.11	23.98		-2.10		30	Pass
HT20	MCS0	2	64	5320	11.30	11.00	14.16	23.98		-2.10		30	Pass
HT40	MCS0	2	54	5270	11.20	11.30	14.26	23.98		-2.10		30	Pass
HT40	MCS0	2	62	5310	11.00	11.00	14.01	23.98		-2.10		30	Pass
VHT20	MCS0	2	52	5260	11.00	10.90	13.96	23.98		-2.10		30	Pass
VHT20	MCS0	2	60	5300	11.10	10.90	14.01	23.98		-2.10		30	Pass
VHT20	MCS0	2	64	5320	11.20	10.90	14.06	23.98		-2.10		30	Pass
VHT40	MCS0	2	54	5270	11.10	11.20	14.16	23.98		-2.10		30	Pass
VHT40	MCS0	2	62	5310	10.90	10.90	13.91	23.98		-2.10		30	Pass
VHT80	MCS0	2	58	5290	11.00	10.80	13.91	23.98		-2.10		30	Pass

TEST RESULTS DATA
Average Power Table

FCC Band III single antenna														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	100	5500	11.20	10.80		23.98	23.98	-2.40	-2.90	30	Pass
11a	6Mbps	1	116	5580	11.10	11.10		23.98	23.98	-2.40	-2.90	30	Pass
11a	6Mbps	1	140	5700	11.00	10.90		23.98	23.98	-2.40	-2.90	30	Pass
HT20	MCS0	1	100	5500	11.20	10.90		23.98	23.98	-2.40	-2.90	30	Pass
HT20	MCS0	1	116	5580	11.00	11.00		23.98	23.98	-2.40	-2.90	30	Pass
HT20	MCS0	1	140	5700	10.90	10.90		23.98	23.98	-2.40	-2.90	30	Pass
HT40	MCS0	1	102	5510	11.20	11.10		23.98	23.98	-2.40	-2.90	30	Pass
HT40	MCS0	1	110	5550	11.20	11.10		23.98	23.98	-2.40	-2.90	30	Pass
HT40	MCS0	1	134	5670	11.10	10.90		23.98	23.98	-2.40	-2.90	30	Pass
VHT20	MCS0	1	100	5500	11.10	10.80		23.98	23.98	-2.40	-2.90	30	Pass
VHT20	MCS0	1	116	5580	10.90	10.90		23.98	23.98	-2.40	-2.90	30	Pass
VHT20	MCS0	1	140	5700	10.80	10.80		23.98	23.98	-2.40	-2.90	30	Pass
VHT40	MCS0	1	102	5510	11.10	11.00		23.98	23.98	-2.40	-2.90	30	Pass
VHT40	MCS0	1	110	5550	11.10	11.00		23.98	23.98	-2.40	-2.90	30	Pass
VHT40	MCS0	1	134	5670	11.00	10.80		23.98	23.98	-2.40	-2.90	30	Pass
VHT80	MCS0	1	106	5530	11.20	11.10		23.98	23.98	-2.40	-2.90	30	Pass
VHT80	MCS0	1	122	5610	11.20	11.00		23.98	23.98	-2.40	-2.90	30	Pass

FCC Band III MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	100	5500	11.20	10.90	14.06	23.98		-2.40		30	Pass
11a	6Mbps	2	116	5580	11.40	11.10	14.26	23.98		-2.40		30	Pass
11a	6Mbps	2	140	5700	11.40	11.10	14.26	23.98		-2.40		30	Pass
HT20	MCS0	2	100	5500	11.20	10.90	14.06	23.98		-2.40		30	Pass
HT20	MCS0	2	116	5580	11.30	11.10	14.21	23.98		-2.40		30	Pass
HT20	MCS0	2	140	5700	11.20	10.90	14.06	23.98		-2.40		30	Pass
HT40	MCS0	2	102	5510	11.20	11.10	14.16	23.98		-2.40		30	Pass
HT40	MCS0	2	110	5550	11.20	11.10	14.16	23.98		-2.40		30	Pass
HT40	MCS0	2	134	5670	11.10	11.00	14.06	23.98		-2.40		30	Pass
VHT20	MCS0	2	100	5500	11.10	10.80	13.96	23.98		-2.40		30	Pass
VHT20	MCS0	2	116	5580	11.20	11.00	14.11	23.98		-2.40		30	Pass
VHT20	MCS0	2	140	5700	11.10	10.80	13.96	23.98		-2.40		30	Pass
VHT40	MCS0	2	102	5510	11.10	11.00	14.06	23.98		-2.40		30	Pass
VHT40	MCS0	2	110	5550	11.10	11.00	14.06	23.98		-2.40		30	Pass
VHT40	MCS0	2	134	5670	11.00	10.90	13.96	23.98		-2.40		30	Pass
VHT80	MCS0	2	106	5530	11.20	11.10	14.16	23.98		-2.40		30	Pass
VHT80	MCS0	2	122	5610	11.20	11.00	14.11	23.98		-2.40		30	Pass

FCC Band III straddle channel single antenna													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	144	5720	11.00	11.10		23.98	23.98	-2.40	-2.90	30	Pass
HT20	MCS0	1	144	5720	10.90	11.00		23.98	23.98	-2.40	-2.90	30	Pass
HT40	MCS0	1	142	5710	11.10	10.90		23.98	23.98	-2.40	-2.90	30	Pass
VHT20	MCS0	1	144	5720	10.80	10.90		23.98	23.98	-2.40	-2.90	30	Pass
VHT40	MCS0	1	142	5710	11.00	10.80		23.98	23.98	-2.40	-2.90	30	Pass
VHT80	MCS0	1	138	5690	11.00	11.00		23.98	23.98	-2.40	-2.90	30	Pass

FCC Band III straddle channel MIMO													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	2	144	5720	11.30	11.20	14.26	23.98		-2.40		30	Pass
HT20	MCS0	2	144	5720	11.20	11.00	14.11	23.98		-2.40		30	Pass
HT40	MCS0	2	142	5710	11.10	11.00	14.06	23.98		-2.40		30	Pass
VHT20	MCS0	2	144	5720	11.10	10.90	14.01	23.98		-2.40		30	Pass
VHT40	MCS0	2	142	5710	11.00	10.90	13.96	23.98		-2.40		30	Pass
VHT80	MCS0	2	138	5690	11.00	11.00	14.01	23.98		-2.40		30	Pass

TEST RESULTS DATA
Average Power Table

FCC Band I single antenna														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	1	36	5180	Full	11.00	11.10		24.00	24.00	-2.90	-3.30		Pass
HE20	MCS0	1	36	5180	26/0	8.30	8.20		24.00	24.00	-2.90	-3.30		Pass
HE20	MCS0	1	36	5180	52/37	10.90	11.00		24.00	24.00	-2.90	-3.30		Pass
HE20	MCS0	1	36	5180	106/53	11.00	10.90		24.00	24.00	-2.90	-3.30		Pass
HE20	MCS0	1	44	5220	Full	10.90	10.90		24.00	24.00	-2.90	-3.30		Pass
HE20	MCS0	1	48	5240	Full	11.20	10.90		24.00	24.00	-2.90	-3.30		Pass
HE20	MCS0	1	48	5240	26/8	8.30	8.30		24.00	24.00	-2.90	-3.30		Pass
HE20	MCS0	1	48	5240	52/40	10.80	11.00		24.00	24.00	-2.90	-3.30		Pass
HE20	MCS0	1	48	5240	106/54	11.10	11.20		24.00	24.00	-2.90	-3.30		Pass
HE40	MCS0	1	38	5190	Full	11.10	10.90		24.00	24.00	-2.90	-3.30		Pass
HE40	MCS0	1	38	5190	242/61	11.10	11.10		24.00	24.00	-2.90	-3.30		Pass
HE40	MCS0	1	46	5230	Full	11.00	10.90		24.00	24.00	-2.90	-3.30		Pass
HE40	MCS0	1	46	5230	242/62	11.00	10.90		24.00	24.00	-2.90	-3.30		Pass
HE80	MCS0	1	42	5210	Full	10.90	11.00		24.00	24.00	-2.90	-3.30		Pass
HE80	MCS0	1	42	5210	484/65	11.20	10.80		24.00	24.00	-2.90	-3.30		Pass

FCC Band I MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	36	5180	Full	11.00	11.20	14.11	24.00		-2.90			Pass
HE20	MCS0	2	36	5180	26/0	8.30	8.30	11.31	24.00		-2.90			Pass
HE20	MCS0	2	36	5180	52/37	11.30	11.00	14.16	24.00		-2.90			Pass
HE20	MCS0	2	36	5180	106/53	11.00	11.20	14.11	24.00		-2.90			Pass
HE20	MCS0	2	44	5220	Full	10.90	10.90	13.91	24.00		-2.90			Pass
HE20	MCS0	2	48	5240	Full	11.20	10.90	14.06	24.00		-2.90			Pass
HE20	MCS0	2	48	5240	26/8	8.30	8.40	11.36	24.00		-2.90			Pass
HE20	MCS0	2	48	5240	52/40	11.40	11.10	14.26	24.00		-2.90			Pass
HE20	MCS0	2	48	5240	106/54	11.10	11.30	14.21	24.00		-2.90			Pass
HE40	MCS0	2	38	5190	Full	11.10	11.00	14.06	24.00		-2.90			Pass
HE40	MCS0	2	38	5190	242/61	11.20	11.20	14.21	24.00		-2.90			Pass
HE40	MCS0	2	46	5230	Full	11.10	11.30	14.21	24.00		-2.90			Pass
HE40	MCS0	2	46	5230	242/62	11.00	11.10	14.06	24.00		-2.90			Pass
HE80	MCS0	2	42	5210	Full	11.00	11.00	14.01	24.00		-2.90			Pass
HE80	MCS0	2	42	5210	484/65	11.20	11.00	14.11	24.00		-2.90			Pass

TEST RESULTS DATA
Average Power Table

FCC Band II single antenna														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	1	52	5260	Full	11.10	10.90		23.98	23.98	-3.00	-2.10	30	Pass
HE20	MCS0	1	52	5260	26/0	8.40	8.40		23.98	23.98	-3.00	-2.10	30	Pass
HE20	MCS0	1	52	5260	52/37	11.10	10.90		23.98	23.98	-3.00	-2.10	30	Pass
HE20	MCS0	1	52	5260	106/53	11.10	10.80		23.98	23.98	-3.00	-2.10	30	Pass
HE20	MCS0	1	60	5300	Full	10.90	11.00		23.98	23.98	-3.00	-2.10	30	Pass
HE20	MCS0	1	64	5320	Full	11.00	11.10		23.98	23.98	-3.00	-2.10	30	Pass
HE20	MCS0	1	64	5320	26/8	8.30	8.40		23.98	23.98	-3.00	-2.10	30	Pass
HE20	MCS0	1	64	5320	52/40	10.80	11.00		23.98	23.98	-3.00	-2.10	30	Pass
HE20	MCS0	1	64	5320	106/54	10.90	10.90		23.98	23.98	-3.00	-2.10	30	Pass
HE40	MCS0	1	54	5270	Full	11.20	10.90		23.98	23.98	-3.00	-2.10	30	Pass
HE40	MCS0	1	54	5270	242/61	11.20	10.70		23.98	23.98	-3.00	-2.10	30	Pass
HE40	MCS0	1	62	5310	Full	11.00	11.10		23.98	23.98	-3.00	-2.10	30	Pass
HE40	MCS0	1	62	5310	242/62	10.90	10.80		23.98	23.98	-3.00	-2.10	30	Pass
HE80	MCS0	1	58	5290	Full	10.90	11.10		23.98	23.98	-3.00	-2.10	30	Pass
HE80	MCS0	1	58	5290	484/66	10.80	10.90		23.98	23.98	-3.00	-2.10	30	Pass

FCC Band II MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	52	5260	Full	11.20	11.00	14.11	23.98		-2.10		30	Pass
HE20	MCS0	2	52	5260	26/0	8.40	8.50	11.46	23.98		-2.10		30	Pass
HE20	MCS0	2	52	5260	52/37	11.40	11.10	14.26	23.98		-2.10		30	Pass
HE20	MCS0	2	52	5260	106/53	11.20	11.20	14.21	23.98		-2.10		30	Pass
HE20	MCS0	2	60	5300	Full	10.90	11.00	13.96	23.98		-2.10		30	Pass
HE20	MCS0	2	64	5320	Full	11.00	11.10	14.06	23.98		-2.10		30	Pass
HE20	MCS0	2	64	5320	26/8	8.50	8.60	11.56	23.98		-2.10		30	Pass
HE20	MCS0	2	64	5320	52/40	11.30	11.30	14.31	23.98		-2.10		30	Pass
HE20	MCS0	2	64	5320	106/54	11.10	11.20	14.16	23.98		-2.10		30	Pass
HE40	MCS0	2	54	5270	Full	11.30	11.40	14.36	23.98		-2.10		30	Pass
HE40	MCS0	2	54	5270	242/61	11.40	10.90	14.17	23.98		-2.10		30	Pass
HE40	MCS0	2	62	5310	Full	11.00	11.20	14.11	23.98		-2.10		30	Pass
HE40	MCS0	2	62	5310	242/62	10.90	11.20	14.06	23.98		-2.10		30	Pass
HE80	MCS0	2	58	5290	Full	10.90	11.20	14.06	23.98		-2.10		30	Pass
HE80	MCS0	2	58	5290	484/66	10.80	11.20	14.01	23.98		-2.10		30	Pass

TEST RESULTS DATA
Average Power Table

FCC Band III single antenna														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	1	100	5500	Full	11.20	10.80		23.98	23.98	-2.40	-2.90	30	Pass
HE20	MCS0	1	100	5500	26/0	8.40	8.30		23.98	23.98	-2.40	-2.90	30	Pass
HE20	MCS0	1	100	5500	52/37	11.00	10.90		23.98	23.98	-2.40	-2.90	30	Pass
HE20	MCS0	1	100	5500	106/53	11.10	10.90		23.98	23.98	-2.40	-2.90	30	Pass
HE20	MCS0	1	116	5580	Full	11.00	11.00		23.98	23.98	-2.40	-2.90	30	Pass
HE20	MCS0	1	140	5700	Full	10.90	10.80		23.98	23.98	-2.40	-2.90	30	Pass
HE20	MCS0	1	140	5700	26/8	8.40	8.30		23.98	23.98	-2.40	-2.90	30	Pass
HE20	MCS0	1	140	5700	52/40	10.70	10.90		23.98	23.98	-2.40	-2.90	30	Pass
HE20	MCS0	1	140	5700	106/54	10.70	11.00		23.98	23.98	-2.40	-2.90	30	Pass
HE40	MCS0	1	102	5510	Full	10.90	11.00		23.98	23.98	-2.40	-2.90	30	Pass
HE40	MCS0	1	102	5510	242/61	9.40	8.90		23.98	23.98	-2.40	-2.90	30	Pass
HE40	MCS0	1	110	5550	Full	10.80	11.00		23.98	23.98	-2.40	-2.90	30	Pass
HE40	MCS0	1	134	5670	Full	11.20	11.20		23.98	23.98	-2.40	-2.90	30	Pass
HE40	MCS0	1	134	5670	242/62	11.10	10.90		23.98	23.98	-2.40	-2.90	30	Pass
HE80	MCS0	1	106	5530	Full	11.20	11.00		23.98	23.98	-2.40	-2.90	30	Pass
HE80	MCS0	1	106	5530	484/65	10.20	9.90		23.98	23.98	-2.40	-2.90	30	Pass
HE80	MCS0	1	122	5610	Full	10.90	10.90		23.98	23.98	-2.40	-2.90	30	Pass
HE80	MCS0	1	122	5610	484/66	11.20	10.90		23.98	23.98	-2.40	-2.90	30	Pass

FCC Band III MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	100	5500	Full	11.20	10.90	14.06	23.98		-2.40		30	Pass
HE20	MCS0	2	100	5500	26/0	8.70	8.70	11.71	23.98		-2.40		30	Pass
HE20	MCS0	2	100	5500	52/37	11.20	11.30	14.26	23.98		-2.40		30	Pass
HE20	MCS0	2	100	5500	106/53	11.10	11.00	14.06	23.98		-2.40		30	Pass
HE20	MCS0	2	116	5580	Full	11.00	11.00	14.01	23.98		-2.40		30	Pass
HE20	MCS0	2	140	5700	Full	10.90	10.80	13.86	23.98		-2.40		30	Pass
HE20	MCS0	2	140	5700	26/8	8.80	8.70	11.76	23.98		-2.40		30	Pass
HE20	MCS0	2	140	5700	52/40	11.40	11.10	14.26	23.98		-2.40		30	Pass
HE20	MCS0	2	140	5700	106/54	11.40	11.20	14.31	23.98		-2.40		30	Pass
HE40	MCS0	2	102	5510	Full	11.00	11.40	14.21	23.98		-2.40		30	Pass
HE40	MCS0	2	102	5510	242/61	9.40	9.30	12.36	23.98		-2.40		30	Pass
HE40	MCS0	2	110	5550	Full	11.20	11.10	14.16	23.98		-2.40		30	Pass
HE40	MCS0	2	134	5670	Full	11.20	11.40	14.31	23.98		-2.40		30	Pass
HE40	MCS0	2	134	5670	242/62	11.10	11.20	14.16	23.98		-2.40		30	Pass
HE80	MCS0	2	106	5530	Full	11.20	11.40	14.31	23.98		-2.40		30	Pass
HE80	MCS0	2	106	5530	484/65	10.60	10.40	13.51	23.98		-2.40		30	Pass
HE80	MCS0	2	122	5610	Full	11.20	11.00	14.11	23.98		-2.40		30	Pass
HE80	MCS0	2	122	5610	484/66	11.20	11.40	14.31	23.98		-2.40		30	Pass

FCC Band III straddle channel single antenna														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	1	144	5720	Full	10.90	11.20		23.98	23.98	-2.40	-2.90	30	Pass
HE40	MCS0	1	142	5710	Full	11.00	11.10		23.98	23.98	-2.40	-2.90	30	Pass
HE80	MCS0	1	138	5690	Full	11.00	10.90		23.98	23.98	-2.40	-2.90	30	Pass

FCC Band III straddle channel MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)		EIRP Power Limit (dBm)	Pass/Fail
						Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
HE20	MCS0	2	144	5720	Full	10.90	11.20	14.06	23.98		-2.40		30	Pass
HE40	MCS0	2	142	5710	Full	11.20	11.20	14.21	23.98		-2.40		30	Pass
HE80	MCS0	2	138	5690	Full	11.00	10.90	13.96	23.98		-2.40		30	Pass

Appendix B. Radiated Spurious Emission

Test Engineer :	Leo Lee, Mancy Chou and Bigshow Wang	**Temperature :**	22.1~23.1°C
		Relative Humidity :	55~60%

Band 1 - 5150~5250MHz

WIFI 802.11ac VHT80 (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.
0+1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		5072.8	52.66	-21.34	74	40.76	31.95	10.38	30.43	100	289	P	H
		5150	42.35	-11.65	54	30.19	32.1	10.49	30.43	100	289	A	H
	*	5210	94	-	-	82.12	31.74	10.57	30.43	100	289	P	H
	*	5210	85.6	-	-	73.72	31.74	10.57	30.43	100	289	A	H
		5458.04	51.96	-22.04	74	39.91	31.75	10.73	30.43	100	289	P	H
		5458.32	41.11	-12.89	54	29.06	31.75	10.73	30.43	100	289	A	H
		5147.68	53.37	-20.63	74	41.21	32.1	10.49	30.43	100	350	P	V
		5150	43.42	-10.58	54	31.26	32.1	10.49	30.43	100	350	A	V
	*	5210	99.44	-	-	87.56	31.74	10.57	30.43	100	350	P	V
	*	5210	91.51	-	-	79.63	31.74	10.57	30.43	100	350	A	V
		5415.48	52.1	-21.9	74	40.15	31.7	10.68	30.43	100	350	P	V
		5398.96	41.29	-12.71	54	29.37	31.69	10.66	30.43	100	350	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 0+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)
		10420	47.58	-20.62	68.2	54.06	40.1	14.41	60.99	100	0	P	H
		15630	46.41	-27.59	74	53.73	37.64	17.32	62.28	100	0	P	H
802.11ac													H
VHT80													H
CH 42		10420	47.58	-20.62	68.2	54.06	40.1	14.41	60.99	100	0	P	V
5210MHz		15630	48.5	-25.5	74	55.82	37.64	17.32	62.28	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 - 5150~5250MHz

WIFI 802.11ax HE20 Partial 52 (Band Edge @ 3m)

WIFI Ant. 0+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)
		5126.88	52.54	-21.46	74	40.46	32.05	10.46	30.43	100	305	P	H
		5094.64	41.35	-12.65	54	29.38	31.99	10.41	30.43	100	305	A	H
	*	5180	107.17	-	-	95.14	31.92	10.54	30.43	100	305	P	H
802.11ax	*	5180	98.13	-	-	86.1	31.92	10.54	30.43	100	305	A	H
HE20													H
Partial													H
52/37		5020.54	52.65	-21.35	74	41	31.78	10.3	30.43	100	350	P	V
CH 36		5096.46	41.55	-12.45	54	29.57	31.99	10.42	30.43	100	350	A	V
5180MHz	*	5180	112.16	-	-	100.13	31.92	10.54	30.43	100	350	P	V
	*	5180	103.02	-	-	90.99	31.92	10.54	30.43	100	350	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ax HE20 Partial 52 (Harmonic @ 3m)

WIFI Ant. 0+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 HE20 Partial 52/37 CH 36 5180MHz		10345	54.7	-13.5	68.2	61.34	39.82	14.42	60.88	400	0	P	H
		15517.8	56.2	-17.8	74	63.63	38.11	17.27	62.81	209	358	P	H
		15517.8	44.44	-9.56	54	51.87	38.11	17.27	62.81	209	358	A	H
													H
		10345	56.71	-11.49	68.2	63.35	39.82	14.42	60.88	400	0	P	V
		15517.8	61.07	-12.93	74	68.5	38.11	17.27	62.81	208	2	P	V
		15517.8	48.76	-5.24	54	56.19	38.11	17.27	62.81	208	2	A	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 - 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 0+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)
		5135.32	50.46	-23.54	74	38.35	32.07	10.47	30.43	100	289	P	H
		5148.24	41.42	-12.58	54	29.26	32.1	10.49	30.43	100	289	A	H
	*	5290	93.41	-	-	81.81	31.42	10.61	30.43	100	289	P	H
	*	5290	84.95	-	-	73.35	31.42	10.61	30.43	100	289	A	H
802.11ac		5456.16	51.07	-22.93	74	39.03	31.74	10.73	30.43	100	289	P	H
VHT80		5457.6	41.18	-12.82	54	29.13	31.75	10.73	30.43	100	289	A	H
CH 58		5088.06	52.27	-21.73	74	40.32	31.98	10.4	30.43	100	351	P	V
5290MHz		5149.94	41.73	-12.27	54	29.57	32.1	10.49	30.43	100	351	A	V
	*	5290	99.45	-	-	87.85	31.42	10.61	30.43	100	351	P	V
	*	5290	90.97	-	-	79.37	31.42	10.61	30.43	100	351	A	V
		5358.96	52.27	-21.73	74	40.61	31.45	10.64	30.43	100	351	P	V
		5350.08	42.48	-11.52	54	30.87	31.4	10.64	30.43	100	351	A	V

Remark

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

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 0+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)
		10580	47.13	-21.07	68.2	53.65	40.18	14.4	61.1	100	0	P	H
		15870	47.81	-26.19	74	54.53	36.95	17.45	61.12	100	0	P	H
802.11ac													H
VHT80													H
CH 58		10580	47.6	-20.6	68.2	54.12	40.18	14.4	61.1	100	0	P	V
5290MHz		15870	46.49	-27.51	74	53.21	36.95	17.45	61.12	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ax HE20 Partial 52 (Band Edge @ 3m)

WIFI Ant. 0+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)
	*	5320	105.99	-	-	94.4	31.4	10.62	30.43	100	303	P	H
	*	5320	96.67	-	-	85.08	31.4	10.62	30.43	100	303	A	H
		5443.52	53.34	-20.66	74	41.36	31.7	10.71	30.43	100	303	P	H
802.11ax		5460	41.18	-12.82	54	29.12	31.76	10.73	30.43	100	303	A	H
HE20													H
Partial													H
52/40	*	5320	114.37	-	-	102.78	31.4	10.62	30.43	100	341	P	V
CH 64	*	5320	105.15	-	-	93.56	31.4	10.62	30.43	100	341	A	V
5320MHz		5459.52	52.21	-21.79	74	40.15	31.76	10.73	30.43	100	341	P	V
		5459.84	41.49	-12.51	54	29.43	31.76	10.73	30.43	100	341	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ax HE20 Partial 52 (Harmonic @ 3m)

WIFI Ant. 0+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 HE20 Partial 52/40 CH 64 5320MHz		10625	61.38	-12.62	74	67.92	40.17	14.39	61.1	227	336	P	H
		10625	49.91	-4.09	54	56.45	40.17	14.39	61.1	227	336	A	H
		15933.6	55.64	-18.36	74	62.11	36.87	17.48	60.82	209	355	P	H
		15933.6	44.16	-9.84	54	50.63	36.87	17.48	60.82	209	355	A	H
		10625	58.93	-15.07	74	65.47	40.17	14.39	61.1	222	326	P	V
		10625	46.61	-7.39	54	53.15	40.17	14.39	61.1	222	326	A	V
		15939.9	58.22	-15.78	74	64.65	36.88	17.48	60.79	206	3	P	V
		15939.9	45.9	-8.1	54	52.33	36.88	17.48	60.79	206	3	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 0+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)
		5382.88	52.31	-21.69	74	40.49	31.6	10.65	30.43	100	299	P	H
		5468.32	51.75	-16.45	68.2	39.63	31.81	10.74	30.43	100	299	P	H
		5458	41.49	-12.51	54	29.44	31.75	10.73	30.43	100	299	A	H
	*	5530	92.59	-	-	80.35	31.88	10.81	30.45	100	299	P	H
802.11ac	*	5530	83.58	-	-	71.34	31.88	10.81	30.45	100	299	A	H
VHT80		5730.35	51.2	-17	68.2	38.9	32	10.87	30.57	100	299	P	H
CH 106		5453.44	53.49	-20.51	74	41.48	31.72	10.72	30.43	100	338	P	V
5530MHz		5468.8	53.42	-14.78	68.2	41.3	31.81	10.74	30.43	100	338	P	V
		5459.44	42.84	-11.16	54	30.78	31.76	10.73	30.43	100	338	A	V
	*	5530	100.41	-	-	88.17	31.88	10.81	30.45	100	338	P	V
	*	5530	91	-	-	78.76	31.88	10.81	30.45	100	338	A	V
		5727.515	51.48	-16.72	68.2	39.18	32	10.87	30.57	100	338	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 0+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)
		11060	48.56	-25.44	74	54.73	40.48	14.43	61.08	100	0	P	H
		16590	47.99	-20.21	68.2	50.23	38.89	18.22	59.35	100	0	P	H
802.11ac													H
VHT80													H
CH 106		11060	49.38	-24.62	74	55.55	40.48	14.43	61.08	100	0	P	V
5530MHz		16590	48.3	-19.9	68.2	50.54	38.89	18.22	59.35	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ax HE20 Partial 52 (Band Edge @ 3m)

WIFI Ant. 0+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)
		5402.64	52.94	-21.06	74	41.01	31.7	10.66	30.43	112	308	P	H
		5465.36	51.97	-16.23	68.2	39.87	31.79	10.74	30.43	112	308	P	H
		5459.92	41.15	-12.85	54	29.09	31.76	10.73	30.43	112	308	A	H
802.11ax	*	5500	105.3	-	-	92.95	32	10.78	30.43	112	308	P	H
HE20	*	5500	96.39	-	-	84.04	32	10.78	30.43	112	308	A	H
Partial													H
52/37		5365.68	52.9	-21.1	74	41.19	31.49	10.65	30.43	100	335	P	V
CH 100		5460.56	52.39	-15.81	68.2	40.33	31.76	10.73	30.43	100	335	P	V
5500MHz		5414.8	41.44	-12.56	54	29.49	31.7	10.68	30.43	100	335	A	V
	*	5500	114.11	-	-	101.76	32	10.78	30.43	100	335	P	V
	*	5500	105.11	-	-	92.76	32	10.78	30.43	100	335	A	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ax HE20 Partial 52 (Harmonic @ 3m)

WIFI Ant. 0+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 HE20 Partial 52/37 CH 100 5500MHz		10990	58.26	-15.74	74	64.41	40.58	14.37	61.1	221	336	P	H
		10990	45.8	-8.2	54	51.95	40.58	14.37	61.1	221	336	A	H
		16475	49.49	-18.71	68.2	52.22	38.65	18.08	59.46	100	0	P	H
													H
		10990	49.37	-24.63	74	55.52	40.58	14.37	61.1	100	0	P	V
		16475.4	51.75	-16.45	68.2	54.47	38.65	18.08	59.45	100	0	P	V
		10990	49.37	-24.63	74	55.52	40.58	14.37	61.1	100	0	P	V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission above 18GHz

WIFI 802. 11ax20 (Partial RU52 40) (SHF @ 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.	
0+1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802. 11ax20(Partial RU52 40) SHF		23610	41.81	-32.19	74	42.24	39.85	13.02	53.3	150	0	P	H
		39780	49.85	-24.15	74	39.53	45.01	19.96	54.65	150	0	P	H
													H
													H
													H
													H
													H
		23522	41.65	-26.55	68.2	42.19	39.73	13.03	53.3	150	0	P	V
		39890	49.89	-24.11	74	39.14	45.06	20.17	54.48	150	0	P	V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Emission below 1GHz

WIFI 802. 11ax20 (Partial RU52 37) (LF @ 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.	
0+1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		37.76	22.67	-17.33	40	33.71	20.51	0.79	32.34	-	-	P	H
		104.69	23.26	-20.24	43.5	37.47	16.71	1.39	32.31	-	-	P	H
		149.31	31.9	-11.6	43.5	45.37	17.32	1.68	32.47	100	0	P	H
		208.48	26.37	-17.13	43.5	41.83	14.88	2.05	32.39	-	-	P	H
		259.89	23.24	-22.76	46	33.75	19.64	2.28	32.43	-	-	P	H
		825.4	33.33	-12.67	46	33.29	27.87	4.05	31.88	-	-	P	H
													H
													H
													H
													H
802.													H
11ax20(Partial													H
RU52 40)		37.76	30.02	-9.98	40	41.06	20.51	0.79	32.34	100	0	P	V
LF		103.72	27.79	-15.71	43.5	42.1	16.61	1.38	32.3	-	-	P	V
		187.14	23.14	-20.36	43.5	38.58	15	1.94	32.38	-	-	P	V
		263.77	20.89	-25.11	46	31.42	19.61	2.3	32.44	-	-	P	V
		566.41	27.42	-18.58	46	30.65	25.88	3.29	32.4	-	-	P	V
		838.98	31.79	-14.21	46	30.94	28.59	4.09	31.83	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

1. No other spurious found.
2. All results are PASS against 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	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)
802.11b 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

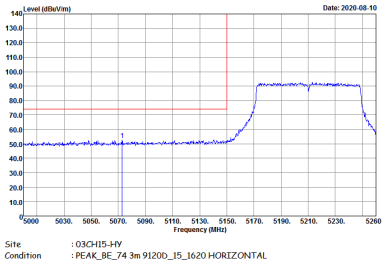
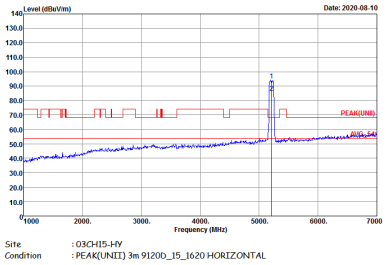
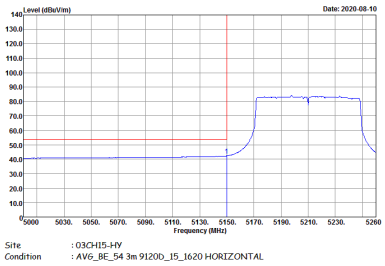
Test Engineer :	Leo Lee, Mancy Chou and Bigshow Wang	**Temperature :**	22.1~23.1°C
		Relative Humidity :	55~60%

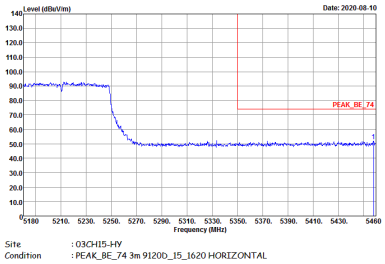
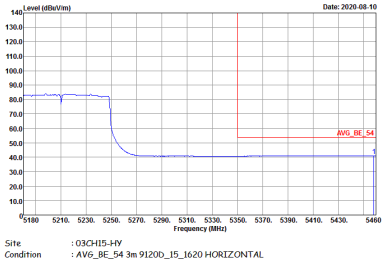
Note symbol

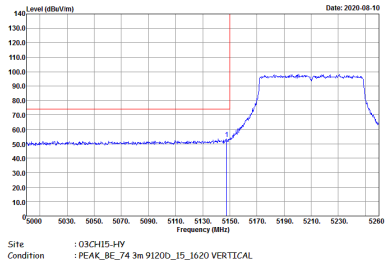
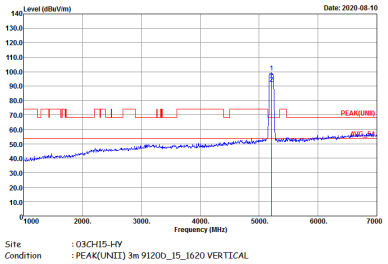
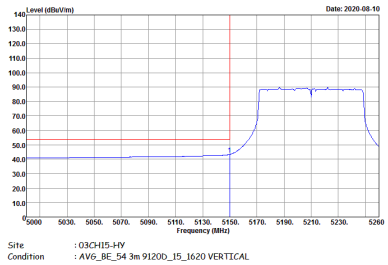
-L	**Low channel location**
-R	**High channel location**

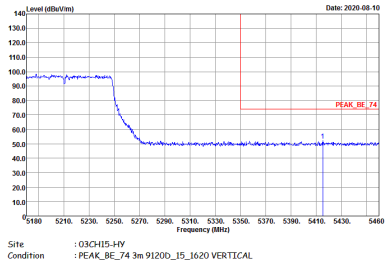
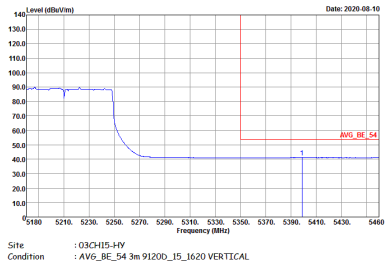
Band 1 - 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

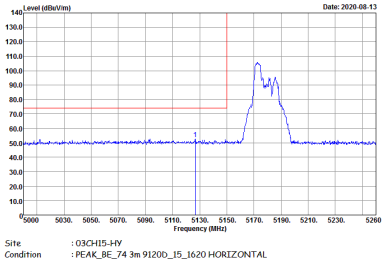
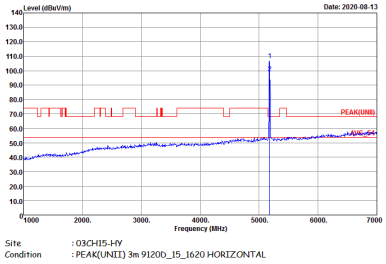
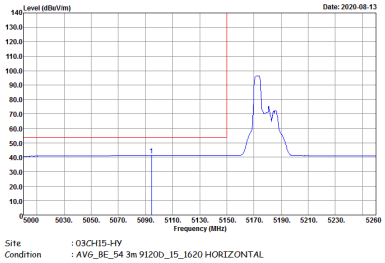
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		Left blank

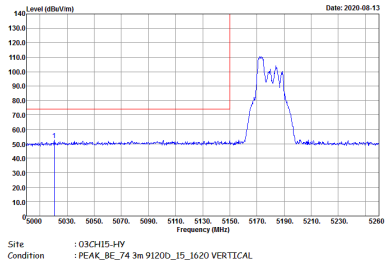
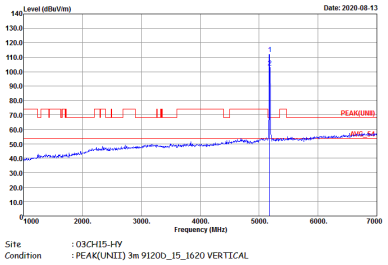
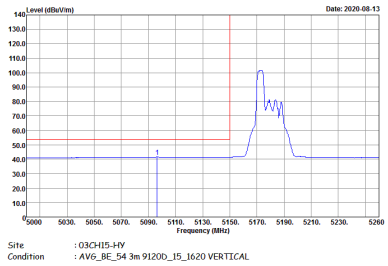
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

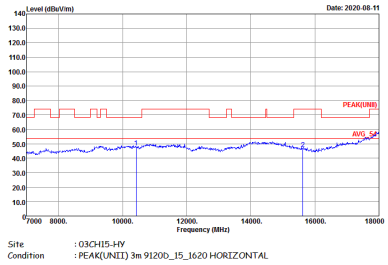
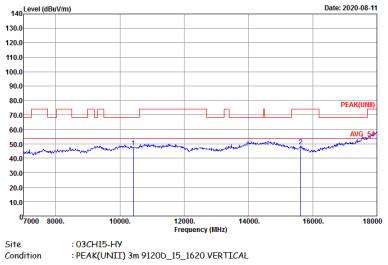
Band 1 5150~5250MHz
WIFI 802.11ax HE20 Partial 52 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH36 5180MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH36 5180MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		Left blank

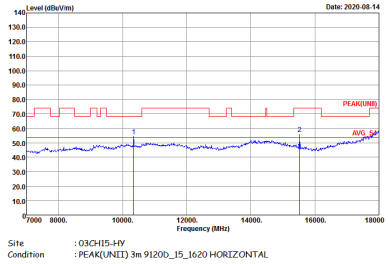
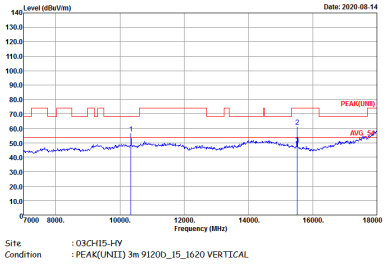
Band 1 - 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
0+1	Horizontal	Vertical
Peak Avg.		

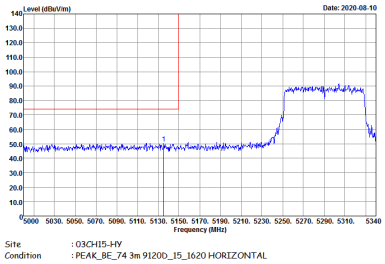
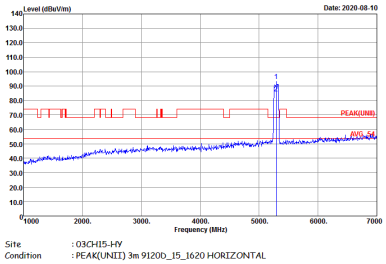
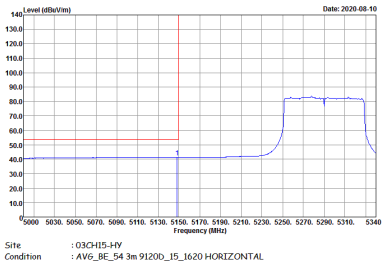
Band 1 - 5150~5250MHz

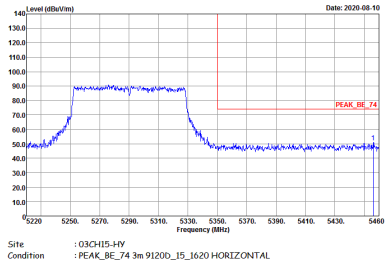
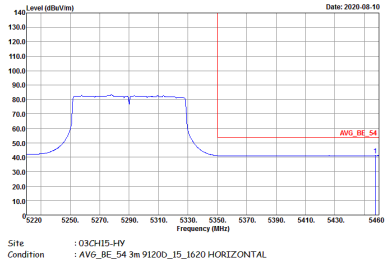
WIFI 802.11ax HE20 Partial 52 (Harmonic @ 3m)

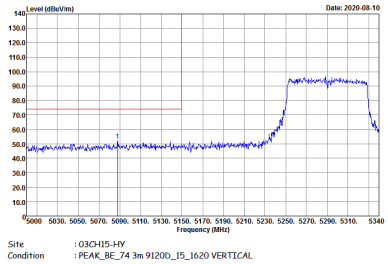
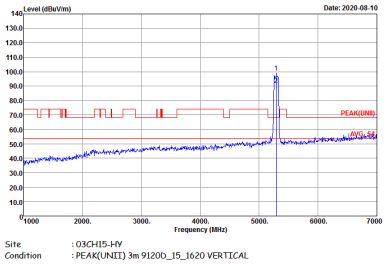
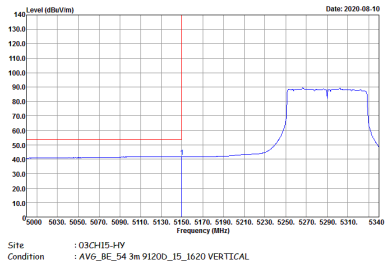
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH36 5180MHz	
0+1	Horizontal	Vertical
Peak Avg.		

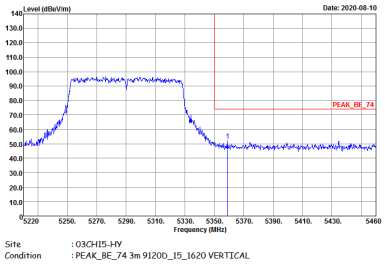
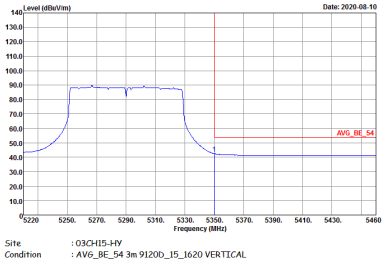
Band 2 - 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		Left blank

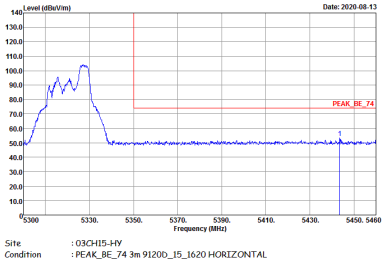
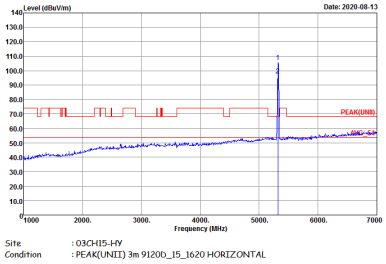
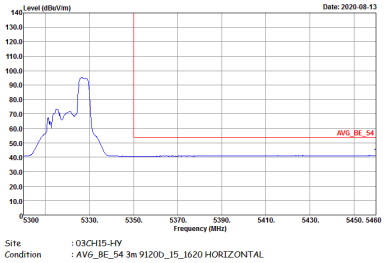
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

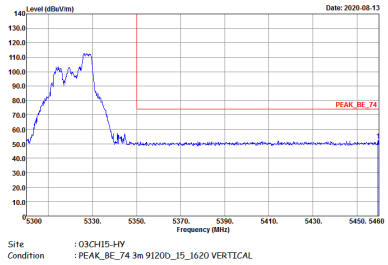
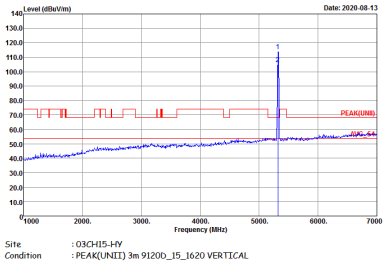
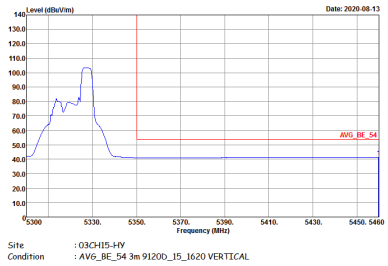
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

Band 2 - 5250~5350MHz

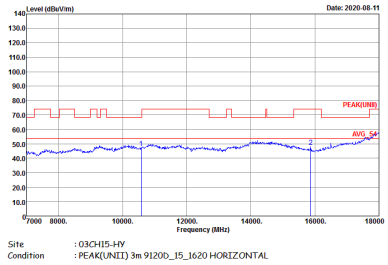
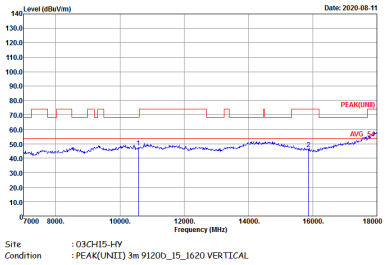
WIFI 802.11ax HE20 Partial 52 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/40 CH64 5320MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/40 CH64 5320MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		Left blank

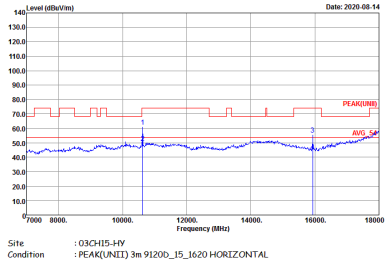
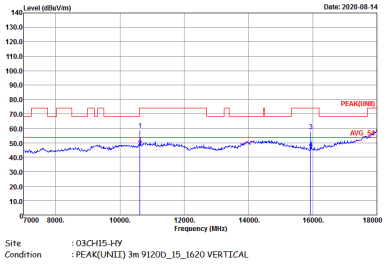
Band 2 - 5250~5350MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz	
0+1	Horizontal	Vertical
Peak Avg.		

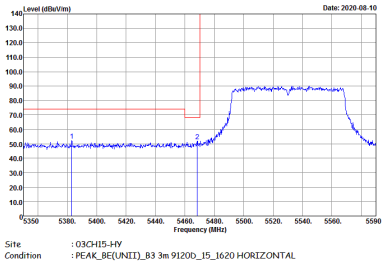
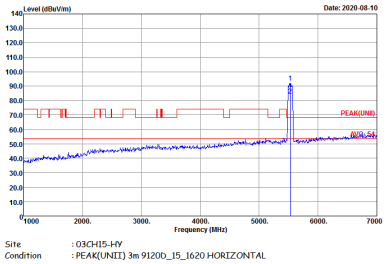
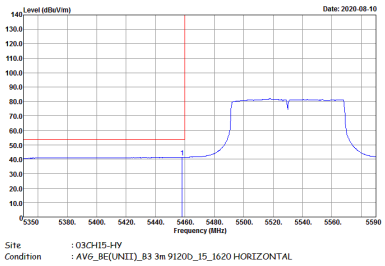
Band 2 - 5250~5350MHz

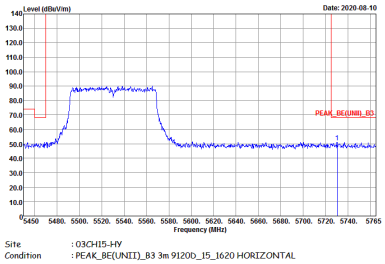
WIFI 802.11ax HE20 Partial 52 (Harmonic @ 3m)

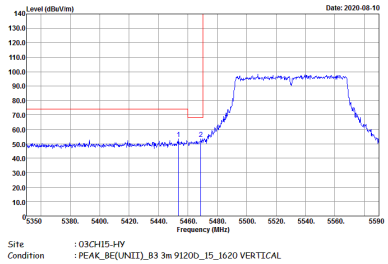
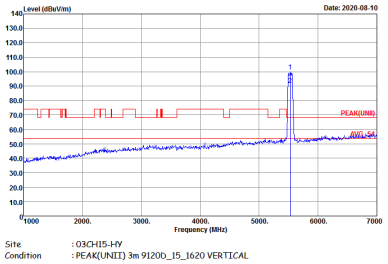
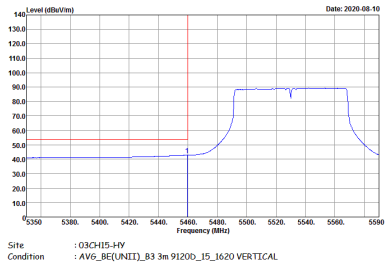
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 52/40 CH64 5320MHz	
0+1	Horizontal	Vertical
Peak Avg.		

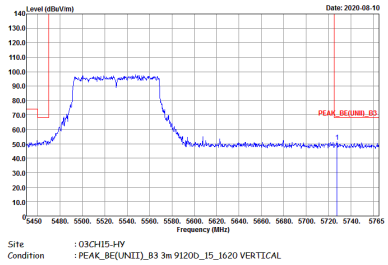
Band 3 - 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		Left blank

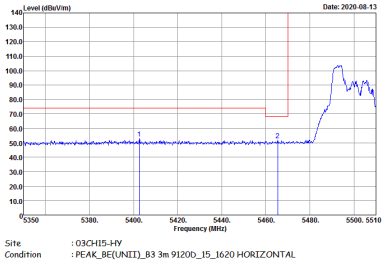
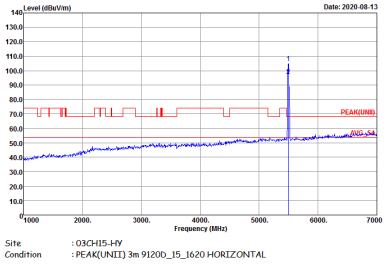
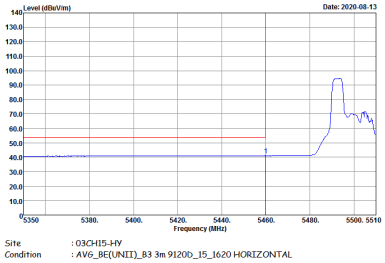
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank

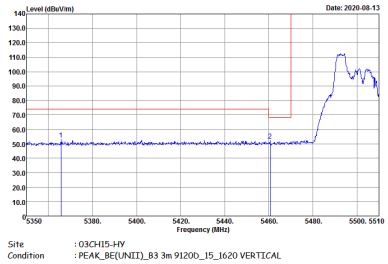
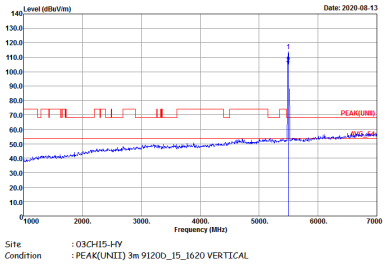
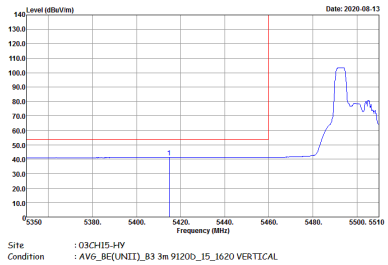
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank

Band 3 - 5470~5725MHz

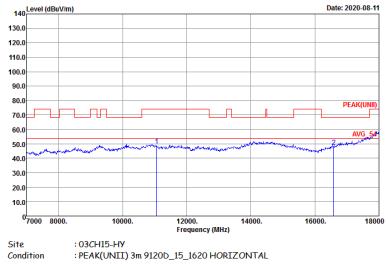
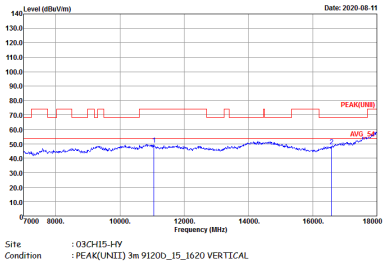
WIFI 802.11ax HE20 Partial 52 (Band Edge @ 3m)

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH100 5500MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		Left blank

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH100 5500MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		Left blank

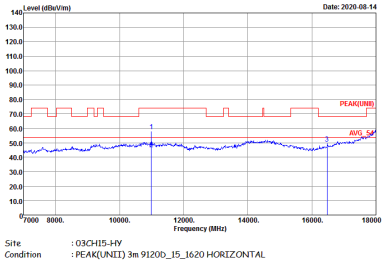
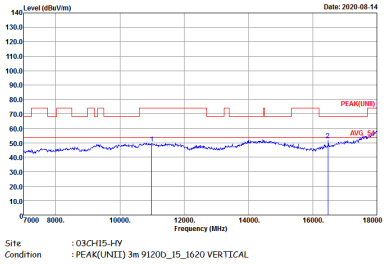
Band 3 - 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz	
0+1	Horizontal	Vertical
Peak Avg.		

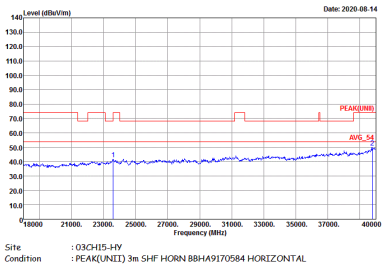
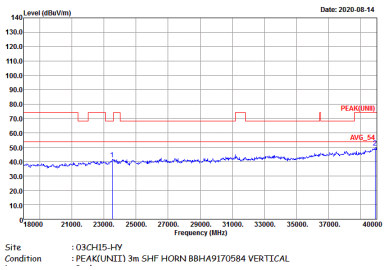
Band 3 - 5470~5725MHz

WIFI 802.11ax HE20 Partial 52 (Harmonic @ 3m)

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH100 5500MHz	
0+1	Horizontal	Vertical
Peak Avg.		

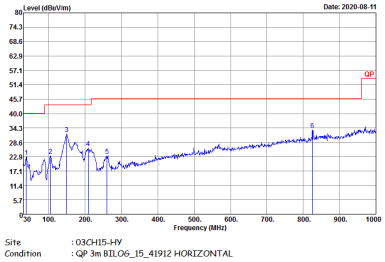
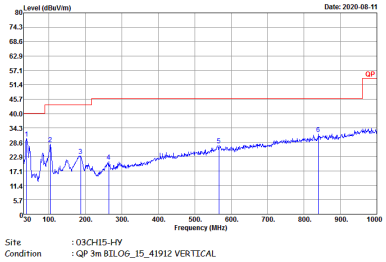
Emission above 18GHz

5GHz WIFI 802. 11ax20(Partial RU52 40) (SHF)

WIFI	5GHz WIFI	
ANT	802. 11ax20(Partial RU52 40) SHF	
0+1	Horizontal	Vertical
QP / Peak		

Emission below 1GHz

5GHz WIFI 802. 11ax20(Partial RU52 37) (LF)

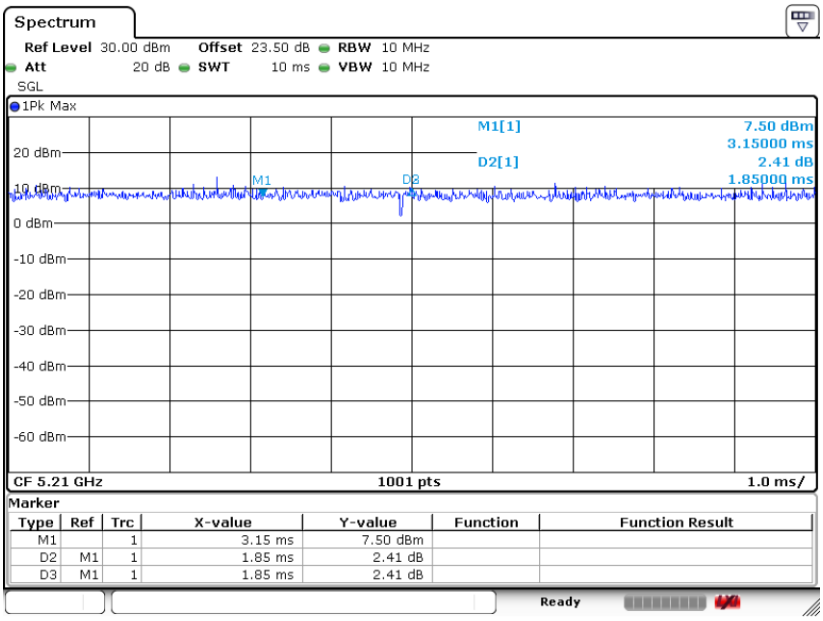
WIFI	5GHz WIFI	
ANT	802.11ax HE20 Full LF	
0+1	Horizontal	Vertical
QP / Peak		

Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
0+1	5GHz 802.11ac VHT80 for Ant 0	100.00	-	-	10Hz	0.00
0+1	5GHz 802.11ac VHT80 for Ant 1	100.00	-	-	10Hz	0.00
0+1	5GHz 802.11ax HE20 52 RU for Ant 0	100.00	-	-	10Hz	0.00
0+1	5GHz 802.11ax HE20 52 RU for Ant 1	100.00	-	-	10Hz	0.00
0+1	5GHz 802.11ax HE80 Full RU for Ant 0	100.00	-	-	10Hz	0.00
0+1	5GHz 802.11ax HE80 Full RU for Ant 1	100.00	-	-	10Hz	0.00

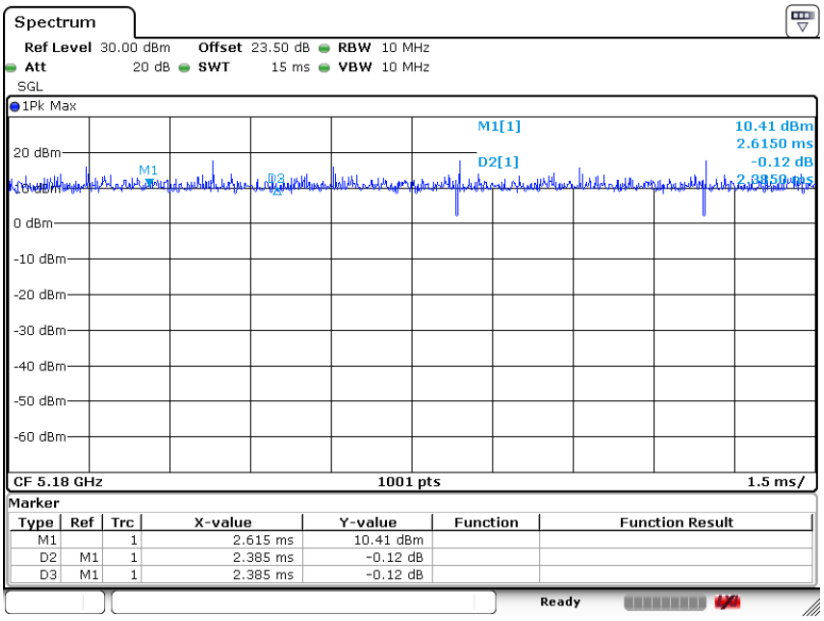
MIMO <Ant. 0>

802.11ac VHT80



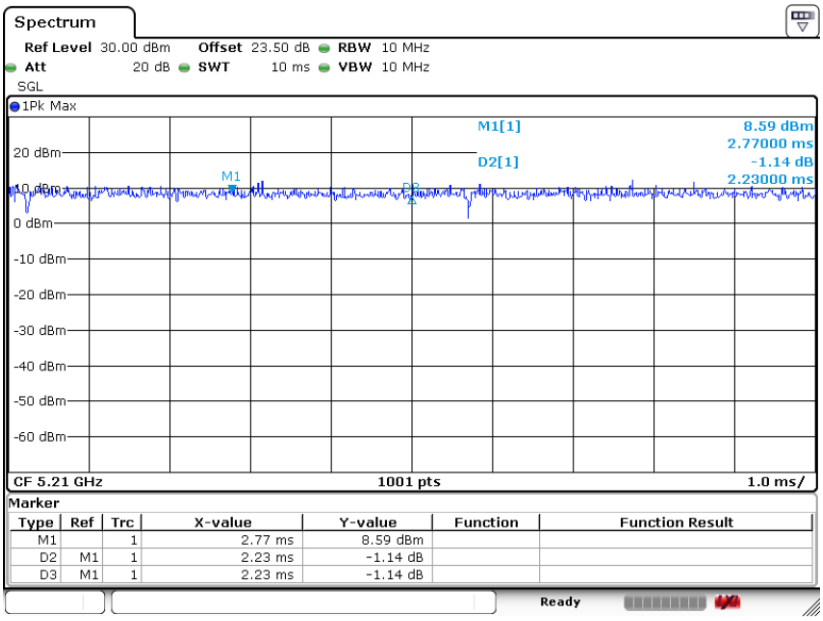
Date: 7.AUG.2020 07:09:05

802.11ax HE20 52 RU



Date: 7.AUG.2020 23:46:24

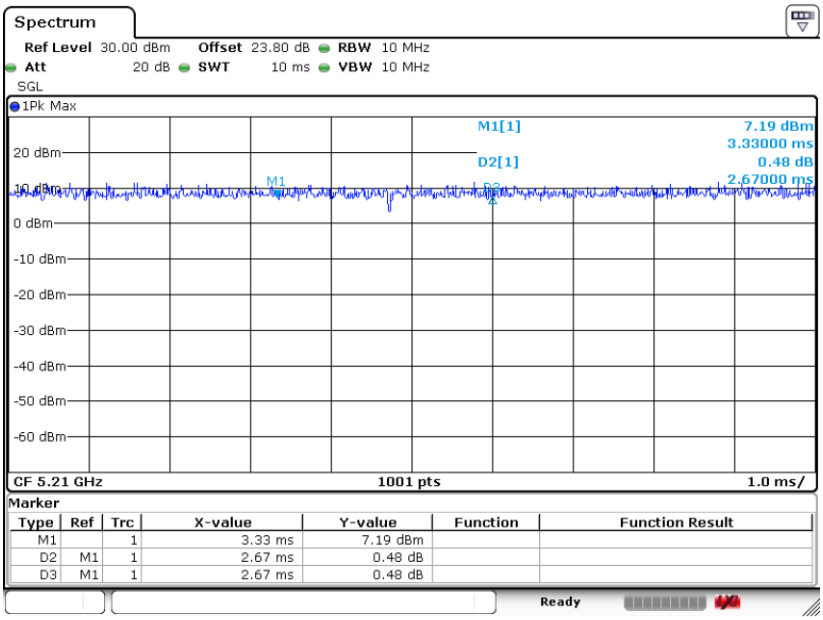
802.11ax HE80 Full RU



Date: 7.AUG.2020 07:19:33

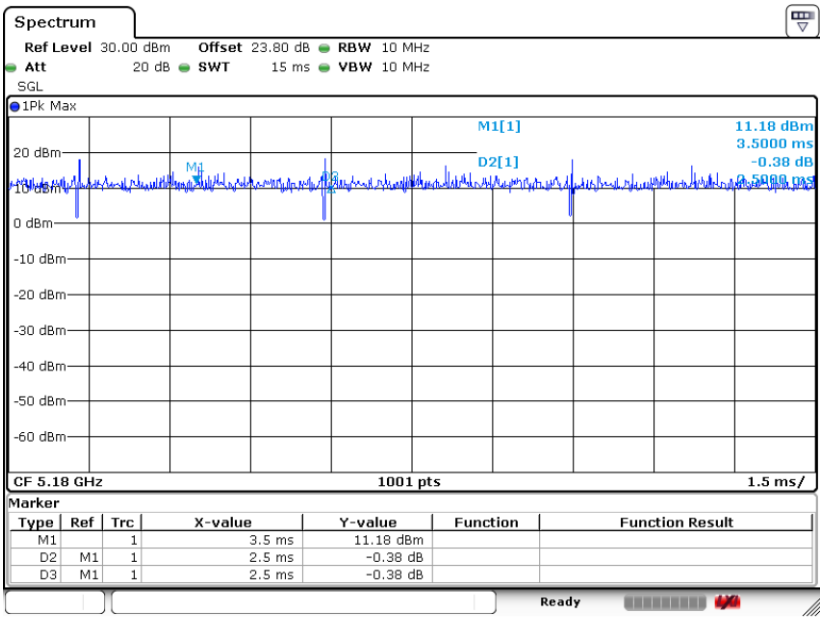
MIMO <Ant. 1>

802.11ac VHT80



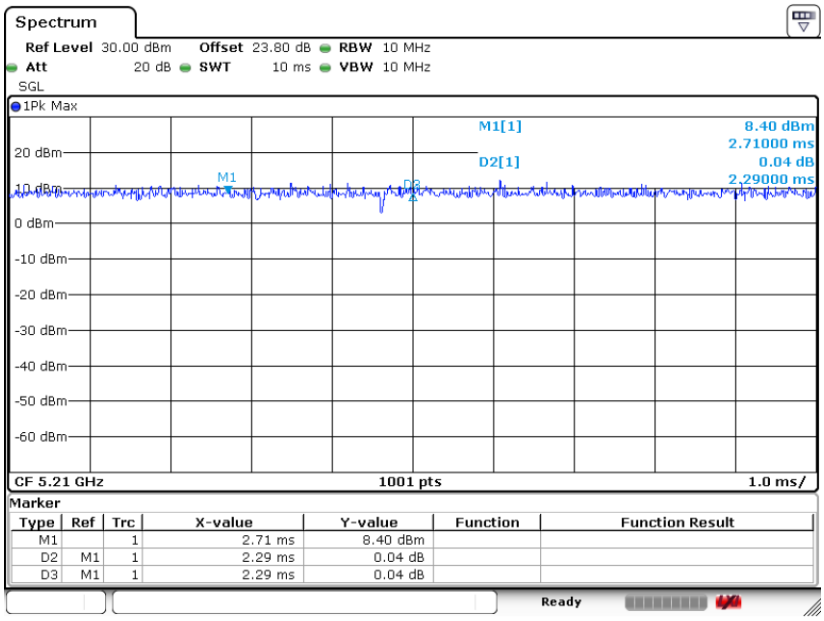
Date: 7.AUG.2020 07:08:21

802.11ax HE20 52 RU



Date: 7.AUG.2020 23:49:26

802.11ax HE80 Full RU



Date: 7.AUG.2020 07:20:01

———THE END———