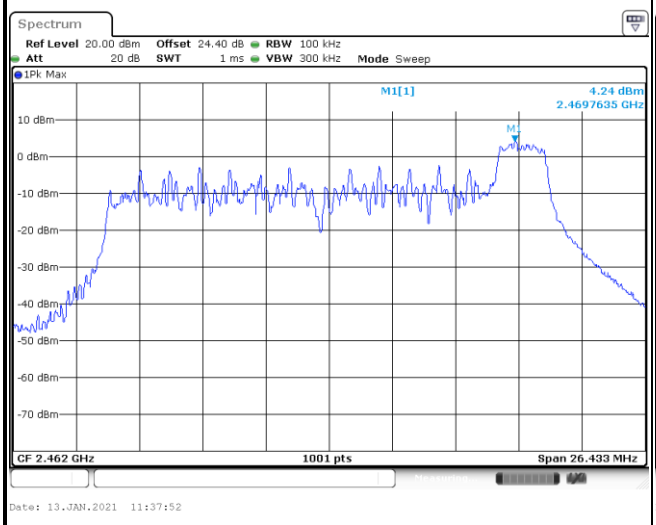
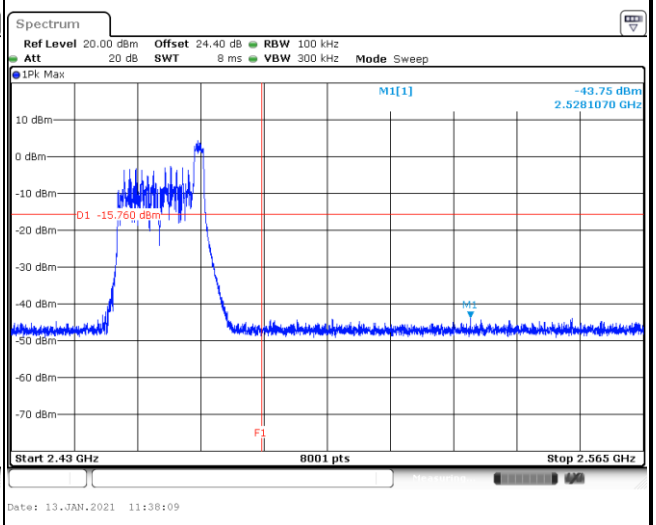
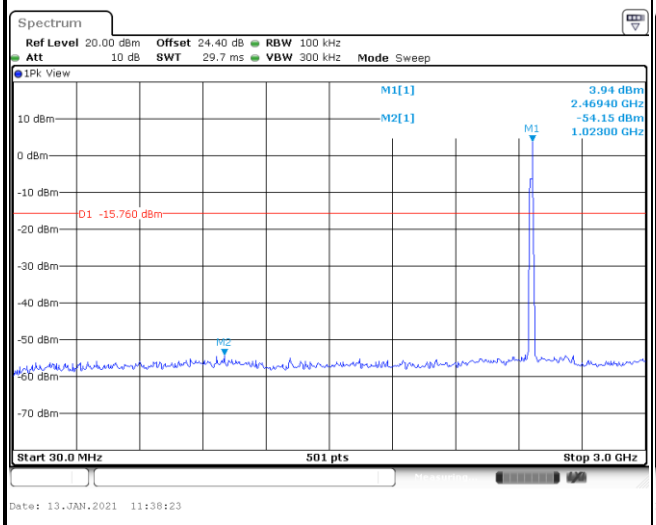
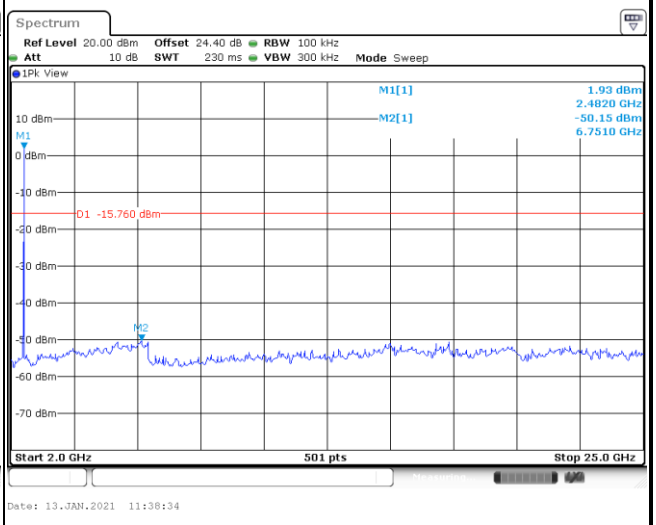
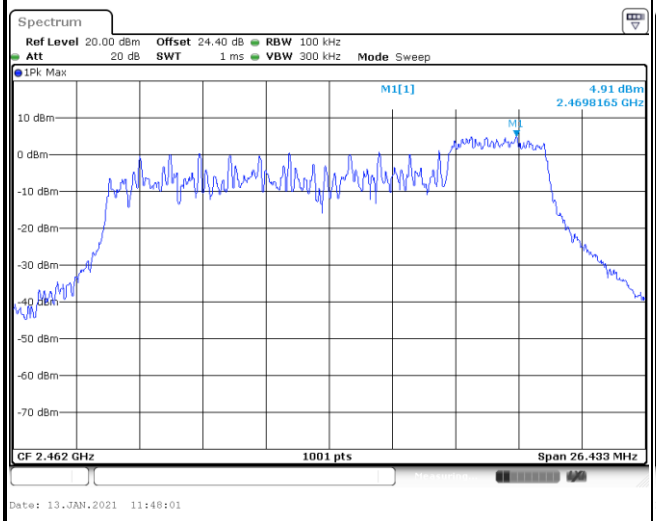
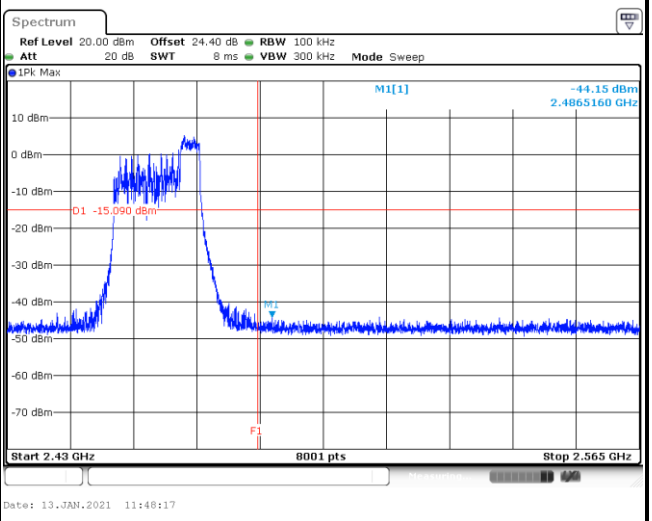
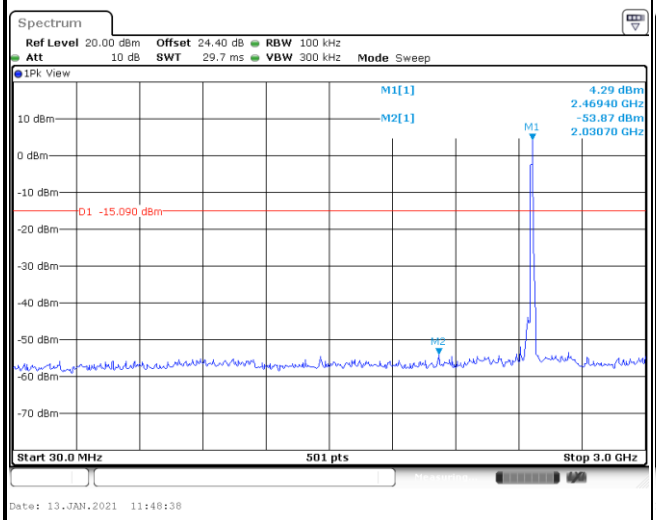
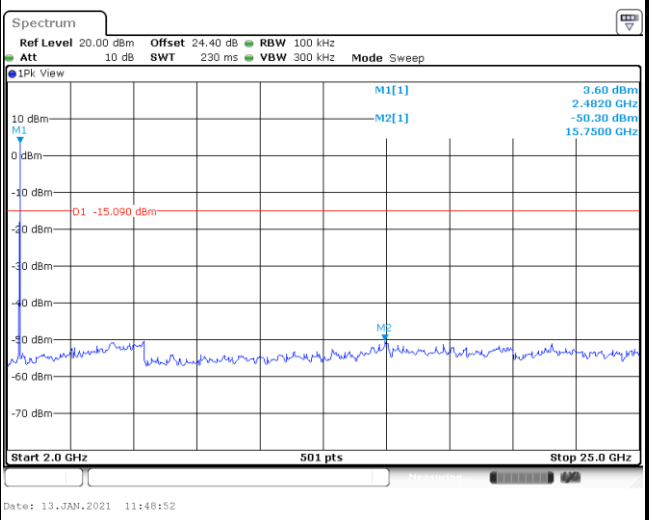
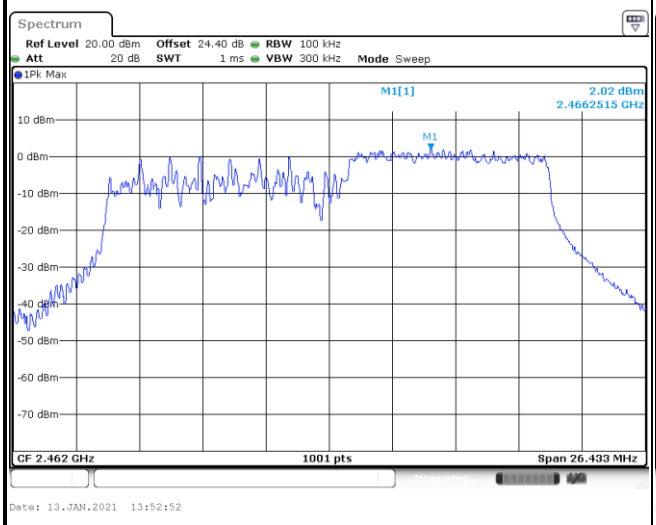
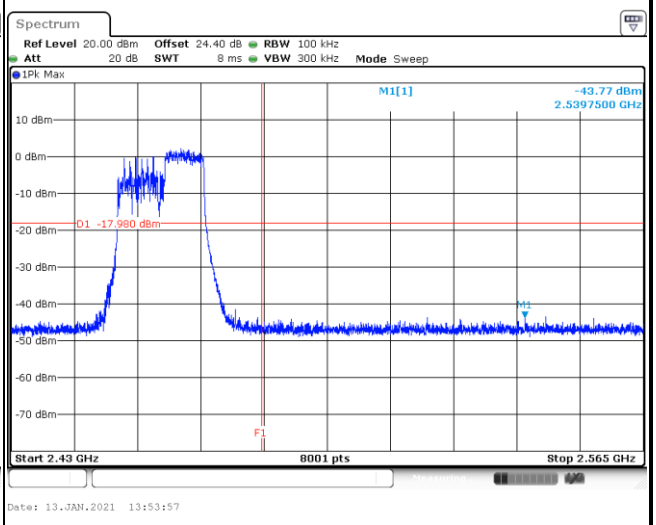
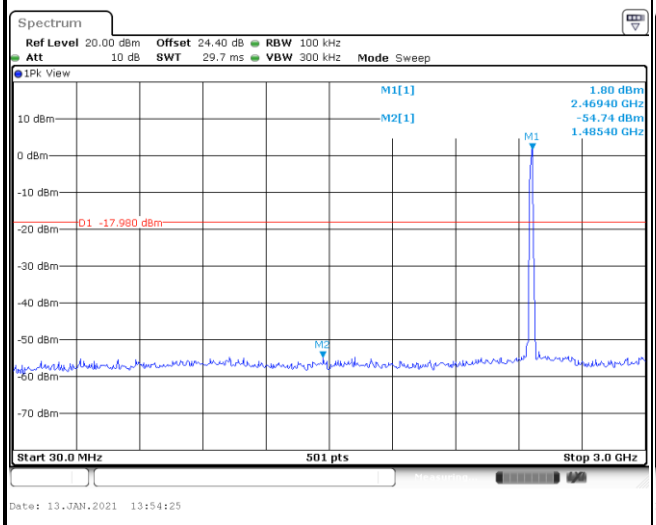
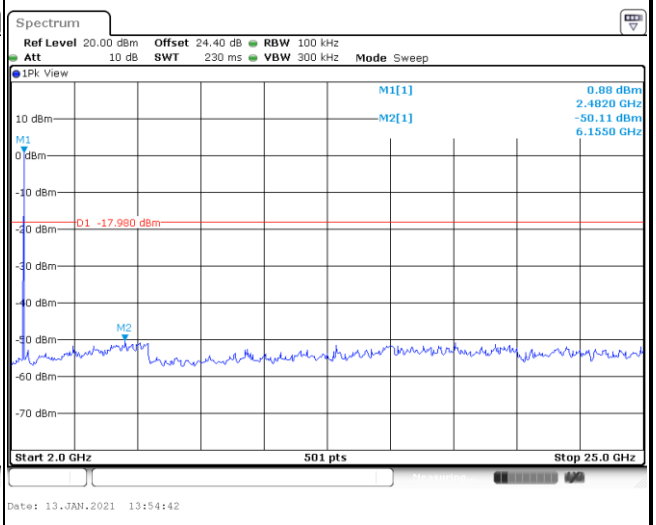
Test Mode :	802.11ax HE20	Test Channel :	11 Partial RU 26/8

100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE20	Test Channel :	11 Partial RU 52/40

100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE20	Test Channel :	11 Partial RU 106/54

100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

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

3.5.2 Measuring Instruments

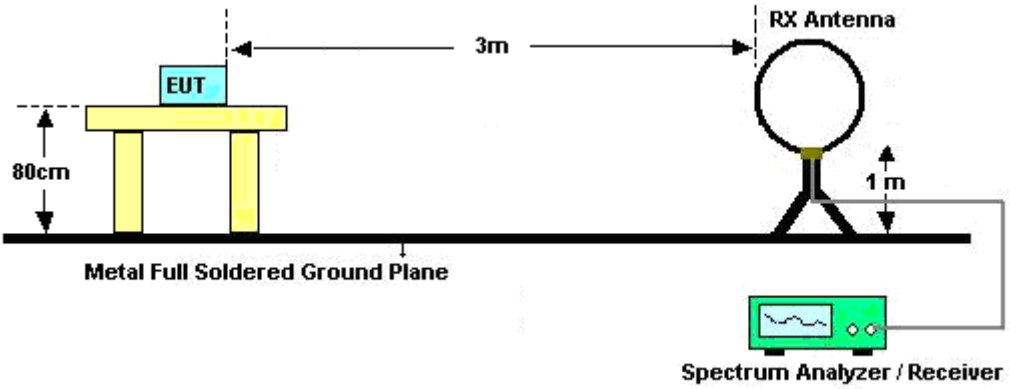
See list of measuring equipment of this test report.

3.5.3 Test Procedures

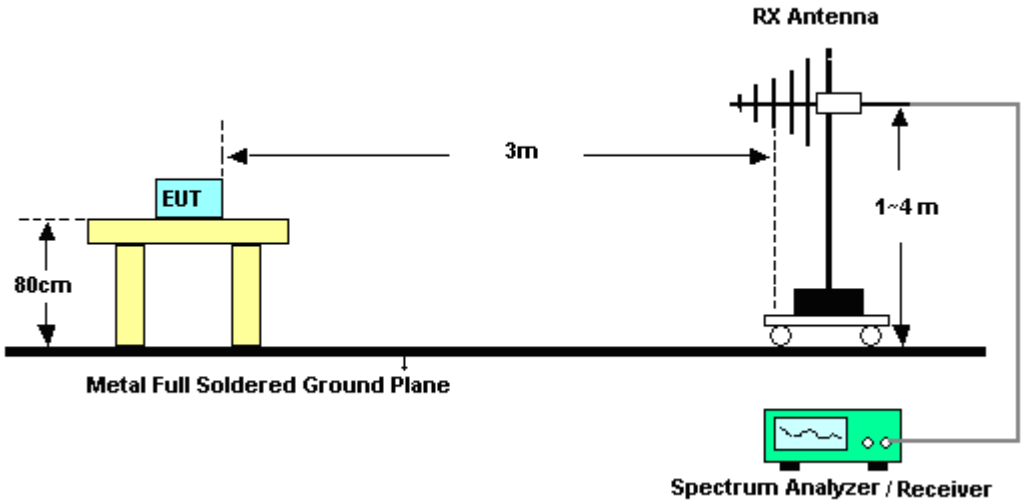
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1 GHz, 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 1 GHz, the emission level of the EUT in peak mode was 20 dB 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.
8. Use the following spectrum analyzer settings:
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Set RBW = 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
   (3) Set RBW = 1 MHz, VBW= 3 MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - 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.

3.5.4 Test Setup

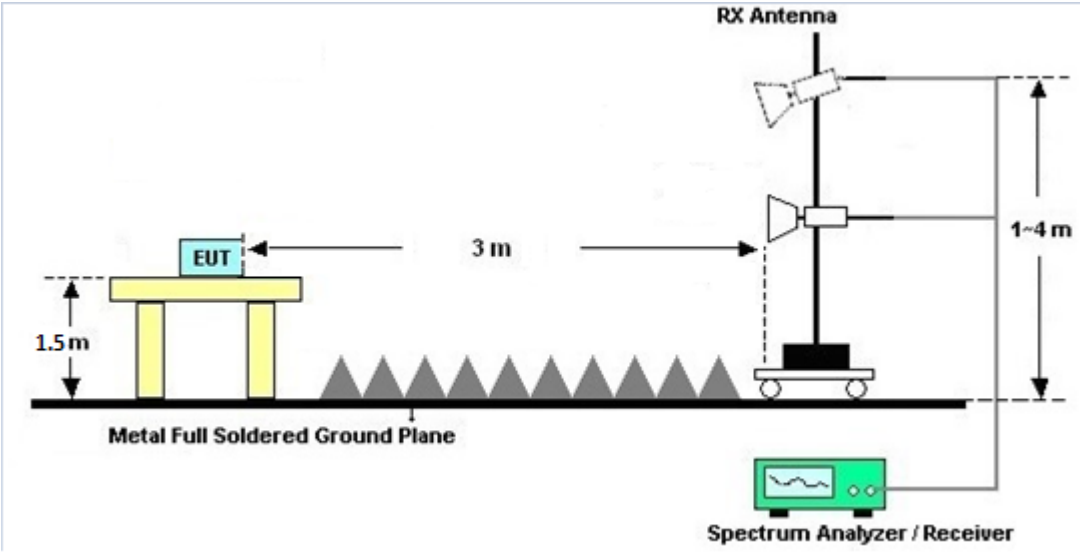
For radiated emissions below 30MHz



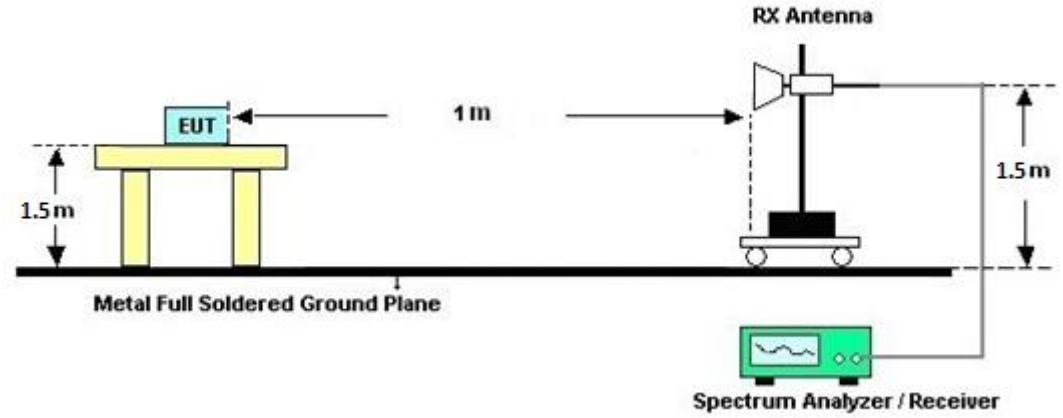
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

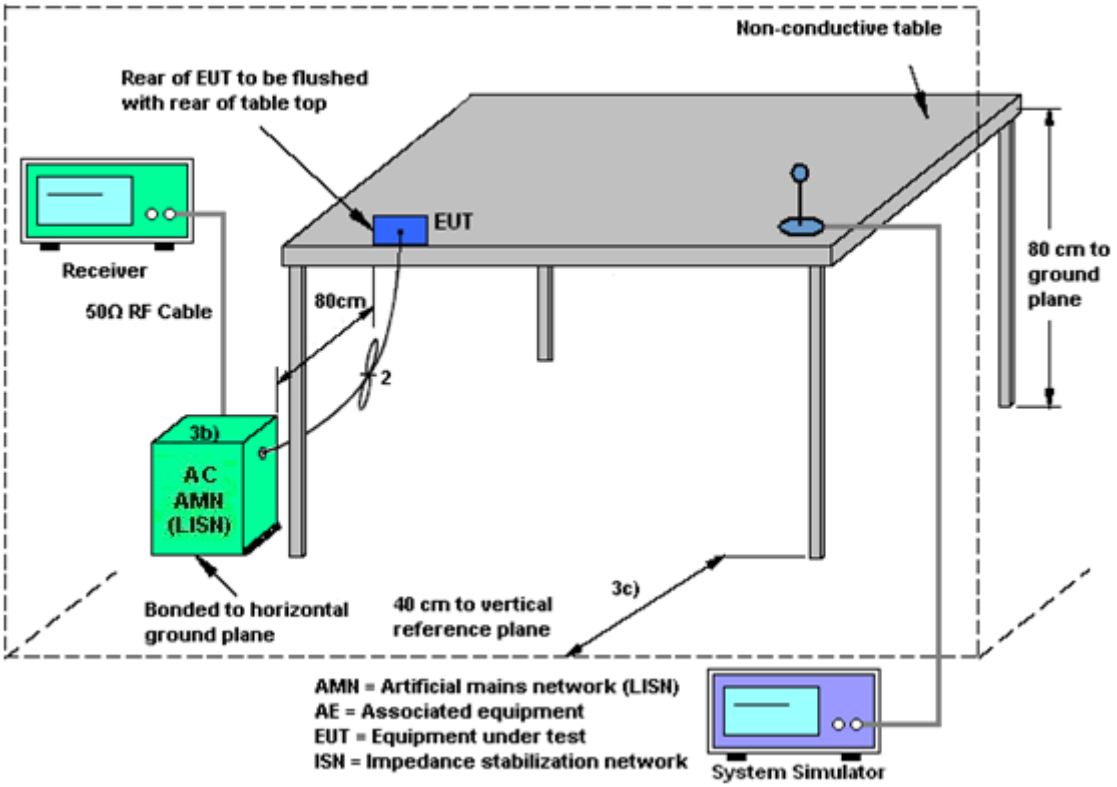
3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. 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.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

For power spectral density (PSD) measurements on all devices,

Array Gain = 10 log(N_{ANT}/N_{SS}=1) dB.

For power measurements on IEEE 802.11 devices,

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

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain “DG” is calculated as following table.

<CDD Modes>

			DG for Power	DG for PSD	Power Limit Reduction	PSD Limit Reduction
	Ant. 1 (dBi)	Ant. 2 (dBi)	(dBi)	(dBi)	(dB)	(dB)
2.4 GHz	-5.30	-4.90	-4.90	-2.09	0.00	0.00

Power Limit Reduction = DG(Power) – 6dBi, (min = 0)

PSD Limit Reduction = DG(PSD) – 6dBi, (min = 0)

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	Jul. 14, 2020	Feb. 26, 2021~ Mar. 03, 2021	Jul. 13, 2021	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Feb. 08, 2021	Feb. 26, 2021~ Mar. 03, 2021	Feb. 07, 2022	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 28, 2020	Feb. 26, 2021~ Mar. 03, 2021	Dec. 27, 2021	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-01620	1GHz~18GHz	Nov. 03, 2020	Feb. 26, 2021~ Mar. 03, 2021	Nov. 02, 2021	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz~40GHz	Dec. 02, 2020	Feb. 26, 2021~ Mar. 03, 2021	Dec. 01, 2021	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055006	1GHz~18GHz	May 07, 2020	Feb. 26, 2021~ Mar. 03, 2021	May 06, 2021	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 21, 2020	Feb. 26, 2021~ Mar. 03, 2021	Aug. 20, 2021	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	0600789	18-40GHz	Oct. 27, 2020	Feb. 26, 2021~ Mar. 03, 2021	Oct. 26, 2021	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Nov. 02, 2020	Feb. 26, 2021~ Mar. 03, 2021	Nov. 01, 2021	Radiation (03CH15-HY
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	May 04, 2020	Feb. 26, 2021~ Mar. 03, 2021	May 03, 2021	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Feb. 26, 2021~ Mar. 03, 2021	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Feb. 26, 2021~ Mar. 03, 2021	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24 (k5)	RK-000451	N/A	N/A	Feb. 26, 2021~ Mar. 03, 2021	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/4, MY9838/4PE ,508405/2E	30MHz~18G	Nov. 16, 2020	Feb. 26, 2021~ Mar. 03, 2021	Nov. 15, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz-40GHz	Feb. 22, 2021	Feb. 26, 2021~ Mar. 03, 2021	Feb. 21, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz-40GHz	Feb. 22, 2021	Feb. 26, 2021~ Mar. 03, 2021	Feb. 21, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 12, 2020	Feb. 26, 2021~ Mar. 03, 2021	Mar. 11, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WLJ4-1000-1530-6000-40ST	SN4	1.53GHz Low Pass Filter	Jul. 03, 2020	Feb. 26, 2021~ Mar. 03, 2021	Jul. 02, 2021	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN4	3GHz High Pass Filter	Sep. 16, 2020	Feb. 26, 2021~ Mar. 03, 2021	Sep. 15, 2021	Radiation (03CH15-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Mar. 01, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 30, 2020	Mar. 01, 2021	Nov. 29, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Mar. 01, 2021	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Mar. 01, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Mar. 01, 2021	N/A	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Mar. 01, 2021	Dec. 30, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Feb. 25, 2021	Mar. 01, 2021	Feb. 24, 2022	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 02, 2020	Dec. 29, 2020 Jan. 13, 2021	Mar. 01, 2021	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO12	10MHz~6GHz	Dec. 16, 2020	Dec. 29, 2020 Jan. 13, 2021	Dec. 15, 2021	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz ~ 40GHz	Jul. 22, 2020	Dec. 29, 2020 Jan. 13, 2021	Jul. 21, 2021	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2020	Dec. 29, 2020 Jan. 13, 2021	Mar. 16, 2021	Conducted (TH05-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.3**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.7**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.3**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.9**

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Eason Huang	Temperature:	21~25	°C
Test Date:	2020/12/29~2021/01/13	Relative Humidity:	51~54	%

Remark: For Conducted Test Items, Ant. 0 means Chain 0 and Ant. 1 means Chain 1.

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band MIMO										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant0	Ant1	Ant0	Ant1		
11b	1Mbps	2	1	2412	13.09	13.14	8.04	8.08	0.50	Pass
11b	1Mbps	2	6	2437	13.14	13.09	8.06	8.00	0.50	Pass
11b	1Mbps	2	11	2462	13.04	12.99	8.08	7.60	0.50	Pass
11g	6Mbps	2	1	2412	16.38	16.33	16.29	16.31	0.50	Pass
11g	6Mbps	2	6	2437	16.43	16.33	16.02	16.03	0.50	Pass
11g	6Mbps	2	11	2462	16.33	16.28	16.03	16.30	0.50	Pass

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band MIMO											
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
						Ant0	Ant1	Ant0	Ant1		
HE20	MCS0	2	1	2412	Full	18.93	18.88	18.85	18.69	0.50	Pass
HE20	MCS0	2	1	2412	26/0	18.53	18.48	2.04	2.04	0.50	Pass
HE20	MCS0	2	1	2412	52/37	18.28	18.33	17.02	17.04	0.50	Pass
HE20	MCS0	2	1	2412	106/53	18.48	18.28	18.16	18.12	0.50	Pass
HE20	MCS0	2	6	2437	Full	18.93	18.93	18.66	18.23	0.50	Pass
HE20	MCS0	2	11	2462	Full	18.83	18.88	18.45	17.62	0.50	Pass
HE20	MCS0	2	11	2462	26/8	18.43	18.28	2.06	2.01	0.50	Pass
HE20	MCS0	2	11	2462	52/40	18.33	18.13	16.99	16.97	0.50	Pass
HE20	MCS0	2	11	2462	106/54	18.23	18.18	17.09	17.14	0.50	Pass

TEST RESULTS DATA
Peak Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	2	1	2412	15.16	16.31	18.78	30.00		-4.90		13.88		36.00		Pass
11b	1Mbps	2	6	2437	15.13	16.30	18.76	30.00		-4.90		13.86		36.00		Pass
11b	1Mbps	2	11	2462	14.70	16.46	18.68	30.00		-4.90		13.78		36.00		Pass
11g	6Mbps	2	1	2412	22.85	22.83	25.85	30.00		-4.90		20.95		36.00		Pass
11g	6Mbps	2	6	2437	22.91	23.13	26.03	30.00		-4.90		21.13		36.00		Pass
11g	6Mbps	2	11	2462	21.61	21.64	24.64	30.00		-4.90		19.74		36.00		Pass
HT20	MCS0	2	1	2412	22.53	22.51	25.53	30.00		-4.90		20.63		36.00		Pass
HT20	MCS0	2	6	2437	22.93	23.12	26.04	30.00		-4.90		21.14		36.00		Pass
HT20	MCS0	2	11	2462	20.92	20.85	23.90	30.00		-4.90		19.00		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	2	1	2412	Full	22.72	22.73	25.74	30.00		-4.90		20.84		36.00		Pass
HE20	MCS0	2	1	2412	26/0	20.45	20.48	23.48	30.00		-4.90		18.58		36.00		Pass
HE20	MCS0	2	1	2412	52/37	22.62	22.61	25.63	30.00		-4.90		20.73		36.00		Pass
HE20	MCS0	2	1	2412	106/53	22.70	22.72	25.72	30.00		-4.90		20.82		36.00		Pass
HE20	MCS0	2	6	2437	Full	23.06	23.18	26.13	30.00		-4.90		21.23		36.00		Pass
HE20	MCS0	2	6	2437	26/4	19.78	19.67	22.74	30.00		-4.90		17.84		36.00		Pass
HE20	MCS0	2	6	2437	52/39	22.26	22.66	25.47	30.00		-4.90		20.57		36.00		Pass
HE20	MCS0	2	6	2437	106/53	23.00	23.06	26.04	30.00		-4.90		21.14		36.00		Pass
HE20	MCS0	2	11	2462	Full	21.72	21.63	24.69	30.00		-4.90		19.79		36.00		Pass
HE20	MCS0	2	11	2462	26/8	20.02	21.10	23.60	30.00		-4.90		18.70		36.00		Pass
HE20	MCS0	2	11	2462	52/40	21.63	21.59	24.62	30.00		-4.90		19.72		36.00		Pass
HE20	MCS0	2	11	2462	106/54	21.50	21.56	24.54	30.00		-4.90		19.64		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	2	1	2412	12.65	13.83	16.29	30.00		-4.90		11.39		36.00		Pass
11b	1Mbps	2	6	2437	12.63	13.81	16.27	30.00		-4.90		11.37		36.00		Pass
11b	1Mbps	2	11	2462	12.66	13.93	16.35	30.00		-4.90		11.45		36.00		Pass
11g	6Mbps	2	1	2412	14.99	14.95	17.98	30.00		-4.90		13.08		36.00		Pass
11g	6Mbps	2	6	2437	15.93	15.94	18.95	30.00		-4.90		14.05		36.00		Pass
11g	6Mbps	2	11	2462	13.49	13.41	16.46	30.00		-4.90		11.56		36.00		Pass
HT20	MCS0	2	1	2412	14.40	14.35	17.39	30.00		-4.90		12.49		36.00		Pass
HT20	MCS0	2	6	2437	15.89	15.92	18.92	30.00		-4.90		14.02		36.00		Pass
HT20	MCS0	2	11	2462	12.63	12.57	15.61	30.00		-4.90		10.71		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Average Conducted Power with duty factor (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	2	1	2412	Full	14.48	14.37	17.44	30.00		-4.90		12.54		36.00		Pass
HE20	MCS0	2	1	2412	26/0	9.18	9.32	12.26	30.00		-4.90		7.36		36.00		Pass
HE20	MCS0	2	1	2412	52/37	12.36	12.48	15.43	30.00		-4.90		10.53		36.00		Pass
HE20	MCS0	2	1	2412	106/53	14.14	14.39	17.28	30.00		-4.90		12.38		36.00		Pass
HE20	MCS0	2	6	2437	Full	15.93	15.97	18.96	30.00		-4.90		14.06		36.00		Pass
HE20	MCS0	2	6	2437	26/4	9.10	9.16	12.14	30.00		-4.90		7.24		36.00		Pass
HE20	MCS0	2	6	2437	52/39	12.47	12.49	15.49	30.00		-4.90		10.59		36.00		Pass
HE20	MCS0	2	6	2437	106/53	14.46	14.47	17.48	30.00		-4.90		12.58		36.00		Pass
HE20	MCS0	2	11	2462	Full	12.86	12.69	15.79	30.00		-4.90		10.89		36.00		Pass
HE20	MCS0	2	11	2462	26/8	9.13	9.23	12.19	30.00		-4.90		7.29		36.00		Pass
HE20	MCS0	2	11	2462	52/40	12.46	12.47	15.48	30.00		-4.90		10.58		36.00		Pass
HE20	MCS0	2	11	2462	106/54	12.48	12.45	15.48	30.00		-4.90		10.58		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant0	Ant1	Worse + 3.01	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	2	1	2412	-11.33	-10.34	-7.33	-2.09		8.00		Pass
11b	1Mbps	2	6	2437	-12.66	-11.37	-8.36	-2.09		8.00		Pass
11b	1Mbps	2	11	2462	-11.39	-10.87	-7.86	-2.09		8.00		Pass
11g	6Mbps	2	1	2412	-11.92	-11.62	-8.61	-2.09		8.00		Pass
11g	6Mbps	2	6	2437	-11.47	-10.52	-7.51	-2.09		8.00		Pass
11g	6Mbps	2	11	2462	-12.61	-12.18	-9.17	-2.09		8.00		Pass

Note: Measured power density (dBm) has offset with cable loss.

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band MIMO													
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
						Ant0	Ant1	Worse + 3.01	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	2	1	2412	Full	-11.51	-12.14	-8.50	-2.09		8.00		Pass
HE20	MCS0	2	1	2412	26/0	-7.01	-9.48	-4.00	-2.09		8.00		Pass
HE20	MCS0	2	1	2412	52/37	-7.37	-7.76	-4.36	-2.09		8.00		Pass
HE20	MCS0	2	1	2412	106/53	-8.18	-8.63	-5.17	-2.09		8.00		Pass
HE20	MCS0	2	6	2437	Full	-10.14	-11.72	-7.13	-2.09		8.00		Pass
HE20	MCS0	2	6	2437	26/4	-9.15	-9.35	-6.14	-2.09		8.00		Pass
HE20	MCS0	2	6	2437	52/39	-9.02	-8.11	-5.10	-2.09		8.00		Pass
HE20	MCS0	2	6	2437	106/53	-9.18	-8.63	-5.62	-2.09		8.00		Pass
HE20	MCS0	2	11	2462	Full	-12.95	-13.95	-9.94	-2.09		8.00		Pass
HE20	MCS0	2	11	2462	26/8	-9.45	-7.74	-4.73	-2.09		8.00		Pass
HE20	MCS0	2	11	2462	52/40	-8.06	-7.64	-4.63	-2.09		8.00		Pass
HE20	MCS0	2	11	2462	106/54	-10.99	-10.21	-7.20	-2.09		8.00		Pass

Note: Measured power density (dBm) has offset with cable loss.

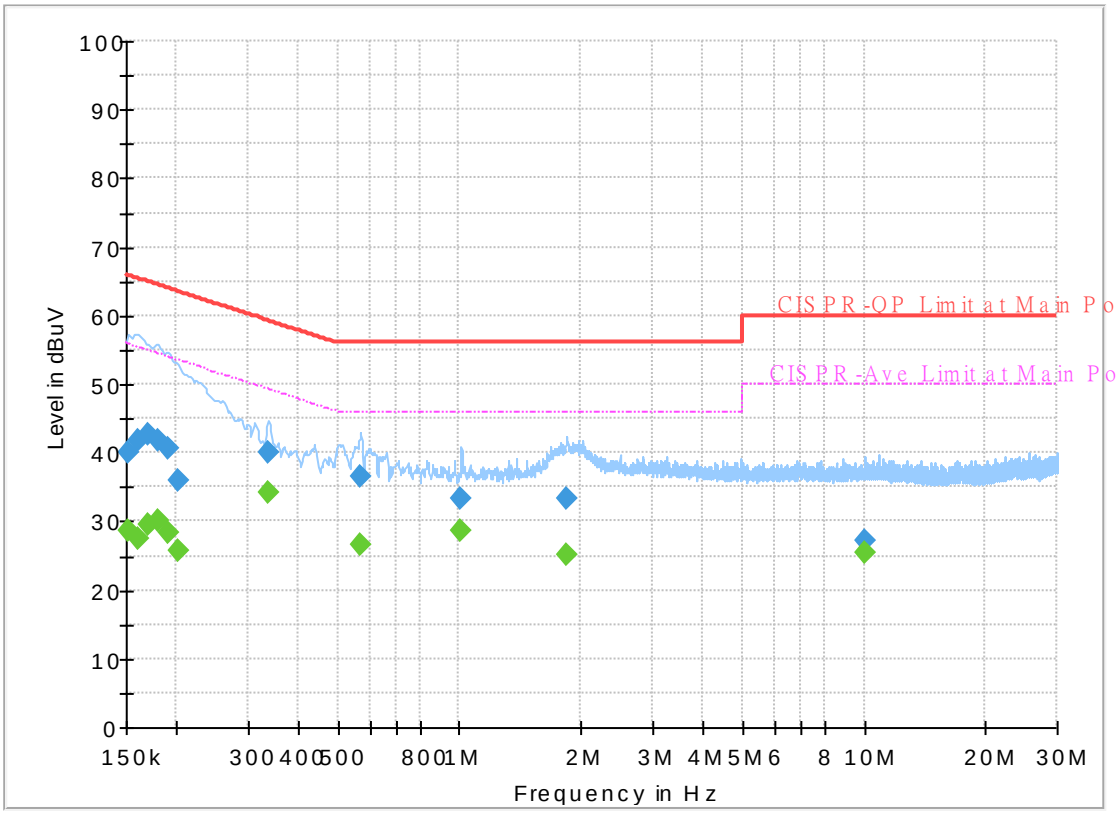
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Tom Lee	**Temperature :**	23~26℃
		Relative Humidity :	40~50%

EUT Information

Report NO :	0D2215
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



Final_Result

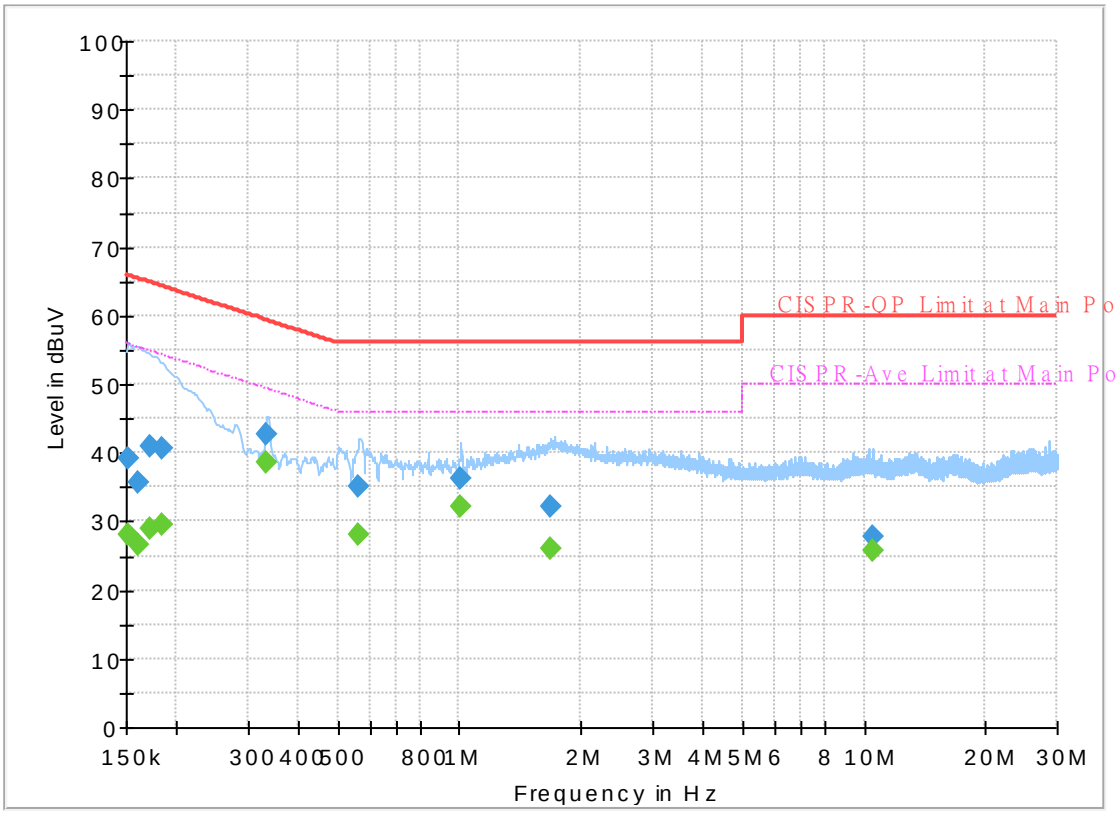
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	28.72	55.88	27.16	L1	OFF	19.5
0.152250	40.17	---	65.88	25.71	L1	OFF	19.5
0.161250	---	27.39	55.40	28.01	L1	OFF	19.5
0.161250	41.93	---	65.40	23.47	L1	OFF	19.5
0.170250	---	29.57	54.95	25.38	L1	OFF	19.5
0.170250	42.74	---	64.95	22.21	L1	OFF	19.5
0.179250	---	30.24	54.52	24.28	L1	OFF	19.5
0.179250	41.81	---	64.52	22.71	L1	OFF	19.5
0.190500	---	28.36	54.02	25.66	L1	OFF	19.5
0.190500	40.74	---	64.02	23.28	L1	OFF	19.5
0.201750	---	25.72	53.54	27.82	L1	OFF	19.5
0.201750	35.99	---	63.54	27.55	L1	OFF	19.5
0.336750	---	34.33	49.28	14.95	L1	OFF	19.5
0.336750	39.94	---	59.28	19.34	L1	OFF	19.5
0.568500	---	26.70	46.00	19.30	L1	OFF	19.7
0.568500	36.50	---	56.00	19.50	L1	OFF	19.7
1.009500	---	28.78	46.00	17.22	L1	OFF	20.0
1.009500	33.43	---	56.00	22.57	L1	OFF	20.0
1.842000	---	25.16	46.00	20.84	L1	OFF	20.0
1.842000	33.37	---	56.00	22.63	L1	OFF	20.0
10.005000	---	25.44	50.00	24.56	L1	OFF	20.0

10.005000	**27.12**	**---**	**60.00**	**32.88**	**L1**	**OFF**	**20.0**

EUT Information

Report NO :	0D2215
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	28.20	55.88	27.68	N	OFF	19.5
0.152250	39.29	---	65.88	26.59	N	OFF	19.5
0.161250	---	26.62	55.40	28.78	N	OFF	19.5
0.161250	35.77	---	65.40	29.63	N	OFF	19.5
0.172500	---	28.88	54.84	25.96	N	OFF	19.5
0.172500	40.84	---	64.84	24.00	N	OFF	19.5
0.183750	---	29.57	54.31	24.74	N	OFF	19.5
0.183750	40.71	---	64.31	23.60	N	OFF	19.5
0.334500	---	38.48	49.34	10.86	N	OFF	19.6
0.334500	42.81	---	59.34	16.53	N	OFF	19.6
0.564000	---	28.15	46.00	17.85	N	OFF	19.8
0.564000	35.05	---	56.00	20.95	N	OFF	19.8
1.007250	---	32.11	46.00	13.89	N	OFF	20.1
1.007250	36.18	---	56.00	19.82	N	OFF	20.1
1.682250	---	26.03	46.00	19.97	N	OFF	20.0
1.682250	32.30	---	56.00	23.70	N	OFF	20.0
10.493250	---	25.79	50.00	24.21	N	OFF	20.1
10.493250	27.63	---	60.00	32.37	N	OFF	20.1

Appendix C. Radiated Spurious Emission

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

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2358.72	54.6	-19.4	74	41.35	27.67	16.51	30.93	168	203	P	H
		2389.905	43.51	-10.49	54	30.33	27.54	16.56	30.92	168	203	A	H
	*	2412	103.78	-	-	90.59	27.5	16.6	30.91	168	203	P	H
	*	2412	100.66	-	-	87.47	27.5	16.6	30.91	168	203	A	H
													H
													H
		2316.825	54.27	-19.73	74	41.01	27.77	16.44	30.95	364	61	P	V
		2339.505	43.51	-10.49	54	30.25	27.72	16.48	30.94	364	61	A	V
	*	2412	100.36	-	-	87.17	27.5	16.6	30.91	364	61	P	V
	*	2412	97.31	-	-	84.12	27.5	16.6	30.91	364	61	A	V
													V
													V
802.11b CH 06 2437MHz		2332.56	54.45	-19.55	74	41.19	27.73	16.47	30.94	138	212	P	H
		2360.88	43.53	-10.47	54	30.28	27.66	16.52	30.93	138	212	A	H
	*	2437	104.91	-	-	91.67	27.5	16.64	30.9	138	212	P	H
	*	2437	101.82	-	-	88.58	27.5	16.64	30.9	138	212	A	H
		2492.89	54.16	-19.84	74	40.9	27.41	16.72	30.87	138	212	P	H
		2484.88	43.54	-10.46	54	30.28	27.43	16.71	30.88	138	212	A	H
		2346.8	54.6	-19.4	74	41.33	27.71	16.49	30.93	400	59	P	V
		2336.56	43.5	-10.5	54	30.23	27.73	16.48	30.94	400	59	A	V
	*	2437	100.91	-	-	87.67	27.5	16.64	30.9	400	59	P	V
	*	2437	97.79	-	-	84.55	27.5	16.64	30.9	400	59	A	V
		2499.19	53.94	-20.06	74	40.68	27.4	16.73	30.87	400	59	P	V
		2488.84	43.55	-10.45	54	30.28	27.42	16.72	30.87	400	59	A	V

802.11b CH 11 2462MHz	*	2462	105.47	-	-	92.21	27.48	16.67	30.89	153	211	P	H
	*	2462	102.38	-	-	89.12	27.48	16.67	30.89	153	211	A	H
		2487	53.99	-20.01	74	40.73	27.43	16.71	30.88	153	211	P	H
		2486.36	43.72	-10.28	54	30.46	27.43	16.71	30.88	153	211	A	H
													H
													H
	*	2462	100.81	-	-	87.54	27.48	16.68	30.89	400	321	P	V
	*	2462	97.68	-	-	84.41	27.48	16.68	30.89	400	321	A	V
		2487.92	53.82	-20.18	74	40.56	27.42	16.72	30.88	400	321	P	V
		2486.32	43.62	-10.38	54	30.36	27.43	16.71	30.88	400	321	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11b (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)
802.11b CH 01 2412MHz		4824	40.2	-33.8	74	58.12	31.1	10.07	59.09	100	0	P	H
		17985	59.85	-14.15	74	50.16	48.73	18.88	57.92	100	26	P	H
		17985	49.91	-4.09	54	40.22	48.73	18.88	57.92	100	26	A	H
													H
		4824	39.63	-34.37	74	57.55	31.1	10.07	59.09	100	0	P	V
		18000	59.01	-14.99	74	49.02	49	18.89	57.9	100	127	P	V
		18000	49.89	-4.11	54	39.9	49	18.89	57.9	100	127	A	V
													V
802.11b CH 06 2437MHz		4874	38.5	-35.5	74	56.46	31.05	10.11	59.12	100	0	P	H
		7311	44.46	-29.54	74	54.41	36.3	12.31	58.56	100	0	P	H
		18000	58.41	-15.59	74	48.42	49	18.89	57.9	100	21	P	H
		18000	49.56	-4.44	54	39.57	49	18.89	57.9	100	21	A	H
		4874	39.38	-34.62	74	57.34	31.05	10.11	59.12	100	0	P	V
		7311	44.15	-29.85	74	54.1	36.3	12.31	58.56	100	0	P	V
		17985	58.89	-15.11	74	49.2	48.73	18.88	57.92	100	134	P	V
		17985	50.02	-3.98	54	40.33	48.73	18.88	57.92	100	134	A	V
802.11b CH 11 2462MHz		4924	39.45	-34.55	74	57.36	31.1	10.14	59.15	100	0	P	H
		7386	44.84	-29.16	74	54.65	36.3	12.35	58.46	100	0	P	H
		18000	58.94	-15.06	74	48.95	49	18.89	57.9	100	34	P	H
		18000	49.69	-4.31	54	39.7	49	18.89	57.9	100	34	A	H
		4924	40.1	-33.9	74	58.01	31.1	10.14	59.15	100	0	P	V
		7386	44.97	-29.03	74	54.78	36.3	12.35	58.46	100	0	P	V
		18000	58.31	-15.69	74	48.32	49	18.89	57.9	100	124	P	V
		18000	49.86	-4.14	54	39.87	49	18.89	57.9	100	124	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11g (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)
802.11g CH 01 2412MHz		2370.27	55.07	-18.93	74	41.84	27.62	16.53	30.92	167	219	P	H
		2390	45.2	-8.8	54	32.02	27.54	16.56	30.92	167	219	A	H
	*	2412	106.21	-	-	93.02	27.5	16.6	30.91	167	219	P	H
	*	2412	98.79	-	-	85.6	27.5	16.6	30.91	167	219	A	H
													H
													H
		2388.435	54.4	-19.6	74	41.21	27.55	16.56	30.92	361	60	P	V
		2388.12	44.1	-9.9	54	30.91	27.55	16.56	30.92	361	60	A	V
	*	2412	101.68	-	-	88.49	27.5	16.6	30.91	361	60	P	V
	*	2412	94.54	-	-	81.35	27.5	16.6	30.91	361	60	A	V
													V
													V
802.11g CH 06 2437MHz		2345.7	54.66	-19.34	74	41.39	27.71	16.49	30.93	162	212	P	H
		2339.41	43.53	-10.47	54	30.27	27.72	16.48	30.94	162	212	A	H
	*	2437	108.67	-	-	95.43	27.5	16.64	30.9	162	212	P	H
	*	2437	101.19	-	-	87.95	27.5	16.64	30.9	162	212	A	H
		2484.52	54.21	-19.79	74	40.95	27.43	16.71	30.88	162	212	P	H
		2484.79	43.65	-10.35	54	30.39	27.43	16.71	30.88	162	212	A	H
		2384.8	54.63	-19.37	74	41.44	27.56	16.55	30.92	400	60	P	V
		2328.02	43.54	-10.46	54	30.28	27.74	16.46	30.94	400	60	A	V
	*	2437	103.65	-	-	90.41	27.5	16.64	30.9	400	60	P	V
	*	2437	96.18	-	-	82.94	27.5	16.64	30.9	400	60	A	V
		2493.61	54.03	-19.97	74	40.76	27.41	16.73	30.87	400	60	P	V
		2499.64	43.56	-10.44	54	30.3	27.4	16.73	30.87	400	60	A	V

802.11g CH 11 2462MHz	*	2462	106.25	-	-	92.98	27.48	16.68	30.89	156	213	P	H
	*	2462	98.82	-	-	85.55	27.48	16.68	30.89	156	213	A	H
		2484.72	57.63	-16.37	74	44.37	27.43	16.71	30.88	156	213	P	H
		2485.44	45.65	-8.35	54	32.39	27.43	16.71	30.88	156	213	A	H
													H
													H
	*	2462	101.94	-	-	88.67	27.48	16.68	30.89	400	313	P	V
	*	2462	94.75	-	-	81.48	27.48	16.68	30.89	400	313	A	V
		2486.04	55.68	-18.32	74	42.42	27.43	16.71	30.88	400	313	P	V
		2485.08	44.79	-9.21	54	31.53	27.43	16.71	30.88	400	313	A	V
													V
													V

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

2.4GHz 2400~2483.5MHz

WIFI 802.11g (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)
802.11g CH 01 2412MHz		4824	38.8	-35.2	74	56.72	31.1	10.07	59.09	100	0	P	H
		17925	58.01	-15.99	74	49.51	47.65	18.84	57.99	100	38	P	H
		17925	49.53	-4.47	54	41.03	47.65	18.84	57.99	100	38	A	H
													H
		4824	39.39	-34.61	74	57.31	31.1	10.07	59.09	100	0	P	V
		18000	58.08	-15.92	74	48.09	49	18.89	57.9	100	146	P	V
		18000	49.95	-4.05	54	39.96	49	18.89	57.9	100	146	A	V
													V
802.11g CH 06 2437MHz		4874	39.08	-34.92	74	57.04	31.05	10.11	59.12	100	0	P	H
		7311	43.96	-30.04	74	53.91	36.3	12.31	58.56	100	0	P	H
		18000	58.91	-15.09	74	48.92	49	18.89	57.9	100	29	P	H
		18000	49.86	-4.14	54	39.87	49	18.89	57.9	100	29	A	H
		4874	39.2	-34.8	74	57.16	31.05	10.11	59.12	100	0	P	V
		7311	44.22	-29.78	74	54.17	36.3	12.31	58.56	100	0	P	V
		17985	59.12	-14.88	74	49.43	48.73	18.88	57.92	100	123	P	V
		17985	49.93	-4.07	54	40.24	48.73	18.88	57.92	100	123	A	V
802.11g CH 11 2462MHz		4924	40.23	-33.77	74	58.14	31.1	10.14	59.15	100	0	P	H
		7386	45	-29	74	54.81	36.3	12.35	58.46	100	0	P	H
		18000	59.42	-14.58	74	49.43	49	18.89	57.9	100	25	P	H
		18000	49.73	-4.27	54	39.74	49	18.89	57.9	100	25	A	H
		4924	39.57	-34.43	74	57.48	31.1	10.14	59.15	100	0	P	V
		7386	45.42	-28.58	74	55.23	36.3	12.35	58.46	100	0	P	V
		18000	58.86	-15.14	74	48.87	49	18.89	57.9	100	154	P	V
		18000	49.93	-4.07	54	39.94	49	18.89	57.9	100	154	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (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)
		2389.905	55.36	-18.64	74	42.18	27.54	16.56	30.92	167	216	P	H
		2390	45.4	-8.6	54	32.22	27.54	16.56	30.92	167	216	A	H
	*	2412	105.03	-	-	91.84	27.5	16.6	30.91	167	216	P	H
	*	2412	95.55	-	-	82.36	27.5	16.6	30.91	167	216	A	H
802.11ax													H
HE20 Full													H
CH 01		2351.895	54.72	-19.28	74	41.46	27.69	16.5	30.93	369	63	P	V
2412MHz		2389.905	44.35	-9.65	54	31.17	27.54	16.56	30.92	369	63	A	V
	*	2412	100.51	-	-	87.32	27.5	16.6	30.91	369	63	P	V
	*	2412	91.5	-	-	78.31	27.5	16.6	30.91	369	63	A	V
													V
													V
		2383.1	55.03	-18.97	74	41.83	27.57	16.55	30.92	158	216	P	H
		2390	43.78	-10.22	54	30.6	27.54	16.56	30.92	158	216	A	H
	*	2437	106.74	-	-	93.5	27.5	16.64	30.9	158	216	P	H
	*	2437	98	-	-	84.76	27.5	16.64	30.9	158	216	A	H
802.11ax		2485.42	53.94	-20.06	74	40.68	27.43	16.71	30.88	158	216	P	H
HE20 Full		2483.71	43.83	-10.17	54	30.57	27.43	16.71	30.88	158	216	A	H
CH 06		2312.04	54.94	-19.06	74	41.68	27.78	16.43	30.95	350	87	P	V
2437MHz		2327.34	43.62	-10.38	54	30.35	27.75	16.46	30.94	350	87	A	V
	*	2437	101.43	-	-	88.19	27.5	16.64	30.9	350	87	P	V
	*	2437	92.45	-	-	79.21	27.5	16.64	30.9	350	87	A	V
		2493.52	54.74	-19.26	74	41.48	27.41	16.72	30.87	350	87	P	V
		2485.69	43.69	-10.31	54	30.43	27.43	16.71	30.88	350	87	A	V

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)
	*	2462	103.57	-	-	90.3	27.48	16.68	30.89	158	208	P	H
	*	2462	94.72	-	-	81.45	27.48	16.68	30.89	158	208	A	H
		2483.76	58.98	-15.02	74	45.72	27.43	16.71	30.88	158	208	P	H
		2483.52	47.51	-6.49	54	34.25	27.43	16.71	30.88	158	208	A	H
8802.11ax													H
HE20 Full													H
CH 11	*	2462	99.19	-	-	85.92	27.48	16.68	30.89	349	63	P	V
2462MHz	*	2462	89.22	-	-	75.95	27.48	16.68	30.89	349	63	A	V
		2483.76	56.08	-17.92	74	42.82	27.43	16.71	30.88	349	63	P	V
		2483.52	45.32	-8.68	54	32.06	27.43	16.71	30.88	349	63	A	V
													V
													V

Remark

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

2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (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)
		4824	39.12	-34.88	74	57.04	31.1	10.07	59.09	100	0	P	H
		17970	59.02	-14.98	74	49.63	48.46	18.87	57.94	100	157	P	H
802.11ax		17970	49.68	-4.32	54	40.29	48.46	18.87	57.94	100	157	A	H
HE20 Full													H
CH 01		4824	38.85	-35.15	74	56.77	31.1	10.07	59.09	100	0	P	V
2412MHz		17985	58.42	-15.58	74	48.73	48.73	18.88	57.92	100	29	P	V
		17985	49.68	-4.32	54	39.99	48.73	18.88	57.92	100	29	A	V
													V
		4874	38.41	-35.59	74	56.37	31.05	10.11	59.12	100	0	P	H
		7311	44.14	-29.86	74	54.09	36.3	12.31	58.56	100	0	P	H
802.11ax		18000	58.87	-15.13	74	48.88	49	18.89	57.9	100	132	P	H
HE20 Full		18000	49.98	-4.02	54	39.99	49	18.89	57.9	100	132	A	H
CH 06		4874	38.23	-35.77	74	56.19	31.05	10.11	59.12	100	0	P	V
2437MHz		7311	43.85	-30.15	74	53.8	36.3	12.31	58.56	100	0	P	V
		17985	58.04	-15.96	74	48.35	48.73	18.88	57.92	100	42	P	V
		17985	49.81	-4.19	54	40.12	48.73	18.88	57.92	100	42	A	V
		4924	39.18	-34.82	74	57.09	31.1	10.14	59.15	100	0	P	H
		7386	45.09	-28.91	74	54.9	36.3	12.35	58.46	100	0	P	H
802.11ax		18000	58.13	-15.87	74	48.14	49	18.89	57.9	100	128	P	H
HE20 Full		18000	49.97	-4.03	54	39.98	49	18.89	57.9	100	128	A	H
CH 11		4924	39.46	-34.54	74	57.37	31.1	10.14	59.15	100	0	P	V
2462MHz		7386	44.51	-29.49	74	54.32	36.3	12.35	58.46	100	0	P	V
		18000	58.33	-15.67	74	48.34	49	18.89	57.9	100	26	P	V
		18000	49.91	-4.09	54	39.92	49	18.89	57.9	100	26	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 26 (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)
802.11ax HE20 Partial 26/0 CH 01 2412MHz		2318.295	55.33	-18.67	74	42.07	27.76	16.45	30.95	135	100	P	H
		2326.17	43.61	-10.39	54	30.34	27.75	16.46	30.94	135	100	A	H
	*	2412	108.22	-	-	95.03	27.5	16.6	30.91	135	100	P	H
	*	2412	100.05	-	-	86.86	27.5	16.6	30.91	135	100	A	H
													H
													H
		2349.375	55	-19	74	41.73	27.7	16.5	30.93	371	63	P	V
		2332.47	43.62	-10.38	54	30.35	27.74	16.47	30.94	371	63	A	V
	*	2412	105.78	-	-	92.59	27.5	16.6	30.91	371	63	P	V
	*	2412	97.26	-	-	84.07	27.5	16.6	30.91	371	63	A	V
													V
													V
802.11ax HE20 Partial 26/8 CH 11 2462MHz	*	2462	111.71	-	-	98.44	27.48	16.68	30.89	138	208	P	H
	*	2462	102.37	-	-	89.1	27.48	16.68	30.89	138	208	A	H
		2485.33	54.98	-19.02	74	41.72	27.43	16.71	30.88	138	208	P	H
		2484.07	43.73	-10.27	54	30.47	27.43	16.71	30.88	138	208	A	H
													H
													H
	*	2462	107.29	-	-	94.02	27.48	16.68	30.89	366	313	P	V
	*	2462	97.67	-	-	84.4	27.48	16.68	30.89	366	313	A	V
		2486.64	55.12	-18.88	74	41.86	27.43	16.71	30.88	366	313	P	V
		2488.72	43.69	-10.31	54	30.42	27.42	16.72	30.87	366	313	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 26 (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 26/0 CH 01 2412MHz		4824	39.53	-34.47	74	57.45	31.1	10.07	59.09	100	0	P	H
		17985	59.62	-14.38	74	49.93	48.73	18.88	57.92	100	153	P	H
		17985	49.65	-4.35	54	39.96	48.73	18.88	57.92	100	153	A	H
													H
		4824	39.59	-34.41	74	57.51	31.1	10.07	59.09	100	0	P	V
		18000	59.07	-14.93	74	49.08	49	18.89	57.9	100	29	P	V
		18000	49.87	-4.13	54	39.88	49	18.89	57.9	100	29	A	V
													V
802.11ax HE20 Partial 26/8 CH 11 2462MHz		4924	40.83	-33.17	74	58.74	31.1	10.14	59.15	100	0	P	H
		7386	44.11	-29.89	74	53.92	36.3	12.35	58.46	100	0	P	H
		18000	58.94	-15.06	74	48.95	49	18.89	57.9	100	124	P	H
		18000	49.97	-4.03	54	39.98	49	18.89	57.9	100	124	A	H
		4924	39.27	-34.73	74	57.18	31.1	10.14	59.15	100	0	P	V
		7386	44.28	-29.72	74	54.09	36.3	12.35	58.46	100	0	P	V
		17985	58.1	-15.9	74	48.41	48.73	18.88	57.92	100	33	P	V
		17985	49.71	-4.29	54	40.02	48.73	18.88	57.92	100	33	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

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)
		2390	56.06	-17.94	74	42.88	27.54	16.56	30.92	136	99	P	H
		2352.315	43.6	-10.4	54	30.34	27.69	16.5	30.93	136	99	A	H
	*	2412	109.19	-	-	96	27.5	16.6	30.91	136	99	P	H
802.11ax	*	2412	100.56	-	-	87.37	27.5	16.6	30.91	136	99	A	H
HE20													H
Partial													H
52/37		2319.45	55.07	-18.93	74	41.81	27.76	16.45	30.95	369	64	P	V
CH 01		2328.375	43.67	-10.33	54	30.41	27.74	16.46	30.94	369	64	A	V
2412MHz	*	2412	106.48	-	-	93.29	27.5	16.6	30.91	369	64	P	V
	*	2412	97.99	-	-	84.8	27.5	16.6	30.91	369	64	A	V
													V
													V
	*	2462	111.78	-	-	98.51	27.48	16.68	30.89	138	213	P	H
	*	2462	102.68	-	-	89.41	27.48	16.68	30.89	138	213	A	H
		2484.84	60.01	-13.99	74	46.75	27.43	16.71	30.88	138	213	P	H
802.11ax		2483.72	43.82	-10.18	54	30.56	27.43	16.71	30.88	138	213	A	H
HE20													H
Partial													H
52/40	*	2462	108.14	-	-	94.87	27.48	16.68	30.89	400	299	P	V
CH 11	*	2462	99.22	-	-	85.95	27.48	16.68	30.89	400	299	A	V
2462MHz		2485.04	58.46	-15.54	74	45.2	27.43	16.71	30.88	400	299	P	V
		2483.56	43.72	-10.28	54	30.46	27.43	16.71	30.88	400	299	A	V
													V
													V

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 106 (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)
		2390	57.38	-16.62	74	44.2	27.54	16.56	30.92	143	213	P	H
		2390	44.65	-9.35	54	31.47	27.54	16.56	30.92	143	213	A	H
	*	2412	109.9	-	-	96.71	27.5	16.6	30.91	143	213	P	H
802.11ax	*	2412	100.95	-	-	87.76	27.5	16.6	30.91	143	213	A	H
HE20													H
Partial													H
106/53		2314.095	54.97	-19.03	74	41.71	27.77	16.44	30.95	370	65	P	V
CH 01		2390	43.69	-10.31	54	30.51	27.54	16.56	30.92	370	65	A	V
2412MHz	*	2412	104.49	-	-	91.3	27.5	16.6	30.91	370	65	P	V
	*	2412	96.42	-	-	83.23	27.5	16.6	30.91	370	65	A	V
													V
													V
	*	2462	108.72	-	-	95.45	27.48	16.68	30.89	140	216	P	H
	*	2462	99.63	-	-	86.36	27.48	16.68	30.89	140	216	A	H
		2485	58.31	-15.69	74	45.05	27.43	16.71	30.88	140	216	P	H
802.11ax		2483.52	43.83	-10.17	54	30.57	27.43	16.71	30.88	140	216	A	H
HE20													H
Partial													H
106/54	*	2462	104.35	-	-	91.08	27.48	16.68	30.89	400	299	P	V
CH 11	*	2462	96.52	-	-	83.25	27.48	16.68	30.89	400	299	A	V
2462MHz		2483.88	57.19	-16.81	74	43.93	27.43	16.71	30.88	400	299	P	V
		2484.28	43.77	-10.23	54	30.51	27.43	16.71	30.88	400	299	A	V
													V
													V

Emission above 18GHz

2.4GHz WIFI 802.11ax HE20 (SHF)

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)
		22352	40.21	-33.79	74	43.62	38.89	12.26	54.56	150	0	P	H
													H
													H
													H
2.4GHz													H
802.11ax													H
HE20		23032	40.37	-33.63	74	43.39	38.61	12.46	54.09	150	0	P	V
SHF													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Emission below 1GHz

2.4GHz WIFI 802.11ax HE20 (LF)

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)
		31.94	22.34	-17.66	40	30.51	23.65	0.69	32.51	-	-	P	H
		109.54	29.35	-14.15	43.5	43.63	16.75	1.49	32.52	-	-	P	H
		168.71	29.61	-13.89	43.5	44.53	15.7	1.87	32.49	-	-	P	H
		215.27	27.36	-16.14	43.5	42.72	14.95	2.12	32.43	-	-	P	H
		714.82	31.66	-14.34	46	33.86	26.62	3.63	32.45	-	-	P	H
		895.24	33.03	-12.97	46	31.67	28.86	4.15	31.65	100	0	P	H
													H
													H
													H
													H
2.4GHz													H
802.11ax													H
HE20		38.73	32.63	-7.37	40	44.29	20.1	0.79	32.55	100	0	P	V
LF		109.54	31.6	-11.9	43.5	45.88	16.75	1.49	32.52	-	-	P	V
		139.61	30.19	-13.31	43.5	43.56	17.44	1.69	32.5	-	-	P	V
		320.03	23.38	-22.62	46	33.98	19.45	2.46	32.51	-	-	P	V
		739.07	31.76	-14.24	46	32.79	27.73	3.69	32.45	-	-	P	V
		958.29	34.42	-11.58	46	30.31	30.97	4.35	31.21	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

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

<WPC Charging Mode>

2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (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)
	*	2462	102.65	-	-	89.38	27.48	16.68	30.89	346	212	P	H
	*	2462	93.33	-	-	80.06	27.48	16.68	30.89	346	212	A	H
		2483.52	58.2	-15.8	74	44.94	27.43	16.71	30.88	346	212	P	H
		2483.56	46.3	-7.7	54	33.04	27.43	16.71	30.88	346	212	A	H
8802.11ax													H
HE20 Full													H
CH 11	*	2462	102.97	-	-	89.7	27.48	16.68	30.89	400	303	P	V
2462MHz	*	2462	93.14	-	-	79.87	27.48	16.68	30.89	400	303	A	V
		2484.36	57.52	-16.48	74	44.26	27.43	16.71	30.88	400	303	P	V
		2483.52	46.32	-7.68	54	33.06	27.43	16.71	30.88	400	303	A	V
													V
													V

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

2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (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 Full CH 11 2462MHz		4924	39.89	-34.11	74	57.8	31.1	10.14	59.15	100	0	P	H
		7386	46.16	-27.84	74	55.97	36.3	12.35	58.46	100	0	P	H
		18000	61.15	-12.85	74	51.16	49	18.89	57.9	100	33	P	H
		18000	50.96	-3.04	54	40.97	49	18.89	57.9	100	33	A	H
		4924	39.97	-34.03	74	57.88	31.1	10.14	59.15	100	0	P	V
		7386	46.46	-27.54	74	56.27	36.3	12.35	58.46	100	0	P	V
		18000	60.33	-13.67	74	50.34	49	18.89	57.9	100	22	P	V
		18000	50.15	-3.85	54	40.16	49	18.89	57.9	100	22	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission above 18GHz

2.4GHz WIFI 802.11ax HE20 (SHF)

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)
2.4GHz 802.11ax HE20 SHF		23192	41.62	-32.38	74	44.55	38.64	12.49	54.06	150	0	P	H
													H
													H
													H
													H
													H
		21208	38.27	-35.73	74	43.31	38.24	11.42	54.7	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

2.4GHz WIFI 802.11ax HE20 (LF)

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)
		30	22.69	-17.31	40	29.92	24.59	0.67	32.49	-	-	P	H
		109.54	29.32	-14.18	43.5	43.6	16.75	1.49	32.52	-	-	P	H
		141.55	31.22	-12.28	43.5	44.6	17.42	1.7	32.5	-	-	P	H
		217.21	27.12	-18.88	46	42.38	15.04	2.13	32.43	-	-	P	H
		248.25	25.53	-20.47	46	37.52	18.14	2.27	32.4	-	-	P	H
		959.26	33.99	-12.01	46	29.84	31	4.35	31.2	100	0	P	H
													H
													H
													H
													H
2.4GHz													H
802.11ax													H
HE20		39.7	33.14	-6.86	40	45.3	19.59	0.81	32.56	100	0	P	V
LF		107.6	28.16	-15.34	43.5	42.45	16.75	1.48	32.52	-	-	P	V
		141.55	24.57	-18.93	43.5	37.95	17.42	1.7	32.5	-	-	P	V
		218.18	22.32	-23.68	46	37.53	15.09	2.13	32.43	-	-	P	V
		321	23.4	-22.6	46	33.95	19.49	2.47	32.51	-	-	P	V
		954.41	34.39	-11.61	46	30.44	30.85	4.35	31.25	-	-	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.	
0+1		(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 D. Radiated Spurious Emission Plots

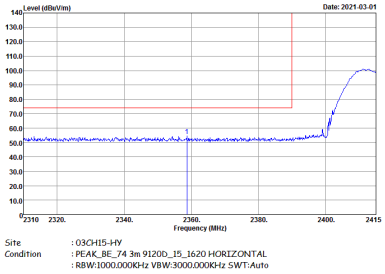
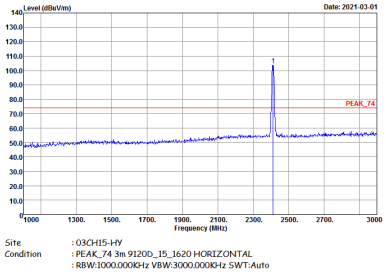
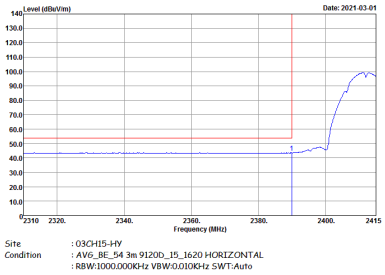
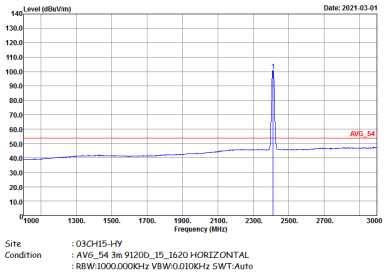
Test Engineer :	Leo Lee, Mancy Chou and Bigshow Wang	**Temperature :**	22.1~23.1°C
		Relative Humidity :	55~60%

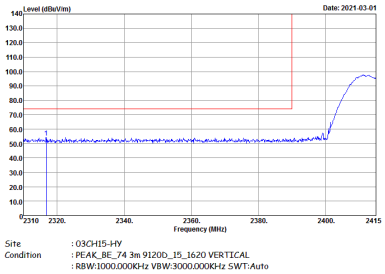
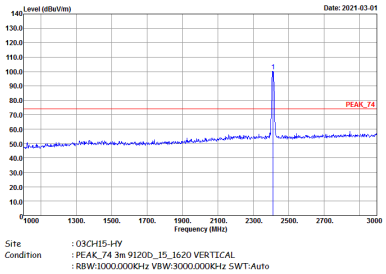
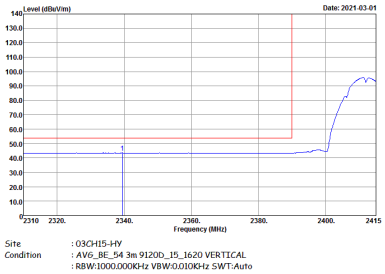
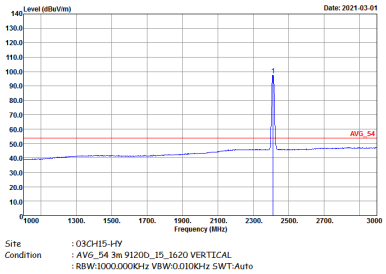
Note symbol

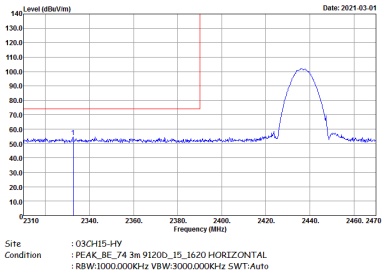
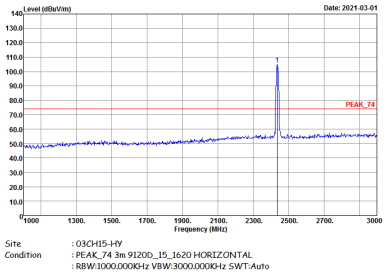
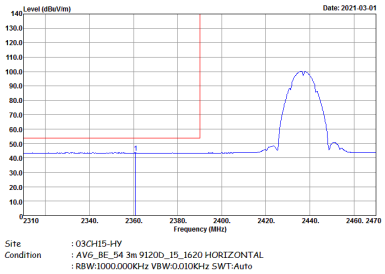
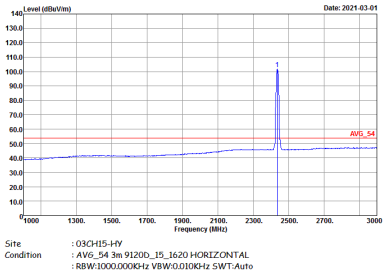
-L	**Low channel location**
-R	**High channel location**

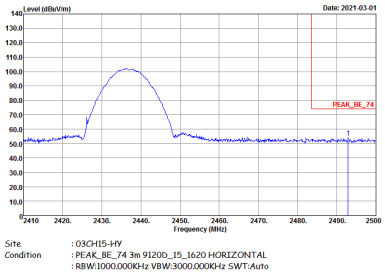
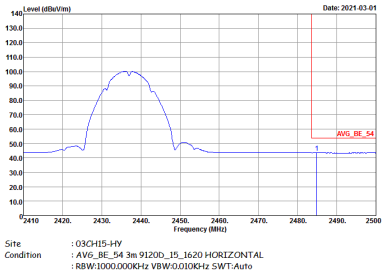
2.4GHz 2400~2483.5MHz

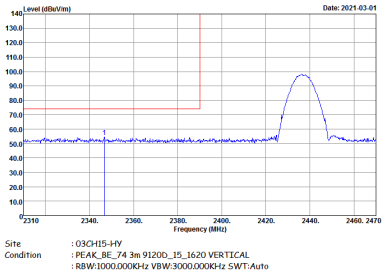
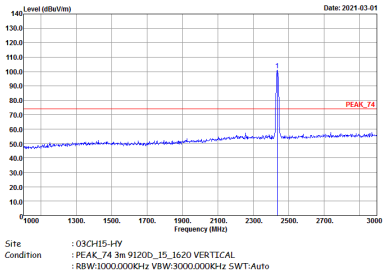
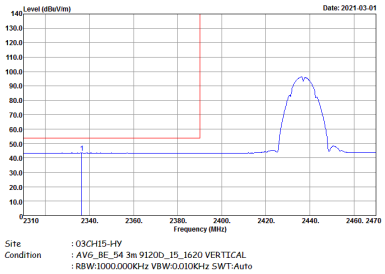
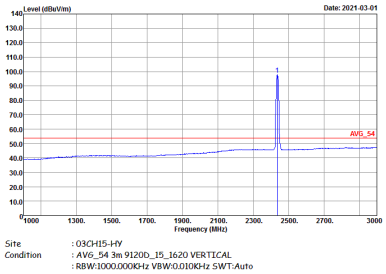
WIFI 802.11b (Band Edge @ 3m)

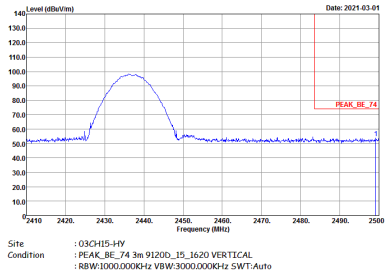
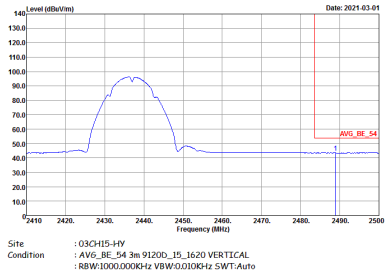
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

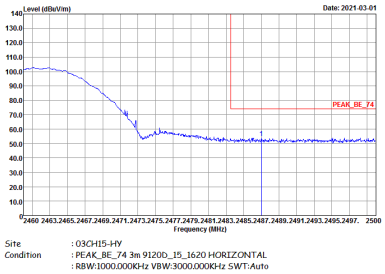
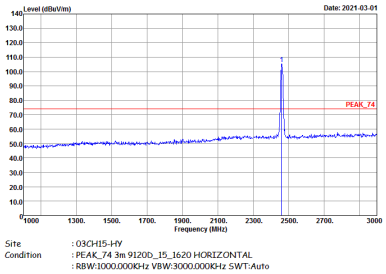
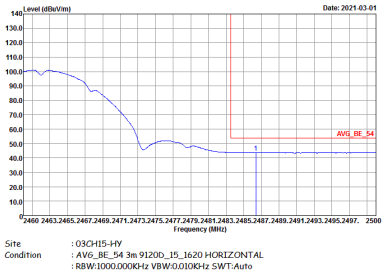
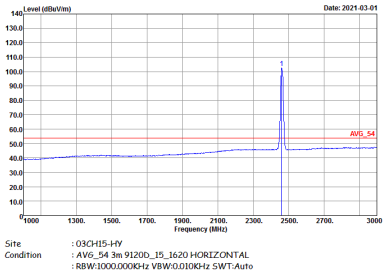
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

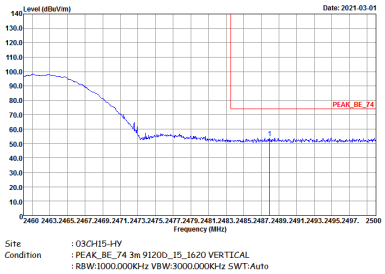
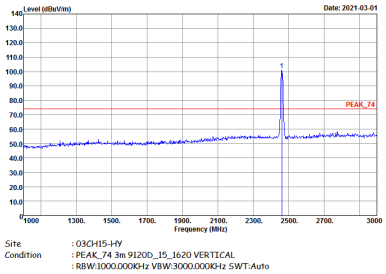
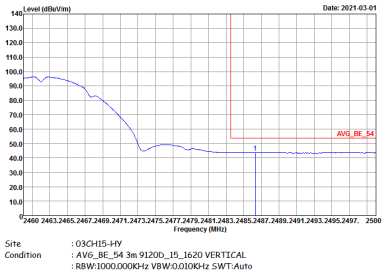
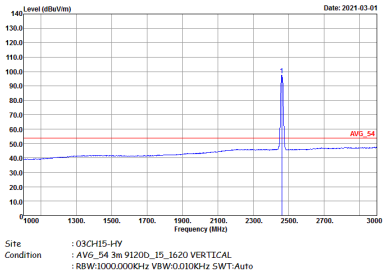
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

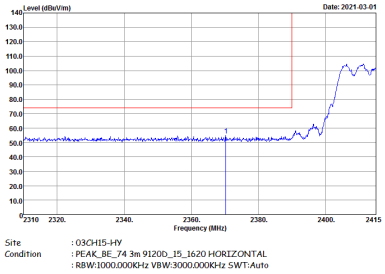
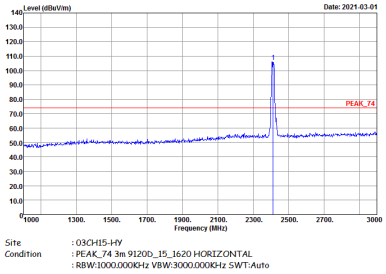
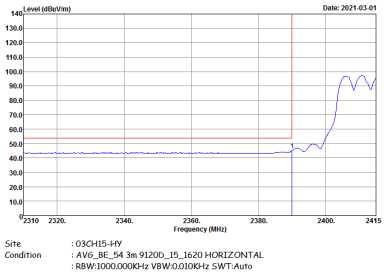
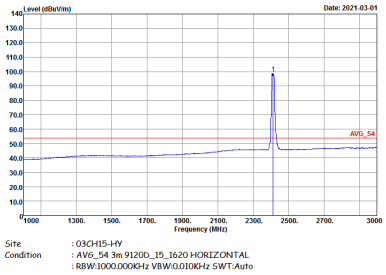
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

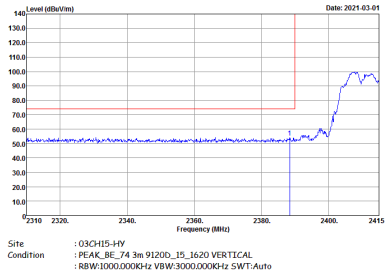
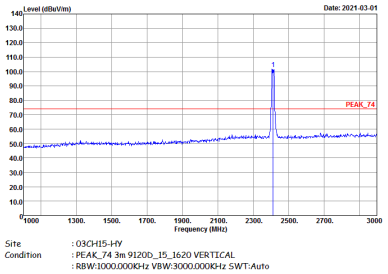
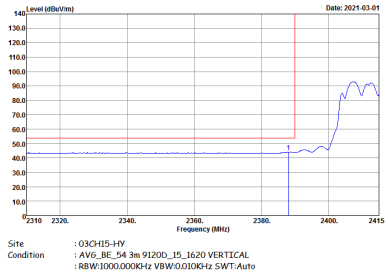
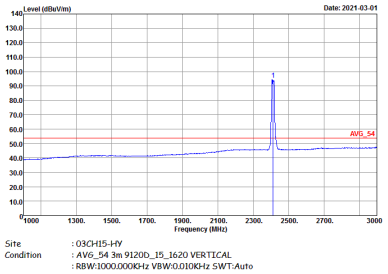
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

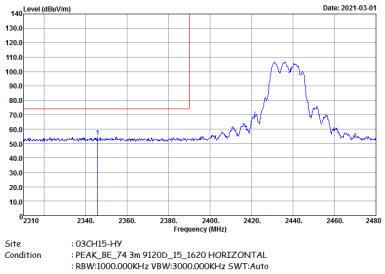
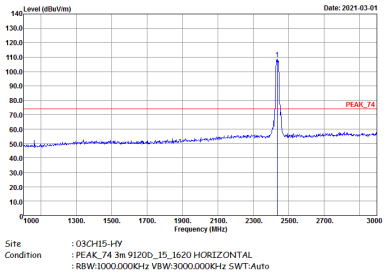
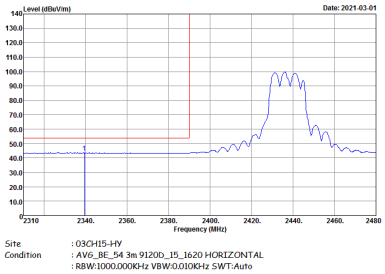
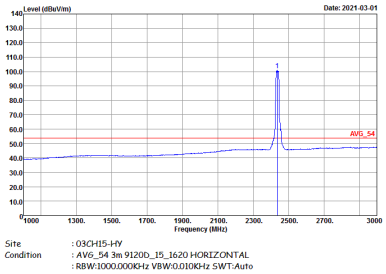
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

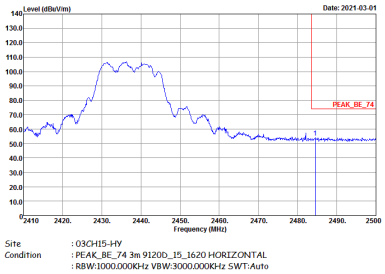
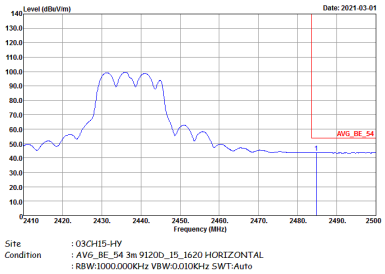
2.4GHz 2400~2483.5MHz

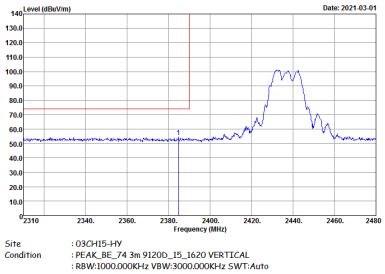
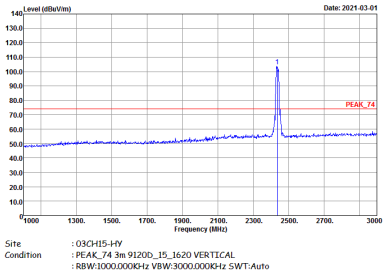
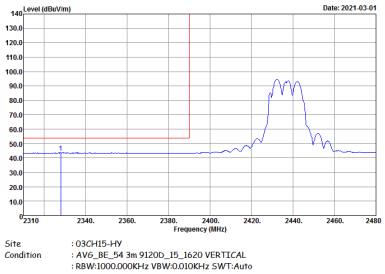
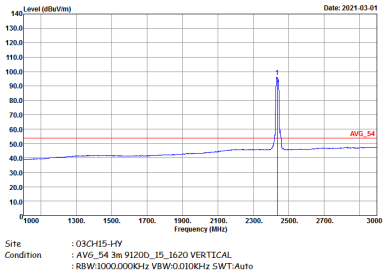
WIFI 802.11g (Band Edge @ 3m)

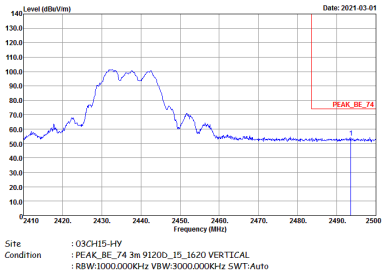
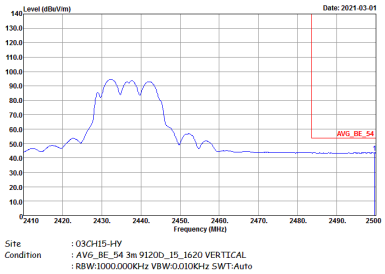
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

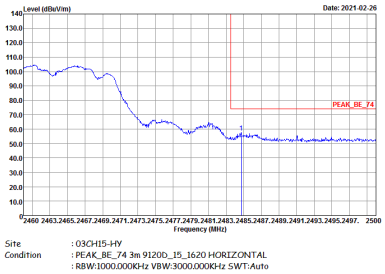
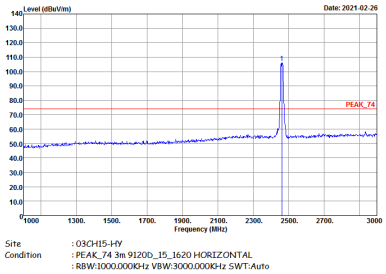
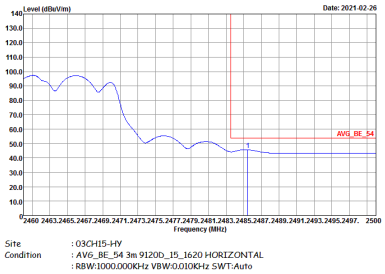
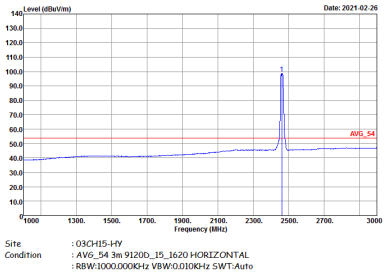
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

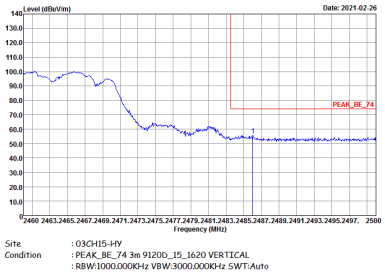
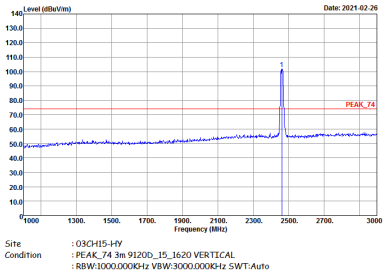
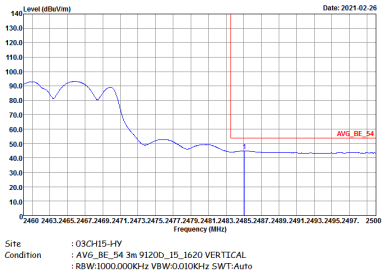
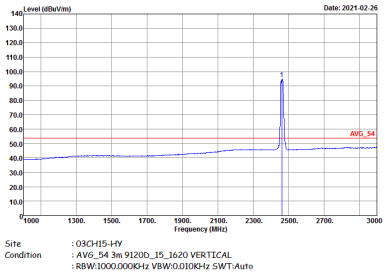
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

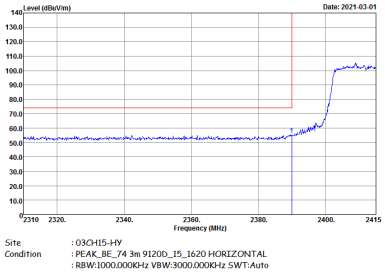
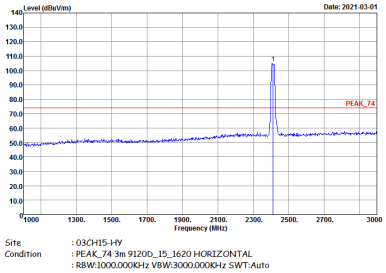
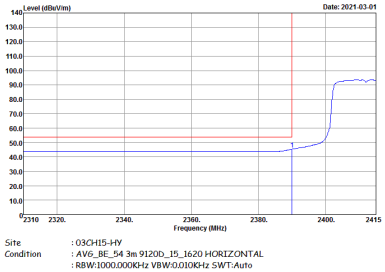
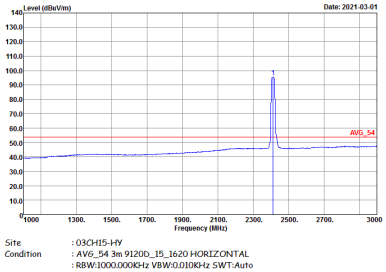
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

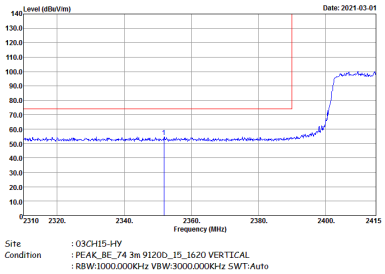
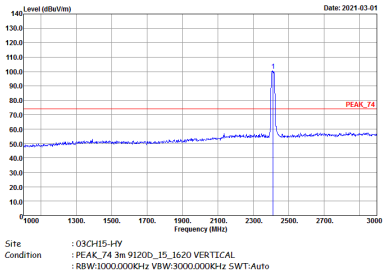
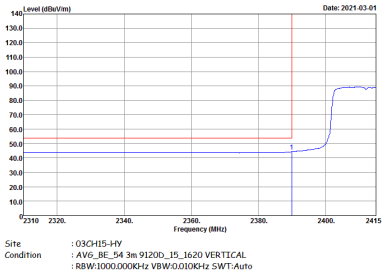
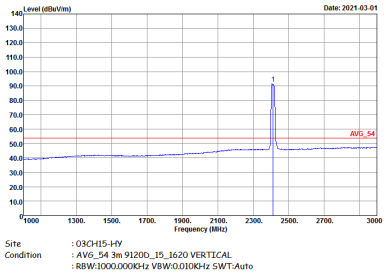
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

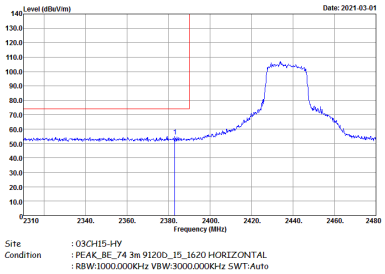
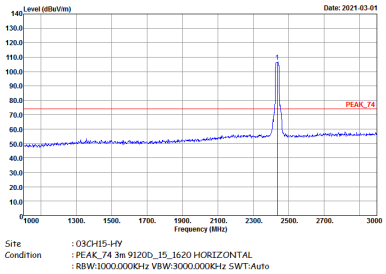
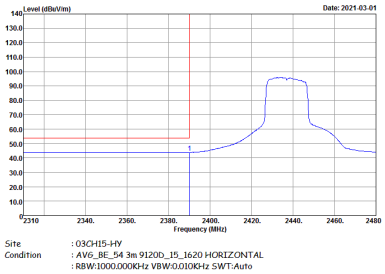
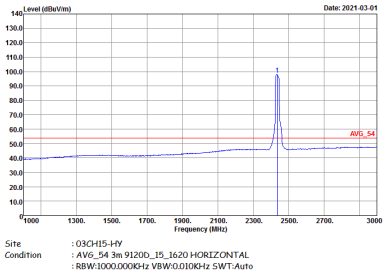
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

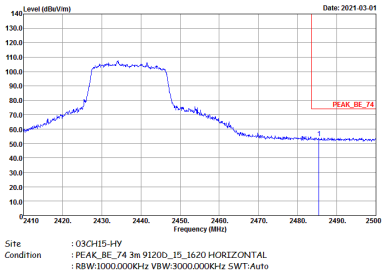
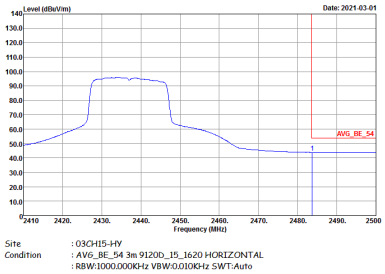
2.4GHz 2400~2483.5MHz

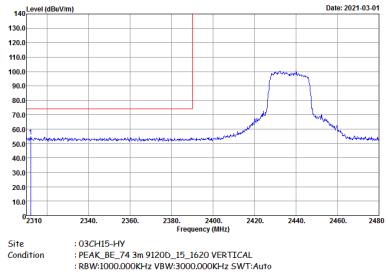
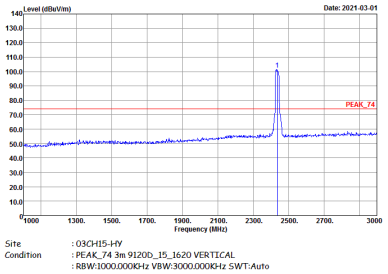
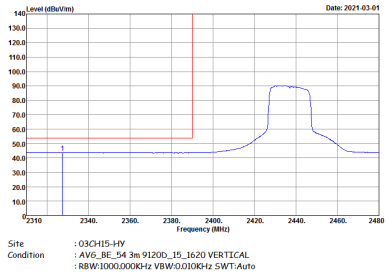
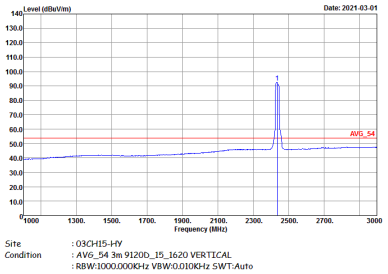
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

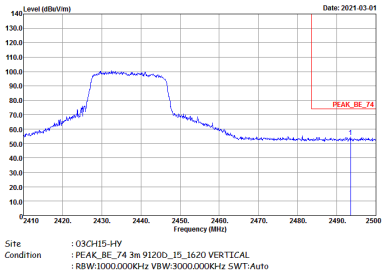
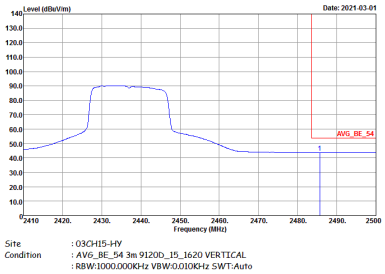
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

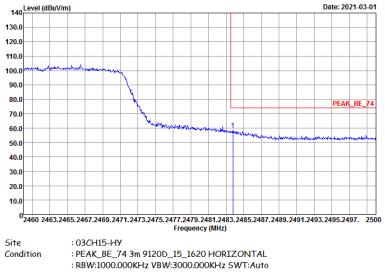
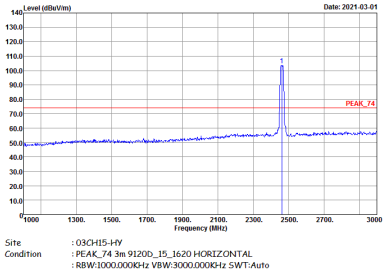
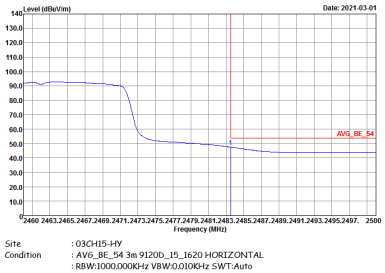
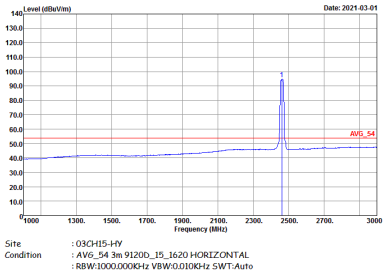
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

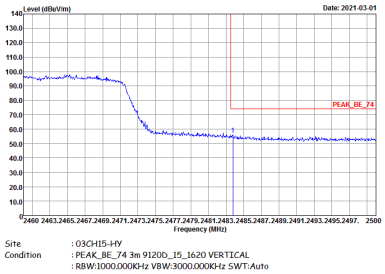
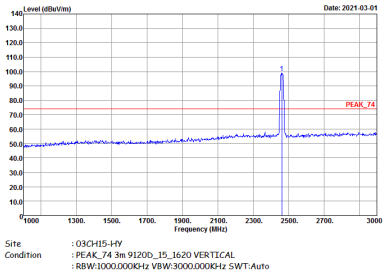
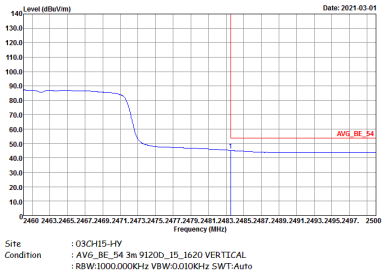
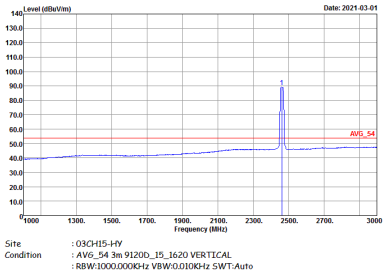
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak		
Avg.		

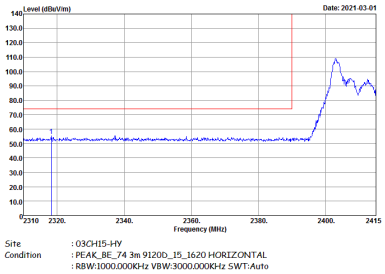
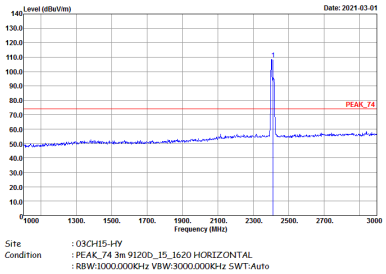
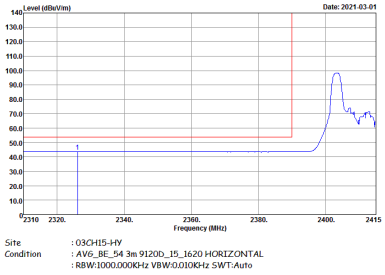
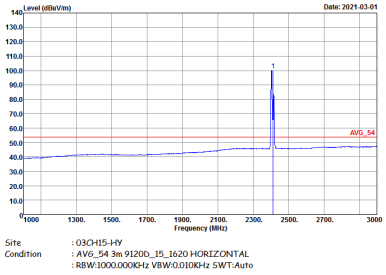
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

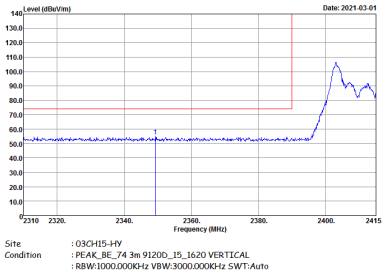
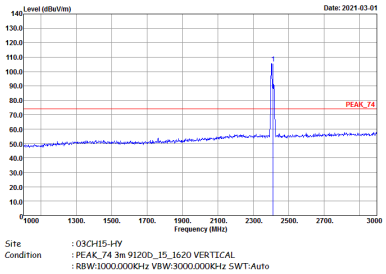
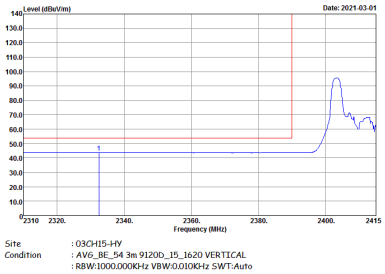
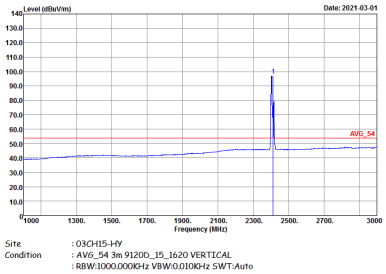
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 9120D_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 9120D_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 9120D_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 9120D_15_1620 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

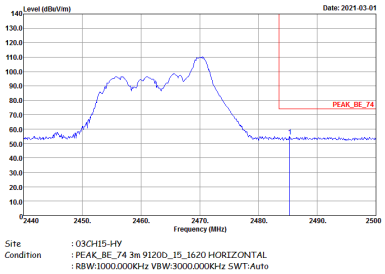
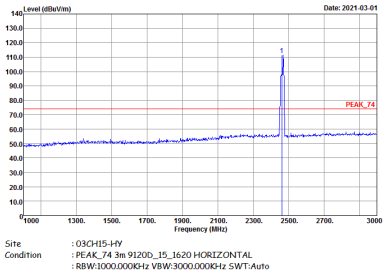
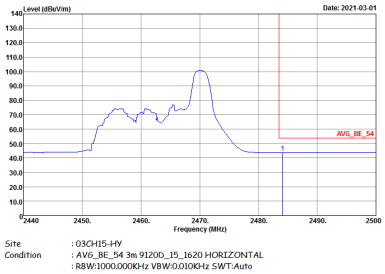
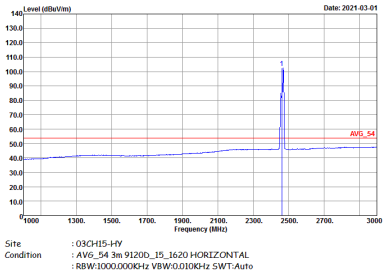
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

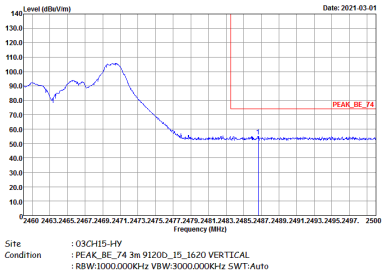
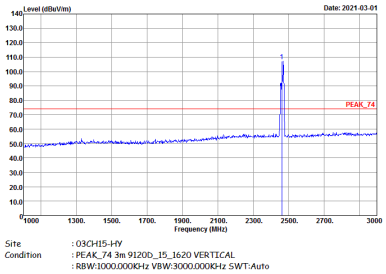
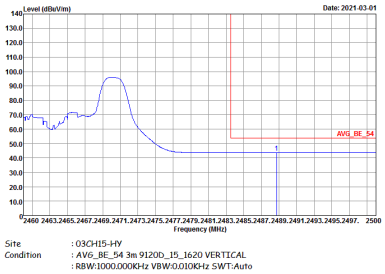
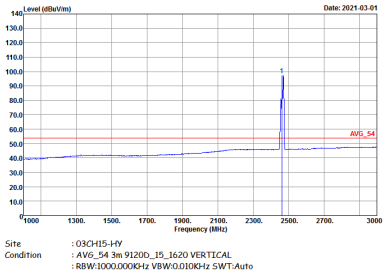
2.4GHz 2400~2483.5MHz

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

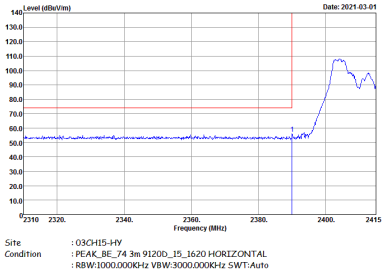
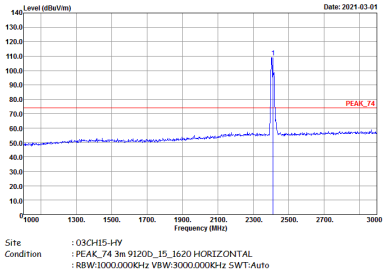
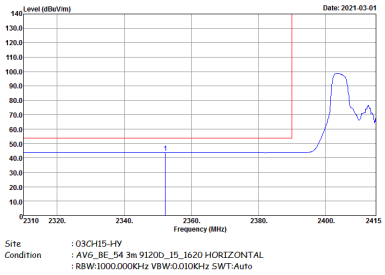
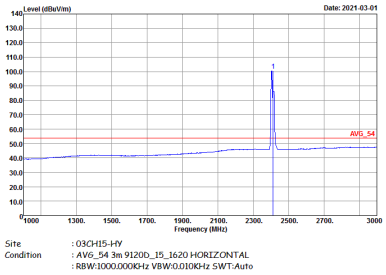
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

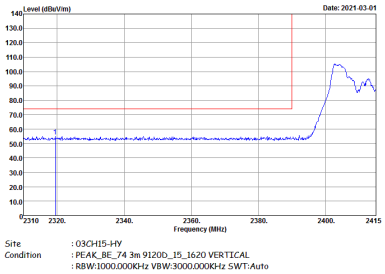
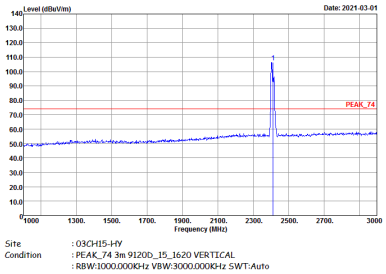
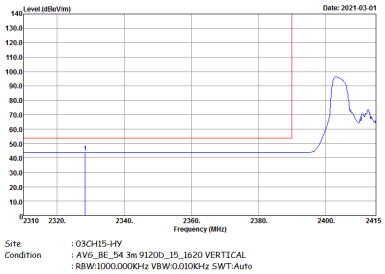
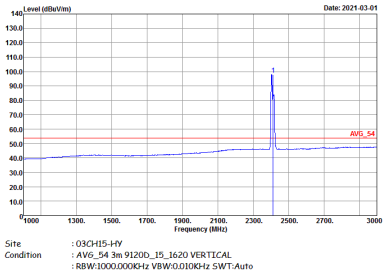
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

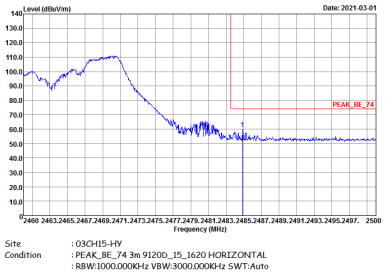
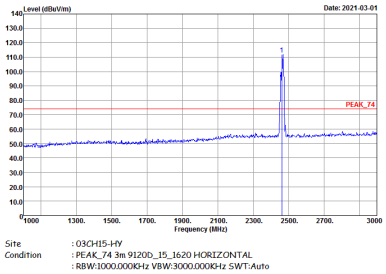
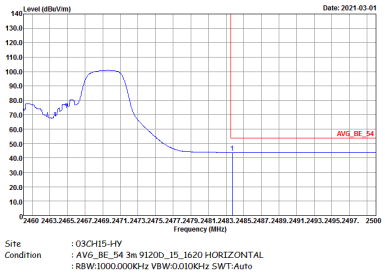
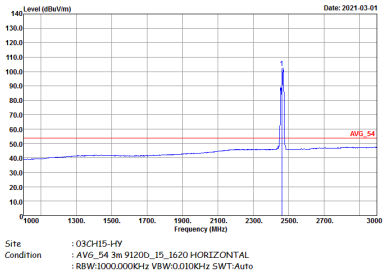
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

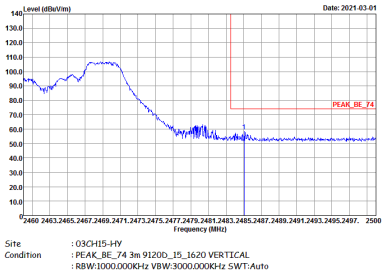
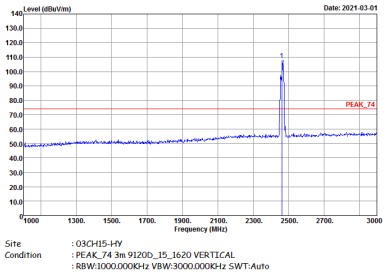
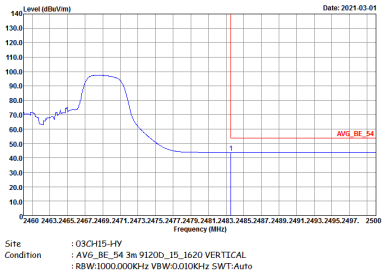
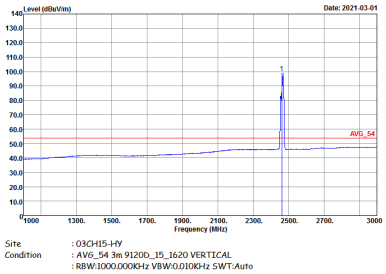
2.4GHz 2400~2483.5MHz

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

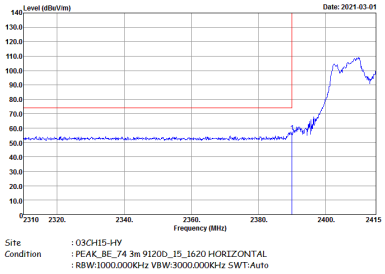
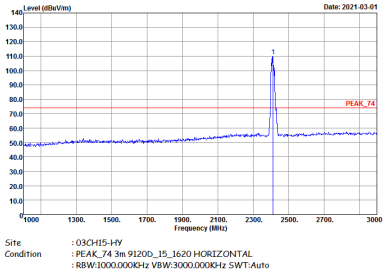
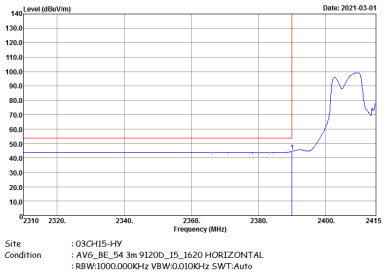
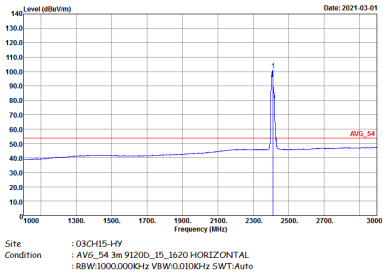
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/37 CH01 2412MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

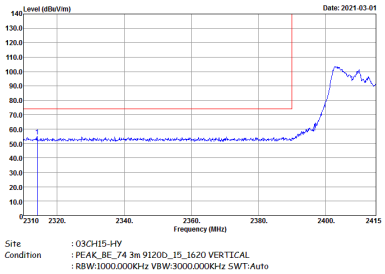
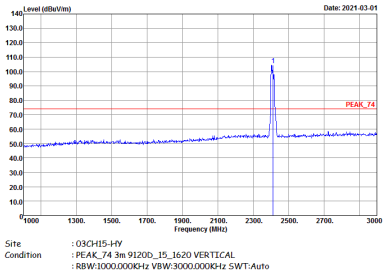
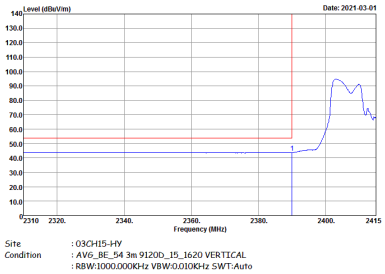
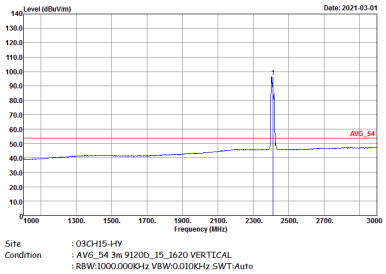
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 52/40 CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

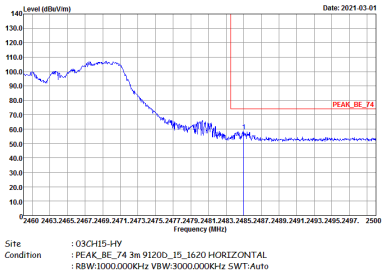
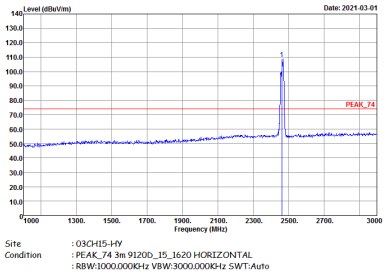
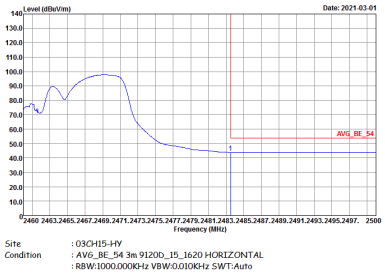
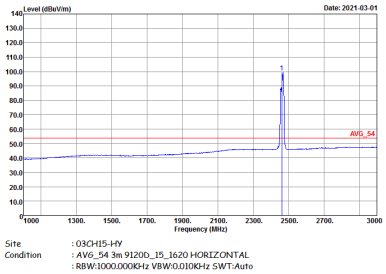
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11ax HE20 Partial 52/40 CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

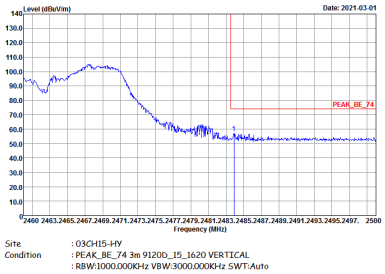
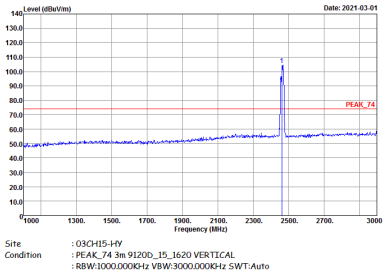
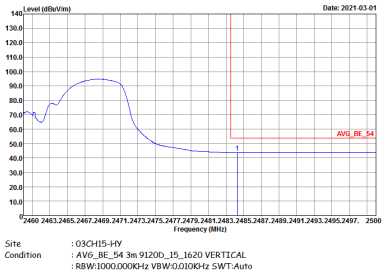
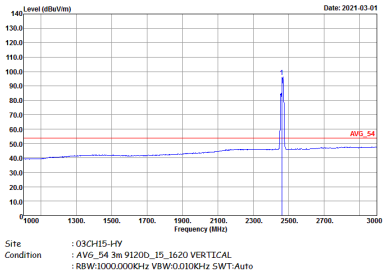
2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 106 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

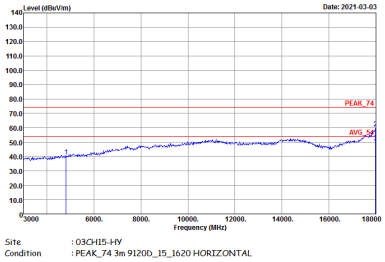
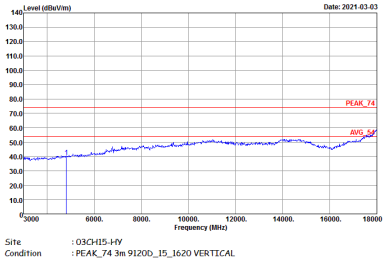
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH01 2412MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

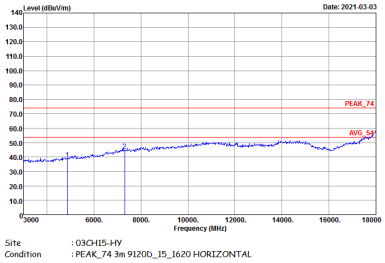
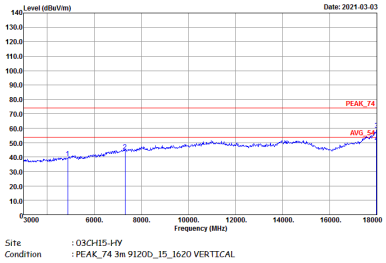
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

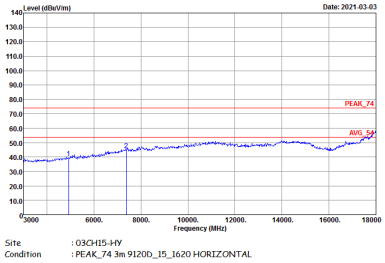
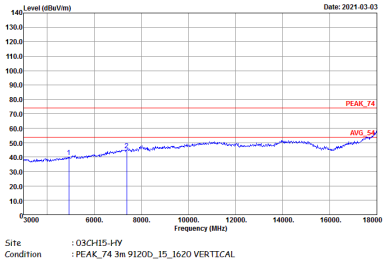
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH11 2462MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

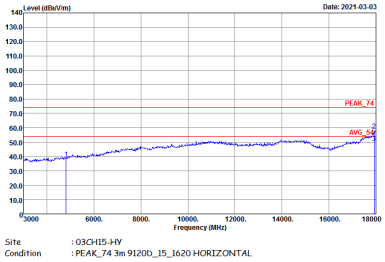
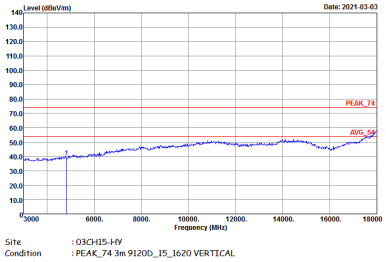
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Horizontal	Vertical
Peak Avg.		

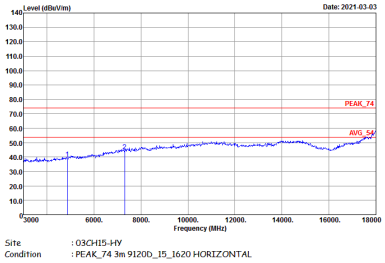
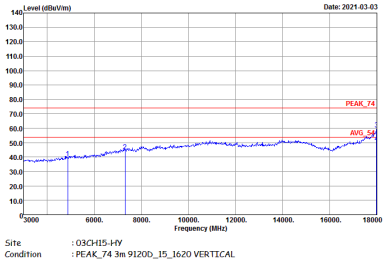
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
0+1	Horizontal	Vertical
Peak Avg.		

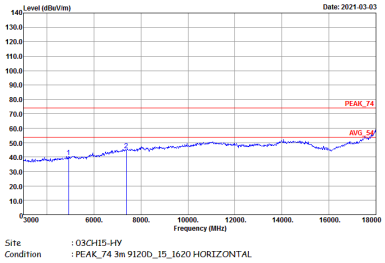
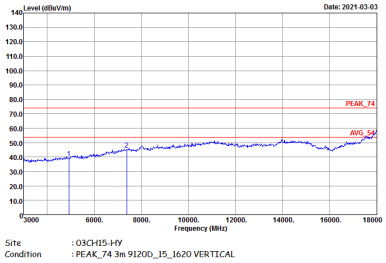
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

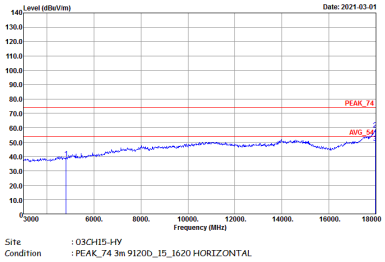
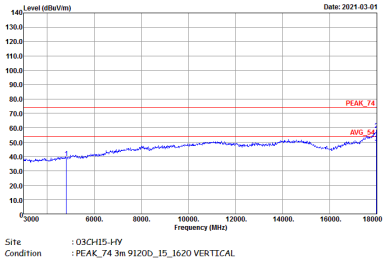
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
0+1	Horizontal	Vertical
Peak Avg.		

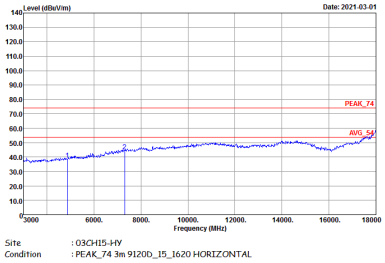
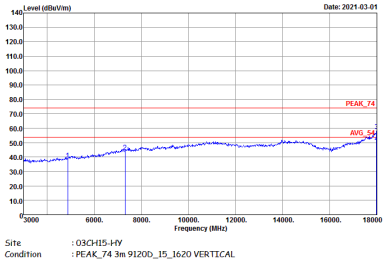
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
0+1	Horizontal	Vertical
Peak Avg.		

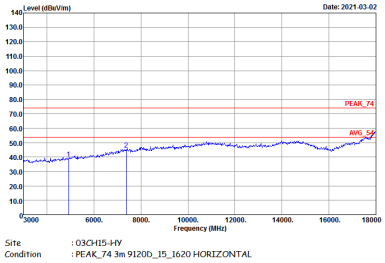
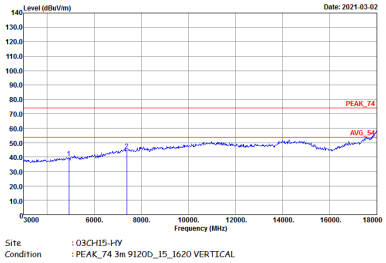
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

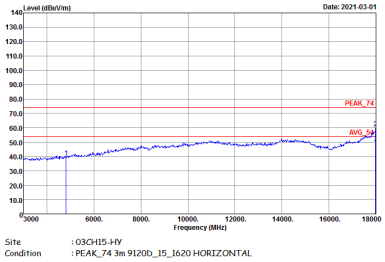
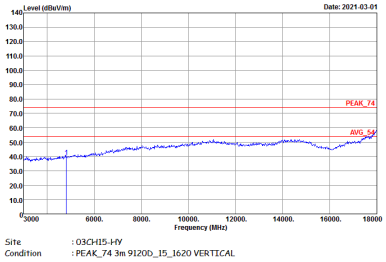
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH01 2412MHz	
0+1	Horizontal	Vertical
Peak Avg.		

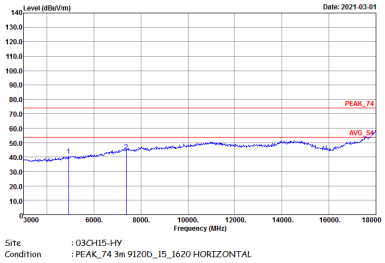
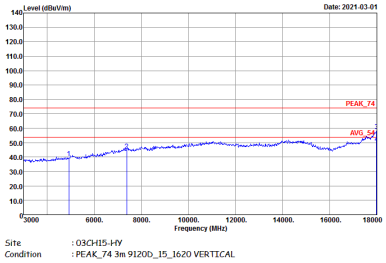
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH06 2437MHz	
0+1	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.		

2.4GHz 2400~2483.5MHz

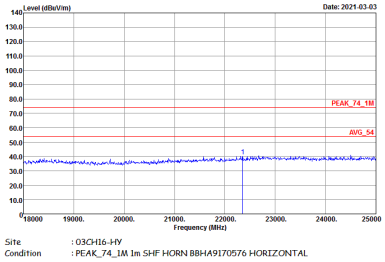
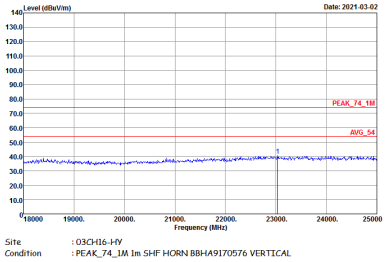
WIFI 802.11ax HE20 Partial 26 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
0+1	Horizontal	Vertical
Peak Avg.		

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 26/8 CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.		

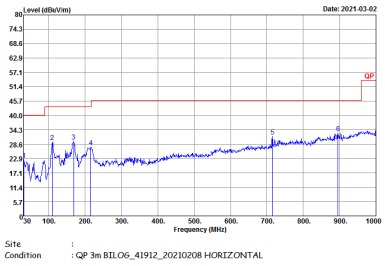
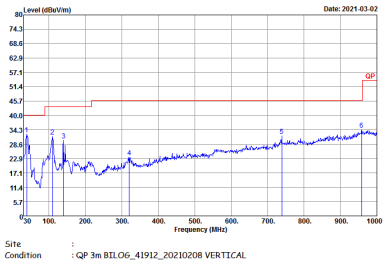
Emission above 18GHz

2.4GHz WIFI 802.11ax HE20 Full (SHF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ax HE20 Full SHF	
0+1	Horizontal	Vertical
QP / Peak		

Emission below 1GHz

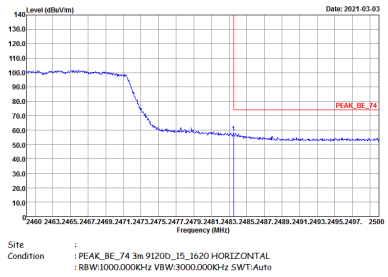
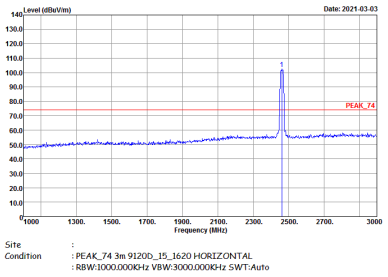
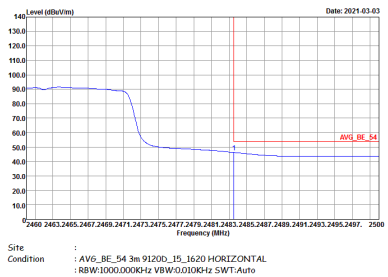
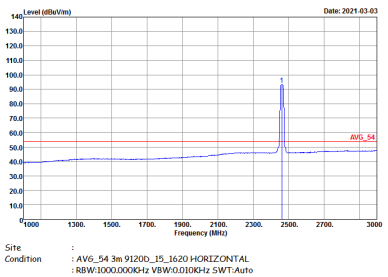
2.4GHz WIFI 802.11ax HE20 Full (LF)

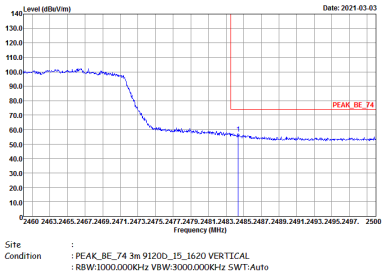
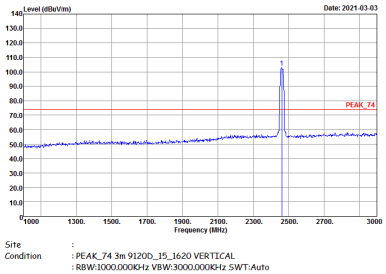
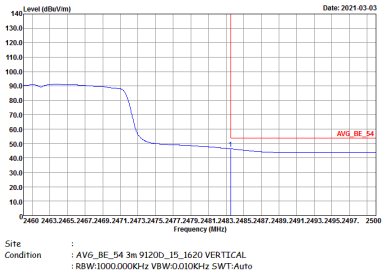
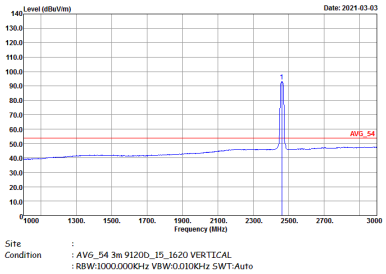
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ax HE20 Full LF	
0+1	Horizontal	Vertical
QP / Peak		

<WPC Charging Mode>

2.4GHz 2400~2483.5MHz

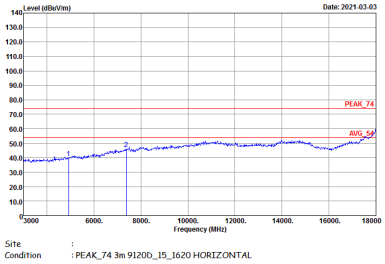
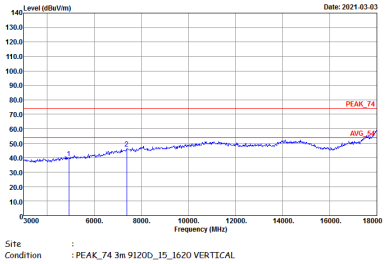
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : Condition : PEAK_BE_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : Condition : PEAK_74 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : Condition : AVG_BE_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : Condition : AVG_54 3m 9120D_15_1620 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

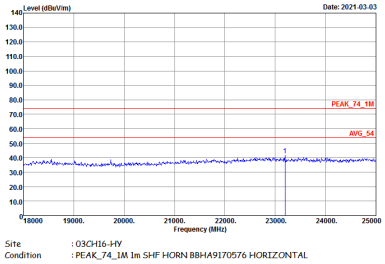
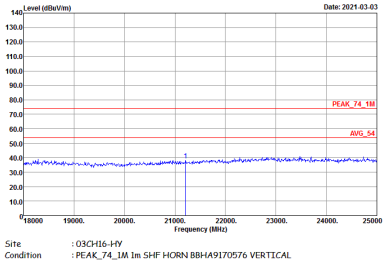
2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.		

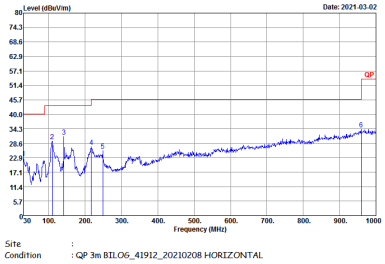
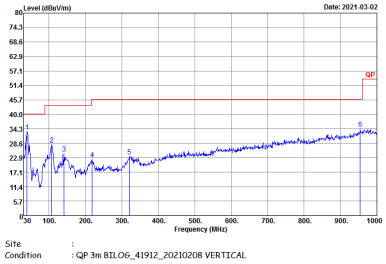
Emission above 18GHz

2.4GHz WIFI 802.11ax HE20 Full (SHF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ax HE20 Full SHF	
0+1	Horizontal	Vertical
QP / Peak		

Emission below 1GHz

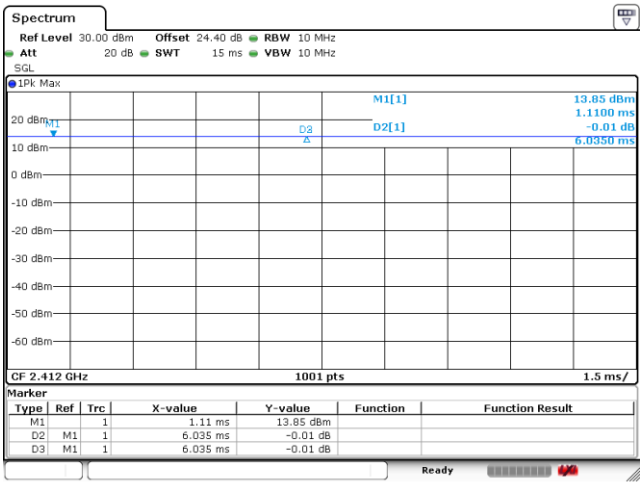
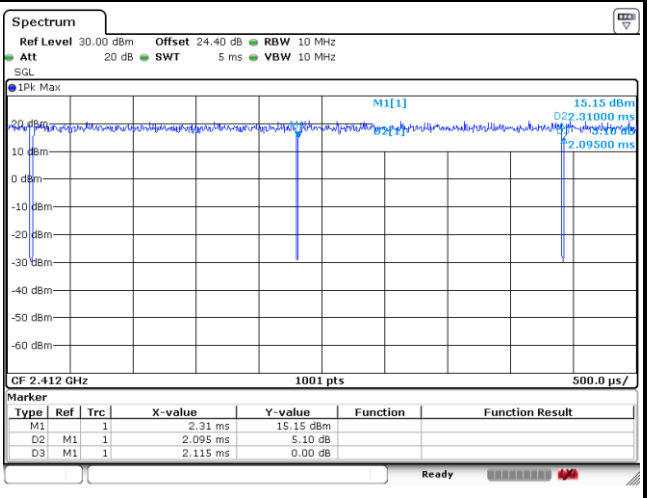
2.4GHz WIFI 802.11ax HE20 Full (LF)

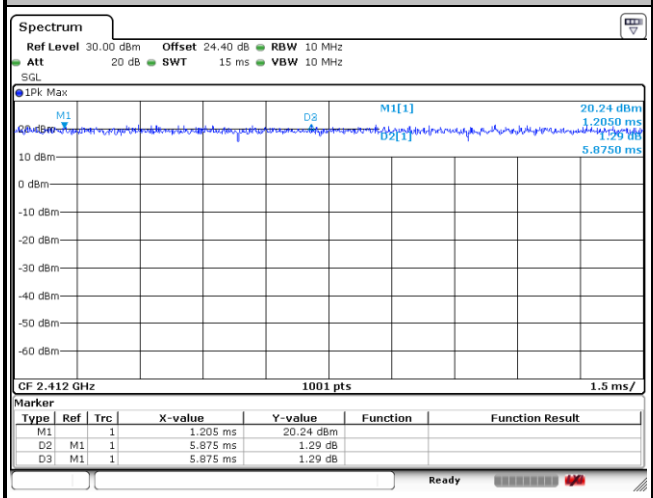
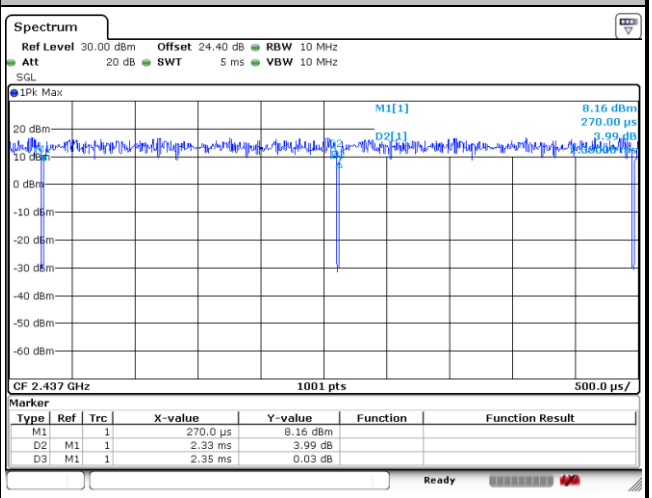
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ax HE20 Full LF	
0+1	Horizontal	Vertical
QP / Peak		

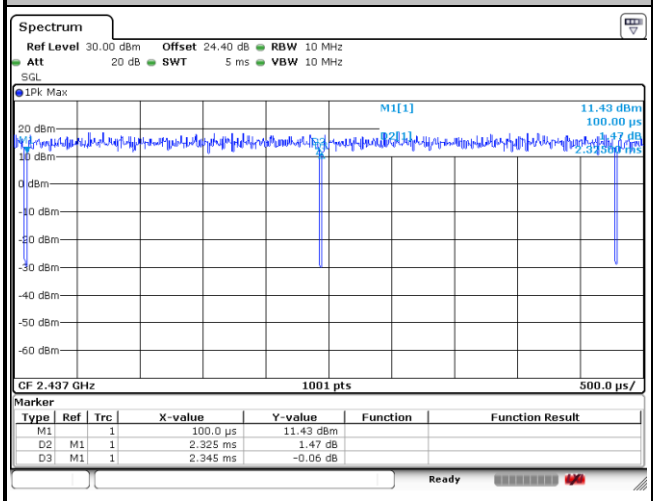
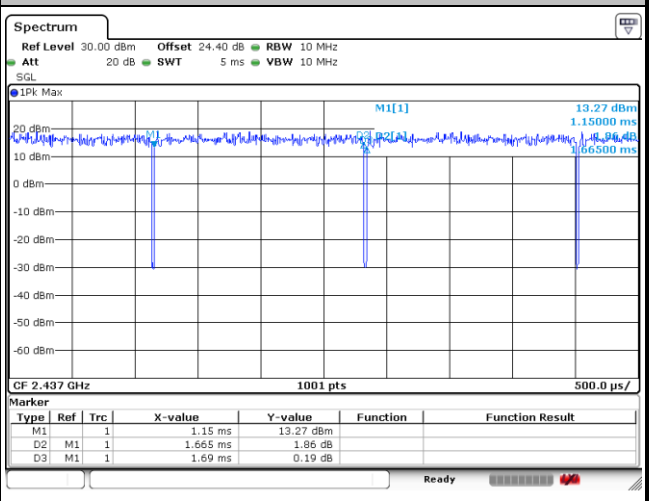
Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
0+1	802.11b for Ant. 0	100.00	-	-	10Hz	0.00
0+1	802.11b for Ant. 1	100.00	-	-	10Hz	0.00
0+1	802.11g for Ant. 0	99.05	-	-	10Hz	0.04
0+1	802.11g for Ant. 1	99.29	-	-	10Hz	0.03
0+1	2.4GHz 802.11ax HE20 Full RU for Ant. 0	100.00	-	-	10Hz	0.00
0+1	2.4GHz 802.11ax HE20 Full RU for Ant. 1	100.00	-	-	10Hz	0.00
0+1	2.4GHz 802.11ax HE20 26 RU for Ant. 0	99.15	-	-	10Hz	0.04
0+1	2.4GHz 802.11ax HE20 26 RU for Ant. 1	99.15	-	-	10Hz	0.04
0+1	2.4GHz 802.11ax HE20 52 RU for Ant. 0	99.15	-	-	10Hz	0.04
0+1	2.4GHz 802.11ax HE20 52 RU for Ant. 1	98.94	-	-	10Hz	0.05
0+1	2.4GHz 802.11ax HE20 106 RU for Ant. 0	98.52	-	-	10Hz	0.06
0+1	2.4GHz 802.11ax HE20 106 RU for Ant. 1	98.52	-	-	10Hz	0.06

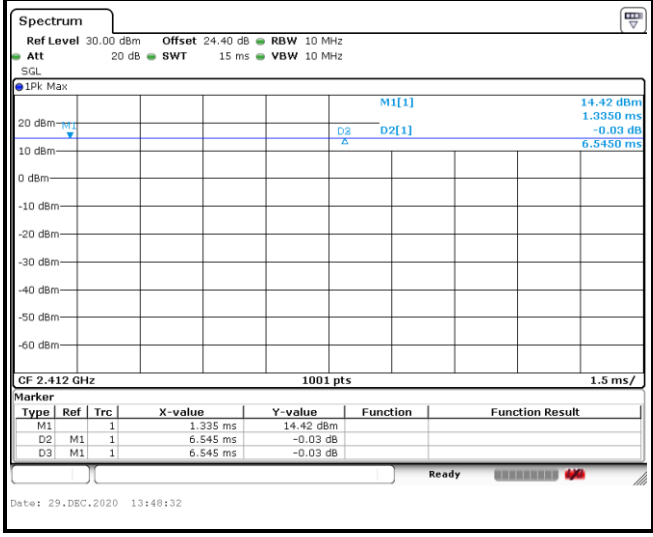
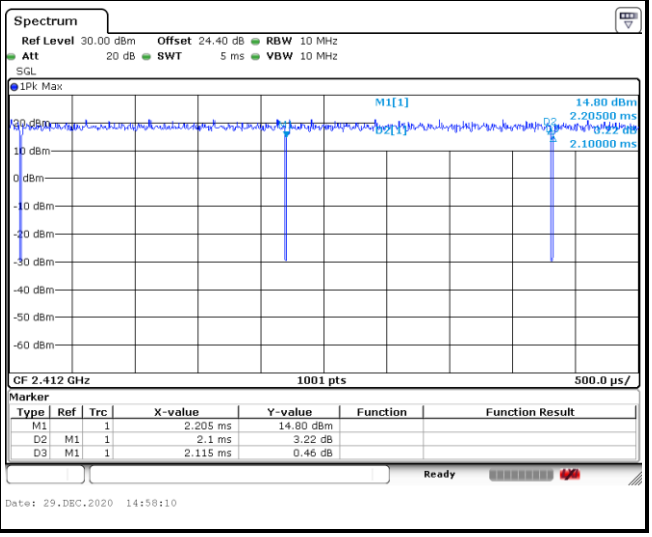
MIMO <Ant. 0>

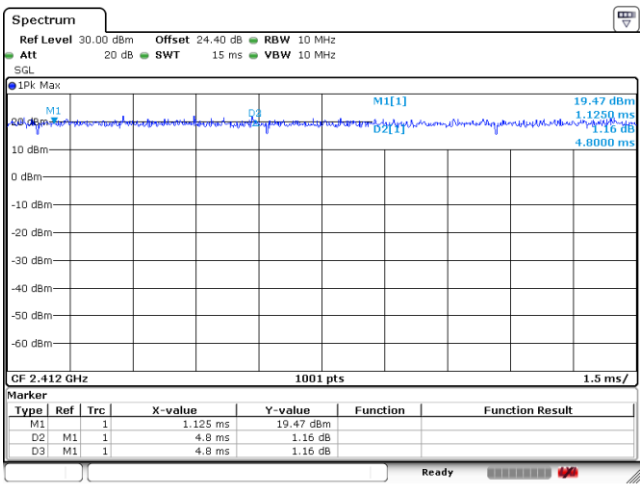
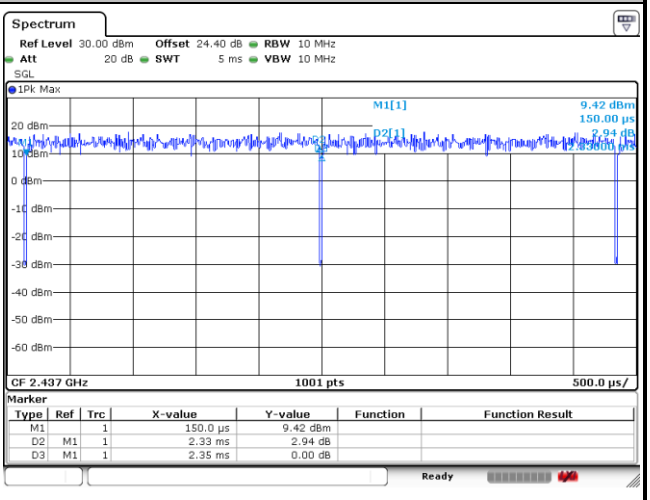
802.11b	802.11g
	

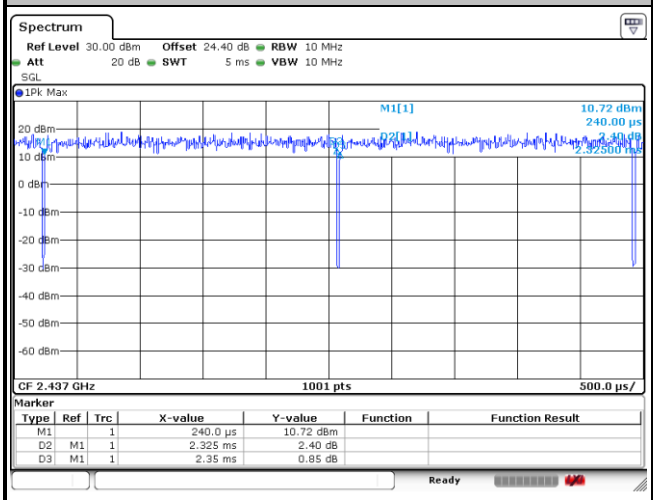
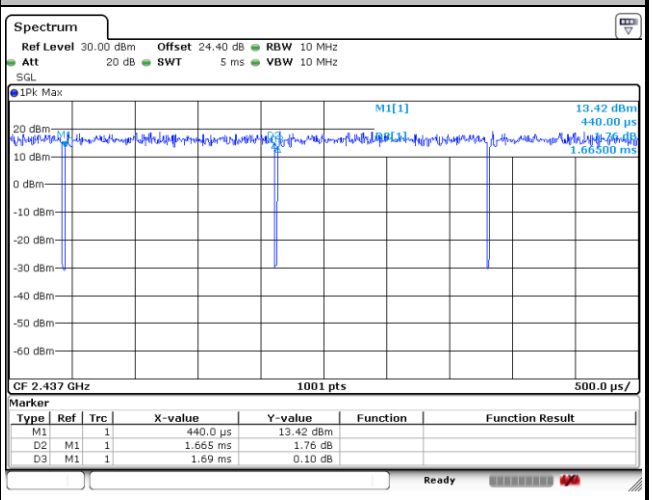
802.11ax HE20 Full RU	802.11ax HE20 26 RU
	

802.11ax HE20 52 RU	802.11ax HE20 106 RU
	

MIMO <Ant. 1>

802.11b	802.11g
	

802.11ax HE20 Full RU	802.11ax HE20 26 RU
	

802.11ax HE20 52 RU	802.11ax HE20 106 RU
	

———THE END———