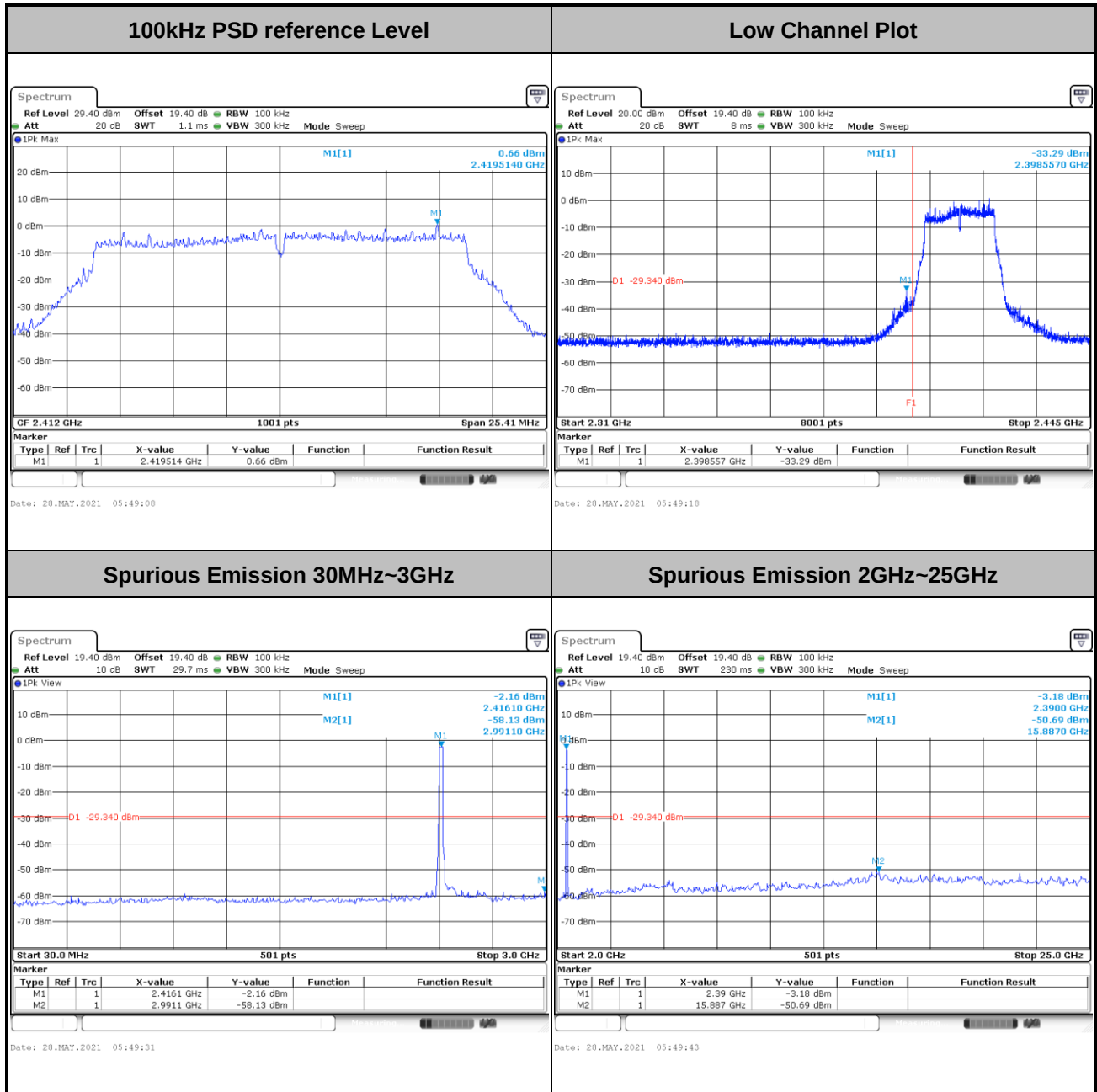




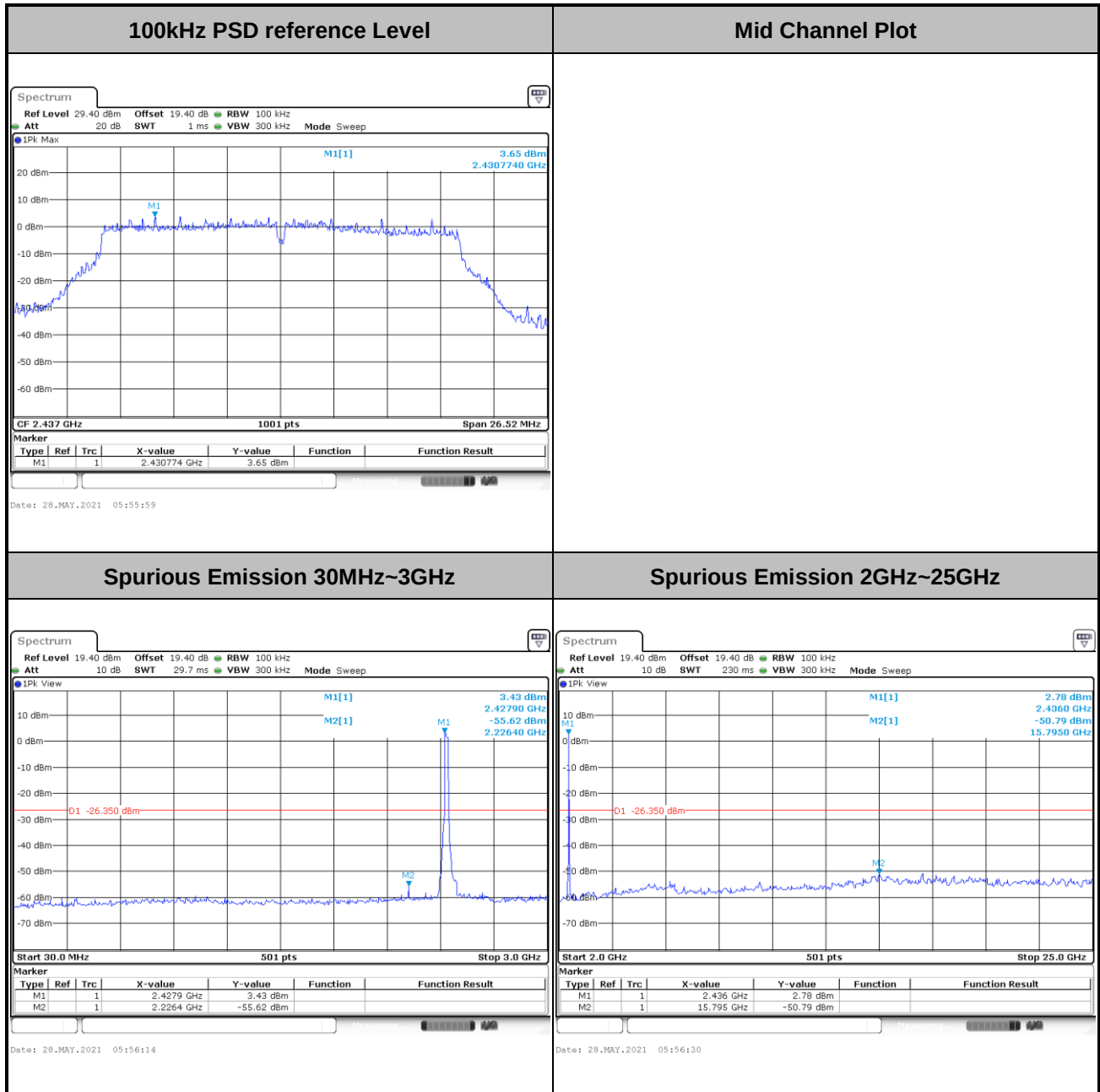
Number of TX = 2, Ant. 2 (Measured)

Test Mode :	802.11ac VHT20	Test Channel :	01
-------------	----------------	----------------	----



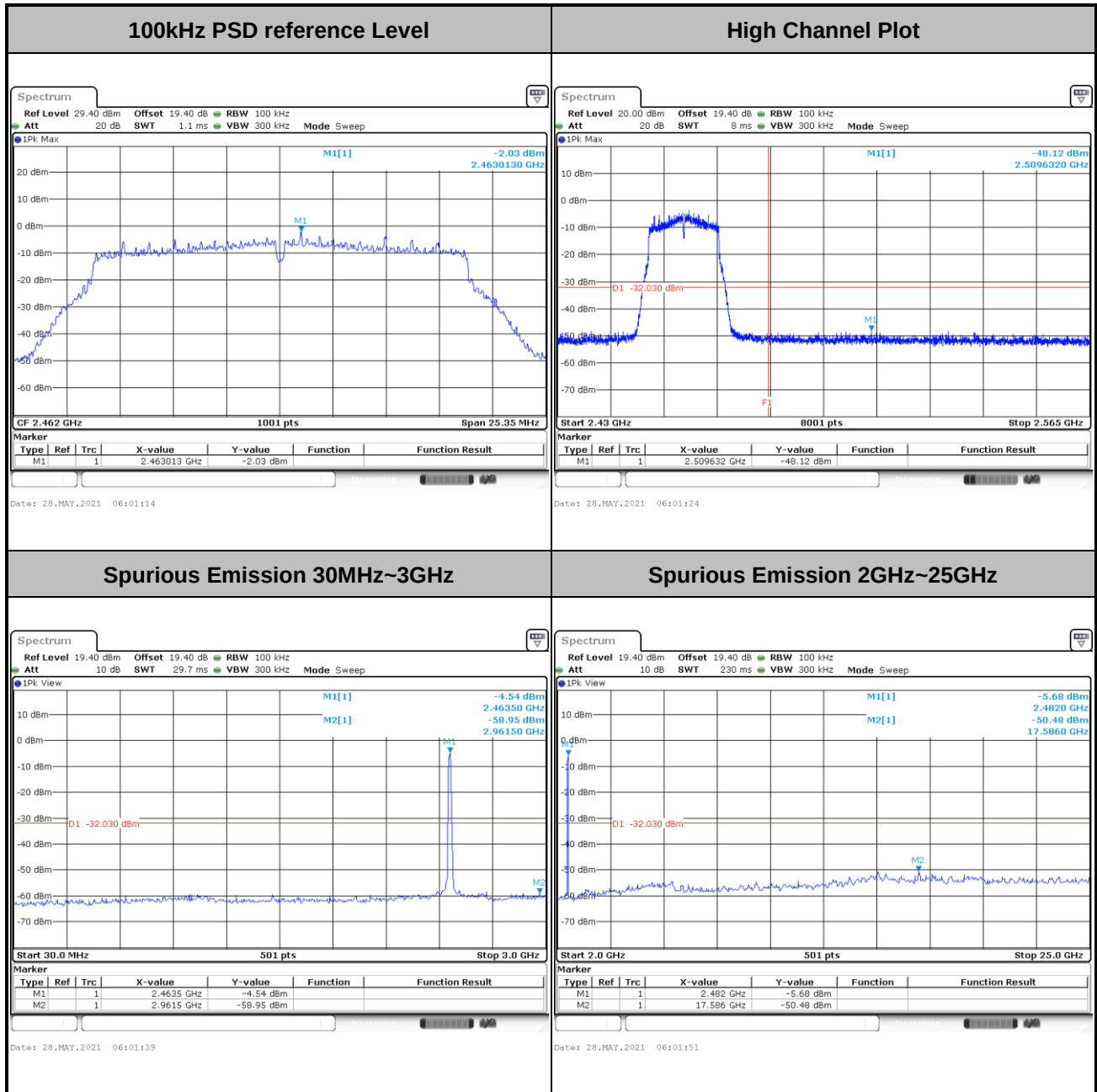


Test Mode :	802.11ac VHT20	Test Channel :	06
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Test Mode :	802.11ac VHT20	Test Channel :	11
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3.5 Radiated Band Edges and Spurious Emission Measurement

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.

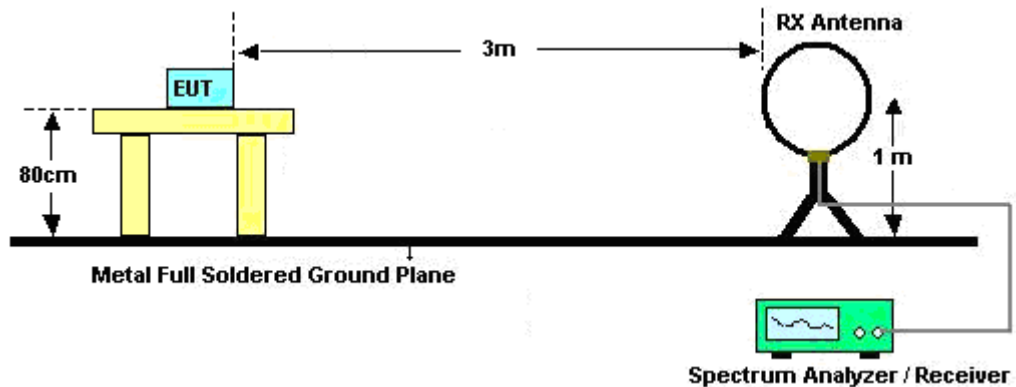


3.5.3 Test Procedures

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 be 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; $VBW \geq RBW$; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW = 3 MHz for $f \geq 1$ GHz for peak measurement.
For average measurement:
 - $VBW = 10$ Hz, when duty cycle is no less than 98 percent.
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

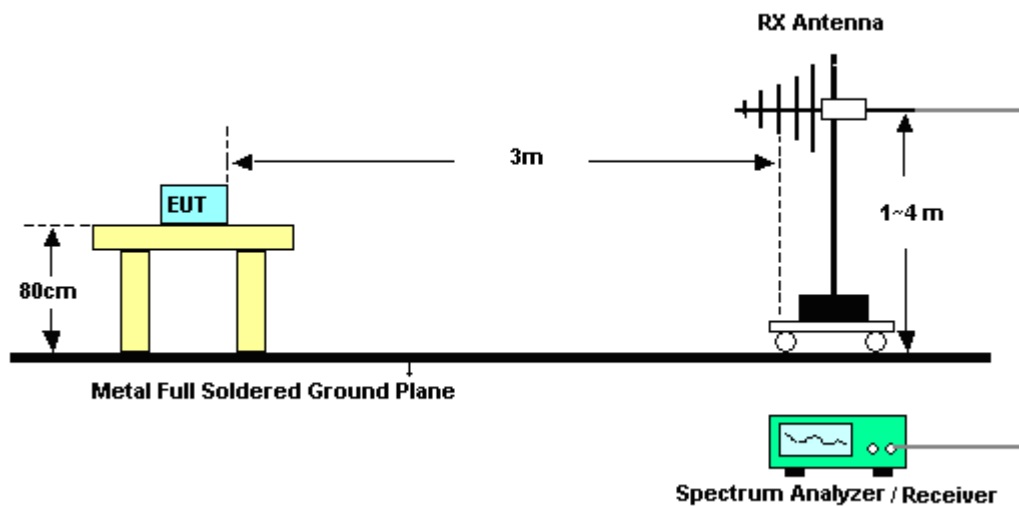
3.5.4 Test Setup

For radiated emissions below 30MHz

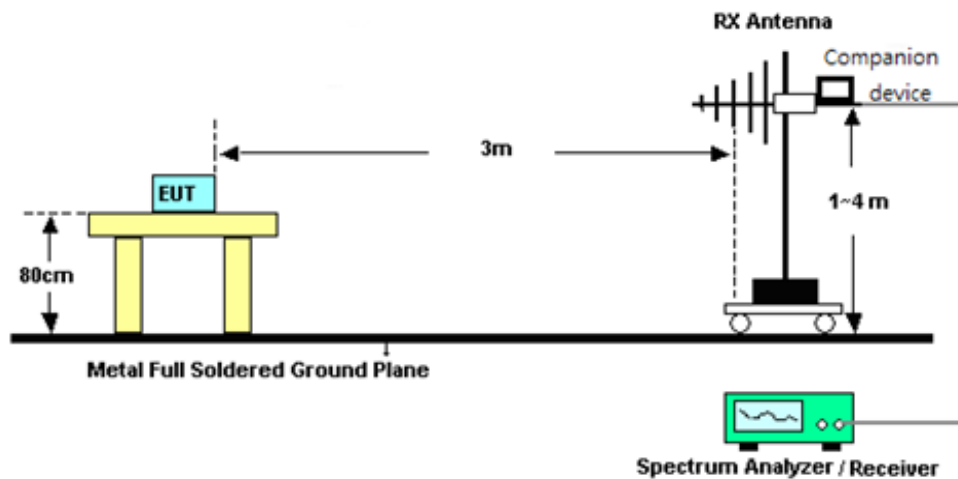


For radiated emissions from 30MHz to 1GHz

<CDD Mode>

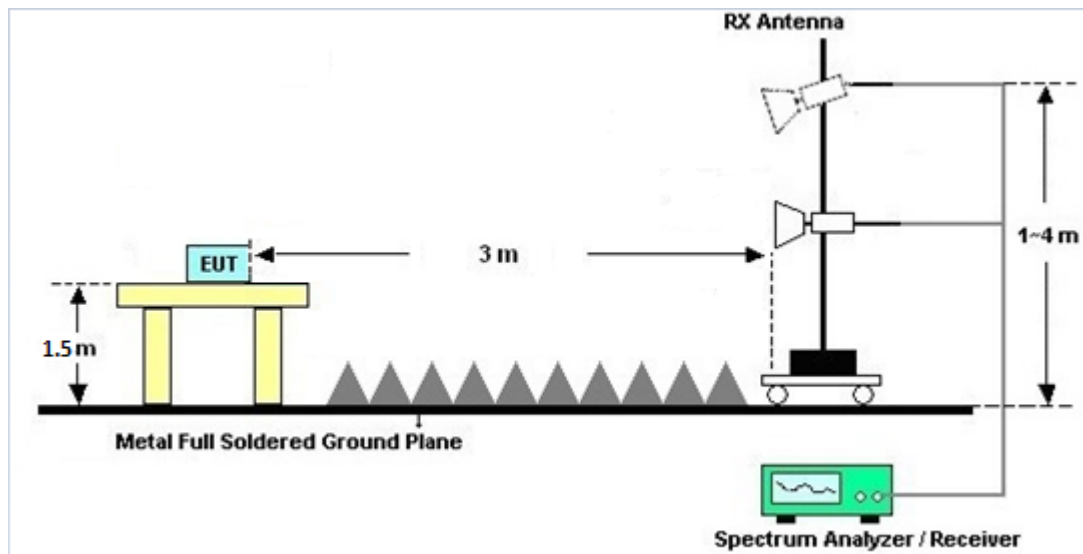


<TXBF Mode>

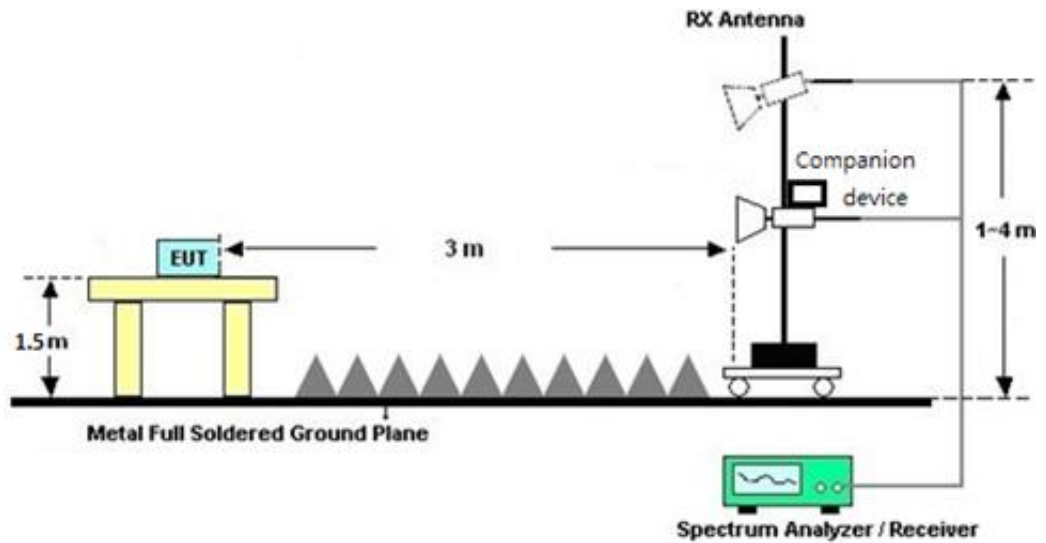


For radiated test above 1GHz

<CDD Mode>



<TXBF Mode>





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

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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B and C.

3.5.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B and C.

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 (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

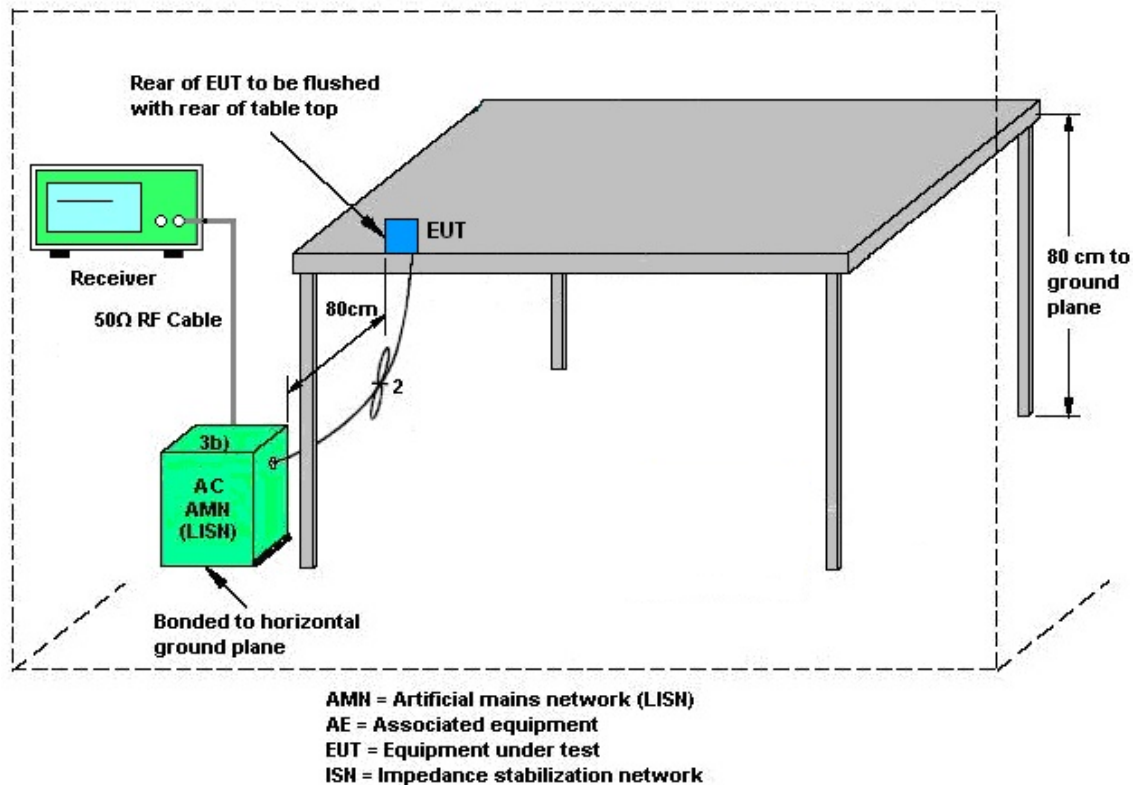
3.6.2 Measuring Instruments

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 A.

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 (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
2.4 GHz	3.10	3.10	3.10	6.11	0.00	0.11

Power Limit Reduction = $DG(\text{Power}) - 6\text{dBi}$, (min = 0)

PSD Limit Reduction = $DG(\text{PSD}) - 6\text{dBi}$, (min = 0)

TXBF modes

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

The EUT supports beamforming for 802.11ac modes.

The directional gain calculation is following F)2)e)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.

			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 1	Ant. 2	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
2.4 GHz	3.10	3.10	6.11	6.11	0.11	0.11

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	Apr. 15, 2021~ May 12, 2021	Jul. 13, 2021	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01 N-06	47020 & 06	30MHz to 1GHz	Oct. 11, 2020	Apr. 15, 2021~ May 12, 2021	Oct. 10, 2021	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1G	Sep. 30, 2020	Apr. 15, 2021~ May 12, 2021	Sep. 29, 2021	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-152 2	1G~18GHz	Sep. 29, 2020	Apr. 15, 2021~ May 12, 2021	Sep. 28, 2021	Radiation (03CH16-HY)
Amplifier	EMCI	EMC051845S E	980729	1-18GHz	Jul. 10, 2020	Apr. 15, 2021~ May 12, 2021	Jul. 09, 2021	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170 584	18GHz ~40GHz	Dec. 11, 2020	Apr. 15, 2021~ May 12, 2021	Dec. 10, 2021	Radiation (03CH16-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 11, 2020	Apr. 15, 2021~ May 12, 2021	Dec. 10, 2021	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY532702 64	1GHz~26.5GHz	Dec. 10, 2020	Apr. 15, 2021~ May 12, 2021	Dec. 09, 2021	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A	MY590530 12	3Hz~26.5GHz	Nov. 18, 2020	Apr. 15, 2021~ May 12, 2021	Nov. 17, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/ 4PE	NA	Aug. 29, 2020	Apr. 15, 2021~ May 12, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11688/ 4PE	NA	Aug. 29, 2020	Apr. 15, 2021~ May 12, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300 -5757	NA	Aug. 29, 2020	Apr. 15, 2021~ May 12, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Apr. 15, 2021~ May 12, 2021	N/A	Radiation (03CH16-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Apr. 15, 2021~ May 12, 2021	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Apr. 15, 2021~ May 12, 2021	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Apr. 15, 2021~ May 12, 2021	N/A	Radiation (03CH16-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 03, 2021	Apr. 06, 2021~ Jun. 08, 2021	Mar. 02, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054S NO10	10MHz~6GHz	Dec. 16, 2020	Apr. 06, 2021~ Jun. 08, 2021	Dec. 15, 2021	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz ~ 40GHz	Jul. 22, 2020	Apr. 06, 2021~ Jun. 08, 2021	Jul. 21, 2021	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz-40GHz	Jan. 21, 2021	Apr. 06, 2021~ Jun. 08, 2021	Jan. 20, 2022	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2021	Apr. 06, 2021~ Jun. 08, 2021	Mar. 16, 2022	Conducted (TH05-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Apr. 30, 2021	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Apr. 30, 2021	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-FN	9561-FN00373	9kHz-200MHz	Nov. 02, 2020	Apr. 30, 2021	Nov. 01, 2021	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	N/A	Apr. 30, 2021	N/A	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Feb. 01, 2021	Apr. 30, 2021	Jan. 31, 2022	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 11, 2020	Apr. 30, 2021	Sep. 10, 2021	Conduction (CO07-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.2 dB
--	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5 dB
--	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.3 dB
--	--------

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

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



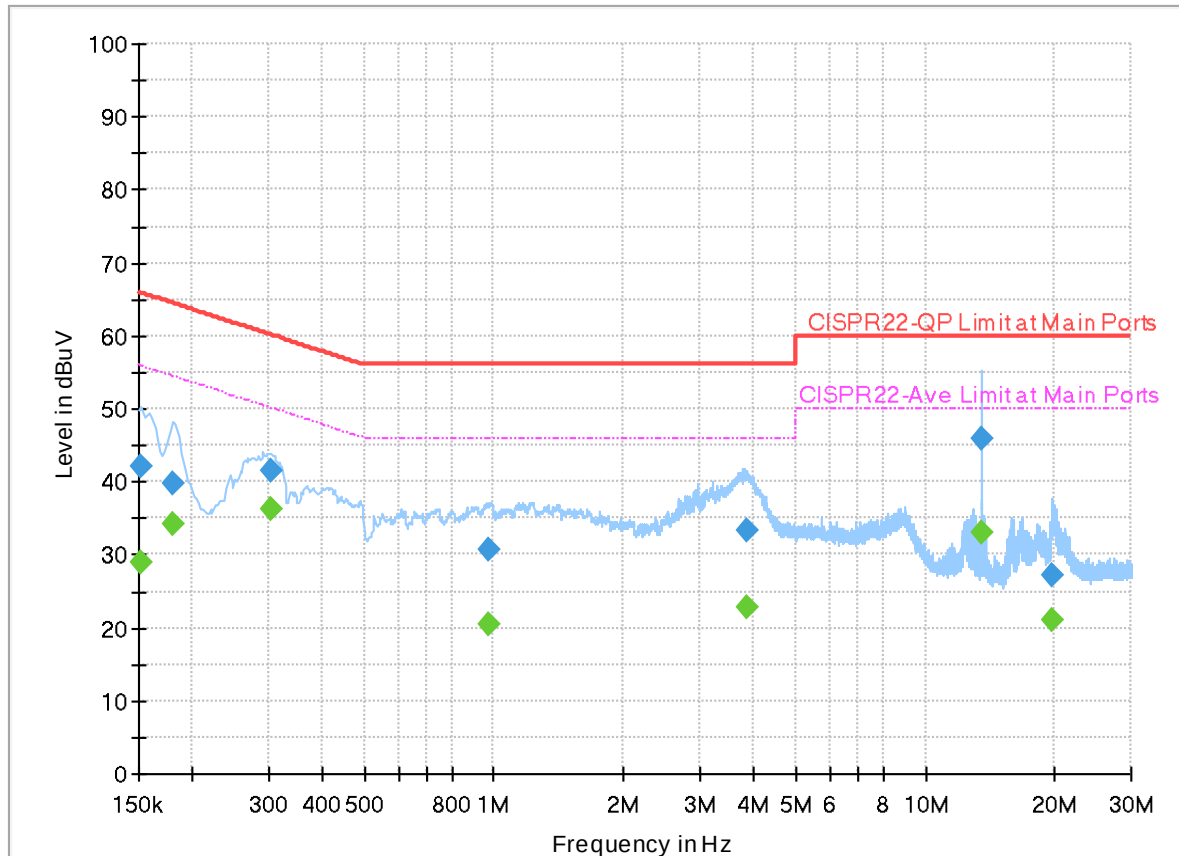
Appendix A. AC Conducted Emission Test Results

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

EUT Information

Report NO : 131009-01
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



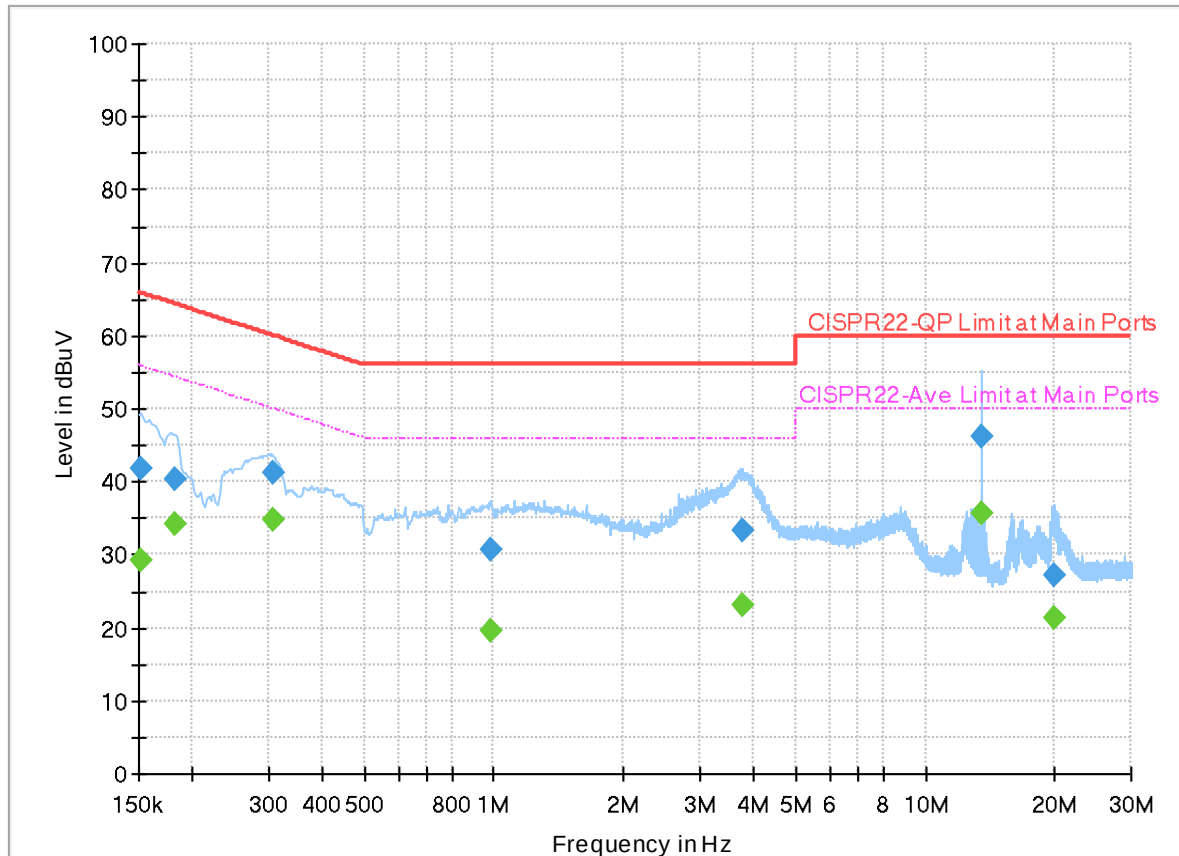
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	28.93	55.88	26.95	L1	OFF	20.0
0.152250	42.03	---	65.88	23.85	L1	OFF	20.0
0.179250	---	34.32	54.52	20.20	L1	OFF	20.0
0.179250	39.77	---	64.52	24.75	L1	OFF	20.0
0.303000	---	36.29	50.16	13.87	L1	OFF	20.0
0.303000	41.65	---	60.16	18.51	L1	OFF	20.0
0.966750	---	20.48	46.00	25.52	L1	OFF	20.0
0.966750	30.73	---	56.00	25.27	L1	OFF	20.0
3.849000	---	22.77	46.00	23.23	L1	OFF	20.1
3.849000	33.21	---	56.00	22.79	L1	OFF	20.1
13.560000	---	32.96	50.00	17.04	L1	OFF	20.2
13.560000	45.84	---	60.00	14.16	L1	OFF	20.2
19.677750	---	21.03	50.00	28.97	L1	OFF	20.2
19.677750	27.29	---	60.00	32.71	L1	OFF	20.2

EUT Information

Report NO : 131009-01
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	---	29.20	55.88	26.68	N	OFF	20.0
0.152250	41.92	---	65.88	23.96	N	OFF	20.0
0.181500	---	34.28	54.42	20.14	N	OFF	20.0
0.181500	40.38	---	64.42	24.04	N	OFF	20.0
0.307500	---	34.81	50.04	15.23	N	OFF	20.0
0.307500	41.09	---	60.04	18.95	N	OFF	20.0
0.980250	---	19.65	46.00	26.35	N	OFF	20.0
0.980250	30.71	---	56.00	25.29	N	OFF	20.0
3.770250	---	22.97	46.00	23.03	N	OFF	20.1
3.770250	33.43	---	56.00	22.57	N	OFF	20.1
13.560000	---	35.62	50.00	14.38	N	OFF	20.2
13.560000	46.24	---	60.00	13.76	N	OFF	20.2
19.864500	---	21.42	50.00	28.58	N	OFF	20.3
19.864500	27.20	---	60.00	32.80	N	OFF	20.3



Appendix B. Radiated Spurious Emission

Test Engineer :	Karl Hou, Caster Liao and Andy Yang	Temperature :	20~25°C
		Relative Humidity :	50~60%

<CDD Mode>

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2325.54	56.41	-17.59	74	40.5	27.85	18.36	30.3	292	12	P	H
		2390	44.54	-9.46	54	28.78	27.56	18.48	30.28	292	12	A	H
	*	2412	106.24	-	-	90.51	27.48	18.52	30.27	292	12	P	H
	*	2412	103.22	-	-	87.49	27.48	18.52	30.27	292	12	A	H
													H
													H
		2390	57.65	-16.35	74	41.89	27.56	18.48	30.28	220	326	P	V
		2389.8	47.62	-6.38	54	31.86	27.56	18.48	30.28	220	326	A	V
	*	2412	115.43	-	-	99.7	27.48	18.52	30.27	220	326	P	V
	*	2412	112.53	-	-	96.8	27.48	18.52	30.27	220	326	A	V
													V
													V
802.11b CH 06 2437MHz		2358.72	56.85	-17.15	74	40.97	27.75	18.42	30.29	202	359	P	H
		2354.52	44.27	-9.73	54	28.37	27.77	18.42	30.29	202	359	A	H
	*	2437	107.49	-	-	91.76	27.43	18.57	30.27	202	359	P	H
	*	2437	104.36	-	-	88.63	27.43	18.57	30.27	202	359	A	H
		2493	56.3	-17.7	74	40.47	27.4	18.68	30.25	202	359	P	H
		2483.97	45.21	-8.79	54	29.4	27.4	18.66	30.25	202	359	A	H
		2351.3	56.95	-17.05	74	41.04	27.79	18.41	30.29	247	307	P	V
		2389.94	44.62	-9.38	54	28.86	27.56	18.48	30.28	247	307	A	V
	*	2437	113.46	-	-	97.73	27.43	18.57	30.27	247	307	P	V
	*	2437	110.36	-	-	94.63	27.43	18.57	30.27	247	307	A	V
		2485.3	57.68	-16.32	74	41.86	27.4	18.67	30.25	247	307	P	V
		2483.76	47.39	-6.61	54	31.58	27.4	18.66	30.25	247	307	A	V



802.11b CH 11 2462MHz	*	2462	109.67	-	-	93.91	27.4	18.62	30.26	198	359	P	H
	*	2462	106.56	-	-	90.8	27.4	18.62	30.26	198	359	A	H
		2487.44	58.55	-15.45	74	42.73	27.4	18.67	30.25	198	359	P	H
		2488.88	46.88	-7.12	54	31.06	27.4	18.67	30.25	198	359	A	H
													H
													H
	*	2462	116.55	-	-	100.79	27.4	18.62	30.26	233	306	P	V
	*	2462	113.34	-	-	97.58	27.4	18.62	30.26	233	306	A	V
		2484	60.42	-13.58	74	44.61	27.4	18.66	30.25	233	306	P	V
		2483.6	51.7	-2.3	54	35.89	27.4	18.66	30.25	233	306	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. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	43.96	-30.04	74	54.81	31.15	13.36	55.36	100	0	P	H
		12060	53.45	-20.55	74	49.14	38.88	20.52	55.09	150	306	P	H
		12060	47.63	-6.37	54	43.32	38.88	20.52	55.09	150	306	A	H
													H
		4824	46.69	-27.31	74	57.54	31.15	13.36	55.36	100	0	P	V
		12060	54.37	-19.63	74	50.06	38.88	20.52	55.09	227	338	P	V
		12060	48.43	-5.57	54	44.12	38.88	20.52	55.09	227	338	A	V
													V
802.11b CH 06 2437MHz		4874	44.64	-29.36	74	55.5	31.15	13.36	55.37	100	0	P	H
		7311	50.78	-23.22	74	54.46	36.42	16.16	56.26	331	347	P	H
		7311	44.32	-9.68	54	48	36.42	16.16	56.26	331	347	A	H
		12185	51.56	-22.44	74	47.21	38.83	20.58	55.06	200	316	P	H
		4874	45.8	-28.2	74	56.66	31.15	13.36	55.37	100	0	P	V
		7311	53.67	-20.33	74	57.35	36.42	16.16	56.26	183	322	P	V
		7311	49.15	-4.85	54	52.83	36.42	16.16	56.26	183	322	A	V
		12185	52.62	-21.38	74	48.27	38.83	20.58	55.06	100	339	P	V
802.11b CH 11 2462MHz		4924	47.98	-26.02	74	58.8	31.2	13.36	55.38	100	0	P	H
		7386	49.96	-24.04	74	53.45	36.43	16.36	56.28	100	0	P	H
		12310	54.79	-19.21	74	50.81	38.39	20.63	55.04	127	4	P	H
		12310	49.75	-4.25	54	45.77	38.39	20.63	55.04	127	4	A	H
		4924	49.89	-24.11	74	60.71	31.2	13.36	55.38	100	0	P	V
		7386	53.38	-20.62	74	56.87	36.43	16.36	56.28	194	293	P	V
		7386	48.13	-5.87	54	51.62	36.43	16.36	56.28	194	293	A	V
		12310	55.68	-18.32	74	51.7	38.39	20.63	55.04	110	332	P	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. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2388.96	60.16	-13.84	74	44.39	27.57	18.48	30.28	369	49	P	H
		2389.905	46.46	-7.54	54	30.7	27.56	18.48	30.28	369	49	A	H
	*	2412	108.59	-	-	92.86	27.48	18.52	30.27	369	49	P	H
	*	2412	100.45	-	-	84.72	27.48	18.52	30.27	369	49	A	H
													H
													H
		2390	69.46	-4.54	74	53.7	27.56	18.48	30.28	219	351	P	V
		2390	52.87	-1.13	54	37.11	27.56	18.48	30.28	219	351	A	V
	*	2412	114.97	-	-	99.24	27.48	18.52	30.27	219	351	P	V
	*	2412	108.22	-	-	92.49	27.48	18.52	30.27	219	351	A	V
													V
													V
802.11g CH 06 2437MHz		2360.54	57.37	-16.63	74	41.49	27.74	18.43	30.29	237	300	P	H
		2389.52	44.81	-9.19	54	29.05	27.56	18.48	30.28	237	301	A	H
	*	2437	109.65	-	-	93.92	27.43	18.57	30.27	237	301	P	H
	*	2437	102.13	-	-	86.4	27.43	18.57	30.27	237	301	A	H
		2484.39	58.6	-15.4	74	42.79	27.4	18.66	30.25	237	301	P	H
		2483.5	47.42	-6.58	54	31.61	27.4	18.66	30.25	237	301	A	H
		2389.38	56.92	-17.08	74	41.16	27.56	18.48	30.28	169	0	P	V
		2389.94	45.88	-8.12	54	30.12	27.56	18.48	30.28	169	0	A	V
	*	2437	117.44	-	-	101.71	27.43	18.57	30.27	169	0	P	V
	*	2437	109.94	-	-	94.21	27.43	18.57	30.27	169	0	A	V
		2484.25	64.65	-9.35	74	48.84	27.4	18.66	30.25	169	0	P	V
		2483.5	52.36	-1.64	54	36.55	27.4	18.66	30.25	169	0	A	V



802.11g CH 11 2462MHz	*	2462	107.34	-	-	91.58	27.4	18.62	30.26	390	47	P	H
	*	2462	100.26	-	-	84.5	27.4	18.62	30.26	390	47	A	H
		2483.6	62.96	-11.04	74	47.15	27.4	18.66	30.25	390	47	P	H
		2483.52	47.14	-6.86	54	31.33	27.4	18.66	30.25	390	47	A	H
													H
													H
	*	2462	114.34	-	-	98.58	27.4	18.62	30.26	229	355	P	V
	*	2462	107.27	-	-	91.51	27.4	18.62	30.26	229	355	A	V
		2483.64	67.08	-6.92	74	51.27	27.4	18.66	30.25	229	355	P	V
		2483.52	52.67	-1.33	54	36.86	27.4	18.66	30.25	229	355	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. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	40.03	-33.97	74	50.88	31.15	13.36	55.36	100	0	P	H
		12060	54.68	-19.32	74	50.37	38.88	20.52	55.09	123	1	P	H
		12060	39.5	-14.5	54	35.19	38.88	20.52	55.09	123	1	A	H
													H
		4824	40.54	-33.46	74	51.39	31.15	13.36	55.36	100	0	P	V
		12060	57.12	-16.88	74	52.81	38.88	20.52	55.09	207	341	P	V
		12060	40.18	-13.82	54	35.87	38.88	20.52	55.09	207	341	A	V
													V
802.11g CH 06 2437MHz		4874	43.58	-30.42	74	54.44	31.15	13.36	55.37	100	0	P	H
		7311	49.85	-24.15	74	53.53	36.42	16.16	56.26	100	0	P	H
		12185	56.52	-17.48	74	52.17	38.83	20.58	55.06	125	360	P	H
		12185	42.18	-11.82	54	37.83	38.83	20.58	55.06	125	360	A	H
		4874	45.72	-28.28	74	56.58	31.15	13.36	55.37	100	0	P	V
		7311	55.85	-18.15	74	59.53	36.42	16.16	56.26	225	328	P	V
		7311	43.04	-10.96	54	46.72	36.42	16.16	56.26	225	328	A	V
		12185	57.37	-16.63	74	53.02	38.83	20.58	55.06	100	339	P	V
802.11g CH 11 2462MHz		4924	41.7	-32.3	74	52.52	31.2	13.36	55.38	100	0	P	H
		7386	46.18	-27.82	74	49.67	36.43	16.36	56.28	100	0	P	H
													H
													H
		4924	43.42	-30.58	74	54.24	31.2	13.36	55.38	100	0	P	V
		7386	45.09	-28.91	74	48.58	36.43	16.36	56.28	100	0	P	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 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 01 2412MHz		2390	57.63	-16.37	74	41.87	27.56	18.48	30.28	243	302	P	H
		2390	46.28	-7.72	54	30.52	27.56	18.48	30.28	243	302	A	H
	*	2412	105.37	-	-	89.64	27.48	18.52	30.27	243	302	P	H
	*	2412	97.76	-	-	82.03	27.48	18.52	30.27	243	302	A	H
													H
													H
		2389.8	68.08	-5.92	74	52.32	27.56	18.48	30.28	222	359	P	V
		2390	51.06	-2.94	54	35.3	27.56	18.48	30.28	222	359	A	V
	*	2412	113.55	-	-	97.82	27.48	18.52	30.27	222	359	P	V
	*	2412	105.82	-	-	90.09	27.48	18.52	30.27	222	359	A	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		2328.2	56.52	-17.48	74	40.61	27.84	18.37	30.3	266	309	P	H
		2349.76	44.84	-9.16	54	28.92	27.8	18.41	30.29	266	309	A	H
	*	2437	108.88	-	-	93.15	27.43	18.57	30.27	266	309	P	H
	*	2437	99.7	-	-	83.97	27.43	18.57	30.27	266	309	A	H
		2486.28	58.83	-15.17	74	43.01	27.4	18.67	30.25	266	309	P	H
		2483.5	47.32	-6.68	54	31.51	27.4	18.66	30.25	266	309	A	H
		2389.52	57.51	-16.49	74	41.75	27.56	18.48	30.28	199	0	P	V
		2389.94	46.25	-7.75	54	30.49	27.56	18.48	30.28	199	0	A	V
	*	2437	116.19	-	-	100.46	27.43	18.57	30.27	199	0	P	V
	*	2437	108.54	-	-	92.81	27.43	18.57	30.27	199	0	A	V
		2486.77	63.71	-10.29	74	47.89	27.4	18.67	30.25	199	0	P	V
		2483.5	52.81	-1.19	54	37	27.4	18.66	30.25	199	0	A	V



802.11ac VHT20 CH 11 2462MHz	*	2462	103.79	-	-	88.03	27.4	18.62	30.26	254	40	P	H
	*	2462	95.93	-	-	80.17	27.4	18.62	30.26	254	40	A	H
		2483.96	58.3	-15.7	74	42.49	27.4	18.66	30.25	254	40	P	H
		2483.52	47.07	-6.93	54	31.26	27.4	18.66	30.25	254	40	A	H
													H
													H
	*	2462	112.18	-	-	96.42	27.4	18.62	30.26	172	357	P	V
	*	2462	104.13	-	-	88.37	27.4	18.62	30.26	172	357	A	V
		2483.64	64.33	-9.67	74	48.52	27.4	18.66	30.25	172	357	P	V
		2483.52	52.16	-1.84	54	36.35	27.4	18.66	30.25	172	357	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 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 01 2412MHz		4824	40.35	-33.65	74	51.2	31.15	13.36	55.36	100	0	P	H
		12060	48.43	-25.57	74	44.12	38.88	20.52	55.09	100	0	P	H
													H
													H
		4824	40.09	-33.91	74	50.94	31.15	13.36	55.36	100	0	P	V
		12060	54.37	-19.63	74	50.06	38.88	20.52	55.09	194	352	P	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		4874	44.45	-29.55	74	55.31	31.15	13.36	55.37	100	0	P	H
		7311	48.79	-25.21	74	52.47	36.42	16.16	56.26	100	0	P	H
		12185	56.61	-17.39	74	52.26	38.83	20.58	55.06	211	356	P	H
		12185	41.96	-12.04	54	37.61	38.83	20.58	55.06	211	356	A	H
		4874	46.62	-27.38	74	57.48	31.15	13.36	55.37	100	0	P	V
		7311	53.28	-20.72	74	56.96	36.42	16.16	56.26	213	329	P	V
		7311	41.31	-12.69	54	44.99	36.42	16.16	56.26	213	329	A	V
		12185	55.77	-18.23	74	51.42	38.83	20.58	55.06	184	350	P	V
802.11ac VHT20 CH 11 2462MHz		4924	40.6	-33.4	74	51.42	31.2	13.36	55.38	100	0	P	H
		7386	45.53	-28.47	74	49.02	36.43	16.36	56.28	100	0	P	H
													H
													H
		4924	42.38	-31.62	74	53.2	31.2	13.36	55.38	100	0	P	V
		7386	45.01	-28.99	74	48.5	36.43	16.36	56.28	100	0	P	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 106 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 106/53 CH 01 2412MHz		2389.8	59.86	-14.14	74	44.1	27.56	18.48	30.28	275	307	P	H
		2390	47.46	-6.54	54	31.7	27.56	18.48	30.28	275	307	A	H
	*	2412	107.89	-	-	92.16	27.48	18.52	30.27	275	307	P	H
	*	2412	100.08	-	-	84.35	27.48	18.52	30.27	275	307	A	H
													H
													H
		2389.905	64.7	-9.3	74	48.94	27.56	18.48	30.28	235	2	P	V
		2390	51.55	-2.45	54	35.79	27.56	18.48	30.28	235	2	A	V
	*	2412	115.62	-	-	99.9	27.48	18.52	30.28	235	2	P	V
	*	2412	106.29	-	-	90.57	27.48	18.52	30.28	235	2	A	V
													V
													V
802.11ax HE20 Partial 106/54 CH 11 2462MHz	*	2462	108.61	-	-	92.85	27.4	18.62	30.26	263	307	P	H
	*	2462	100.5	-	-	84.74	27.4	18.62	30.26	263	307	A	H
		2483.84	58.23	-15.77	74	42.42	27.4	18.66	30.25	263	307	P	H
		2484.16	47.54	-6.46	54	31.73	27.4	18.66	30.25	263	307	A	H
													H
													H
	*	2462	115.78	-	-	100.02	27.4	18.62	30.26	161	350	P	V
	*	2462	107.18	-	-	91.42	27.4	18.62	30.26	161	350	A	V
		2483.56	66.12	-7.88	74	50.31	27.4	18.66	30.25	161	350	P	V
		2483.52	52.42	-1.58	54	36.61	27.4	18.66	30.25	161	350	A	V
													V
													V



2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 106 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 106/53 CH 01 2412MHz		4824	39.16	-34.84	74	50.01	31.15	13.36	55.36	100	0	P	H
		12045	52.18	-21.82	74	47.92	38.83	20.52	55.09	150	360	P	H
		12045	39.22	-14.78	54	34.96	38.83	20.52	55.09	150	360	A	H
													H
		4824	39.16	-34.84	74	50.01	31.15	13.36	55.36	100	0	P	V
		12045	54.58	-19.42	74	50.32	38.83	20.52	55.09	246	337	P	V
		12045	39.6	-14.4	54	35.34	38.83	20.52	55.09	246	337	A	V
													V
802.11ax HE20 Partial 106/54 CH 11 2462MHz		4924	39.24	-34.76	74	50.06	31.2	13.36	55.38	100	0	P	H
		7386	45.46	-28.54	74	48.95	36.43	16.36	56.28	100	0	P	H
													H
													H
		4924	40.63	-33.37	74	51.45	31.2	13.36	55.38	100	0	P	V
		7386	46	-28	74	49.49	36.43	16.36	56.28	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz WIFI 802.11g (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11g LF		73.65	25.13	-14.87	40	43.86	12.73	1.27	32.73	-	-	P	H
		126.03	31.94	-11.56	43.5	45.28	17.57	1.77	32.68	100	0	P	H
		259.89	19.7	-26.3	46	29.7	19.97	2.72	32.69	-	-	P	H
		402.48	30.56	-15.44	46	37.35	22.19	3.4	32.38	-	-	P	H
		558.65	28.41	-17.59	46	30.85	26.19	4.04	32.67	-	-	P	H
		742.95	32.19	-13.81	46	31.99	28.11	4.69	32.6	-	-	P	H
													H
													H
													H
													H
													H
													H
		48.43	30.42	-9.58	40	47.39	14.93	0.94	32.84	100	0	P	V
		64.92	30.3	-9.7	40	49.98	11.92	1.18	32.78	-	-	P	V
		125.06	29.74	-13.76	43.5	43.05	17.6	1.77	32.68	-	-	P	V
		186.17	23.5	-20	43.5	39.07	15.06	2.24	32.87	-	-	P	V
		405.39	27.74	-18.26	46	34.42	22.3	3.41	32.39	-	-	P	V
		717.73	32.7	-13.3	46	33.45	27.1	4.63	32.48	-	-	P	V
													V
													V
												V	
												V	
												V	
												V	
												V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



<TXBF Mode>

2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT20 CH 01 2412MHz		2389.695	57.46	-16.54	74	41.7	27.56	18.48	30.28	371	322	P	H
		2390	46.45	-7.55	54	30.69	27.56	18.48	30.28	371	322	A	H
	*	2412	104.4	-	-	88.67	27.48	18.52	30.27	371	322	P	H
	*	2412	95.97	-	-	80.24	27.48	18.52	30.27	371	322	A	H
													H
													H
		2390	65.75	-8.25	74	49.99	27.56	18.48	30.28	212	357	P	V
		2390	52.69	-1.31	54	36.93	27.56	18.48	30.28	212	357	A	V
	*	2412	112.81	-	-	97.08	27.48	18.52	30.27	212	357	P	V
	*	2412	105.2	-	-	89.47	27.48	18.52	30.27	212	357	A	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		2342.2	56.51	-17.49	74	40.59	27.82	18.39	30.29	124	62	P	H
		2373.84	45.41	-8.59	54	29.59	27.66	18.45	30.29	124	62	A	H
	*	2437	106.44	-	-	90.71	27.43	18.57	30.27	123	62	P	H
	*	2437	97.95	-	-	82.22	27.43	18.57	30.27	123	62	A	H
		2486.21	57.71	-16.29	74	41.89	27.4	18.67	30.25	123	62	P	H
		2484.6	46.7	-7.3	54	30.89	27.4	18.66	30.25	123	62	A	H
		2356.48	56.86	-17.14	74	40.97	27.76	18.42	30.29	167	357	P	V
		2389.8	45.74	-8.26	54	29.98	27.56	18.48	30.28	167	357	A	V
	*	2437	115.56	-	-	99.83	27.43	18.57	30.27	167	357	P	V
	*	2437	107.4	-	-	91.67	27.43	18.57	30.27	167	357	A	V
		2483.9	62.98	-11.02	74	47.17	27.4	18.66	30.25	167	357	P	V
		2483.69	52.6	-1.4	54	36.79	27.4	18.66	30.25	167	357	A	V



802.11ac VHT20 CH 11 2462MHz	*	2462	100.81	-	-	85.05	27.4	18.62	30.26	155	2	P	H
	*	2462	92.49	-	-	76.73	27.4	18.62	30.26	155	2	A	H
		2485.04	56.03	-17.97	74	40.21	27.4	18.67	30.25	155	2	P	H
		2487.16	45.99	-8.01	54	30.17	27.4	18.67	30.25	155	2	A	H
													H
													H
	*	2462	110.58	-	-	94.82	27.4	18.62	30.26	181	0	P	V
	*	2462	102.24	-	-	86.48	27.4	18.62	30.26	181	0	A	V
		2483.84	61.91	-12.09	74	46.1	27.4	18.66	30.25	181	0	P	V
		2483.6	52.21	-1.79	54	36.4	27.4	18.66	30.25	181	0	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 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 01 2412MHz		4824	39.15	-34.85	74	50	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
		4824	38.97	-35.03	74	49.82	31.15	13.36	55.36	100	0	P	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		4874	44.13	-29.87	74	54.99	31.15	13.36	55.37	100	0	P	H
		7311	46.97	-27.03	74	50.65	36.42	16.16	56.26	100	0	P	H
													H
													H
		4874	47.56	-26.44	74	58.42	31.15	13.36	55.37	100	0	P	V
		7311	49.54	-24.46	74	53.22	36.42	16.16	56.26	100	0	P	V
													V
802.11ac VHT20 CH 11 2462MHz		4924	39.93	-34.07	74	50.75	31.2	13.36	55.38	100	0	P	H
		7386	45.1	-28.9	74	48.59	36.43	16.36	56.28	100	0	P	H
													H
													H
		4924	40.53	-33.47	74	51.35	31.2	13.36	55.38	100	0	P	V
		7386	45.52	-28.48	74	49.01	36.43	16.36	56.28	100	0	P	V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz WIFI 802. 11ac VHT20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11ac VHT20 LF		69.77	28.44	-11.56	40	47.51	12.45	1.23	32.75	-	-	P	H
		119.24	32.97	-10.53	43.5	46.39	17.53	1.71	32.66	100	0	P	H
		224	20.33	-25.67	46	34.88	15.78	2.49	32.82	-	-	P	H
		413.15	30.72	-15.28	46	37.07	22.62	3.44	32.41	-	-	P	H
		558.65	28.76	-17.24	46	31.2	26.19	4.04	32.67	-	-	P	H
		742.95	32.88	-13.12	46	32.68	28.11	4.69	32.6	-	-	P	H
													H
													H
													H
													H
													H
													H
		48.43	33.6	-6.4	40	50.57	14.93	0.94	32.84	100	0	P	V
		64.92	29.93	-10.07	40	49.61	11.92	1.18	32.78	-	-	P	V
		116.33	31.27	-12.23	43.5	44.74	17.49	1.69	32.65	-	-	P	V
		188.11	22.96	-20.54	43.5	38.55	15.03	2.25	32.87	-	-	P	V
		401.51	27.62	-18.38	46	34.43	22.16	3.4	32.37	-	-	P	V
		758.47	31.81	-14.19	46	31.6	28.14	4.74	32.67	-	-	P	V
													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	Peak or Average
H/V	Horizontal or Vertical



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)

2. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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



Appendix C. Radiated Spurious Emission Plots

Test Engineer :	Karl Hou, Caster Liao and Andy Yang	Temperature :	20~25°C
		Relative Humidity :	50~60%

Note symbol

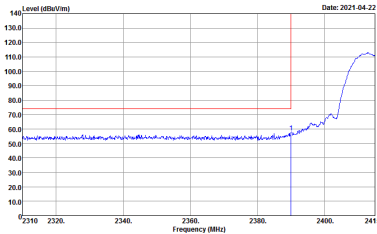
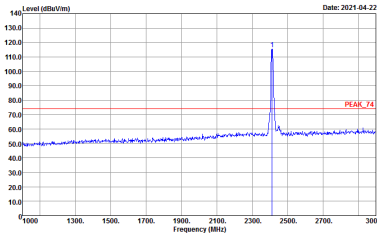
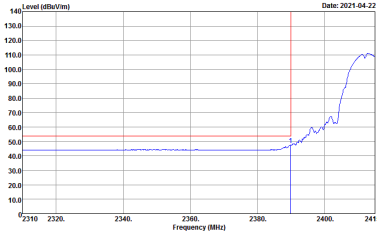
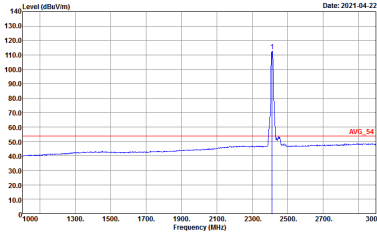
-L	Low channel location
-R	High channel location

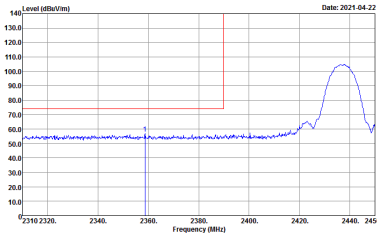
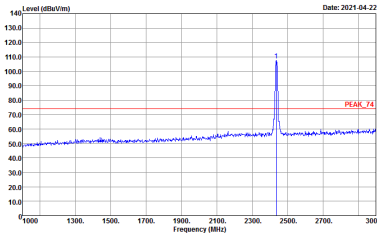
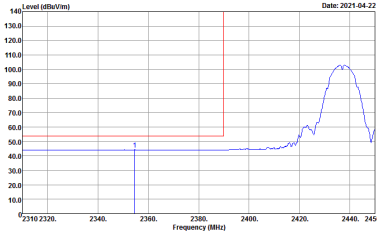
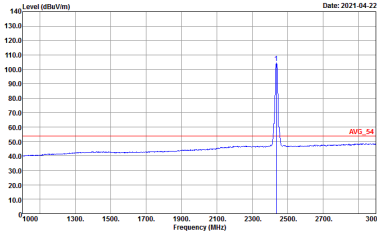


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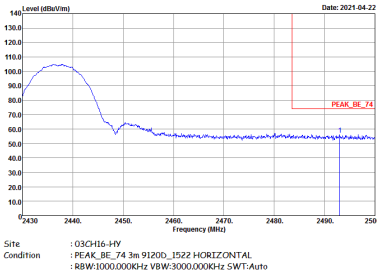
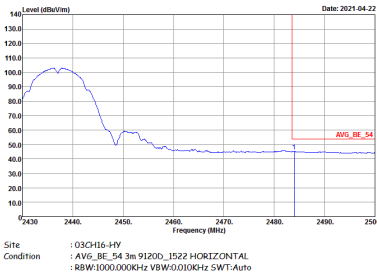
2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

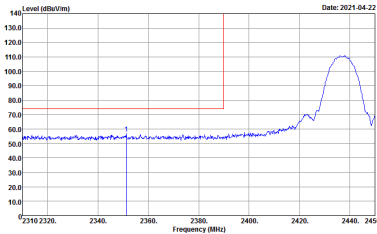
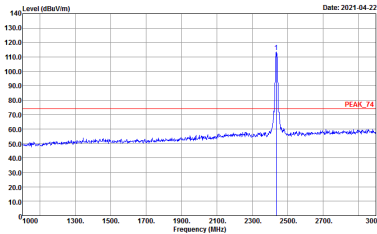
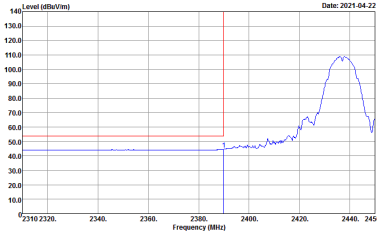
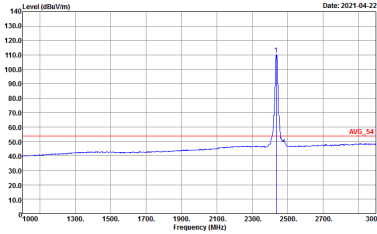
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ANT	802.11b CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

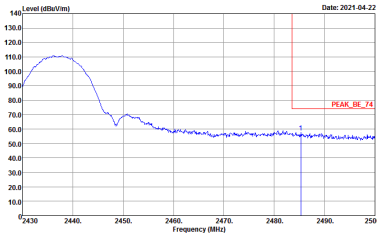
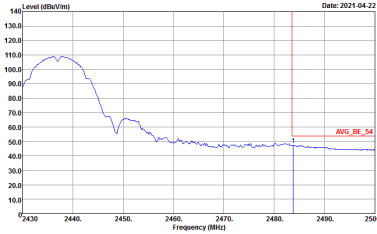
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

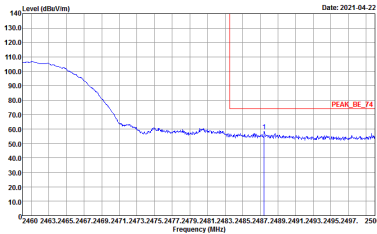
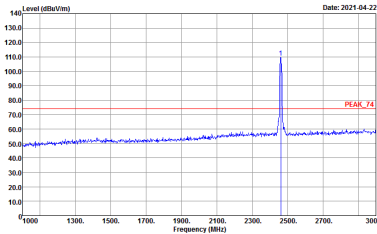
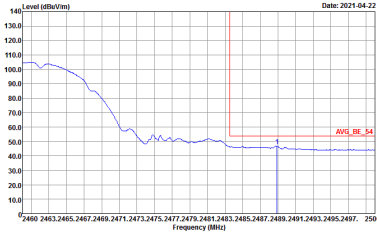
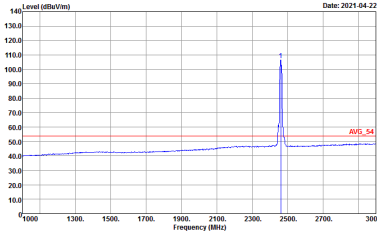


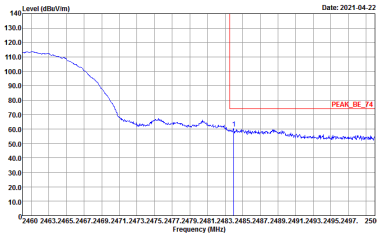
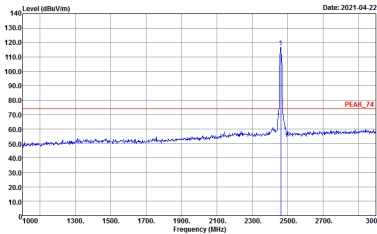
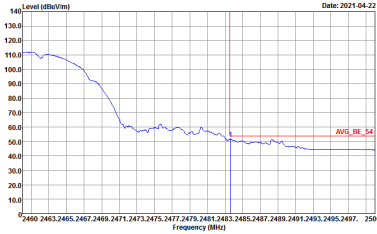
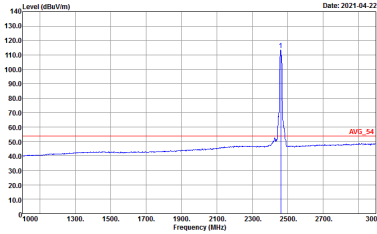
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Date: 2021-04-22	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Date: 2021-04-22	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

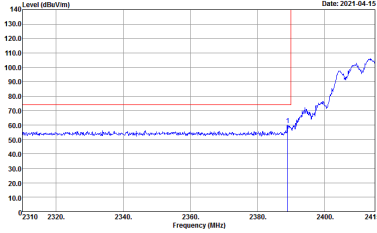
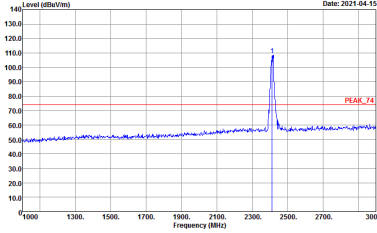
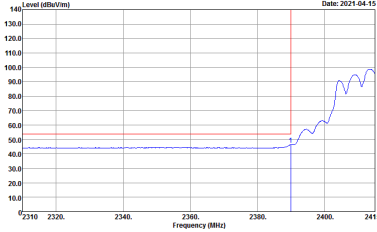
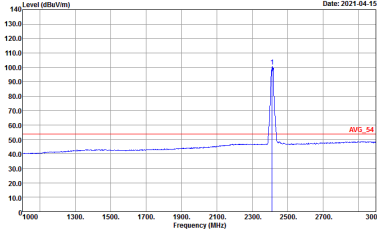


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

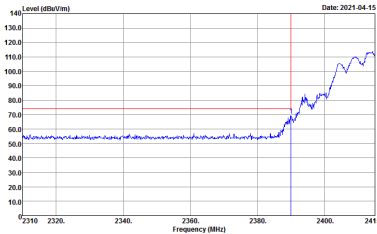
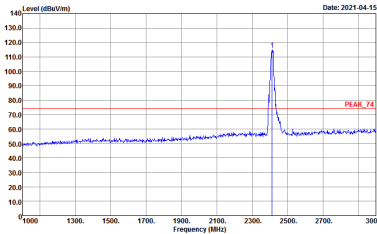
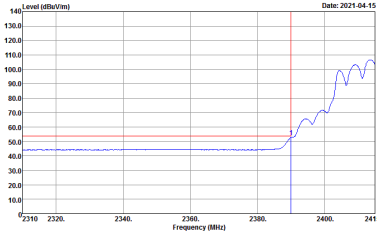
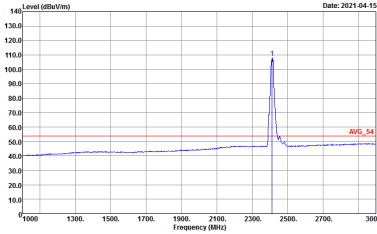
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

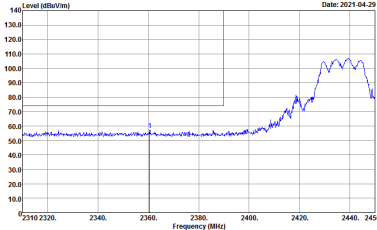
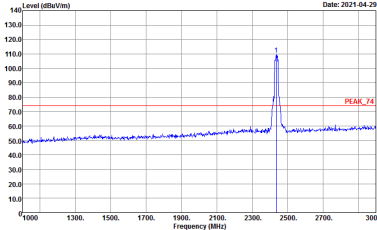
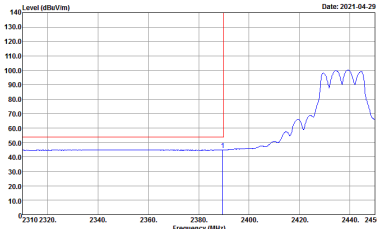
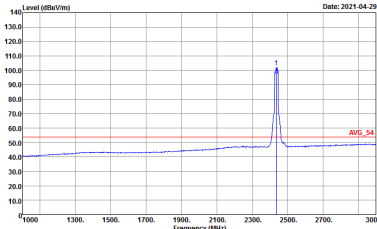
2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

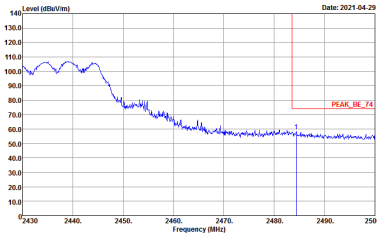
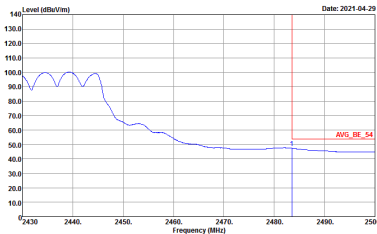


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

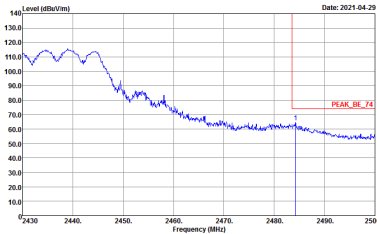
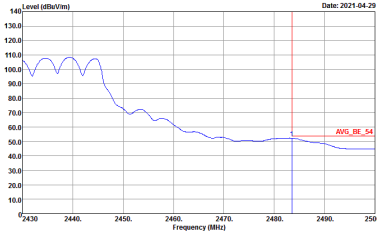


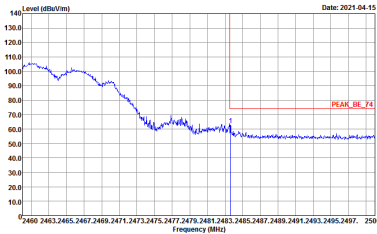
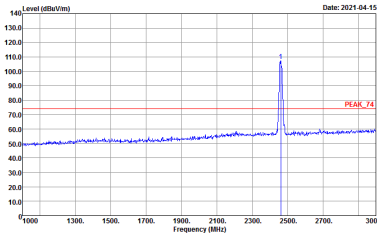
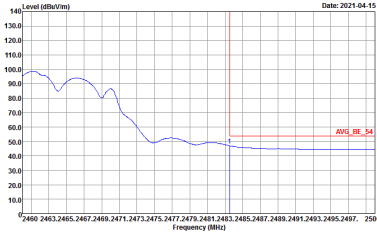
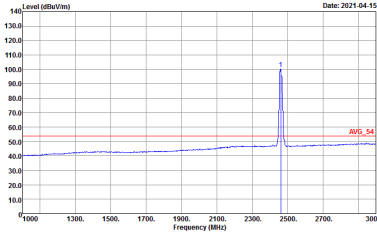
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

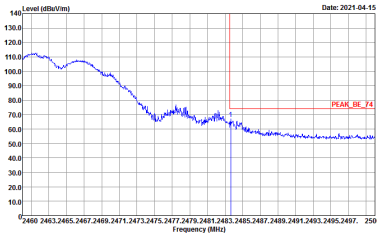
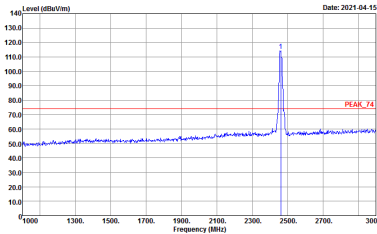
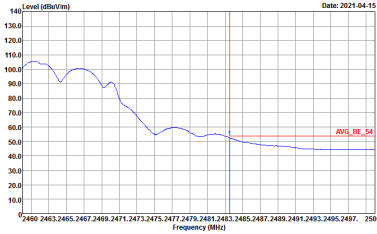
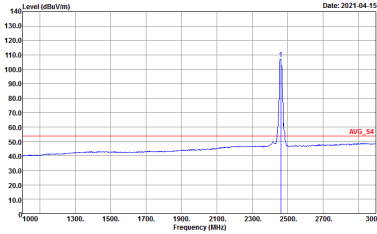


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left Blank

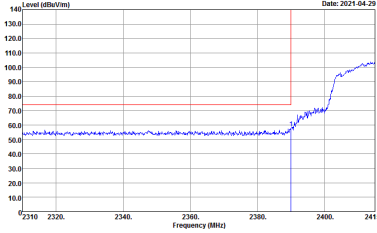
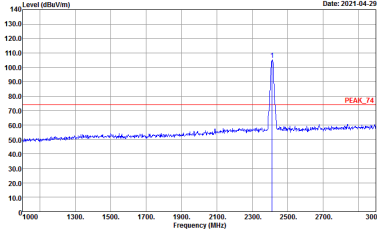
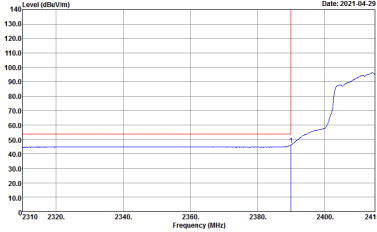
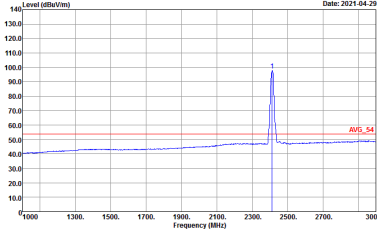
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto

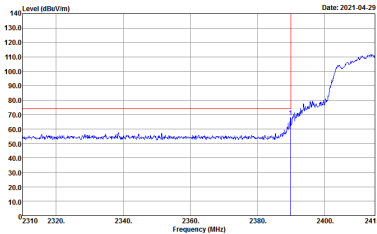
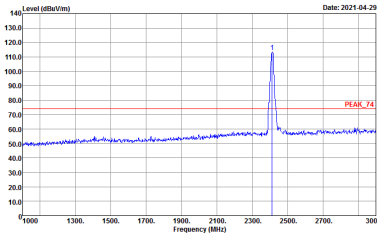
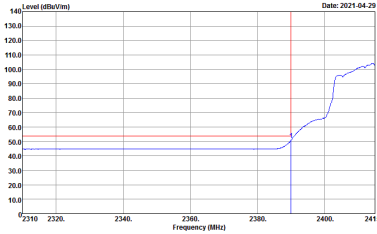
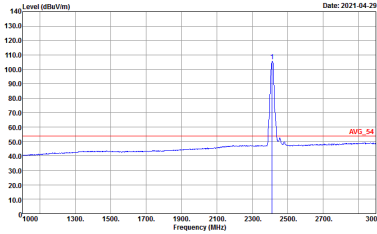
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

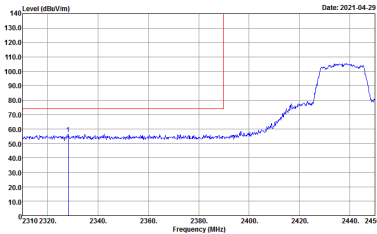
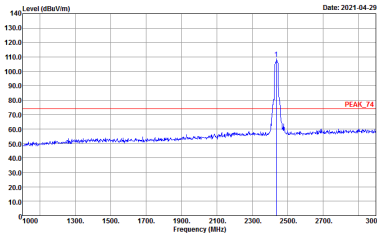
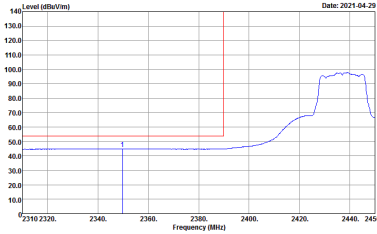
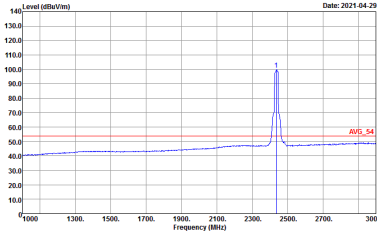


2.4GHz 2400~2483.5MHz

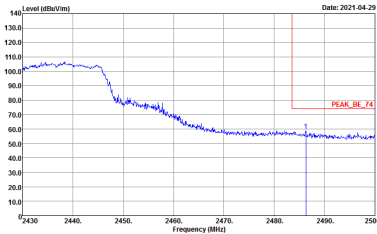
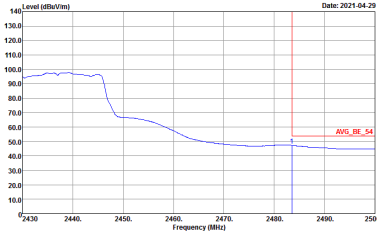
WIFI 802.11ac VHT20 (Band Edge @ 3m)

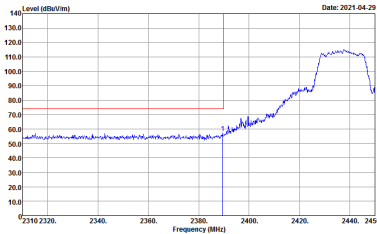
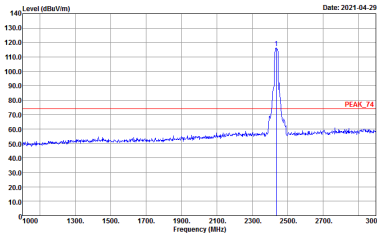
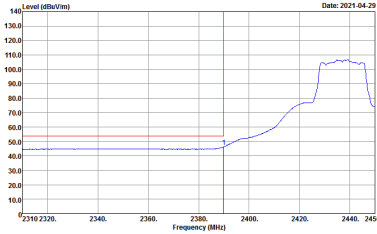
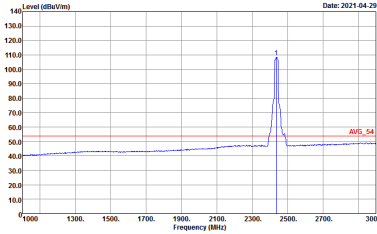
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

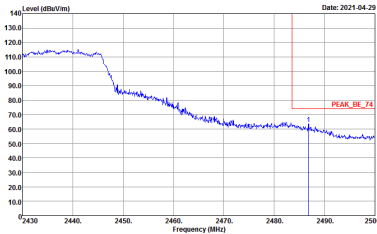
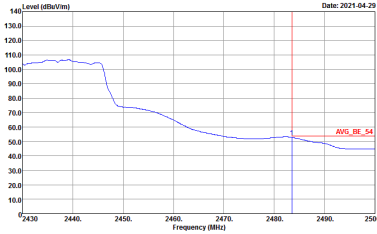
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

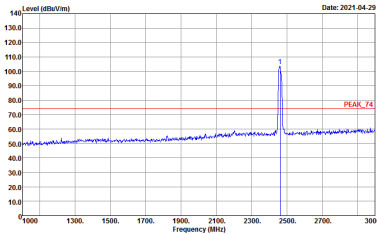
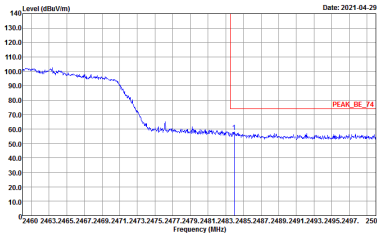
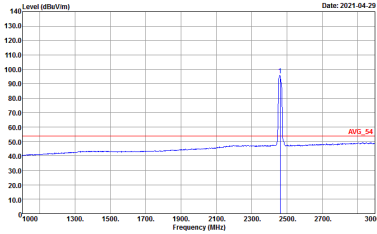
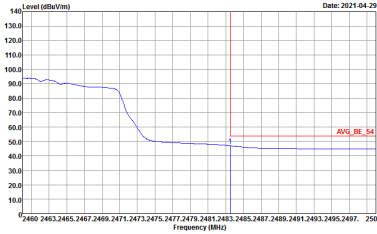


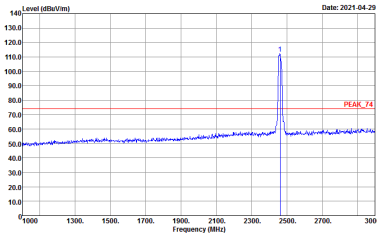
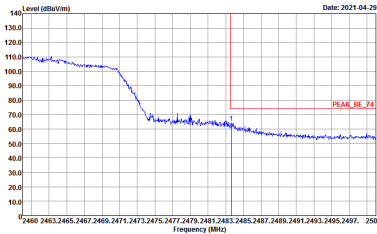
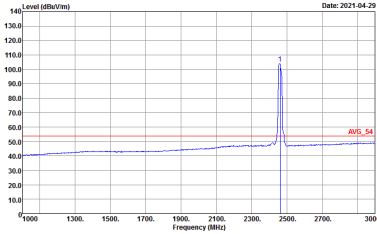
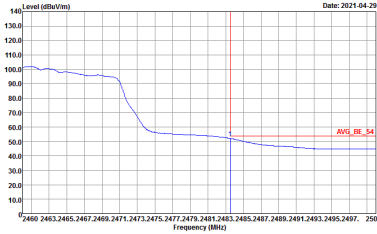
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

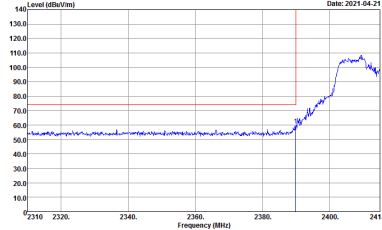
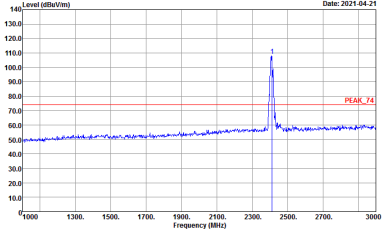
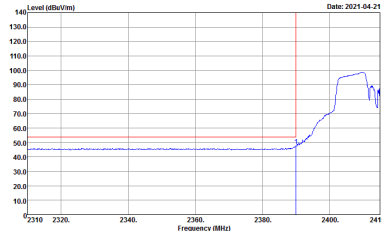
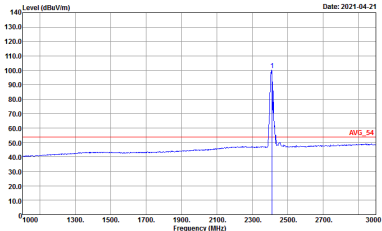


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

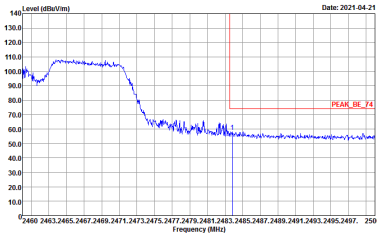
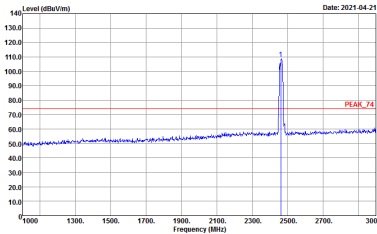
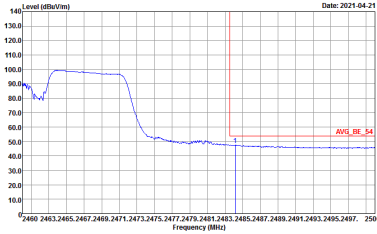
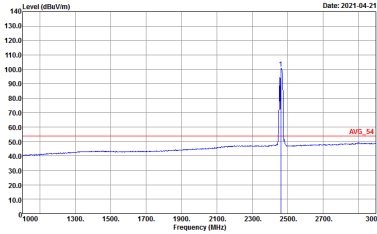
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

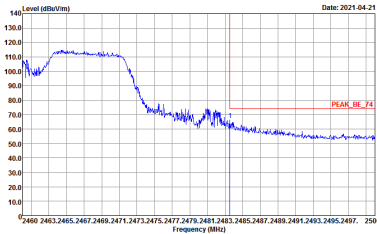
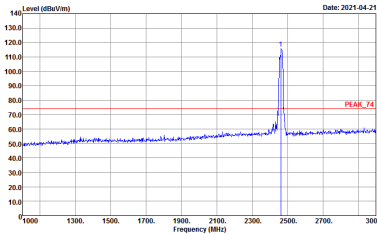
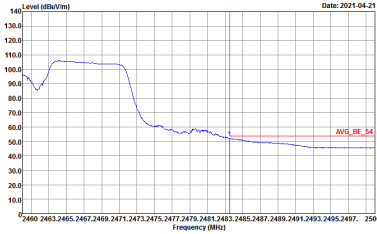
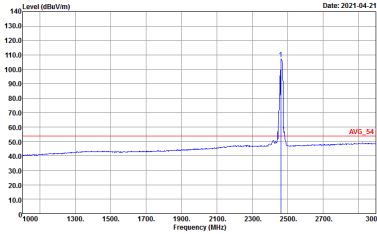
2.4GHz 2400~2483.5MHz
WIFI 802.11ax HE20 Partial 106 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto
Avg.		

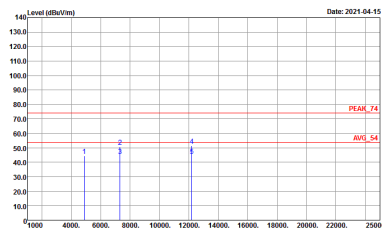
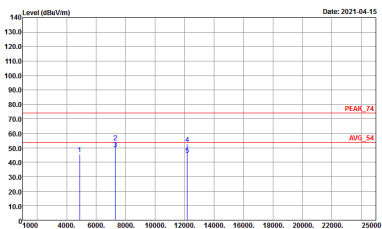


2.4GHz 2400~2483.5MHz

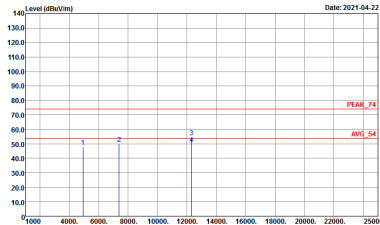
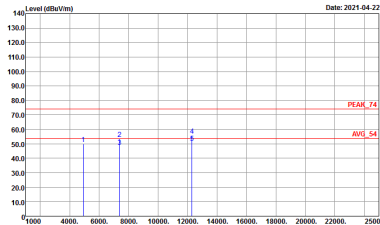
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBu/1m) Date: 2021-04-22 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBu/1m) Date: 2021-04-22 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL

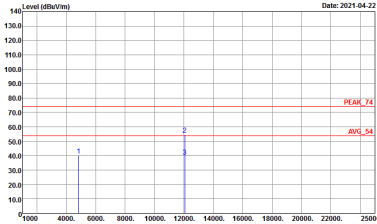
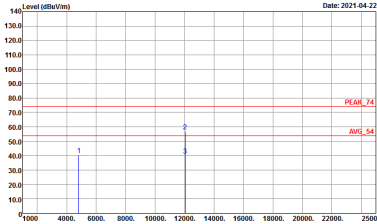


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL

**2.4GHz 2400~2483.5MHz****WIFI 802.11g (Harmonic @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-04-29 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-04-30 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL

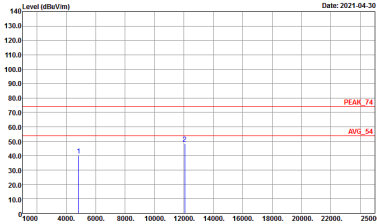
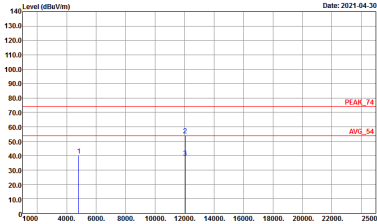


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBu/V/m) Date: 2021-04-22 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBu/V/m) Date: 2021-04-22 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-04-30 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-04-30 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-04-30 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-04-30 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



2.4GHz 2400~2483.5MHz

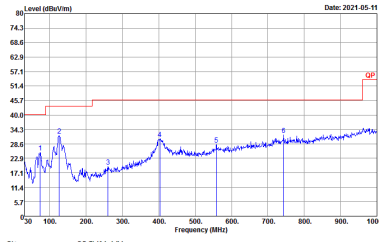
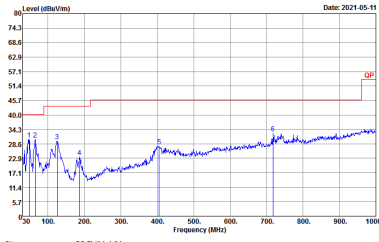
WIFI 802.11ax HE20 Partial 106 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 106/53 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBm/5m) Date: 2021-04-22 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBm/5m) Date: 2021-04-22 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ax HE20 Partial 106/54 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBu/Vm) Date: 2021-04-22 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBu/Vm) Date: 2021-04-22 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL

Emission below 1GHz
2.4GHz WIFI 802.11g (LF)

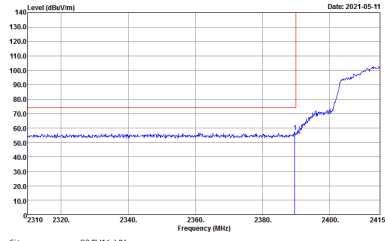
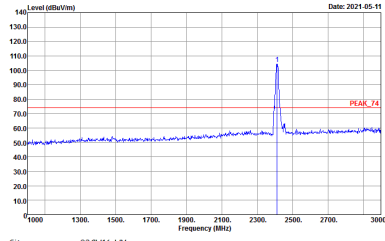
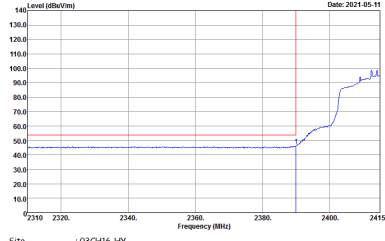
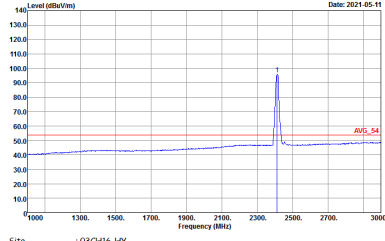
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11g LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CHI6-HY Condition : QP 3m BIL06_47020406 HORIZONTAL	 Site : 03CHI6-HY Condition : QP 3m BIL06_47020406 VERTICAL

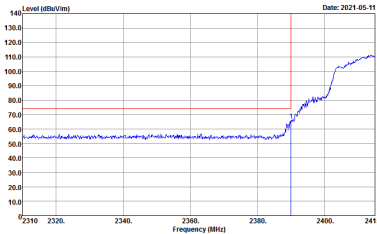
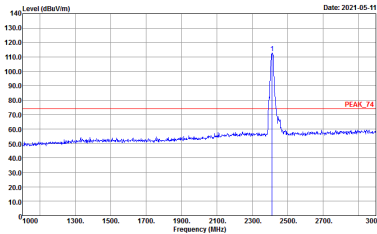
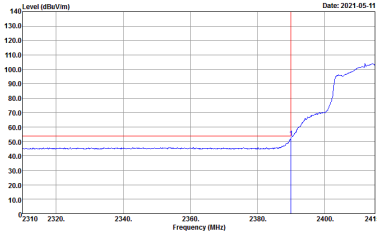
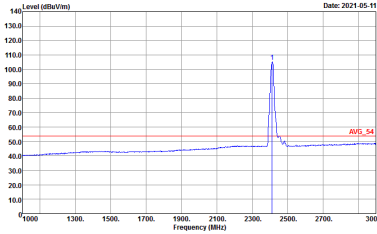


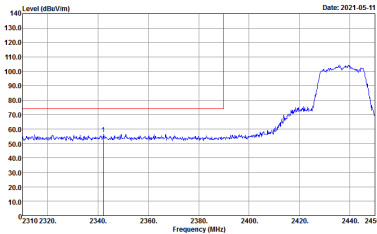
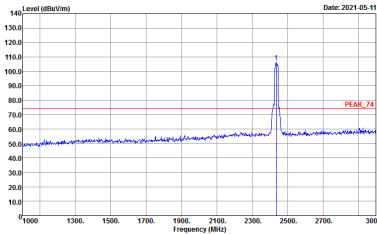
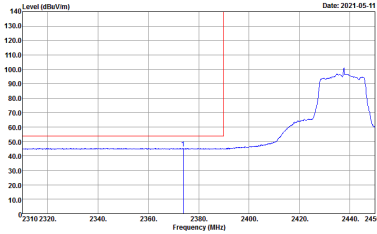
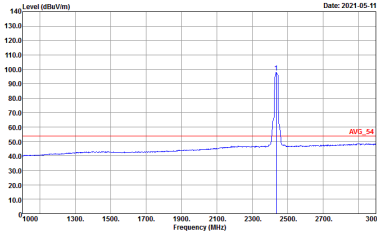
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2.4GHz 2400~2483.5MHz

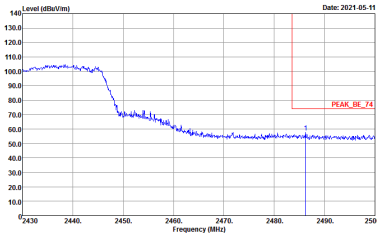
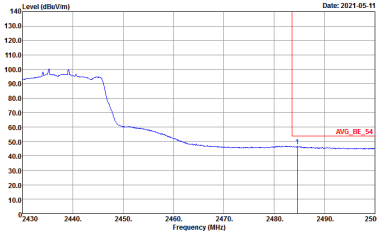
WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

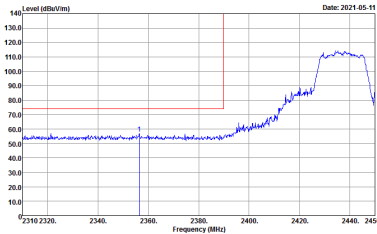
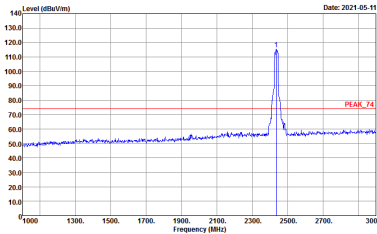
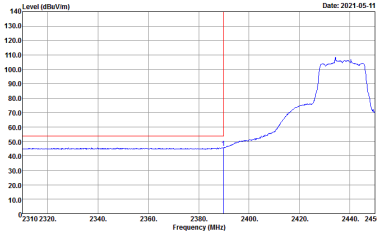
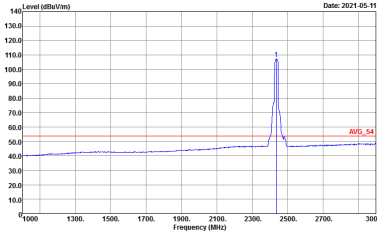
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto
Avg.		

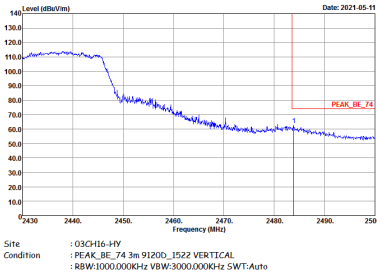
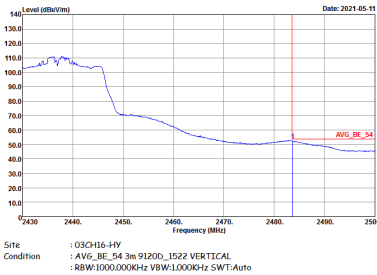
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto



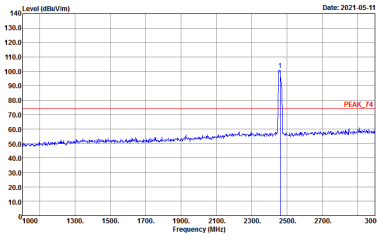
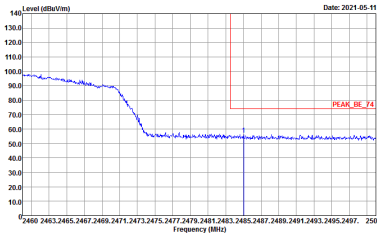
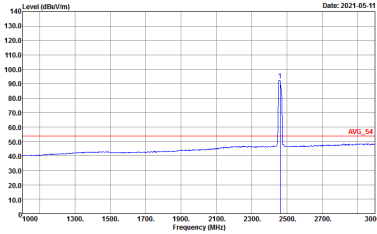
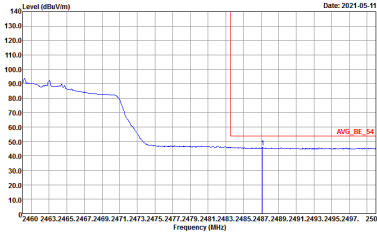
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank

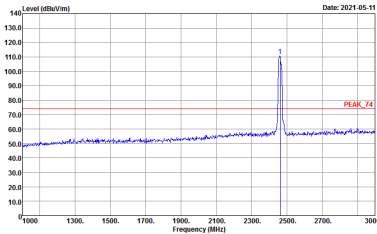
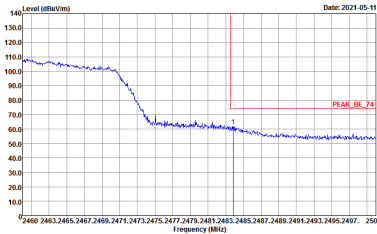
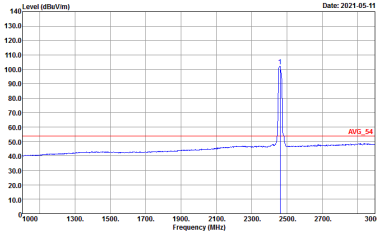
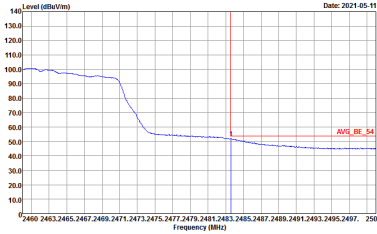


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank



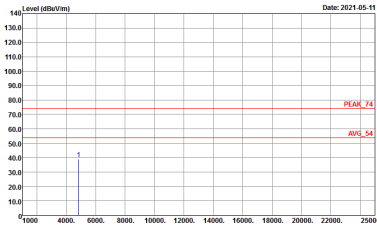
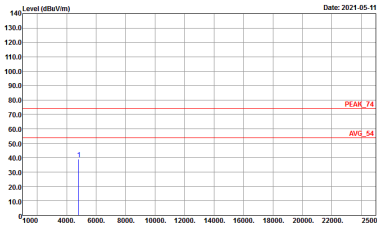
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VH20 CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:1000kHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:1000kHz SWT:Auto

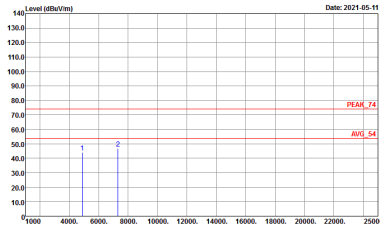
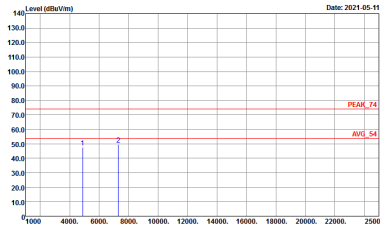


2.4GHz 2400~2483.5MHz

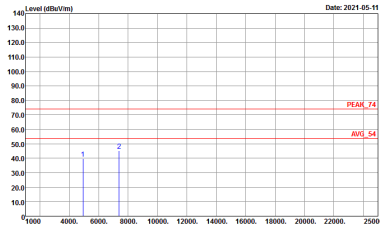
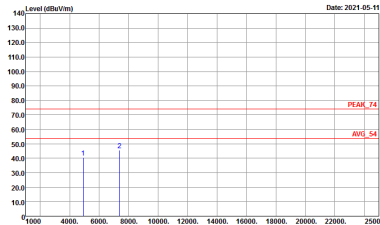
WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



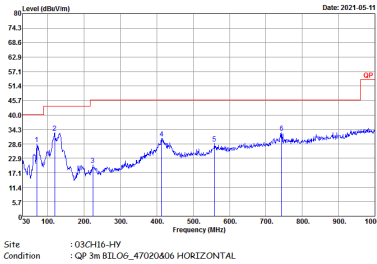
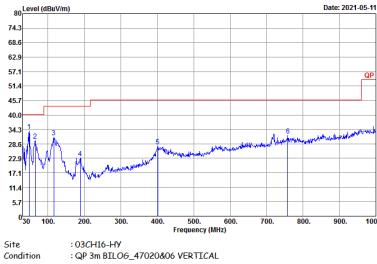
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



Emission below 1GHz
2.4GHz WIFI 802.11ac VHT20 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ac VHT20 LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CHI6-HY Condition : QP 3m BIL06_47020406 HORIZONTAL	 Site : 03CHI6-HY Condition : QP 3m BIL06_47020406 VERTICAL



Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
1+2	802.11b	100.00	-	-	10Hz	0.00
1+2	802.11g	99.04	-	-	10Hz	0.04
1+2	802.11ac VHT20	98.22	-	-	10Hz	0.08
1+2	802.11ax HE20 106 RU	81.84	4530	0.22	1KHz	0.87

MIMO <Ant. 1+2>

