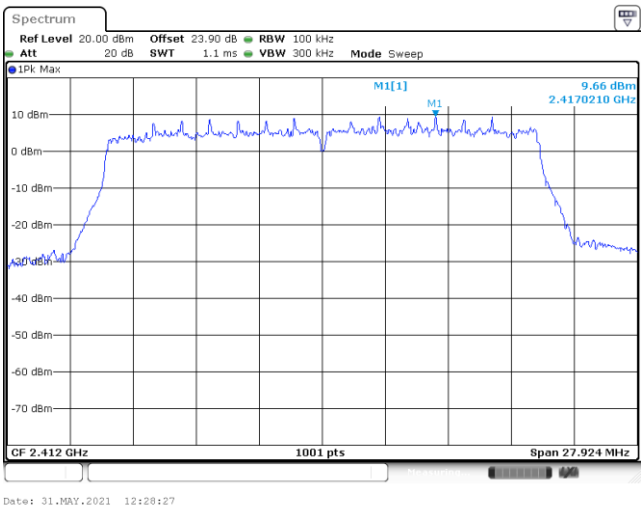
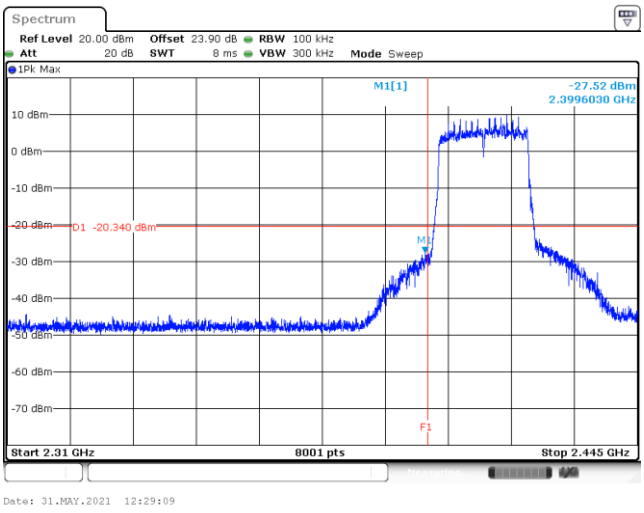
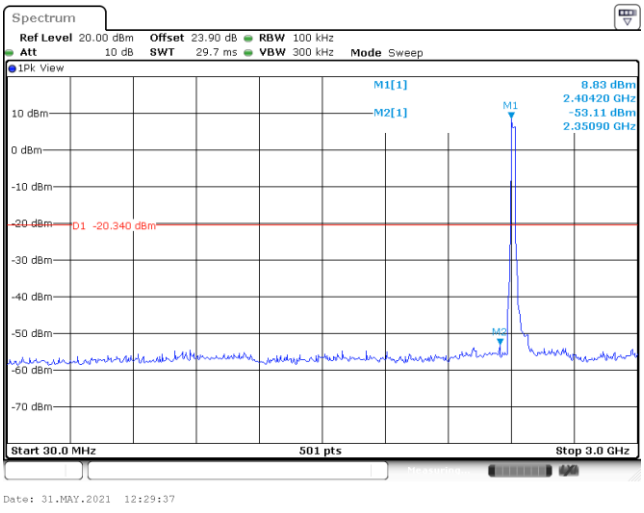
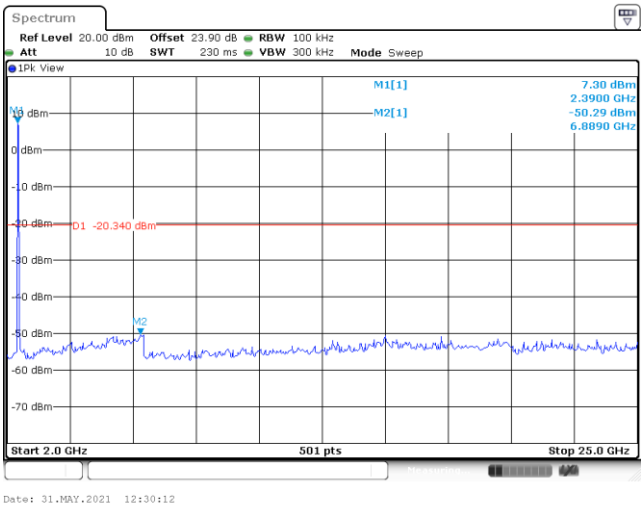
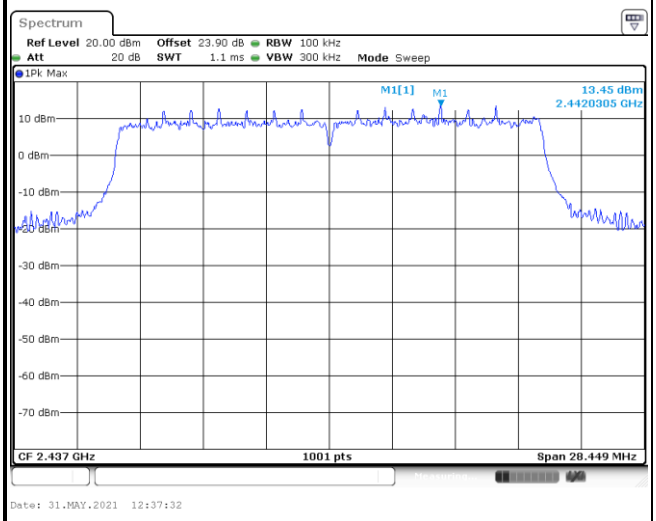
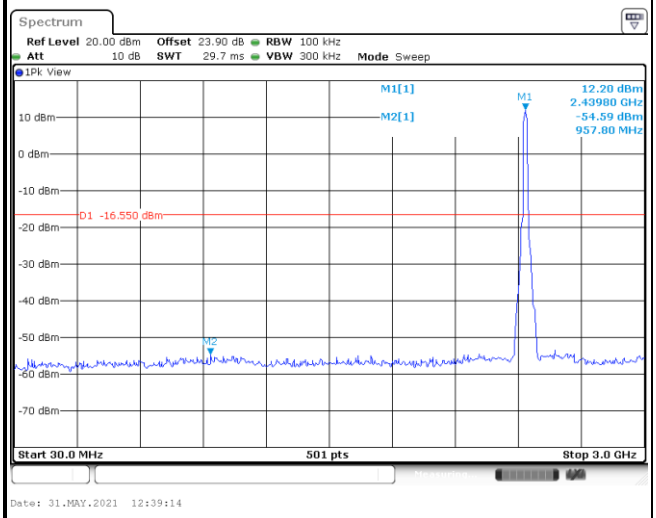
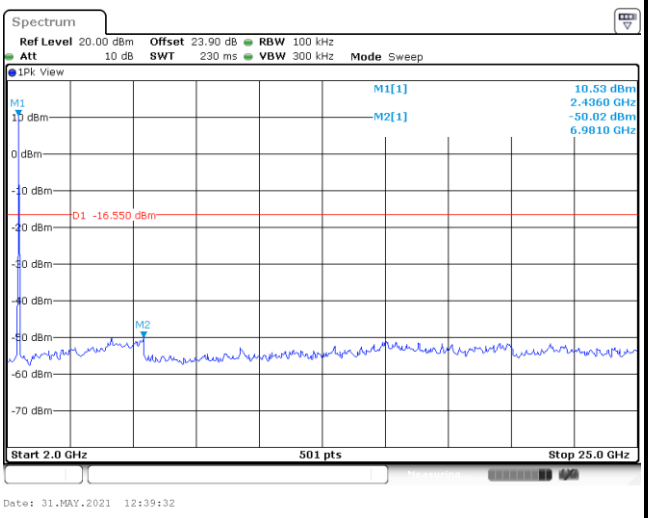
Test Mode :	802.11ax HE20	Test Channel :	01 Full RU

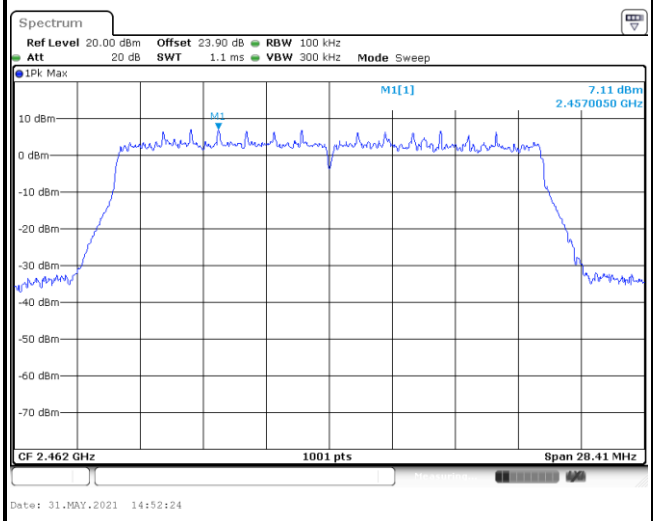
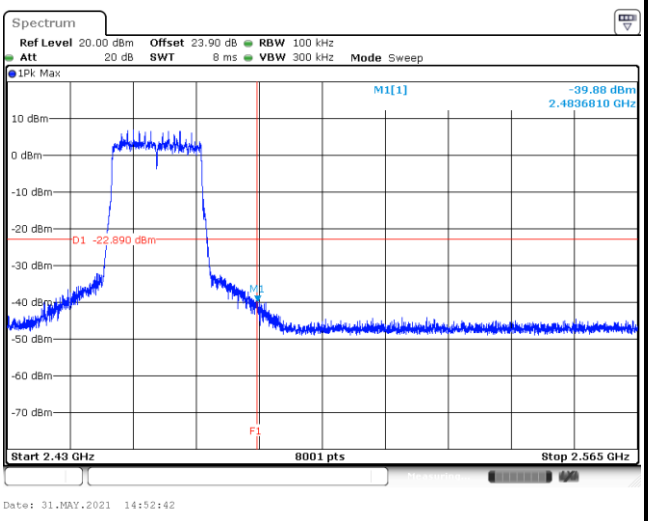
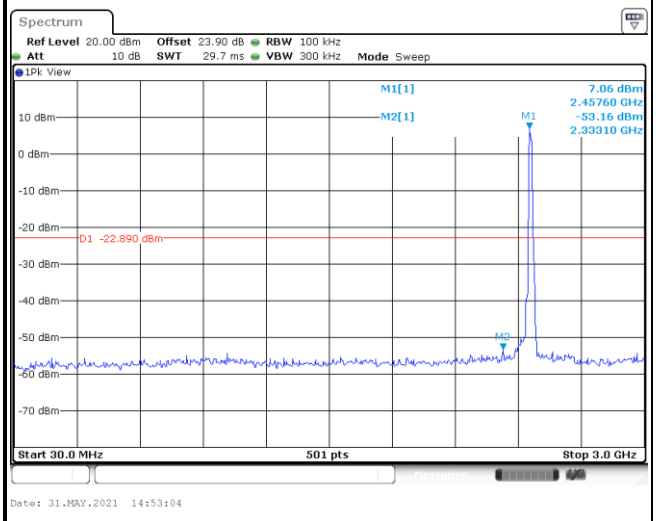
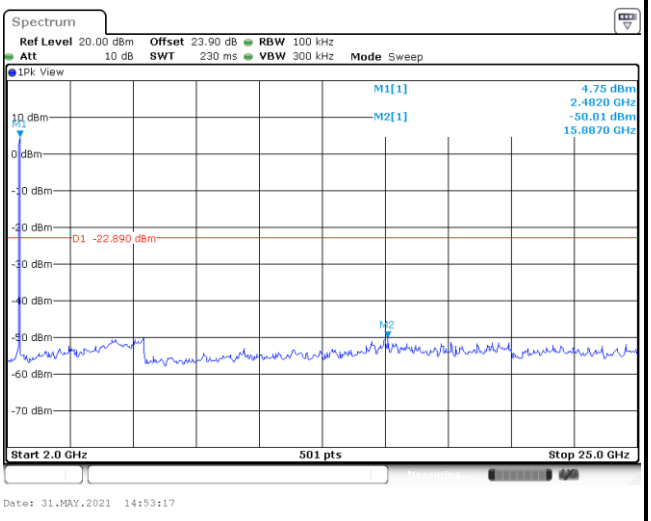
100kHz PSD reference Level	Low Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE20	Test Channel :	06 Full RU

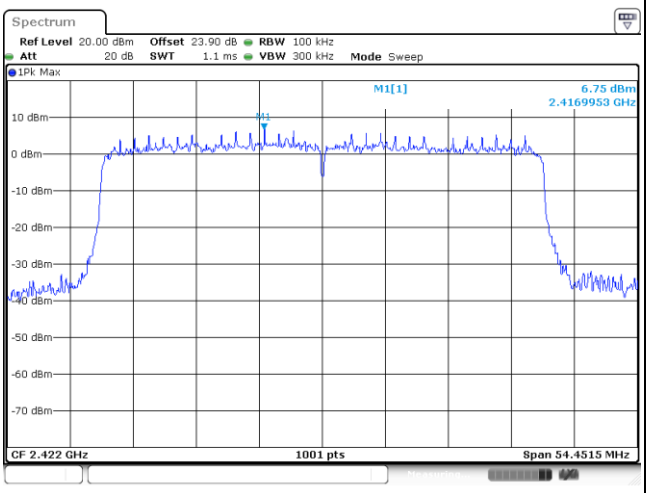
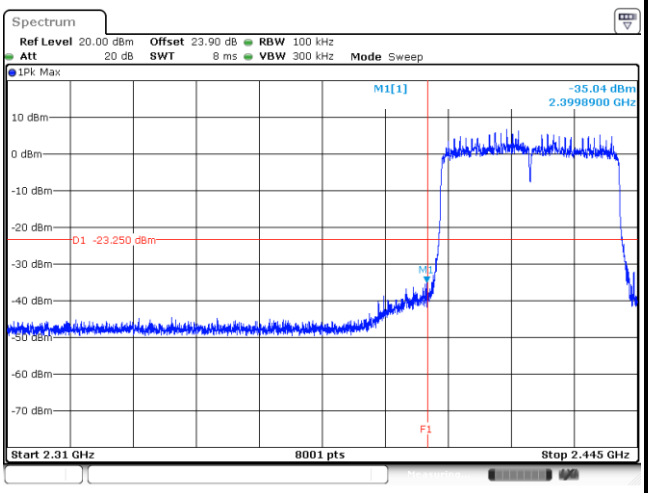
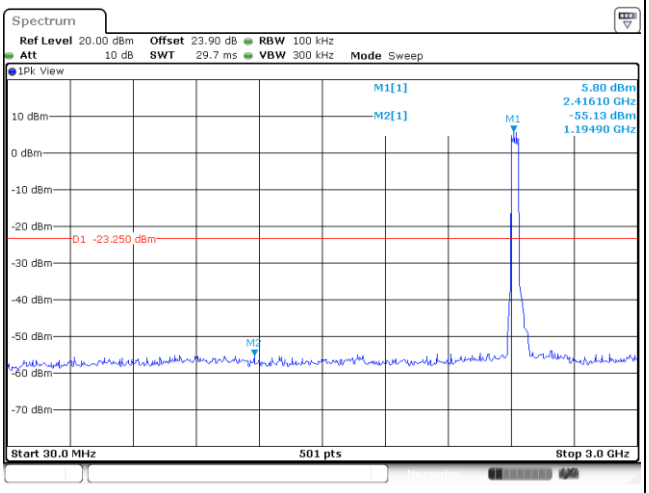
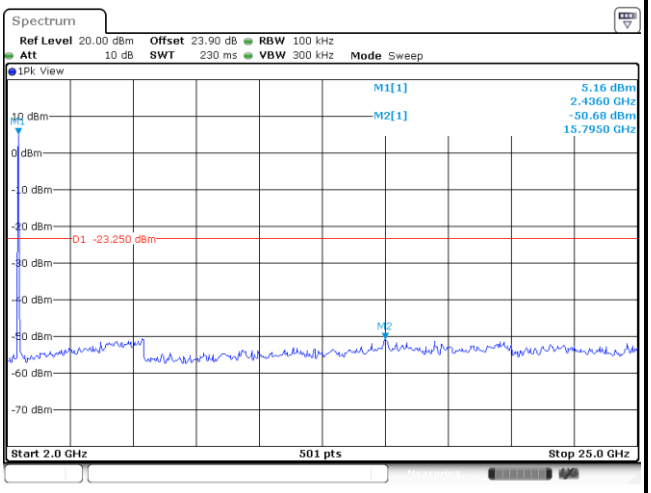
100kHz PSD reference Level	Mid Channel Plot
	

Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

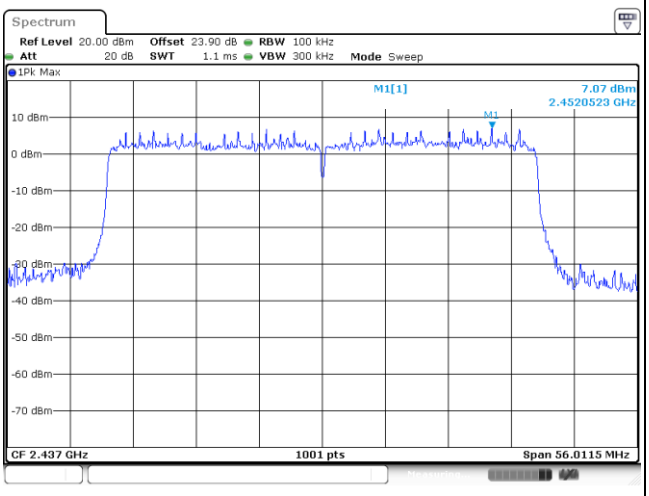
Test Mode :	802.11ax HE20	Test Channel :	11 Full RU

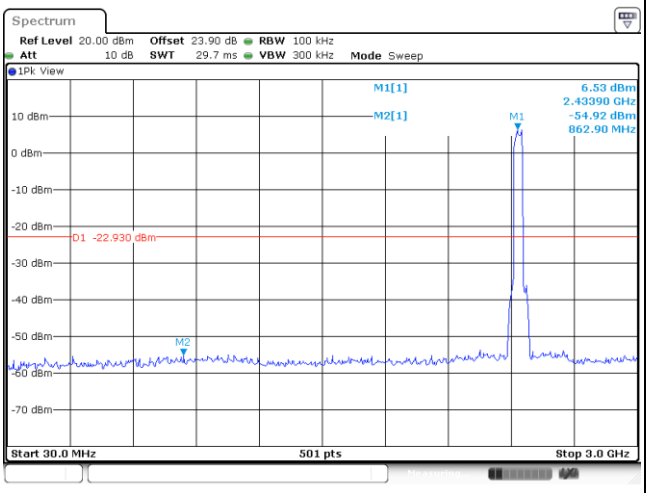
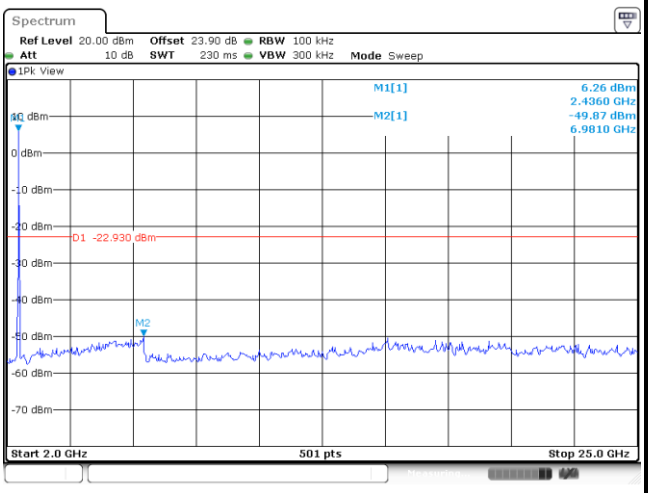
100kHz PSD reference Level	High Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE40	Test Channel :	03 Full RU

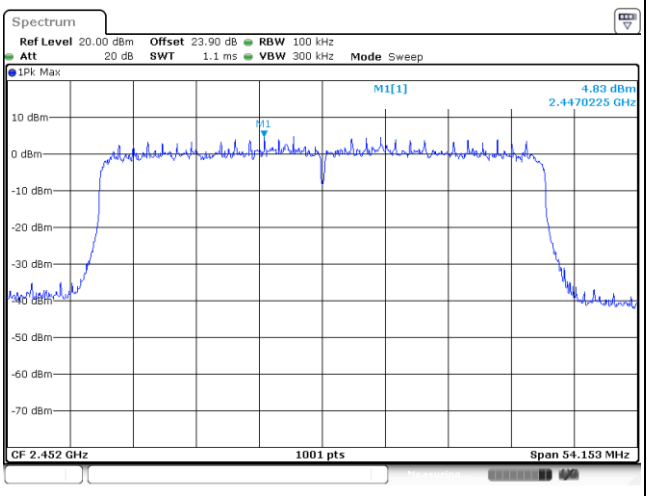
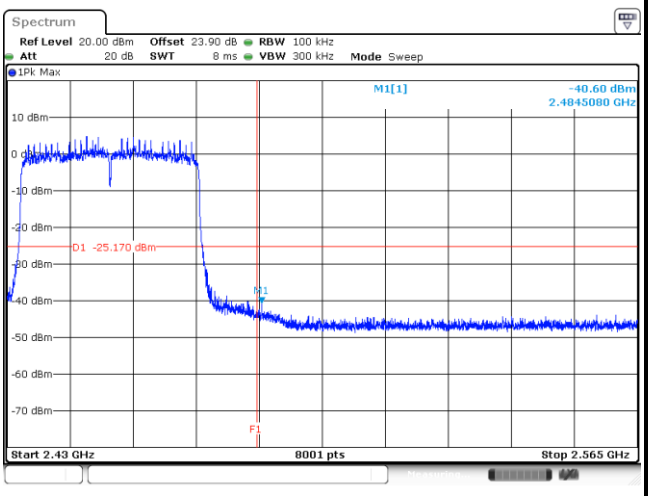
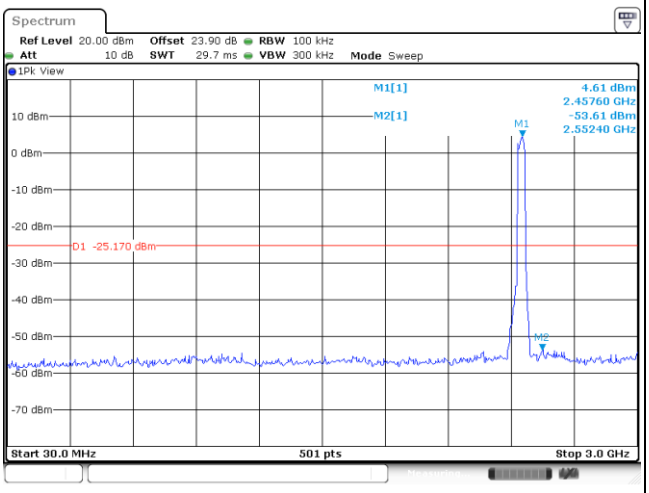
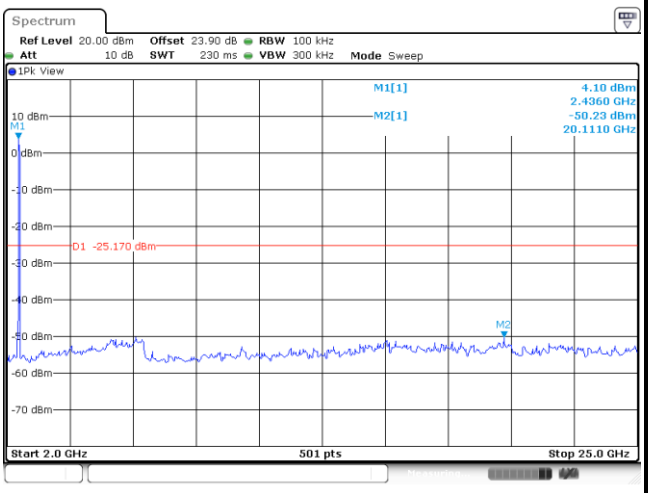
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE40	Test Channel :	06 Full RU

100kHz PSD reference Level	Channel Plot
	

Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11ax HE40	Test Channel :	09 Full RU

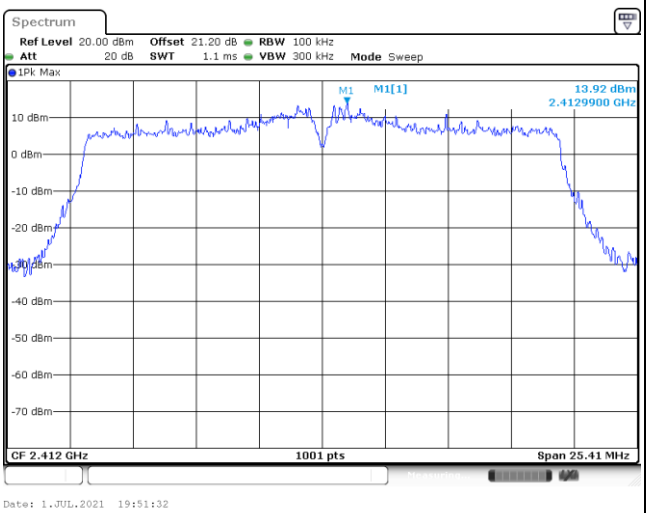
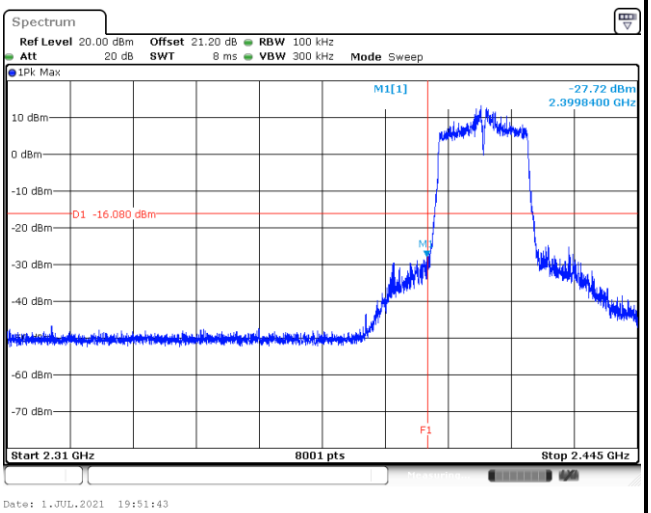
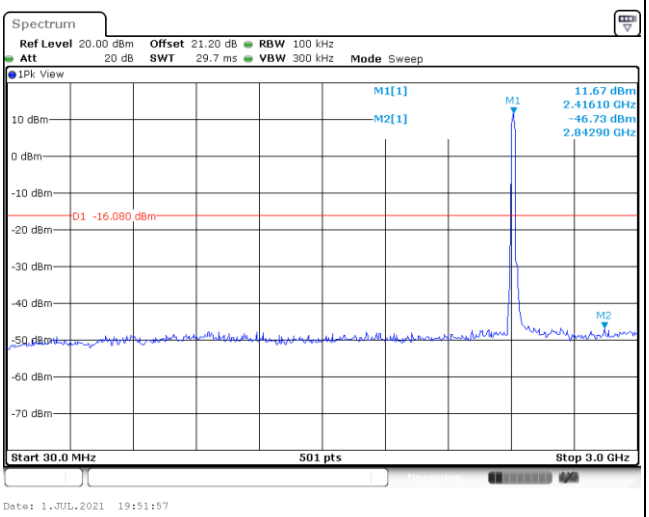
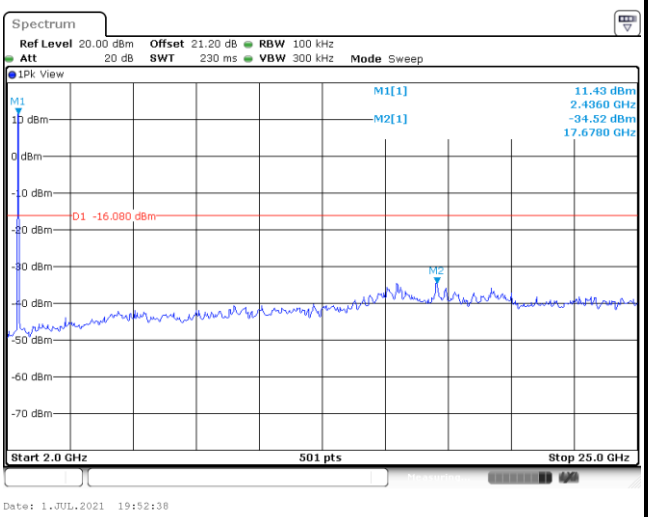
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

<TXBF Modes>

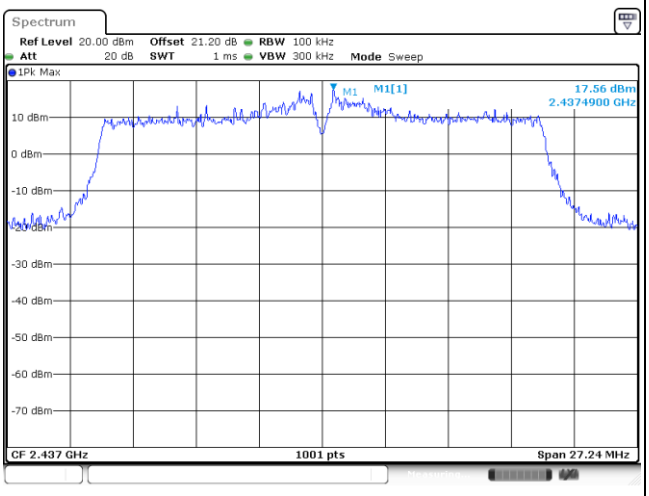
Test Engineer :	Kai Liao	**Temperature :**	23.0~25.1℃
		Relative Humidity :	46.5~58.7%

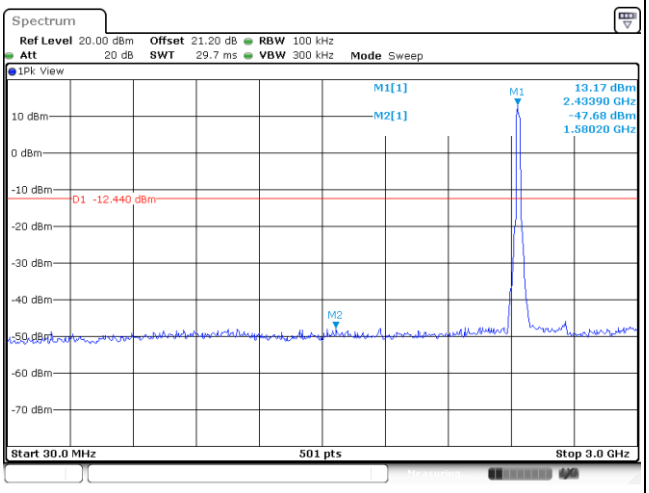
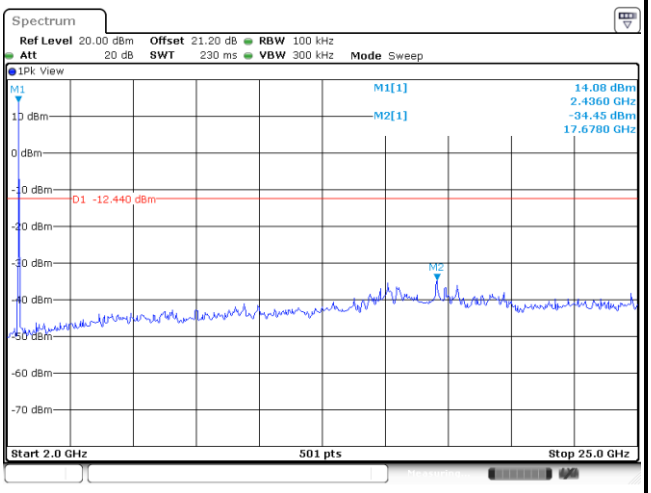
Number of TX = 2, Ant. 1 (Measured)

Test Mode :	802.11ax HE20	**Test Channel :**	01 Full RU

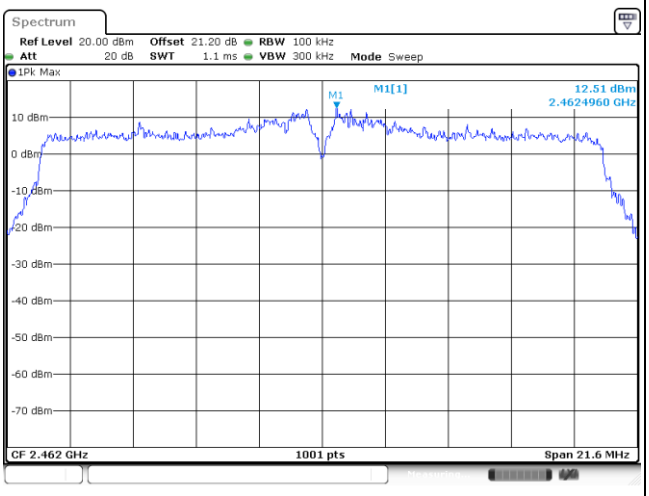
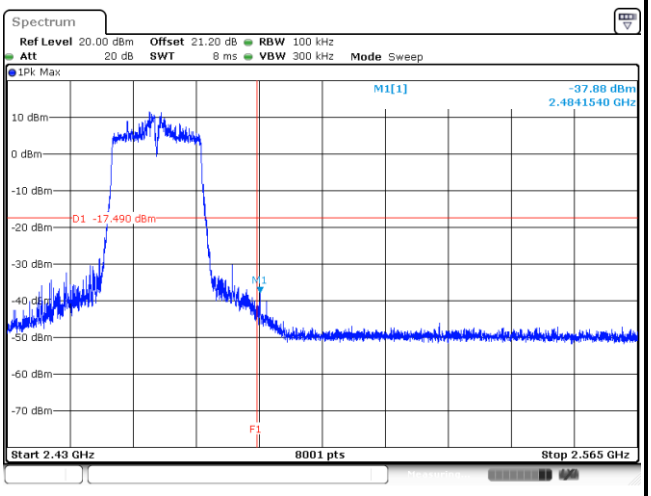
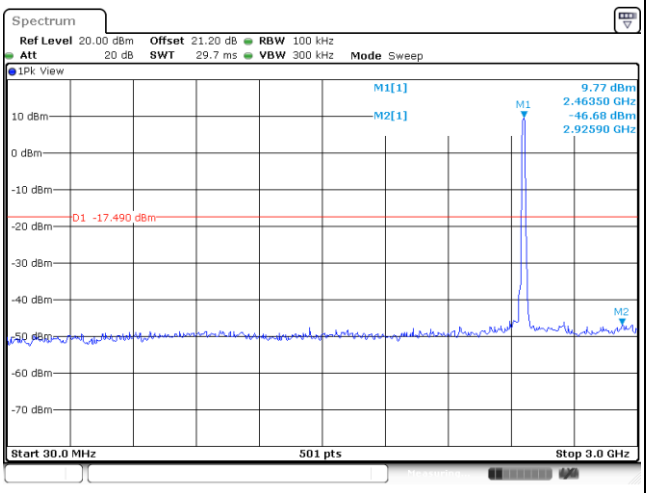
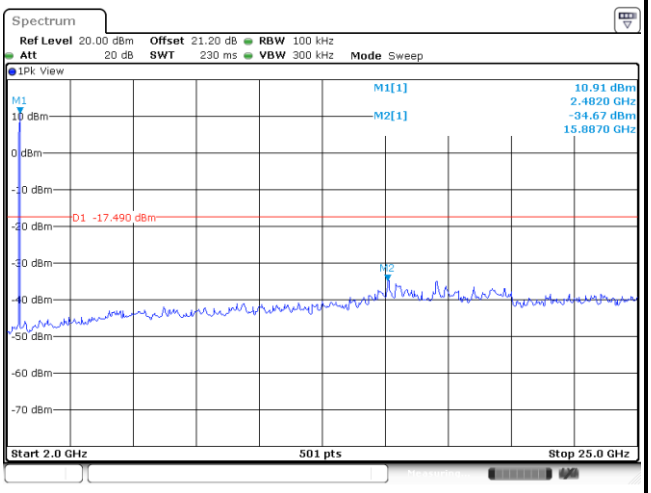
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE20	Test Channel :	06 Full RU

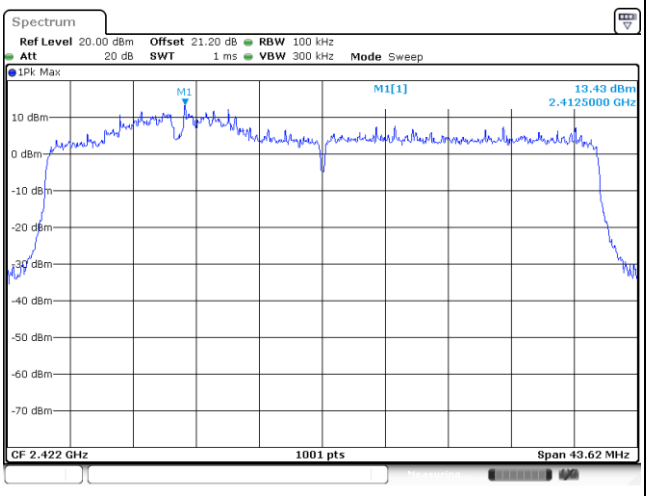
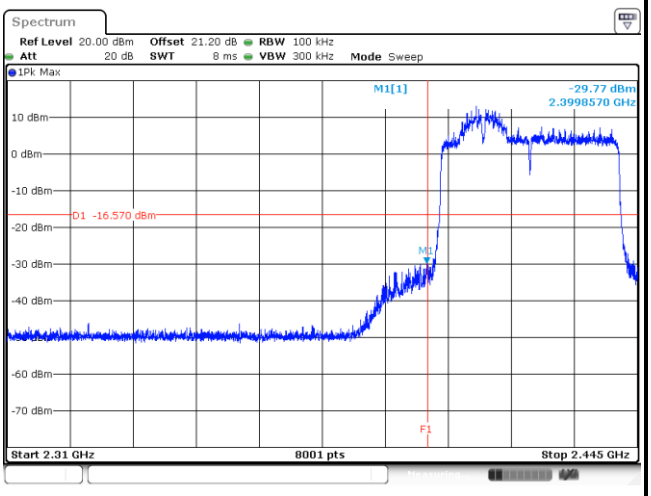
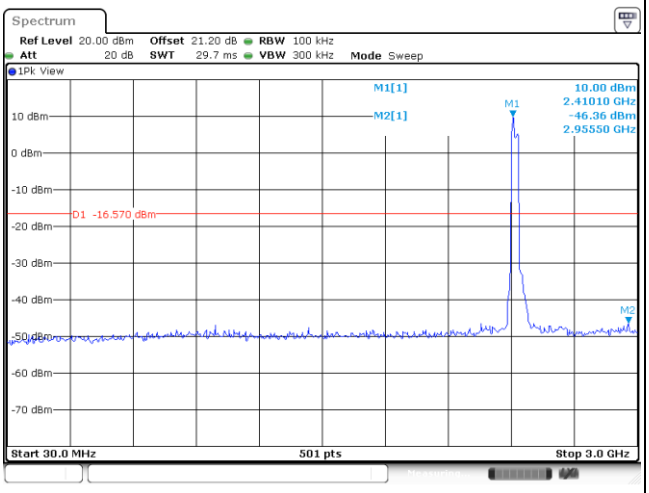
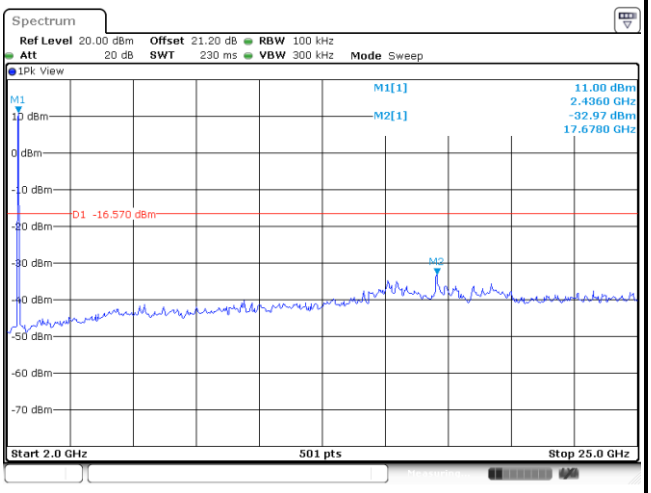
100kHz PSD reference Level	Channel Plot
	

Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

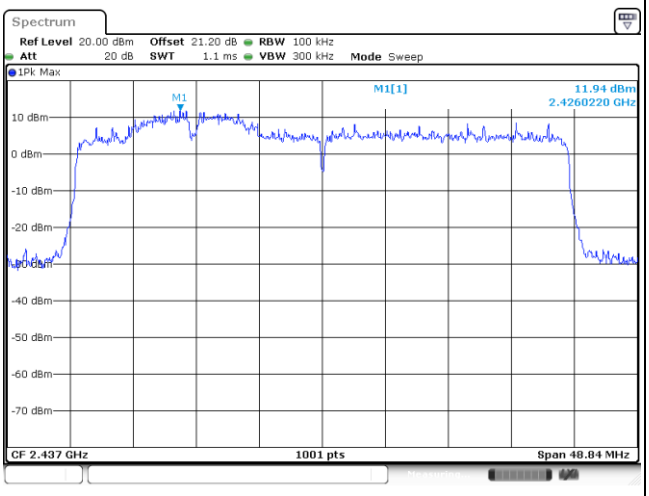
Test Mode :	802.11ax HE20	Test Channel :	11 Full RU

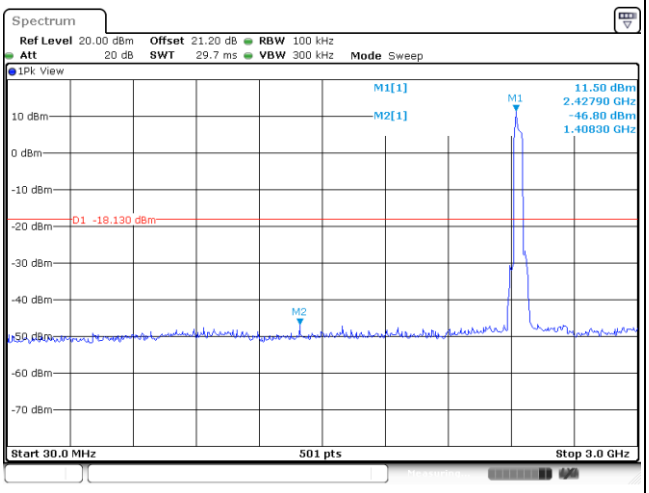
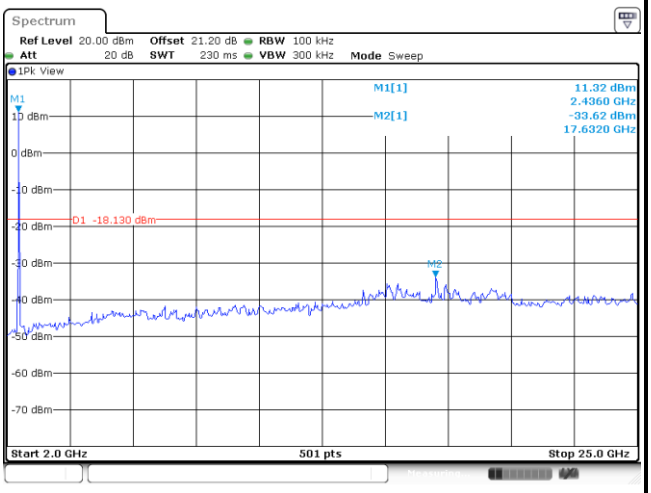
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE40	Test Channel :	03 Full RU

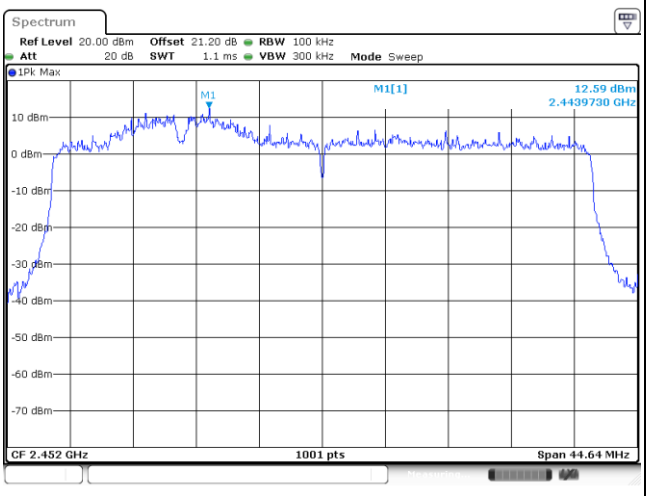
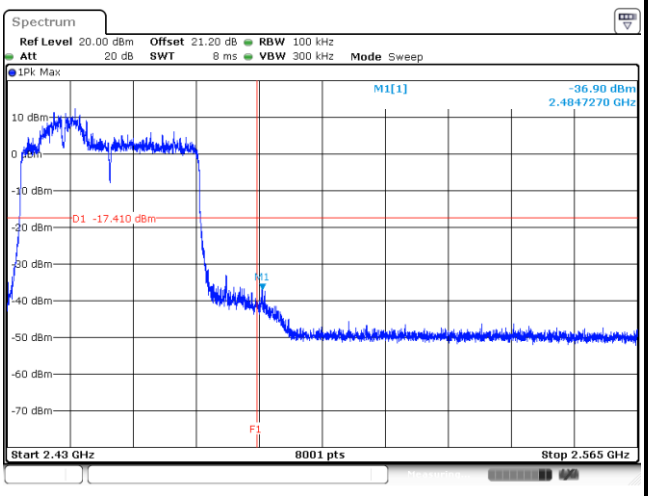
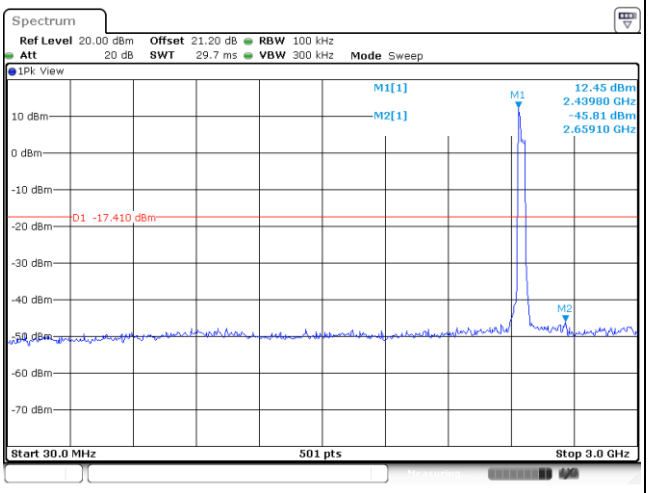
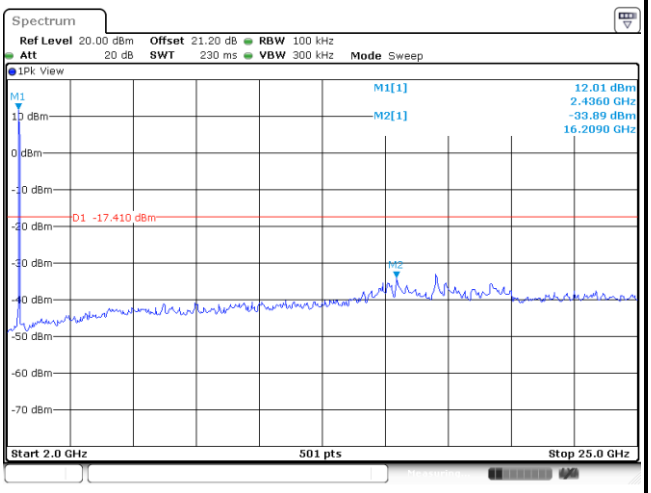
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE40	Test Channel :	06 Full RU

100kHz PSD reference Level	Channel Plot
	

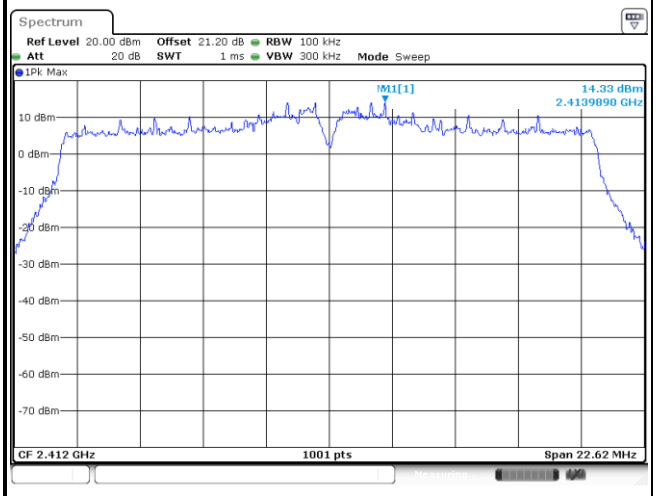
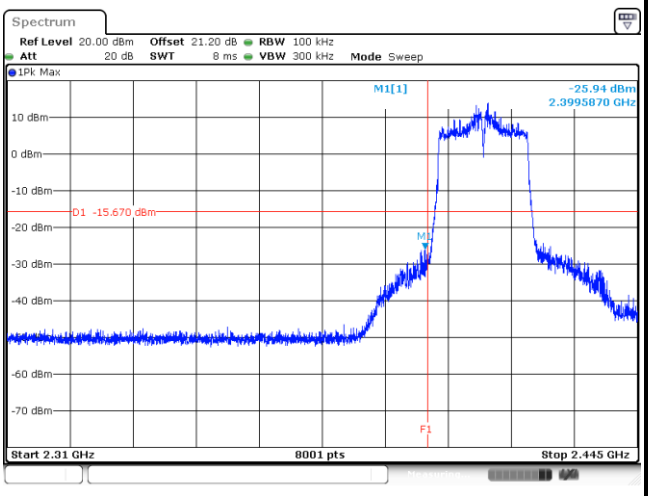
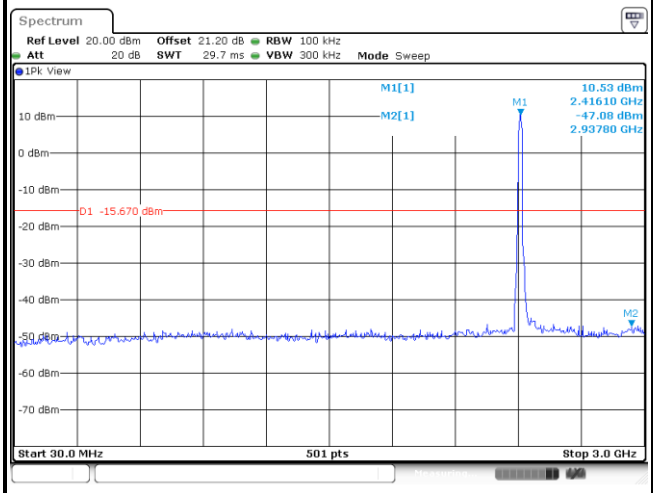
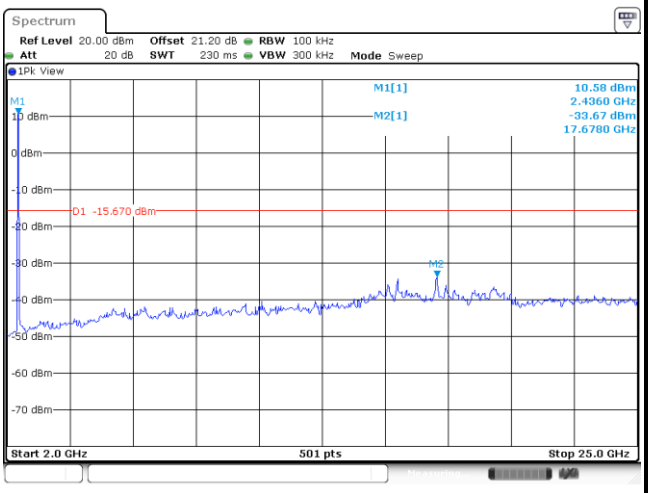
Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11ax HE40	Test Channel :	09 Full RU

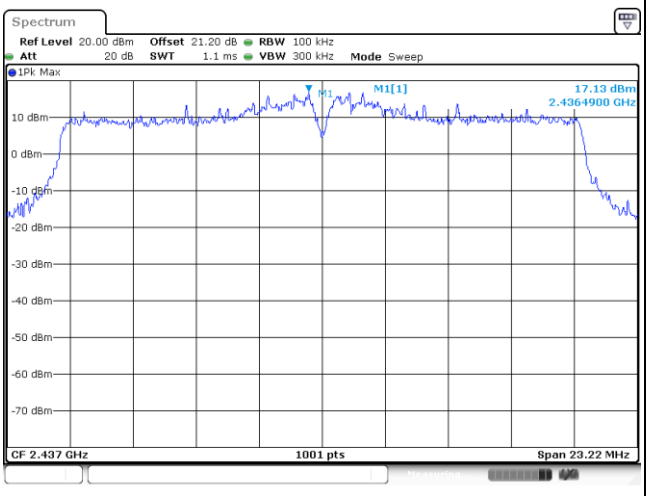
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

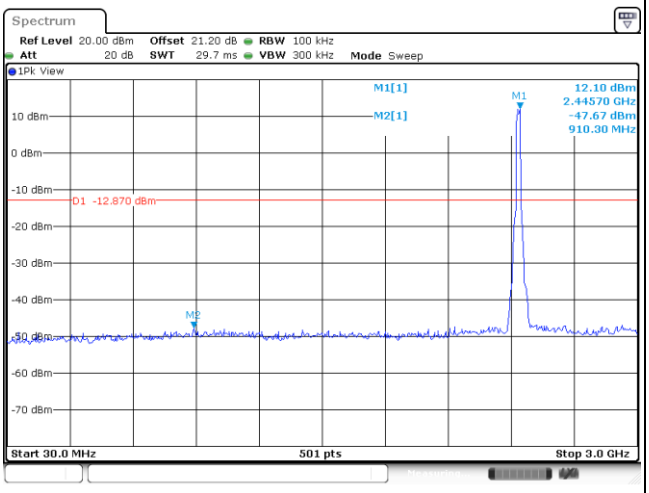
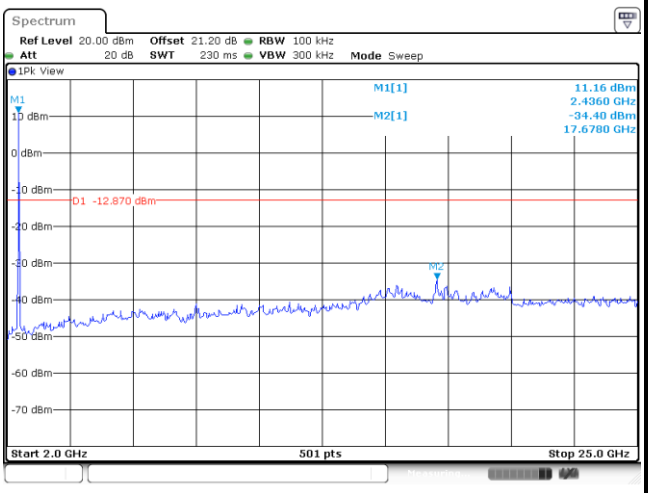
Number of TX = 2, Ant. 2 (Measured)

Test Mode :	802.11ax HE20	Test Channel :	01 Full RU

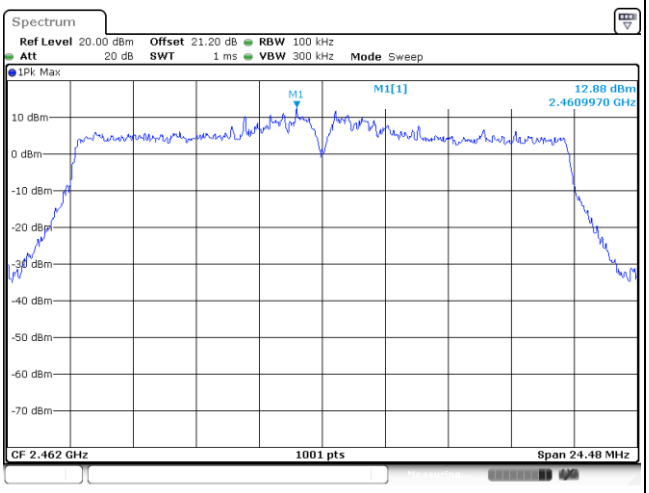
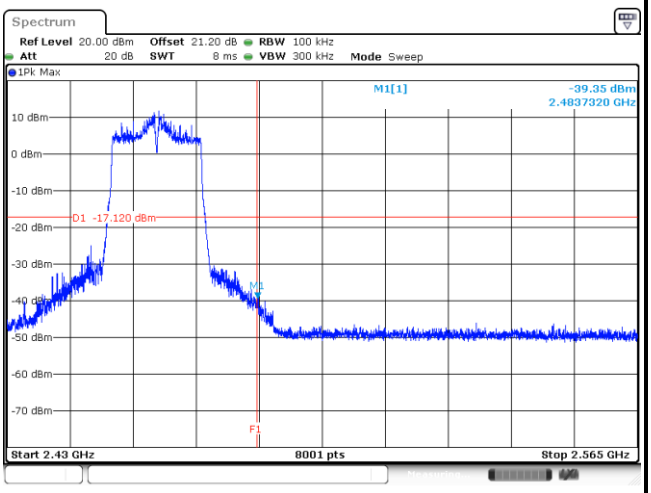
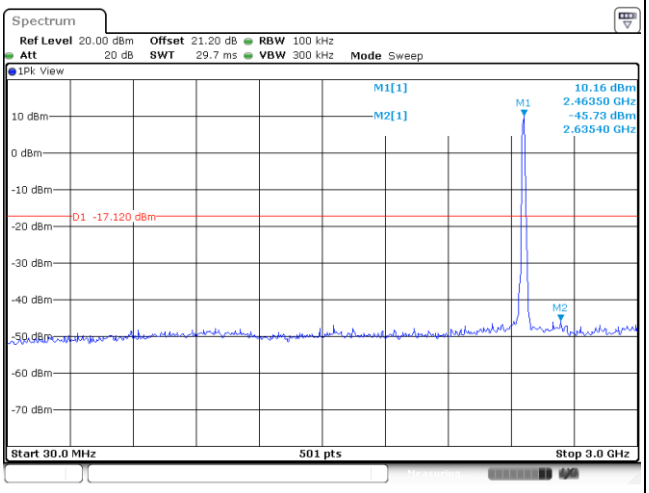
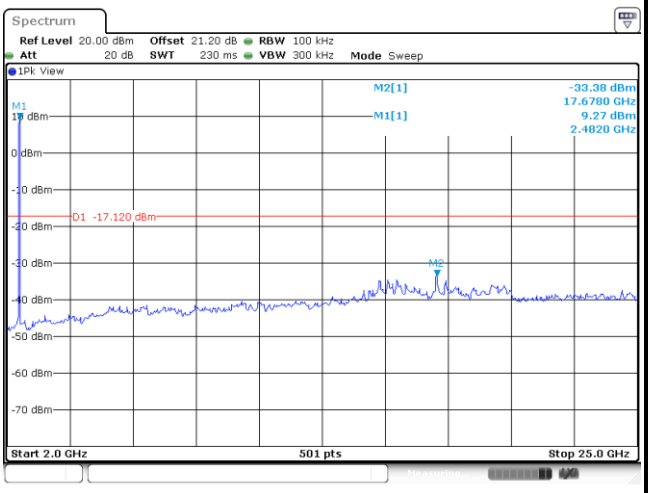
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE20	Test Channel :	06 Full RU

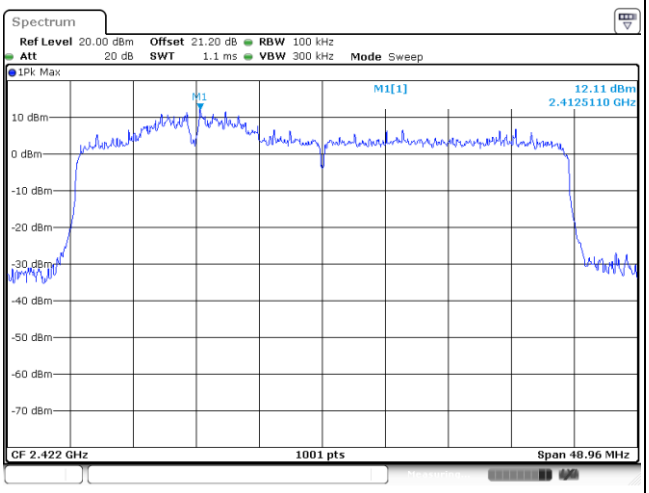
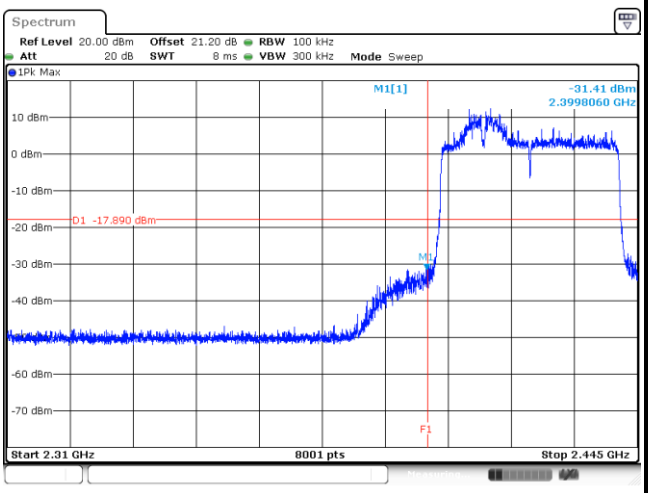
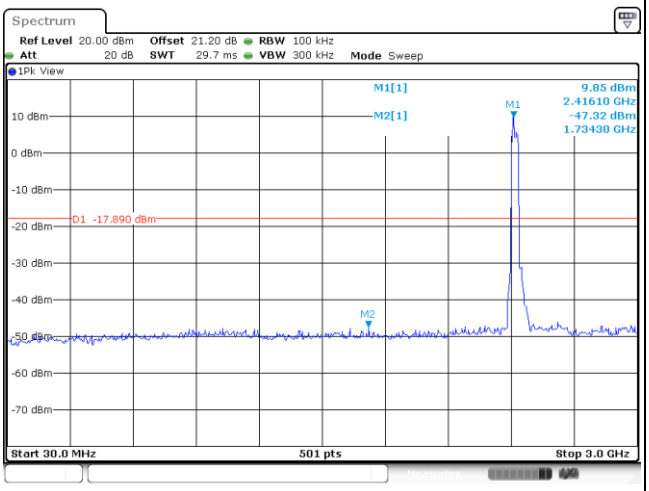
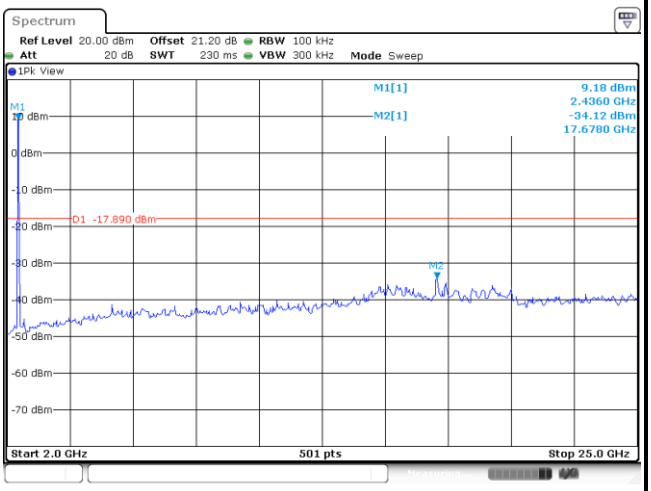
100kHz PSD reference Level	Channel Plot
	

Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

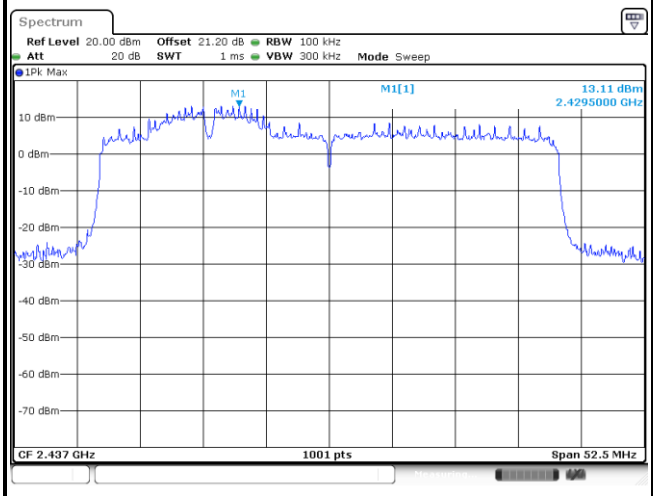
Test Mode :	802.11ax HE20	Test Channel :	11 Full RU

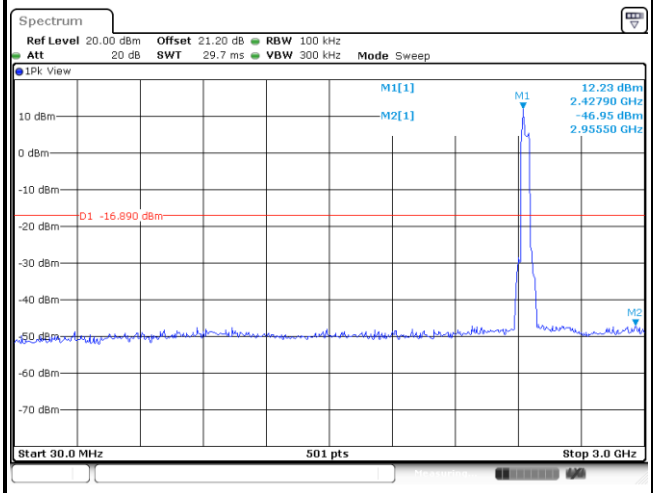
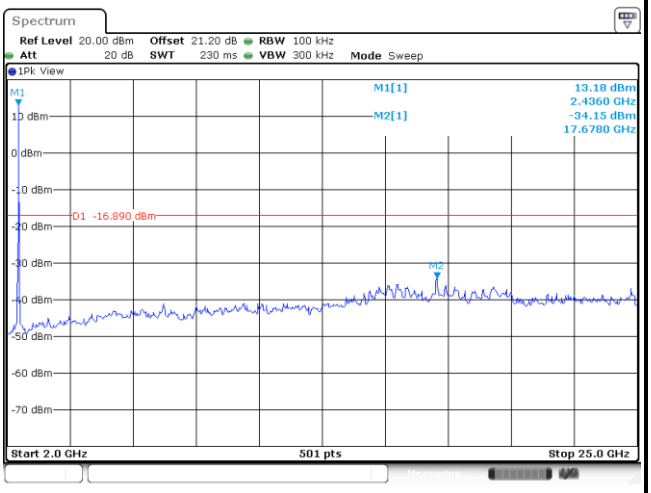
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE40	Test Channel :	03 Full RU

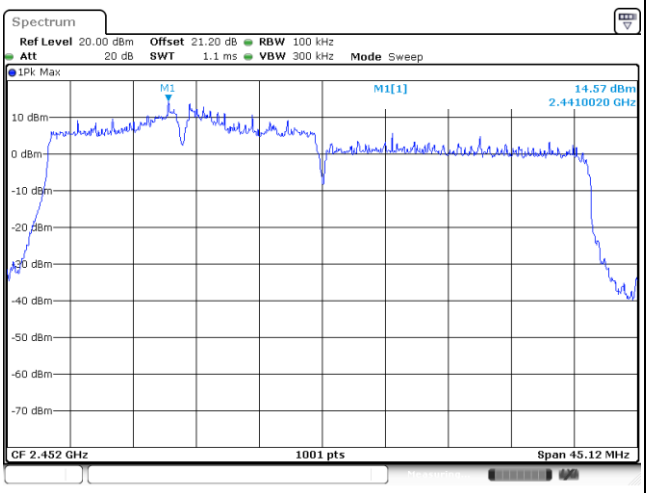
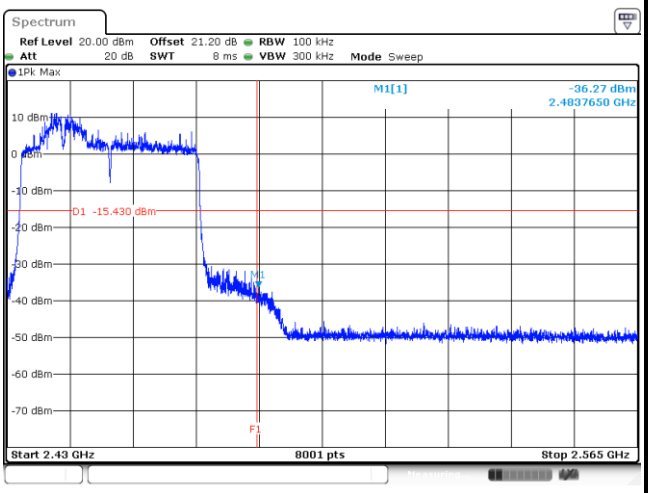
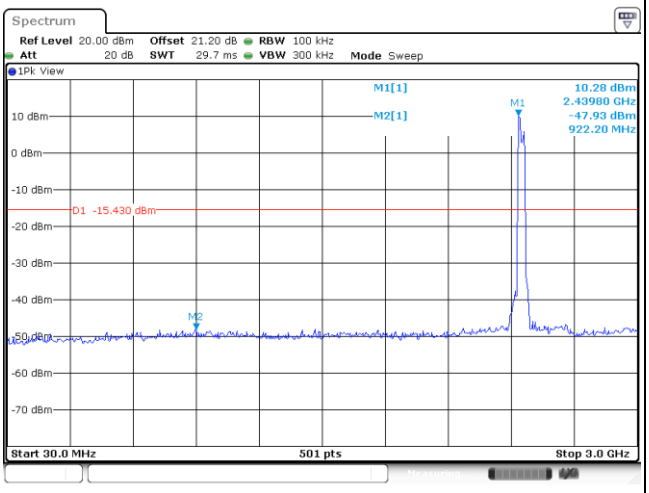
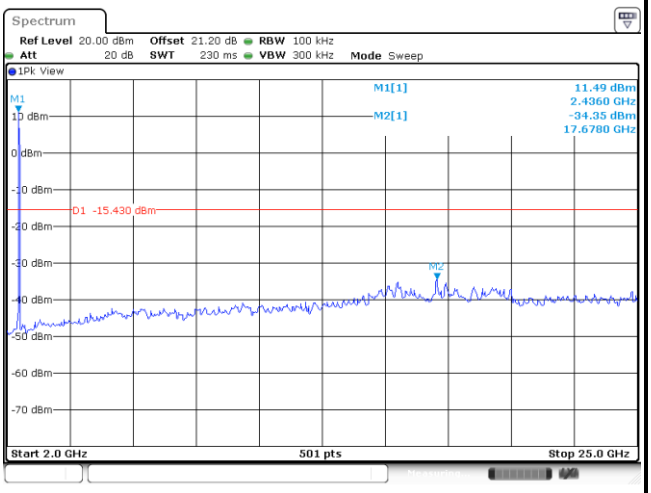
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HE40	Test Channel :	06 Full RU

100kHz PSD reference Level	Channel Plot
	

Spurious Emission 30MHz~3GHz	Spurious Emission 2GHz~25GHz
	

Test Mode :	802.11ax HE40	Test Channel :	09 Full RU

100kHz PSD reference Level	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

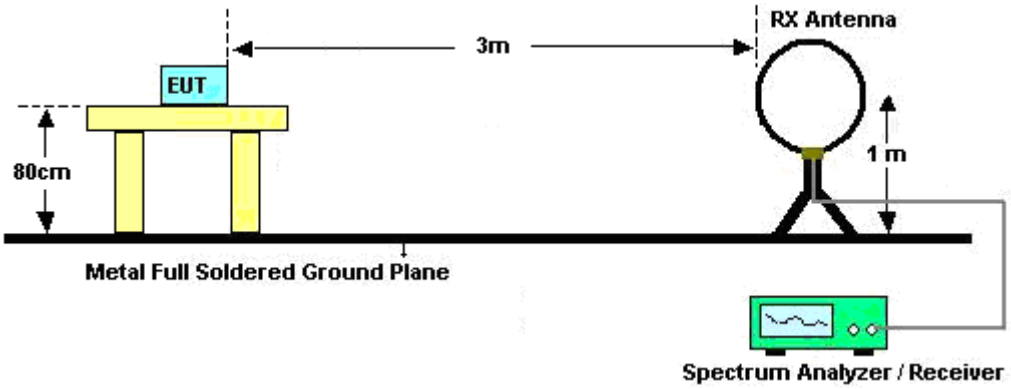
See list of measuring equipment of this test report.

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 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 ≥ 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.

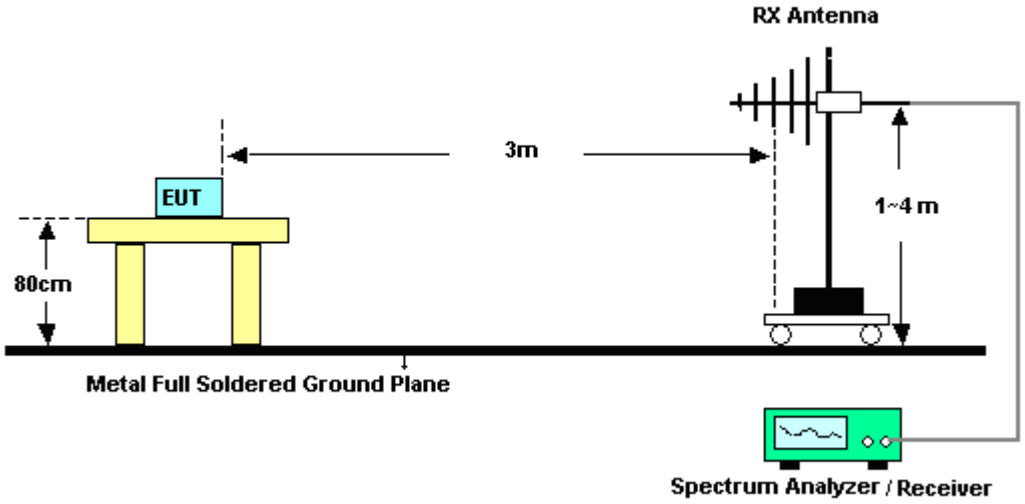
3.5.4 Test Setup

For radiated emissions below 30MHz

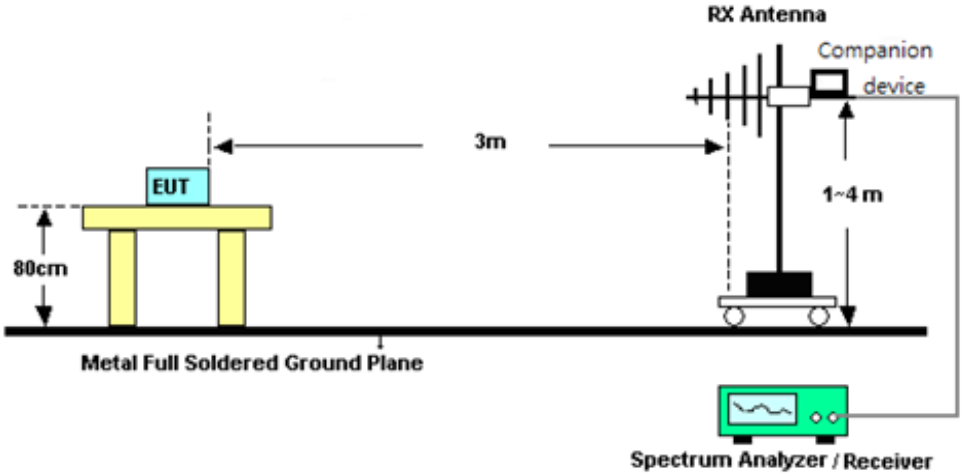


For radiated emissions from 30MHz to 1GHz

<CDD Mode>

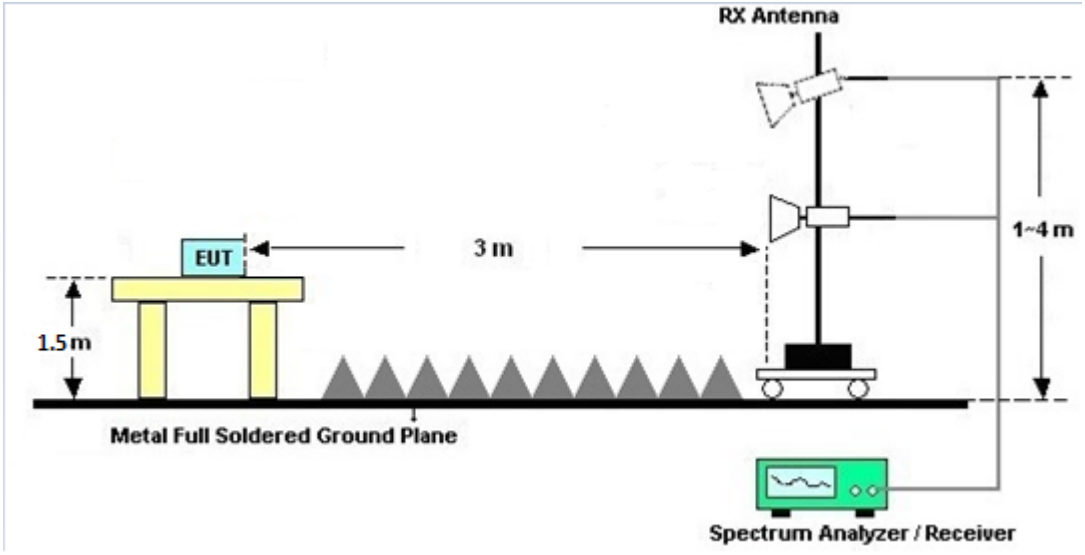


<TXBF Modes>

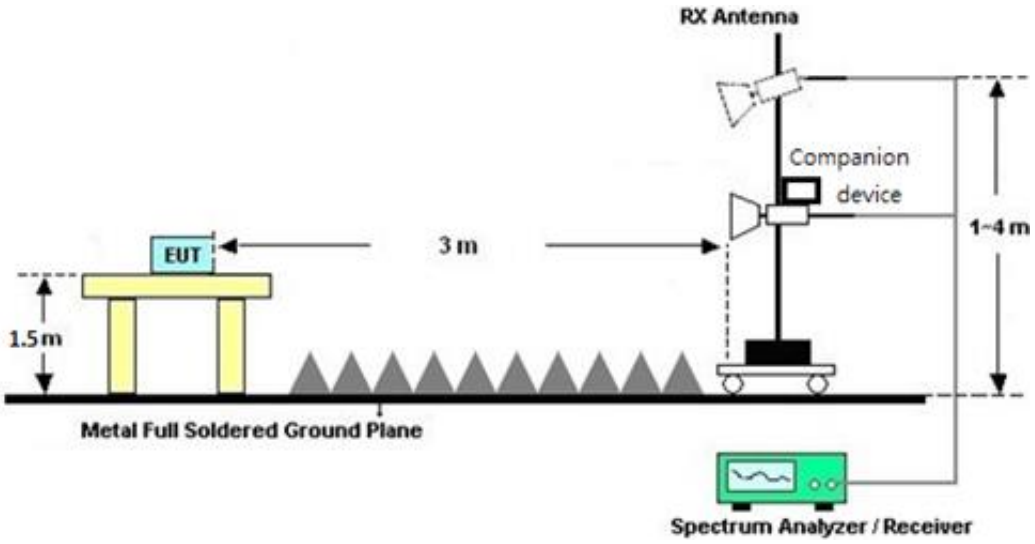


For radiated test above 1GHz

<CDD Mode>



<TXBF Modes>



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 C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

3.5.8 Test Result of Radiated Spurious Emission (30 MHz ~ 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.

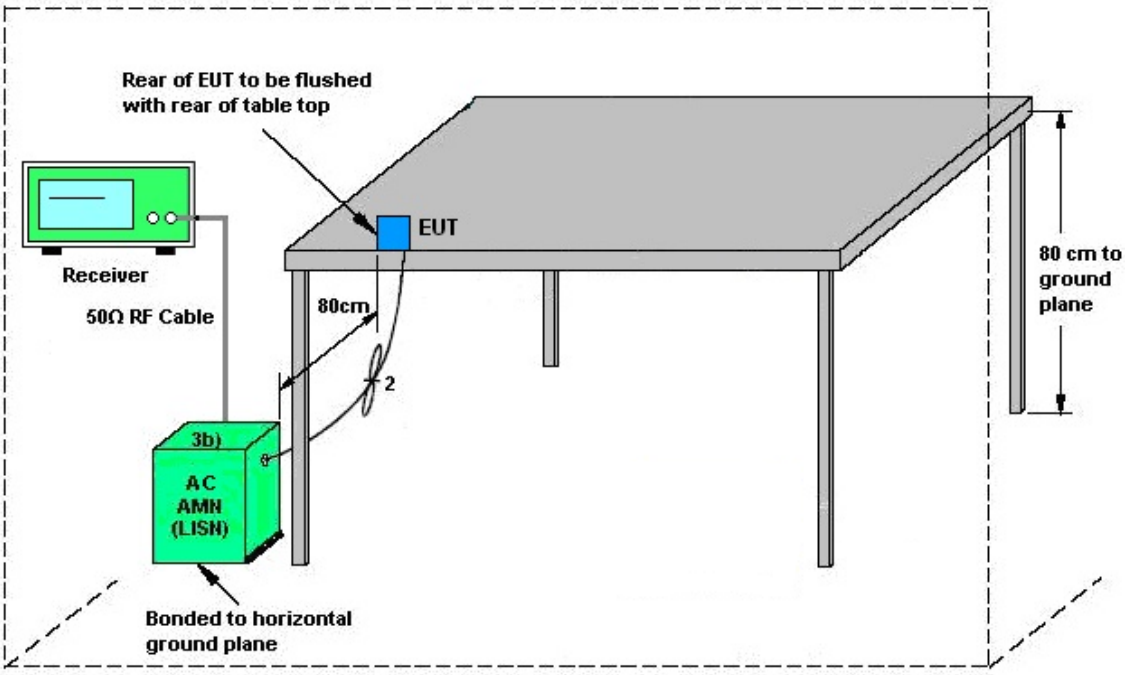
3.6.2 Measuring Instruments

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



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

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	3.50	2.70	3.50	6.12	0.00	0.12

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

PSD Limit Reduction = DG(PSD) – 6dBi, (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 kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth 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	3.50	2.70	6.12	6.12	0.12	0.12

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. 19, 2021~ Jun. 23, 2021	Jul. 13, 2021	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01 N-06	47020 & 06	30MHz to 1GHz	Oct. 11, 2020	Apr. 19, 2021~ Jun. 23, 2021	Oct. 10, 2021	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1G	Sep. 30. 2020	Apr. 19, 2021~ Jun. 23, 2021	Sep. 29. 2021	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1522	1G~18GHz	Sep. 29, 2020	Apr. 19, 2021~ Jun. 23, 2021	Sep. 28, 2021	Radiation (03CH16-HY)
Amplifier	EMCI	EMC051845SE	980729	1-18GHz	Jul. 10, 2020	Apr. 19, 2021~ Jun. 23, 2021	Jul. 09, 2021	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	00993	18GHz ~40GHz	Nov. 19, 2020	Apr. 19, 2021~ Jun. 23, 2021	Nov. 18, 2021	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec. 10, 2020	Apr. 19, 2021~ Jun. 23, 2021	Dec. 09, 2021	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A	MY59053012	3Hz~26.5GHz	Nov. 18, 2020	Apr. 19, 2021~ Jun. 23, 2021	Nov. 17, 2021	Radiation (03CH16-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Jan. 15, 2021	Apr. 19, 2021~ Jun. 23, 2021	Jan. 14, 2022	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/ 4PE	NA	Aug. 29, 2020	Apr. 19, 2021~ Jun. 23, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11688/ 4PE	NA	Aug. 29, 2020	Apr. 19, 2021~ Jun. 23, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300 -5757	NA	Aug. 29, 2020	Apr. 19, 2021~ Jun. 23, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Apr. 19, 2021~ Jun. 23, 2021	N/A	Radiation (03CH16-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Apr. 19, 2021~ Jun. 23, 2021	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Apr. 19, 2021~ Jun. 23, 2021	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Apr. 19, 2021~ Jun. 23, 2021	N/A	Radiation (03CH16-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 22, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 30, 2020	May 22, 2021	Nov. 29, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	May 22, 2021	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	May 22, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	May 22, 2021	N/A	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Feb. 25, 2021	May 22, 2021	Feb. 24, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	May 22, 2021	Dec. 30, 2021	Conduction (CO05-HY)
Hygrometer	TECPEL	TR-32	HE17XB2468	N/A	Mar. 09, 2021	May 28, 2021~ Jul. 01, 2021	Mar. 08, 2022	Conducted (TH02-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO12	10MHz~6GHz	Dec. 16, 2020	May 28, 2021~ Jul. 01, 2021	Dec. 15, 2021	Conducted (TH02-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz ~ 40GHz	Jul. 22, 2020	May 28, 2021~ Jul. 01, 2021	Jul. 21, 2021	Conducted (TH02-HY)
Switch Box & RF Cable	Burgeon	ETF058	EC1300484	N/A	Nov. 19, 2020	May 28, 2021~ Jul. 01, 2021	Nov. 18, 2021	Conducted (TH02-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 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. Test Result of Conducted Test Items

<CDD Mode>

Test Engineer:	Eason Huang	Temperature:	21~25	°C
Test Date:	2021/5/28~2021/6/30	Relative Humidity:	51~54	%

Report Number : FR111911B

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band Single Antenna										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant1	Ant2	Ant1	Ant2		
11b	1Mbps	1	1	2412	10.24	-	7.06	-	0.50	Pass
11b	1Mbps	1	6	2437	10.24	-	7.06	-	0.50	Pass
11b	1Mbps	1	11	2462	10.34	-	7.06	-	0.50	Pass
11g	6Mbps	1	1	2412	17.08	-	16.32	-	0.50	Pass
11g	6Mbps	1	6	2437	17.18	-	16.35	-	0.50	Pass
11g	6Mbps	1	11	2462	17.03	-	16.35	-	0.50	Pass

2.4GHz Band MIMO										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant1	Ant2	Ant1	Ant2		
11b	1Mbps	2	1	2412	10.24	10.24	7.08	7.04	0.50	Pass
11b	1Mbps	2	6	2437	10.24	10.29	7.04	7.06	0.50	Pass
11b	1Mbps	2	11	2462	10.34	10.34	7.06	7.06	0.50	Pass
11g	6Mbps	2	1	2412	17.03	16.83	16.32	16.30	0.50	Pass
11g	6Mbps	2	6	2437	17.13	17.08	16.35	16.32	0.50	Pass
11g	6Mbps	2	11	2462	17.03	16.83	16.35	16.36	0.50	Pass

Report Number : FR111911B

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	24.30	-		30.00	-	3.50	2.70	27.80	-	36.00	-	Pass
11b	1Mbps	1	6	2437	24.90	-		30.00	-	3.50	2.70	28.40	-	36.00	-	Pass
11b	1Mbps	1	11	2462	24.30	-		30.00	-	3.50	2.70	27.80	-	36.00	-	Pass
11g	6Mbps	1	1	2412	24.50	-		30.00	-	3.50	2.70	28.00	-	36.00	-	Pass
11g	6Mbps	1	6	2437	25.50	-		30.00	-	3.50	2.70	29.00	-	36.00	-	Pass
11g	6Mbps	1	11	2462	23.20	-		30.00	-	3.50	2.70	26.70	-	36.00	-	Pass
HT20	MCS0	1	1	2412	24.00	-		30.00	-	3.50	2.70	27.50	-	36.00	-	Pass
HT20	MCS0	1	6	2437	25.60	-		30.00	-	3.50	2.70	29.10	-	36.00	-	Pass
HT20	MCS0	1	11	2462	20.90	-		30.00	-	3.50	2.70	24.40	-	36.00	-	Pass
HT40	MCS0	1	3	2422	21.90	-		30.00	-	3.50	2.70	25.40	-	36.00	-	Pass
HT40	MCS0	1	6	2437	23.40	-		30.00	-	3.50	2.70	26.90	-	36.00	-	Pass
HT40	MCS0	1	9	2452	21.40	-		30.00	-	3.50	2.70	24.90	-	36.00	-	Pass
VHT20	MCS0	1	1	2412	24.00	-		30.00	-	3.50	2.70	27.50	-	36.00	-	Pass
VHT20	MCS0	1	6	2437	25.60	-		30.00	-	3.50	2.70	29.10	-	36.00	-	Pass
VHT20	MCS0	1	11	2462	20.90	-		30.00	-	3.50	2.70	24.40	-	36.00	-	Pass
VHT40	MCS0	1	3	2422	21.90	-		30.00	-	3.50	2.70	25.40	-	36.00	-	Pass
VHT40	MCS0	1	6	2437	23.40	-		30.00	-	3.50	2.70	26.90	-	36.00	-	Pass
VHT40	MCS0	1	9	2452	21.40	-		30.00	-	3.50	2.70	24.90	-	36.00	-	Pass

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	2	1	2412	24.30	22.90	26.67	30.00		3.50		30.17		36.00		Pass
11b	1Mbps	2	6	2437	24.90	23.30	27.18	30.00		3.50		30.68		36.00		Pass
11b	1Mbps	2	11	2462	24.30	22.60	26.54	30.00		3.50		30.04		36.00		Pass
11g	6Mbps	2	1	2412	23.00	23.00	26.01	30.00		3.50		29.51		36.00		Pass
11g	6Mbps	2	6	2437	25.30	25.30	28.31	30.00		3.50		31.81		36.00		Pass
11g	6Mbps	2	11	2462	21.10	21.20	24.16	30.00		3.50		27.66		36.00		Pass
HT20	MCS0	2	1	2412	21.70	21.80	24.76	30.00		3.50		28.26		36.00		Pass
HT20	MCS0	2	6	2437	25.70	25.40	28.56	30.00		3.50		32.06		36.00		Pass
HT20	MCS0	2	11	2462	19.60	19.60	22.61	30.00		3.50		26.11		36.00		Pass
HT40	MCS0	2	3	2422	21.40	21.00	24.21	30.00		3.50		27.71		36.00		Pass
HT40	MCS0	2	6	2437	22.30	21.90	25.11	30.00		3.50		28.61		36.00		Pass
HT40	MCS0	2	9	2452	19.70	19.60	22.66	30.00		3.50		26.16		36.00		Pass
VHT20	MCS0	2	1	2412	21.70	21.80	24.76	30.00		3.50		28.26		36.00		Pass
VHT20	MCS0	2	6	2437	25.70	25.40	28.56	30.00		3.50		32.06		36.00		Pass
VHT20	MCS0	2	11	2462	19.60	19.60	22.61	30.00		3.50		26.11		36.00		Pass
VHT40	MCS0	2	3	2422	21.40	21.00	24.21	30.00		3.50		27.71		36.00		Pass
VHT40	MCS0	2	6	2437	22.30	21.90	25.11	30.00		3.50		28.61		36.00		Pass
VHT40	MCS0	2	9	2452	19.70	19.60	22.66	30.00		3.50		26.16		36.00		Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band Single Antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	1.90	-		3.50	2.70	8.00	8.00	Pass
11b	1Mbps	1	6	2437	2.49	-		3.50	2.70	8.00	8.00	Pass
11b	1Mbps	1	11	2462	2.21	-		3.50	2.70	8.00	8.00	Pass
11g	6Mbps	1	1	2412	-0.96	-		3.50	2.70	8.00	8.00	Pass
11g	6Mbps	1	6	2437	-0.03	-		3.50	2.70	8.00	8.00	Pass
11g	6Mbps	1	11	2462	-2.63	-		3.50	2.70	8.00	8.00	Pass

2.4GHz Band MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	2	1	2412	4.10	0.49	7.11	6.12		7.88		Pass
11b	1Mbps	2	6	2437	4.73	0.64	7.74	6.12		7.88		Pass
11b	1Mbps	2	11	2462	2.53	0.78	5.54	6.12		7.88		Pass
11g	6Mbps	2	1	2412	-3.00	-2.18	0.83	6.12		7.88		Pass
11g	6Mbps	2	6	2437	-0.64	-1.39	2.37	6.12		7.88		Pass
11g	6Mbps	2	11	2462	-5.08	-4.34	-1.33	6.12		7.88		Pass

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

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band Single Antenna											
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
						Ant1	Ant2	Ant1	Ant2		
HE20	MCS0	1	1	2412	Full	19.13		18.89		0.50	Pass
HE20	MCS0	1	6	2437	Full	19.18		18.97		0.50	Pass
HE20	MCS0	1	11	2462	Full	19.08		19.02		0.50	Pass
HE40	MCS0	1	3	2422	Full	36.76		36.10		0.50	Pass
HE40	MCS0	1	6	2437	Full	36.86		36.30		0.50	Pass
HE40	MCS0	1	9	2452	Full	36.66		36.10		0.50	Pass

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
						Ant1	Ant2	Ant1	Ant2		
HE20	MCS0	2	1	2412	Full	19.03	19.08	19.02	18.62	0.50	Pass
HE20	MCS0	2	6	2437	Full	19.13	19.28	18.97	18.97	0.50	Pass
HE20	MCS0	2	11	2462	Full	19.03	19.08	18.96	18.94	0.50	Pass
HE40	MCS0	2	3	2422	Full	37.66	37.56	37.58	36.30	0.50	Pass
HE40	MCS0	2	6	2437	Full	37.76	37.76	37.58	37.34	0.50	Pass
HE40	MCS0	2	9	2452	Full	37.66	37.56	37.40	36.10	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
HE20	MCS3	1	1	2412	Full	24.10	-		30.00	-	3.50	2.70	27.60	-	36.00	-	Pass
HE20	MCS3	1	6	2437	Full	25.70	-		30.00	-	3.50	2.70	29.20	-	36.00	-	Pass
HE20	MCS3	1	11	2462	Full	21.00	-		30.00	-	3.50	2.70	24.50	-	36.00	-	Pass
HE40	MCS3	1	3	2422	Full	22.00	-		30.00	-	3.50	2.70	25.50	-	36.00	-	Pass
HE40	MCS3	1	6	2437	Full	23.50	-		30.00	-	3.50	2.70	27.00	-	36.00	-	Pass
HE40	MCS3	1	9	2452	Full	21.50	-		30.00	-	3.50	2.70	25.00	-	36.00	-	Pass

2.4GHz Band MIMO																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
HE20	MCS3	2	1	2412	Full	21.80	21.90	24.86	30.00		3.50		28.36		36.00		Pass
HE20	MCS3	2	6	2437	Full	25.80	25.50	28.66	30.00		3.50		32.16		36.00		Pass
HE20	MCS3	2	11	2462	Full	19.70	19.70	22.71	30.00		3.50		26.21		36.00		Pass
HE40	MCS3	2	3	2422	Full	21.50	21.10	24.31	30.00		3.50		27.81		36.00		Pass
HE40	MCS3	2	6	2437	Full	22.40	22.00	25.21	30.00		3.50		28.71		36.00		Pass
HE40	MCS3	2	9	2452	Full	19.80	19.70	22.76	30.00		3.50		26.26		36.00		Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band Single Antenna													
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
						Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	1	1	2412	Full	-2.26			3.50	2.70	8.00	8.00	Pass
HE20	MCS0	1	6	2437	Full	0.03			3.50	2.70	8.00	8.00	Pass
HE20	MCS0	1	11	2462	Full	-4.16			3.50	2.70	8.00	8.00	Pass
HE40	MCS0	1	3	2422	Full	-5.26			3.50	2.70	8.00	8.00	Pass
HE40	MCS0	1	6	2437	Full	-4.45			3.50	2.70	8.00	8.00	Pass
HE40	MCS0	1	9	2452	Full	-5.84			3.50	2.70	8.00	8.00	Pass

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
						Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	2	1	2412	Full	-4.30	-4.11	-1.10	6.12		7.88		Pass
HE20	MCS0	2	6	2437	Full	-0.35	-0.20	2.81	6.12		7.88		Pass
HE20	MCS0	2	11	2462	Full	-5.96	-5.49	-2.48	6.12		7.88		Pass
HE40	MCS0	2	3	2422	Full	-8.60	-8.49	-5.48	6.12		7.88		Pass
HE40	MCS0	2	6	2437	Full	-7.61	-7.74	-4.60	6.12		7.88		Pass
HE40	MCS0	2	9	2452	Full	-10.18	-10.01	-7.00	6.12		7.88		Pass

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

<TXBF Mode>

Test Engineer:	Kai Liao	Temperature:	23 ~ 25.1	°C
Test Date:	2021/6/17 ~2021/7/1	Relative Humidity:	46.5 ~ 58.7	%

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
HT20	MCS0	2	1	2412	22.90	22.70	25.81	29.88		6.12		31.93		36.00		Pass
HT20	MCS0	2	6	2437	25.80	25.70	28.76	29.88		6.12		34.88		36.00		Pass
HT20	MCS0	2	11	2462	21.10	20.40	23.77	29.88		6.12		29.89		36.00		Pass
HT40	MCS0	2	3	2422	22.80	22.40	25.61	29.88		6.12		31.73		36.00		Pass
HT40	MCS0	2	6	2437	23.60	23.30	26.46	29.88		6.12		32.58		36.00		Pass
HT40	MCS0	2	9	2452	22.10	21.90	25.01	29.88		6.12		31.13		36.00		Pass
VHT20	MCS0	2	1	2412	23.10	22.80	25.96	29.88		6.12		32.08		36.00		Pass
VHT20	MCS0	2	6	2437	26.00	25.90	28.96	29.88		6.12		35.08		36.00		Pass
VHT20	MCS0	2	11	2462	21.30	20.60	23.97	29.88		6.12		30.09		36.00		Pass
VHT40	MCS0	2	3	2422	22.90	22.60	25.76	29.88		6.12		31.88		36.00		Pass
VHT40	MCS0	2	6	2437	23.70	23.40	26.56	29.88		6.12		32.68		36.00		Pass
VHT40	MCS0	2	9	2452	22.20	22.00	25.11	29.88		6.12		31.23		36.00		Pass

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

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
						Ant1	Ant2	Ant1	Ant2		
HE20	MCS0	2	1	2412	Full	19.13	19.03	16.94	15.08	0.50	Pass
HE20	MCS0	2	6	2437	Full	19.23	19.23	18.16	15.48	0.50	Pass
HE20	MCS0	2	11	2462	Full	19.18	19.13	14.40	16.32	0.50	Pass
HE40	MCS0	2	3	2422	Full	37.66	37.66	29.08	32.64	0.50	Pass
HE40	MCS0	2	6	2437	Full	37.86	37.76	32.56	35.00	0.50	Pass
HE40	MCS0	2	9	2452	Full	37.66	37.66	29.76	30.08	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	2	1	2412	Full	23.20	22.90	26.06	29.88		6.12		32.18		36.00		Pass
HE20	MCS0	2	6	2437	Full	26.10	26.00	29.06	29.88		6.12		35.18		36.00		Pass
HE20	MCS0	2	11	2462	Full	21.40	20.70	24.07	29.88		6.12		30.19		36.00		Pass
HE40	MCS0	2	3	2422	Full	23.00	22.70	25.86	29.88		6.12		31.98		36.00		Pass
HE40	MCS0	2	6	2437	Full	23.90	23.60	26.76	29.88		6.12		32.88		36.00		Pass
HE40	MCS0	2	9	2452	Full	22.30	22.20	25.26	29.88		6.12		31.38		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)	RU Config.	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
						Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	2	1	2412	Full	0.03	-0.14	3.04	6.12		7.88		Pass
HE20	MCS0	2	6	2437	Full	2.38	2.47	5.48	6.12		7.88		Pass
HE20	MCS0	2	11	2462	Full	-1.65	-2.72	1.36	6.12		7.88		Pass
HE40	MCS0	2	3	2422	Full	-2.27	-1.78	1.23	6.12		7.88		Pass
HE40	MCS0	2	6	2437	Full	-1.28	-1.42	1.73	6.12		7.88		Pass
HE40	MCS0	2	9	2452	Full	-2.30	-2.61	0.71	6.12		7.88		Pass

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

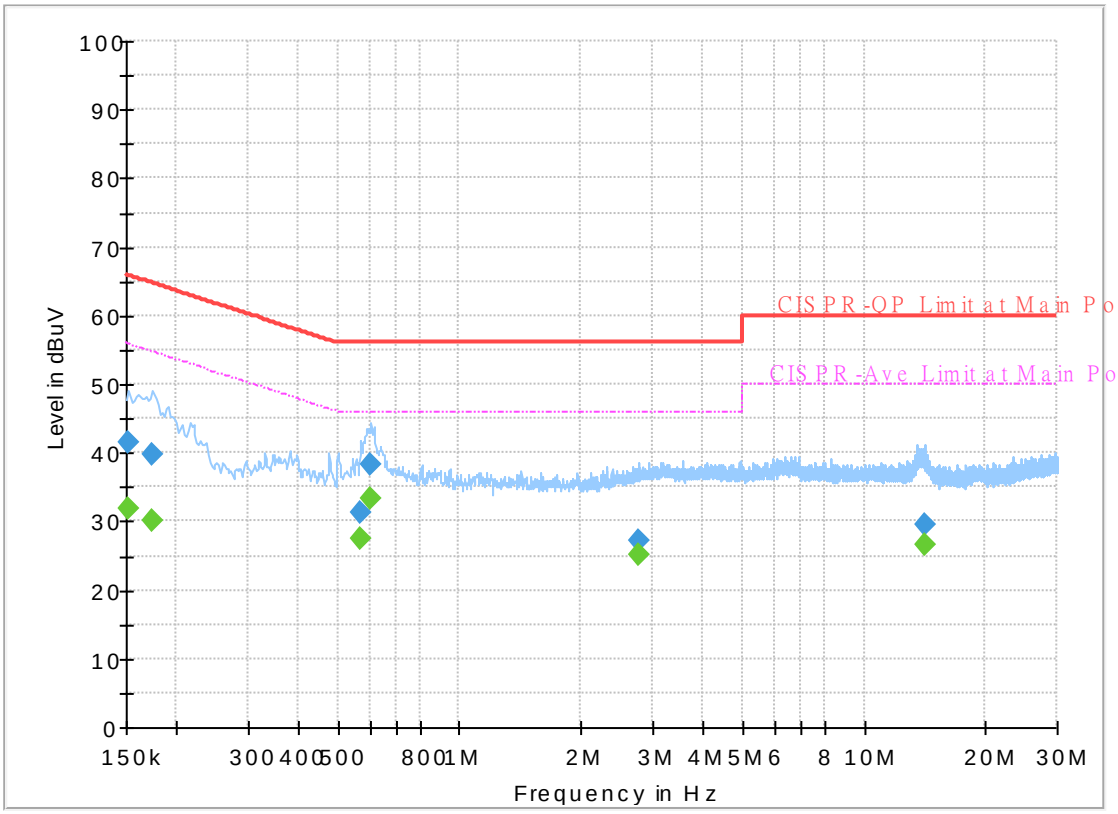
Appendix B. AC Conducted Emission Test Results

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

EUT Information

Report NO :	111911
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



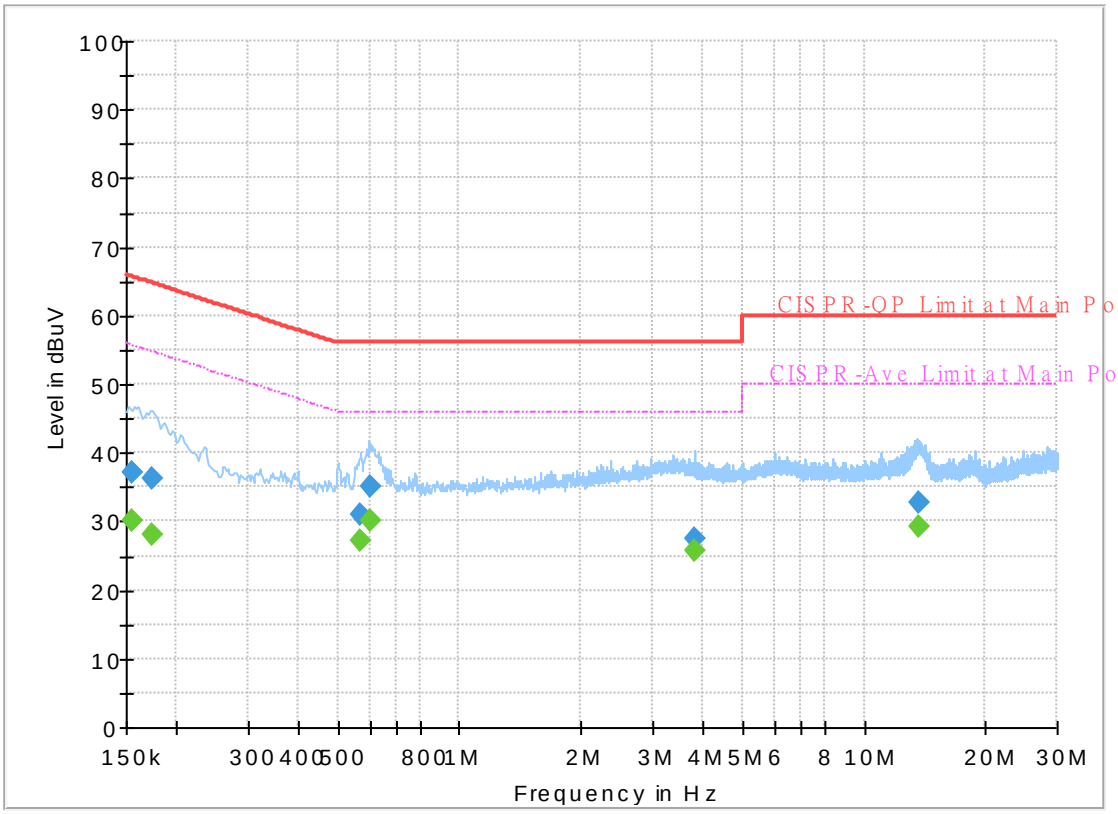
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	31.73	55.88	24.15	L1	OFF	19.5
0.152250	41.38	---	65.88	24.50	L1	OFF	19.5
0.174750	---	30.11	54.73	24.62	L1	OFF	19.5
0.174750	39.72	---	64.73	25.01	L1	OFF	19.5
0.568500	---	27.36	46.00	18.64	L1	OFF	19.7
0.568500	31.36	---	56.00	24.64	L1	OFF	19.7
0.604500	---	33.25	46.00	12.75	L1	OFF	19.8
0.604500	38.21	---	56.00	17.79	L1	OFF	19.8
2.775750	---	25.19	46.00	20.81	L1	OFF	19.9
2.775750	27.18	---	56.00	28.82	L1	OFF	19.9
14.109000	---	26.60	50.00	23.40	L1	OFF	20.1
14.109000	29.53	---	60.00	30.47	L1	OFF	20.1

EUT Information

Report NO :	111911
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)
0.154500	---	30.26	55.75	25.49	N	OFF	19.5
0.154500	37.21	---	65.75	28.54	N	OFF	19.5
0.174750	---	28.13	54.73	26.60	N	OFF	19.5
0.174750	36.27	---	64.73	28.46	N	OFF	19.5
0.568500	---	27.09	46.00	18.91	N	OFF	19.8
0.568500	31.13	---	56.00	24.87	N	OFF	19.8
0.604500	---	30.21	46.00	15.79	N	OFF	19.8
0.604500	34.99	---	56.00	21.01	N	OFF	19.8
3.815250	---	25.63	46.00	20.37	N	OFF	19.9
3.815250	27.57	---	56.00	28.43	N	OFF	19.9
13.717500	---	29.17	50.00	20.83	N	OFF	20.2
13.717500	32.89	---	60.00	27.11	N	OFF	20.2

Appendix C. Radiated Spurious Emission

Test Engineer :	Karl Hou 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		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2388.855	56.57	-17.43	74	40.8	27.57	18.48	30.28	108	37	P	H
		2390	45.42	-8.58	54	29.66	27.56	18.48	30.28	108	37	A	H
	*	2412	113.02	-	-	97.29	27.48	18.52	30.27	108	37	P	H
	*	2412	109.93	-	-	94.2	27.48	18.52	30.27	108	37	A	H
													H
		2332.785	57.27	-16.73	74	41.36	27.83	18.38	30.3	101	98	P	V
		2390	44.88	-9.12	54	29.12	27.56	18.48	30.28	101	98	A	V
	*	2412	111.64	-	-	95.91	27.48	18.52	30.27	101	98	P	V
	*	2412	108.5	-	-	92.77	27.48	18.52	30.27	101	98	A	V
													V
802.11b CH 06 2437MHz		2347.8	57.12	-16.88	74	41.21	27.8	18.4	30.29	100	98	P	H
		2389.94	44.83	-9.17	54	29.07	27.56	18.48	30.28	100	98	A	H
	*	2437	112.69	-	-	96.96	27.43	18.57	30.27	100	98	P	H
	*	2437	109.32	-	-	93.59	27.43	18.57	30.27	100	98	A	H
		2488.1	56.39	-17.61	74	40.57	27.4	18.67	30.25	100	98	P	H
		2484.25	45.95	-8.05	54	30.14	27.4	18.66	30.25	100	98	A	H
		2318.96	57.17	-16.83	74	41.26	27.86	18.35	30.3	204	37	P	V
		2346.68	44.78	-9.22	54	28.86	27.81	18.4	30.29	204	37	A	V
	*	2437	112.92	-	-	97.19	27.43	18.57	30.27	204	37	P	V
	*	2437	109.48	-	-	93.75	27.43	18.57	30.27	204	37	A	V
		2495.52	57.01	-16.99	74	41.17	27.4	18.69	30.25	204	37	P	V
		2484.25	45.83	-8.17	54	30.02	27.4	18.66	30.25	204	37	A	V

802.11b CH 11 2462MHz	*	2462	112.51	-	-	96.75	27.4	18.62	30.26	100	37	P	H
	*	2462	109.39	-	-	93.63	27.4	18.62	30.26	100	37	A	H
		2484.64	57.34	-16.66	74	41.52	27.4	18.67	30.25	100	37	P	H
		2483.92	46.31	-7.69	54	30.5	27.4	18.66	30.25	100	37	A	H
													H
													H
	*	2462	112.06	-	-	96.3	27.4	18.62	30.26	108	96	P	V
	*	2462	108.82	-	-	93.06	27.4	18.62	30.26	108	96	A	V
		2484.36	57.64	-16.36	74	41.83	27.4	18.66	30.25	108	96	P	V
		2483.96	45.7	-8.3	54	29.89	27.4	18.66	30.25	108	96	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	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	40.32	-33.68	74	51.17	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
													H
													H
		4824	40.67	-33.33	74	51.52	31.15	13.36	55.36	100	0	P	V
													V
													V
													V
													V
													V
802.11b CH 06 2437MHz		4874	40.66	-33.34	74	51.52	31.15	13.36	55.37	100	0	P	H
		7311	53.65	-20.35	74	57.33	36.42	16.16	56.26	397	240	P	H
		7311	49.09	-4.91	54	52.77	36.42	16.16	56.26	397	240	A	H
													H
													H
													H
		4874	41	-33	74	51.86	31.15	13.36	55.37	100	0	P	V
		7311	55.05	-18.95	74	58.73	36.42	16.16	56.26	303	184	P	V
		7311	50.54	-3.46	54	54.22	36.42	16.16	56.26	303	184	A	V
													V
													V
													V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 11 2462MHz		4924	43.73	-30.27	74	54.55	31.2	13.36	55.38	100	0	P	H
		7386	53.77	-20.23	74	57.26	36.43	16.36	56.28	399	240	P	H
		7386	48.93	-5.07	54	52.42	36.43	16.36	56.28	399	240	A	H
													H
													H
													H
		4924	44.11	-29.89	74	54.93	31.2	13.36	55.38	100	0	P	V
		7386	54.67	-19.33	74	58.16	36.43	16.36	56.28	302	187	P	V
		7386	49.91	-4.09	54	53.4	36.43	16.36	56.28	302	187	A	V
													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 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2390	70.27	-3.73	74	54.51	27.56	18.48	30.28	100	36	P	H
		2390	51.31	-2.69	54	35.55	27.56	18.48	30.28	100	36	A	H
	*	2412	111.55	-	-	95.82	27.48	18.52	30.27	100	36	P	H
	*	2412	104.04	-	-	88.31	27.48	18.52	30.27	100	36	A	H
													H
													H
		2389.905	66.13	-7.87	74	50.37	27.56	18.48	30.28	245	45	P	V
		2390	49.28	-4.72	54	33.52	27.56	18.48	30.28	245	45	A	V
	*	2412	110.9	-	-	95.17	27.48	18.52	30.27	245	45	P	V
	*	2412	103.2	-	-	87.47	27.48	18.52	30.27	245	45	A	V
													V
													V
802.11g CH 06 2437MHz		2335.48	57.36	-16.64	74	41.45	27.83	18.38	30.3	307	96	P	H
		2328.34	45.26	-8.74	54	29.35	27.84	18.37	30.3	307	96	A	H
	*	2437	111.38	-	-	95.65	27.43	18.57	30.27	307	96	P	H
	*	2437	103.24	-	-	87.51	27.43	18.57	30.27	307	96	A	H
		2484.04	56.89	-17.11	74	41.08	27.4	18.66	30.25	307	96	P	H
		2483.5	45.88	-8.12	54	30.07	27.4	18.66	30.25	307	96	A	H
		2375.24	56.9	-17.1	74	41.08	27.65	18.45	30.28	111	352	P	V
		2366.28	45.32	-8.68	54	29.47	27.7	18.44	30.29	111	352	A	V
	*	2437	112.29	-	-	96.56	27.43	18.57	30.27	111	352	P	V
	*	2437	104.27	-	-	88.54	27.43	18.57	30.27	111	352	A	V
		2484.25	57.56	-16.44	74	41.75	27.4	18.66	30.25	111	352	P	V
		2483.5	46.6	-7.4	54	30.79	27.4	18.66	30.25	111	352	A	V

802.11g CH 11 2462MHz	*	2462	108.8	-	-	93.04	27.4	18.62	30.26	302	81	P	H
	*	2462	101.06	-	-	85.3	27.4	18.62	30.26	302	81	A	H
		2483.64	69.45	-4.55	74	53.64	27.4	18.66	30.25	302	81	P	H
		2483.72	51.31	-2.69	54	35.5	27.4	18.66	30.25	302	81	A	H
													H
													H
	*	2462	110.16	-	-	94.4	27.4	18.62	30.26	128	353	P	V
	*	2462	102.62	-	-	86.86	27.4	18.62	30.26	128	353	A	V
		2483.56	69.96	-4.04	74	54.15	27.4	18.66	30.25	128	353	P	V
		2483.56	52.58	-1.42	54	36.77	27.4	18.66	30.25	128	353	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	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	40.88	-33.12	74	51.73	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
													H
													H
		4824	40.25	-33.75	74	51.1	31.15	13.36	55.36	100	0	P	V
													V
													V
													V
													V
													V
802.11g CH 06 2437MHz		4874	40.1	-33.9	74	50.96	31.15	13.36	55.37	100	0	P	H
		7311	49.53	-24.47	74	53.21	36.42	16.16	56.26	100	0	P	H
													H
													H
													H
													H
		4874	40.88	-33.12	74	51.74	31.15	13.36	55.37	100	0	P	V
		7311	53.98	-20.02	74	57.66	36.42	16.16	56.26	282	183	P	V
		7311	43.73	-10.27	54	47.41	36.42	16.16	56.26	282	183	A	V
													V
													V
													V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 11 2462MHz		4924	40.16	-33.84	74	50.98	31.2	13.36	55.38	100	0	P	H
		7386	47.33	-26.67	74	50.82	36.43	16.36	56.28	100	0	P	H
													H
													H
													H
													H
		4924	40.66	-33.34	74	51.48	31.2	13.36	55.38	100	0	P	V
		7386	47.64	-26.36	74	51.13	36.43	16.36	56.28	100	0	P	V
													V
													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 Full (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2390	66.02	-7.98	74	50.26	27.56	18.48	30.28	109	35	P	H
		2390	52.62	-1.38	54	36.86	27.56	18.48	30.28	109	35	A	H
	*	2412	112.28	-	-	96.55	27.48	18.52	30.27	109	35	P	H
	*	2412	103.1	-	-	87.37	27.48	18.52	30.27	109	35	A	H
802.11ax													H
HE20 Full													H
CH 01		2389.8	64.7	-9.3	74	48.94	27.56	18.48	30.28	245	45	P	V
2412MHz		2390	51.15	-2.85	54	35.39	27.56	18.48	30.28	245	45	A	V
	*	2412	112.9	-	-	97.17	27.48	18.52	30.27	245	45	P	V
	*	2412	102.62	-	-	86.89	27.48	18.52	30.27	245	45	A	V
													V
													V
		2389.66	57.27	-16.73	74	41.51	27.56	18.48	30.28	306	97	P	H
		2320.92	45.3	-8.7	54	29.39	27.86	18.35	30.3	306	97	A	H
	*	2437	113.74	-	-	98.01	27.43	18.57	30.27	306	97	P	H
	*	2437	103.19	-	-	87.46	27.43	18.57	30.27	306	97	A	H
802.11ax		2496.85	56.7	-17.3	74	40.86	27.4	18.69	30.25	306	97	P	H
HE20 Full		2484.74	46.08	-7.92	54	30.26	27.4	18.67	30.25	306	97	A	H
CH 06		2389.38	56.63	-17.37	74	40.87	27.56	18.48	30.28	113	353	P	V
2437MHz		2344.16	45.39	-8.61	54	29.47	27.81	18.4	30.29	113	353	A	V
	*	2437	114.56	-	-	98.83	27.43	18.57	30.27	113	353	P	V
	*	2437	103.97	-	-	88.24	27.43	18.57	30.27	113	353	A	V
		2484.74	58.8	-15.2	74	42.98	27.4	18.67	30.25	113	353	P	V
		2483.69	46.67	-7.33	54	30.86	27.4	18.66	30.25	113	353	A	V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	2462	108.55	-	-	92.79	27.4	18.62	30.26	301	83	P	H
	*	2462	98.55	-	-	82.79	27.4	18.62	30.26	301	83	A	H
		2483.56	68.12	-5.88	74	52.31	27.4	18.66	30.25	301	83	P	H
		2483.52	51.07	-2.93	54	35.26	27.4	18.66	30.25	301	83	A	H
802.11ax													H
HE20 Full													H
CH 11	*	2464	110.39	-	-	94.63	27.4	18.62	30.26	129	353	P	V
2462MHz	*	2464	99.64	-	-	83.88	27.4	18.62	30.26	129	353	A	V
		2483.52	68.2	-5.8	74	52.39	27.4	18.66	30.25	129	353	P	V
		2483.6	51.73	-2.27	54	35.92	27.4	18.66	30.25	129	353	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. 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	41.47	-32.53	74	52.32	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 01		4824	40.83	-33.17	74	51.68	31.15	13.36	55.36	100	0	P	V
2412MHz													V
													V
													V
													V
													V
		4874	40.67	-33.33	74	51.53	31.15	13.36	55.37	100	0	P	H
		7311	51.14	-22.86	74	54.82	36.42	16.16	56.26	387	236	P	H
		7311	41.23	-12.77	54	44.91	36.42	16.16	56.26	387	236	A	H
													H
802.11ax													H
HE20 Full													H
CH 06		4874	41.36	-32.64	74	52.22	31.15	13.36	55.37	100	0	P	V
2437MHz		7311	53.07	-20.93	74	56.75	36.42	16.16	56.26	280	184	P	V
		7311	43.01	-10.99	54	46.69	36.42	16.16	56.26	280	184	A	V
													V
													V
													V

		4924	40.6	-33.4	74	51.42	31.2	13.36	55.38	100	0	P	H
		7386	46.53	-27.47	74	50.02	36.43	16.36	56.28	100	0	P	H
													H
													H
802.11ax													H
HE20 Full													H
CH 11		4924	39.89	-34.11	74	50.71	31.2	13.36	55.38	100	0	P	V
2462MHz		7386	46.65	-27.35	74	50.14	36.43	16.36	56.28	100	0	P	V
													V
													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 HE40 Full (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2388.68	62.68	-11.32	74	46.91	27.57	18.48	30.28	100	36	P	H
		2389.8	52.84	-1.16	54	37.08	27.56	18.48	30.28	100	36	A	H
	*	2422	108.05	-	-	92.32	27.46	18.54	30.27	100	36	P	H
	*	2422	99.98	-	-	84.25	27.46	18.54	30.27	100	36	A	H
802.11ax		2484.74	57.01	-16.99	74	41.19	27.4	18.67	30.25	100	36	P	H
HE40 Full		2488.38	47.33	-6.67	54	31.51	27.4	18.67	30.25	100	36	A	H
CH 03		2389.38	57.78	-16.22	74	42.02	27.56	18.48	30.28	183	46	P	V
2422MHz		2389.94	50.3	-3.7	54	34.54	27.56	18.48	30.28	183	46	A	V
	*	2422	106.77	-	-	91.04	27.46	18.54	30.27	183	46	P	V
	*	2422	98.17	-	-	82.44	27.46	18.54	30.27	183	46	A	V
		2484.67	56.87	-17.13	74	41.05	27.4	18.67	30.25	183	46	P	V
		2483.55	47.37	-6.63	54	31.56	27.4	18.66	30.25	183	46	A	V
		2389.94	60.6	-13.4	74	44.84	27.56	18.48	30.28	111	36	P	H
		2389.94	49.67	-4.33	54	33.91	27.56	18.48	30.28	111	36	A	H
	*	2437	111.03	-	-	95.3	27.43	18.57	30.27	111	36	P	H
	*	2437	101.9	-	-	86.17	27.43	18.57	30.27	111	36	A	H
802.11ax		2484.18	64.73	-9.27	74	48.92	27.4	18.66	30.25	111	36	P	H
HE40 Full		2483.62	52.29	-1.71	54	36.48	27.4	18.66	30.25	111	36	A	H
CH 06		2387.84	57.75	-16.25	74	41.98	27.57	18.48	30.28	116	16	P	V
2437MHz		2389.94	48.56	-5.44	54	32.8	27.56	18.48	30.28	116	16	A	V
	*	2437	109.14	-	-	93.41	27.43	18.57	30.27	116	16	P	V
	*	2437	100.39	-	-	84.66	27.43	18.57	30.27	116	16	A	V
		2485.72	65.98	-8.02	74	50.16	27.4	18.67	30.25	116	16	P	V
		2483.76	52.58	-1.42	54	36.77	27.4	18.66	30.25	116	16	A	V

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 09 2452MHz		2372.86	56.97	-17.03	74	41.15	27.66	18.45	30.29	108	37	P	H
		2349.9	46.88	-7.12	54	30.96	27.8	18.41	30.29	108	37	A	H
	*	2452	107.78	-	-	92.04	27.4	18.6	30.26	108	37	P	H
	*	2452	99.08	-	-	83.34	27.4	18.6	30.26	108	37	A	H
		2485.65	62.16	-11.84	74	46.34	27.4	18.67	30.25	108	37	P	H
		2483.97	52.37	-1.63	54	36.56	27.4	18.66	30.25	108	37	A	H
		2388.82	56.76	-17.24	74	40.99	27.57	18.48	30.28	210	44	P	V
		2330.44	46.57	-7.43	54	30.66	27.84	18.37	30.3	210	44	A	V
	*	2452	107.37	-	-	91.63	27.4	18.6	30.26	210	44	P	V
	*	2452	97.81	-	-	82.07	27.4	18.6	30.26	210	44	A	V
		2485.09	62.15	-11.85	74	46.33	27.4	18.67	30.25	210	44	P	V
		2484.04	52.32	-1.68	54	36.51	27.4	18.66	30.25	210	44	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 HE40 Full (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4844	40.33	-33.67	74	51.15	31.19	13.36	55.37	100	0	P	H
		7266	45.61	-28.39	74	49.55	36.26	16.05	56.25	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 03		4844	41.87	-32.13	74	52.69	31.19	13.36	55.37	100	0	P	V
2422MHz		7266	46.33	-27.67	74	50.27	36.26	16.05	56.25	100	0	P	V
													V
													V
													V
													V
		4874	41.34	-32.66	74	52.2	31.15	13.36	55.37	100	0	P	H
		7311	45.8	-28.2	74	49.48	36.42	16.16	56.26	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 06		4874	41.17	-32.83	74	52.03	31.15	13.36	55.37	100	0	P	V
2437MHz		7311	45.99	-28.01	74	49.67	36.42	16.16	56.26	100	0	P	V
													V
													V
													V
													V

		4904	41.34	-32.66	74	52.24	31.12	13.36	55.38	100	0	P	H
		7356	45.92	-28.08	74	49.42	36.49	16.28	56.27	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 09		4904	39.56	-34.44	74	50.46	31.12	13.36	55.38	100	0	P	V
2452MHz		7356	46.19	-27.81	74	49.69	36.49	16.28	56.27	100	0	P	V
													V
													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 802.11ax HE40 (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		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		73.65	22.66	-17.34	40	41.39	12.73	1.27	32.73	-	-	P	H
		96.93	24.99	-18.51	43.5	40.4	15.7	1.51	32.62	-	-	P	H
		153.19	31.77	-11.73	43.5	45.49	17.06	1.98	32.76	-	-	P	H
		268.62	25.51	-20.49	46	36.02	19.39	2.76	32.66	-	-	P	H
		316.15	26.49	-19.51	46	36.53	19.49	2.99	32.52	-	-	P	H
		746.83	35.79	-10.21	46	35.59	28.13	4.69	32.62	100	0	P	H
													H
													H
													H
													H
2.4GHz													H
802.11ax													H
HE40		38.73	31.81	-8.19	40	43.66	20.12	0.81	32.78	100	0	P	V
LF		95.96	34.09	-9.41	43.5	49.72	15.49	1.5	32.62	-	-	P	V
		128.94	32.27	-11.23	43.5	45.69	17.48	1.79	32.69	-	-	P	V
		160.95	28.8	-14.7	43.5	42.95	16.6	2.04	32.79	-	-	P	V
		211.39	25.88	-17.62	43.5	41.15	15.19	2.41	32.87	-	-	P	V
		719.67	36.56	-9.44	46	37.23	27.19	4.63	32.49	-	-	P	V
													V
													V
													V
													V
													V
													V

Remark

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

2.4GHz 2400~2483.5MHz

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

With RJ-45

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		2389.66	57.72	-16.28	74	41.96	27.56	8.56	30.28	120	36	P	H
		2389.94	51.56	-2.44	54	35.8	27.56	8.56	30.28	120	36	A	H
	*	2422	-	-	74	91.72	27.46	8.62	30.27	120	36	P	H
	*	2422	-	-	54	82.48	27.46	8.62	30.27	120	36	A	H
802.11ax		2497.2	56.78	-17.22	74	40.94	27.4	8.77	30.25	120	36	P	H
HE40 Full		2483.9	46.85	-7.15	54	31.04	27.4	8.74	30.25	120	36	A	H
CH 03		2361.8	56.98	-17.02	74	41.11	27.73	8.51	30.29	152	93	P	V
2422MHz		2389.52	51.39	-2.61	54	35.63	27.56	8.56	30.28	152	93	A	V
	*	2422	-	-	74	91.49	27.46	8.62	30.27	152	93	P	V
	*	2422	-	-	54	82.33	27.46	8.62	30.27	152	93	A	V
		2487.82	56.76	-17.24	74	40.94	27.4	8.75	30.25	152	93	P	V
		2489.78	47.04	-6.96	54	31.21	27.4	8.76	30.25	152	93	A	V

2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE40 Full (Harmonic @ 3m)

With RJ-45

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		4844	39.09	-34.91	74	49.91	31.19	12.87	55.37	100	0	P	H
		7266	44.61	-29.39	74	48.55	36.26	15.62	56.25	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 03		4844	39.32	-34.68	74	50.14	31.19	12.87	55.37	100	0	P	V
2422MHz		7266	44.56	-29.44	74	48.5	36.26	15.62	56.25	100	0	P	V
													V
													V
													V
													V

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.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2389.485	57.26	-16.74	74	41.5	27.56	18.48	30.28	113	323	P	H
		2390	46.3	-7.7	54	30.54	27.56	18.48	30.28	113	323	A	H
	*	2412	116.75	-	-	101.02	27.48	18.52	30.27	113	323	P	H
	*	2412	113.34	-	-	97.61	27.48	18.52	30.27	113	323	A	H
													H
													H
		2389.17	56.93	-17.07	74	41.17	27.56	18.48	30.28	225	319	P	V
		2388.855	45.95	-8.05	54	30.18	27.57	18.48	30.28	225	319	A	V
	*	2412	115.38	-	-	99.65	27.48	18.52	30.27	225	319	P	V
	*	2412	111.89	-	-	96.16	27.48	18.52	30.27	225	319	A	V
													V
													V
802.11b CH 06 2437MHz		2323.16	56.35	-17.65	74	40.44	27.85	18.36	30.3	114	324	P	H
		2389.8	46.2	-7.8	54	30.44	27.56	18.48	30.28	114	324	A	H
	*	2437	117.25	-	-	101.52	27.43	18.57	30.27	114	324	P	H
	*	2437	114.05	-	-	98.32	27.43	18.57	30.27	114	324	A	H
		2485.86	56.9	-17.1	74	41.08	27.4	18.67	30.25	114	324	P	H
		2483.76	46.84	-7.16	54	31.03	27.4	18.66	30.25	114	324	A	H
		2330.72	56.62	-17.38	74	40.71	27.84	18.37	30.3	299	323	P	V
		2389.52	45.46	-8.54	54	29.7	27.56	18.48	30.28	299	323	A	V
	*	2437	116.44	-	-	100.71	27.43	18.57	30.27	299	323	P	V
	*	2437	113.38	-	-	97.65	27.43	18.57	30.27	299	323	A	V
		2486	57.33	-16.67	74	41.51	27.4	18.67	30.25	299	323	P	V
		2483.83	46.66	-7.34	54	30.85	27.4	18.66	30.25	299	323	A	V

802.11b CH 11 2462MHz	*	2462	115.12	-	-	99.36	27.4	18.62	30.26	302	185	P	H
	*	2462	111.89	-	-	96.13	27.4	18.62	30.26	302	185	A	H
		2486.24	58.31	-15.69	74	42.49	27.4	18.67	30.25	302	185	P	H
		2483.52	48.3	-5.7	54	32.49	27.4	18.66	30.25	302	185	A	H
													H
													H
	*	2462	115.89	-	-	100.13	27.4	18.62	30.26	300	59	P	V
	*	2462	112.56	-	-	96.8	27.4	18.62	30.26	300	59	A	V
		2484.2	57.95	-16.05	74	42.14	27.4	18.66	30.25	300	59	P	V
		2483.92	47.71	-6.29	54	31.9	27.4	18.66	30.25	300	59	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	40.98	-33.02	74	51.83	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
													H
													H
		4824	42.56	-31.44	74	53.41	31.15	13.36	55.36	100	0	P	V
													V
													V
													V
													V
													V
802.11b CH 06 2437MHz		4874	40.3	-33.7	74	51.16	31.15	13.36	55.37	100	0	P	H
		7311	49.73	-24.27	74	53.41	36.42	16.16	56.26	100	0	P	H
													H
													H
													H
													H
		4874	41.33	-32.67	74	52.19	31.15	13.36	55.37	100	0	P	V
		7311	52.2	-21.8	74	55.88	36.42	16.16	56.26	324	184	P	V
		7311	45.87	-8.13	54	49.55	36.42	16.16	56.26	324	184	A	V
													V
													V
													V

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 11 2462MHz		4924	44.29	-29.71	74	55.11	31.2	13.36	55.38	100	0	P	H
		7386	49.37	-24.63	74	52.86	36.43	16.36	56.28	100	0	P	H
													H
													H
													H
													H
		4924	44.01	-29.99	74	54.83	31.2	13.36	55.38	100	0	P	V
		7386	49.67	-24.33	74	53.16	36.43	16.36	56.28	100	0	P	V
													V
													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 (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		2389.905	68.69	-5.31	74	52.93	27.56	18.48	30.28	100	121	P	H
		2389.905	52.38	-1.62	54	36.62	27.56	18.48	30.28	100	121	A	H
	*	2412	115.3	-	-	99.57	27.48	18.52	30.27	100	121	P	H
	*	2412	108.2	-	-	92.47	27.48	18.52	30.27	100	121	A	H
													H
													H
		2389.905	63.72	-10.28	74	47.96	27.56	18.48	30.28	319	316	P	V
		2390	49.59	-4.41	54	33.83	27.56	18.48	30.28	319	316	A	V
	*	2412	115.02	-	-	99.29	27.48	18.52	30.27	319	316	P	V
	*	2412	107.52	-	-	91.79	27.48	18.52	30.27	319	316	A	V
													V
													V
802.11g CH 06 2437MHz		2310.56	56.62	-17.38	74	40.71	27.88	18.33	30.3	100	116	P	H
		2389.94	47.09	-6.91	54	31.33	27.56	18.48	30.28	100	116	A	H
	*	2437	117.74	-	-	102.01	27.43	18.57	30.27	100	116	P	H
	*	2437	110.53	-	-	94.8	27.43	18.57	30.27	100	116	A	H
		2485.3	59.62	-14.38	74	43.8	27.4	18.67	30.25	100	116	P	H
		2484.18	48.58	-5.42	54	32.77	27.4	18.66	30.25	100	116	A	H
		2389.1	57.05	-16.95	74	41.28	27.57	18.48	30.28	304	317	P	V
		2389.52	47.02	-6.98	54	31.26	27.56	18.48	30.28	304	317	A	V
	*	2437	118.09	-	-	102.36	27.43	18.57	30.27	304	317	P	V
	*	2437	110.53	-	-	94.8	27.43	18.57	30.27	304	317	A	V
		2483.97	59.3	-14.7	74	43.49	27.4	18.66	30.25	304	317	P	V
		2483.62	48.67	-5.33	54	32.86	27.4	18.66	30.25	304	317	A	V

802.11g CH 11 2462MHz	*	2462	114.51	-	-	98.75	27.4	18.62	30.26	103	115	P	H
	*	2462	106.87	-	-	91.11	27.4	18.62	30.26	103	115	A	H
		2483.76	68.19	-5.81	74	52.38	27.4	18.66	30.25	103	115	P	H
		2483.52	52.45	-1.55	54	36.64	27.4	18.66	30.25	103	115	A	H
													H
													H
	*	2462	114.74	-	-	98.98	27.4	18.62	30.26	338	320	P	V
	*	2462	106.98	-	-	91.22	27.4	18.62	30.26	338	320	A	V
		2483.92	64.71	-9.29	74	48.9	27.4	18.66	30.25	338	320	P	V
		2484.32	50.19	-3.81	54	34.38	27.4	18.66	30.25	338	320	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	41.18	-32.82	74	52.03	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
													H
													H
		4824	40.19	-33.81	74	51.04	31.15	13.36	55.36	100	0	P	V
													V
													V
													V
													V
													V
802.11g CH 06 2437MHz		4874	40.87	-33.13	74	51.73	31.15	13.36	55.37	100	0	P	H
		7311	54.82	-19.18	74	58.5	36.42	16.16	56.26	389	238	P	H
		7311	43.2	-10.8	54	46.88	36.42	16.16	56.26	389	238	A	H
													H
													H
													H
		4874	40.77	-33.23	74	51.63	31.15	13.36	55.37	100	0	P	V
		7311	54.43	-19.57	74	58.11	36.42	16.16	56.26	268	185	P	V
		7311	44.34	-9.66	54	48.02	36.42	16.16	56.26	268	185	A	V
													V
													V
													V

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 11 2462MHz		4924	40.28	-33.72	74	51.1	31.2	13.36	55.38	100	0	P	H
		7386	45.24	-28.76	74	48.73	36.43	16.36	56.28	100	0	P	H
													H
													H
													H
													H
		4924	39.75	-34.25	74	50.57	31.2	13.36	55.38	100	0	P	V
		7386	45.34	-28.66	74	48.83	36.43	16.36	56.28	100	0	P	V
													V
													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 Full (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)
		2389.485	66.42	-7.58	74	50.66	27.56	18.48	30.28	100	119	P	H
		2389.38	50.81	-3.19	54	35.05	27.56	18.48	30.28	100	119	A	H
	*	2412	113.65	-	-	97.92	27.48	18.52	30.27	100	119	P	H
	*	2412	105.69	-	-	89.96	27.48	18.52	30.27	100	119	A	H
802.11ax													H
HE20 Full													H
CH 01		2389.905	67.96	-6.04	74	52.2	27.56	18.48	30.28	315	318	P	V
2412MHz		2390	52.51	-1.49	54	36.75	27.56	18.48	30.28	315	318	A	V
	*	2412	114.22	-	-	98.49	27.48	18.52	30.27	315	318	P	V
	*	2412	105.41	-	-	89.68	27.48	18.52	30.27	315	318	A	V
													V
													V
		2389.24	57.29	-16.71	74	41.53	27.56	18.48	30.28	100	118	P	H
		2389.24	47.14	-6.86	54	31.38	27.56	18.48	30.28	100	118	A	H
	*	2437	119.29	-	-	103.56	27.43	18.57	30.27	100	118	P	H
	*	2437	109.81	-	-	94.08	27.43	18.57	30.27	100	118	A	H
802.11ax		2485.16	61.04	-12.96	74	45.22	27.4	18.67	30.25	100	118	P	H
HE20 Full		2484.25	49.64	-4.36	54	33.83	27.4	18.66	30.25	100	118	A	H
CH 06		2389.94	57.65	-16.35	74	41.89	27.56	18.48	30.28	312	314	P	V
2437MHz		2389.94	47.41	-6.59	54	31.65	27.56	18.48	30.28	312	314	A	V
	*	2437	117.75	-	-	102.02	27.43	18.57	30.27	312	314	P	V
	*	2437	109.51	-	-	93.78	27.43	18.57	30.27	312	314	A	V
		2483.76	61.54	-12.46	74	45.73	27.4	18.66	30.25	312	314	P	V
		2483.5	49.37	-4.63	54	33.56	27.4	18.66	30.25	312	314	A	V

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)
	*	2462	113.87	-	-	98.11	27.4	18.62	30.26	100	116	P	H
	*	2462	104	-	-	88.24	27.4	18.62	30.26	100	116	A	H
		2484.2	67.65	-6.35	74	51.84	27.4	18.66	30.25	100	116	P	H
		2484	52.37	-1.63	54	36.56	27.4	18.66	30.25	100	116	A	H
802.11ax													H
HE20 Full													H
CH 11	*	2462	113.34	-	-	97.58	27.4	18.62	30.26	304	315	P	V
2462MHz	*	2462	103.69	-	-	87.93	27.4	18.62	30.26	304	315	A	V
		2484.44	66.26	-7.74	74	50.45	27.4	18.66	30.25	304	315	P	V
		2484.64	50.93	-3.07	54	35.11	27.4	18.67	30.25	304	315	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. 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)
		4824	40.15	-33.85	74	51	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 01		4824	40.26	-33.74	74	51.11	31.15	13.36	55.36	100	0	P	V
2412MHz													V
													V
													V
													V
													V
		4874	40.69	-33.31	74	51.55	31.15	13.36	55.37	100	0	P	H
		7311	54.15	-19.85	74	57.83	36.42	16.16	56.26	370	238	P	H
		7311	43.23	-10.77	54	46.91	36.42	16.16	56.26	370	238	A	H
													H
802.11ax													H
HE20 Full													H
CH 06		4874	40.49	-33.51	74	51.35	31.15	13.36	55.37	100	0	P	V
2437MHz		7311	55.63	-18.37	74	59.31	36.42	16.16	56.26	259	179	P	V
		7311	44.6	-9.4	54	48.28	36.42	16.16	56.26	259	179	A	V
													V
													V
													V

		4924	40.66	-33.34	74	51.48	31.2	13.36	55.38	100	0	P	H
		7386	45.45	-28.55	74	48.94	36.43	16.36	56.28	100	0	P	H
													H
													H
802.11ax													H
HE20 Full													H
CH 11		4924	41.1	-32.9	74	51.92	31.2	13.36	55.38	100	0	P	V
2462MHz		7386	46.56	-27.44	74	50.05	36.43	16.36	56.28	100	0	P	V
													V
													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 HE40 Full (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)
		2389.24	65.2	-8.8	74	49.44	27.56	18.48	30.28	107	124	P	H
		2389.24	52.3	-1.7	54	36.54	27.56	18.48	30.28	107	124	A	H
	*	2422	111.89	-	-	96.16	27.46	18.54	30.27	107	124	P	H
	*	2422	102.26	-	-	86.53	27.46	18.54	30.27	107	124	A	H
802.11ax		2485.02	56.75	-17.25	74	40.93	27.4	18.67	30.25	107	124	P	H
HE40 Full		2483.55	48.11	-5.89	54	32.3	27.4	18.66	30.25	107	124	A	H
CH 03		2389.94	60.52	-13.48	74	44.76	27.56	18.48	30.28	352	319	P	V
2422MHz		2389.8	52.44	-1.56	54	36.68	27.56	18.48	30.28	352	319	A	V
	*	2422	109.62	-	-	93.89	27.46	18.54	30.27	352	319	P	V
	*	2422	101.51	-	-	85.78	27.46	18.54	30.27	352	319	A	V
		2485.16	57.45	-16.55	74	41.63	27.4	18.67	30.25	352	319	P	V
		2485.51	48.05	-5.95	54	32.23	27.4	18.67	30.25	352	319	A	V
		2389.1	60.72	-13.28	74	44.95	27.57	18.48	30.28	104	119	P	H
		2388.96	49.87	-4.13	54	34.1	27.57	18.48	30.28	104	119	A	H
	*	2437	112.05	-	-	96.32	27.43	18.57	30.27	104	119	P	H
	*	2437	103.74	-	-	88.01	27.43	18.57	30.27	104	119	A	H
802.11ax		2486.7	63.96	-10.04	74	48.14	27.4	18.67	30.25	104	119	P	H
HE40 Full		2484.04	51.98	-2.02	54	36.17	27.4	18.66	30.25	104	119	A	H
CH 06		2389.66	60.75	-13.25	74	44.99	27.56	18.48	30.28	344	318	P	V
2437MHz		2389.94	50.67	-3.33	54	34.91	27.56	18.48	30.28	344	318	A	V
	*	2437	112.94	-	-	97.21	27.43	18.57	30.27	344	318	P	V
	*	2437	103.53	-	-	87.8	27.43	18.57	30.27	344	318	A	V
		2485.23	63.82	-10.18	74	48	27.4	18.67	30.25	344	318	P	V
		2485.09	52.08	-1.92	54	36.26	27.4	18.67	30.25	344	318	A	V

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)
		2383.5	56.24	-17.76	74	40.45	27.6	18.47	30.28	103	120	P	H
		2375.38	46.84	-7.16	54	31.02	27.65	18.45	30.28	103	120	A	H
	*	2452	111.52	-	-	95.78	27.4	18.6	30.26	103	120	P	H
	*	2452	101.62	-	-	85.88	27.4	18.6	30.26	103	120	A	H
802.11ax		2485.02	60.64	-13.36	74	44.82	27.4	18.67	30.25	103	120	P	H
HE40 Full		2484.25	51.77	-2.23	54	35.96	27.4	18.66	30.25	103	120	A	H
CH 09		2380.28	56.52	-17.48	74	40.72	27.62	18.46	30.28	307	316	P	V
2452MHz		2389.94	47.05	-6.95	54	31.29	27.56	18.48	30.28	307	316	A	V
	*	2452	111.33	-	-	95.59	27.4	18.6	30.26	307	316	P	V
	*	2452	101.33	-	-	85.59	27.4	18.6	30.26	307	316	A	V
		2485.3	61.35	-12.65	74	45.53	27.4	18.67	30.25	307	316	P	V
		2484.95	51.46	-2.54	54	35.64	27.4	18.67	30.25	307	316	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 HE40 Full (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)
		4844	40.67	-33.33	74	51.49	31.19	13.36	55.37	100	0	P	H
		7266	44.68	-29.32	74	48.62	36.26	16.05	56.25	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 03		4844	40.13	-33.87	74	50.95	31.19	13.36	55.37	100	0	P	V
2422MHz		7266	45.08	-28.92	74	49.02	36.26	16.05	56.25	100	0	P	V
													V
													V
													V
													V
		4874	40.5	-33.5	74	51.36	31.15	13.36	55.37	100	0	P	H
		7311	46.4	-27.6	74	50.08	36.42	16.16	56.26	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 06		4874	40.47	-33.53	74	51.33	31.15	13.36	55.37	100	0	P	V
2437MHz		7311	45.84	-28.16	74	49.52	36.42	16.16	56.26	100	0	P	V
													V
													V
													V
													V

		4904	40.14	-33.86	74	51.04	31.12	13.36	55.38	100	0	P	H
		7356	45.84	-28.16	74	49.34	36.49	16.28	56.27	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 09		4904	40.02	-33.98	74	50.92	31.12	13.36	55.38	100	0	P	V
2452MHz		7356	46.26	-27.74	74	49.76	36.49	16.28	56.27	100	0	P	V
													V
													V
													V
													V

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

<TXBF Mode>

2.4GHz 2400~2483.5MHz

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

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		2389.8	66.42	-7.58	74	50.66	27.56	18.48	30.28	100	124	P	H
		2390	52.53	-1.47	54	36.77	27.56	18.48	30.28	100	124	A	H
	*	2412	114.35	-	-	98.62	27.48	18.52	30.27	100	124	P	H
	*	2412	106.06	-	-	90.33	27.48	18.52	30.27	100	124	A	H
802.11ax													H
HE20 Full													H
CH 01		2389.485	66.11	-7.89	74	50.35	27.56	18.48	30.28	100	184	P	V
2412MHz		2389.8	50.54	-3.46	54	34.78	27.56	18.48	30.28	100	184	A	V
	*	2412	114.5	-	-	98.77	27.48	18.52	30.27	100	184	P	V
	*	2412	108.45	-	-	92.72	27.48	18.52	30.27	100	184	A	V
													V
													V
		2389.52	57.71	-16.29	74	41.95	27.56	18.48	30.28	238	188	P	H
		2389.52	46.48	-7.52	54	30.72	27.56	18.48	30.28	238	188	A	H
	*	2437	115.82	-	-	100.09	27.43	18.57	30.27	238	188	P	H
	*	2437	108.32	-	-	92.59	27.43	18.57	30.27	238	188	A	H
802.11ax		2484.74	59.32	-14.68	74	43.5	27.4	18.67	30.25	238	188	P	H
HE20 Full		2483.62	47.91	-6.09	54	32.1	27.4	18.66	30.25	238	188	A	H
CH 06		2367.12	56.52	-17.48	74	40.67	27.7	18.44	30.29	151	164	P	V
2437MHz		2389.94	45.56	-8.44	54	29.8	27.56	18.48	30.28	151	164	A	V
	*	2437	115.55	-	-	99.82	27.43	18.57	30.27	151	164	P	V
	*	2437	111.68	-	-	95.95	27.43	18.57	30.27	151	164	A	V
		2486.14	57.48	-16.52	74	41.66	27.4	18.67	30.25	151	164	P	V
		2484.53	46.39	-7.61	54	30.58	27.4	18.66	30.25	151	164	A	V

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)
	*	2462	112.93	-	-	97.17	27.4	18.62	30.26	100	116	P	H
	*	2462	104.29	-	-	88.53	27.4	18.62	30.26	100	116	A	H
		2484.32	65.73	-8.27	74	49.92	27.4	18.66	30.25	100	116	P	H
		2484	51.88	-2.12	54	36.07	27.4	18.66	30.25	100	116	A	H
802.11ax													H
HE20 Full													H
CH 11	*	2462	110.97	-	-	95.21	27.4	18.62	30.26	156	10	P	V
2462MHz	*	2462	101.88	-	-	86.12	27.4	18.62	30.26	156	10	A	V
		2485.04	61.41	-12.59	74	45.59	27.4	18.67	30.25	156	10	P	V
		2483.56	49.69	-4.31	54	33.88	27.4	18.66	30.25	156	10	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. 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)
		4824	39.98	-34.02	74	50.83	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
802.11ax													H
HE20 Full													H
CH 01		4824	39.4	-34.6	74	50.25	31.15	13.36	55.36	100	0	P	V
2412MHz													V
													V
													V
													V
													V
		4874	40.22	-33.78	74	51.08	31.15	13.36	55.37	100	0	P	H
		7311	48.3	-25.7	74	51.98	36.42	16.16	56.26	100	0	P	H
													H
													H
802.11ax													H
HE20 Full													H
CH 06		4874	39.17	-34.83	74	50.03	31.15	13.36	55.37	100	0	P	V
2437MHz		7311	52.79	-21.21	74	56.47	36.42	16.16	56.26	279	182	P	V
		7311	48.84	-5.16	54	52.52	36.42	16.16	56.26	279	182	A	V
													V
													V
													V

		4924	40.22	-33.78	74	51.04	31.2	13.36	55.38	100	0	P	H
		7386	45.3	-28.7	74	48.79	36.43	16.36	56.28	100	0	P	H
													H
													H
802.11ax													H
HE20 Full													H
CH 11		4924	39.01	-34.99	74	49.83	31.2	13.36	55.38	100	0	P	V
2462MHz		7386	46.75	-27.25	74	50.24	36.43	16.36	56.28	100	0	P	V
													V
													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 HE40 Full (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)
		2389.66	64.33	-9.67	74	48.57	27.56	18.48	30.28	100	119	P	H
		2389.94	51.32	-2.68	54	35.56	27.56	18.48	30.28	100	119	A	H
	*	2422	111.94	-	-	96.21	27.46	18.54	30.27	100	119	P	H
	*	2422	107.07	-	-	91.34	27.46	18.54	30.27	100	119	A	H
802.11ax		2483.62	58.28	-15.72	74	42.47	27.4	18.66	30.25	100	119	P	H
HE40 Full		2483.69	47.1	-6.9	54	31.29	27.4	18.66	30.25	100	119	A	H
CH 03		2388.26	63.79	-10.21	74	48.02	27.57	18.48	30.28	294	104	P	V
2422MHz		2389.94	50.84	-3.16	54	35.08	27.56	18.48	30.28	294	104	A	V
	*	2422	110.84	-	-	95.11	27.46	18.54	30.27	294	104	P	V
	*	2422	107.21	-	-	91.48	27.46	18.54	30.27	294	104	A	V
		2489.36	57.06	-16.94	74	41.24	27.4	18.67	30.25	294	104	P	V
		2483.5	45.91	-8.09	54	30.1	27.4	18.66	30.25	294	104	A	V
		2389.38	61.79	-12.21	74	46.03	27.56	18.48	30.28	100	119	P	H
		2389.24	48.96	-5.04	54	33.2	27.56	18.48	30.28	100	119	A	H
	*	2437	112.68	-	-	96.95	27.43	18.57	30.27	100	119	P	H
	*	2437	108.07	-	-	92.34	27.43	18.57	30.27	100	119	A	H
802.11ax		2483.55	70.54	-3.46	74	54.73	27.4	18.66	30.25	100	119	P	H
HE40 Full		2484.04	52.46	-1.54	54	36.65	27.4	18.66	30.25	100	119	A	H
CH 06		2389.94	58.92	-15.08	74	43.16	27.56	18.48	30.28	300	88	P	V
2437MHz		2389.24	47.58	-6.42	54	31.82	27.56	18.48	30.28	300	88	A	V
	*	2437	111.03	-	-	95.3	27.43	18.57	30.27	300	88	P	V
	*	2437	102.18	-	-	86.45	27.43	18.57	30.27	300	88	A	V
		2484.11	65.45	-8.55	74	49.64	27.4	18.66	30.25	300	88	P	V
		2483.97	51.12	-2.88	54	35.31	27.4	18.66	30.25	300	88	A	V

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 HE40 Full CH 09 2452MHz		2325.54	57.08	-16.92	74	41.17	27.85	18.36	30.3	100	116	P	H
		2389.8	45.33	-8.67	54	29.57	27.56	18.48	30.28	100	116	A	H
	*	2452	111	-	-	95.26	27.4	18.6	30.26	100	116	P	H
	*	2452	102.99	-	-	87.25	27.4	18.6	30.26	100	116	A	H
		2484.18	63.89	-10.11	74	48.08	27.4	18.66	30.25	100	116	P	H
		2484.18	52.69	-1.31	54	36.88	27.4	18.66	30.25	100	116	A	H
		2328.76	56.7	-17.3	74	40.79	27.84	18.37	30.3	300	330	P	V
		2389.8	45.57	-8.43	54	29.81	27.56	18.48	30.28	300	330	A	V
	*	2452	111.26	-	-	95.52	27.4	18.6	30.26	300	330	P	V
	*	2452	100.54	-	-	84.8	27.4	18.6	30.26	300	330	A	V
		2483.76	61.77	-12.23	74	45.96	27.4	18.66	30.25	300	330	P	V
		2484.95	51.62	-2.38	54	35.8	27.4	18.67	30.25	300	330	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 HE40 Full (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)
		4844	39.65	-34.35	74	50.47	31.19	13.36	55.37	100	0	P	H
		7266	44.35	-29.65	74	48.29	36.26	16.05	56.25	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 03		4844	39.45	-34.55	74	50.27	31.19	13.36	55.37	100	0	P	V
2422MHz		7266	44.74	-29.26	74	48.68	36.26	16.05	56.25	100	0	P	V
													V
													V
													V
													V
		4874	39.51	-34.49	74	50.37	31.15	13.36	55.37	100	0	P	H
		7311	46.03	-27.97	74	49.71	36.42	16.16	56.26	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 06		4874	39.1	-34.9	74	49.96	31.15	13.36	55.37	100	0	P	V
2437MHz		7311	45.32	-28.68	74	49	36.42	16.16	56.26	100	0	P	V
													V
													V
													V
													V

		4904	39.24	-34.76	74	50.14	31.12	13.36	55.38	100	0	P	H
		7356	44.97	-29.03	74	48.47	36.49	16.28	56.27	100	0	P	H
													H
													H
802.11ax													H
HE40 Full													H
CH 09		4904	39.5	-34.5	74	50.4	31.12	13.36	55.38	100	0	P	V
2452MHz		7356	45.86	-28.14	74	49.36	36.49	16.28	56.27	100	0	P	V
													V
													V
													V
													V

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

Note symbol

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

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b 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 :	Karl Hou and Andy Yang	**Temperature :**	20~25°C
		Relative Humidity :	50~60%

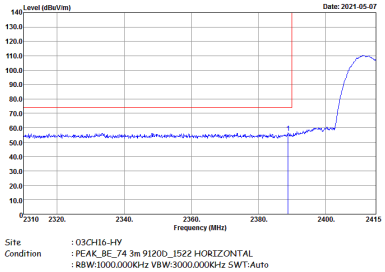
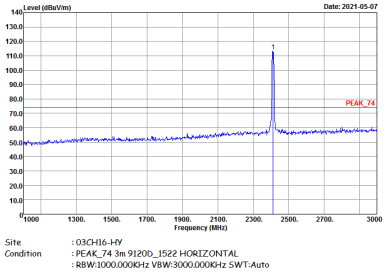
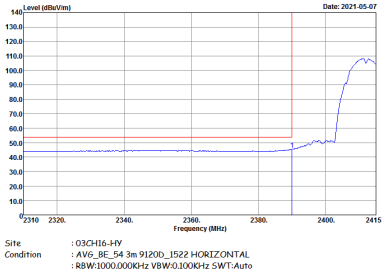
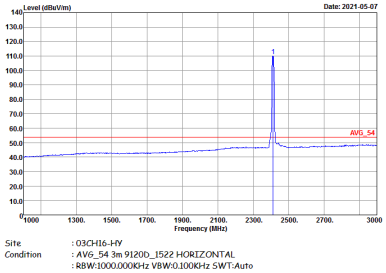
Note symbol

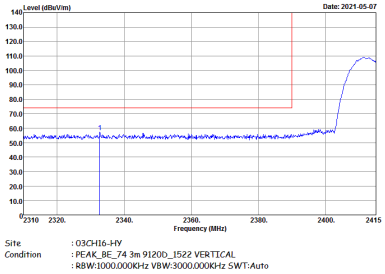
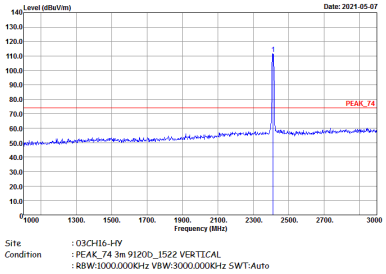
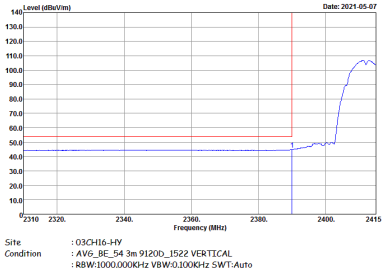
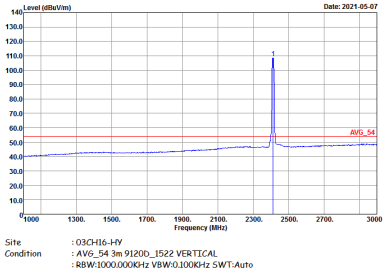
-L	**Low channel location**
-R	**High channel location**

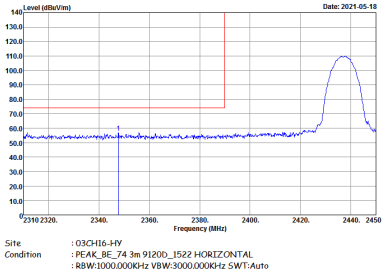
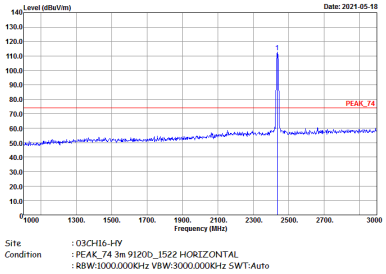
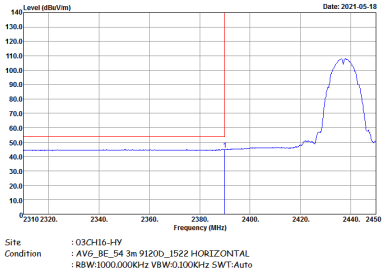
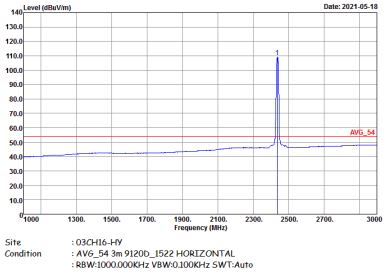
<CDD Mode>

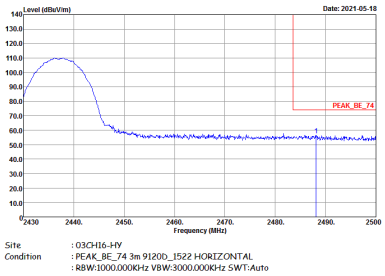
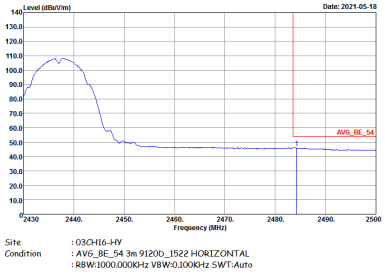
2.4GHz 2400~2483.5MHz

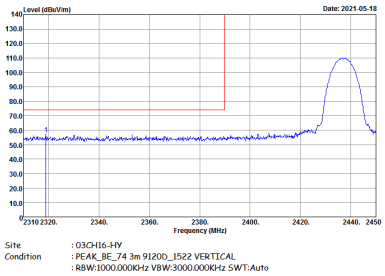
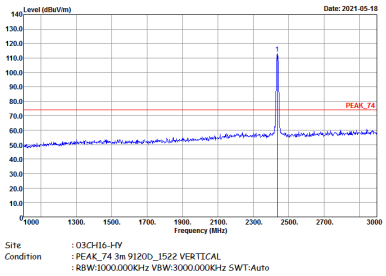
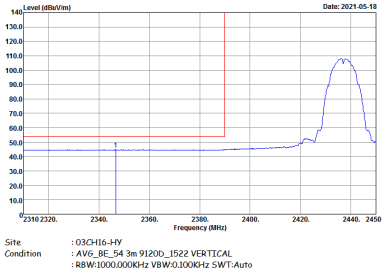
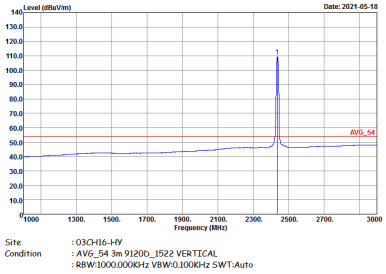
WIFI 802.11b (Band Edge @ 3m)

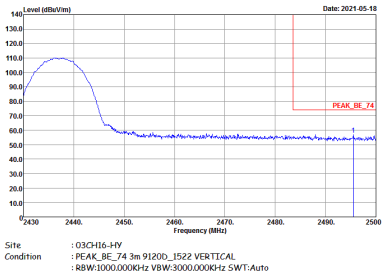
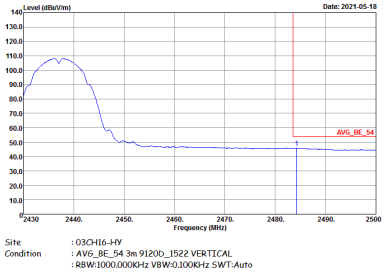
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

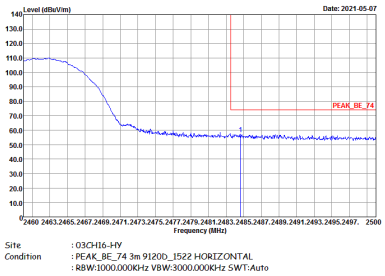
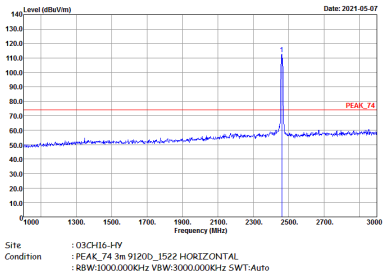
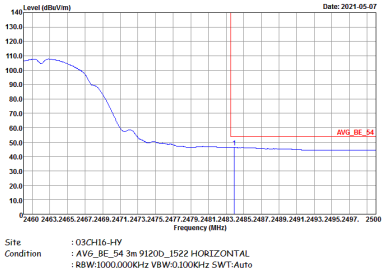
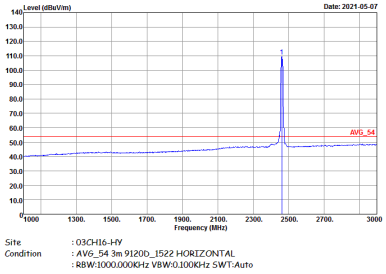
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak		
Avg.		

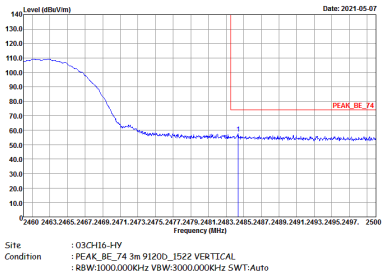
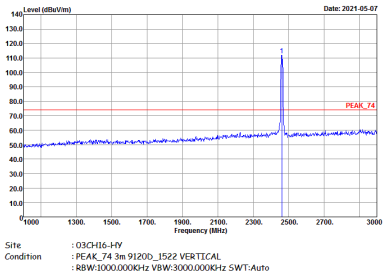
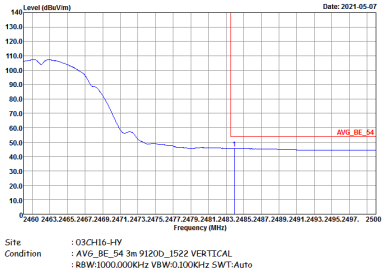
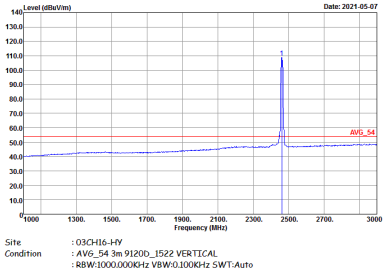
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

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

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

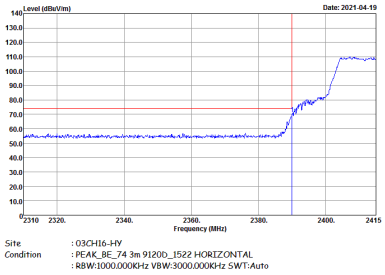
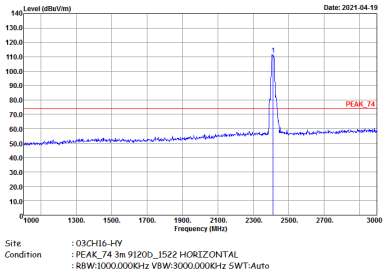
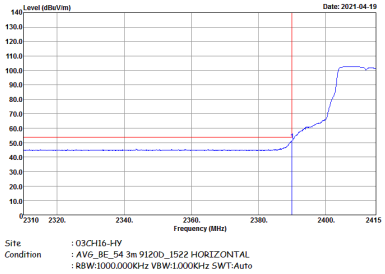
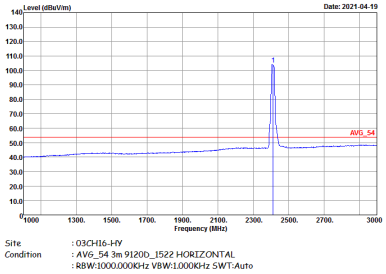
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

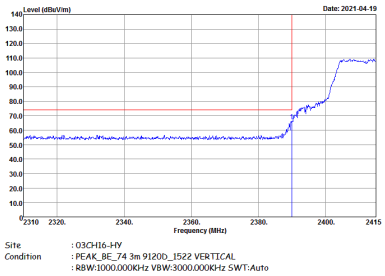
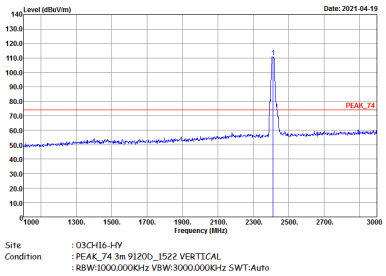
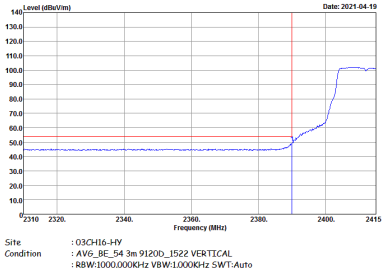
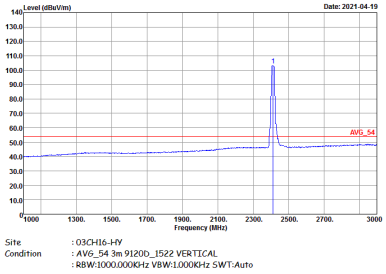
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

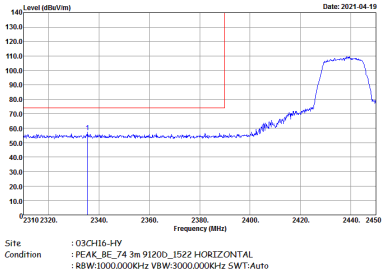
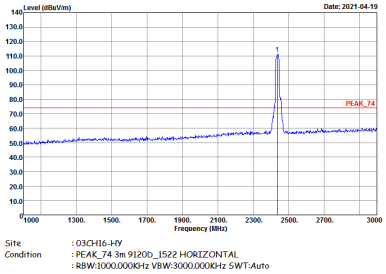
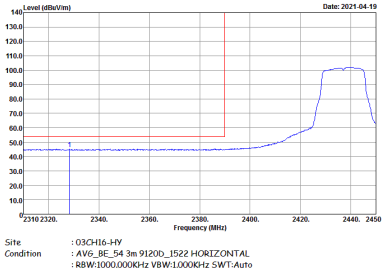
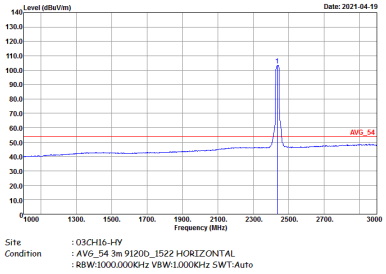
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak		
Avg.		

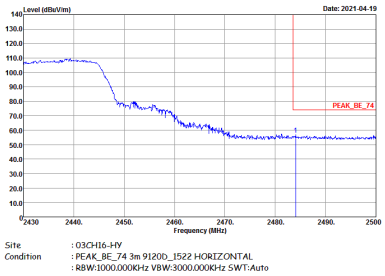
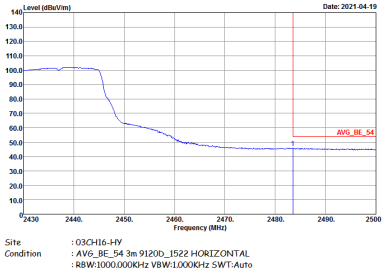
2.4GHz 2400~2483.5MHz

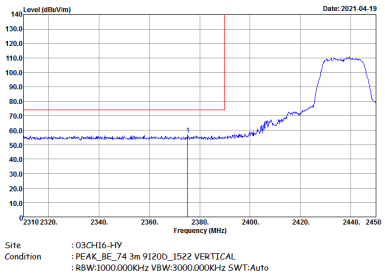
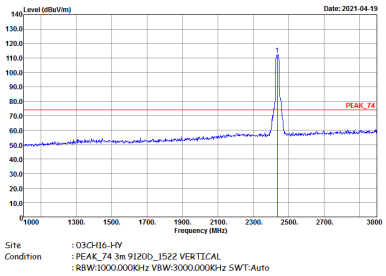
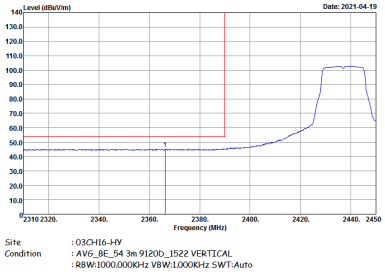
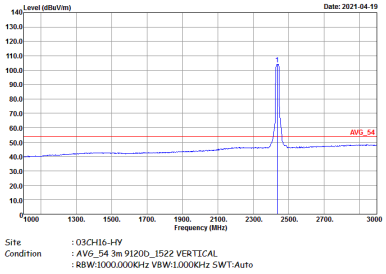
WIFI 802.11g (Band Edge @ 3m)

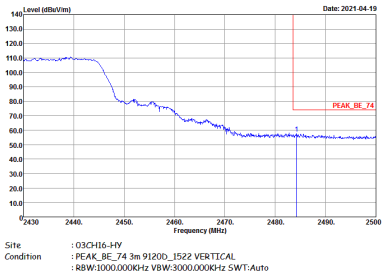
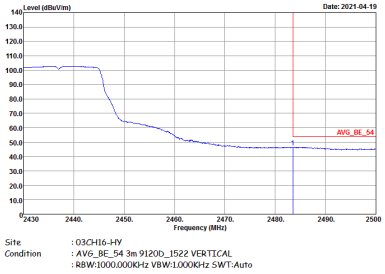
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

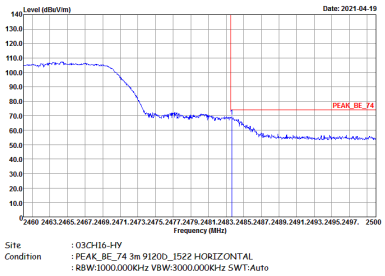
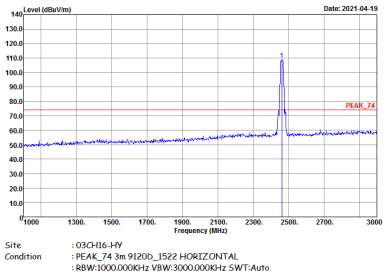
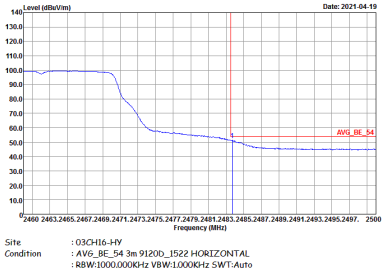
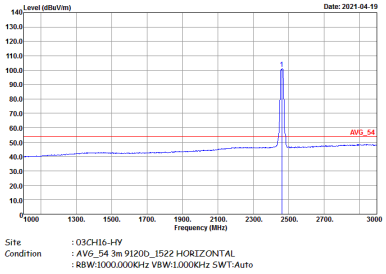
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak		
Avg.		

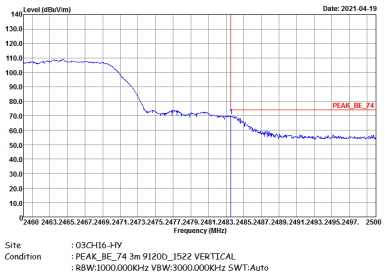
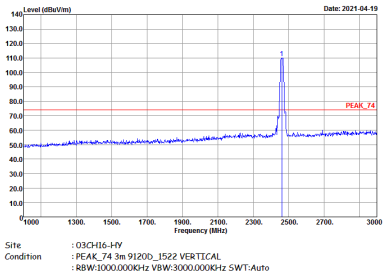
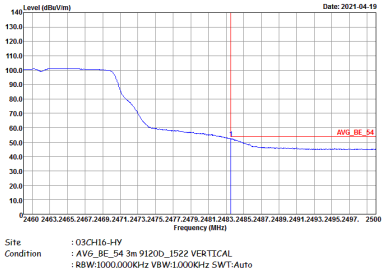
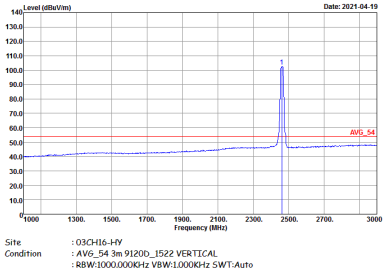
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 9120D_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 9120D_1522 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 9120D_1522 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

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

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

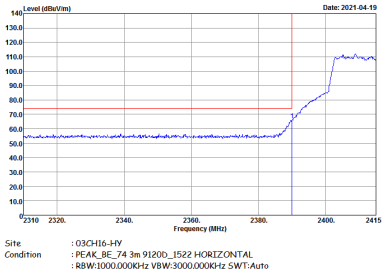
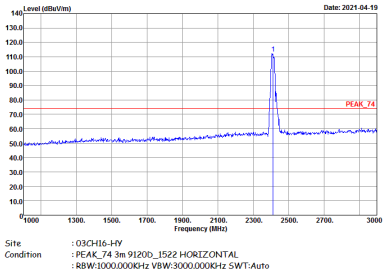
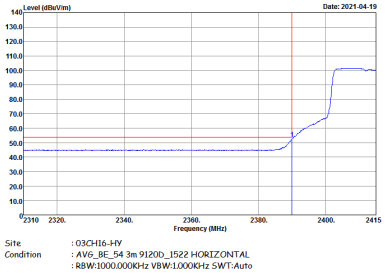
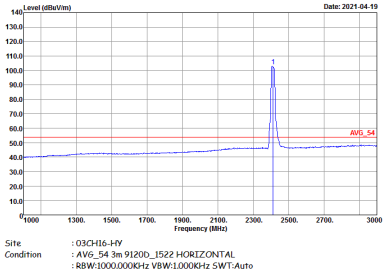
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank

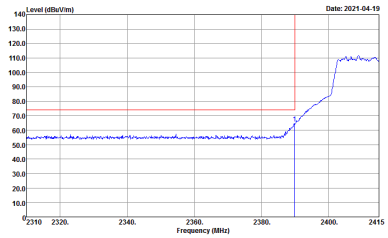
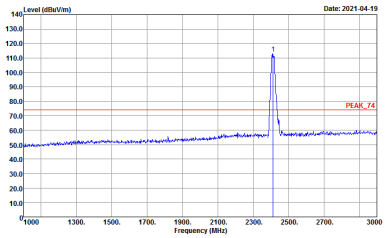
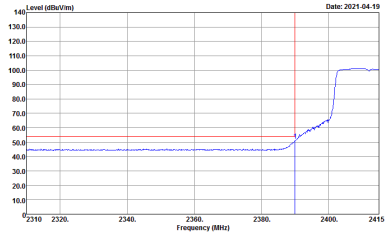
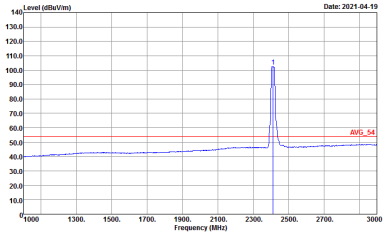
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

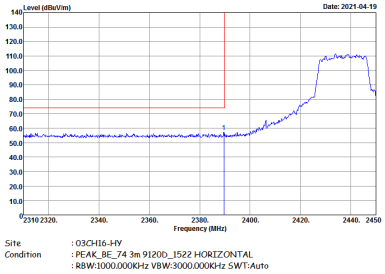
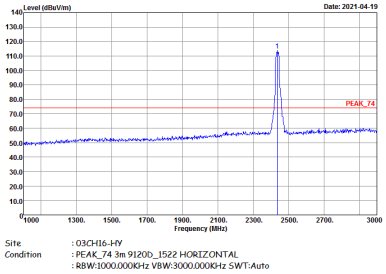
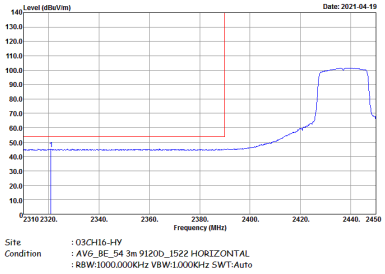
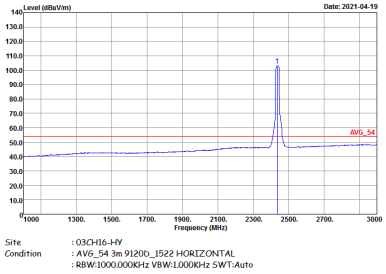
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak		
Avg.		

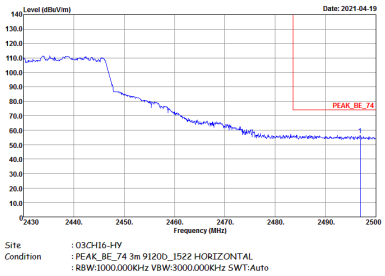
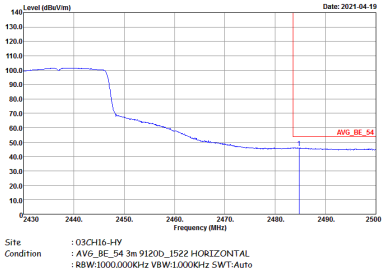
2.4GHz 2400~2483.5MHz

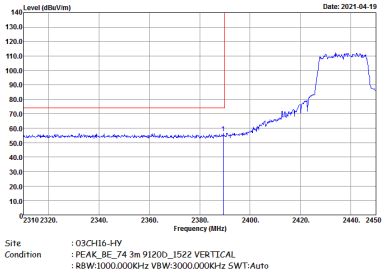
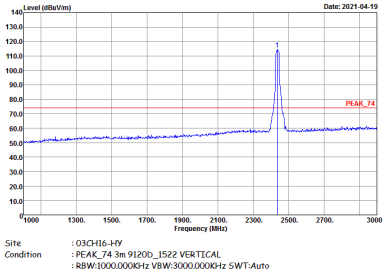
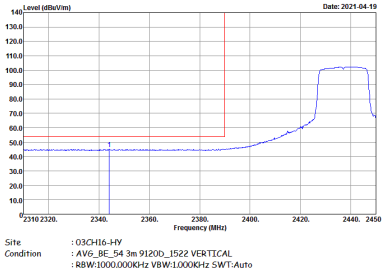
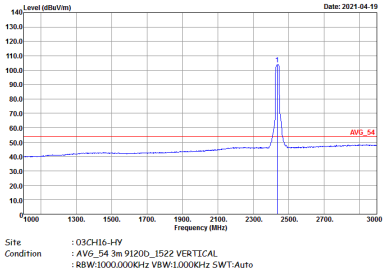
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

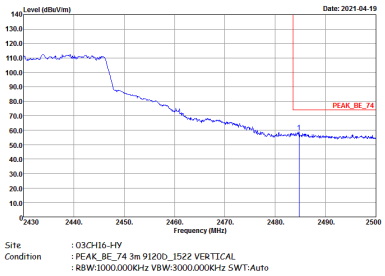
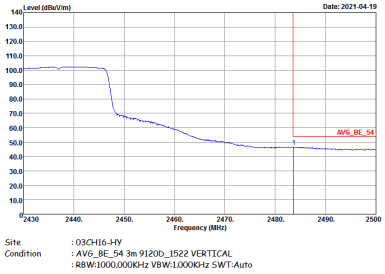
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

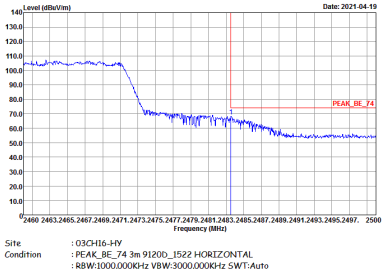
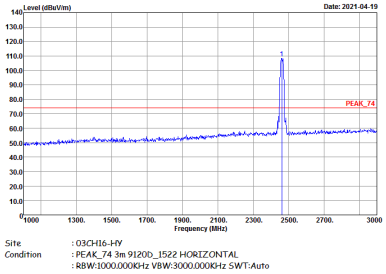
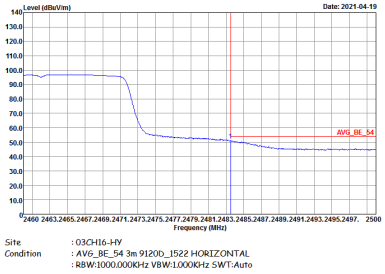
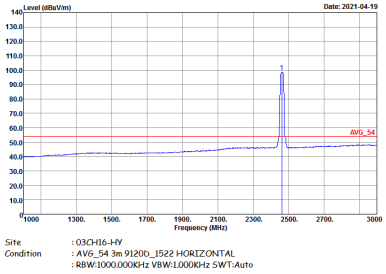
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 9120D_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 9120D_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

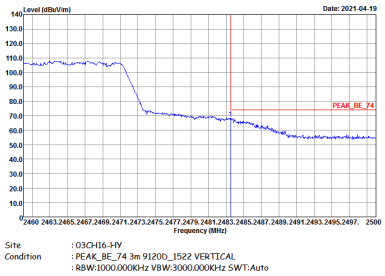
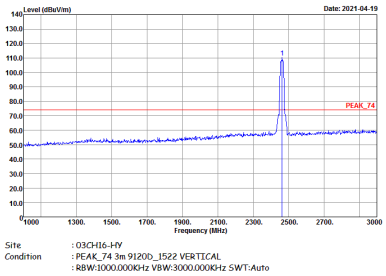
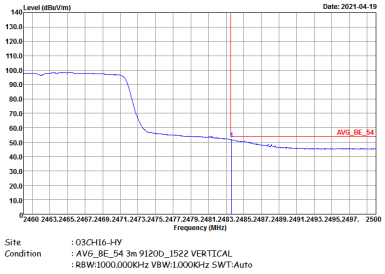
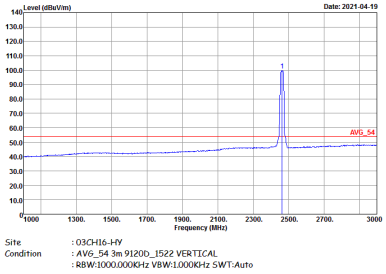
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

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

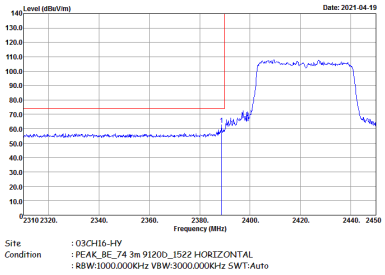
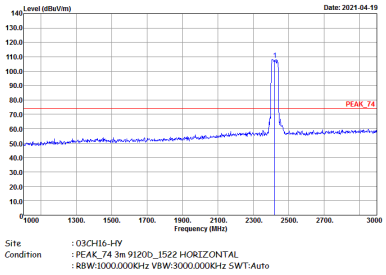
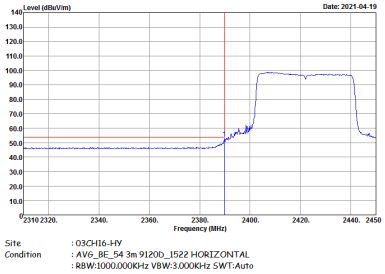
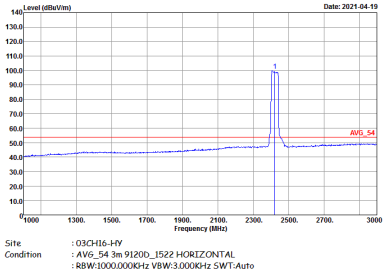
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

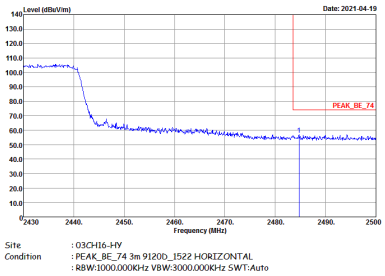
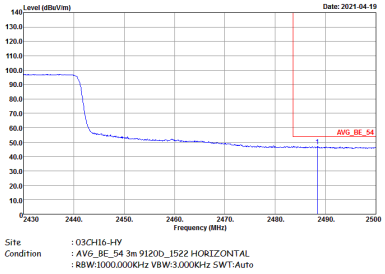
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
1	Horizontal	Fundamental
Peak		
Avg.		

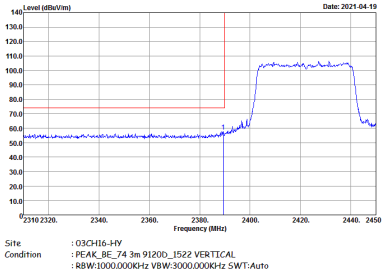
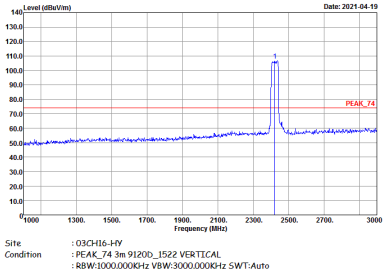
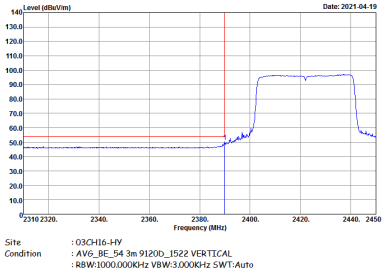
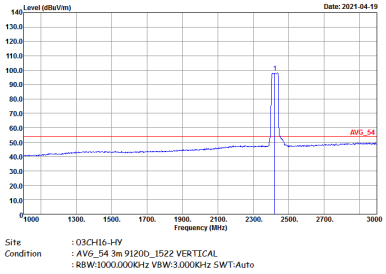
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
1	Vertical	Fundamental
Peak		
Avg.		

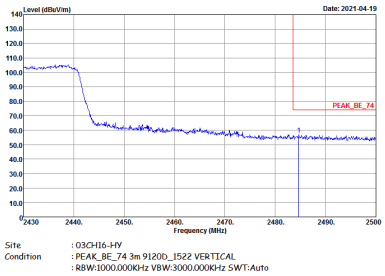
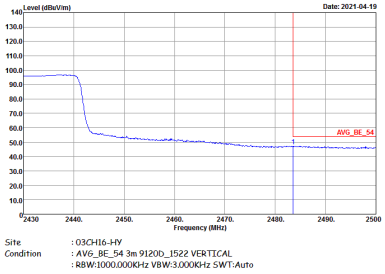
2.4GHz 2400~2483.5MHz

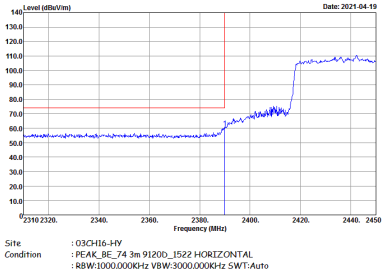
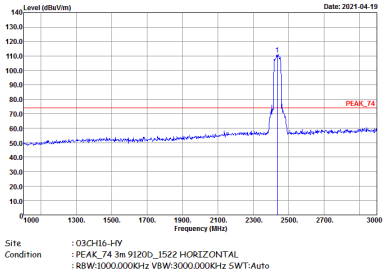
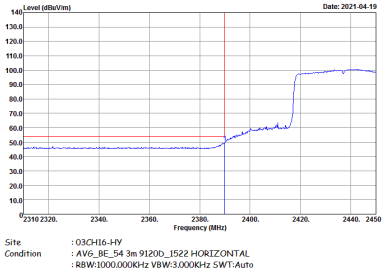
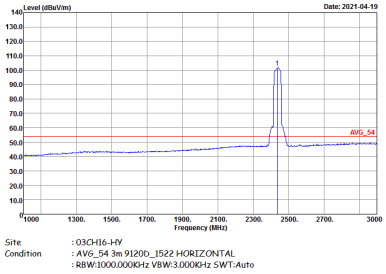
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

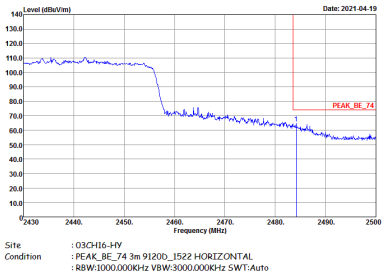
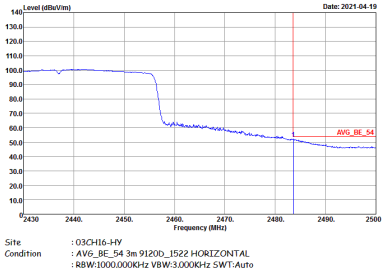
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

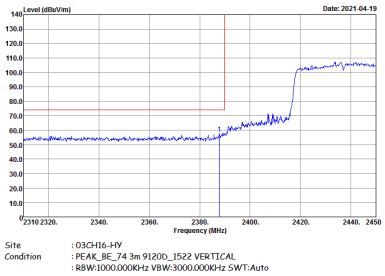
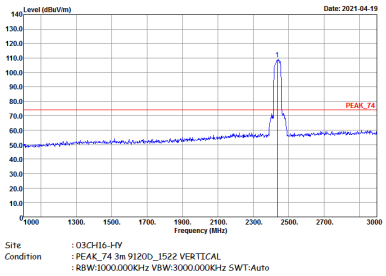
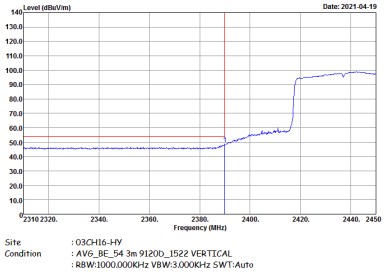
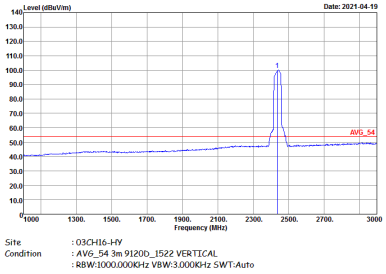
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

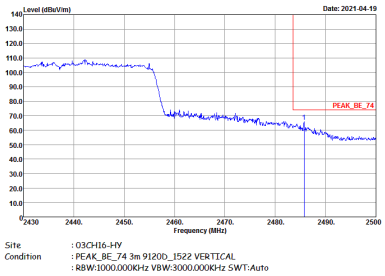
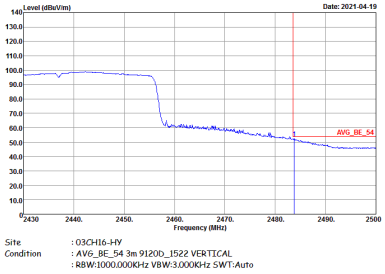
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

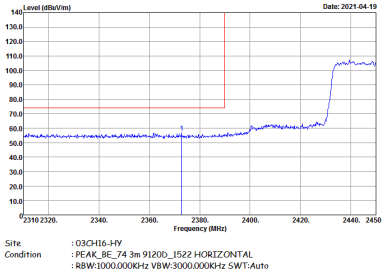
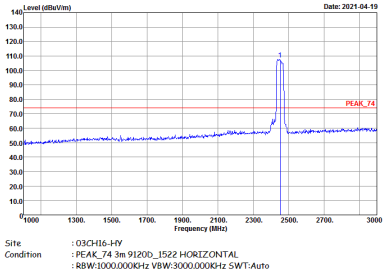
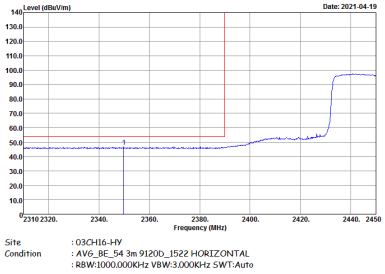
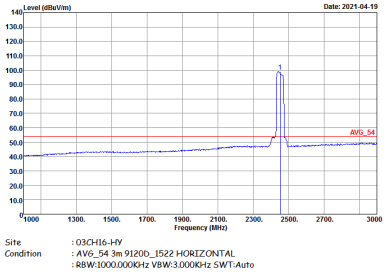
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

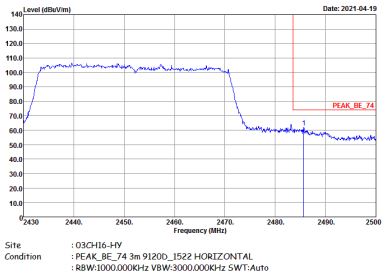
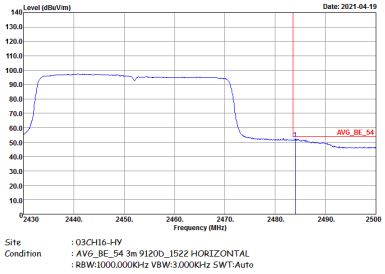
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

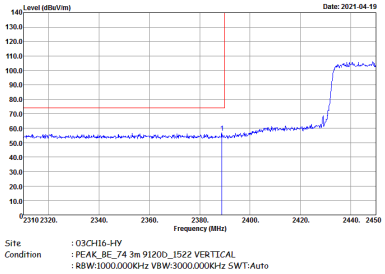
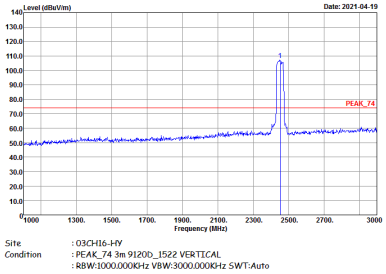
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - L	
1	Vertical	Fundamental
Peak		
Avg.