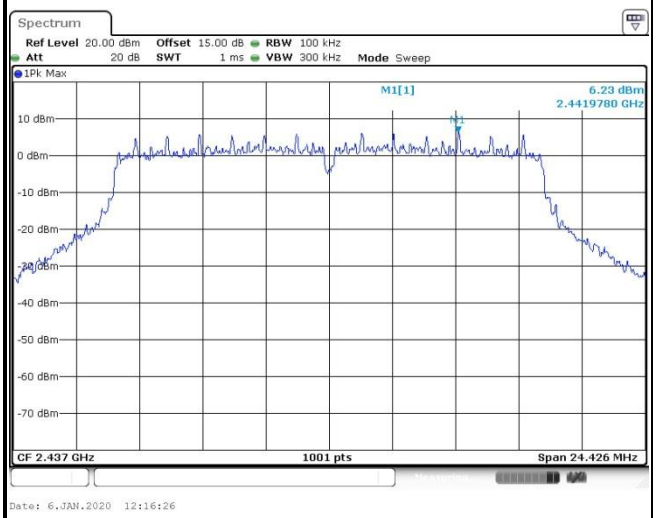
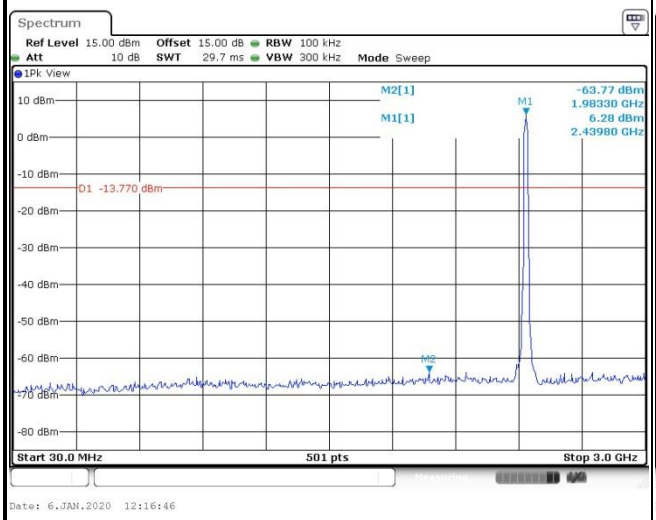
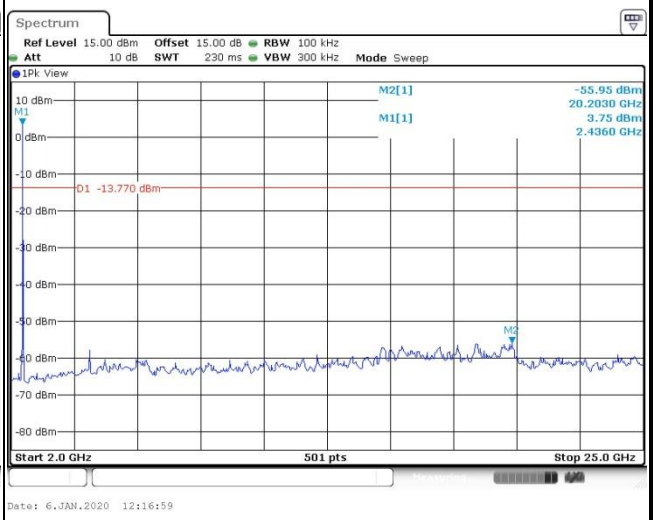
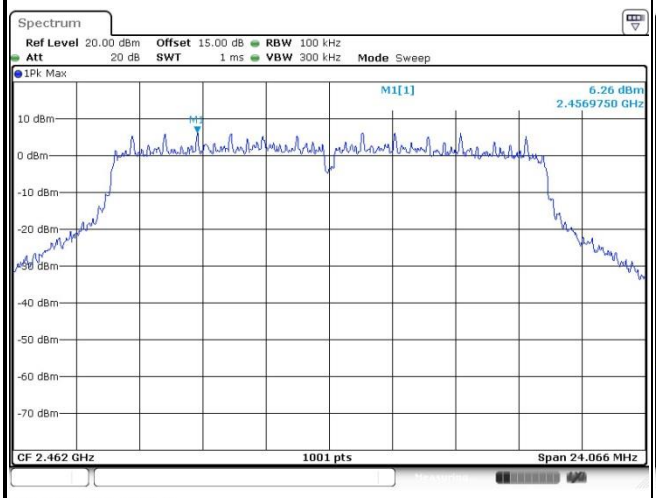
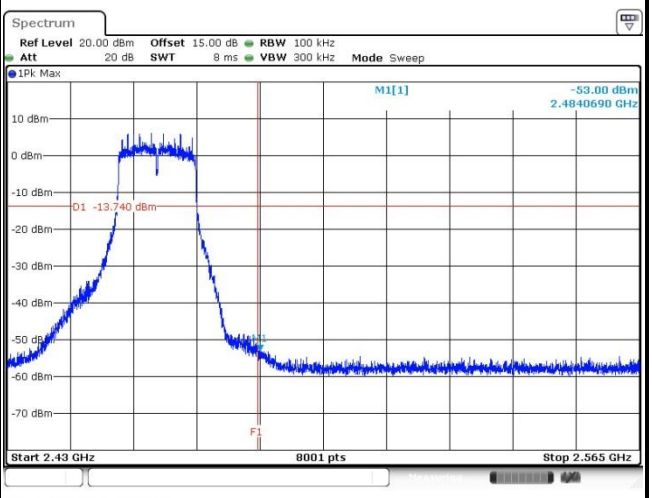
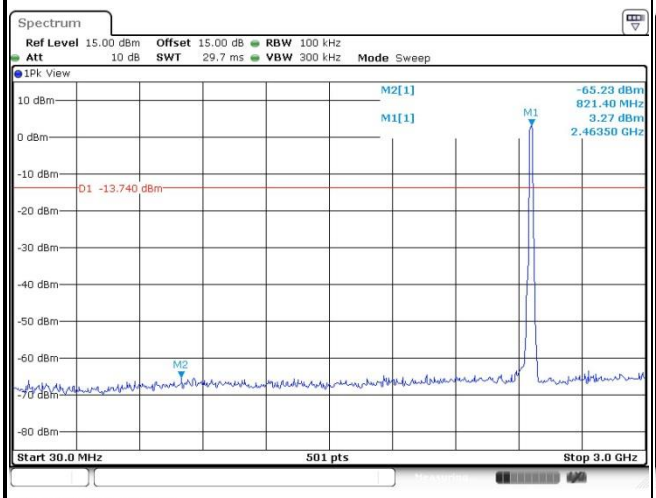
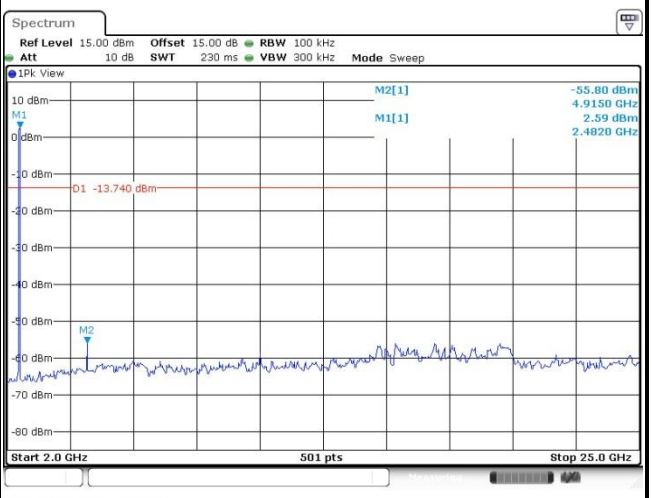
Test Mode :	802.11g	Test Channel :	06

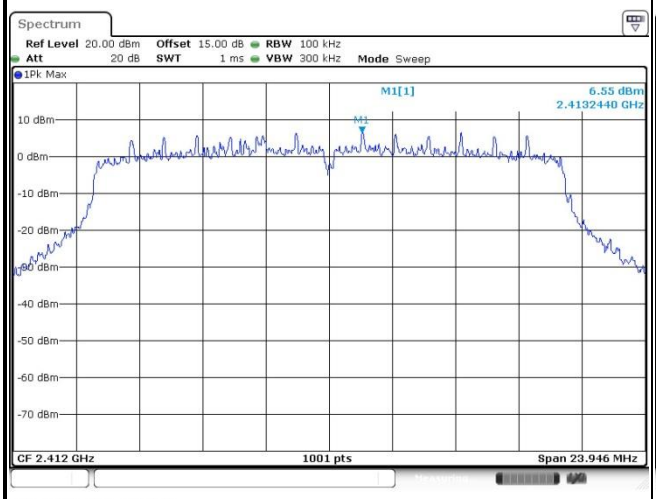
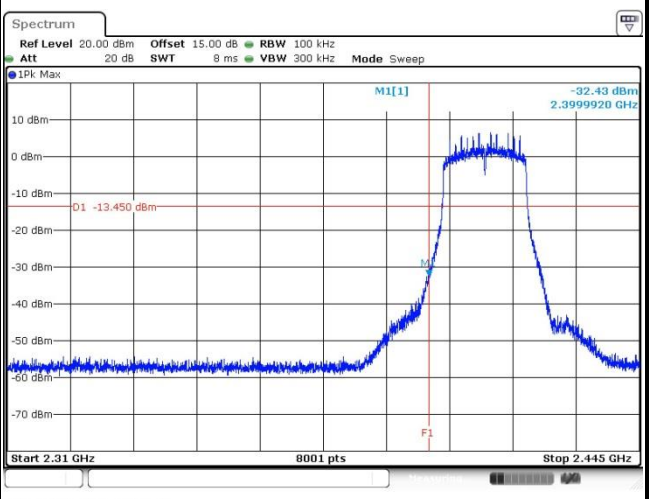
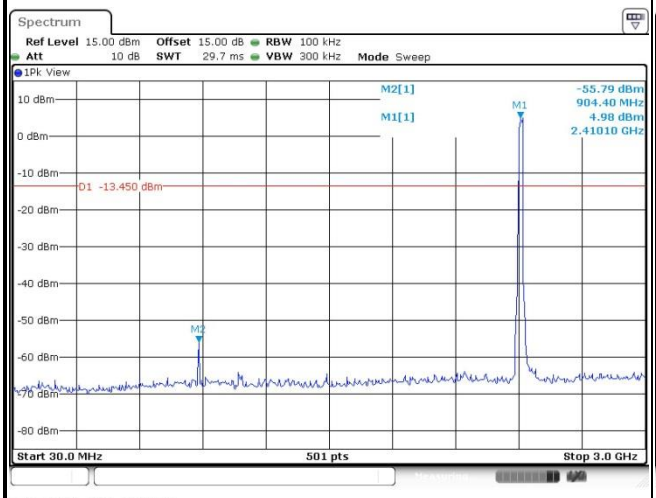
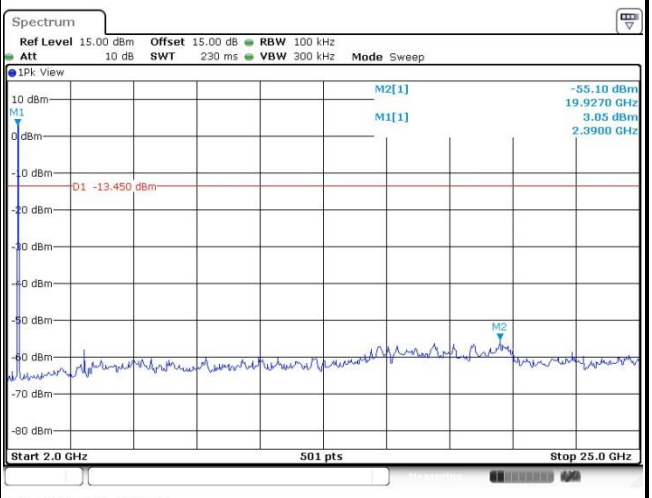
100kHz PSD reference Level	Channel Plot
	

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

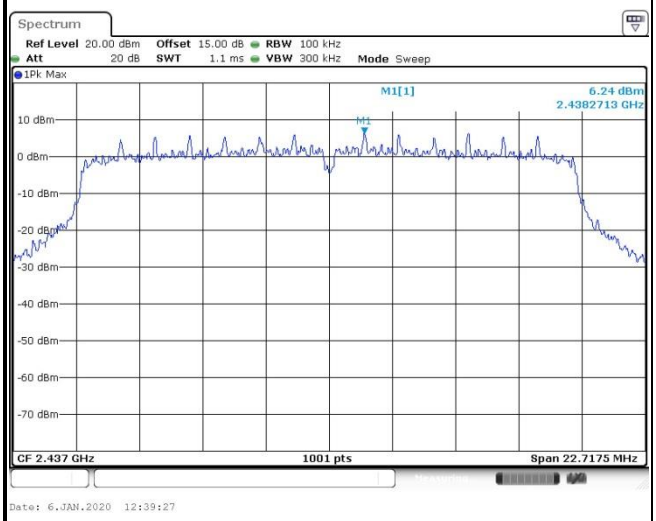
Test Mode :	802.11g	Test Channel :	11

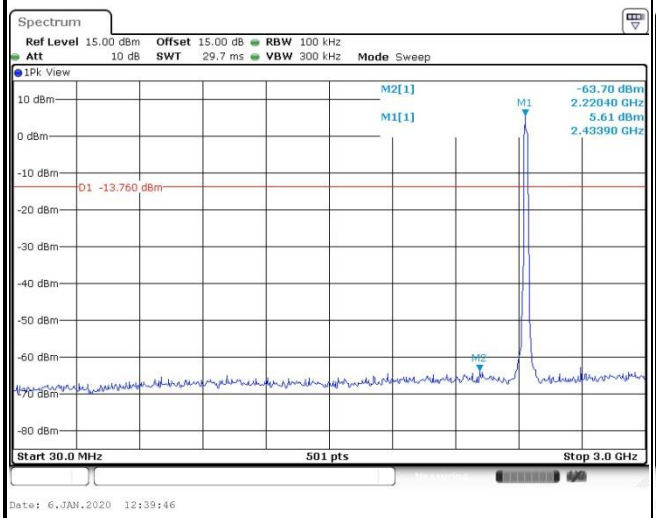
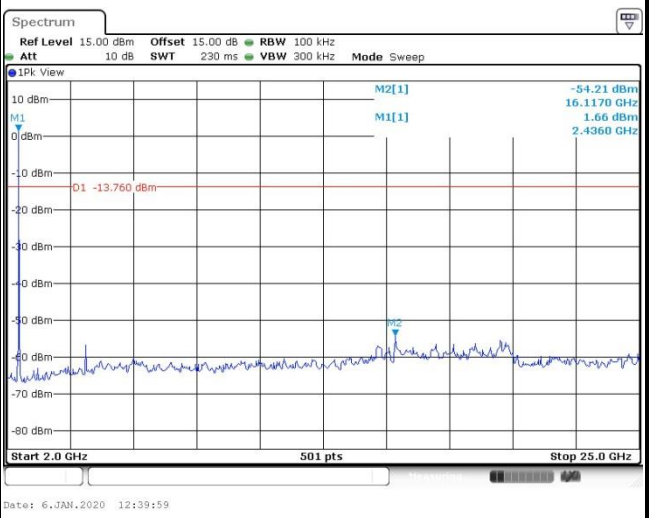
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11n HT20	Test Channel :	01

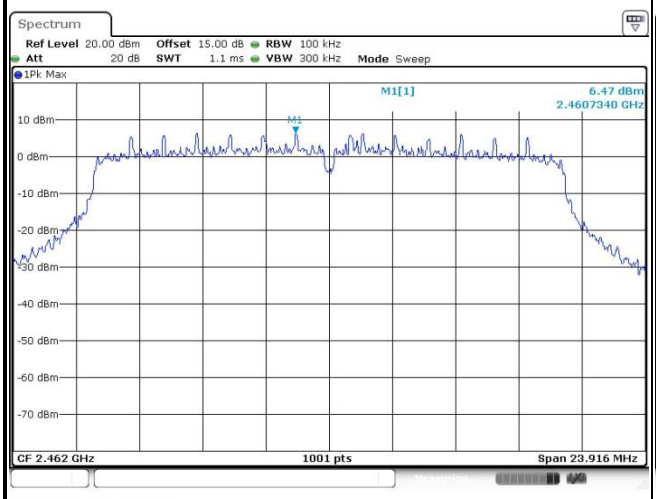
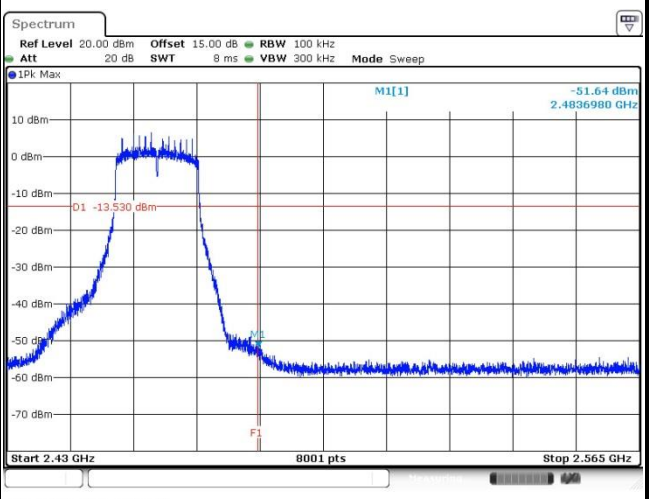
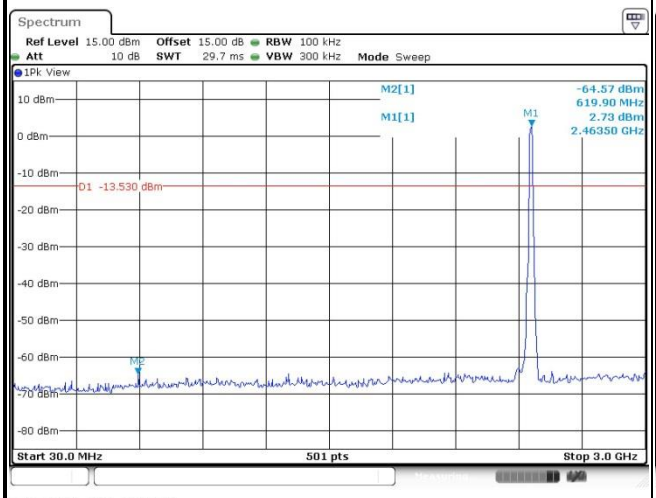
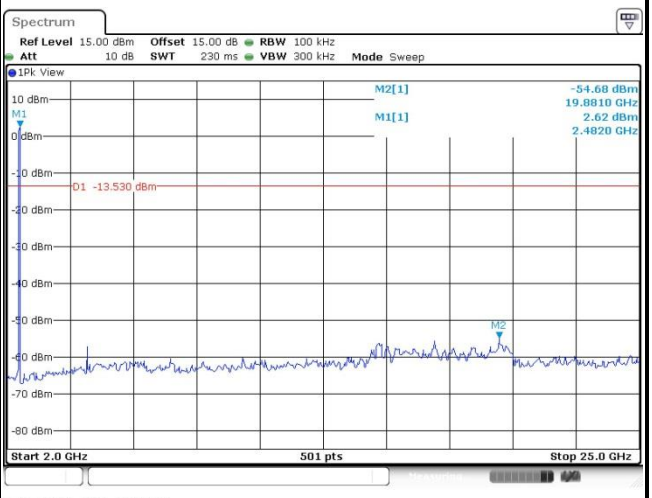
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11n HT20	Test Channel :	06

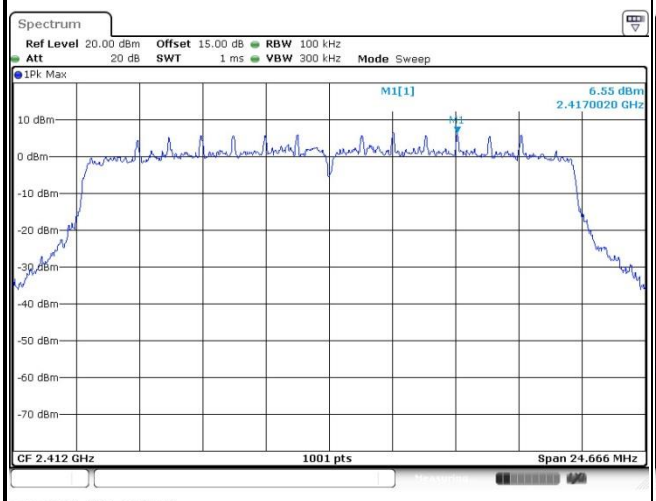
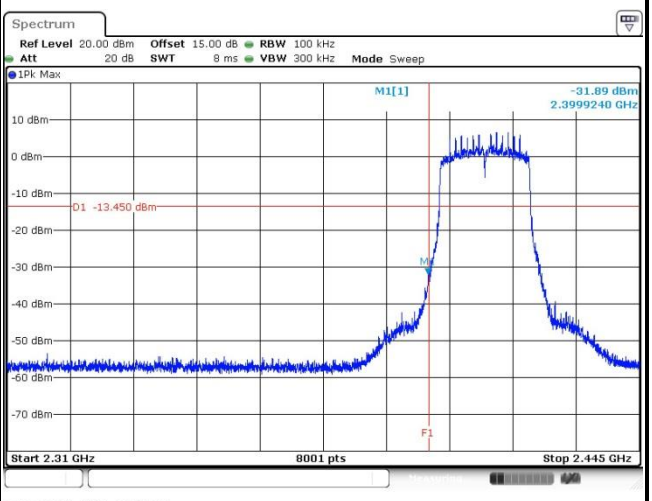
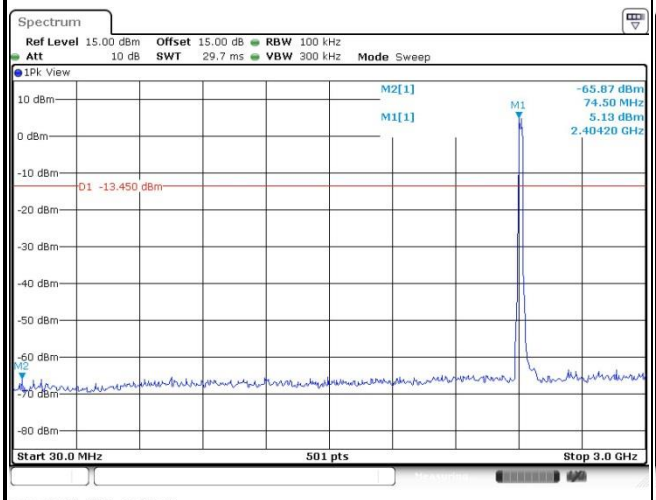
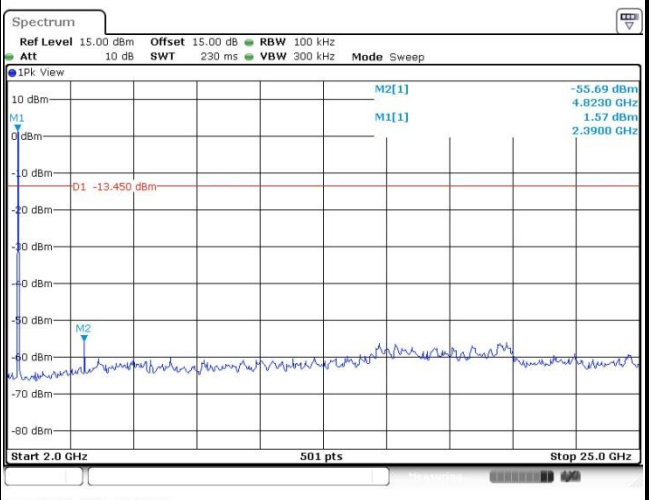
100kHz PSD reference Level	Channel Plot
	

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

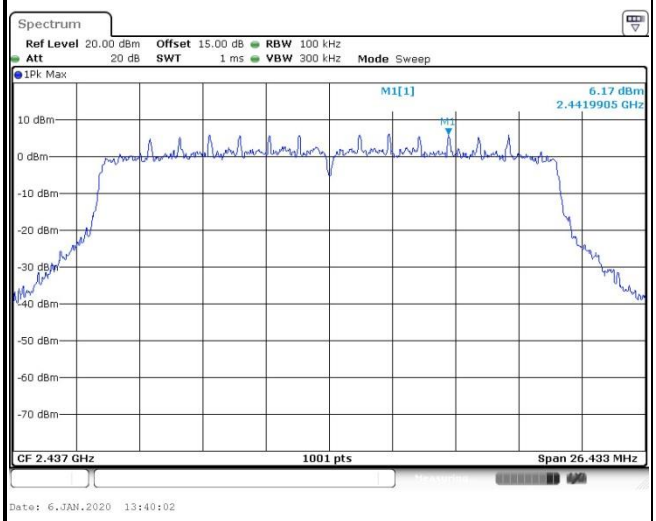
Test Mode :	802.11n HT20	Test Channel :	11

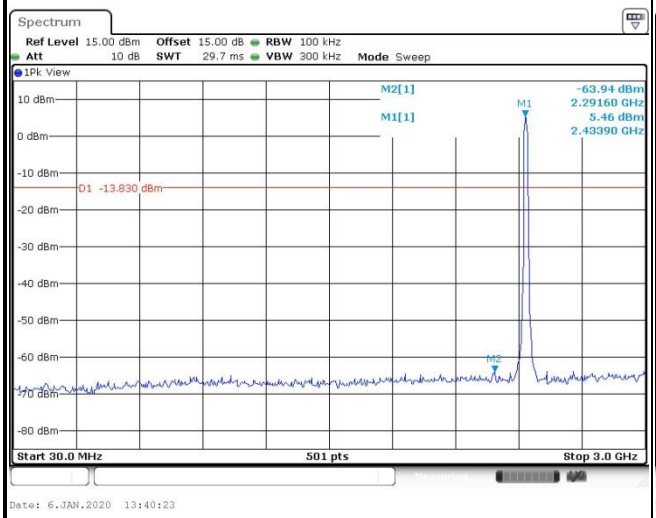
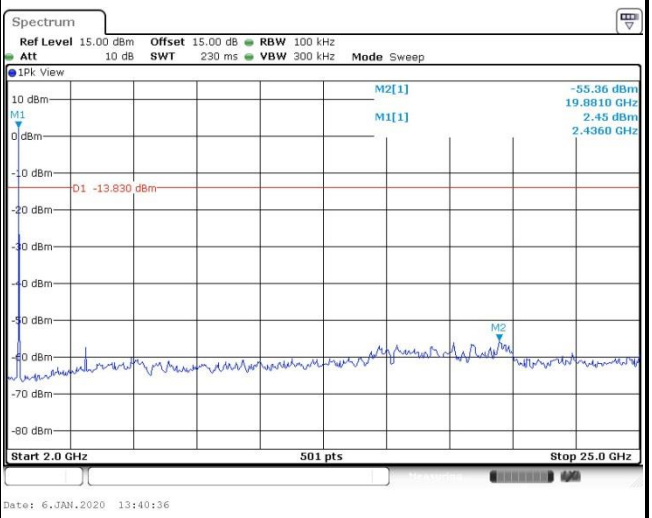
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HT20	Test Channel :	01

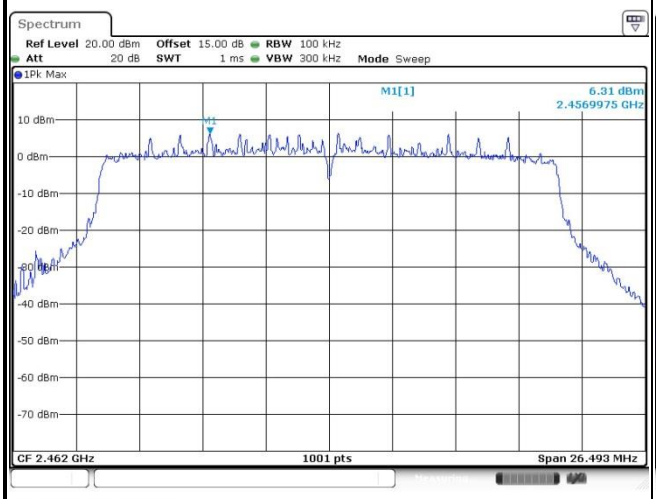
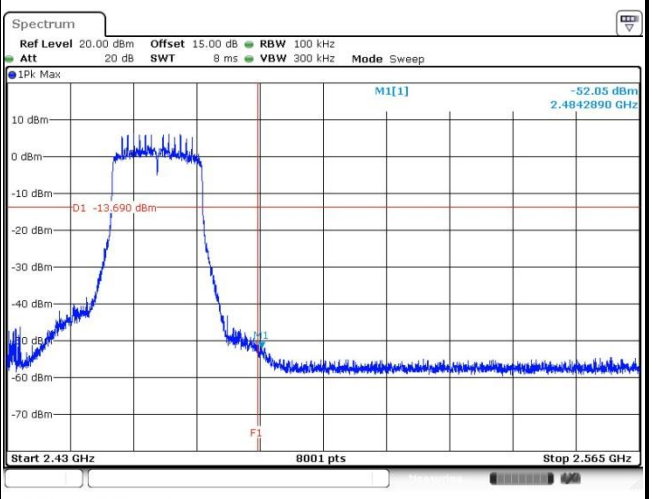
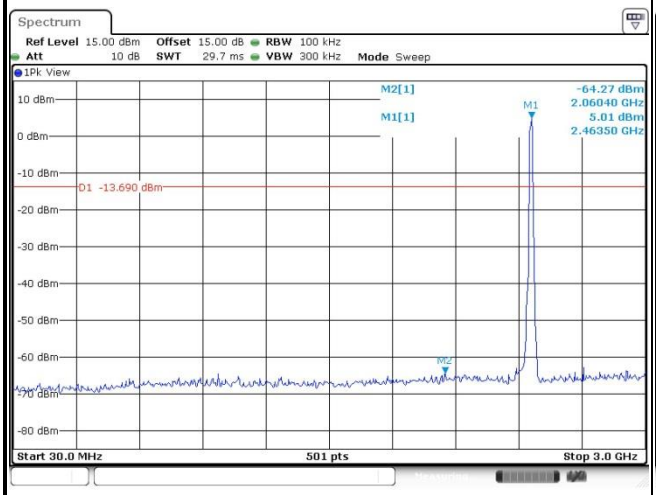
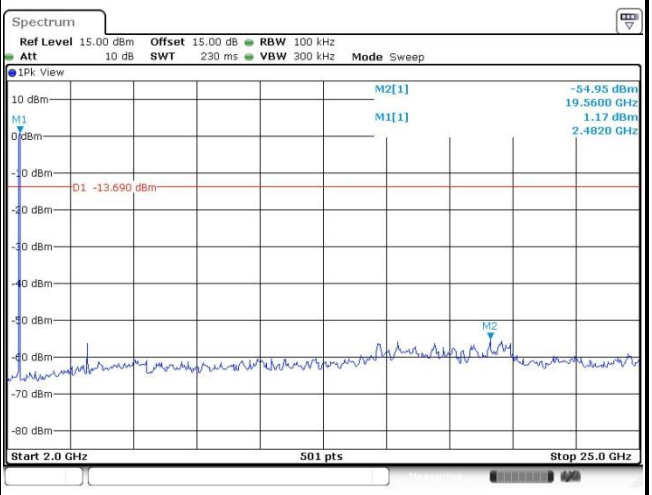
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HT20	Test Channel :	06

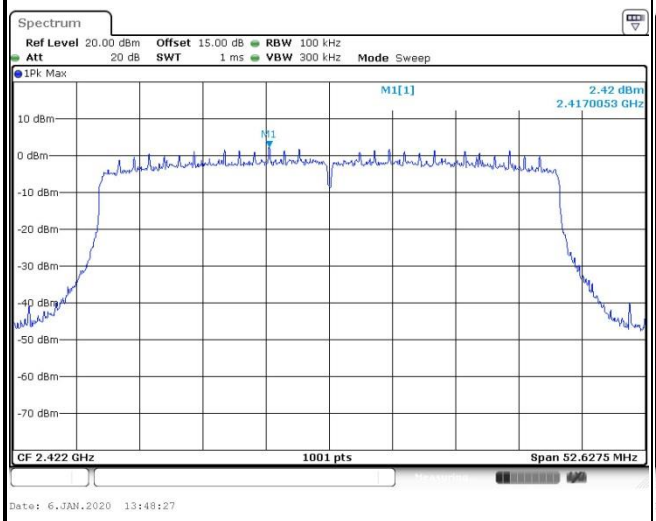
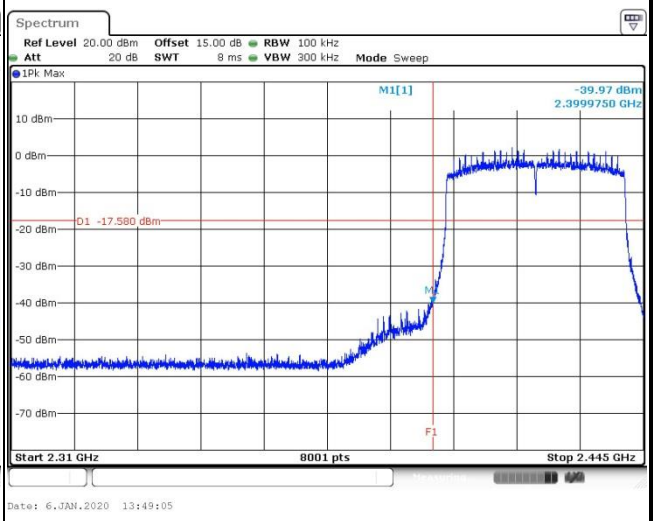
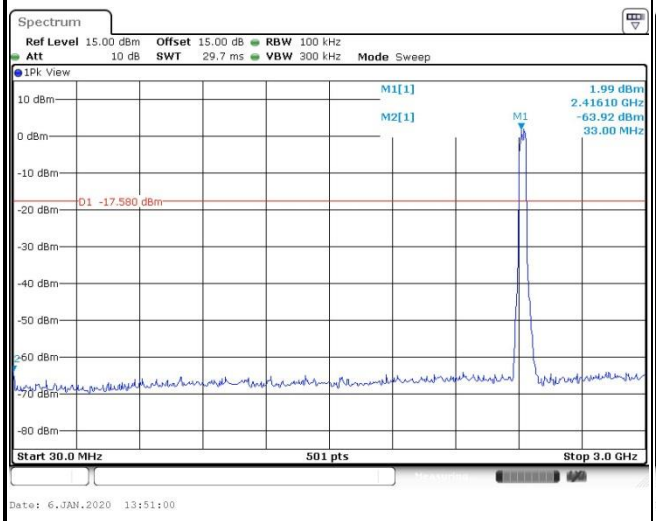
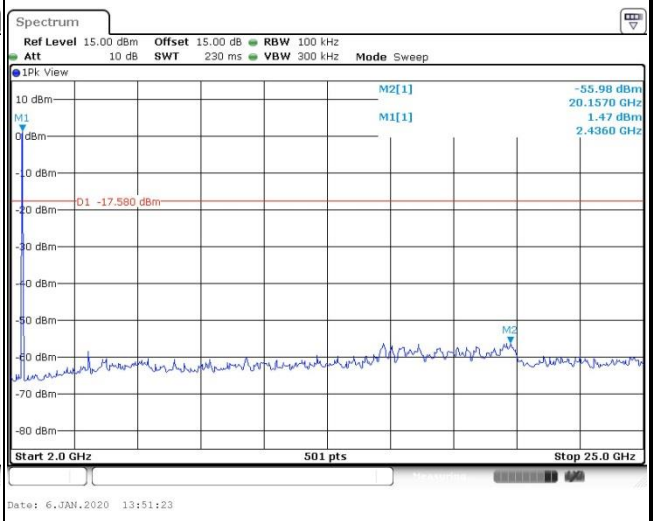
100kHz PSD reference Level	Channel Plot
	

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

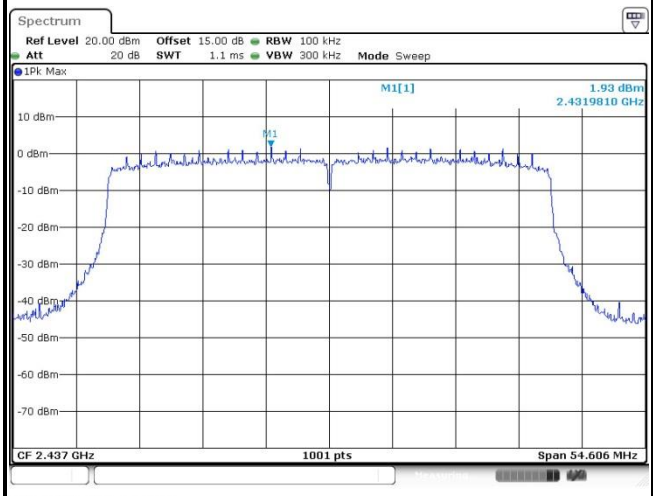
Test Mode :	802.11ax HT20	Test Channel :	11

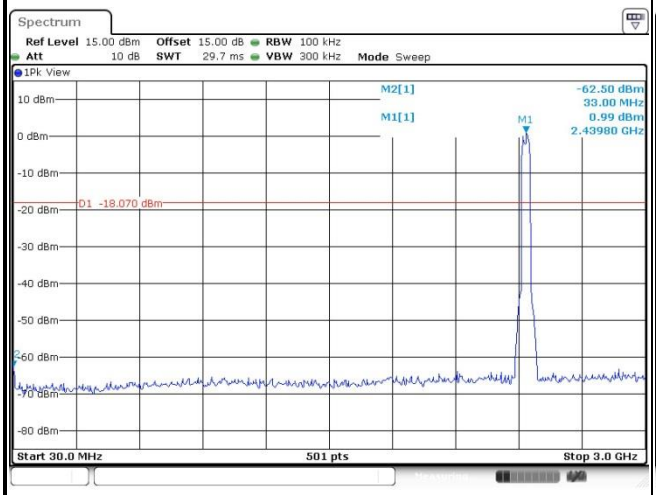
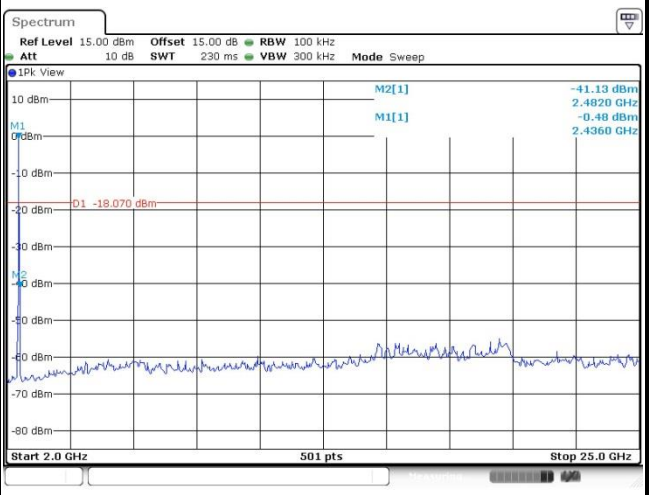
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HT40	Test Channel :	03

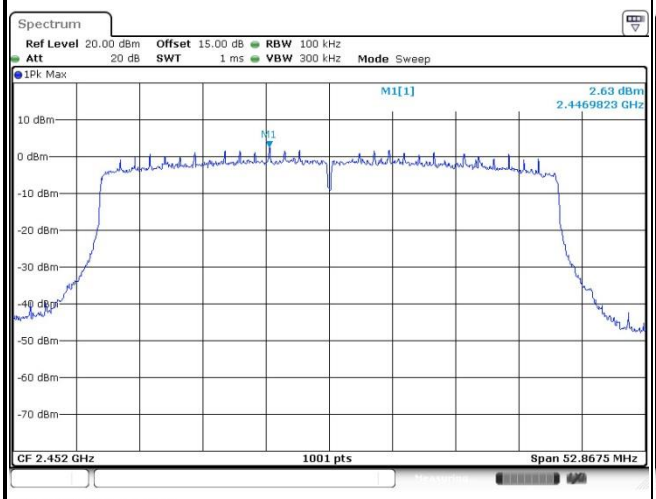
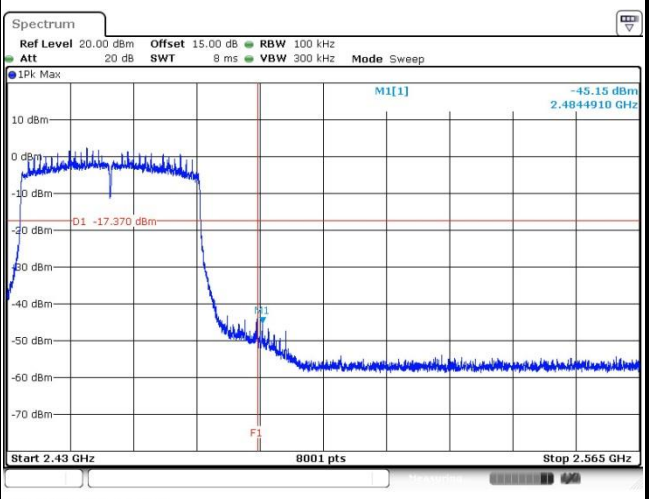
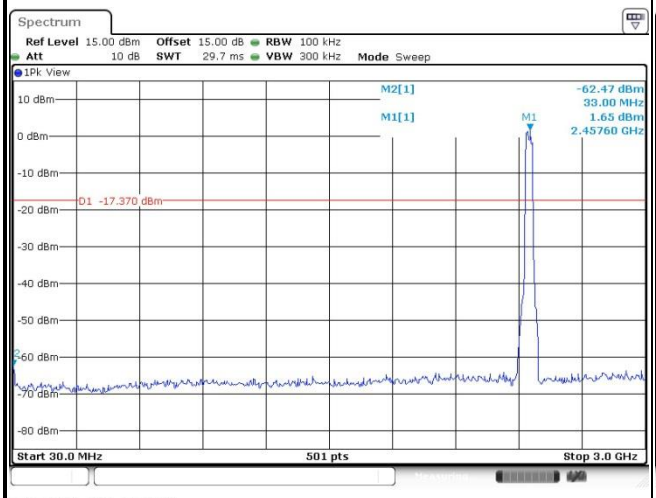
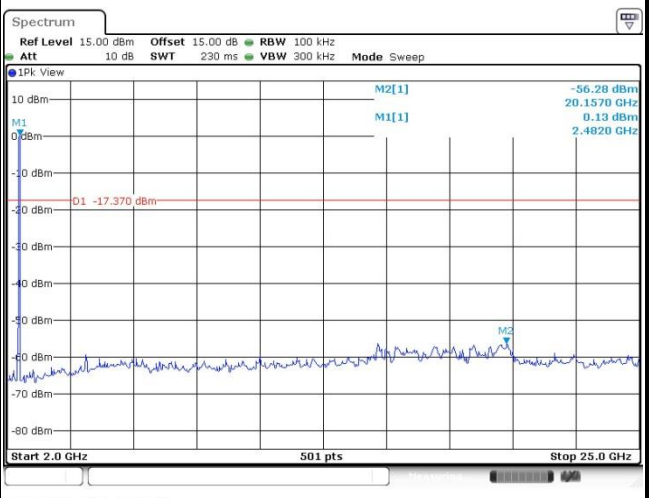
100kHz PSD reference Level	Channel Plot
	
Spurious Emission 30MHz~3GHz	**Spurious Emission 2GHz~25GHz**
	

Test Mode :	802.11ax HT40	Test Channel :	06

100kHz PSD reference Level	Channel Plot
	

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

Test Mode :	802.11ax HT40	Test Channel :	09

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

Note: For 11ax testing, the whole testing has assessed only full Ru tones mode by referring to their higher conducted power.

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

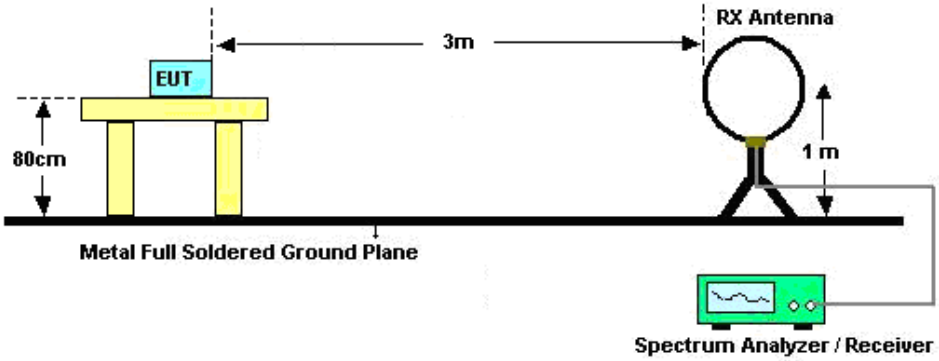
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

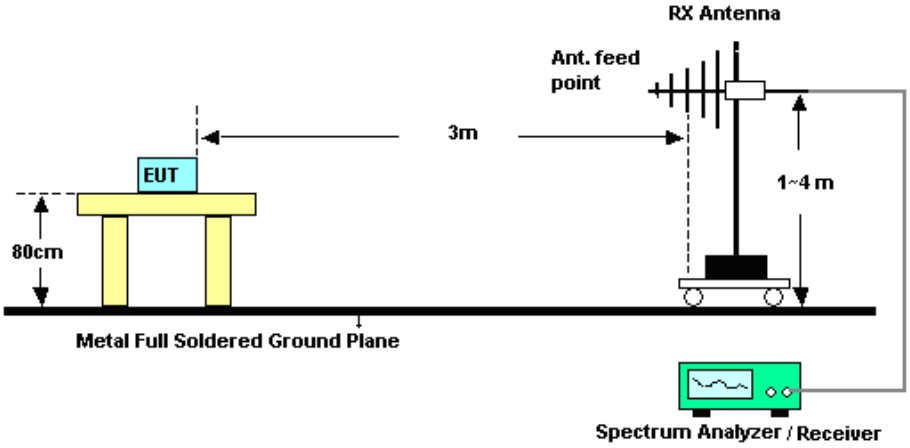
1. The testing follows ANSI C63.10-2013 clause 11.11 & 11.12
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz 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 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
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= 3MHz for f ≥ 1 GHz for peak measurement.
   For average measurement:
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

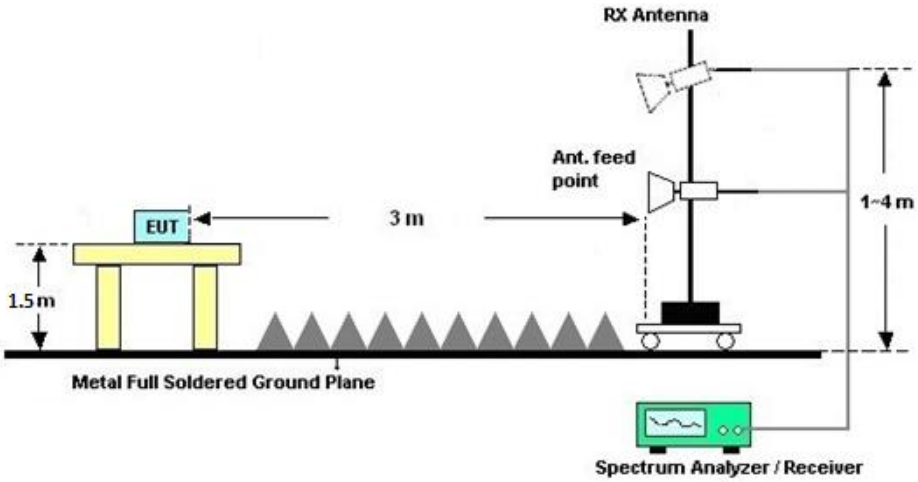
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C.

3.5.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix C.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

Frequency of Emission (MHz)	Conducted Limit (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.

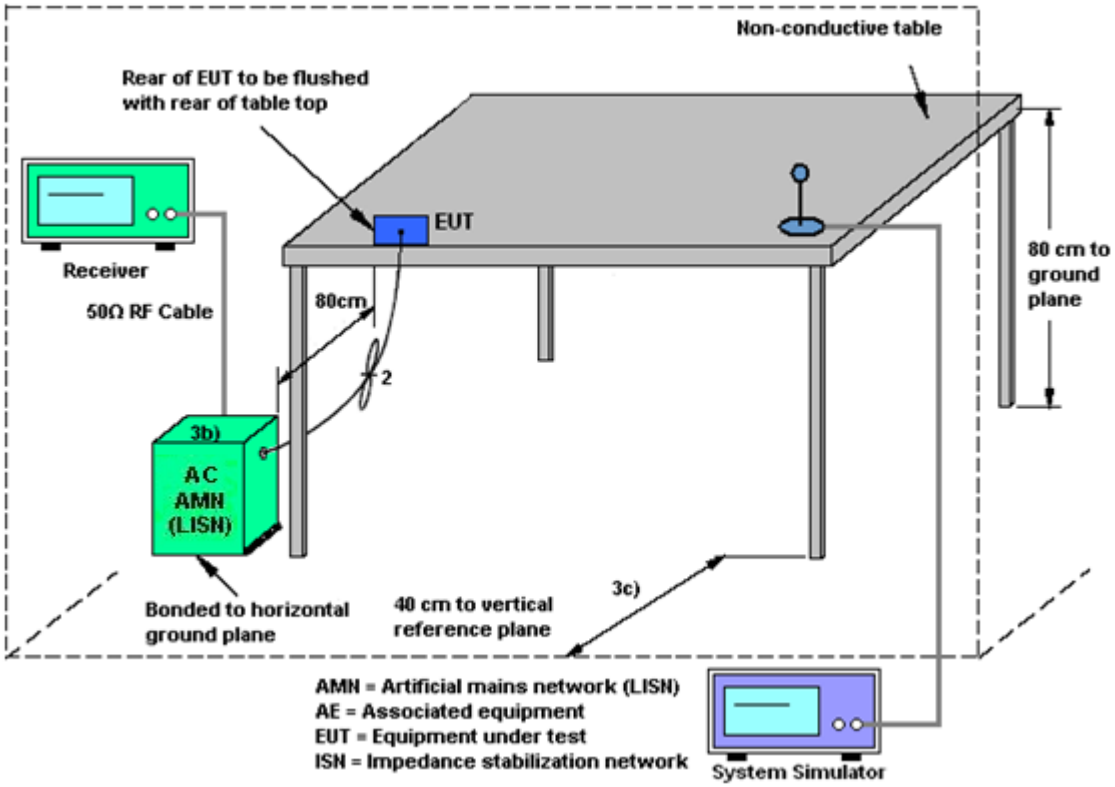
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 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 should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

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

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	-2.80	-3.00	-2.80	0.11	0.00	0.00

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

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

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 18, 2019	Jan. 03, 2020~ Jan. 19, 2020	Apr. 17, 2020	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 26, 2019	Jan. 03, 2020~ Jan. 19, 2020	Dec. 25, 2020	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 26, 2019	Jan. 03, 2020~ Jan. 19, 2020	Dec. 25, 2020	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Apr. 19, 2019	Dec. 11, 2019	Apr. 18, 2020	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 29, 2019	Dec. 11, 2019	May 28, 2020	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 19, 2019	Dec. 11, 2019	Jul. 18, 2020	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 07, 2019	Dec. 11, 2019	Jan. 06, 2020	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 22, 2019	Dec. 11, 2019	Jul. 21, 2020	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 18, 2019	Dec. 11, 2019	Apr. 17, 2020	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 18, 2019	Dec. 11, 2019	Oct. 17, 2020	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 18, 2019	Dec. 11, 2019	Oct. 17, 2020	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 18, 2019	Dec. 11, 2019	Oct. 17, 2020	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Dec. 11, 2019	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Dec. 11, 2019	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Dec. 11, 2019	NCR	Radiation (03CH02-SZ)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Dec. 26, 2018	Dec. 13, 2019	Dec. 25, 2019	Conduction (CO01-SZ)
AC LISN	EMCO	3816/2SH	00103912	9kHz~30MHz	Oct. 17, 2019	Dec. 13, 2019	Oct. 16, 2020	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Dec. 27, 2018	Dec. 13, 2019	Dec. 26, 2019	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 23, 2019	Dec. 13, 2019	Jul. 22, 2020	Conduction (CO01-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.6dB**

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

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

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.4dB**

Appendix A. Conducted Test Results

A1. Conducted Test Results

Test Engineer:	Zhang Jiang	Temperature:	21~25	°C
Test Date:	2020/1/3~2020/1/19	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band MIMO										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant1	Ant2	Ant1	Ant2		
11b	1Mbps	2	1	2412	12.94	12.89	8.07	8.03	0.50	Pass
11b	1Mbps	2	6	2437	12.99	13.04	8.05	8.05	0.50	Pass
11b	1Mbps	2	11	2462	13.09	13.04	8.05	8.05	0.50	Pass
11g	6Mbps	2	1	2412	16.38	16.38	15.64	15.86	0.50	Pass
11g	6Mbps	2	6	2437	16.38	16.38	15.76	16.28	0.50	Pass
11g	6Mbps	2	11	2462	16.43	16.43	16.28	16.04	0.50	Pass
HT20	MCS0	2	1	2412	17.48	17.53	15.94	15.96	0.50	Pass
HT20	MCS0	2	6	2437	17.58	17.48	16.74	15.14	0.50	Pass
HT20	MCS0	2	11	2462	17.53	17.53	15.14	15.94	0.50	Pass

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band MIMO											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	2	1	2412	-6.73	-5.04	-2.03	0.11		8.00		Pass
11b	1Mbps	2	6	2437	-7.14	-8.40	-4.13	0.11		8.00		Pass
11b	1Mbps	2	11	2462	-6.84	-8.15	-3.83	0.11		8.00		Pass
11g	6Mbps	2	1	2412	-9.87	-8.95	-5.94	0.11		8.00		Pass
11g	6Mbps	2	6	2437	-9.34	-10.01	-6.33	0.11		8.00		Pass
11g	6Mbps	2	11	2462	-9.85	-8.76	-5.75	0.11		8.00		Pass
HT20	MCS0	2	1	2412	-5.99	-9.00	-2.98	0.11		8.00		Pass
HT20	MCS0	2	6	2437	-7.12	-8.52	-4.11	0.11		8.00		Pass
HT20	MCS0	2	11	2462	-9.20	-7.81	-4.80	0.11		8.00		Pass

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

TEST RESULTS DATA
Peak Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	2	1	2412	21.13	21.17	24.16	30.00		-2.80		21.36		36.00		Pass
11b	1Mbps	2	6	2437	21.17	21.12	24.16	30.00		-2.80		21.36		36.00		Pass
11b	1Mbps	2	11	2462	21.14	21.10	24.13	30.00		-2.80		21.33		36.00		Pass
11g	6Mbps	2	1	2412	22.83	22.73	25.79	30.00		-2.80		22.99		36.00		Pass
11g	6Mbps	2	6	2437	22.74	22.64	25.70	30.00		-2.80		22.90		36.00		Pass
11g	6Mbps	2	11	2462	22.68	22.53	25.62	30.00		-2.80		22.82		36.00		Pass
HT20	MCS0	2	1	2412	22.43	22.56	25.51	30.00		-2.80		22.71		36.00		Pass
HT20	MCS0	2	6	2437	22.57	22.35	25.47	30.00		-2.80		22.67		36.00		Pass
HT20	MCS0	2	11	2462	22.42	22.35	25.40	30.00		-2.80		22.60		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		2	1	2412	Full	18.78	18.83	18.00	16.44	0.50	Pass
HE20		2	6	2437	Full	18.83	18.88	17.98	17.62	0.50	Pass
HE20		2	11	2462	Full	18.93	18.93	18.38	17.66	0.50	Pass
HE40		2	3	2422	Full	37.76	37.66	37.20	35.08	0.50	Pass
HE40		2	6	2437	Full	37.66	37.76	37.28	36.40	0.50	Pass
HE40		2	9	2452	Full	37.66	37.66	37.24	35.25	0.50	Pass

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	-8.50	-8.04	-5.03	0.11		8.00		Pass
HE20	MCS0	2	1	2412	26/0	-9.82	-8.61	-5.60	0.11		8.00		Pass
HE20	MCS0	2	1	2412	52/37	-9.85	-9.27	-6.26	0.11		8.00		Pass
HE20	MCS0	2	1	2412	106/53	-9.13	-8.44	-5.43	0.11		8.00		Pass
HE20	MCS0	2	6	2437	Full	-8.61	-9.21	-5.60	0.11		8.00		Pass
HE20	MCS0	2	11	2462	Full	-8.16	-8.11	-5.10	0.11		8.00		Pass
HE20	MCS0	2	11	2462	26/8	-9.75	-9.17	-6.16	0.11		8.00		Pass
HE20	MCS0	2	11	2462	52/40	-9.48	-8.48	-5.47	0.11		8.00		Pass
HE20	MCS0	2	11	2462	106/54	-8.95	-8.44	-5.43	0.11		8.00		Pass
HE40	MCS0	2	3	2422	Full	-13.67	-12.70	-9.69	0.11		8.00		Pass
HE40	MCS0	2	3	2422	242/61	-13.73	-13.34	-10.33	0.11		8.00		Pass
HE40	MCS0	2	6	2437	Full	-12.35	-12.73	-9.34	0.11		8.00		Pass
HE40	MCS0	2	9	2452	Full	-13.88	-13.31	-10.30	0.11		8.00		Pass
HE40	MCS0	2	9	2452	242/62	-14.34	-14.36	-11.33	0.11		8.00		Pass

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

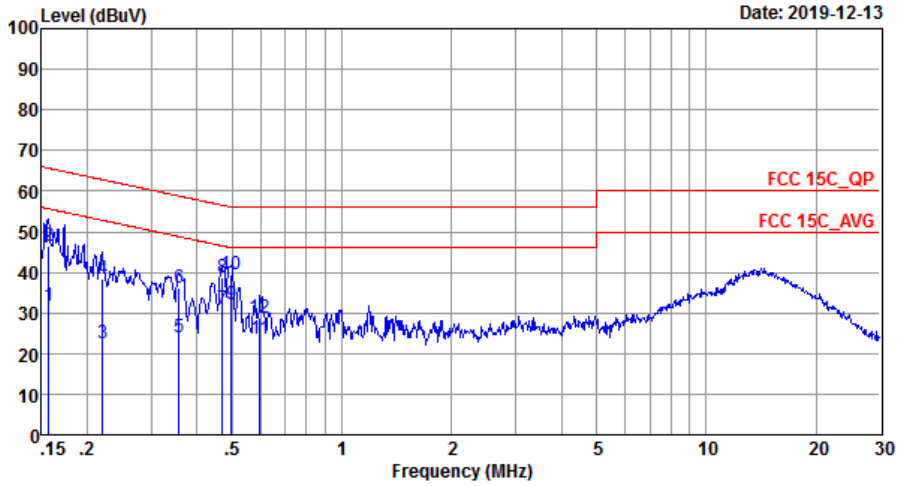
TEST RESULTS DATA
Peak Output Power

2.4GHz Band MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	2	1	2412	Full	22.53	23.51	26.06	30.00		-2.80		23.26		36.00		Pass
HE20	MCS0	2	1	2412	26/0	20.46	20.99	23.74	30.00		-2.80		20.94		36.00		Pass
HE20	MCS0	2	1	2412	52/37	21.41	22.04	24.75	30.00		-2.80		21.95		36.00		Pass
HE20	MCS0	2	1	2412	106/53	22.34	23.23	25.82	30.00		-2.80		23.02		36.00		Pass
HE20	MCS0	2	6	2437	Full	23.78	23.76	26.78	30.00		-2.80		23.98		36.00		Pass
HE20	MCS0	2	11	2462	Full	23.48	23.44	26.47	30.00		-2.80		23.67		36.00		Pass
HE20	MCS0	2	11	2462	26/8	21.02	21.50	24.28	30.00		-2.80		21.48		36.00		Pass
HE20	MCS0	2	11	2462	52/40	22.58	22.71	25.66	30.00		-2.80		22.86		36.00		Pass
HE20	MCS0	2	11	2462	106/54	23.40	23.37	26.40	30.00		-2.80		23.60		36.00		Pass
HE40	MCS0	2	3	2422	Full	22.33	22.31	25.33	30.00		-2.80		22.53		36.00		Pass
HE40	MCS0	2	3	2422	242/61	22.15	22.22	25.20	30.00		-2.80		22.40		36.00		Pass
HE40	MCS0	2	6	2437	Full	22.27	22.30	25.30	30.00		-2.80		22.50		36.00		Pass
HE40	MCS0	2	9	2452	Full	22.21	22.16	25.20	30.00		-2.80		22.40		36.00		Pass
HE40	MCS0	2	9	2452	242/62	22.19	22.17	25.19	30.00		-2.80		22.39		36.00		Pass

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

Appendix B. AC Conducted Emission Test Results

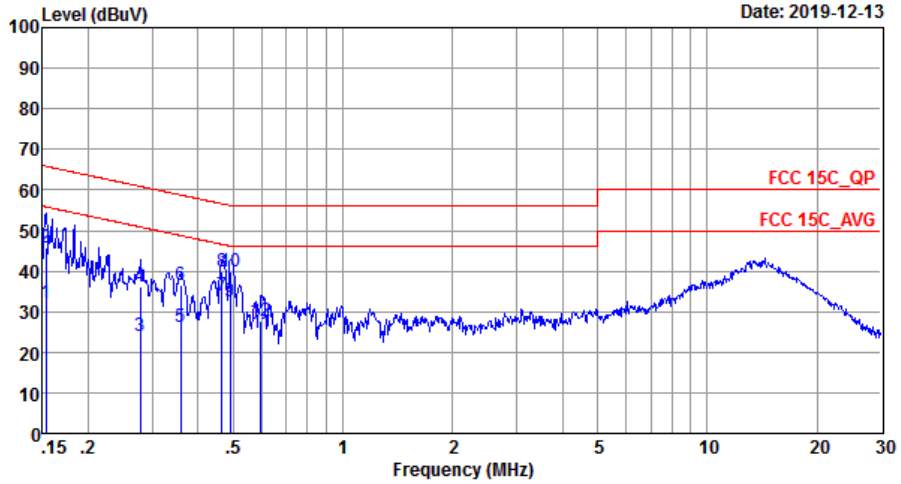
Test Engineer :	ZhangXu	Temperature :	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Line



Site : CO01-SZ
Condition: FCC 15C QP LISN 20190719_L LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.16	31.64	-24.01	55.65	21.60	0.03	10.01	Average
2		0.16	46.54	-19.11	65.65	36.50	0.03	10.01	QP
3		0.22	22.34	-30.45	52.79	12.30	0.03	10.01	Average
4		0.22	38.44	-24.35	62.79	28.40	0.03	10.01	QP
5		0.36	24.14	-24.64	48.78	14.10	0.03	10.01	Average
6		0.36	36.04	-22.74	58.78	26.00	0.03	10.01	QP
7		0.47	30.97	-15.52	46.49	20.90	0.02	10.05	Average
8		0.47	38.57	-17.92	56.49	28.50	0.02	10.05	QP
9	*	0.50	31.98	-14.07	46.05	21.90	0.02	10.06	Average
10		0.50	39.38	-16.67	56.05	29.30	0.02	10.06	QP
11		0.59	23.49	-22.51	46.00	13.40	0.02	10.07	Average
12		0.59	28.89	-27.11	56.00	18.80	0.02	10.07	QP

Test Engineer :	ZhangXu	Temperature :	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral



Site : CO01-SZ
Condition: FCC 15C QP LISN 20190719_N NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.15	32.24	-23.58	55.82	22.20	0.03	10.01	Average
2		0.15	45.84	-19.98	65.82	35.80	0.03	10.01	QP
3		0.28	23.84	-27.06	50.90	13.80	0.03	10.01	Average
4		0.28	36.24	-24.66	60.90	26.20	0.03	10.01	QP
5		0.36	26.13	-22.61	48.74	16.10	0.02	10.01	Average
6		0.36	36.63	-22.11	58.74	26.60	0.02	10.01	QP
7	*	0.47	33.96	-12.62	46.58	23.90	0.02	10.04	Average
8		0.47	39.86	-16.72	56.58	29.80	0.02	10.04	QP
9		0.49	32.58	-13.56	46.14	22.50	0.02	10.06	Average
10		0.49	39.88	-16.26	56.14	29.80	0.02	10.06	QP
11		0.59	24.79	-21.21	46.00	14.70	0.02	10.07	Average
12		0.59	27.79	-28.21	56.00	17.70	0.02	10.07	QP

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)

Appendix C. Radiated Spurious Emission

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2365.12	48.28	-25.72	74	45.74	27.83	7.51	32.8	333	25	P	H
		2390	36.9	-17.1	54	34.44	27.7	7.54	32.78	333	25	A	H
	*	2412	99.96	-	-	97.53	27.67	7.54	32.78	333	25	P	H
	*	2412	97.44	-	-	95.01	27.67	7.54	32.78	333	25	A	H
		2311.78	48.27	-25.73	74	45.68	27.97	7.48	32.86	270	326	P	V
		2390	37.44	-16.56	54	34.98	27.7	7.54	32.78	270	326	A	V
	*	2412	107.65	-	-	105.22	27.67	7.54	32.78	270	326	P	V
	*	2412	105.09	-	-	102.66	27.67	7.54	32.78	270	326	A	V
802.11b CH 06 2437MHz		2365.3	47.63	-26.37	74	45.09	27.83	7.51	32.8	333	25	P	H
		2344.58	36.1	-17.9	54	33.54	27.9	7.48	32.82	333	25	A	H
	*	2437	100.64	-	-	98.26	27.6	7.54	32.76	333	25	P	H
	*	2437	96.12	-	-	93.74	27.6	7.54	32.76	333	25	A	H
		2497.48	46.53	-27.47	74	44.3	27.4	7.53	32.7	333	25	P	H
		2483.76	36.03	-17.97	54	33.75	27.47	7.53	32.72	333	25	A	H
		2327.36	47.43	-26.57	74	44.86	27.93	7.48	32.84	270	326	P	V
		2389.24	36.46	-17.54	54	34.02	27.7	7.54	32.8	270	326	A	V
	*	2437	107.29	-	-	104.91	27.6	7.54	32.76	270	326	P	V
	*	2437	104.82	-	-	102.44	27.6	7.54	32.76	270	326	A	V
		2484.67	47.4	-26.6	74	45.12	27.47	7.53	32.72	270	326	P	V
		2484.88	36.45	-17.55	54	34.17	27.47	7.53	32.72	270	326	A	V

802.11b CH 11 2462MHz	*	2462	101.23	-	-	98.9	27.53	7.54	32.74	333	25	P	H
	*	2462	98.7	-	-	96.37	27.53	7.54	32.74	333	25	A	H
		2493.32	47.51	-26.49	74	45.28	27.4	7.53	32.7	333	25	P	H
		2483.96	36.44	-17.56	54	34.16	27.47	7.53	32.72	333	25	A	H
	*	2462	107.26	-	-	104.93	27.53	7.54	32.74	270	326	P	V
	*	2462	103.41	-	-	101.08	27.53	7.54	32.74	270	326	A	V
		2483.84	48.02	-25.98	74	45.74	27.47	7.53	32.72	270	326	P	V
		2483.92	37.82	-16.18	54	35.54	27.47	7.53	32.72	270	326	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 802.11b (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	39.37	-34.63	74	52.73	31.15	9.86	54.37	174	210	P	H
		4824	38.65	-35.35	74	52.01	31.15	9.86	54.37	185	255	P	V
802.11b CH 06 2437MHz		4874	40.48	-33.52	74	53.82	31.13	9.88	54.35	102	152	P	H
		7311	45.32	-28.68	74	51.55	36.4	11.88	54.51	100	154	P	H
		4874	39.86	-34.14	74	53.2	31.13	9.88	54.35	164	237	P	V
		7311	44.57	-29.43	74	50.8	36.4	11.88	54.51	157	121	P	V
802.11b CH 11 2462MHz		4924	39.37	-34.63	74	52.56	31.23	9.91	54.33	144	281	P	H
		7386	45.23	-28.77	74	51.52	36.3	12.01	54.6	168	41	P	H
		4924	39.65	-34.35	74	52.84	31.23	9.91	54.33	150	285	P	V
		7386	45.43	-28.57	74	51.72	36.3	12.01	54.6	182	233	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2389.90	49.2	-24.8	74	46.74	27.7	7.54	32.78	333	353	P	H
		2390	38.51	-15.49	54	36.05	27.7	7.54	32.78	333	353	A	H
	*	2412	100.04	-	-	97.61	27.67	7.54	32.78	333	353	P	H
	*	2412	92.87	-	-	90.44	27.67	7.54	32.78	333	353	A	H
		2390	51.94	-22.06	74	49.48	27.7	7.54	32.78	193	317	P	V
		2390	41.83	-12.17	54	39.37	27.7	7.54	32.78	193	317	A	V
	*	2412	108.02	-	-	105.59	27.67	7.54	32.78	193	317	P	V
	*	2412	99.9	-	-	97.47	27.67	7.54	32.78	193	317	A	V
802.11g CH 06 2437MHz		2373.7	47.66	-26.34	74	45.18	27.77	7.51	32.8	333	353	P	H
		2389.38	36.15	-17.85	54	33.71	27.7	7.54	32.8	333	353	A	H
	*	2437	99.5	-	-	97.12	27.6	7.54	32.76	333	353	P	H
	*	2437	91.79	-	-	89.41	27.6	7.54	32.76	333	353	A	H
		2484.6	46.49	-27.51	74	44.21	27.47	7.53	32.72	333	353	P	H
		2484.81	36.07	-17.93	54	33.79	27.47	7.53	32.72	333	353	A	H
		2344.16	47.29	-26.71	74	44.73	27.9	7.48	32.82	193	317	P	V
		2389.52	36.23	-17.77	54	33.79	27.7	7.54	32.8	193	317	A	V
	*	2437	108.47	-	-	106.09	27.6	7.54	32.76	193	317	P	V
	*	2437	99.28	-	-	96.9	27.6	7.54	32.76	193	317	A	V
		2492.23	46.95	-27.05	74	44.72	27.4	7.53	32.7	193	317	P	V
		2483.9	36.23	-17.77	54	33.95	27.47	7.53	32.72	193	317	A	V

802.11g CH 11 2462MHz	*	2462	99.82	-	-	97.49	27.53	7.54	32.74	333	353	P	H
	*	2462	92.85	-	-	90.52	27.53	7.54	32.74	333	353	A	H
		2487.36	46.52	-27.48	74	44.24	27.47	7.53	32.72	333	353	P	H
		2483.52	37.14	-16.86	54	34.86	27.47	7.53	32.72	333	353	A	H
	*	2462	108.86	-	-	106.53	27.53	7.54	32.74	154	355	P	V
	*	2462	100.43	-	-	98.1	27.53	7.54	32.74	154	355	A	V
		2483.84	49.31	-24.69	74	47.03	27.47	7.53	32.72	154	355	P	V
		2483.52	39.15	-14.85	54	36.87	27.47	7.53	32.72	154	355	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11g (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	39.45	-34.55	74	52.81	31.15	9.86	54.37	151	207	P	H
		4824	39.44	-34.56	74	52.8	31.15	9.86	54.37	161	180	P	V
802.11g CH 06 2437MHz		4874	38.63	-35.37	74	51.97	31.13	9.88	54.35	154	155	P	H
		7311	45.18	-28.82	74	51.41	36.4	11.88	54.51	141	81	P	H
		4874	38.51	-35.49	74	51.85	31.13	9.88	54.35	133	246	P	V
		7311	45.32	-28.68	74	51.55	36.4	11.88	54.51	152	174	P	V
802.11g CH 11 2462MHz		4924	40.53	-33.47	74	53.72	31.23	9.91	54.33	139	271	P	H
		7386	43.91	-30.09	74	50.2	36.3	12.01	54.6	160	360	P	H
		4924	39.55	-34.45	74	52.74	31.23	9.91	54.33	166	219	P	V
		7386	44.93	-29.07	74	51.22	36.3	12.01	54.6	172	42	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2389.8	51.12	-22.88	74	48.66	27.7	7.54	32.78	333	353	P	H
		2390	38.93	-15.07	54	36.47	27.7	7.54	32.78	333	353	A	H
802.11n	*	2412	100.53	-	-	98.1	27.67	7.54	32.78	333	353	P	H
HT20	*	2412	91.37	-	-	88.94	27.67	7.54	32.78	333	353	A	H
CH 01		2390	49.55	-24.45	74	47.09	27.7	7.54	32.78	154	335	P	V
2412MHz		2390	39.89	-14.11	54	37.43	27.7	7.54	32.78	154	335	A	V
	*	2412	107.24	-	-	104.81	27.67	7.54	32.78	154	335	P	V
	*	2412	99.16	-	-	96.73	27.67	7.54	32.78	154	335	A	V
		2340.1	47.15	-26.85	74	44.59	27.9	7.48	32.82	333	353	P	H
		2337.16	36.16	-17.84	54	33.62	27.9	7.48	32.84	333	353	A	H
	*	2437	100.56	-	-	98.18	27.6	7.54	32.76	333	353	P	H
	*	2437	92.8	-	-	90.42	27.6	7.54	32.76	333	353	A	H
802.11n		2485.09	46.62	-27.38	74	44.34	27.47	7.53	32.72	333	353	P	H
HT20		2486	36.1	-17.9	54	33.82	27.47	7.53	32.72	333	353	A	H
CH 06		2314.62	47.2	-26.8	74	44.59	27.97	7.48	32.84	154	335	P	V
2437MHz		2387.98	36.3	-17.7	54	33.86	27.7	7.54	32.8	154	335	A	V
	*	2437	107.55	-	-	105.17	27.6	7.54	32.76	154	335	P	V
	*	2437	99.26	-	-	96.88	27.6	7.54	32.76	154	335	A	V
		2495.59	47.22	-26.78	74	44.99	27.4	7.53	32.7	154	335	P	V
		2484.04	36.3	-17.7	54	34.02	27.47	7.53	32.72	154	335	A	V

802.11n HT20 CH 11 2462MHz	*	2462	101.31	-	-	98.98	27.53	7.54	32.74	333	353	P	H
	*	2462	93.31	-	-	90.98	27.53	7.54	32.74	333	353	A	H
		2483.64	47.19	-26.81	74	44.91	27.47	7.53	32.72	333	353	P	H
		2483.52	37.18	-16.82	54	34.9	27.47	7.53	32.72	333	353	A	H
	*	2462	107.27	-	-	104.94	27.53	7.54	32.74	154	335	P	V
	*	2462	98.9	-	-	96.57	27.53	7.54	32.74	154	335	A	V
		2484.24	51.62	-22.38	74	49.34	27.47	7.53	32.72	154	335	P	V
		2483.52	40.55	-13.45	54	38.27	27.47	7.53	32.72	154	335	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 802.11n HT20 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		4824	39.01	-34.99	74	52.37	31.15	9.86	54.37	117	240	P	H
		4824	39	-35	74	52.36	31.15	9.86	54.37	158	201	P	V
802.11n HT20 CH 06 2437MHz		4874	39.74	-34.26	74	53.08	31.13	9.88	54.35	152	206	P	H
		7311	45.1	-28.9	74	51.33	36.4	11.88	54.51	188	200	P	H
		4874	38.64	-35.36	74	51.98	31.13	9.88	54.35	108	144	P	V
		7311	44.55	-29.45	74	50.78	36.4	11.88	54.51	155	247	P	V
802.11n HT20 CH 11 2462MHz		4924	39.29	-34.71	74	52.48	31.23	9.91	54.33	194	104	P	H
		7386	44.24	-29.76	74	50.53	36.3	12.01	54.6	163	213	P	H
		4924	41.11	-32.89	74	54.3	31.23	9.91	54.33	164	276	P	V
		7386	45.15	-28.85	74	51.44	36.3	12.01	54.6	141	273	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2387.805	50.31	-23.69	74	47.87	27.7	7.54	32.8	128	9	P	H
		2390	40.05	-13.95	54	37.59	27.7	7.54	32.78	128	9	A	H
802.11ax	*	2412	101.49	-	-	99.06	27.67	7.54	32.78	128	9	P	H
HE20	*	2412	92.1	-	-	89.67	27.67	7.54	32.78	128	9	A	H
CH 01		2389.38	57.8	-16.2	74	55.36	27.7	7.54	32.8	152	351	P	V
2412MHz		2390	41.17	-12.83	54	38.71	27.7	7.54	32.78	152	351	A	V
	*	2412	105.88	-	-	103.45	27.67	7.54	32.78	152	351	P	V
	*	2412	96.5	-	-	94.07	27.67	7.54	32.78	152	351	A	V
		2338.84	47.34	-26.66	74	44.78	27.9	7.48	32.82	130	20	P	H
		2357.6	36.36	-17.64	54	33.84	27.83	7.51	32.82	130	20	A	H
	*	2437	100.09	-	-	97.71	27.6	7.54	32.76	130	20	P	H
	*	2437	91.16	-	-	88.78	27.6	7.54	32.76	130	20	A	H
802.11ax		2492.51	47.39	-26.61	74	45.16	27.4	7.53	32.7	130	20	P	H
HE20		2485.02	36.25	-17.75	54	33.97	27.47	7.53	32.72	130	20	A	H
CH 06		2339.54	47	-27	74	44.44	27.9	7.48	32.82	194	353	P	V
2437MHz		2356.34	36.25	-17.75	54	33.73	27.83	7.51	32.82	194	353	A	V
	*	2437	106.58	-	-	104.2	27.6	7.54	32.76	194	353	P	V
	*	2437	94.97	-	-	92.59	27.6	7.54	32.76	194	353	A	V
		2484.74	46.6	-27.4	74	44.32	27.47	7.53	32.72	194	353	P	V
		2483.69	36.29	-17.71	54	34.01	27.47	7.53	32.72	194	353	A	V

	*	2462	97.03	-	-	94.7	27.53	7.54	32.74	115	119	P	H
	*	2462	87.92	-	-	85.59	27.53	7.54	32.74	115	119	A	H
802.11ax		2488.4	47.66	-26.34	74	45.45	27.4	7.53	32.72	115	119	P	H
HE20		2483.52	37.19	-16.81	54	34.91	27.47	7.53	32.72	115	119	A	H
CH 11	*	2462	105.89	-	-	103.56	27.53	7.54	32.74	211	331	P	V
2462MHz	*	2462	97.43	-	-	95.1	27.53	7.54	32.74	211	331	A	V
		2484.52	60.19	-13.81	74	57.91	27.47	7.53	32.72	211	331	P	V
		2483.52	40.41	-13.59	54	38.13	27.47	7.53	32.72	211	331	A	V

Remark

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

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 CH 01 2412MHz		4824	38.59	-35.41	74	51.95	31.15	9.86	54.37	105	141	P	H
		4824	39.18	-34.82	74	52.54	31.15	9.86	54.37	113	250	P	V
802.11ax HE20 CH 06 2437MHz		4874	39.5	-34.5	74	52.84	31.13	9.88	54.35	143	207	P	H
		7311	45.83	-28.17	74	52.06	36.4	11.88	54.51	167	224	P	H
		4874	38.52	-35.48	74	51.86	31.13	9.88	54.35	165	106	P	V
		7311	45.66	-28.34	74	51.89	36.4	11.88	54.51	174	100	P	V
802.11ax HE20 CH 11 2462MHz		4924	39.08	-34.92	74	52.27	31.23	9.91	54.33	135	122	P	H
		7386	44.2	-29.8	74	50.49	36.3	12.01	54.6	166	207	P	H
		4924	39.77	-34.23	74	52.96	31.23	9.91	54.33	150	285	P	V
		7386	44.69	-29.31	74	50.98	36.3	12.01	54.6	155	274	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE40 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2389.94	53.47	-20.53	74	51.01	27.7	7.54	32.78	134	18	P	H
		2389.66	43.98	-10.02	54	41.54	27.7	7.54	32.8	134	18	A	H
	*	2422	95.98	-	-	93.57	27.63	7.54	32.76	134	18	P	H
	*	2422	87.8	-	-	85.39	27.63	7.54	32.76	134	18	A	H
802.11ax		2486.21	46.54	-27.46	74	44.26	27.47	7.53	32.72	134	18	P	H
HE40		2497.34	37.85	-16.15	54	35.62	27.4	7.53	32.7	134	18	A	H
CH 03		2387	51.71	-22.29	74	49.27	27.7	7.54	32.8	119	353	P	V
2422MHz		2387	42.56	-11.44	54	40.12	27.7	7.54	32.8	119	353	A	V
	*	2422	100.29	-	-	97.88	27.63	7.54	32.76	119	353	P	V
	*	2422	92.6	-	-	90.19	27.63	7.54	32.76	119	353	A	V
		2483.5	47.51	-26.49	74	45.23	27.47	7.53	32.72	119	353	P	V
		2488.94	37.77	-16.23	54	35.56	27.4	7.53	32.72	119	353	A	V
		2385.04	46.96	-27.04	74	44.45	27.77	7.54	32.8	155	19	P	H
		2357.04	37.97	-16.03	54	35.45	27.83	7.51	32.82	155	19	A	H
	*	2437	95.77	-	-	93.39	27.6	7.54	32.76	155	19	P	H
	*	2437	86.71	-	-	84.33	27.6	7.54	32.76	155	19	A	H
802.11ax		2498.04	46.12	-27.88	74	43.89	27.4	7.53	32.7	155	19	P	H
HE40		2497.69	37.95	-16.05	54	35.72	27.4	7.53	32.7	155	19	A	H
CH 06		2356.62	47.42	-26.58	74	44.9	27.83	7.51	32.82	196	355	P	V
2437MHz		2389.38	38.19	-15.81	54	35.75	27.7	7.54	32.8	196	355	A	V
	*	2437	101.81	-	-	99.43	27.6	7.54	32.76	196	355	P	V
	*	2437	93.37	-	-	90.99	27.6	7.54	32.76	196	355	A	V
		2495.66	47.34	-26.66	74	45.11	27.4	7.53	32.7	196	355	P	V
		2483.62	38.31	-15.69	54	36.03	27.47	7.53	32.72	196	355	A	V

		2376.92	47.01	-26.99	74	44.53	27.77	7.51	32.8	131	19	P	H
		2349.2	37.97	-16.03	54	35.38	27.9	7.51	32.82	131	19	A	H
	*	2452	95.57	-	-	93.17	27.6	7.54	32.74	131	19	P	H
	*	2452	87.35	-	-	84.95	27.6	7.54	32.74	131	19	A	H
802.11ax		2485.72	50.92	-23.08	74	48.64	27.47	7.53	32.72	131	19	P	H
HE40		2484.53	41.74	-12.26	54	39.46	27.47	7.53	32.72	131	19	A	H
CH 09		2376.36	47.26	-26.74	74	44.78	27.77	7.51	32.8	137	353	P	V
2452MHz		2349.06	37.92	-16.08	54	35.33	27.9	7.51	32.82	137	353	A	V
	*	2452	100.87	-	-	98.47	27.6	7.54	32.74	137	353	P	V
	*	2452	93.86	-	-	91.46	27.6	7.54	32.74	137	353	A	V
		2486.35	54.08	-19.92	74	51.8	27.47	7.53	32.72	137	353	P	V
		2485.58	42.92	-11.08	54	40.64	27.47	7.53	32.72	137	353	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE40 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax		4844	38.08	-35.92	74	51.36	31.2	9.88	54.36	169	219	P	H
HE40		7266	45.43	-28.57	74	51.7	36.4	11.81	54.48	128	323	P	H
CH 03		4844	38.54	-35.46	74	51.82	31.2	9.88	54.36	150	350	P	V
2422MHz		7266	44.71	-29.29	74	50.98	36.4	11.81	54.48	200	360	P	V
802.11ax		4874	38.43	-35.57	74	51.77	31.13	9.88	54.35	165	230	P	H
HE40		7311	43.47	-30.53	74	49.7	36.4	11.88	54.51	186	323	P	H
CH 06		4874	38.5	-35.5	74	51.84	31.13	9.88	54.35	144	283	P	V
2437MHz		7311	45.13	-28.87	74	51.36	36.4	11.88	54.51	157	165	P	V
802.11ax		4904	39.35	-34.65	74	52.61	31.17	9.9	54.33	133	211	P	H
HE40		7356	44.69	-29.31	74	50.91	36.4	11.94	54.56	174	142	P	H
CH 09		4904	39.66	-34.34	74	52.92	31.17	9.9	54.33	150	360	P	V
2452MHz		7356	45.07	-28.93	74	51.29	36.4	11.94	54.56	103	254	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Verify data of Partial Ru:

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2389.065	49.36	-24.64	74	46.92	27.7	7.54	32.8	281	354	P	H
		2338.665	36.39	-17.61	54	33.85	27.9	7.48	32.84	281	354	A	H
802.11ax	*	2412	96.34	-	-	93.91	27.67	7.54	32.78	281	354	P	H
HE20	*	2412	82.1	-	-	79.67	27.67	7.54	32.78	281	354	A	H
CH 01		2389.8	51.03	-22.97	74	48.57	27.7	7.54	32.78	250	0	P	V
2412MHz		2354.625	36.19	-17.81	54	33.67	27.83	7.51	32.82	250	0	A	V
	*	2412	100.42	-	-	97.99	27.67	7.54	32.78	250	0	P	V
	*	2412	85.8	-	-	83.37	27.67	7.54	32.78	250	0	A	V
	*	2462	96.45	-	-	94.12	27.53	7.54	32.74	306	360	P	H
	*	2462	82.34	-	-	80.01	27.53	7.54	32.74	306	360	A	H
802.11ax		2486.56	48.68	-25.32	74	46.4	27.47	7.53	32.72	306	360	P	H
HE20		2483.88	35.95	-18.05	54	33.67	27.47	7.53	32.72	306	360	A	H
CH 11	*	2462	101.14	-	-	98.81	27.53	7.54	32.74	246	0	P	V
2462MHz	*	2462	86.29	-	-	83.96	27.53	7.54	32.74	246	0	A	V
		2483.64	53.47	-20.53	74	51.19	27.47	7.53	32.72	246	0	P	V
		2483.52	36.02	-17.98	54	33.74	27.47	7.53	32.72	246	0	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 CH 01 2412MHz		4824	38.08	-35.92	74	51.44	31.15	9.86	54.37	157	211	P	H
		4824	37.96	-36.04	74	51.32	31.15	9.86	54.37	185	255	P	V
802.11ax HE20 CH 11 2462MHz		4924	37.81	-36.19	74	51	31.23	9.91	54.33	150	285	P	H
		7386	43.74	-30.26	74	50.03	36.3	12.01	54.6	155	274	P	H
		4924	39.15	-34.85	74	52.34	31.23	9.91	54.33	142	85	P	V
		7386	44.3	-29.7	74	50.59	36.3	12.01	54.6	178	145	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE40 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		2389.94	57.09	-16.91	74	54.63	27.7	7.54	32.78	277	356	P	H
		2389.66	42.65	-11.35	54	40.21	27.7	7.54	32.8	277	356	A	H
	*	2422	96.81	-	-	94.4	27.63	7.54	32.76	277	356	P	H
	*	2422	87.21	-	-	84.8	27.63	7.54	32.76	277	356	A	H
802.11ax		2494.68	47.59	-26.41	74	45.36	27.4	7.53	32.7	277	356	P	H
HE40		2497.62	38.16	-15.84	54	35.93	27.4	7.53	32.7	277	356	A	H
CH 03		2389.94	57.46	-16.54	74	55	27.7	7.54	32.78	257	0	P	V
2422MHz		2389.94	42.7	-11.3	54	40.24	27.7	7.54	32.78	257	0	A	V
	*	2422	102.19	-	-	99.78	27.63	7.54	32.76	257	0	P	V
	*	2422	92.27	-	-	89.86	27.63	7.54	32.76	257	0	A	V
		2483.55	49.38	-24.62	74	47.1	27.47	7.53	32.72	257	0	P	V
		2484.39	38.12	-15.88	54	35.84	27.47	7.53	32.72	257	0	A	V
		2389.66	47.81	-26.19	74	45.37	27.7	7.54	32.8	293	351	P	H
		2350.04	38.33	-15.67	54	35.74	27.9	7.51	32.82	293	351	A	H
	*	2452	97.36	-	-	94.96	27.6	7.54	32.74	293	351	P	H
	*	2452	87.49	-	-	85.09	27.6	7.54	32.74	293	351	A	H
802.11ax		2486.63	58.5	-15.5	74	56.22	27.47	7.53	32.72	293	351	P	H
HE40		2486.56	43.39	-10.61	54	41.11	27.47	7.53	32.72	293	351	A	H
CH 09		2389.66	49.04	-24.96	74	46.6	27.7	7.54	32.8	226	0	P	V
2452MHz		2389.38	38.35	-15.65	54	35.91	27.7	7.54	32.8	226	0	A	V
	*	2452	102.68	-	-	100.28	27.6	7.54	32.74	226	0	P	V
	*	2452	92.76	-	-	90.36	27.6	7.54	32.74	226	0	A	V
		2486.63	65.1	-8.9	74	62.82	27.47	7.53	32.72	226	0	P	V
		2486.84	50.16	-3.84	54	47.88	27.47	7.53	32.72	226	0	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE40 (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)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax		4844	38.55	-35.45	74	51.83	31.2	9.88	54.36	150	350	P	H
HE40		7266	45.73	-28.27	74	52	36.4	11.81	54.48	200	360	P	H
CH 03		4844	38.45	-35.55	74	51.73	31.2	9.88	54.36	181	248	P	V
2422MHz		7266	45.42	-28.58	74	51.69	36.4	11.81	54.48	147	161	P	V
802.11ax		4904	43.43	-30.57	74	56.69	31.17	9.9	54.33	173	52	P	H
HE40		7356	44.39	-29.61	74	50.61	36.4	11.94	54.56	143	301	P	H
CH 09		4904	39.02	-34.98	74	52.28	31.17	9.9	54.33	150	360	P	V
2452MHz		7356	44.81	-29.19	74	51.03	36.4	11.94	54.56	165	335	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz WIFI 802.11n HT40 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	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)
		30	24.12	-15.88	40	30.06	24.8	0.56	31.3	107	188	P	H
		127	23.44	-20.06	43.5	36.34	17.43	1.16	31.49	-	-	P	H
		323.91	24.51	-21.49	46	33.98	19.98	1.9	31.35	-	-	P	H
		512.09	26.31	-19.69	46	30.98	24.12	2.43	31.22	-	-	P	H
2.4GHz		720.64	27	-19	46	28.46	27.07	2.91	31.44	-	-	P	H
802.11n		991.27	28.14	-25.86	54	25.44	30.46	3.46	31.22	-	-	P	H
HT40		30	28.59	-11.41	40	34.53	24.8	0.56	31.3	129	263	P	V
LF		61.04	24.71	-15.29	40	43.63	11.88	0.8	31.6	-	-	P	V
		130.88	22.25	-21.25	43.5	35.09	17.45	1.19	31.48	-	-	P	V
		294.81	21.85	-24.15	46	32.19	19.3	1.8	31.44	-	-	P	V
		683.78	28.59	-17.41	46	30.8	26.55	2.83	31.59	-	-	P	V
		899.12	29.91	-16.09	46	29.09	29	3.32	31.5	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

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

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable 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) + Cable 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)

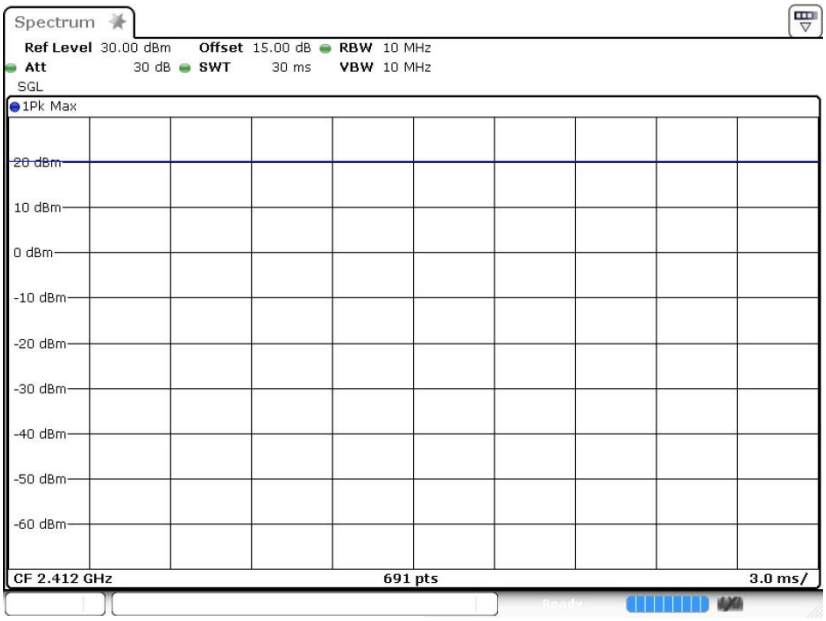
= -10.46(dB)

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

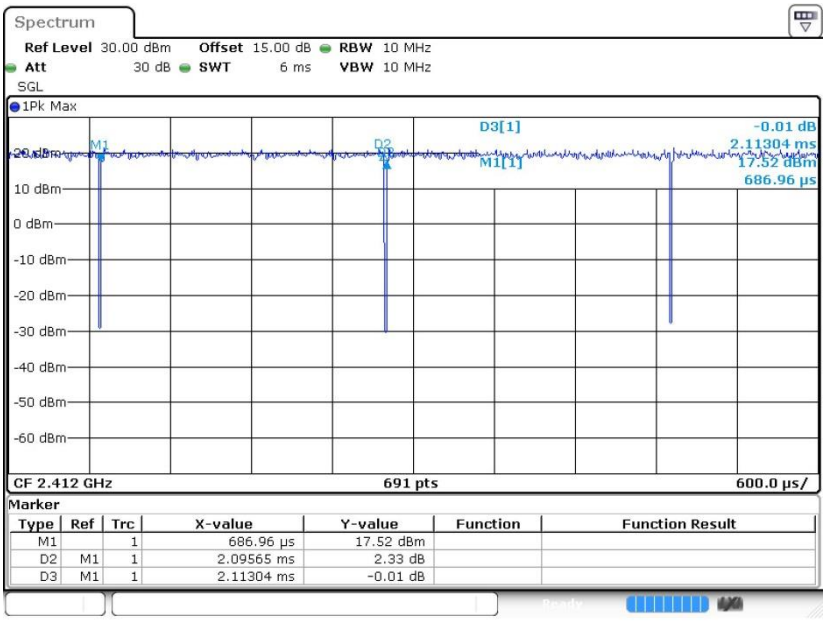
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11b for Ant1+2	100	-	-	10Hz
802.11g for Ant1+2	99.18	-	-	10Hz
802.11n HT20 for Ant1+2	99.12	-	-	10Hz
802.11ax HE20 for Ant1+2	98.39	-	-	10Hz
802.11ax HE40 for Ant1+2	97.84	0.788	1.270	3kHz

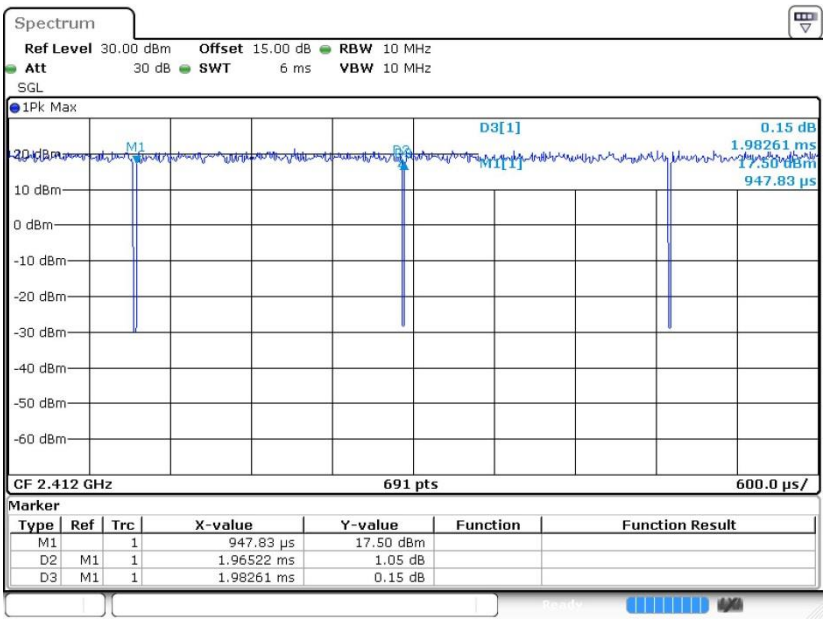
802.11b



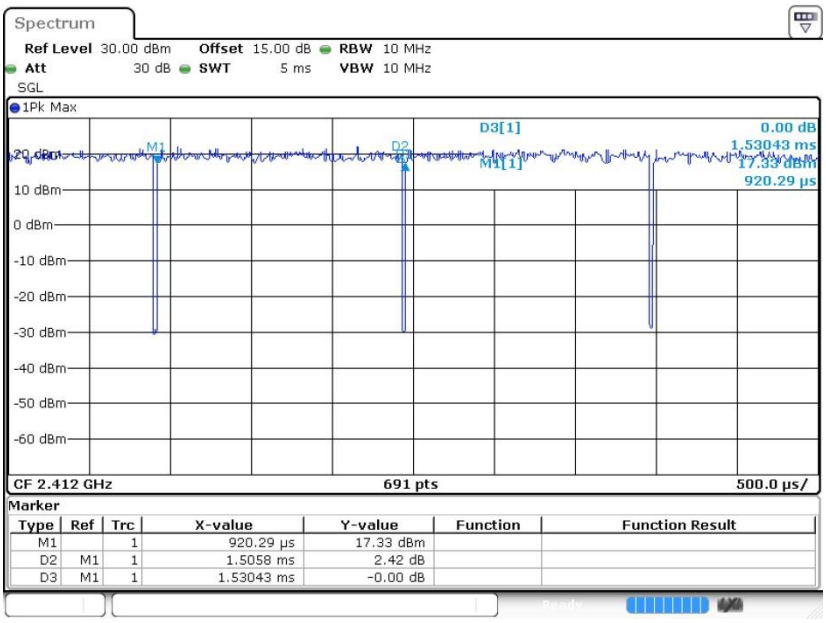
802.11g



802.11n HT20



802.11ax HE20



802.11ax HE40