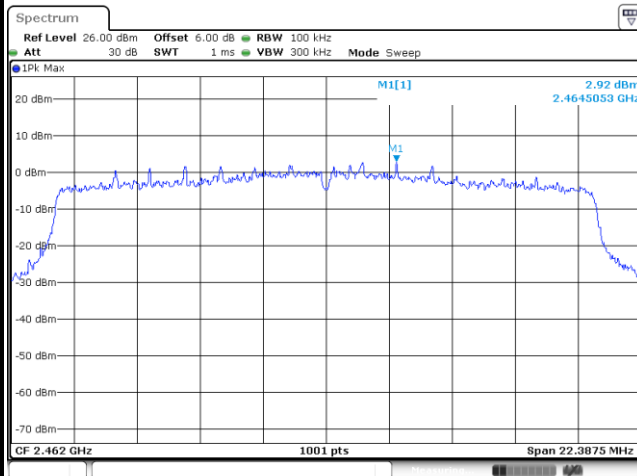




Test Mode : 802.11ax HE20

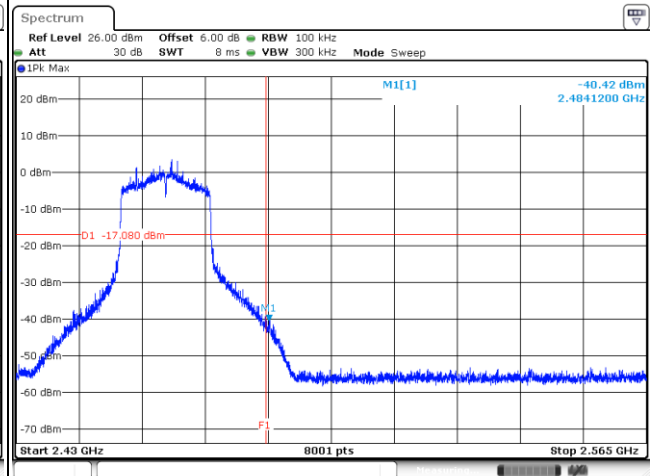
Test Channel : 11

100kHz PSD reference Level



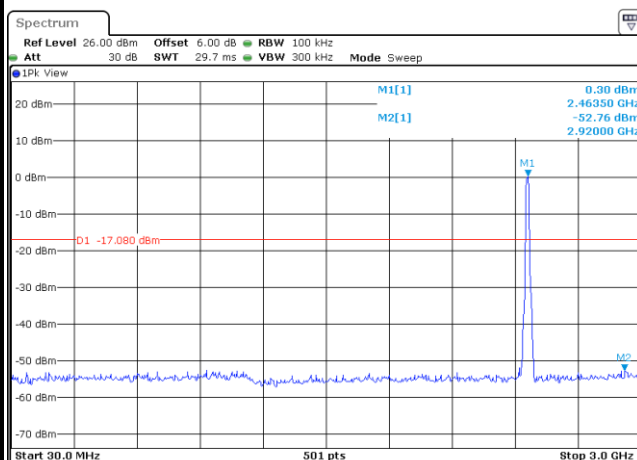
Date: 26.JUN.2022 06:28:36

Channel Plot



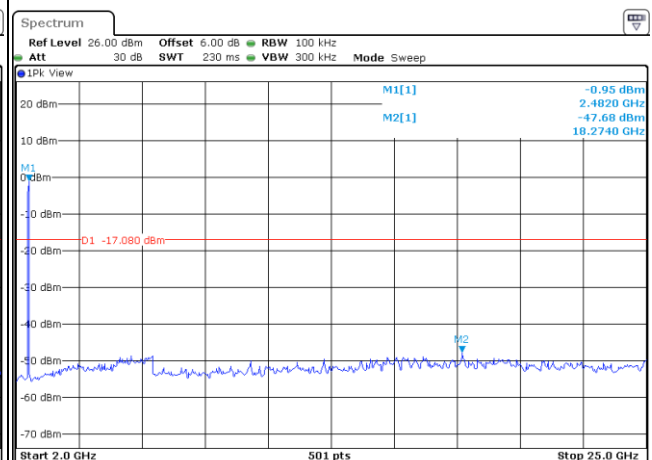
Date: 26.JUN.2022 06:30:06

Spurious Emission 30MHz~3GHz



Date: 26.JUN.2022 06:29:17

Spurious Emission 2GHz~25GHz



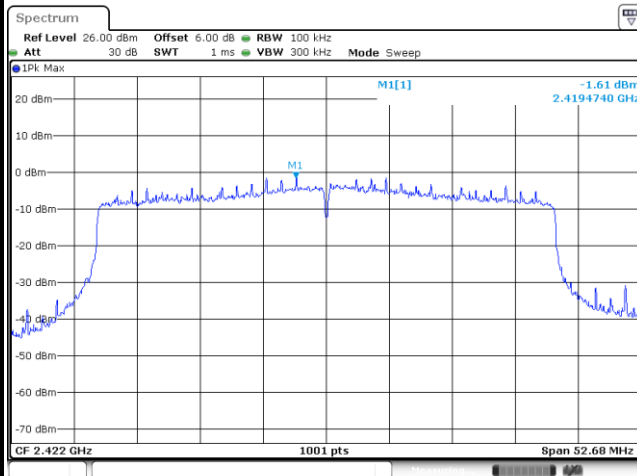
Date: 26.JUN.2022 06:29:37



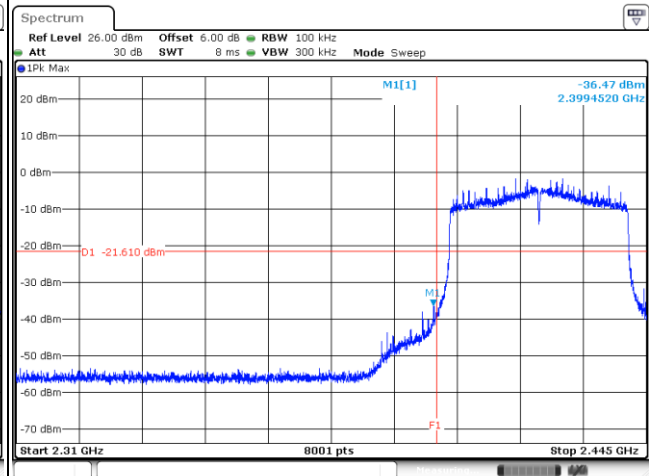
Test Mode : 802.11ax HE40

Test Channel : 03

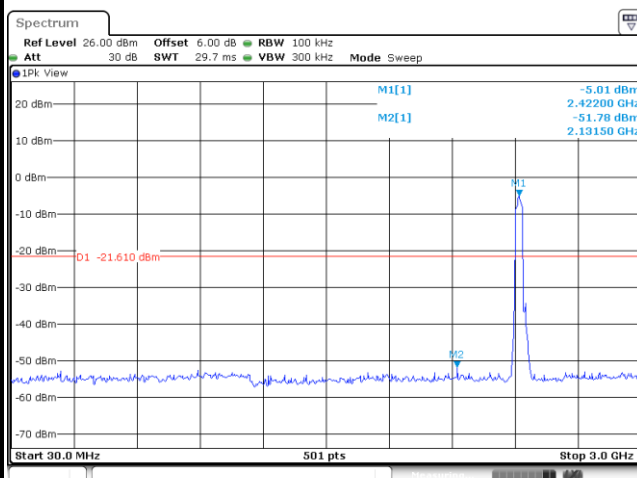
100kHz PSD reference Level



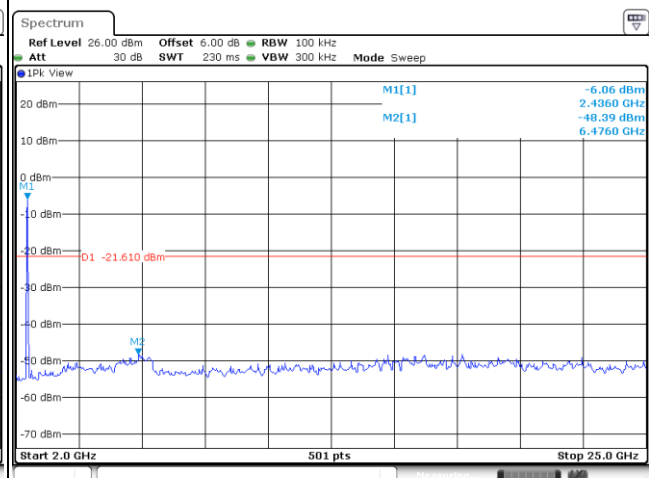
Channel Plot



Spurious Emission 30MHz~3GHz

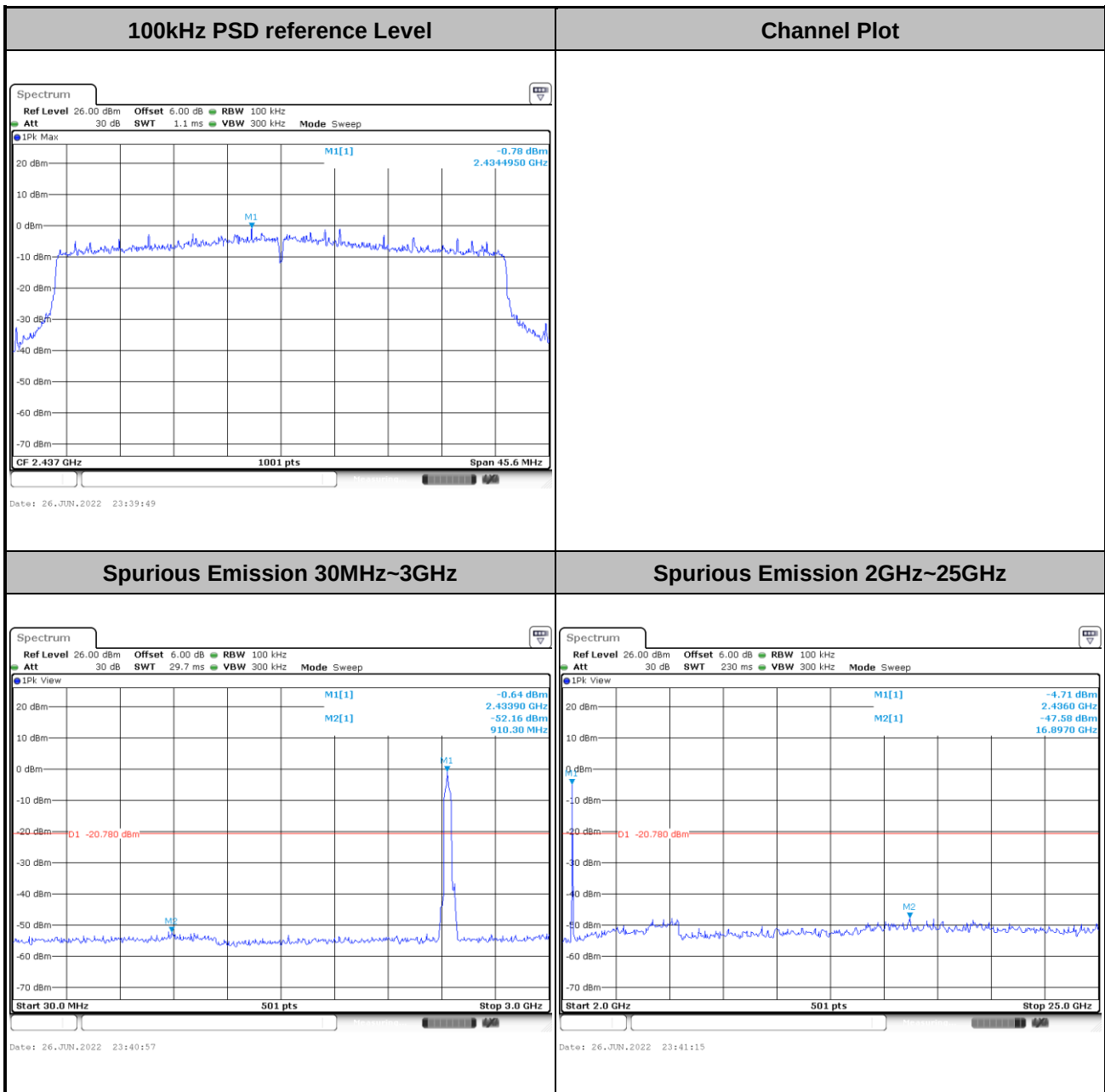


Spurious Emission 2GHz~25GHz





Test Mode :	802.11ax HE40	Test Channel :	06
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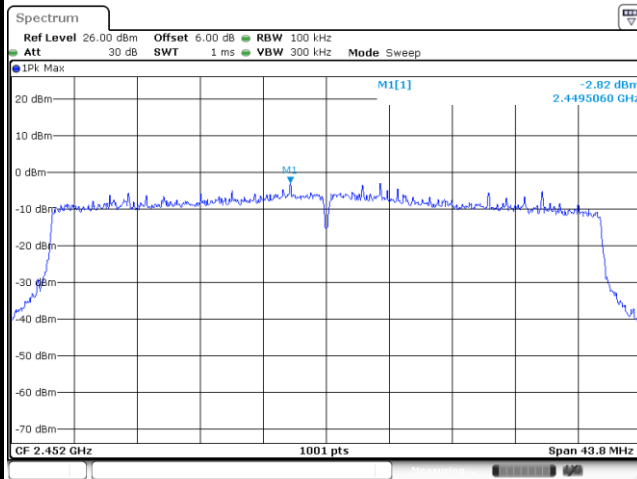




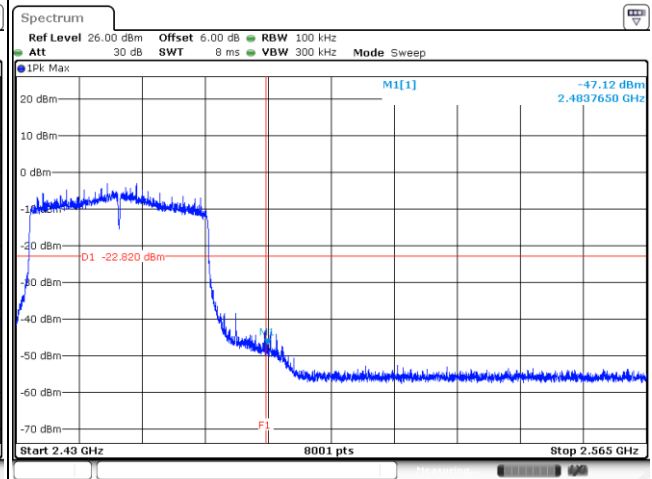
Test Mode : 802.11ax HE40

Test Channel : 09

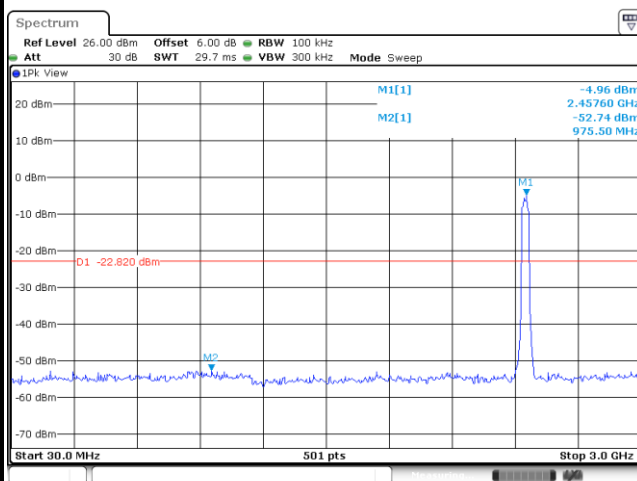
100kHz PSD reference Level



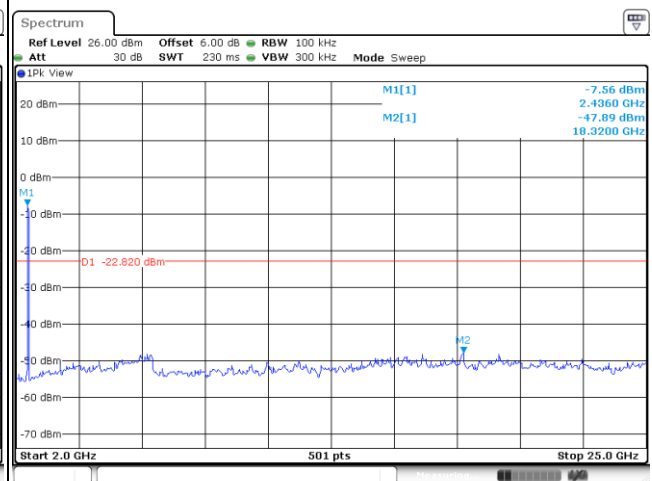
Channel Plot



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

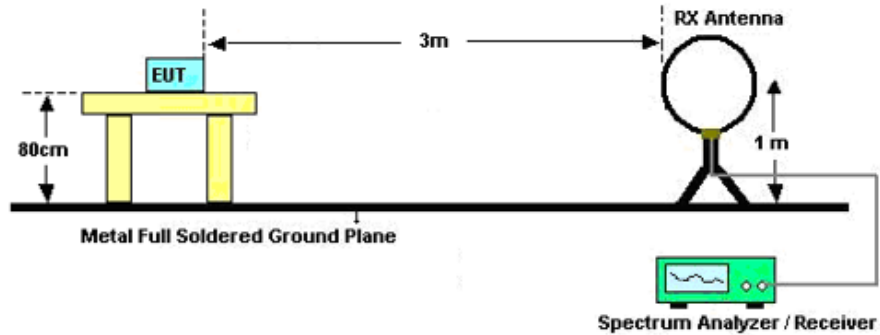
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

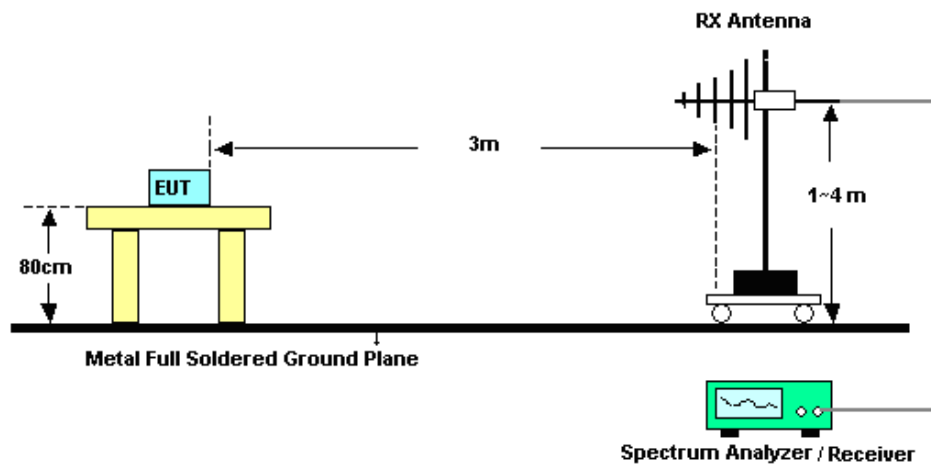
1. The testing follows ANSI C63.10-2013 clause 11.11 & 11.12
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better 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 peak limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement.
For average measurement:
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

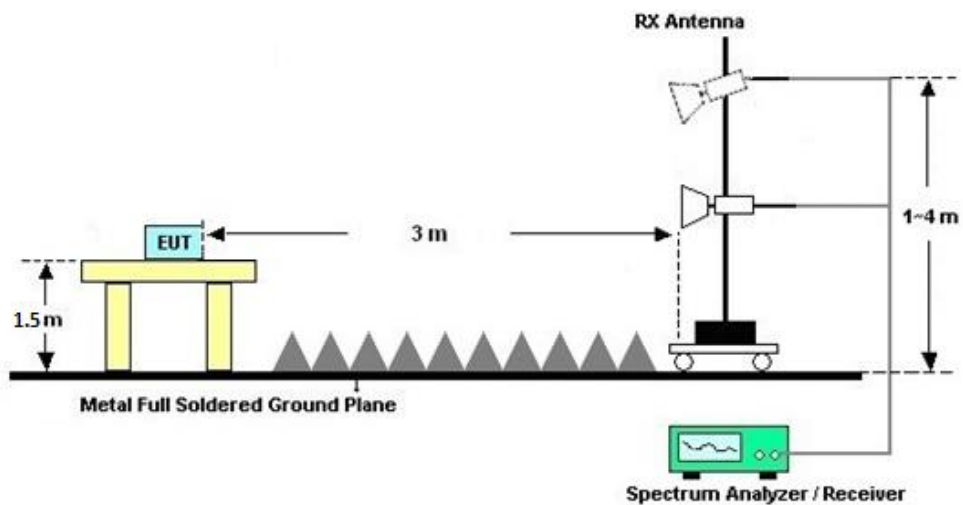
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



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 or 40GHz, whichever is lower)

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

*Decreases with the logarithm of the frequency.

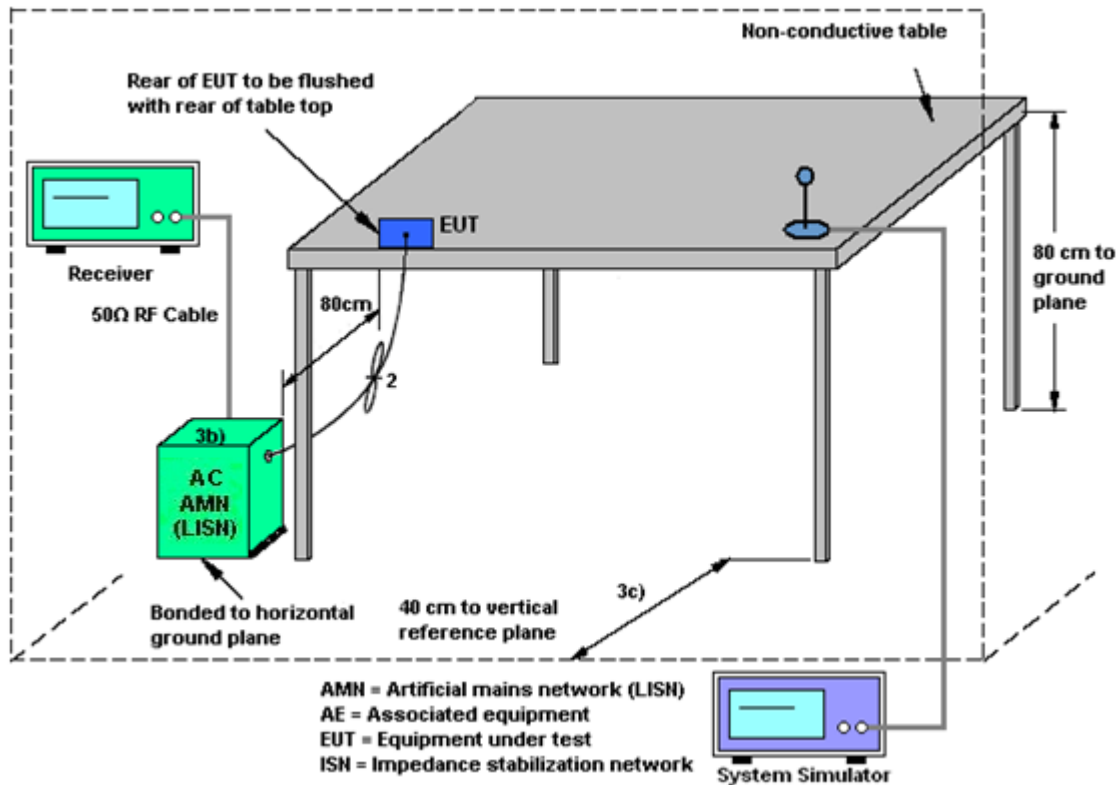
3.6.2 Measuring Instruments

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>						
			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 1 (dBi)	Ant. 2 (dBi)				
2.4 GHz	-1.90	-2.30	-1.90	0.91	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	101040	10Hz~40GHz	Oct. 14, 2021	Jun 26, 2022~Jul. 02, 2022	Oct. 13, 2022	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 05, 2022	Jun 26, 2022~Jul. 02, 2022	Jan. 04, 2023	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 05, 2022	Jun 26, 2022~Jul. 02, 2022	Jan. 04, 2023	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max x 30dBm	Oct. 16, 2021	Jun 15, 2022~Jul. 04, 2022	Oct. 15, 2022	Radiation (03CH05-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471084	10Hz~44G,MAX 30dB	Jul. 12, 2021	Jun 15, 2022~Jul. 04, 2022	Jul. 11, 2022	Radiation (03CH05-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Jun 15, 2022~Jul. 04, 2022	Oct. 29, 2022	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	Jun. 04, 2022	Jun 15, 2022~Jul. 04, 2022	Jun. 03, 2023	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 08, 2021	Jun 15, 2022~Jul. 04, 2022	Nov. 07, 2022	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Jun 15, 2022~Jul. 04, 2022	Jan. 04, 2023	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	380826	9KHz~1GHz	Jul. 30, 2021	Jun 15, 2022~Jul. 04, 2022	Jul. 09, 2022	Radiation (03CH05-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2022	Jun 15, 2022~Jul. 04, 2022	Jan. 04, 2023	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2012228	1Ghz~18Ghz	Oct. 16, 2021	Jun 15, 2022~Jul. 04, 2022	Oct. 15, 2022	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5GHz	Oct. 16, 2021	Jun 15, 2022~Jul. 04, 2022	Oct. 15, 2022	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jun 15, 2022~Jul. 04, 2022	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jun 15, 2022~Jul. 04, 2022	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jun 15, 2022~Jul. 04, 2022	NCR	Radiation (03CH05-KS)
EMI Receiver	R&S	ESR7	101630	9kHz~7GHz;	Sep. 01, 2021	May 26, 2022	Aug. 31, 2022	Conduction (CO01-SZ)
AC LISN	R&S	ENV216	100063	9kHz~30MHz	Sep. 01, 2021	May 26, 2022	Aug. 31, 2022	Conduction (CO01-SZ)
AC LISN (for auxiliary equipment)	EMCO	3816/2SH	00103892	9kHz~30MHz	Oct. 29, 2021	May 26, 2022	Oct. 28, 2022	Conduction (CO01-SZ)
AC Power Source	Chroma	61602	616020000891	100Vac~250Vac	Jul. 14, 2021	May 26, 2022	Jul. 13, 2022	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 (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.2dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

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

----- THE END -----



Appendix A. Conducted Test Results

A1. Conducted Test Results

Test Engineer:	long wu / albert shi / kib shi	Temperature:	21~25	°C
Test Date:	2022/6/26~2022/7/02	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	13.44	13.44	7.60	7.60	0.50	Pass
11b	1Mbps	2	6	2437	13.19	13.19	7.42	8.48	0.50	Pass
11b	1Mbps	2	11	2462	13.89	13.99	7.08	8.04	0.50	Pass
11g	6Mbps	2	1	2412	16.78	16.88	15.34	15.12	0.50	Pass
11g	6Mbps	2	2	2417	17.08	17.13	15.32	15.36	0.50	Pass
11g	6Mbps	2	6	2437	17.08	17.18	15.12	15.44	0.50	Pass
11g	6Mbps	2	9	2452	16.78	16.93	15.32	15.12	0.50	Pass
11g	6Mbps	2	10	2457	16.93	17.23	15.30	14.16	0.50	Pass
11g	6Mbps	2	11	2462	17.03	16.93	15.36	15.12	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass. /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	2	1	2412	15.83	15.69	18.77	30.00		-1.90		16.87		36.00		Pass
11b	1Mbps	2	6	2437	14.96	16.34	18.71	30.00		-1.90		16.81		36.00		Pass
11b	1Mbps	2	11	2462	15.21	16.03	18.65	30.00		-1.90		16.75		36.00		Pass
11g	6Mbps	2	1	2412	13.46	13.77	16.63	30.00		-1.90		14.73		36.00		Pass
11g	6Mbps	2	2	2417	14.93	15.32	18.14	30.00		-1.90		16.24		36.00		Pass
11g	6Mbps	2	6	2437	15.83	16.52	19.20	30.00		-1.90		17.30		36.00		Pass
11g	6Mbps	2	9	2452	16.65	18.15	20.47	30.00		-1.90		18.57		36.00		Pass
11g	6Mbps	2	10	2457	15.05	16.65	18.93	30.00		-1.90		17.03		36.00		Pass
11g	6Mbps	2	11	2462	14.26	15.42	17.89	30.00		-1.90		15.99		36.00		Pass
HT20	MCS0	2	1	2412	12.51	13.14	15.85	30.00		-1.90		13.95		36.00		Pass
HT20	MCS0	2	2	2417	13.52	14.14	16.85	30.00		-1.90		14.95		36.00		Pass
HT20	MCS0	2	6	2437	15.42	16.51	19.01	30.00		-1.90		17.11		36.00		Pass
HT20	MCS0	2	8	2447	16.01	16.60	19.33	30.00		-1.90		17.43		36.00		Pass
HT20	MCS0	2	10	2457	13.15	13.64	16.41	30.00		-1.90		14.51		36.00		Pass
HT20	MCS0	2	11	2462	12.34	13.41	15.92	30.00		-1.90		14.02		36.00		Pass
HT40	MCS0	2	3	2422	10.41	11.52	14.01	30.00		-1.90		12.11		36.00		Pass
HT40	MCS0	2	6	2437	11.21	12.17	14.73	30.00		-1.90		12.83		36.00		Pass
HT40	MCS0	2	9	2452	9.20	11.06	13.24	30.00		-1.90		11.34		36.00		Pass

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

TEST RESULTS DATA
Peak Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	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	17.20	18.49	20.90	30.00		-1.90		19.00		36.00		Pass
11b	1Mbps	2	6	2437	15.93	18.98	20.73	30.00		-1.90		18.83		36.00		Pass
11b	1Mbps	2	11	2462	16.14	18.72	20.63	30.00		-1.90		18.73		36.00		Pass
11g	6Mbps	2	1	2412	18.86	20.55	22.80	30.00		-1.90		20.90		36.00		Pass
11g	6Mbps	2	2	2417	20.35	22.25	24.41	30.00		-1.90		22.51		36.00		Pass
11g	6Mbps	2	6	2437	21.55	23.99	25.95	30.00		-1.90		24.05		36.00		Pass
11g	6Mbps	2	9	2452	21.23	24.76	26.35	30.00		-1.90		24.45		36.00		Pass
11g	6Mbps	2	10	2457	19.70	23.26	24.85	30.00		-1.90		22.95		36.00		Pass
11g	6Mbps	2	11	2462	18.81	22.15	23.80	30.00		-1.90		21.90		36.00		Pass
HT20	MCS0	2	1	2412	18.61	19.74	22.22	30.00		-1.90		20.32		36.00		Pass
HT20	MCS0	2	2	2417	19.79	20.78	23.32	30.00		-1.90		21.42		36.00		Pass
HT20	MCS0	2	6	2437	22.01	22.96	25.52	30.00		-1.90		23.62		36.00		Pass
HT20	MCS0	2	8	2447	22.46	23.28	25.90	30.00		-1.90		24.00		36.00		Pass
HT20	MCS0	2	10	2457	19.88	20.25	23.08	30.00		-1.90		21.18		36.00		Pass
HT20	MCS0	2	11	2462	19.75	21.45	23.69	30.00		-1.90		21.79		36.00		Pass
HT40	MCS0	2	3	2422	16.96	18.41	20.76	30.00		-1.90		18.86		36.00		Pass
HT40	MCS0	2	6	2437	18.19	18.38	21.30	30.00		-1.90		19.40		36.00		Pass
HT40	MCS0	2	9	2452	15.98	16.98	19.52	30.00		-1.90		17.62		36.00		Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band MIMO												
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	2	1	2412	-9.89	-9.57	-6.56	0.91		8.00		Pass
11b	1Mbps	2	6	2437	-9.02	-7.79	-4.78	0.91		8.00		Pass
11b	1Mbps	2	11	2462	-10.03	-9.35	-6.34	0.91		8.00		Pass
11g	6Mbps	2	1	2412	-13.56	-13.18	-10.17	0.91		8.00		Pass
11g	6Mbps	2	2	2417	-12.16	-11.50	-8.49	0.91		8.00		Pass
11g	6Mbps	2	6	2437	-11.34	-11.03	-8.02	0.91		8.00		Pass
11g	6Mbps	2	9	2452	-10.73	-8.28	-5.27	0.91		8.00		Pass
11g	6Mbps	2	10	2457	-11.93	-10.15	-7.14	0.91		8.00		Pass
11g	6Mbps	2	11	2462	-12.82	-11.86	-8.85	0.91		8.00		Pass

Measured power density (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	19.28	16.23	16.50	0.50	Pass
HE20	MCS0	2	2	2417	Full	19.33	19.38	16.53	16.68	0.50	Pass
HE20	MCS0	2	6	2437	Full	19.33	19.48	15.10	15.85	0.50	Pass
HE20	MCS0	2	8	2447	Full	19.38	19.58	15.70	15.10	0.50	Pass
HE20	MCS0	2	10	2457	Full	19.28	19.33	16.60	16.73	0.50	Pass
HE20	MCS0	2	11	2462	Full	19.38	19.33	16.13	14.93	0.50	Pass
HE40	MCS0	2	3	2422	Full	37.66	37.76	34.96	35.12	0.50	Pass
HE40	MCS0	2	6	2437	Full	37.76	37.76	35.04	30.40	0.50	Pass
HE40	MCS0	2	9	2452	Full	37.26	37.66	30.12	29.20	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																	
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config.	Average Conducted Power with duty factor (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	2	1	2412	Full	12.53	13.15	15.86	30.00		-1.90		13.96		36.00		Pass
HE20	MCS0	2	1	2412	26/0	11.42	12.22	14.85	30.00		-1.90		12.95		36.00		Pass
HE20	MCS0	2	1	2412	52/37	11.34	11.88	14.63	30.00		-1.90		12.73		36.00		Pass
HE20	MCS0	2	1	2412	106/53	11.45	11.76	14.62	30.00		-1.90		12.72		36.00		Pass
HE20	MCS0	2	2	2417	Full	13.53	14.15	16.86	30.00		-1.90		14.96		36.00		Pass
HE20	MCS0	2	2	2417	26/0	12.55	14.15	12.62	30.00		-1.90		10.72		36.00		Pass
HE20	MCS0	2	2	2417	52/37	13.47	14.00	16.75	30.00		-1.90		14.85		36.00		Pass
HE20	MCS0	2	2	2417	106/53	13.39	14.12	16.78	30.00		-1.90		14.88		36.00		Pass
HE20	MCS0	2	6	2437	Full	15.43	17.18	19.40	30.00		-1.90		17.50		36.00		Pass
HE20	MCS0	2	6	2437	26/4	12.60	15.22	17.11	30.00		-1.90		15.21		36.00		Pass
HE20	MCS0	2	6	2437	52/39	15.20	17.99	19.83	30.00		-1.90		17.93		36.00		Pass
HE20	MCS0	2	6	2437	106/53	15.08	16.72	18.99	30.00		-1.90		17.09		36.00		Pass
HE20	MCS0	2	8	2447	Full	16.90	17.94	20.46	30.00		-1.90		18.56		36.00		Pass
HE20	MCS0	2	8	2447	26/8	12.57	12.62	15.61	30.00		-1.90		13.71		36.00		Pass
HE20	MCS0	2	8	2447	52/39	15.84	18.47	20.36	30.00		-1.90		18.46		36.00		Pass
HE20	MCS0	2	8	2447	106/53	15.73	17.34	19.62	30.00		-1.90		17.72		36.00		Pass
HE20	MCS0	2	10	2457	Full	13.59	14.22	16.93	30.00		-1.90		15.03		36.00		Pass
HE20	MCS0	2	10	2457	26/8	12.62	12.65	15.65	30.00		-1.90		13.75		36.00		Pass
HE20	MCS0	2	10	2457	52/40	13.67	14.90	17.34	30.00		-1.90		15.44		36.00		Pass
HE20	MCS0	2	10	2457	106/54	13.87	13.68	16.79	30.00		-1.90		14.89		36.00		Pass
HE20	MCS0	2	11	2462	Full	12.65	13.43	16.07	30.00		-1.90		14.17		36.00		Pass
HE20	MCS0	2	11	2462	26/8	12.77	13.29	16.05	30.00		-1.90		14.15		36.00		Pass
HE20	MCS0	2	11	2462	52/40	12.57	13.00	15.80	30.00		-1.90		13.90		36.00		Pass
HE20	MCS0	2	11	2462	106/54	12.57	13.01	15.81	30.00		-1.90		13.91		36.00		Pass
HE40	MCS0	2	3	2422	Full	10.42	11.85	14.20	30.00		-1.90		12.30		36.00		Pass
HE40	MCS0	2	3	2422	242/61	13.95	16.08	18.15	30.00		-1.90		16.25		36.00		Pass
HE40	MCS0	2	6	2437	Full	11.28	12.19	14.77	30.00		-1.90		12.87		36.00		Pass
HE40	MCS0	2	6	2437	242/61	14.24	16.01	18.22	30.00		-1.90		16.32		36.00		Pass
HE40	MCS0	2	9	2452	Full	9.50	11.07	13.37	30.00		-1.90		11.47		36.00		Pass
HE40	MCS0	2	9	2452	242/62	14.05	15.77	18.00	30.00		-1.90		16.10		36.00		Pass

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

TEST RESULTS DATA
Peak Output Power

2.4GHz Band MIMO																	
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
HE20		2	1	2412	Full	18.88	19.90	22.43	30.00		-1.90		20.53		36.00		Pass
HE20		2	1	2412	26/0	21.22	22.12	24.70	30.00		-1.90		22.80		36.00		Pass
HE20		2	1	2412	52/37	20.11	21.68	23.98	30.00		-1.90		22.08		36.00		Pass
HE20		2	1	2412	106/53	19.98	20.92	23.49	30.00		-1.90		21.59		36.00		Pass
HE20		2	2	2417	Full	20.36	21.02	23.71	30.00		-1.90		21.81		36.00		Pass
HE20		2	2	2417	52/37	22.22	23.04	25.66	30.00		-1.90		23.76		36.00		Pass
HE20		2	2	2417	106/53	21.55	21.60	24.59	30.00		-1.90		22.69		36.00		Pass
HE20		2	6	2437	Full	22.56	23.65	26.15	30.00		-1.90		24.25		36.00		Pass
HE20		2	6	2437	26/4	21.66	22.52	25.12	30.00		-1.90		23.22		36.00		Pass
HE20		2	6	2437	52/39	23.02	23.95	26.52	30.00		-1.90		24.62		36.00		Pass
HE20		2	6	2437	106/53	21.65	22.89	25.32	30.00		-1.90		23.42		36.00		Pass
HE20		2	8	2447	Full	23.05	24.85	27.05	30.00		-1.90		25.15		36.00		Pass
HE20		2	8	2447	26/8	22.35	22.85	25.62	30.00		-1.90		23.72		36.00		Pass
HE20		2	8	2447	52/39	23.09	24.21	26.70	30.00		-1.90		24.80		36.00		Pass
HE20		2	8	2447	106/53	22.54	23.35	25.97	30.00		-1.90		24.07		36.00		Pass
HE20		2	10	2457	Full	20.45	21.11	23.80	30.00		-1.90		21.90		36.00		Pass
HE20		2	10	2457	26/8	21.29	21.33	25.62	30.00		-1.90		23.72		36.00		Pass
HE20		2	10	2457	52/40	20.55	21.84	24.25	30.00		-1.90		22.35		36.00		Pass
HE20		2	10	2457	106/54	20.38	21.69	24.09	30.00		-1.90		22.19		36.00		Pass
HE20		2	11	2462	Full	20.15	21.56	23.92	30.00		-1.90		22.02		36.00		Pass
HE20		2	11	2462	26/8	20.36	21.39	23.92	30.00		-1.90		22.02		36.00		Pass
HE20		2	11	2462	52/40	20.31	21.48	23.94	30.00		-1.90		22.04		36.00		Pass
HE20		2	11	2462	106/54	20.33	20.62	23.49	30.00		-1.90		21.59		36.00		Pass
HE40		2	3	2422	Full	17.51	18.43	21.00	30.00		-1.90		19.10		36.00		Pass
HE40		2	3	2422	242/61	22.32	23.42	25.92	30.00		-1.90		24.02		36.00		Pass
HE40		2	6	2437	Full	18.58	18.91	21.76	30.00		-1.90		19.86		36.00		Pass
HE40		2	6	2437	242/61	22.70	23.62	26.19	30.00		-1.90		24.29		36.00		Pass
HE40		2	9	2452	Full	16.46	17.01	19.75	30.00		-1.90		17.85		36.00		Pass
HE40		2	9	2452	242/62	22.24	23.55	25.95	30.00		-1.90		24.05		36.00		Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

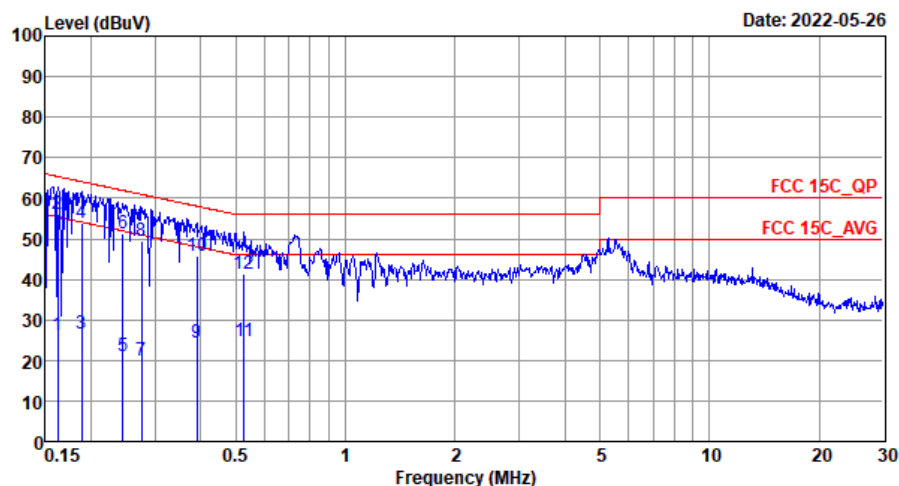
2.4GHz Band MIMO													
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config.	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
						Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	2	1	2412	Full	-12.96	-12.40	-9.39	0.91		8.00		Pass
HE20	MCS0	2	1	2412	26/0	-7.06	-5.51	-2.50	0.91		8.00		Pass
HE20	MCS0	2	1	2412	52/37	-9.40	-9.10	-6.09	0.91		8.00		Pass
HE20	MCS0	2	1	2412	106/53	-14.29	-12.35	-9.34	0.91		8.00		Pass
HE20	MCS0	2	2	2417	Full	-12.09	-11.70	-8.69	0.91		8.00		Pass
HE20	MCS0	2	2	2417	26/0	-4.33	-3.40	-0.39	0.91		8.00		Pass
HE20	MCS0	2	2	2417	52/37	-5.15	-7.18	-2.14	0.91		8.00		Pass
HE20	MCS0	2	2	2417	106/53	-11.90	-9.69	-6.68	0.91		8.00		Pass
HE20	MCS0	2	6	2437	Full	-9.88	-8.75	-5.74	0.91		8.00		Pass
HE20	MCS0	2	6	2437	26/4	-7.70	-3.07	-0.06	0.91		8.00		Pass
HE20	MCS0	2	6	2437	52/39	-6.35	-5.17	-2.16	0.91		8.00		Pass
HE20	MCS0	2	6	2437	106/53	-11.49	-7.67	-4.66	0.91		8.00		Pass
HE20	MCS0	2	8	2447	Full	-8.53	-7.52	-4.51	0.91		8.00		Pass
HE20	MCS0	2	8	2447	26/8	-5.23	-1.78	1.23	0.91		8.00		Pass
HE20	MCS0	2	8	2447	52/40	-4.91	-3.47	-0.46	0.91		8.00		Pass
HE20	MCS0	2	8	2447	106/54	-9.21	-7.99	-4.98	0.91		8.00		Pass
HE20	MCS0	2	10	2457	Full	-11.84	-11.33	-8.32	0.91		8.00		Pass
HE20	MCS0	2	10	2457	26/8	-5.26	-3.25	-0.24	0.91		8.00		Pass
HE20	MCS0	2	10	2457	52/40	-10.93	-8.39	-5.38	0.91		8.00		Pass
HE20	MCS0	2	10	2457	106/54	-12.76	-9.69	-6.68	0.91		8.00		Pass
HE20	MCS0	2	11	2462	Full	-12.57	-13.55	-9.56	0.91		8.00		Pass
HE20	MCS0	2	11	2462	26/8	-8.54	-5.13	-2.12	0.91		8.00		Pass
HE20	MCS0	2	11	2462	52/40	-9.77	-8.11	-5.10	0.91		8.00		Pass
HE20	MCS0	2	11	2462	106/54	-14.87	-11.15	-8.14	0.91		8.00		Pass
HE40	MCS0	2	3	2422	Full	-19.44	-19.00	-15.99	0.91		8.00		Pass
HE40	MCS0	2	3	2422	242/61	-12.65	-11.47	-8.46	0.91		8.00		Pass
HE40	MCS0	2	6	2437	Full	-17.82	-16.66	-13.65	0.91		8.00		Pass
HE40	MCS0	2	6	2437	242/61	-13.45	-11.03	-8.02	0.91		8.00		Pass
HE40	MCS0	2	9	2452	Full	-19.20	-18.23	-15.22	0.91		8.00		Pass
HE40	MCS0	2	9	2452	242/62	-13.97	-10.96	-7.95	0.91		8.00		Pass

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



Appendix B. AC Conducted Emission Test Results

Test Engineer :	Lily	Temperature :	22~25°C
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

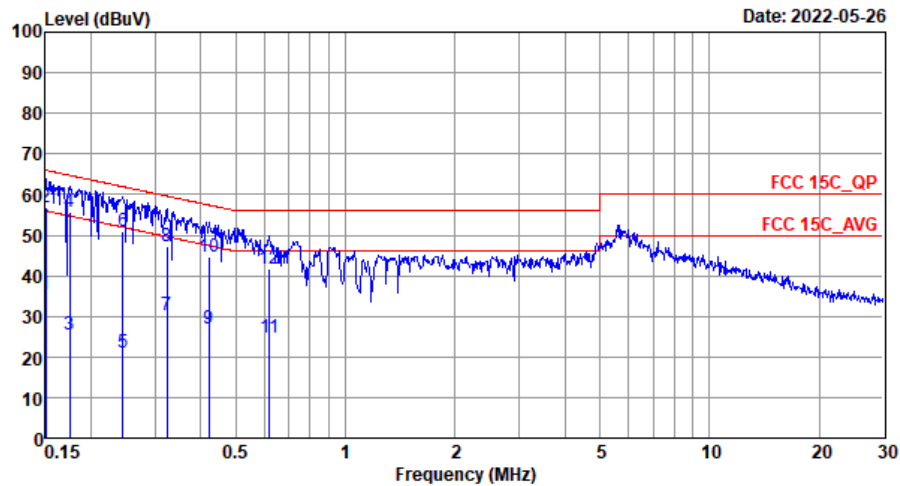


Site : CO01-SZ
Condition: FCC 15C QP LISN 20210901 L LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.16	26.15	-29.19	55.34	5.30	10.20	10.65	Average
2 *	0.16	56.25	-9.09	65.34	35.40	10.20	10.65	QP
3	0.19	26.59	-27.52	54.11	6.10	10.20	10.29	Average
4	0.19	53.79	-10.32	64.11	33.30	10.20	10.29	QP
5	0.24	21.21	-30.74	51.95	0.50	10.18	10.53	Average
6	0.24	51.21	-10.74	61.95	30.50	10.18	10.53	QP
7	0.28	20.02	-30.92	50.94	-0.91	10.17	10.76	Average
8	0.28	49.32	-11.62	60.94	28.39	10.17	10.76	QP
9	0.39	24.20	-23.83	48.03	2.69	10.10	11.41	Average
10	0.39	45.90	-12.13	58.03	24.39	10.10	11.41	QP
11	0.53	24.54	-21.46	46.00	2.70	10.11	11.73	Average
12	0.53	41.24	-14.76	56.00	19.40	10.11	11.73	QP



Test Engineer :	Lily	Temperature :	22~25°C
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-SZ
Condition: FCC 15C_QP LISN_20210901_N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	0.15	35.46	-20.54	56.00	14.30	10.31	10.85	Average
2	0.15	56.66	-9.34	66.00	35.50	10.31	10.85	QP
3	0.17	25.56	-29.16	54.72	4.80	10.29	10.47	Average
4 *	0.17	55.86	-8.86	64.72	35.10	10.29	10.47	QP
5	0.24	21.18	-30.77	51.95	0.40	10.25	10.53	Average
6	0.24	50.98	-10.97	61.95	30.20	10.25	10.53	QP
7	0.32	30.35	-19.27	49.62	9.10	10.19	11.06	Average
8	0.32	47.15	-12.47	59.62	25.90	10.19	11.06	QP
9	0.42	26.83	-20.59	47.42	5.10	10.19	11.54	Average
10	0.42	44.53	-12.89	57.42	22.80	10.19	11.54	QP
11	0.62	24.90	-21.10	46.00	3.29	10.24	11.37	Average
12	0.62	41.80	-14.20	56.00	20.19	10.24	11.37	QP

Note:

- Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
- 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	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2358.49	49.06	-24.94	74	46.07	32.83	7.04	36.88	182	344	P	H
		2389.3	39.57	-14.43	54	36.45	32.88	7.1	36.86	182	344	A	H
	*	2414	104.76	-	-	101.58	32.9	7.13	36.85	182	344	P	H
	*	2412	102.55	-	-	99.37	32.9	7.13	36.85	182	344	A	H
		2354.07	49.52	-24.48	74	46.53	32.83	7.04	36.88	304	360	P	V
		2389.43	39.25	-14.75	54	36.13	32.88	7.1	36.86	304	360	A	V
	*	2412	105.19	-	-	102.01	32.9	7.13	36.85	304	360	P	V
	*	2412	102.86	-	-	99.68	32.9	7.13	36.85	304	360	A	V
802.11b CH 11 2462MHz	*	2462	105.81	-	-	102.46	32.96	7.22	36.83	210	28	P	H
	*	2462	103.3	-	-	99.95	32.96	7.22	36.83	210	28	A	H
		2483.68	49.35	-24.65	74	45.94	32.98	7.25	36.82	210	28	P	H
		2486.44	40.66	-13.34	54	37.25	32.98	7.25	36.82	210	28	A	H
	*	2462	106.07	-	-	102.72	32.96	7.22	36.83	100	23	P	V
	*	2462	103.68	-	-	100.33	32.96	7.22	36.83	100	23	A	V
		2494.84	49.29	-24.71	74	45.82	33	7.28	36.81	100	23	P	V
		2486.56	40.72	-13.28	54	37.31	32.98	7.25	36.82	100	23	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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b		4830	41.12	-32.88	74	62.05	34.2	10.25	65.38	300	0	P	H
CH 01		4830	40.25	-33.75	74	61.18	34.2	10.25	65.38	100	0	P	V
2412MHz													
802.11b		4875	41.2	-32.8	74	62.1	34.23	10.29	65.42	300	0	P	H
CH 06		7305	44	-30	74	61.33	35.86	12.72	65.91	300	0	P	H
2437MHz		4875	40.8	-33.2	74	61.7	34.23	10.29	65.42	100	0	P	V
		7305	42.86	-31.14	74	60.19	35.86	12.72	65.91	100	0	P	V
802.11b		4920	41.18	-32.82	74	62.03	34.26	10.34	65.45	300	0	P	H
CH 11		7380	44.45	-29.55	74	61.95	35.88	12.73	66.11	300	0	P	H
2462MHz		4920	41.31	-32.69	74	62.16	34.26	10.34	65.45	100	0	P	V
		7380	42	-32	74	59.5	35.88	12.73	66.11	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g		2389.69	52.14	-21.86	74	49.02	32.88	7.1	36.86	296	320	P	H
CH 01		2389.82	42.46	-11.54	54	39.34	32.88	7.1	36.86	296	320	A	H
2412MHz	*	2410	107.73	-	-	104.55	32.9	7.13	36.85	296	320	P	H
	*	2412	100.91	-	-	97.73	32.9	7.13	36.85	296	320	A	H
		2389.04	51.03	-22.97	74	47.91	32.88	7.1	36.86	100	302	P	V
		2389.95	42.05	-11.95	54	38.93	32.88	7.1	36.86	100	302	A	V
	*	2410	109.16	-	-	105.98	32.9	7.13	36.85	100	302	P	V
	*	2410	101.96	-	-	98.78	32.9	7.13	36.85	100	302	A	V
802.11g		2389.3	56.52	-17.48	74	53.4	32.88	7.1	36.86	355	39	P	H
CH 02		2389.82	46.67	-7.33	54	43.55	32.88	7.1	36.86	355	39	A	H



2417MHz		2416	109.46	-	-	106.25	32.9	7.16	36.85	355	39	P	H
		2416	102.45	-	-	99.24	32.9	7.16	36.85	355	39	A	H
		2389.69	56.63	-17.37	74	53.51	32.88	7.1	36.86	116	64	P	V
		2389.69	46.82	-7.18	54	43.7	32.88	7.1	36.86	116	64	A	V
		2416	111.75	-	-	108.54	32.9	7.16	36.85	116	64	P	V
		2416	104.6	-	-	101.39	32.9	7.16	36.85	116	64	A	V
802.11g CH 11 2462MHz	*	2462	108.7	-	-	105.35	32.96	7.22	36.83	283	314	P	H
	*	2462	101.71	-	-	98.36	32.96	7.22	36.83	283	314	A	H
		2483.62	53.85	-20.15	74	50.44	32.98	7.25	36.82	283	314	P	H
		2483.5	43.69	-10.31	54	40.28	32.98	7.25	36.82	283	314	A	H
	*	2460	108.43	-	-	105.08	32.96	7.22	36.83	100	346	P	V
	*	2460	101.6	-	-	98.25	32.96	7.22	36.83	100	346	A	V
		2483.62	52.56	-21.44	74	49.15	32.98	7.25	36.82	100	346	P	V
		2483.62	43.74	-10.26	54	40.33	32.98	7.25	36.82	100	346	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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4830	40.72	-33.28	74	61.65	34.2	10.25	65.38	300	0	P	H
		4830	40.8	-33.2	74	61.73	34.2	10.25	65.38	100	0	P	V
802.11g CH 02 2417MHz		4834	40.88	-33.12	74	61.81	34.21	10.25	65.39	300	0	P	H
		7251	42.77	-31.23	74	59.96	35.85	12.72	65.76	300	0	P	H
		4834	40.08	-33.92	74	61.01	34.21	10.25	65.39	100	0	P	V
		7251	42.31	-31.69	74	59.5	35.85	12.72	65.76	100	0	P	V
802.11g CH 06 2437MHz		4875	40.9	-33.1	74	61.8	34.23	10.29	65.42	300	0	P	H
		7305	42.81	-31.19	74	60.14	35.86	12.72	65.91	300	0	P	H
		4875	41.16	-32.84	74	62.06	34.23	10.29	65.42	100	0	P	V
		7305	43.79	-30.21	74	61.12	35.86	12.72	65.91	100	0	P	V
802.11g CH 11 2462MHz		4920	41.61	-32.39	74	62.46	34.26	10.34	65.45	300	0	P	H
		7380	42.27	-31.73	74	59.77	35.88	12.73	66.11	300	0	P	H
		4920	40.98	-33.02	74	61.83	34.26	10.34	65.45	100	0	P	V
		7380	42.56	-31.44	74	60.06	35.88	12.73	66.11	100	0	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 802.11 ax 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)
802.11ax HE20 Full CH 01 2412MHz		2388.65	50.49	-23.51	74	47.37	32.88	7.1	36.86	295	319	P	H
		2389.95	40.55	-13.45	54	37.43	32.88	7.1	36.86	295	319	A	H
	*	2410	108.15	-	-	104.97	32.9	7.13	36.85	295	319	P	H
	*	2410	98.73	-	-	95.55	32.9	7.13	36.85	295	319	A	H
		2389.17	50.86	-23.14	74	47.74	32.88	7.1	36.86	124	298	P	V
		2389.82	40.24	-13.76	54	37.12	32.88	7.1	36.86	124	298	A	V
	*	2410	109.32	-	-	106.14	32.9	7.13	36.85	124	298	P	V
	*	2410	99.3	-	-	96.12	32.9	7.13	36.85	124	298	A	V
802.11ax HE20 Full CH 02 2417MHz		2389.95	53.74	-20.26	74	50.62	32.88	7.1	36.86	354	29	P	H
		2389.95	44.09	-9.91	54	40.97	32.88	7.1	36.86	354	29	A	H
		2414	110.86	-	-	107.68	32.9	7.13	36.85	354	29	P	H
		2414	100.87	-	-	97.69	32.9	7.13	36.85	354	29	A	H
		2389.04	55.37	-18.63	74	52.25	32.88	7.1	36.86	116	69	P	V
		2389.95	45.27	-8.73	54	42.15	32.88	7.1	36.86	116	69	A	V
		2416	111.14	-	-	107.93	32.9	7.16	36.85	116	69	P	V
		2414	101.53	-	-	98.35	32.9	7.13	36.85	116	69	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)
8802.11ax HE20 Full CH 10 2457MHz	*	2483.5	52.72	-21.28	74	49.31	32.98	7.25	36.82	382	29	A	H
	*	2483.56	41.88	-12.12	54	38.47	32.98	7.25	36.82	382	29	P	H
		2456	110.76	-	-	107.41	32.96	7.22	36.83	382	29	P	H
		2454	100.72	-	-	97.37	32.96	7.22	36.83	382	29	A	H
	*	2483.56	54.39	-19.61	74	50.98	32.98	7.25	36.82	100	104	P	V
	*	2483.5	42.61	-11.39	54	39.2	32.98	7.25	36.82	100	104	A	V
		2454	110.9	-	-	107.55	32.96	7.22	36.83	100	104	P	V
		2454	100.67	-	-	97.32	32.96	7.22	36.83	100	104	A	V
8802.11ax HE20 Full CH 11 2462MHz	*	2460	108.55	-	-	105.2	32.96	7.22	36.83	284	311	P	H
	*	2460	99.02	-	-	95.67	32.96	7.22	36.83	284	311	A	H
		2483.56	51.49	-22.51	74	48.08	32.98	7.25	36.82	284	311	P	H
		2483.5	40.44	-13.56	54	37.03	32.98	7.25	36.82	284	311	A	H
	*	2462	107.62	-	-	104.27	32.96	7.22	36.83	100	357	P	V
	*	2460	98.92	-	-	95.57	32.96	7.22	36.83	100	357	A	V
		2485.06	51.26	-22.74	74	47.85	32.98	7.25	36.82	100	357	P	V
		2483.62	41	-13	54	37.59	32.98	7.25	36.82	100	357	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax		4830	40.54	-33.46	74	61.47	34.2	10.25	65.38	300	0	P	H
HE20 Full		4830	41.08	-32.92	74	62.01	34.2	10.25	65.38	100	0	P	V
CH 01													
2412MHz													
802.11ax		4834	40.88	-33.12	74	61.81	34.21	10.25	65.39	300	0	P	H
HE20 Full		7251	42.77	-31.23	74	59.96	35.85	12.72	65.76	300	0	P	H
CH 02		4830	40.08	-33.92	74	61.01	34.2	10.25	65.38	100	0	P	V
2417MHz		7251	42.96	-31.04	74	60.15	35.85	12.72	65.76	100	0	P	V
802.11ax		4875	40.92	-33.08	74	61.82	34.23	10.29	65.42	300	0	P	H
HE20 Full		7305	43.67	-30.33	74	61	35.86	12.72	65.91	300	0	P	H
CH 06		4875	41.18	-32.82	74	62.08	34.23	10.29	65.42	100	0	P	V
2437MHz		7305	42.62	-31.38	74	59.95	35.86	12.72	65.91	100	0	P	V
802.11ax		4914	41.08	-32.92	74	61.93	34.25	10.34	65.44	300	0	P	H
HE20 Full		7371	42.83	-31.17	74	60.33	35.88	12.73	66.11	300	0	P	H
CH 10		4914	40.7	-33.3	74	61.55	34.25	10.34	65.44	100	0	P	V
2457MHz		7371	42.66	-31.34	74	60.16	35.88	12.73	66.11	100	0	P	V
802.11ax		4920	41.05	-32.95	74	61.9	34.26	10.34	65.45	300	0	P	H
HE20 Full		7380	42.42	-31.58	74	59.92	35.88	12.73	66.11	300	0	P	H
CH 11		4920	40.74	-33.26	74	61.59	34.26	10.34	65.45	100	0	P	V
2462MHz		7380	41.93	-32.07	74	59.43	35.88	12.73	66.11	100	0	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 Partial 26 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 26/0 CH 01 2412MHz		2389.82	56.61	-17.39	74	53.49	32.88	7.1	36.86	100	24	P	H
		2389.95	39.48	-14.52	54	36.36	32.88	7.1	36.86	100	24	A	H
		2404	109.96	-	-	106.78	32.9	7.13	36.85	100	24	P	H
		2404	102.43	-	-	99.25	32.9	7.13	36.85	100	24	A	H
		2389.69	55.66	-18.34	74	52.54	32.88	7.1	36.86	104	4	P	V
		2389.95	39.29	-14.71	54	36.17	32.88	7.1	36.86	104	4	A	V
		2404	108.93	-	-	105.75	32.9	7.13	36.85	104	4	P	V
		2402	101.17	-	-	98.02	32.88	7.13	36.86	104	4	A	V
802.11ax HE20 Partial 26/8 CH 11 2462MHz		2483.74	59.25	-14.75	74	55.84	32.98	7.25	36.82	295	40	P	H
		2483.5	39.96	-14.04	54	36.55	32.98	7.25	36.82	295	40	A	H
		2470	114.29	-	-	110.94	32.96	7.22	36.83	295	40	P	H
		2470	105.57	-	-	102.22	32.96	7.22	36.83	295	40	A	H
		2483.56	58.26	-15.74	74	54.85	32.98	7.25	36.82	100	26	P	V
		2484.04	38.86	-15.14	54	35.45	32.98	7.25	36.82	100	26	A	V
		2470	113.44	-	-	110.09	32.96	7.22	36.83	100	26	P	V
		2470	104.83	-	-	101.48	32.96	7.22	36.83	100	26	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 26/0 CH 01 2412MHz		4830	40.88	-33.12	74	61.81	34.2	10.25	65.38	300	0	P	H
		4830	40.08	-33.92	74	61.01	34.2	10.25	65.38	100	0	P	V
802.11ax HE20 Partial 26/4 CH 06 2437MHz		4875	40.34	-33.66	74	61.24	34.23	10.29	65.42	300	0	P	H
		7305	42.56	-31.44	74	59.89	35.86	12.72	65.91	300	0	P	H
		4875	40.44	-33.56	74	61.34	34.23	10.29	65.42	100	0	P	V
		7305	42.22	-31.78	74	59.55	35.86	12.72	65.91	100	0	P	V
802.11ax HE20 Partial 26/8 CH 11 2462MHz		4920	39.93	-34.07	74	60.78	34.26	10.34	65.45	300	0	P	H
		7380	42.07	-31.93	74	59.57	35.88	12.73	66.11	300	0	P	H
		4920	40.3	-33.7	74	61.15	34.26	10.34	65.45	100	0	P	V
		7380	42.36	-31.64	74	59.86	35.88	12.73	66.11	100	0	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 Partial 52 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 52/37 CH 01 2412MHz		2389.95	53.84	-20.16	74	50.72	32.88	7.1	36.86	100	19	P	H
		2389.95	38.53	-15.47	54	35.41	32.88	7.1	36.86	100	19	A	H
		2404	109.56	-	-	106.38	32.9	7.13	36.85	100	19	P	H
		2404	99.2	-	-	96.02	32.9	7.13	36.85	100	19	A	H
		2389.95	60.09	-13.91	74	56.97	32.88	7.1	36.86	100	93	P	V
		2389.95	40.61	-13.39	54	37.49	32.88	7.1	36.86	100	93	A	V
		2406	111.83	-	-	108.65	32.9	7.13	36.85	100	93	P	V
		2406	101.66	-	-	98.48	32.9	7.13	36.85	100	93	A	V
802.11ax HE20 Partial 52/37 CH 02 2417MHz		2389.3	49.36	-24.64	74	46.24	32.88	7.1	36.86	224	16	P	H
		2389.82	38.23	-15.77	54	35.11	32.88	7.1	36.86	224	16	A	H
		2408	110.21	-	-	107.03	32.9	7.13	36.85	224	16	P	H
		2408	101.09	-	-	97.91	32.9	7.13	36.85	224	16	A	H
		2389.17	49.65	-24.35	74	46.53	32.88	7.1	36.86	100	94	P	V
		2389.95	39.18	-14.82	54	36.06	32.88	7.1	36.86	100	94	A	V
		2410	110.82	-	-	107.64	32.9	7.13	36.85	100	94	P	V
		2410	102.95	-	-	99.77	32.9	7.13	36.85	100	94	A	V
802.11ax HE20 Partial 52/40 CH 10 2457MHz		2485.6	53.38	-20.62	74	49.97	32.98	7.25	36.82	239	50	P	H
		2483.56	38.78	-15.22	54	35.37	32.98	7.25	36.82	239	50	A	H
		2464	113.27	-	-	109.92	32.96	7.22	36.83	239	50	P	H
		2464	103.94	-	-	100.59	32.96	7.22	36.83	239	50	A	H
		2485.96	51.65	-22.35	74	48.24	32.98	7.25	36.82	123	65	P	V
		2483.5	38.56	-15.44	54	35.15	32.98	7.25	36.82	123	65	A	V
		2464	112.42	-	-	109.07	32.96	7.22	36.83	123	65	P	V
		2464	104.58	-	-	101.23	32.96	7.22	36.83	123	65	A	V
802.11ax HE20 Partial 52/40 CH 11 2462MHz		2483.56	60.25	-13.75	74	56.84	32.98	7.25	36.82	335	30	P	H
		2483.5	39.18	-14.82	54	35.77	32.98	7.25	36.82	335	30	A	H
		2468	110.98	-	-	107.63	32.96	7.22	36.83	335	30	P	H
		2470	102.1	-	-	98.75	32.96	7.22	36.83	335	30	A	H
		2483.5	56.35	-17.65	74	52.94	32.98	7.25	36.82	246	24	P	V
		2484.58	38.84	-15.16	54	35.43	32.98	7.25	36.82	246	24	A	V



		2468	112.19	-	-	108.84	32.96	7.22	36.83	246	24	P	V
		2470	103.08	-	-	99.73	32.96	7.22	36.83	246	24	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 52/37 CH 01 2412MHz		4830	40.18	-33.82	74	61.11	34.2	10.25	65.38	300	0	P	H
		4830	39.81	-34.19	74	60.74	34.2	10.25	65.38	100	0	P	V
802.11ax HE20 Partial 52/37 CH 02 2417MHz		4834	41.05	-32.95	74	61.98	34.21	10.25	65.39	300	0	P	H
		7251	42.42	-31.58	74	59.61	35.85	12.72	65.76	300	0	P	H
		4834	40.74	-33.26	74	61.67	34.21	10.25	65.39	100	0	P	V
		7251	41.93	-32.07	74	59.12	35.85	12.72	65.76	100	0	P	V
802.11ax HE20 Partial 52/38 CH 06 2437MHz		4875	40.31	-33.69	74	61.21	34.23	10.29	65.42	300	0	P	H
		7305	42.61	-31.39	74	59.94	35.86	12.72	65.91	300	0	P	H
		4875	40.19	-33.81	74	61.09	34.23	10.29	65.42	100	0	P	V
		7305	42.78	-31.22	74	60.11	35.86	12.72	65.91	100	0	P	V



802.11ax		4914	41.05	-32.95	74	61.9	34.25	10.34	65.44	300	0	P	H
HE20		7371	42.42	-31.58	74	59.92	35.88	12.73	66.11	300	0	P	H
Partial		4914	40.74	-33.26	74	61.59	34.25	10.34	65.44	100	0	P	V
52/40													
CH 10		7371	41.93	-32.07	74	59.43	35.88	12.73	66.11	100	0	P	V
2437MHz													
802.11ax		4920	40.1	-33.9	74	60.95	34.26	10.34	65.45	300	0	P	H
HE20		7380	41.84	-32.16	74	59.34	35.88	12.73	66.11	300	0	P	H
Partial		4920	40.41	-33.59	74	61.26	34.26	10.34	65.45	100	0	P	V
52/40													
CH 11		7380	42.44	-31.56	74	59.94	35.88	12.73	66.11	100	0	P	V
2462MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 106/53 CH 01 2412MHz		2389.69	48.85	-25.15	74	45.73	32.88	7.1	36.86	317	24	P	H
		2389.69	38.78	-15.22	54	35.66	32.88	7.1	36.86	317	24	A	H
		2408	108.02	-	-	104.84	32.9	7.13	36.85	317	24	P	H
		2410	99.11	-	-	95.93	32.9	7.13	36.85	317	24	A	H
		2389.95	50.06	-23.94	74	46.94	32.88	7.1	36.86	101	92	P	V
		2389.69	39.17	-14.83	54	36.05	32.88	7.1	36.86	101	92	A	V
		2408	109.08	-	-	105.9	32.9	7.13	36.85	101	92	P	V
		2408	100.6	-	-	97.42	32.9	7.13	36.85	101	92	A	V
802.11ax HE20 Partial 106/53 CH 02 2417MHz		2316.11	48.87	-25.13	74	46.03	32.77	6.98	36.91	249	53	P	H
		2389.69	38.23	-15.77	54	35.11	32.88	7.1	36.86	249	53	A	H
		2414	108.54	-	-	105.36	32.9	7.13	36.85	249	53	P	H
		2414	100.46	-	-	97.28	32.9	7.13	36.85	249	53	A	H
		2375.91	48.58	-25.42	74	45.52	32.86	7.07	36.87	118	69	P	V
		2389.69	38.25	-15.75	54	35.13	32.88	7.1	36.86	118	69	A	V



		2414	110.47	-	-	107.29	32.9	7.13	36.85	118	69	P	V
		2414	101.86	-	-	98.68	32.9	7.13	36.85	118	69	A	V
802.11ax HE20 Partial 106/54 CH 10 2457MHz		2483.68	51.95	-22.05	74	48.54	32.98	7.25	36.82	212	49	P	H
		2484.58	38.53	-15.47	54	35.12	32.98	7.25	36.82	212	49	A	H
		2464	109.2	-	-	105.85	32.96	7.22	36.83	212	49	P	H
		2464	100.95	-	-	97.6	32.96	7.22	36.83	212	49	A	H
		2485.12	51.74	-22.26	74	48.33	32.98	7.25	36.82	164	24	P	V
		2484.28	38.31	-15.69	54	34.9	32.98	7.25	36.82	164	24	A	V
		2466	108.35	-	-	105	32.96	7.22	36.83	164	24	P	V
		2464	100.27	-	-	96.92	32.96	7.22	36.83	164	24	A	V
802.11ax HE20 Partial 106/54 CH 11 2462MHz		2483.8	59.02	-14.98	74	55.61	32.98	7.25	36.82	334	26	P	H
		2483.56	39.86	-14.14	54	36.45	32.98	7.25	36.82	334	26	A	H
		2470	107.65	-	-	104.3	32.96	7.22	36.83	334	26	P	H
		2470	99.26	-	-	95.91	32.96	7.22	36.83	334	26	A	H
		2483.62	55.94	-18.06	74	52.53	32.98	7.25	36.82	247	24	P	V
		2483.62	38.57	-15.43	54	35.16	32.98	7.25	36.82	247	24	A	V
		2470	109.87	-	-	106.52	32.96	7.22	36.83	247	24	P	V
		2468	99.37	-	-	96.02	32.96	7.22	36.83	247	24	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preampl	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)
802.11ax HE20 Partial 106/53 CH 01 2412MHz		4830	40.67	-33.33	74	61.6	34.2	10.25	65.38	300	0	P	H
		4830	40.97	-33.03	74	61.9	34.2	10.25	65.38	100	0	P	V
802.11ax HE20		4834	39.76	-34.24	74	60.69	34.21	10.25	65.39	300	0	P	H
		7251	42.49	-31.51	74	59.68	35.85	12.72	65.76	300	0	P	H



Partial 106/53 CH 02 2417MHz		4834	40.19	-33.81	74	61.12	34.21	10.25	65.39	100	0	P	V
		7251	42.01	-31.99	74	59.2	35.85	12.72	65.76	100	0	P	V
802.11ax HE20 Partial 106/53 CH 06 2437MHz		4875	39.82	-34.18	74	60.72	34.23	10.29	65.42	300	0	P	H
		7305	42.89	-31.11	74	60.22	35.86	12.72	65.91	300	0	P	H
		4875	39.79	-34.21	74	60.69	34.23	10.29	65.42	100	0	P	V
		7305	42.09	-31.91	74	59.42	35.86	12.72	65.91	100	0	P	V
802.11ax HE20 Partial 106/54 CH 10 2457MHz		4914	39.76	-34.24	74	60.61	34.25	10.34	65.44	300	0	P	H
		7371	42.49	-31.51	74	59.99	35.88	12.73	66.11	300	0	P	H
		4914	40.19	-33.81	74	61.04	34.25	10.34	65.44	100	0	P	V
		7371	42.01	-31.99	74	59.51	35.88	12.73	66.11	100	0	P	V
802.11ax HE20 Partial 106/54 CH 11 2462MHz		4920	40.38	-33.62	74	61.23	34.26	10.34	65.45	300	0	P	H
		7380	42.39	-31.61	74	59.89	35.88	12.73	66.11	300	0	P	H
		4920	40.21	-33.79	74	61.06	34.26	10.34	65.45	100	0	P	V
		7380	42.3	-31.7	74	59.8	35.88	12.73	66.11	100	0	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 802.11 ax 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)
802.11ax HE40 Full CH 03 2422MHz		2389.56	57.48	-16.52	74	54.36	32.88	7.1	36.86	285	319	P	H
		2389.95	47.94	-6.06	54	44.82	32.88	7.1	36.86	285	319	A	H
	*	2420	104.53	-	-	101.3	32.92	7.16	36.85	285	319	P	H
	*	2420	95.37	-	-	92.14	32.92	7.16	36.85	285	319	A	H
		2486.08	49.76	-24.24	74	46.35	32.98	7.25	36.82	285	319	P	H
		2484.22	38.3	-15.7	54	34.89	32.98	7.25	36.82	285	319	A	H
		2389.95	60.27	-13.73	74	57.15	32.88	7.1	36.86	152	297	P	V
		2389.56	49.56	-4.44	54	46.44	32.88	7.1	36.86	152	297	A	V
	*	2418	106.02	-	-	102.81	32.9	7.16	36.85	152	297	P	V
	*	2420	96.35	-	-	93.12	32.92	7.16	36.85	152	297	A	V
		2486.02	50.21	-23.79	74	46.8	32.98	7.25	36.82	152	297	P	V
		2485.24	38.3	-15.7	54	34.89	32.98	7.25	36.82	152	297	A	V
802.11ax HE40 Full CH 06 2437MHz		2389.04	49.38	-24.62	74	46.26	32.88	7.1	36.86	318	309	P	H
		2389.82	38.57	-15.43	54	35.45	32.88	7.1	36.86	318	309	A	H
	*	2436	106.78	-	-	103.52	32.92	7.19	36.85	318	309	P	H
	*	2436	96.41	-	-	93.15	32.92	7.19	36.85	318	309	A	H
		2484.04	49.53	-24.47	74	46.12	32.98	7.25	36.82	318	309	P	H
		2483.5	38.99	-15.01	54	35.58	32.98	7.25	36.82	318	309	A	H
		2389.95	49.9	-24.1	74	46.78	32.88	7.1	36.86	116	343	P	V
		2389.82	39.27	-14.73	54	36.15	32.88	7.1	36.86	116	343	A	V
	*	2434	105.04	-	-	101.81	32.92	7.16	36.85	116	343	P	V
	*	2436	96.2	-	-	92.94	32.92	7.19	36.85	116	343	A	V
		2483.98	50.73	-23.27	74	47.32	32.98	7.25	36.82	116	343	P	V
		2483.62	39.85	-14.15	54	36.44	32.98	7.25	36.82	116	343	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		2365.51	49.22	-24.78	74	46.2	32.83	7.07	36.88	376	348	P	H
		2389.95	37.89	-16.11	54	34.77	32.88	7.1	36.86	376	348	A	H
	*	2448	103.95	-	-	100.66	32.94	7.19	36.84	376	348	P	H
	*	2450	94.21	-	-	90.92	32.94	7.19	36.84	376	348	A	H
		2483.56	50.69	-23.31	74	47.28	32.98	7.25	36.82	376	348	P	H
		2483.5	40.68	-13.32	54	37.27	32.98	7.25	36.82	376	348	A	H
		2368.11	48.61	-25.39	74	45.59	32.83	7.07	36.88	100	120	P	V
		2389.04	38.35	-15.65	54	35.23	32.88	7.1	36.86	100	120	A	V
	*	2450	105.11	-	-	101.82	32.94	7.19	36.84	100	120	P	V
	*	2450	95.23	-	-	91.94	32.94	7.19	36.84	100	120	A	V
		2483.56	48.84	-25.16	74	45.43	32.98	7.25	36.82	100	120	P	V
		2483.5	39.37	-14.63	54	35.96	32.98	7.25	36.82	100	120	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)
802.11ax		4844	40.23	-33.77	74	61.16	34.21	10.25	65.39	300	0	P	H
HE40 Full		7260	42.12	-31.88	74	59.31	35.85	12.72	65.76	300	0	P	H
CH 03		4844	40.36	-33.64	74	61.29	34.21	10.25	65.39	100	0	P	V
2422MHz		7260	43.26	-30.74	74	60.45	35.85	12.72	65.76	100	0	P	V
802.11ax		4875	39.89	-34.11	74	60.79	34.23	10.29	65.42	300	0	P	H
HE40 Full		7305	43.41	-30.59	74	60.74	35.86	12.72	65.91	300	0	P	H
CH 06		4875	40.85	-33.15	74	61.75	34.23	10.29	65.42	100	0	P	V
2437MHz		7305	42.38	-31.62	74	59.71	35.86	12.72	65.91	100	0	P	V
802.11ax		4904	39.76	-34.24	74	60.63	34.25	10.32	65.44	300	0	P	H
HE40 Full		7356	42.49	-31.51	74	59.95	35.87	12.73	66.06	300	0	P	H
CH 09		4904	40.19	-33.81	74	61.06	34.25	10.32	65.44	100	0	P	V
2452MHz		7356	42.01	-31.99	74	59.47	35.87	12.73	66.06	100	0	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 Partial 242 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Partial 242/61 CH 03 2422MHz		2389.69	63.92	-10.08	74	60.8	32.88	7.1	36.86	353	36	P	H
		2389.95	49.8	-4.2	54	46.68	32.88	7.1	36.86	353	36	A	H
		2484.04	49.28	-24.72	74	45.87	32.98	7.25	36.82	353	36	P	H
		2483.5	38.4	-15.6	54	34.99	32.98	7.25	36.82	353	36	A	H
		2410	106.59	-	-	103.41	32.9	7.13	36.85	353	36	P	H
		2410	97.18	-	-	94	32.9	7.13	36.85	353	36	A	H
		2389.56	63.52	-10.48	74	60.4	32.88	7.1	36.86	100	113	P	V
		2389.95	49.62	-4.38	54	46.5	32.88	7.1	36.86	100	113	A	V
		2484.46	50.28	-23.72	74	46.87	32.98	7.25	36.82	100	113	P	V
		2483.98	38.56	-15.44	54	35.15	32.98	7.25	36.82	100	113	A	V
		2410	105.89	-	-	102.71	32.9	7.13	36.85	100	113	P	V
		2408	97.6	-	-	94.42	32.9	7.13	36.85	100	113	A	V
802.11ax HE40 Partial 242/62 CH 09 2452MHz		2339.12	49.13	-24.87	74	46.2	32.81	7.01	36.89	342	39	P	H
		2388.91	38.11	-15.89	54	34.99	32.88	7.1	36.86	342	39	A	H
		2485.24	67.73	-6.27	74	64.32	32.98	7.25	36.82	342	39	P	H
		2483.5	47.92	-6.08	54	44.51	32.98	7.25	36.82	342	39	A	H
		2460	104.66	-	-	101.31	32.96	7.22	36.83	342	39	P	H
		2460	96.27	-	-	92.92	32.96	7.22	36.83	342	39	A	H
		2341.07	48.56	-25.44	74	45.6	32.81	7.04	36.89	122	67	P	V
		2389.69	38.62	-15.38	54	35.5	32.88	7.1	36.86	122	67	A	V
		2485.36	69.16	-4.84	74	65.75	32.98	7.25	36.82	122	67	P	V
		2484.88	49.76	-4.24	54	46.35	32.98	7.25	36.82	122	67	A	V
		2458	106.26	-	-	102.91	32.96	7.22	36.83	122	67	P	V
		2458	97.52	-	-	94.17	32.96	7.22	36.83	122	67	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 Partial 242 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Partial 242/61 CH 03 2422MHz		4845	41.45	-32.55	74	62.38	34.21	10.25	65.39	300	0	P	H
		7266	41.8	-32.2	74	59.03	35.86	12.72	65.81	300	0	P	H
		4845	40.48	-33.52	74	61.41	34.21	10.25	65.39	100	0	P	V
		7266	42.4	-31.6	74	59.63	35.86	12.72	65.81	100	0	P	V
802.11ax HE40 Partial 242/61 CH 06 2437MHz		4875	40.37	-33.63	74	61.27	34.23	10.29	65.42	300	0	P	H
		7311	42.35	-31.65	74	59.68	35.86	12.72	65.91	300	0	P	H
		4875	40.3	-33.7	74	61.2	34.23	10.29	65.42	100	0	P	V
		7311	42.51	-31.49	74	59.84	35.86	12.72	65.91	100	0	P	V
802.11ax HE40 Partial 242/62 CH 09 2452MHz		4905	40.31	-33.69	74	61.16	34.25	10.34	65.44	300	0	P	H
		7256	42.03	-31.97	74	59.22	35.85	12.72	65.76	300	0	P	H
		4905	40.75	-33.25	74	61.6	34.25	10.34	65.44	100	0	P	V
		7356	42	-32	74	59.46	35.87	12.73	66.06	100	0	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 802.11ax HE40 Partial 242 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11ax HE40 LF		30	20.62	-19.38	40	27.11	25.5	0.71	32.7	-	-	P	H
		156.1	24.93	-18.57	43.5	38.51	17.36	1.9	32.84	-	-	P	H
		299.66	24.51	-21.49	46	34.57	20.2	2.64	32.9	-	-	P	H
		551.86	24.13	-21.87	46	27.26	25.88	3.59	32.6	-	-	P	H
		751.68	28.63	-17.37	46	30.6	26.52	4.2	32.69	-	-	P	H
		889.42	35.57	-10.43	46	36.17	27.36	4.56	32.52	-	-	P	H
		48.43	28.67	-11.33	40	44.82	15.77	1.05	32.97	-	-	P	V
		64.92	27.25	-12.75	40	45.84	13.3	1.21	33.1	-	-	P	V
		131.85	25.4	-18.1	43.5	38.78	17.72	1.74	32.84	-	-	P	V
		326.82	22.46	-23.54	46	31.76	20.85	2.75	32.9	-	-	P	V
		560.59	25.53	-20.47	46	28.68	25.82	3.61	32.58	-	-	P	V
		790.48	28.81	-17.19	46	30.23	26.82	4.3	32.54	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



<Simultaneous transmission>

2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE40 Partial 242 Tx & WCDMA 850 Link (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Partial 242/61 CH 03 2422MHz		2389.04	61.92	-12.08	74	58.8	32.88	7.1	36.86	390	51	P	H
		2389.95	48.7	-5.3	54	45.58	32.88	7.1	36.86	390	51	A	H
		2489.68	49.57	-24.43	74	46.13	33	7.25	36.81	390	51	P	H
		2497.54	38.44	-15.56	54	34.97	33	7.28	36.81	390	51	A	H
		2422	107.92	---	---	104.69	32.92	7.16	36.85	390	51	P	H
		2410	98.14	---	---	94.96	32.9	7.13	36.85	390	51	A	H
		2388.91	63.13	-10.87	74	60.01	32.88	7.1	36.86	119	60	P	V
		2389.95	49.96	-4.04	54	46.84	32.88	7.1	36.86	119	60	A	V
		2483.68	50.01	-23.99	74	46.6	32.98	7.25	36.82	119	60	P	V
		2484.82	38.49	-15.51	54	35.08	32.98	7.25	36.82	119	60	A	V
		2418	107.68	---	---	104.47	32.9	7.16	36.85	119	60	P	V
		2408	98.49	---	---	95.31	32.9	7.13	36.85	119	60	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 Partial 242 Tx & WCDMA 850 Link (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Partial 242/61 CH 03 2422MHz		4844	39.65	-34.35	74	60.58	34.21	10.25	65.39	300	0	P	H
		7260	41.95	-32.05	74	59.14	35.85	12.72	65.76	300	0	P	H
		4844	39.99	-34.01	74	60.92	34.21	10.25	65.39	100	0	P	V
		7260	41.87	-32.13	74	59.06	35.85	12.72	65.76	100	0	P	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+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

2. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

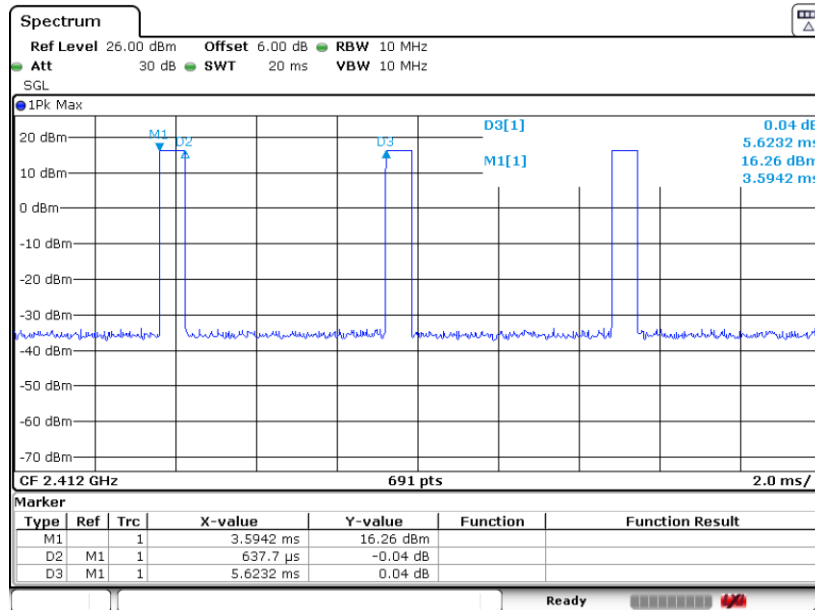
Both peak and average measured complies with the limit line, so test result is “PASS”.

Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11b	11.34	0.638	1.568	1.6KHz
802.11g	48.97	1.036	0.965	1KHz
802.11ax HE20	79.24	5.420	0.184	200Hz
802.11ax HE40	76.52	5.478	0.183	200Hz

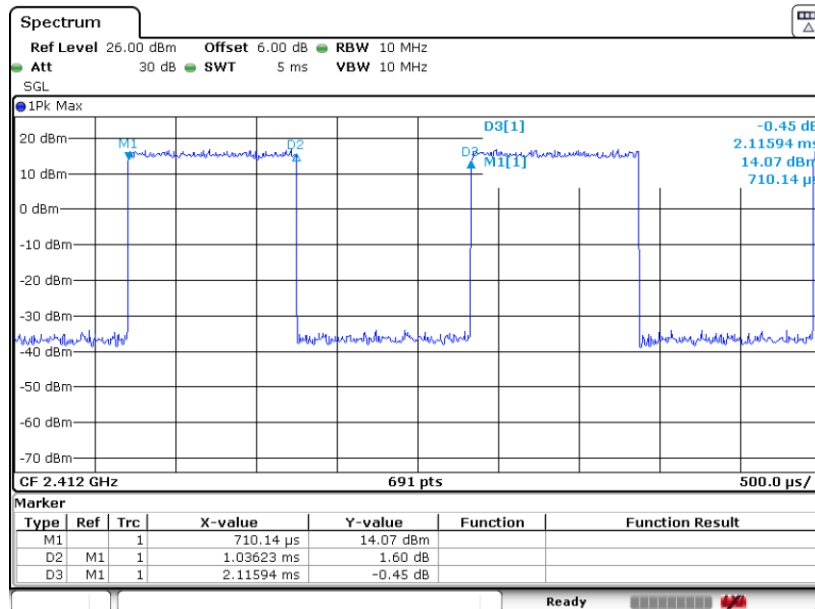


802.11b



Date: 15.JUN.2022 09:35:56

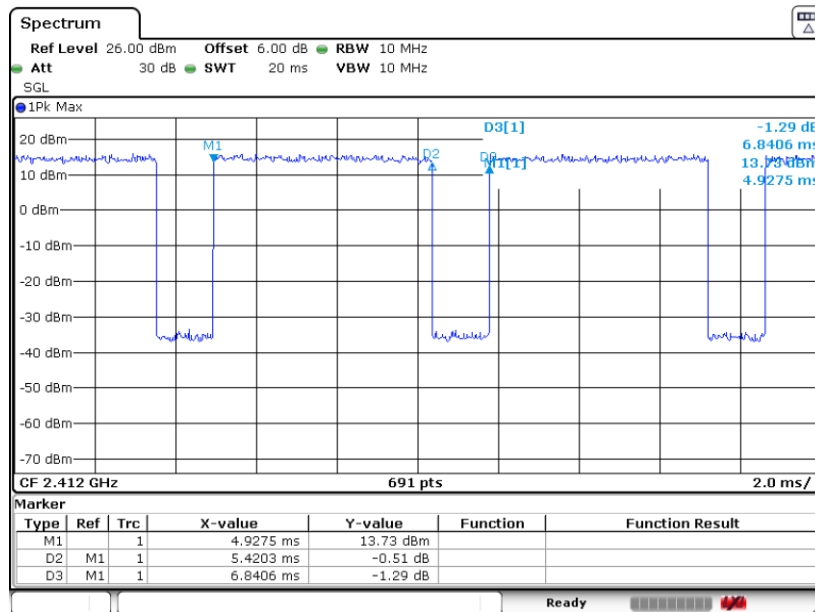
802.11g



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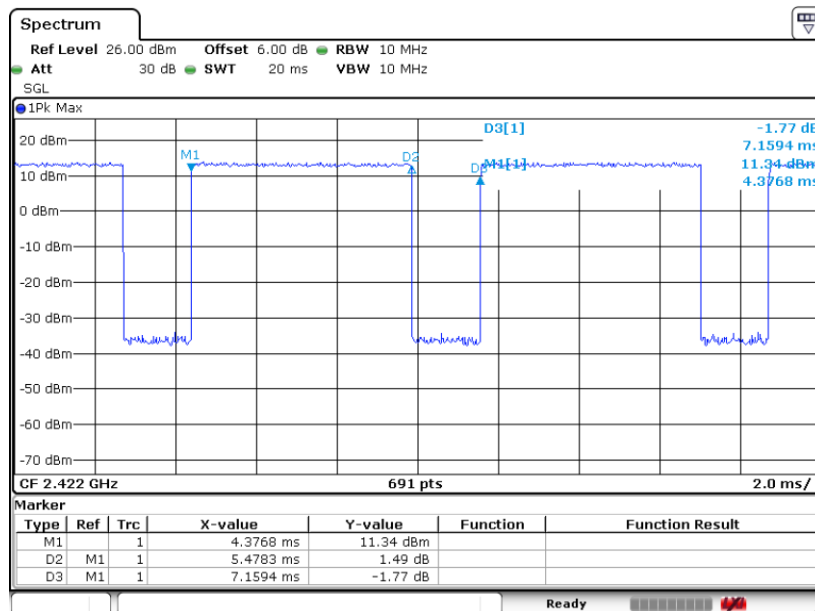


802.11ax HE20



Date: 15.JUN.2022 10:17:26

802.11ax HE40



Date: 22.JUN.2022 04:13:32