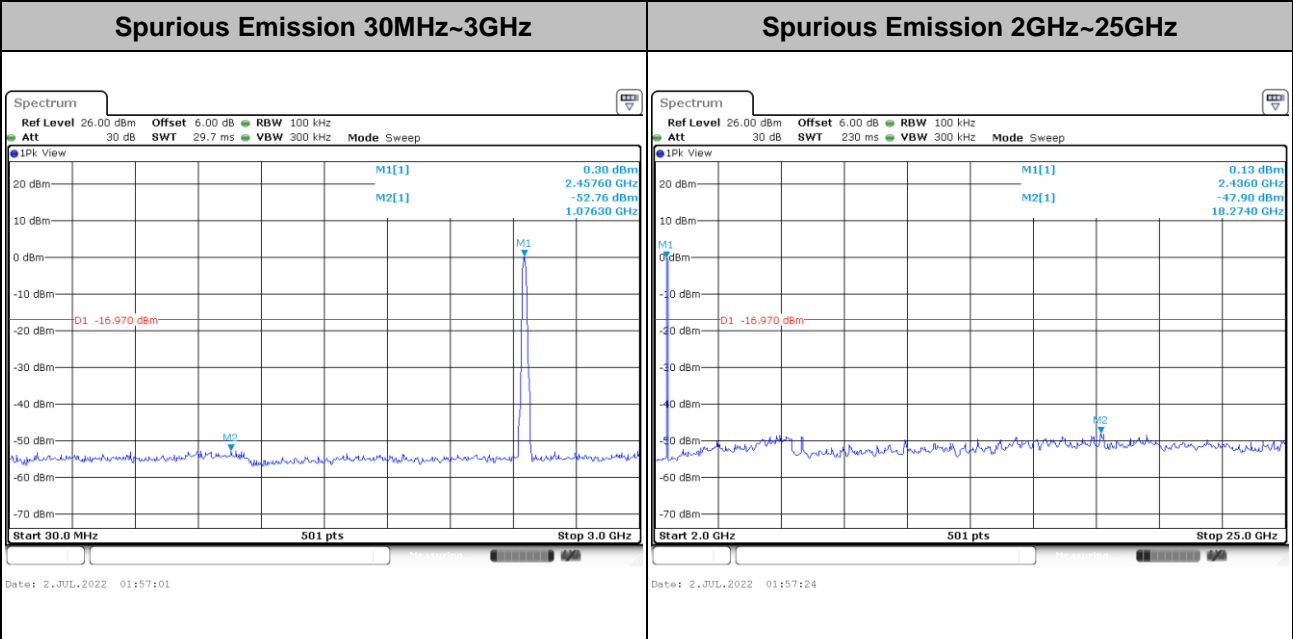
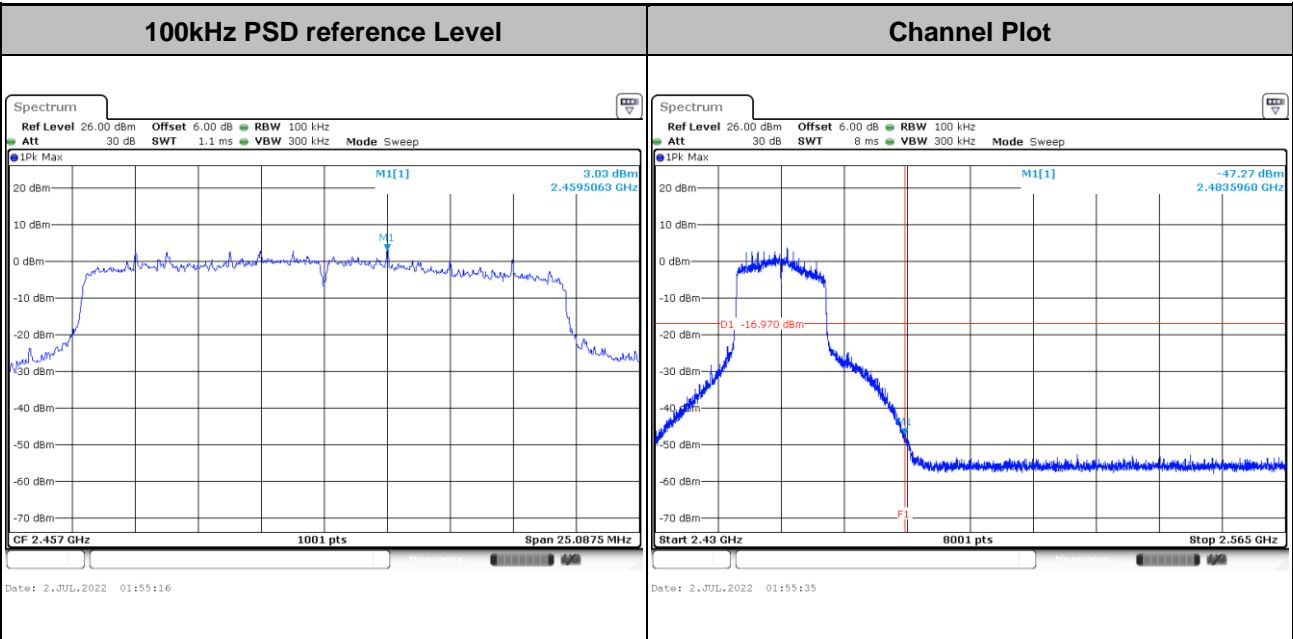


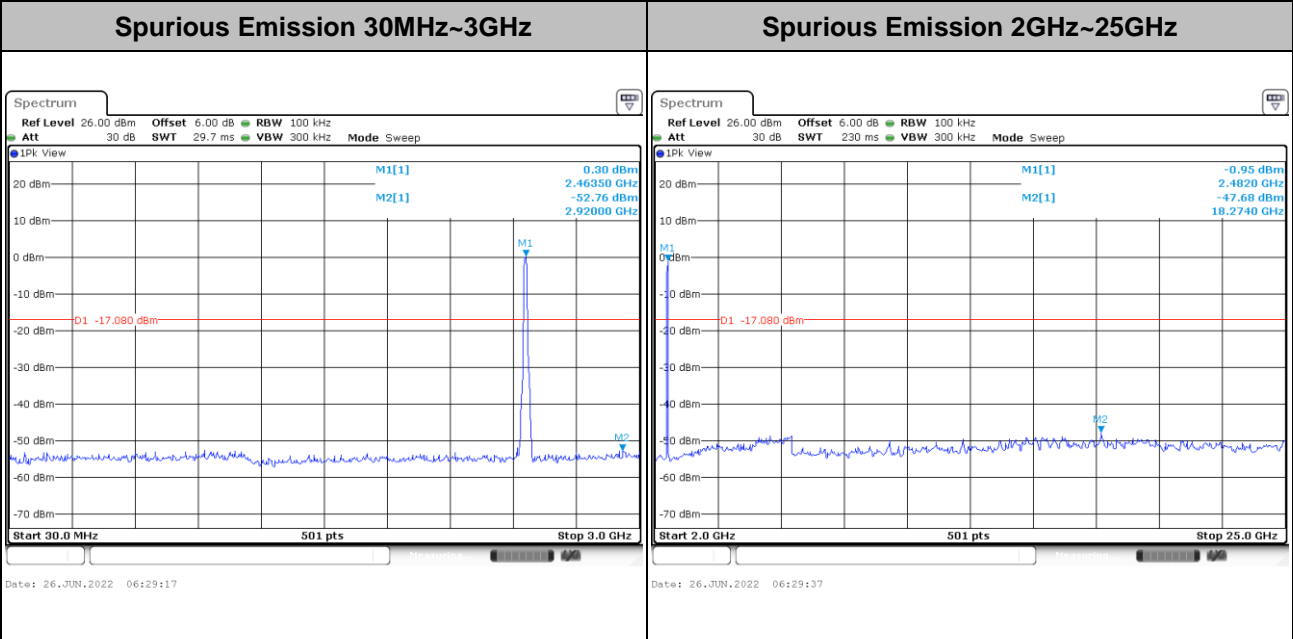
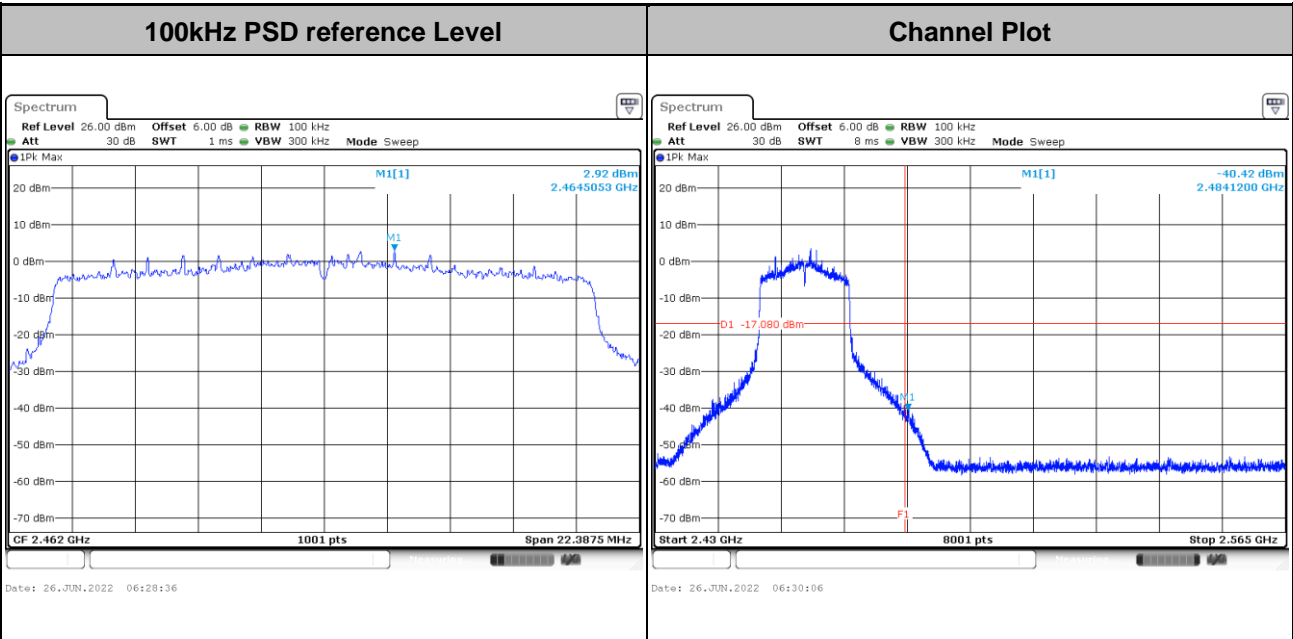


Test Mode : 802.11ax HE20 Test Channel : 10



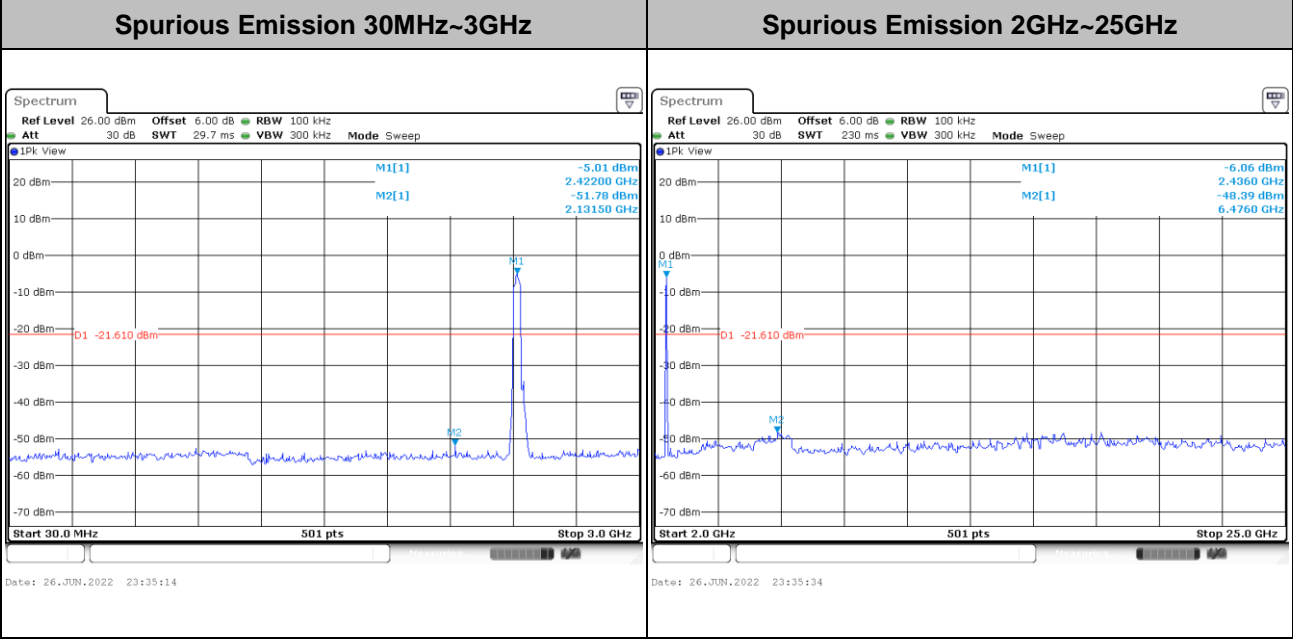
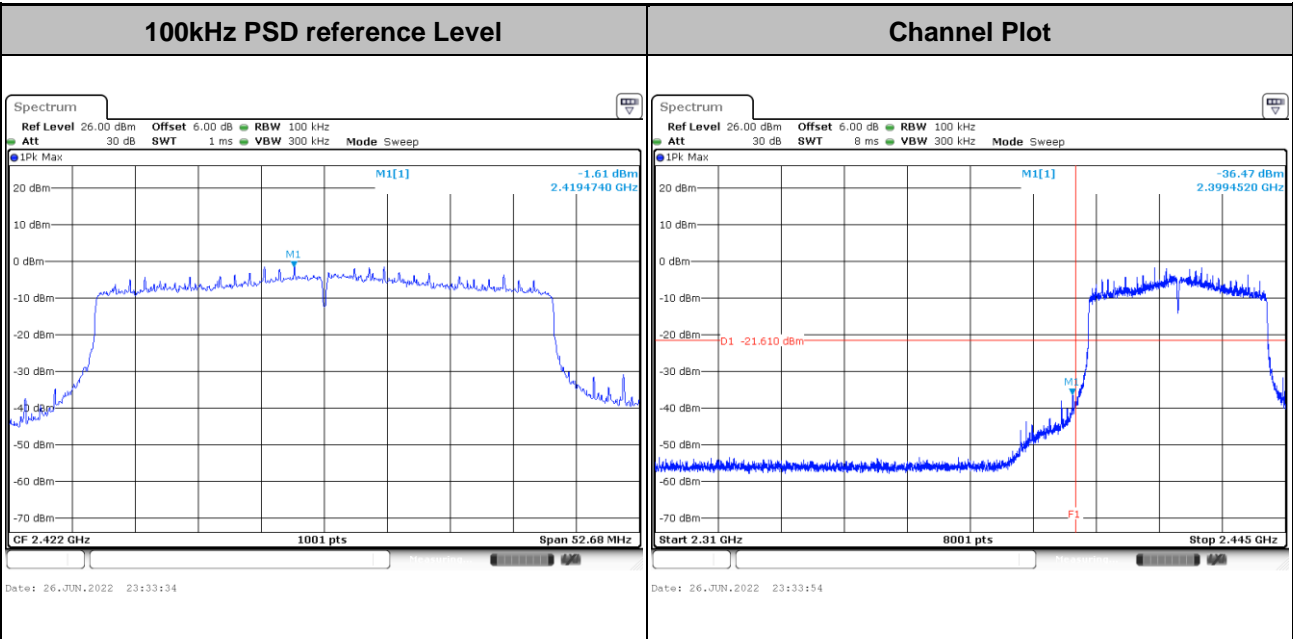


Test Mode : 802.11ax HE20 Test Channel : 11



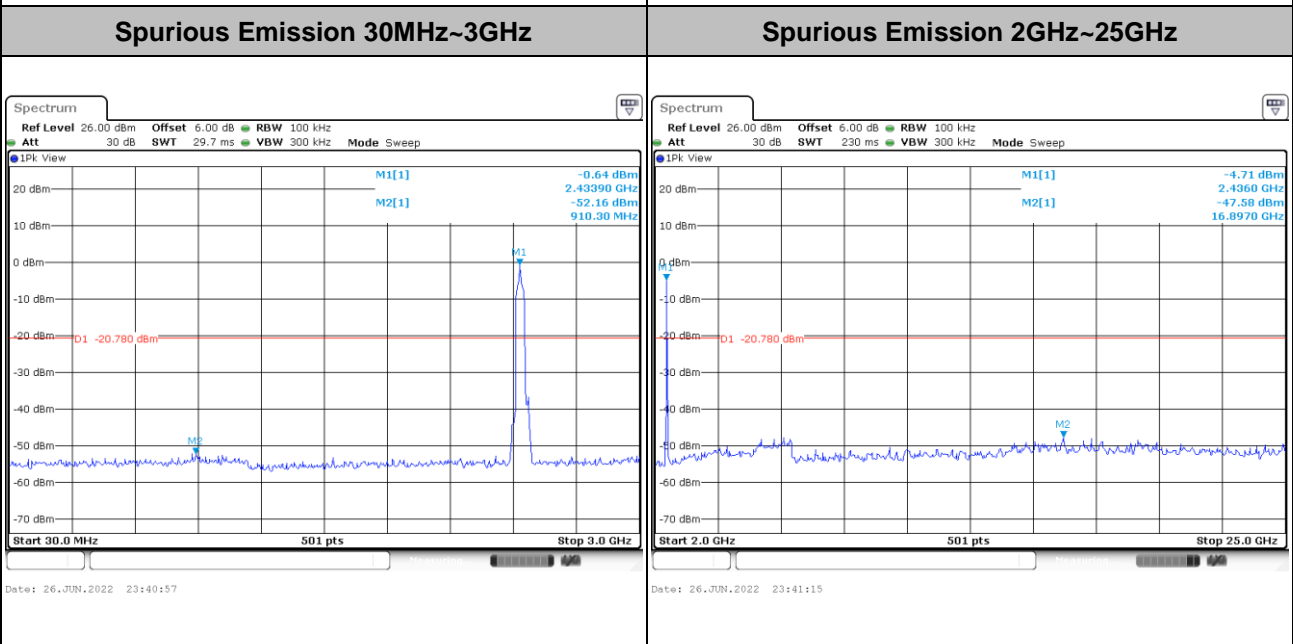
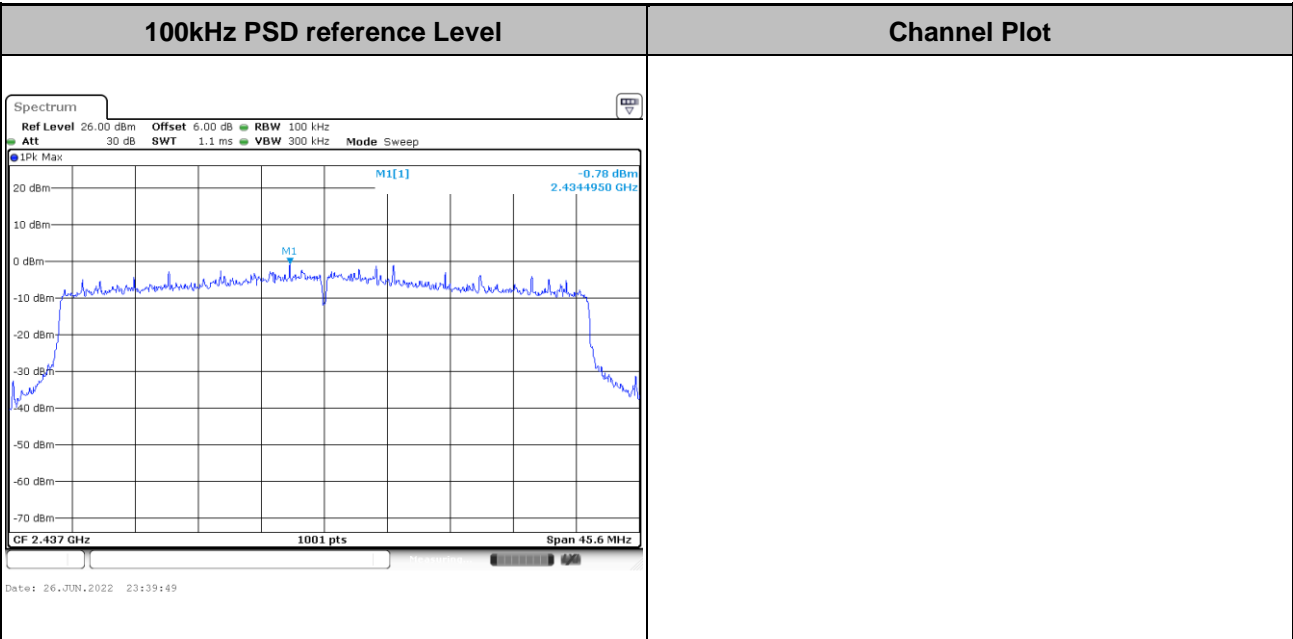


Test Mode : 802.11ax HE40 Test Channel : 03



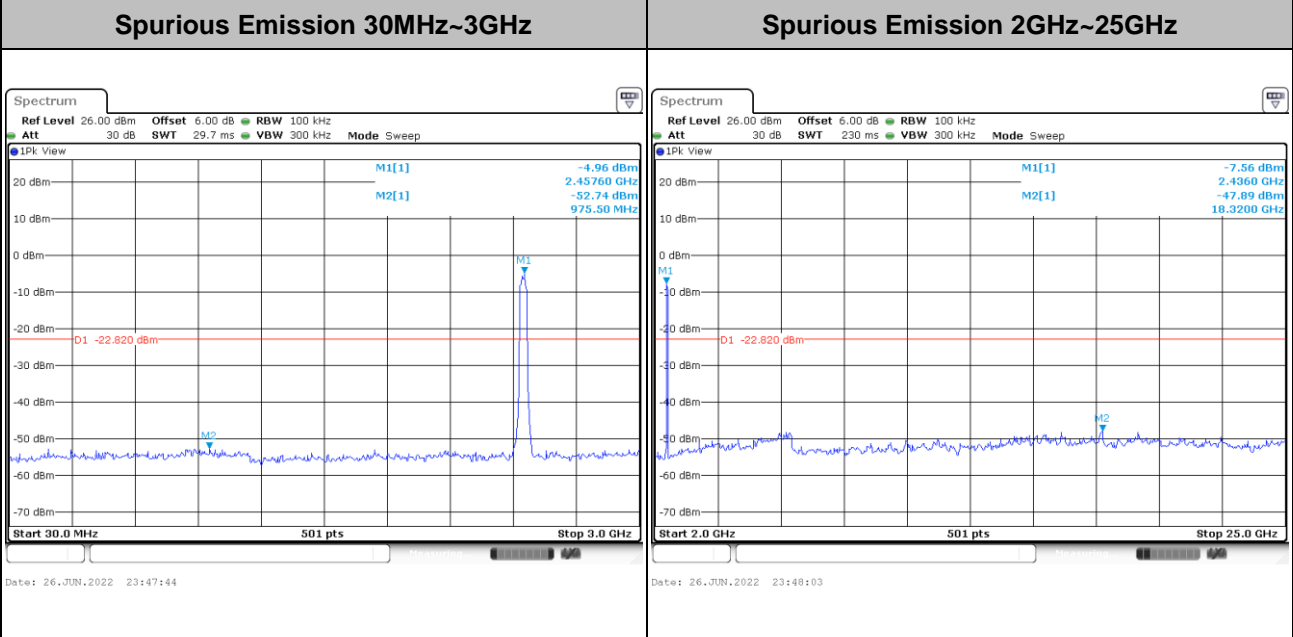
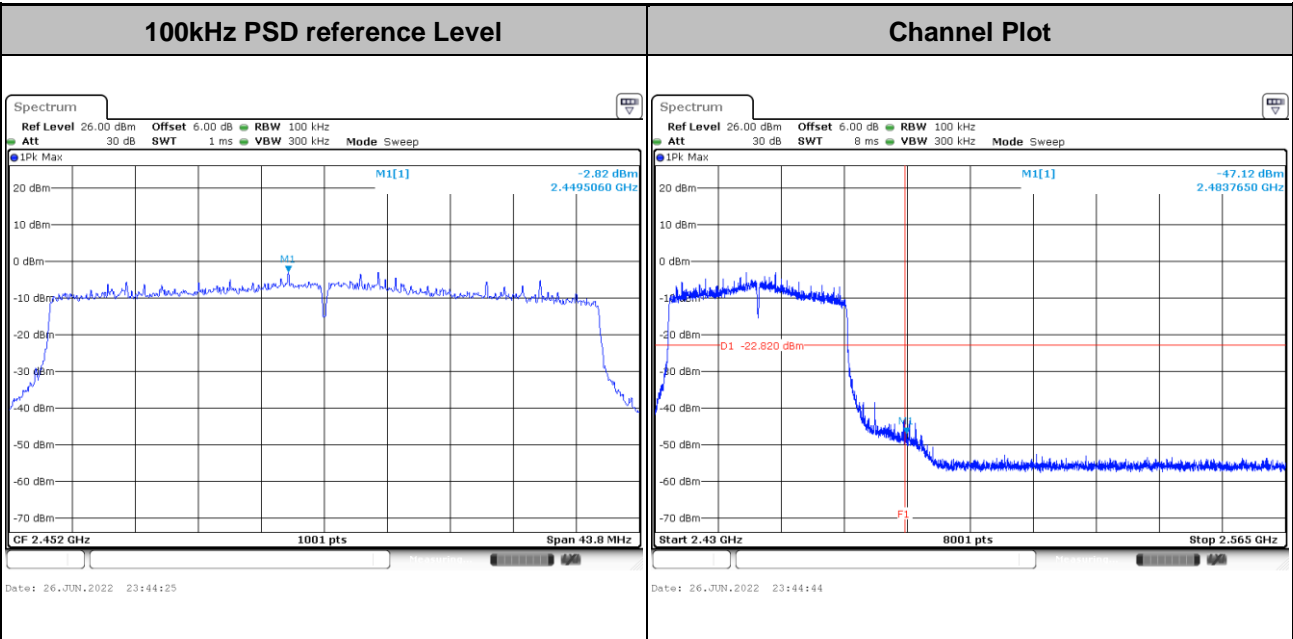


Test Mode :	802.11ax HE40	Test Channel :	06
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Test Mode : 802.11ax HE40 Test Channel : 09





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.

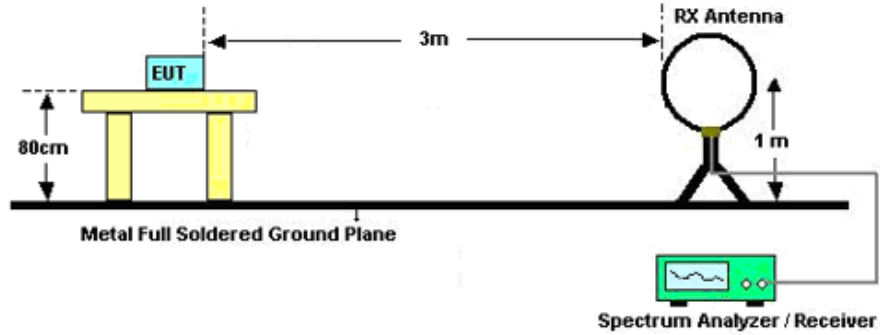


3.5.3 Test Procedures

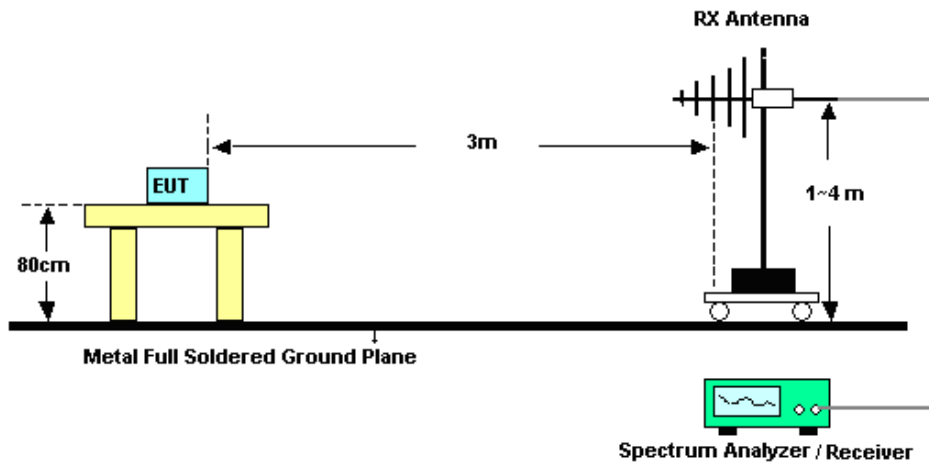
1. The testing follows ANSI C63.10-2013 clause 11.11 & 11.12
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better 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

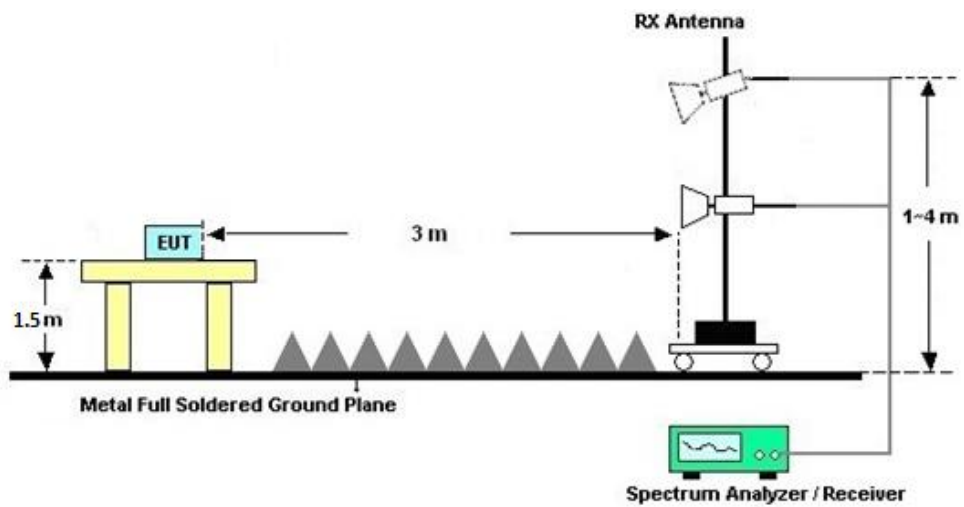
For radiated emissions below 30MHz



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.

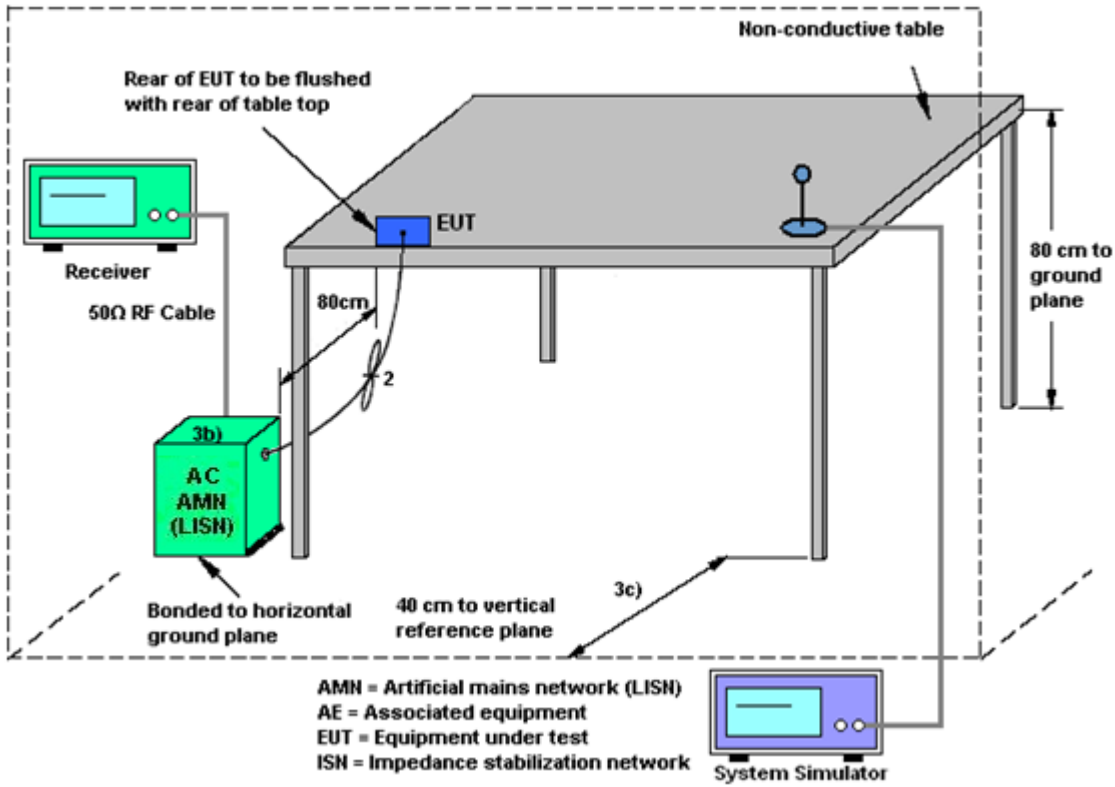
3.6.2 Measuring Instruments

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>						
	Ant. 1	Ant. 2	DG for Power	DG for PSD	Power Limit Reduction	PSD Limit Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
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)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 13, 2022	Jul. 26, 2022	Jul. 12, 2023	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 21, 2022	Jul. 26, 2022	Jun. 20, 2023	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz~2GHz	Oct. 22, 2021	Jul. 26, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 18, 2022	Jul. 26, 2022	Jul. 17, 2023	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 13, 2022	Jul. 26, 2022	Jul. 12, 2023	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz~40GHz	Apr. 10, 2022	Jul. 26, 2022	Apr. 09, 2023	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Jul. 13, 2022	Jul. 26, 2022	Jul. 12, 2023	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 22, 2021	Jul. 26, 2022	Oct. 21, 2022	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Jul. 26, 2022	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Jul. 26, 2022	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Jul. 26, 2022	NCR	Radiation (03CH02-SZ)
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))	5.1dB
---	-------

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB
---	-------

----- 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

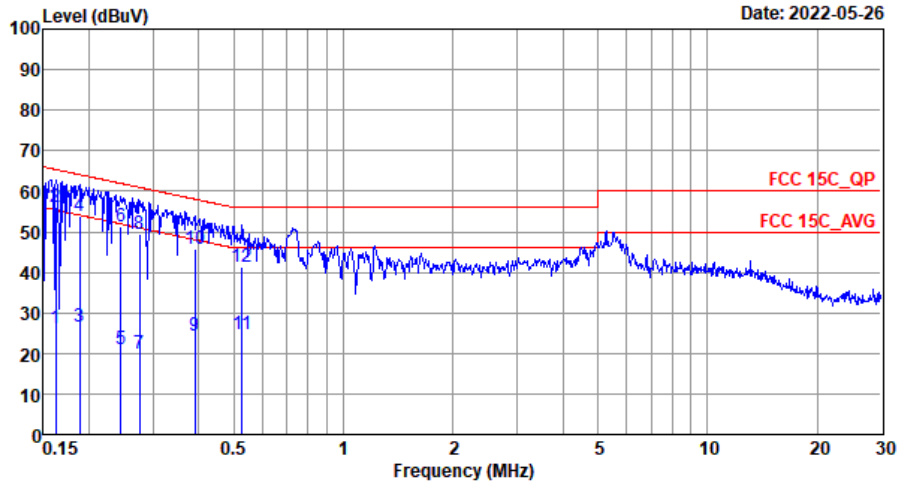
2.4GHz Band MIMO													
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config.	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
						Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	2	1	2412	Full	-12.96	-12.40	-9.39	0.91		8.00	Pass	
HE20	MCS0	2	1	2412	26/0	-7.06	-5.51	-2.50	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.		

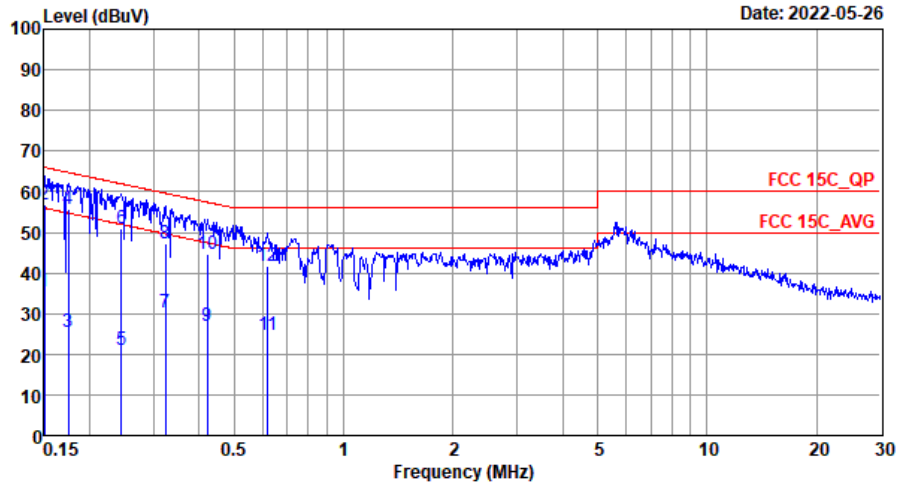


Site : CO01-SZ
 Condition: FCC 15C QP LISN 20210901 L LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			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	Margin	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		2363.34	51.26	-22.74	74	46.31	31.7	5.51	32.26	292	344	P	H
		2363.55	41.6	-12.4	54	36.65	31.7	5.51	32.26	292	344	A	H
	*	2412	102.99	-	-	97.86	31.8	5.57	32.24	292	344	P	H
	*	2412	98.63	-	-	93.5	31.8	5.57	32.24	292	344	A	H
		2338.66	50.77	-23.23	74	45.85	31.7	5.49	32.27	292	54	P	V
		2386.02	41.56	-12.44	54	36.56	31.7	5.55	32.25	292	54	A	V
	*	2412	98.71	-	-	93.58	31.8	5.57	32.24	292	54	P	V
	*	2412	95.01	-	-	89.88	31.8	5.57	32.24	292	54	A	V
802.11b CH 06 2437MHz		2380.56	50.37	-23.63	74	45.39	31.7	5.53	32.25	292	186	P	H
		2346.12	41.25	-12.75	54	36.32	31.7	5.49	32.26	292	186	A	H
	*	2437	103.45	-	-	97.98	32	5.61	32.14	292	186	P	H
	*	2437	98.51	-	-	93.04	32	5.61	32.14	292	186	A	H
		2495.1	52.45	-21.55	74	46.52	32.1	5.68	31.85	292	186	P	H
		2492.58	42.25	-11.75	54	36.32	32.1	5.68	31.85	292	186	A	H
		2384.06	51.14	-22.86	74	46.16	31.7	5.53	32.25	100	346	P	V
		2382.52	41.38	-12.62	54	36.4	31.7	5.53	32.25	100	346	A	V
	*	2437	97.68	-	-	92.21	32	5.61	32.14	100	346	P	V
	*	2437	92.2	-	-	86.73	32	5.61	32.14	100	346	A	V
		2499.44	51.68	-22.32	74	45.75	32.1	5.68	31.85	100	346	P	V
	2498.6	42.43	-11.57	54	36.5	32.1	5.68	31.85	100	346	A	V	



802.11b CH 11 2462MHz	*	2462	103.13	-	-	97.51	32.03	5.64	32.05	202	353	P	H
	*	2462	90.53	-	-	84.91	32.03	5.64	32.05	202	353	A	H
		2492.23	50.64	-23.36	74	44.71	32.1	5.68	31.85	202	353	P	H
		2497.41	42.26	-11.74	54	36.33	32.1	5.68	31.85	202	353	A	H
	*	2462	97.38	-	-	91.76	32.03	5.64	32.05	100	355	P	V
	*	2462	91.7	-	-	86.08	32.03	5.64	32.05	100	355	A	V
		2498.46	52.16	-21.84	74	46.23	32.1	5.68	31.85	100	355	P	V
		2496.99	42.42	-11.58	54	36.49	32.1	5.68	31.85	100	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 802.11b (Harmonic @ 3m)

Table with 14 columns: WIFI Ant. 1+2, Note, Frequency (MHz), Level (dBµV/m), Margin (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). Rows include data for CH 01 (2412MHz), CH 06 (2437MHz), and CH 11 (2462MHz).



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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2389.59	57.65	-16.35	74	52.65	31.7	5.55	32.25	102	106	P	H
		2389.90	45.55	-8.45	54	40.54	31.7	5.55	32.24	102	106	A	H
	*	2412	105.61	-	-	100.48	31.8	5.57	32.24	102	106	P	H
	*	2412	97.3	-	-	92.17	31.8	5.57	32.24	102	106	A	H
		2389.90	55.23	-18.77	74	50.22	31.7	5.55	32.24	291	54	P	V
		2389.90	44.73	-9.27	54	39.72	31.7	5.55	32.24	291	54	A	V
	*	2412	104.41	-	-	99.28	31.8	5.57	32.24	291	54	P	V
	*	2412	95.75	-	-	90.62	31.8	5.57	32.24	291	54	A	V
802.11g CH 02 2417MHz		2389.38	53.28	-20.72	74	48.28	31.7	5.55	32.25	111	184	P	H
		2390	42.74	-11.26	54	37.73	31.7	5.55	32.24	111	184	A	H
	*	2417	108.5	-	-	103.27	31.8	5.57	32.14	111	184	P	H
	*	2417	90.26	-	-	85.03	31.8	5.57	32.14	111	184	A	H
		2390	52.35	-21.65	74	47.34	31.7	5.55	32.24	111	316	P	V
		2390	42.28	-11.72	54	37.27	31.7	5.55	32.24	111	316	A	V
	*	2417	106.25	-	-	101.02	31.8	5.57	32.14	111	316	P	V
	*	2417	88.54	-	-	83.31	31.8	5.57	32.14	111	316	A	V



802.11g CH 06 2437MHz	*	2388.26	52.17	-21.83	74	47.17	31.7	5.55	32.25	180	293	P	H
	*	2389.94	42.11	-11.89	54	37.1	31.7	5.55	32.24	180	293	A	H
		2437	108.98	-	-	103.63	31.9	5.59	32.14	180	293	P	H
		2437	98.45	-	-	93.1	31.9	5.59	32.14	180	293	A	H
		2484.81	54.51	-19.49	74	48.73	32.07	5.66	31.95	180	293	P	H
		2483.5	44.11	-9.89	54	38.33	32.07	5.66	31.95	180	293	A	H
	*	2389.8	52.22	-21.78	74	47.21	31.7	5.55	32.24	292	37	P	V
	*	2389.94	42.39	-11.61	54	37.38	31.7	5.55	32.24	292	37	A	V
		2437	104.32	-	-	98.97	31.9	5.59	32.14	292	37	P	V
		2437	96.21	-	-	90.86	31.9	5.59	32.14	292	37	A	V
		2498.74	52.05	-21.95	74	46.12	32.1	5.68	31.85	292	37	P	V
		2497.41	41.92	-12.08	54	35.99	32.1	5.68	31.85	292	37	A	V
802.11g CH 11 2462MHz	*	2462	106.54	-	-	100.92	32.03	5.64	32.05	278	296	P	H
	*	2462	96.1	-	-	90.48	32.03	5.64	32.05	278	296	A	H
		2484.08	54.42	-19.58	74	48.64	32.07	5.66	31.95	278	296	P	H
		2484.2	44.01	-9.99	54	38.23	32.07	5.66	31.95	278	296	A	H
	*	2462	105.21	-	-	99.59	32.03	5.64	32.05	275	52	P	V
	*	2462	94.65	-	-	89.03	32.03	5.64	32.05	275	52	A	V
		2484.68	53.48	-20.52	74	47.7	32.07	5.66	31.95	275	52	P	V
		2484.08	43.2	-10.8	54	37.42	32.07	5.66	31.95	275	52	A	V
Remark	<p>1. No other spurious found.</p> <p>2. All results are PASS against Peak and Average limit line.</p>												



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

Table with 14 columns: WIFI Ant. 1+2, Note, Frequency (MHz), Level (dBµV/m), Margin (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). Rows include data for CH 01 (2412MHz), CH 06 (2437MHz), and CH 11 (2462MHz), plus a Remark section.



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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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		2388.43	58.44	-15.56	74	53.44	31.7	5.55	32.25	155	137	P	H
		2389.90	47.22	-6.78	54	42.21	31.7	5.55	32.24	155	137	A	H
	*	2412	105.89	-	-	100.76	31.8	5.57	32.24	155	137	P	H
	*	2412	94.72	-	-	89.59	31.8	5.57	32.24	155	137	A	H
		2389.90	54.78	-19.22	74	49.77	31.7	5.55	32.24	285	56	P	V
		2390	43.47	-10.53	54	38.46	31.7	5.55	32.24	285	56	A	V
	*	2412	105.32	-	-	100.19	31.8	5.57	32.24	285	56	P	V
	*	2412	93.84	-	-	88.71	31.8	5.57	32.24	285	56	A	V
802.11ax HE20 Full CH 02 2417MHz		2379.82	51.46	-22.54	74	46.48	31.7	5.53	32.25	109	186	P	H
		2389.38	41	-13	54	36	31.7	5.55	32.25	109	186	A	H
	*	2417	109.72	-	-	104.49	31.8	5.57	32.14	109	186	P	H
	*	2417	96.22	-	-	90.99	31.8	5.57	32.14	109	186	A	H
		2389.90	51.93	-22.07	74	46.92	31.7	5.55	32.24	110	318	P	V
		2389.90	41.47	-12.53	54	36.46	31.7	5.55	32.24	110	318	A	V
	*	2417	107.25	-	-	102.02	31.8	5.57	32.14	110	318	P	V
	*	2417	92.95	-	-	87.72	31.8	5.57	32.14	110	318	A	V



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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 06 2437MHz	*	2389.94	53.52	-20.48	74	48.51	31.7	5.55	32.24	292	34	P	H
	*	2389.8	43.03	-10.97	54	38.02	31.7	5.55	32.24	292	34	A	H
		2437	108.22	-	-	102.75	32	5.61	32.14	292	34	P	H
		2437	95.87	-	-	90.4	32	5.61	32.14	292	34	A	H
		2483.55	55.78	-18.22	74	50	32.07	5.66	31.95	292	34	P	H
		2483.76	44.43	-9.57	54	38.65	32.07	5.66	31.95	292	34	A	H
	*	2346.54	51.27	-22.73	74	46.34	31.7	5.49	32.26	289	241	P	V
	*	2389.66	40.59	-13.41	54	35.59	31.7	5.55	32.25	289	241	A	V
		2437	109.88	-	-	104.41	32	5.61	32.14	289	241	P	V
		2437	96.64	-	-	91.17	32	5.61	32.14	289	241	A	V
	2483.62	56.09	-17.91	74	50.31	32.07	5.66	31.95	289	241	P	V	
	2483.83	44.1	-9.9	54	38.32	32.07	5.66	31.95	289	241	A	V	
802.11ax HE20 Full CH 10 2457MHz	*	2457	109.79	-	-	104.17	32.03	5.64	32.05	102	198	P	H
	*	2457	96.47	-	-	90.85	32.03	5.64	32.05	102	198	A	H
		2489.8	52.23	-21.77	74	46.4	32.1	5.68	31.95	102	198	P	H
		2483.72	41.75	-12.25	54	35.97	32.07	5.66	31.95	102	198	A	H
	*	2457	105.86	-	-	100.24	32.03	5.64	32.05	100	317	P	V
	*	2457	94.87	-	-	89.25	32.03	5.64	32.05	100	317	A	V
		2486.6	51.46	-22.54	74	45.68	32.07	5.66	31.95	100	317	P	V
	2483.68	41.38	-12.62	54	35.6	32.07	5.66	31.95	100	317	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 11 2462MHz	*	2462	106.33	-	-	100.71	32.03	5.64	32.05	122	100	P	H
	*	2462	94.3	-	-	88.68	32.03	5.64	32.05	122	100	A	H
		2483.56	53.2	-20.8	74	47.42	32.07	5.66	31.95	122	100	P	H
		2483.52	43.41	-10.59	54	37.63	32.07	5.66	31.95	122	100	A	H
	*	2462	104.62	-	-	99	32.03	5.64	32.05	284	43	P	V
	*	2462	92.88	-	-	87.26	32.03	5.64	32.05	284	43	A	V
		2483.64	52.18	-21.82	74	46.4	32.07	5.66	31.95	284	43	P	V
		2483.52	42.91	-11.09	54	37.13	32.07	5.66	31.95	284	43	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)	Margin (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		4824	42.91	-31.09	74	58.3	33.8	8.71	57.9	-	-	P	H
		4824	42.97	-31.03	74	58.36	33.8	8.71	57.9	-	-	P	V
802.11ax HE20 Full CH 06 2437MHz		4874	42.18	-31.82	74	57.56	33.73	8.79	57.9	-	-	P	H
		7311	45.03	-28.97	74	57.69	35.72	11.09	59.47	-	-	P	H
		4874	41.55	-32.45	74	56.93	33.73	8.79	57.9	-	-	P	V
		7311	44.41	-29.59	74	57.07	35.72	11.09	59.47	-	-	P	V
802.11ax HE20 Full CH 11 2462MHz		4924	42.33	-31.67	74	57.63	33.7	8.9	57.9	-	-	P	H
		7386	44.76	-29.24	74	57.63	35.76	11.08	59.71	-	-	P	H
		4924	42.83	-31.17	74	58.13	33.7	8.9	57.9	-	-	P	V
		7386	45.82	-28.18	74	58.69	35.76	11.08	59.71	-	-	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)	Margin (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		2390	58.9	-15.1	74	53.89	31.7	5.55	32.24	258	30	P	H
		2390	41.81	-12.19	54	36.8	31.7	5.55	32.24	258	30	A	H
	*	2412	111.23	-	-	106.1	31.8	5.57	32.24	258	30	P	H
	*	2412	100.93	-	-	95.8	31.8	5.57	32.24	258	30	A	H
		2389.69	53.27	-20.73	74	48.27	31.7	5.55	32.25	290	317	P	V
		2389.8	40.28	-13.72	54	35.27	31.7	5.55	32.24	290	317	A	V
	*	2412	102.4	-	-	97.27	31.8	5.57	32.24	290	317	P	V
	*	2412	91.52	-	-	86.39	31.8	5.57	32.24	290	317	A	V
802.11ax HE20 Partial 26/4 CH 06 2437MHz		2342.06	50.69	-23.31	74	45.76	31.7	5.49	32.26	100	196	P	H
		2389.8	40.51	-13.49	54	35.5	31.7	5.55	32.24	100	196	A	H
	*	2437	114.14	-	-	108.67	32	5.61	32.14	100	196	P	H
	*	2437	100.98	-	-	95.51	32	5.61	32.14	100	196	A	H
		2490.2	52.57	-21.43	74	46.74	32.1	5.68	31.95	100	196	P	H
		2499.02	41.34	-12.66	54	35.41	32.1	5.68	31.85	100	196	A	H
		2381.12	51.18	-22.82	74	46.2	31.7	5.53	32.25	290	222	P	V
		2375.38	40.57	-13.43	54	35.59	31.7	5.53	32.25	290	222	A	V
	*	2437	108.02	-	-	102.55	32	5.61	32.14	290	222	P	V
	*	2437	96.55	-	-	91.08	32	5.61	32.14	290	222	A	V
		2499.51	52.38	-21.62	74	46.45	32.1	5.68	31.85	290	222	P	V
		2498.04	41.51	-12.49	54	35.58	32.1	5.68	31.85	290	222	A	V



802.11ax HE20 Partial 26/8 CH 11 2462MHz	*	2462	113.84	-	-	108.22	32.03	5.64	32.05	292	282	P	H
	*	2462	99.43	-	-	93.81	32.03	5.64	32.05	292	282	A	H
		2485.8	54.17	-19.83	74	48.39	32.07	5.66	31.95	292	282	P	H
		2483.56	42.11	-11.89	54	36.33	32.07	5.66	31.95	292	282	A	H
	*	2462	110.3	-	-	104.68	32.03	5.64	32.05	282	250	P	V
	*	2462	100.87	-	-	95.25	32.03	5.64	32.05	282	250	A	V
		2496.96	51.63	-22.37	74	45.7	32.1	5.68	31.85	282	250	P	V
		2485.88	41.58	-12.42	54	35.8	32.07	5.66	31.95	282	250	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)	Margin (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		4824	42.3	-31.7	74	57.69	33.8	8.71	57.9	-	-	P	H
Partial 26/0													
CH 01 2412MHz		4824	42.64	-31.36	74	58.03	33.8	8.71	57.9	-	-	P	V
802.11ax HE20		4874	41.89	-32.11	74	57.27	33.73	8.79	57.9	-	-	P	H
Partial 26/4		7311	45.48	-28.52	74	58.14	35.72	11.09	59.47	-	-	P	H
		4874	40.81	-33.19	74	56.19	33.73	8.79	57.9	-	-	P	V
CH 06 2437MHz		7311	45.37	-28.63	74	58.03	35.72	11.09	59.47	-	-	P	V
802.11ax HE20		4924	42.05	-31.95	74	57.35	33.7	8.9	57.9	-	-	P	H
Partial 26/8		7386	44.96	-29.04	74	57.83	35.76	11.08	59.71	-	-	P	H
		4924	41.62	-32.38	74	56.92	33.7	8.9	57.9	-	-	P	V
CH 11 2462MHz		7386	44.47	-29.53	74	57.34	35.76	11.08	59.71	-	-	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)	Margin (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		2389.48	54.85	-19.15	74	49.85	31.7	5.55	32.25	265	36	P	H
		2390	41.15	-12.85	54	36.14	31.7	5.55	32.24	265	36	A	H
	*	2412	108.36	-	-	103.23	31.8	5.57	32.24	265	36	P	H
	*	2412	98.04	-	-	92.91	31.8	5.57	32.24	265	36	A	H
		2389.90	52.73	-21.27	74	47.72	31.7	5.55	32.24	264	251	P	V
		2390	41.3	-12.7	54	36.29	31.7	5.55	32.24	264	251	A	V
	*	2412	104.94	-	-	99.81	31.8	5.57	32.24	264	251	P	V
	*	2412	94.65	-	-	89.52	31.8	5.57	32.24	264	251	A	V
802.11ax HE20 Partial 52/37 CH 02 2417MHz		2379.19	52.01	-21.99	74	47.03	31.7	5.53	32.25	100	206	P	H
		2389.90	40.89	-13.11	54	35.88	31.7	5.55	32.24	100	206	A	H
	*	2417	110.65	-	-	105.42	31.8	5.57	32.14	100	206	P	H
	*	2417	100.14	-	-	94.91	31.8	5.57	32.14	100	206	A	H
		2327.64	51.38	-22.62	74	46.55	31.63	5.47	32.27	292	224	P	V
		2373.10	40.52	-13.48	54	35.54	31.7	5.53	32.25	292	224	A	V
	*	2417	107.77	-	-	102.54	31.8	5.57	32.14	292	224	P	V
	*	2417	96.46	-	-	91.23	31.8	5.57	32.14	292	224	A	V



802.11ax HE20 Partial 52/39 CH 06 2437MHz	*	2337.02	51.64	-22.36	74	46.72	31.7	5.49	32.27	182	206	P	H
	*	2389.8	40.8	-13.2	54	35.79	31.7	5.55	32.24	182	206	A	H
		2437	112.62	-	-	107.15	32	5.61	32.14	182	206	P	H
		2437	102.5	-	-	97.03	32	5.61	32.14	182	206	A	H
		2493.7	52.09	-21.91	74	46.16	32.1	5.68	31.85	182	206	P	H
		2483.55	41.59	-12.41	54	35.81	32.07	5.66	31.95	182	206	A	H
	*	2346.26	51.72	-22.28	74	46.79	31.7	5.49	32.26	292	224	P	V
	*	2389.8	40.61	-13.39	54	35.6	31.7	5.55	32.24	292	224	A	V
		2437	109.72	-	-	104.25	32	5.61	32.14	292	224	P	V
		2437	100.32	-	-	94.85	32	5.61	32.14	292	224	A	V
		2488.8	52.07	-21.93	74	46.24	32.1	5.68	31.95	292	224	P	V
		2497.06	41.33	-12.67	54	35.4	32.1	5.68	31.85	292	224	A	V
802.11ax HE20 Partial 52/40 CH 10 2457MHz	*	2457	108.48	-	-	102.86	32.03	5.64	32.05	100	199	P	H
	*	2457	96.97	-	-	91.35	32.03	5.64	32.05	100	199	A	H
		2485.32	53.33	-20.67	74	47.55	32.07	5.66	31.95	100	199	P	H
		2498.04	41.39	-12.61	54	35.46	32.1	5.68	31.85	100	199	A	H
	*	2457	106.36	-	-	100.74	32.03	5.64	32.05	292	224	P	V
	*	2457	93.94	-	-	88.32	32.03	5.64	32.05	292	224	A	V
		2489.04	51.8	-22.2	74	45.97	32.1	5.68	31.95	292	224	P	V
		2499.88	41.41	-12.59	54	35.48	32.1	5.68	31.85	292	224	A	V
802.11ax HE20 Partial 52/40 CH 11 2462MHz	*	2462	111.55	-	-	105.93	32.03	5.64	32.05	250	282	P	H
	*	2462	101.4	-	-	95.78	32.03	5.64	32.05	250	282	A	H
		2486.4	52.16	-21.84	74	46.38	32.07	5.66	31.95	250	282	P	H
		2485.2	41.58	-12.42	54	35.8	32.07	5.66	31.95	250	282	A	H
	*	2462	108.87	-	-	103.25	32.03	5.64	32.05	284	246	P	V
	*	2462	98.24	-	-	92.62	32.03	5.64	32.05	284	246	A	V
		2484.28	51.88	-22.12	74	46.1	32.07	5.66	31.95	284	246	P	V
		2484.2	41.5	-12.5	54	35.72	32.07	5.66	31.95	284	246	A	V



2.4GHz 2400~2483.5MHz

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

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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		4824	42.7	-31.3	74	58.09	33.8	8.71	57.9	-	-	P	H
		4824	41.32	-32.68	74	56.71	33.8	8.71	57.9	-	-	P	V
802.11ax HE20 Partial 52/39 CH 06 2437MHz		4874	43.01	-30.99	74	58.39	33.73	8.79	57.9	-	-	P	H
		7311	44.47	-29.53	74	57.13	35.72	11.09	59.47	-	-	P	H
		4874	41.35	-32.65	74	56.73	33.73	8.79	57.9	-	-	P	V
		7311	45.53	-28.47	74	58.19	35.72	11.09	59.47	-	-	P	V
802.11ax HE20 Partial 52/40 CH 11 2462MHz		4924	41.94	-32.06	74	57.24	33.7	8.9	57.9	-	-	P	H
		7386	43.74	-30.26	74	56.61	35.76	11.08	59.71	-	-	P	H
		4924	42.34	-31.66	74	57.64	33.7	8.9	57.9	-	-	P	V
		7386	44.2	-29.8	74	57.07	35.76	11.08	59.71	-	-	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 106 (Band Edge @ 3m)**

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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	53.89	-20.11	74	48.89	31.7	5.55	32.25	268	278	P	H
		2390	40.83	-13.17	54	35.82	31.7	5.55	32.24	268	278	A	H
	*	2412	107.28	-	-	102.15	31.8	5.57	32.24	268	278	P	H
	*	2412	96.85	-	-	91.72	31.8	5.57	32.24	268	278	A	H
		2340.45	51.72	-22.28	74	46.79	31.7	5.49	32.26	263	246	P	V
		2362.81	40.35	-13.65	54	35.4	31.7	5.51	32.26	263	246	A	V
	*	2412	102.83	-	-	97.7	31.8	5.57	32.24	263	246	P	V
	*	2412	91.69	-	-	86.56	31.8	5.57	32.24	263	246	A	V
802.11ax HE20 Partial 106/53 CH 02 2417MHz		2332.47	51.67	-22.33	74	46.84	31.63	5.47	32.27	100	204	P	H
		2388.64	40.57	-13.43	54	35.57	31.7	5.55	32.25	100	204	A	H
	*	2417	108.35	-	-	103.12	31.8	5.57	32.14	100	204	P	H
	*	2417	96.31	-	-	91.08	31.8	5.57	32.14	100	204	A	H
		2333.83	51.82	-22.18	74	46.99	31.63	5.47	32.27	292	224	P	V
		2389.59	40.54	-13.46	54	35.54	31.7	5.55	32.25	292	224	A	V
	*	2417	104.01	-	-	98.78	31.8	5.57	32.14	292	224	P	V
	*	2417	92.71	-	-	87.48	31.8	5.57	32.14	292	224	A	V



802.11ax HE20 Partial 106/53 CH 06 2437MHz		2389.8	58.1	-15.9	74	53.09	31.7	5.55	32.24	291	295	P	H
		2389.52	40.39	-13.61	54	35.39	31.7	5.55	32.25	291	295	A	H
	*	2437	110.2	-	-	104.73	32	5.61	32.14	291	295	P	H
	*	2437	99.96	-	-	94.49	32	5.61	32.14	291	295	A	H
		2484.53	63.84	-10.16	74	58.06	32.07	5.66	31.95	291	295	P	H
		2483.9	41.65	-12.35	54	35.87	32.07	5.66	31.95	291	295	A	H
		2389.38	55.24	-18.76	74	50.24	31.7	5.55	32.25	292	220	P	V
		2373.14	40.2	-13.8	54	35.22	31.7	5.53	32.25	292	220	A	V
	*	2437	108.47	-	-	103	32	5.61	32.14	292	220	P	V
	*	2437	98.03	-	-	92.56	32	5.61	32.14	292	220	A	V
		2485.93	58.56	-15.44	74	52.78	32.07	5.66	31.95	292	220	P	V
		2499.86	41.36	-12.64	54	35.43	32.1	5.68	31.85	292	220	A	V
802.11ax HE20 Partial 106/54 CH 10 2457MHz	*	2457	110.02	-	-	104.4	32.03	5.64	32.05	100	199	P	H
	*	2457	96.94	-	-	91.32	32.03	5.64	32.05	100	199	A	H
		2490.08	52	-22	74	46.17	32.1	5.68	31.95	100	199	P	H
		2497.36	41.4	-12.6	54	35.47	32.1	5.68	31.85	100	199	A	H
	*	2457	105.04	-	-	99.42	32.03	5.64	32.05	292	224	P	V
	*	2457	94.05	-	-	88.43	32.03	5.64	32.05	292	224	A	V
		2484.96	51.88	-22.12	74	46.1	32.07	5.66	31.95	292	224	P	V
		2496.28	41.39	-12.61	54	35.46	32.1	5.68	31.85	292	224	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



802.11ax HE20 Partial 106/54 CH 11 2462MHz	*	2462	109.32	-	-	103.7	32.03	5.64	32.05	291	280	P	H
	*	2462	98.24	-	-	92.62	32.03	5.64	32.05	291	280	A	H
		2483.6	57.9	-16.1	74	52.12	32.07	5.66	31.95	291	280	P	H
		2484.48	41.63	-12.37	54	35.85	32.07	5.66	31.95	291	280	A	H
	*	2462	106.03	-	-	100.41	32.03	5.64	32.05	288	249	P	V
	*	2462	94.82	-	-	89.2	32.03	5.64	32.05	288	249	A	V
		2483.96	55.79	-18.21	74	50.01	32.07	5.66	31.95	288	249	P	V
		2484.28	41.23	-12.77	54	35.45	32.07	5.66	31.95	288	249	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 Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 106/53 CH 01 2412MHz		4824	42.03	-31.97	74	57.42	33.8	8.71	57.9	-	-	P	H
		4824	41.85	-32.15	74	57.24	33.8	8.71	57.9	-	-	P	V
802.11ax HE20 Partial 106/53 CH 06 2437MHz		4874	41.78	-32.22	74	57.16	33.73	8.79	57.9	-	-	P	H
		7311	44.26	-29.74	74	56.92	35.72	11.09	59.47	-	-	P	H
		4874	40.56	-33.44	74	55.94	33.73	8.79	57.9	-	-	P	V
		7311	45.28	-28.72	74	57.94	35.72	11.09	59.47	-	-	P	V
802.11ax HE20 Partial 106/54 CH 11 2462MHz		4924	41.41	-32.59	74	56.71	33.7	8.9	57.9	-	-	P	H
		7386	44.3	-29.7	74	57.17	35.76	11.08	59.71	-	-	P	H
		4924	41.74	-32.26	74	57.04	33.7	8.9	57.9	-	-	P	V
		7386	44.01	-29.99	74	56.88	35.76	11.08	59.71	-	-	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)	Margin (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		2388.4	52.88	-21.12	74	47.88	31.7	5.55	32.25	173	99	P	H
		2389.38	43.44	-10.56	54	38.44	31.7	5.55	32.25	173	99	A	H
	*	2422	101.28	-	-	95.93	31.9	5.59	32.14	173	99	P	H
	*	2422	89.36	-	-	84.01	31.9	5.59	32.14	173	99	A	H
		2488.73	52.34	-21.66	74	46.51	32.1	5.68	31.95	173	99	P	H
		2488.38	41.13	-12.87	54	35.3	32.1	5.68	31.95	173	99	A	H
		2387.7	50.34	-23.66	74	45.34	31.7	5.55	32.25	175	199	P	V
		2389.24	40.76	-13.24	54	35.76	31.7	5.55	32.25	175	199	A	V
	*	2422	91.62	-	-	86.27	31.9	5.59	32.14	175	199	P	V
	*	2422	80.52	-	-	75.17	31.9	5.59	32.14	175	199	A	V
		2495.59	51.41	-22.59	74	45.48	32.1	5.68	31.85	175	199	P	V
		2498.53	41.28	-12.72	54	35.35	32.1	5.68	31.85	175	199	A	V
802.11ax HE40 Full CH 06 2437MHz		2371.18	50.6	-23.4	74	45.62	31.7	5.53	32.25	236	274	P	H
		2389.8	40.4	-13.6	54	35.39	31.7	5.55	32.24	236	274	A	H
	*	2437	102.9	-	-	97.43	32	5.61	32.14	236	274	P	H
	*	2437	88.82	-	-	83.35	32	5.61	32.14	236	274	A	H
		2489.57	51.33	-22.67	74	45.5	32.1	5.68	31.95	236	274	P	H
		2483.83	41.38	-12.62	54	35.6	32.07	5.66	31.95	236	274	A	H
		2319.38	50.24	-23.76	74	45.41	31.63	5.47	32.27	291	242	P	V
		2383.64	39.99	-14.01	54	35.01	31.7	5.53	32.25	291	242	A	V
	*	2437	101.1	-	-	95.63	32	5.61	32.14	291	242	P	V
	*	2437	87.39	-	-	81.92	32	5.61	32.14	291	242	A	V
	2498.6	52.36	-21.64	74	46.43	32.1	5.68	31.85	291	242	P	V	
	2483.55	41.2	-12.8	54	35.42	32.07	5.66	31.95	291	242	A	V	



WiFi Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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		2384.48	50.37	-23.63	74	45.06	32.03	5.53	32.25	290	274	P	H
		2356.9	40.32	-13.68	54	35	32.07	5.51	32.26	290	274	A	H
	*	2452	102.29	-	-	96.43	32.3	5.61	32.05	290	274	P	H
	*	2452	88.71	-	-	82.85	32.3	5.61	32.05	290	274	A	H
		2484.32	54.59	-19.41	74	48.71	32.17	5.66	31.95	290	274	P	H
		2483.5	45.11	-8.89	54	39.23	32.17	5.66	31.95	290	274	A	H
		2366.42	51.13	-22.87	74	45.8	32.07	5.51	32.25	290	245	P	V
		2373.84	40.29	-13.71	54	34.98	32.03	5.53	32.25	290	245	A	V
	*	2452	99.27	-	-	93.41	32.3	5.61	32.05	290	245	P	V
	*	2452	86.49	-	-	80.63	32.3	5.61	32.05	290	245	A	V
		2484.6	53.35	-20.65	74	47.47	32.17	5.66	31.95	290	245	P	V
		2483.5	43.62	-10.38	54	37.74	32.17	5.66	31.95	290	245	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)	Margin (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	43.77	-30.23	74	59.13	33.8	8.74	57.9	-	-	P	H
HE40 Full		7266	45.16	-28.84	74	57.63	35.71	11.19	59.37	-	-	P	H
CH 03		4844	42.76	-31.24	74	58.12	33.8	8.74	57.9	-	-	P	V
2422MHz		7266	47.01	-26.99	74	59.48	35.71	11.19	59.37	-	-	P	V
802.11ax		4874	41.42	-32.58	74	56.8	33.73	8.79	57.9	-	-	P	H
HE40 Full		7311	43.9	-30.1	74	56.56	35.72	11.09	59.47	-	-	P	H
CH 06		4874	41.62	-32.38	74	57	33.73	8.79	57.9	-	-	P	V
2437MHz		7311	43.52	-30.48	74	56.18	35.72	11.09	59.47	-	-	P	V
802.11ax		4904	42.99	-31.01	74	58.33	33.7	8.86	57.9	-	-	P	H
HE40 Full		7356	44.38	-29.62	74	57.14	35.77	11.08	59.61	-	-	P	H
CH 09		4904	42.03	-31.97	74	57.37	33.7	8.86	57.9	-	-	P	V
2452MHz		7356	44.61	-29.39	74	57.37	35.77	11.08	59.61	-	-	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)	Margin (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		2389.52	58.62	-15.38	74	53.62	31.7	5.55	32.25	123	116	P	H
		2389.8	49.04	-4.96	54	44.03	31.7	5.55	32.24	123	116	A	H
	*	2422	103.81	-	-	98.46	31.9	5.59	32.14	123	116	P	H
	*	2422	92.44	-	-	87.09	31.9	5.59	32.14	123	116	A	H
		2490.55	51.64	-22.36	74	45.81	32.1	5.68	31.95	123	116	P	H
		2497.55	41.2	-12.8	54	35.27	32.1	5.68	31.85	123	116	A	H
		2382.24	51.31	-22.69	74	46.33	31.7	5.53	32.25	290	222	P	V
		2389.94	41.73	-12.27	54	36.72	31.7	5.55	32.24	290	222	A	V
	*	2422	103.07	-	-	97.72	31.9	5.59	32.14	290	222	P	V
	*	2422	90.55	-	-	85.2	31.9	5.59	32.14	290	222	A	V
		2493.84	52.7	-21.3	74	46.77	32.1	5.68	31.85	290	222	P	V
		2490.83	41.32	-12.68	54	35.49	32.1	5.68	31.95	290	222	A	V
802.11ax HE40 Partial 242/61 CH 06 2437MHz		2388.68	63.23	-10.77	74	58.23	31.7	5.55	32.25	132	109	P	H
		2389.94	44.45	-9.55	54	39.44	31.7	5.55	32.24	132	109	A	H
	*	2437	108.95	-	-	103.48	32	5.61	32.14	132	109	P	H
	*	2437	95.88	-	-	90.41	32	5.61	32.14	132	109	A	H
		2485.86	63.15	-10.85	74	57.37	32.07	5.66	31.95	132	109	P	H
		2484.39	44.54	-9.46	54	38.76	32.07	5.66	31.95	132	109	A	H
		2389.1	56.86	-17.14	74	51.86	31.7	5.55	32.25	290	222	P	V
		2389.24	41.36	-12.64	54	36.36	31.7	5.55	32.25	290	222	A	V
	*	2437	106.74	-	-	101.27	32	5.61	32.14	290	222	P	V
	*	2437	95.14	-	-	89.67	32	5.61	32.14	290	222	A	V
		2485.72	68.13	-5.87	74	62.35	32.07	5.66	31.95	290	222	P	V
		2485.72	46.51	-7.49	54	40.73	32.07	5.66	31.95	290	222	A	V



802.11ax HE40 Partial 242/62 CH 09 2452MHz		2373.56	51.46	-22.54	74	46.48	31.7	5.53	32.25	164	112	P	H
		2385.46	40.7	-13.3	54	35.72	31.7	5.53	32.25	164	112	A	H
	*	2452	104.32	-	-	98.76	32	5.61	32.05	164	112	P	H
	*	2452	91.76	-	-	86.2	32	5.61	32.05	164	112	A	H
		2485.02	66.7	-7.3	74	60.92	32.07	5.66	31.95	164	112	P	H
		2485.16	47.01	-6.99	54	41.23	32.07	5.66	31.95	164	112	A	H
		2353.26	51.04	-22.96	74	46.09	31.7	5.51	32.26	292	224	P	V
		2366.98	40.66	-13.34	54	35.7	31.7	5.51	32.25	292	224	A	V
	*	2452	101.04	-	-	95.48	32	5.61	32.05	292	224	P	V
	*	2452	90.31	-	-	84.75	32	5.61	32.05	292	224	A	V
		2485.16	66.15	-7.85	74	60.37	32.07	5.66	31.95	292	224	P	V
		2484.81	46.59	-7.41	54	40.81	32.07	5.66	31.95	292	224	A	V



2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE40 Partial 242 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Margin (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	42.7	-31.3	74	58.06	33.8	8.74	57.9	-	-	P	H
		7266	44.54	-29.46	74	57.01	35.71	11.19	59.37	-	-	P	H
		4844	41.64	-32.36	74	57	33.8	8.74	57.9	-	-	P	V
		7266	46.79	-27.21	74	59.26	35.71	11.19	59.37	-	-	P	V
802.11ax HE40 Partial 242/61 CH 06 2437MHz		4874	44.84	-29.16	74	60.22	33.73	8.79	57.9	-	-	P	
		7311	43.26	-30.74	74	55.92	35.72	11.09	59.47	-	-	P	
		4874	42.37	-31.63	74	57.75	33.73	8.79	57.9	-	-	P	
		7311	45.28	-28.72	74	57.94	35.72	11.09	59.47	-	-	P	
802.11ax HE40 Partial 242/62 CH 09 2452MHz		4904	42.84	-31.16	74	58.18	33.7	8.86	57.9	-	-	P	H
		7356	45.4	-28.6	74	58.19	35.74	11.08	59.61	-	-	P	H
		4904	42.81	-31.19	74	58.15	33.7	8.86	57.9	-	-	P	V
		7356	44.71	-29.29	74	57.5	35.74	11.08	59.61	-	-	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 (LF)

Table with 14 columns: WIFI Ant., Note, Frequency, Level, Margin, Limit Line, Read Level, Antenna Factor, Path Loss, Preamp Factor, Ant Pos, Table Pos, Peak Avg., Pol. It contains 12 rows of test data and a final Remark row.



<Simultaneous transmission>

802.11ax40 Partial 242/61 CH03 2422MHz& GSM850 Co-location (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax40 Partial 242/61 CH03 2422MHz& GSM850		2389.24	57.66	-16.34	74	52.66	31.7	5.55	32.25	120	325	P	H
		2389.94	45.68	-8.32	54	40.67	31.7	5.55	32.24	120	325	A	H
	*	2422	105.18	-	-	99.83	31.9	5.59	32.14	120	325	P	H
	*	2422	92.58	-	-	87.23	31.9	5.59	32.14	120	325	A	H
		2494.33	51.92	-22.08	74	45.99	32.1	5.68	31.85	120	325	P	H
		2493.14	41.36	-12.64	54	35.43	32.1	5.68	31.85	120	325	A	H
		2389.8	52.47	-21.53	74	47.46	31.7	5.55	32.24	120	197	P	V
		2389.94	42.97	-11.03	54	37.96	31.7	5.55	32.24	120	197	A	V
	*	2422	100.33	-	-	94.98	31.9	5.59	32.14	120	197	P	V
	*	2422	87.52	-	-	82.17	31.9	5.59	32.14	120	197	A	V
		2493.7	52.33	-21.67	74	46.4	32.1	5.68	31.85	120	197	P	V
		2500	41.59	-12.41	54	35.66	32.1	5.68	31.85	120	197	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4 GHz 2390~2483.5MHz

WIFI 802.11ax40 Partial 242/61 CH03 2422MHz& GSM850 Co-location (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax40 Partial 242/61 CH03 2422MHz& GSM850		1697.6	47.35	-26.65	74	46.43	29.2	4.62	32.9	-	-	P	H
		2546.4	50.22	-23.78	74	44	32.4	5.74	31.92	-	-	P	H
		3395.2	39.82	-34.18	74	58.36	32.7	6.84	58.08	-	-	P	H
		4844	42.45	-31.55	74	57.81	33.8	8.74	57.9	-	-	P	H
		7266	45.28	-28.72	74	57.75	35.71	11.19	59.37	-	-	P	H
		1697.6	48.16	-25.84	74	47.24	29.2	4.62	32.9	-	-	P	V
		2546.4	50.68	-23.32	74	44.46	32.4	5.74	31.92	-	-	P	V
		3395.2	39.77	-34.23	74	58.31	32.7	6.84	58.08	-	-	P	V
		4844	42.78	-31.22	74	58.14	33.8	8.74	57.9	-	-	P	
	7266	45.21	-28.79	74	57.68	35.71	11.19	59.37	-	-	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 Margin line.
P/A	Peak or Average
H/V	Horizontal or Vertical



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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					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. Margin (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. Margin (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. Margin (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”.

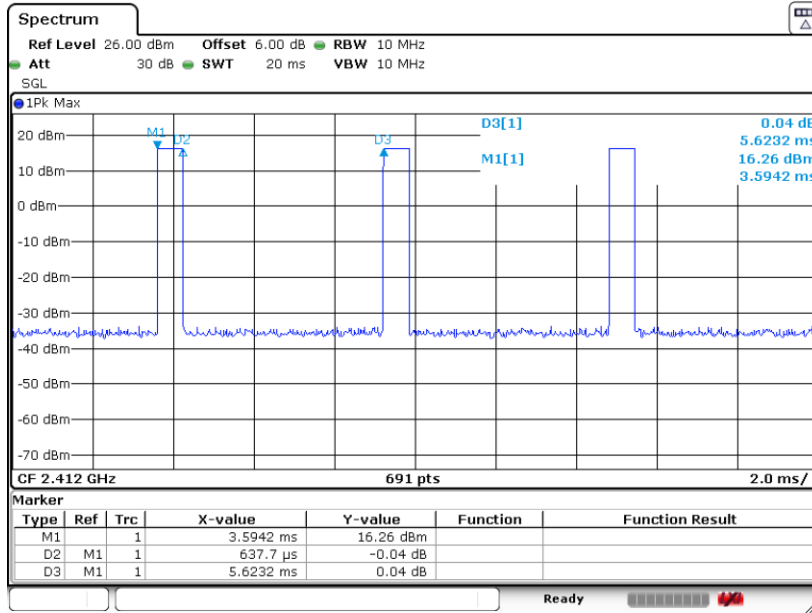


Appendix D. Duty Cycle Plots

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

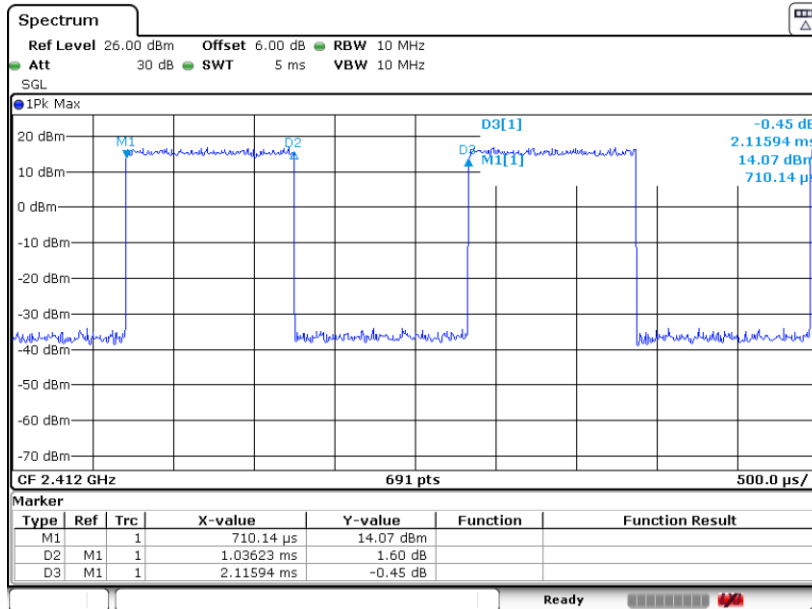


802.11b



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

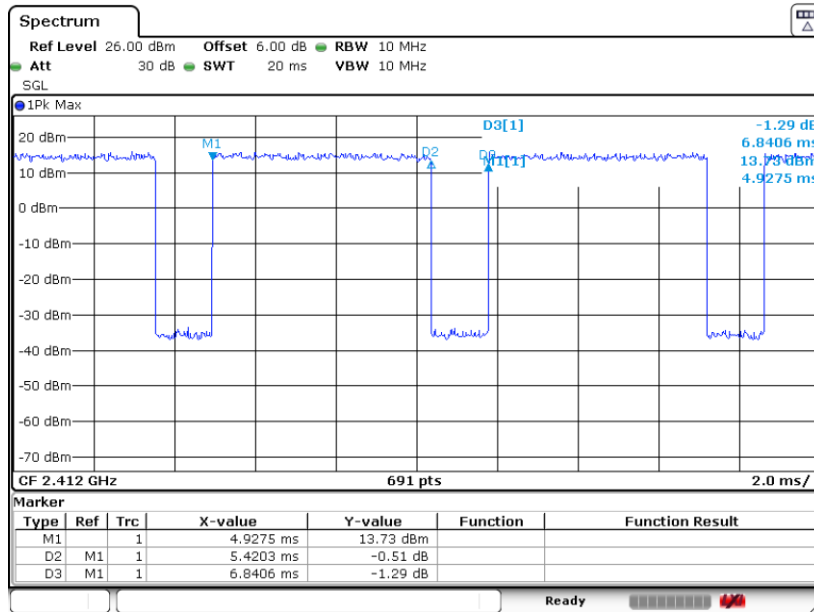
802.11g



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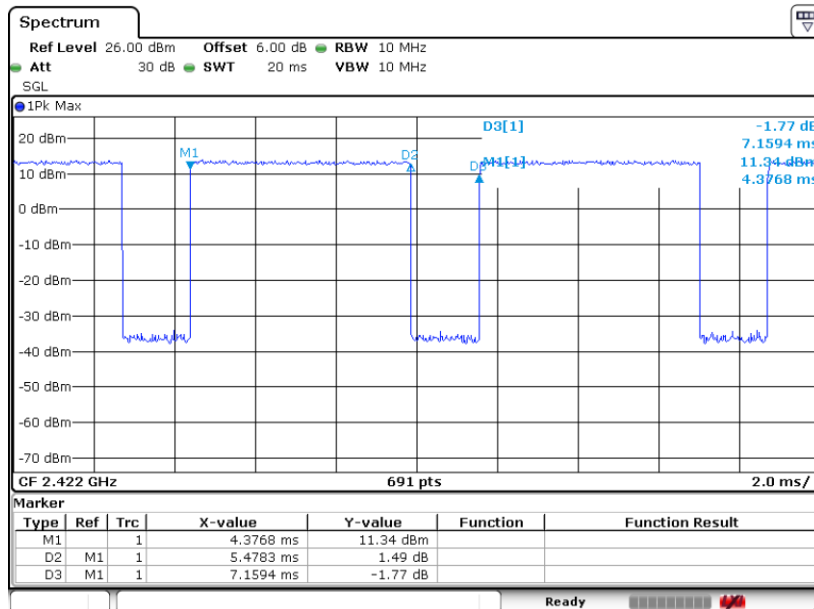


802.11ax HE20



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

802.11ax HE40



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