

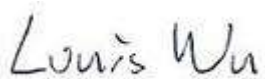


FCC RADIO TEST REPORT

FCC ID : U8G-P1AX11
Equipment : PEPWAVE / peplink Wireless Product
Brand Name : PEPWAVE / peplink
Model Name : MAX Transit Pro
MAX Transit Pro LTEA
MAX-TST-PRO-DUO-LTEA-US-T-PRM
MAX-TST-PRO-DUO-LTEA-R-T-PRM
Applicant : PISMO LABS TECHNOLOGY LIMITED
A8, 5/F, HK Spinners Industrial Building,
Phase 6, 481 Castle Peak Road, Cheung
Sha Wan, Hong Kong
Manufacturer : PISMO LABS TECHNOLOGY LIMITED
A8, 5/F, HK Spinners Industrial Building,
Phase 6, 481 Castle Peak Road, Cheung
Sha Wan, Hong Kong
Standard : FCC Part 15 Subpart C §15.247

The product was received on Jan. 18, 2022 and testing was performed from Feb. 19, 2022 to Jun. 10, 2022. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.



Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issue Date
FR211326A	01	Initial issue of report	Jun. 24, 2022

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.247(b)	Power Output Measurement	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges	Pass	-
		Conducted Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	2.63 dB under the limit at 2389.940 MHz
3.6	15.207	AC Conducted Emission	Pass	13.31 dB under the limit at 0.654 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	Pass	-

Declaration of Conformity:

- The test results (PASS/FAIL) with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
- The measurement uncertainty please refer to this report "Uncertainty of Evaluation".

Comments and Explanations:

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Lewis Ho

Report Producer: Vivian Hsu

1 General Description

1.1 Product Feature of Equipment Under Test

WCDMA/LTE, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax, WiFi 5GHz 802.11a/n/ac/ax, and GPS

Product Feature		
Integrated WWAN Module 1	Brand Name: Sierra Model Name: EM7411 FCC ID: N7NEM74B	
Integrated WWAN Module 2	Brand Name: Sierra Model Name: EM7511 FCC ID: N7NEM75S	
Sample 1	MAX-TST-PRO-DUO-LTEA-US-T-PRM with WWAN Module 1 (EM7411)	
Sample 2	MAX-TST-PRO-DUO-LTEA-R-T-PRM with WWAN Module 2 (EM7511)	
Antenna Type	WWAN Omni-directional Antenna WLAN <Ant. 1>: Omni-directional Antenna <Ant. 2>: Omni-directional Antenna GPS: Directional Antenna	
Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	Ant. 1: 2.44 Ant. 2: 2.44

Remark: The EUT's information above is declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.2 Modification of EUT

No modifications made to the EUT during the testing.



1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	CO05-HY (TAF Code: 1190)
Remark	The AC Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No.
	TH05-HY, 03CH15-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190 and TW3786

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v05r02
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in two configurations. (Ant. Degree 0 and Ant. Degree 90), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find Ant. Degree 90 as worst plane.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

2.2 Test Mode

The CDD mode is chosen as worst case configuration for all test cases due to higher power than SISO mode.

The 802.11n/ac mode has no higher power and PSD than 802.11ax mode, thus the 802.11ax mode is chosen as main test configuration, and the 802.11n/ac mode is verified the power.

The final test modes consider the modulation and the worst data rates as shown in the table below.

MIMO Antenna

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20 (Covered by HE20)	MCS0
802.11n HT40 (Covered by HE40)	MCS0
802.11ac VHT20 (Covered by HE20)	MCS0
802.11ac VHT40 (Covered by HE40)	MCS0
802.11ax HE20	MCS0
802.11ax HE40	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4GHz) Link + LAN Link + WAN Link + Type C (Port 1) Cable with Adapter for Sample 1 Mode 2 : WLAN (2.4GHz) Link + LAN Link + WAN Link + Type C (Port 1) Cable with Adapter for Sample 2
Remark: The worst case of Conducted Emission is mode 1; only the test data of it was reported.	

<Sample 1>

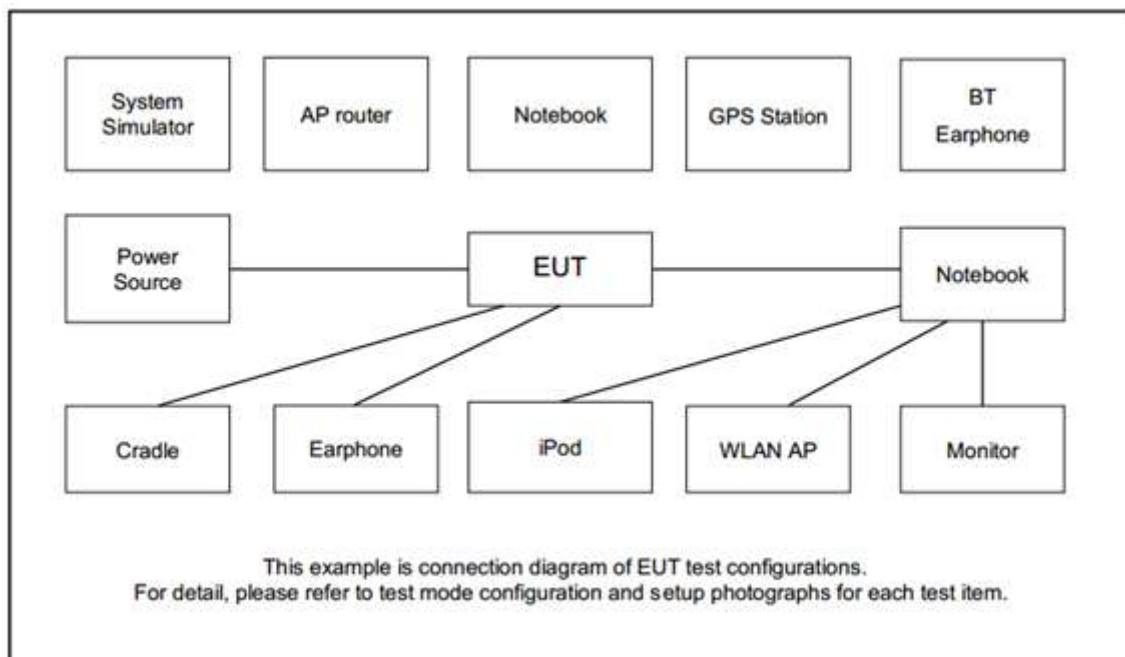
Ch. #	2400-2483.5 MHz			
	802.11b	802.11g	802.11ax HE20	802.11ax HE40
Low	01	01	01	03
Middle	06	06	06	06
High	11	11	11	09

<Sample 2>

Ch. #	2400-2483.5 MHz
	802.11ax HE40
Low	03
Middle	-
High	-

Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
2.	USB 3.1 Cable	Pismo	E119932-Y	N/A	N/A	N/A
3.	Adapter	BILLION	DCTPD65WZZ-B1	FCC DoC	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility “QSPR Version 5.0-00202” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$.
6. Measure and record the results in the test report.

3.1.4 Test Setup

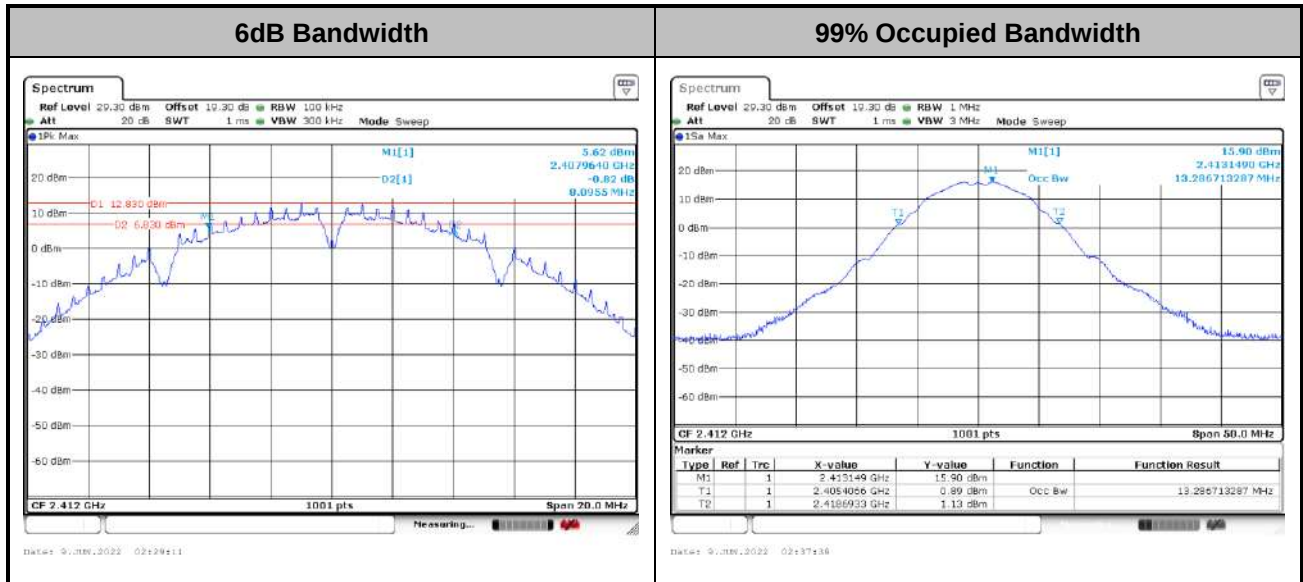




3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

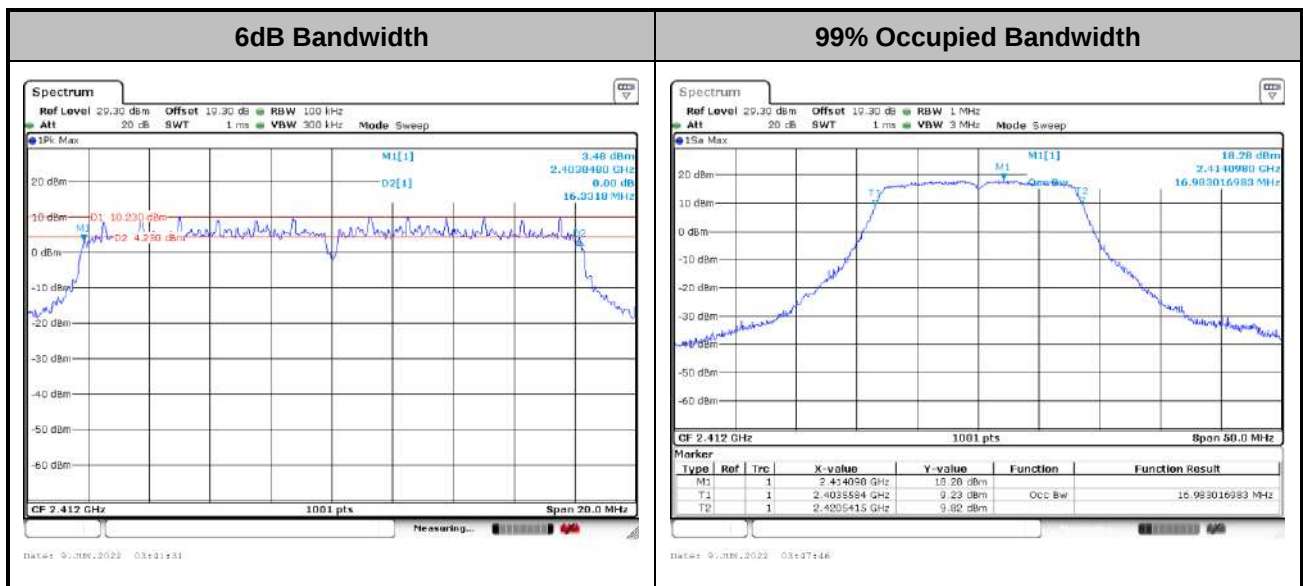
Please refer to Appendix A.

<802.11b>



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

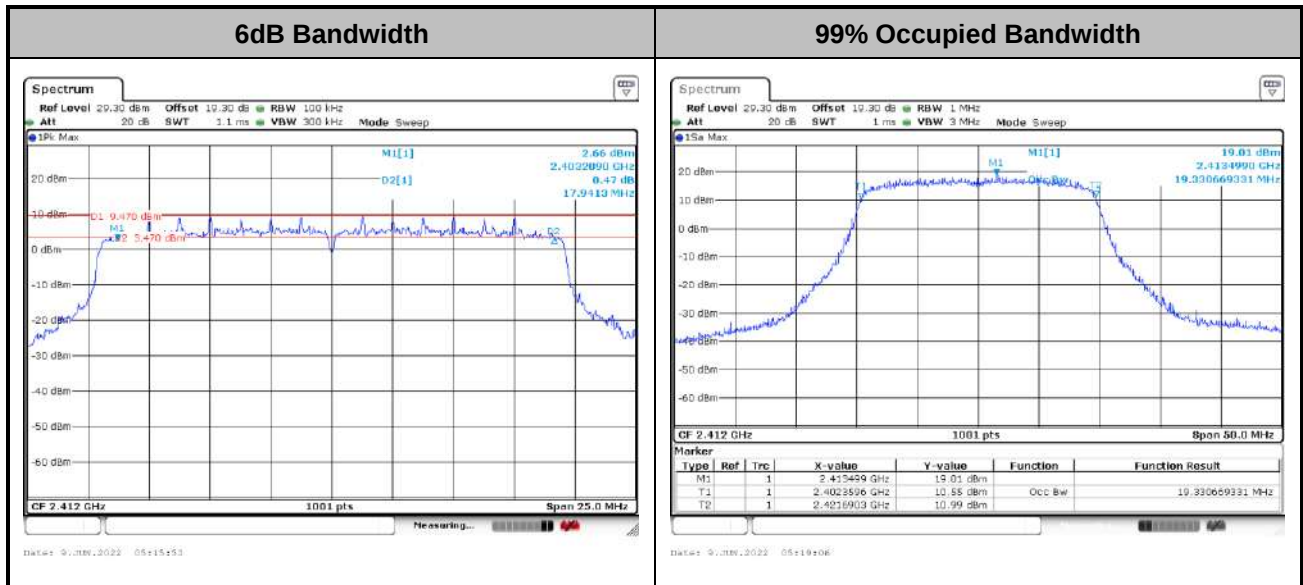
<802.11g>



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

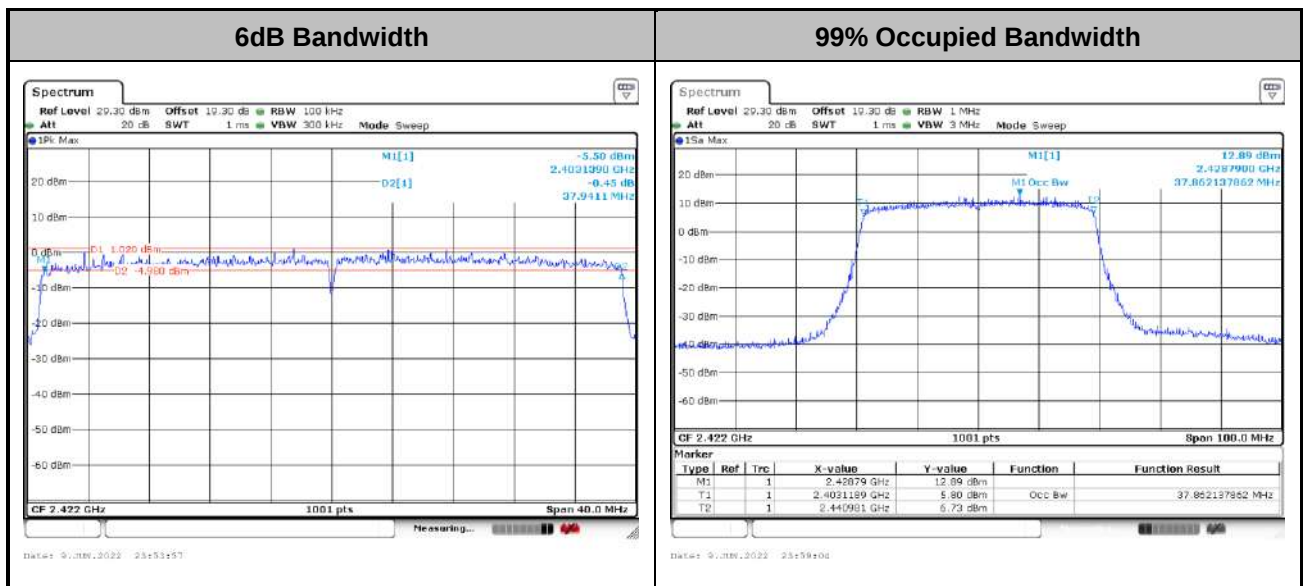


<802.11ax HE20>



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

<802.11ax HE40>



Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5 MHz, the limit for output power is 30 dBm. If transmitting antenna with directional gain greater than 6 dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

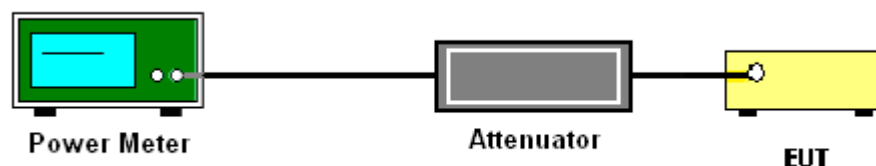
3.2.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.2.3 Test Procedures

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
2. The RF output of EUT is connected to the power meter by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Measure the conducted output power and record the results in the test report.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.2.4 Test Setup



3.2.5 Test Result of Average Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8 dBm in any 3 kHz band at any time interval of continuous transmission.

3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.3.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.
7. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

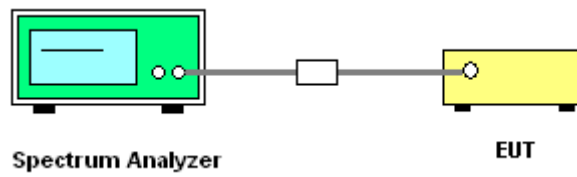
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

Method (1): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=2)

3.3.4 Test Setup

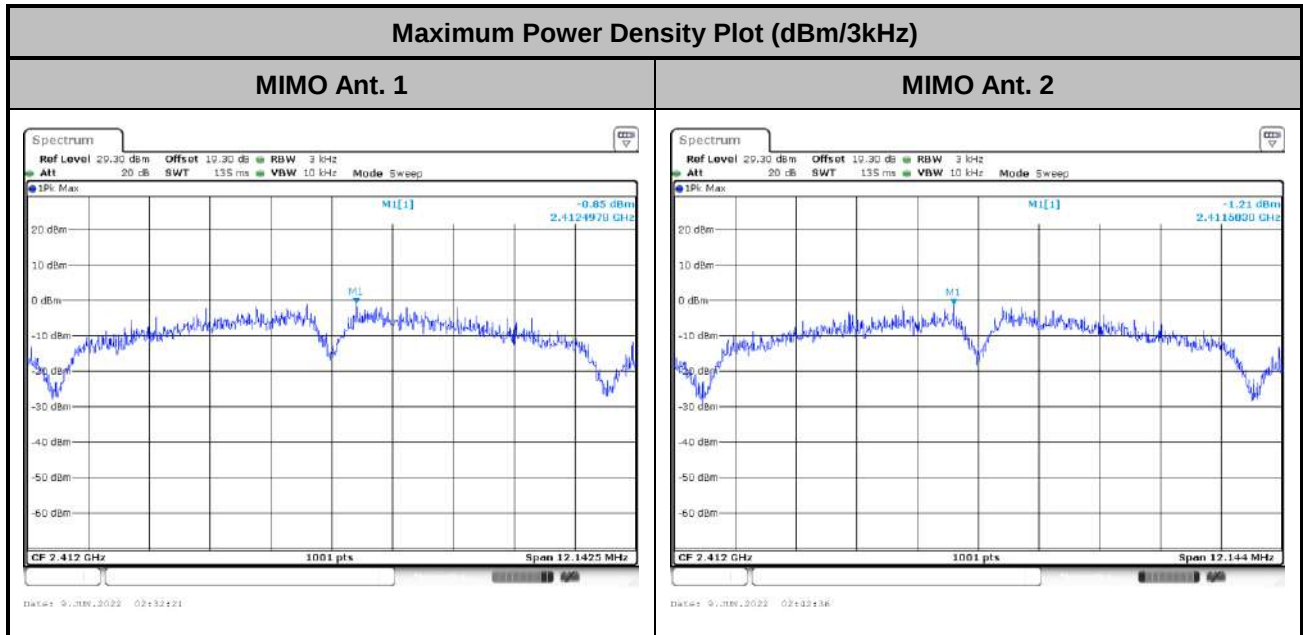




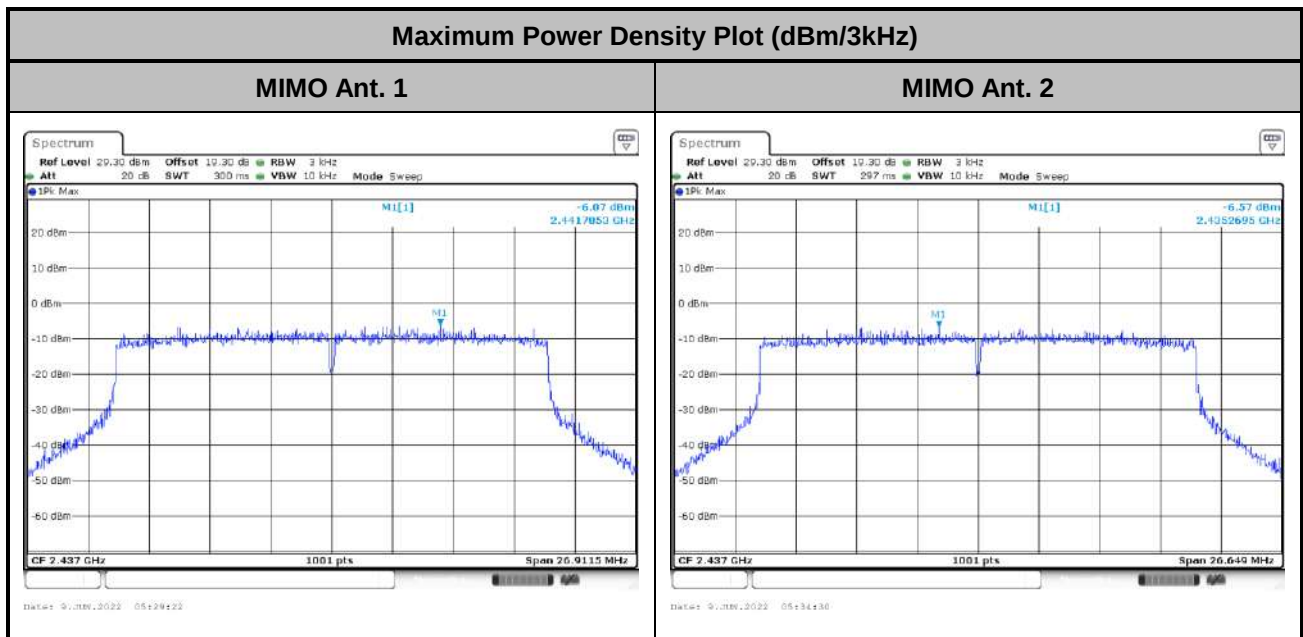
3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

<802.11b Mode>



<802.11ax Mode>



3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement.

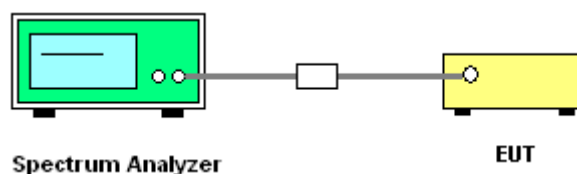
3.4.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.4.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.11.3 Emission level measurement.
2. The RF output of EUT is connected to the spectrum analyzer by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

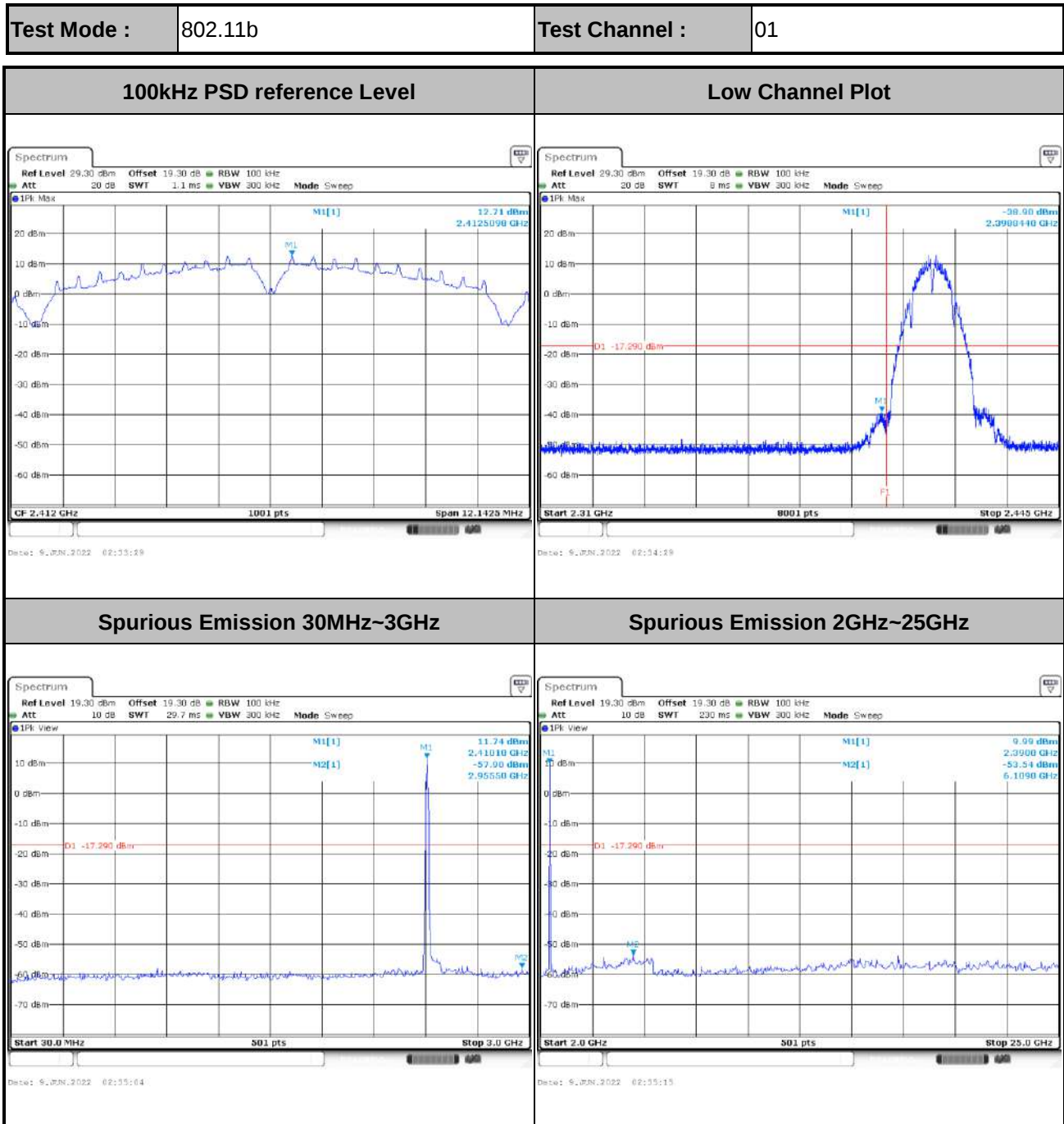
3.4.4 Test Setup

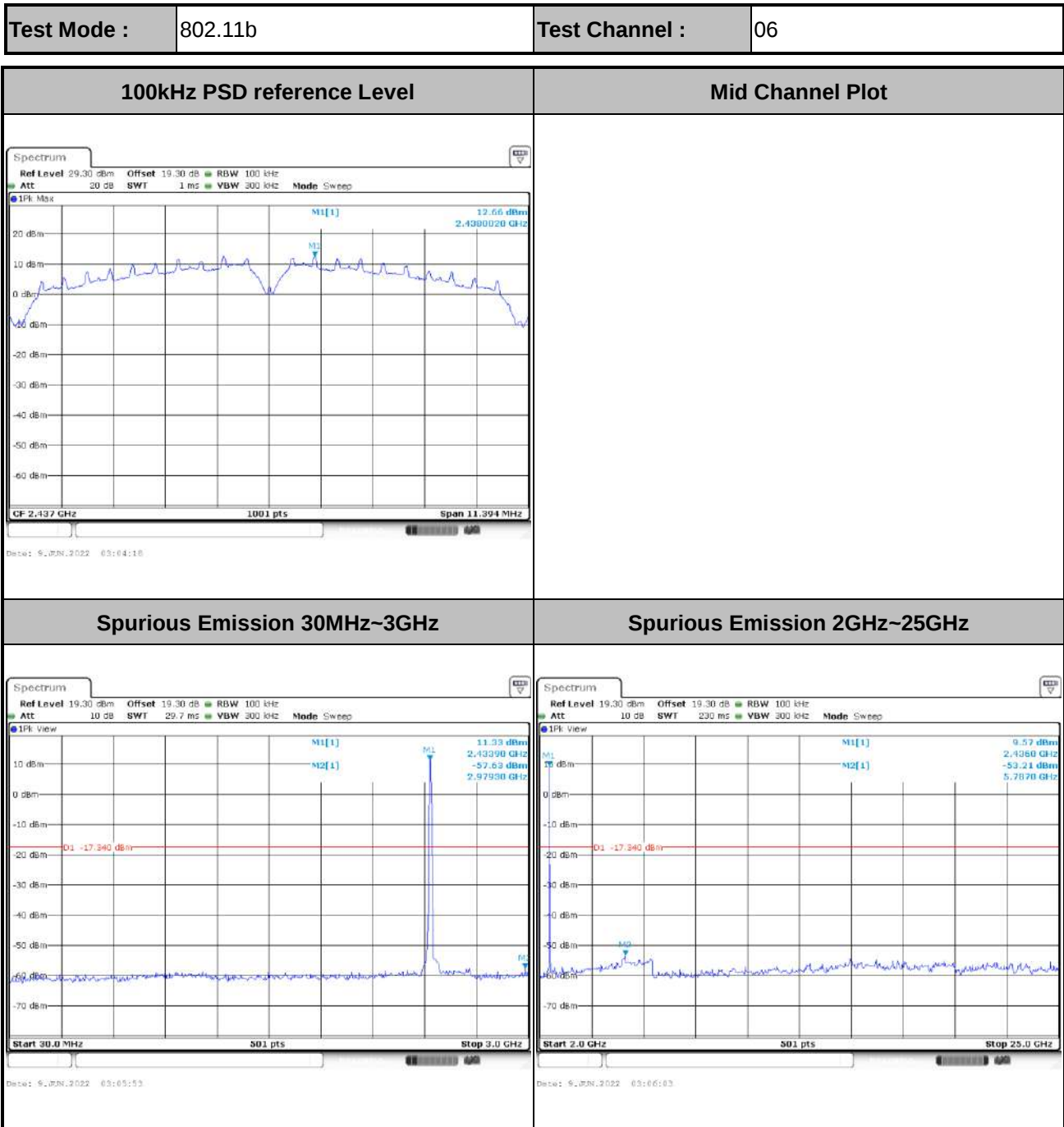




3.4.5 Test Result of Conducted Band Edges and Spurious Emission

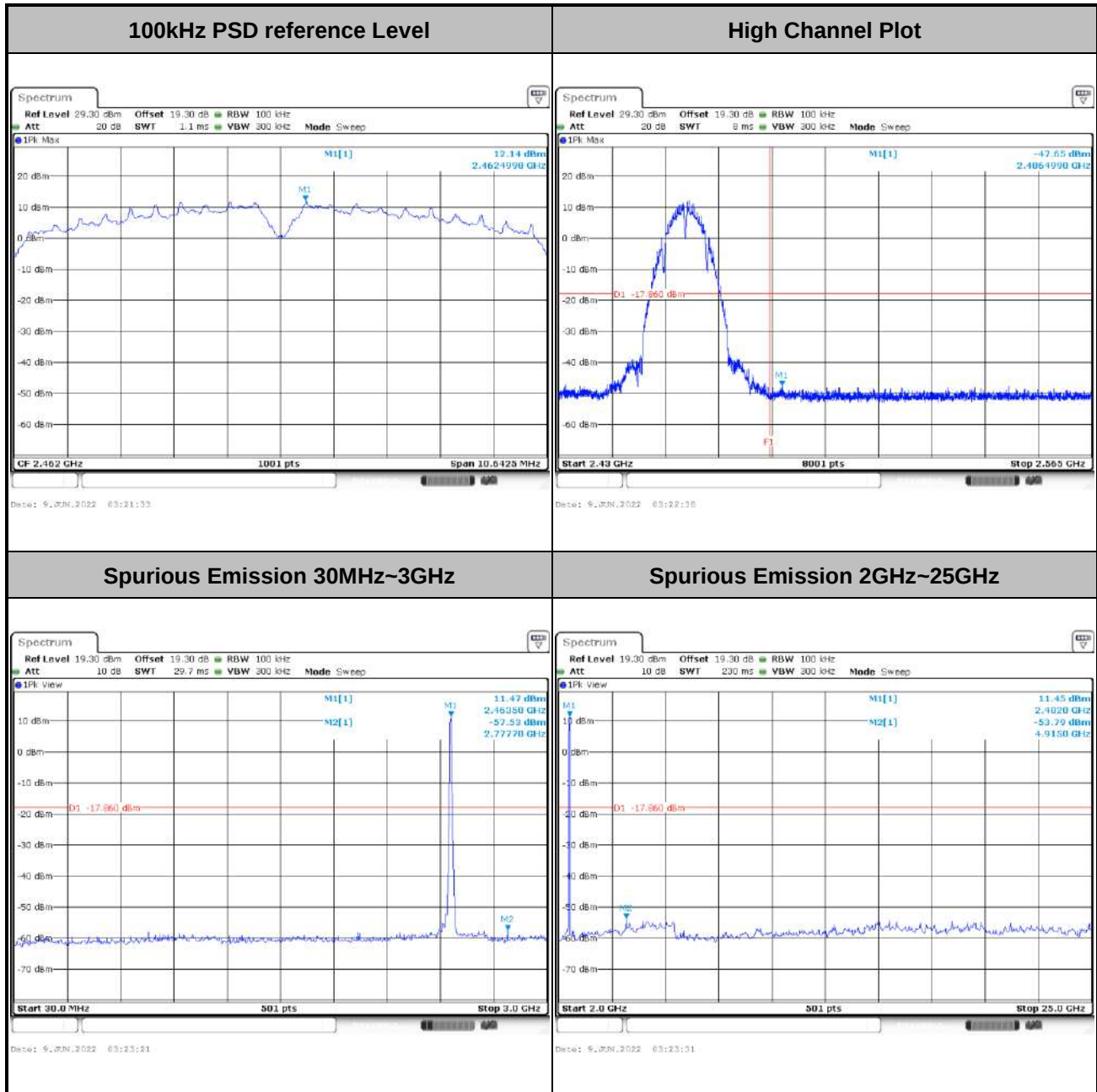
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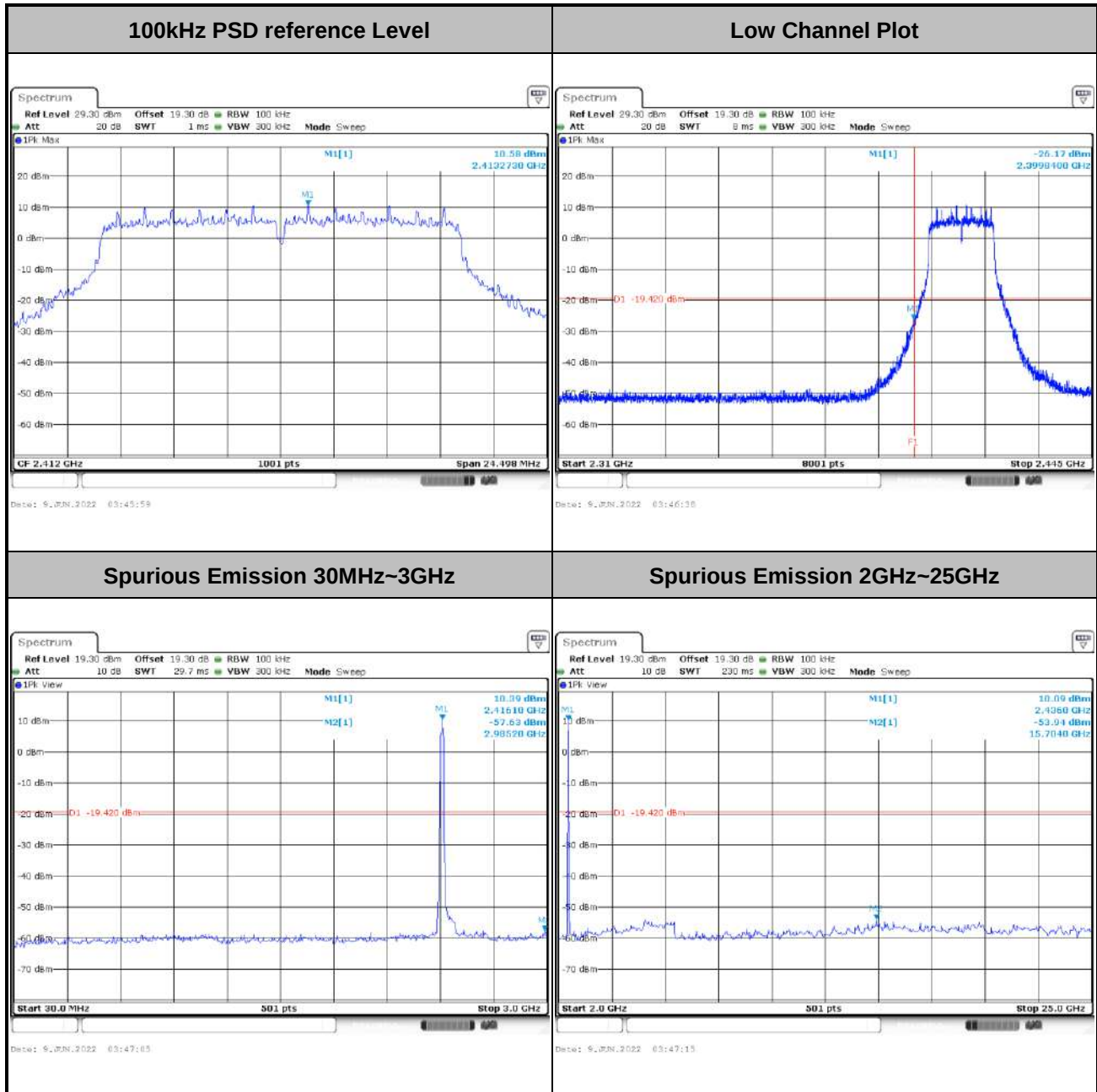


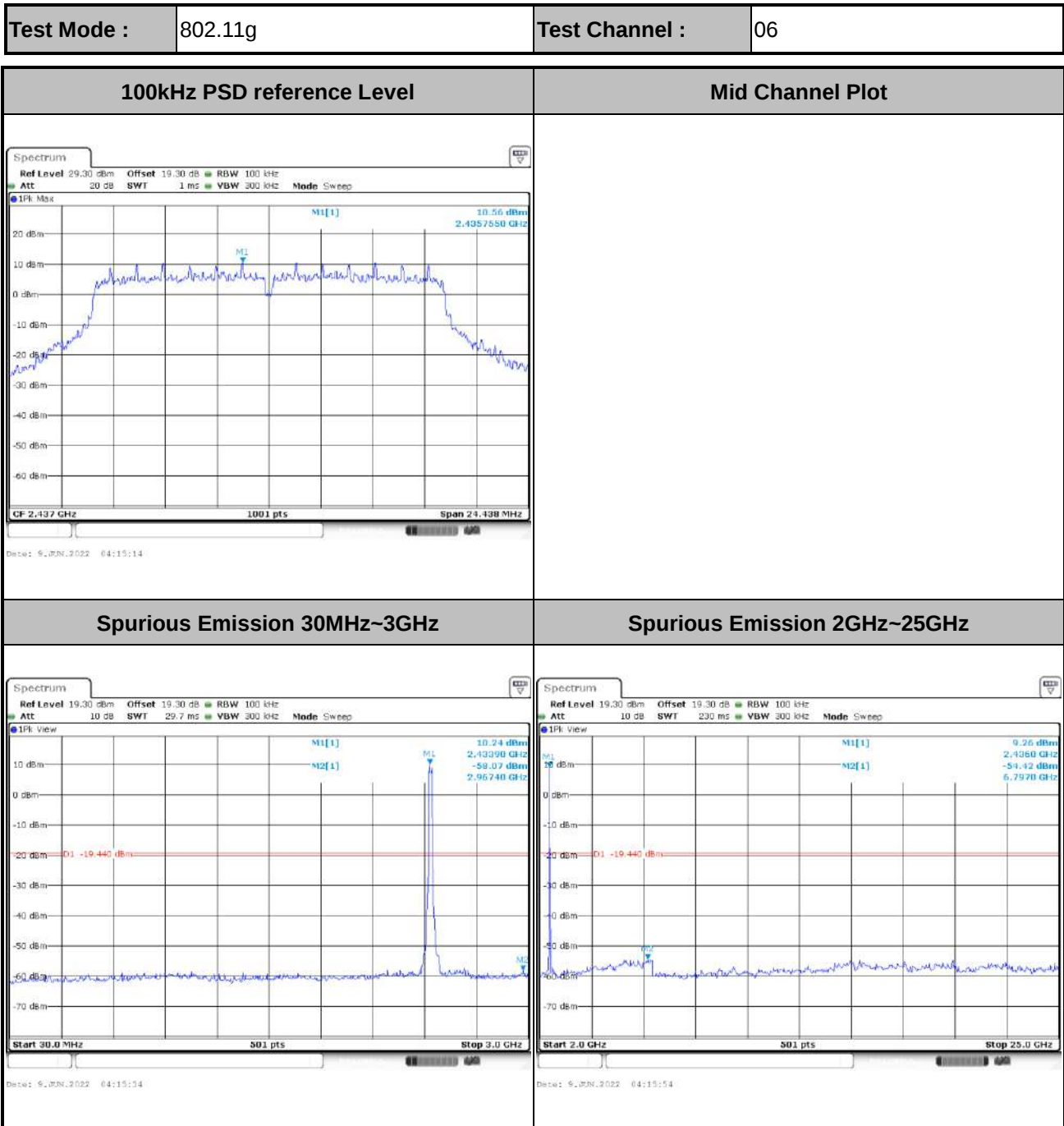
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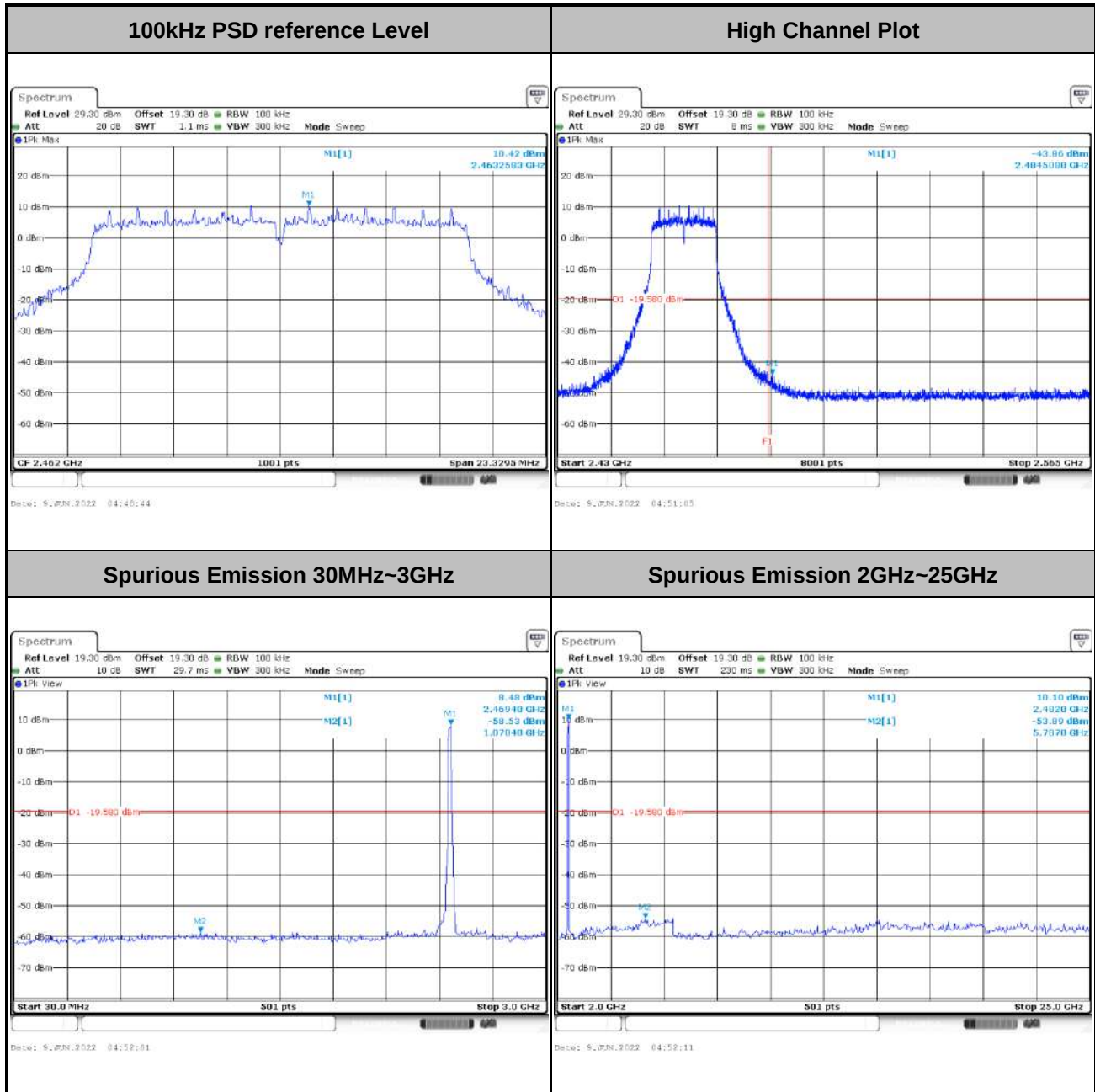
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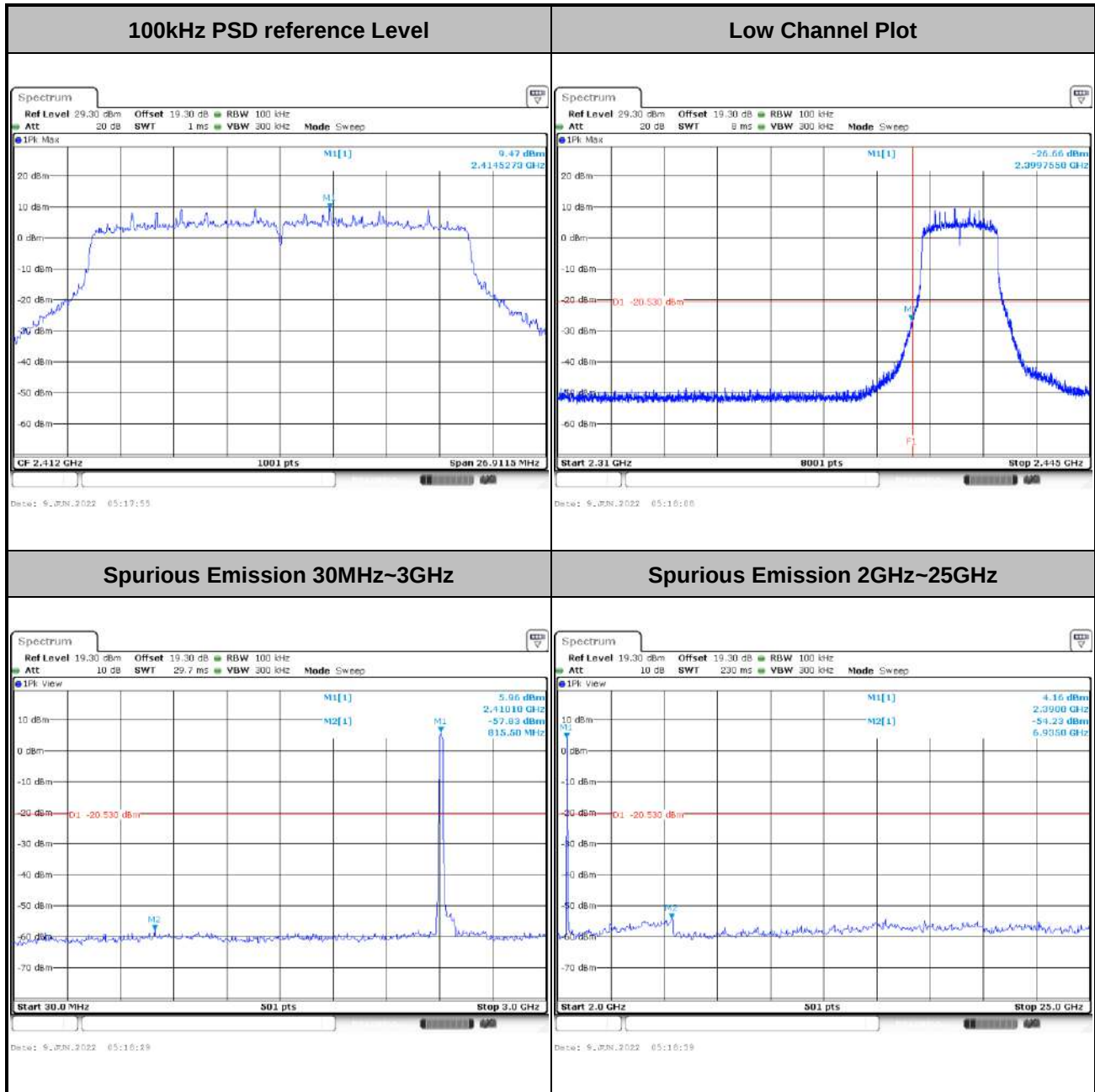


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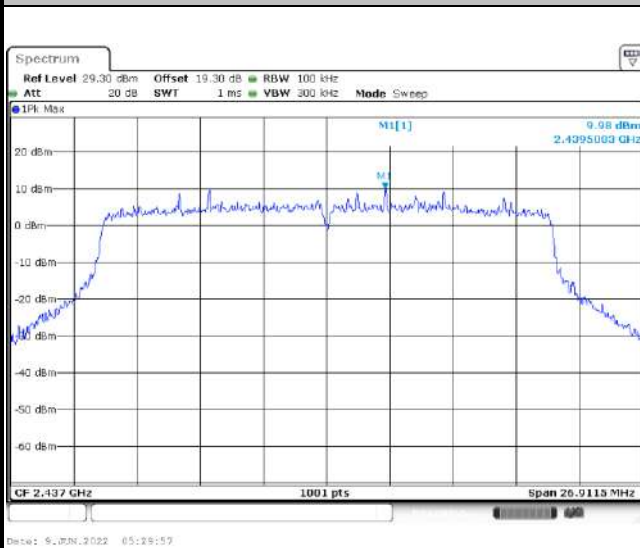
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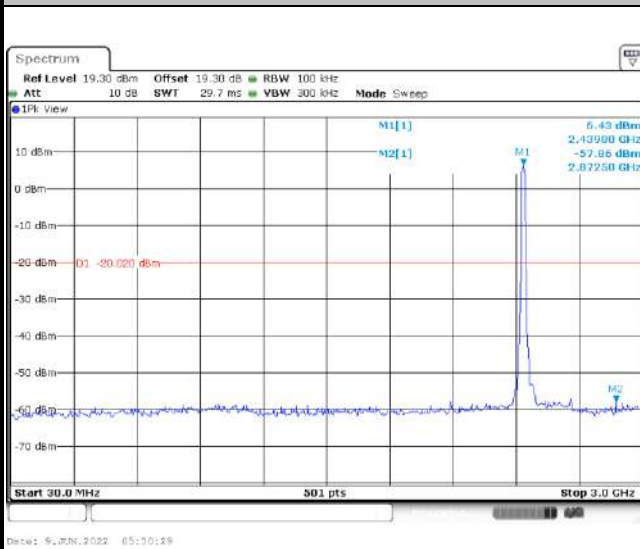
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100kHz PSD reference Level

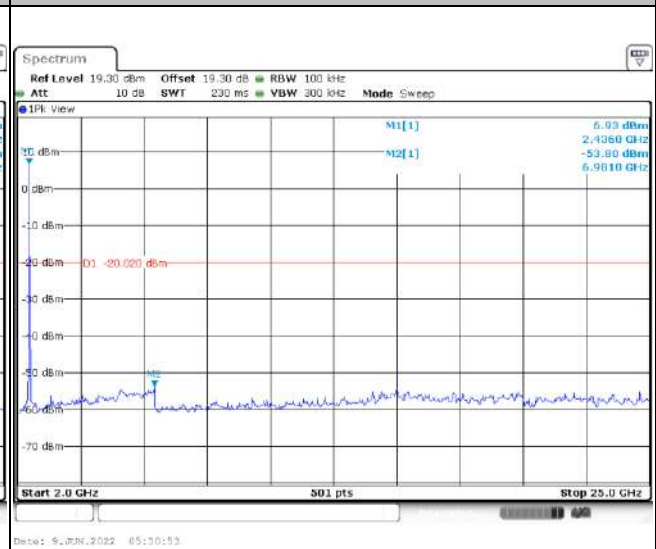


Mid Channel Plot

Spurious Emission 30MHz~3GHz

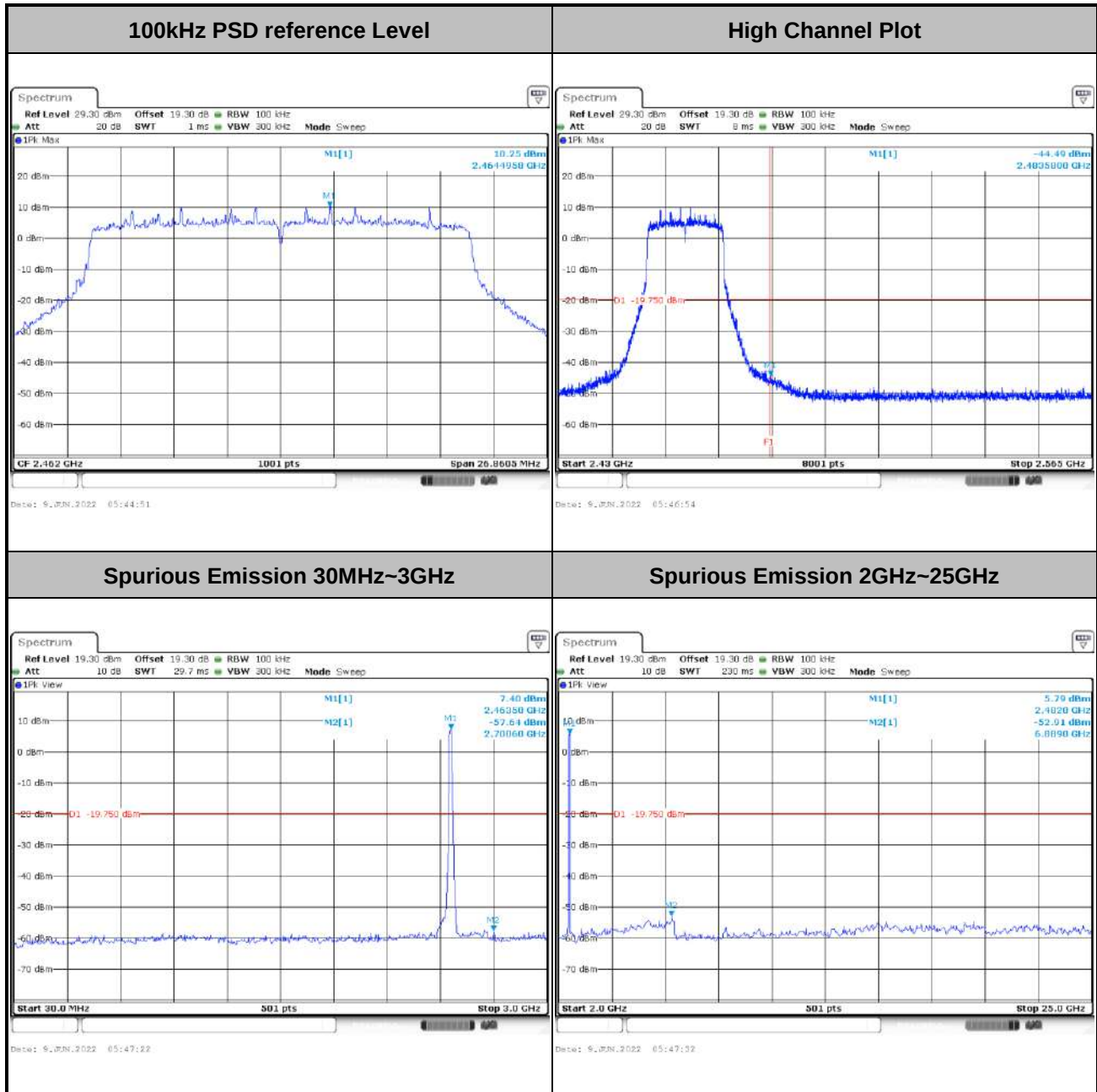


Spurious Emission 2GHz~25GHz



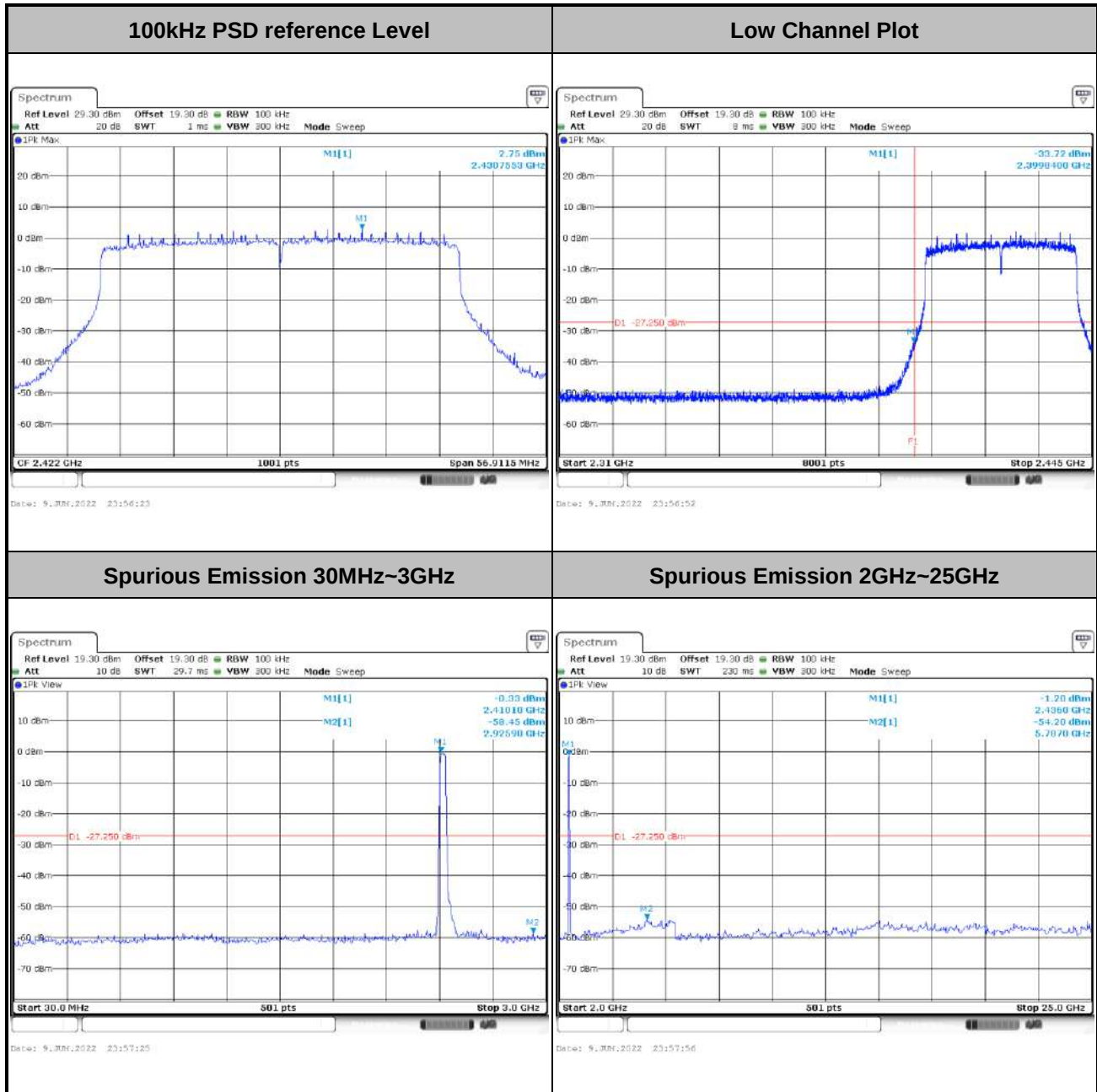


Test Mode :	802.11ax HE20	Test Channel :	11 Full RU
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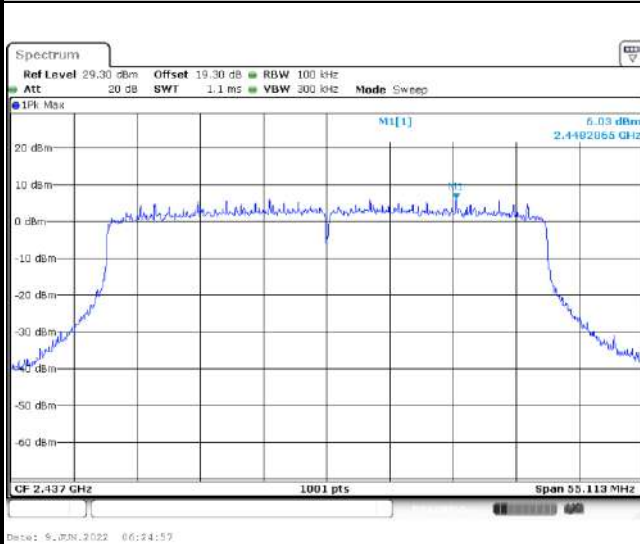
Test Mode :	802.11ax HE40	Test Channel :	03 Full RU
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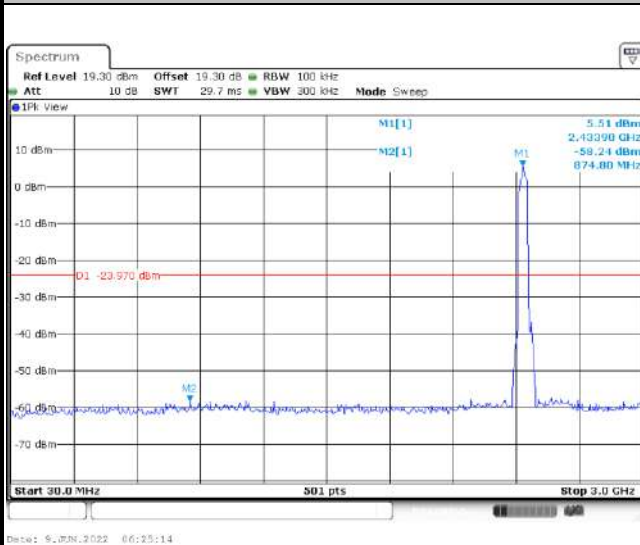
Test Mode :	802.11ax HE40	Test Channel :	06 Full RU
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100kHz PSD reference Level

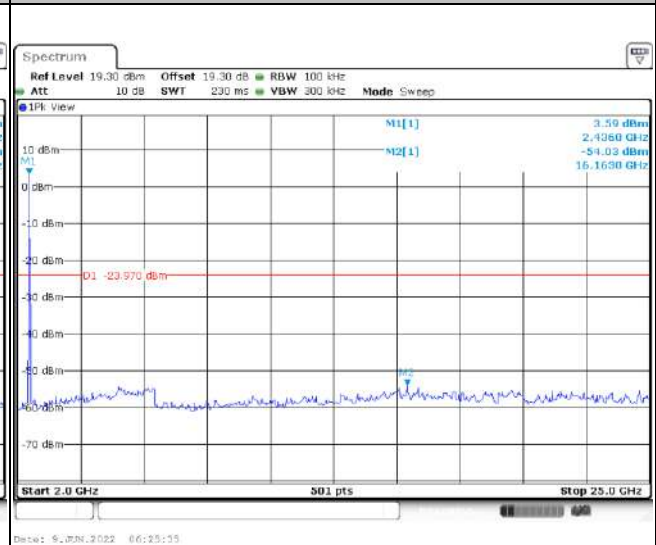


Mid Channel Plot

Spurious Emission 30MHz~3GHz

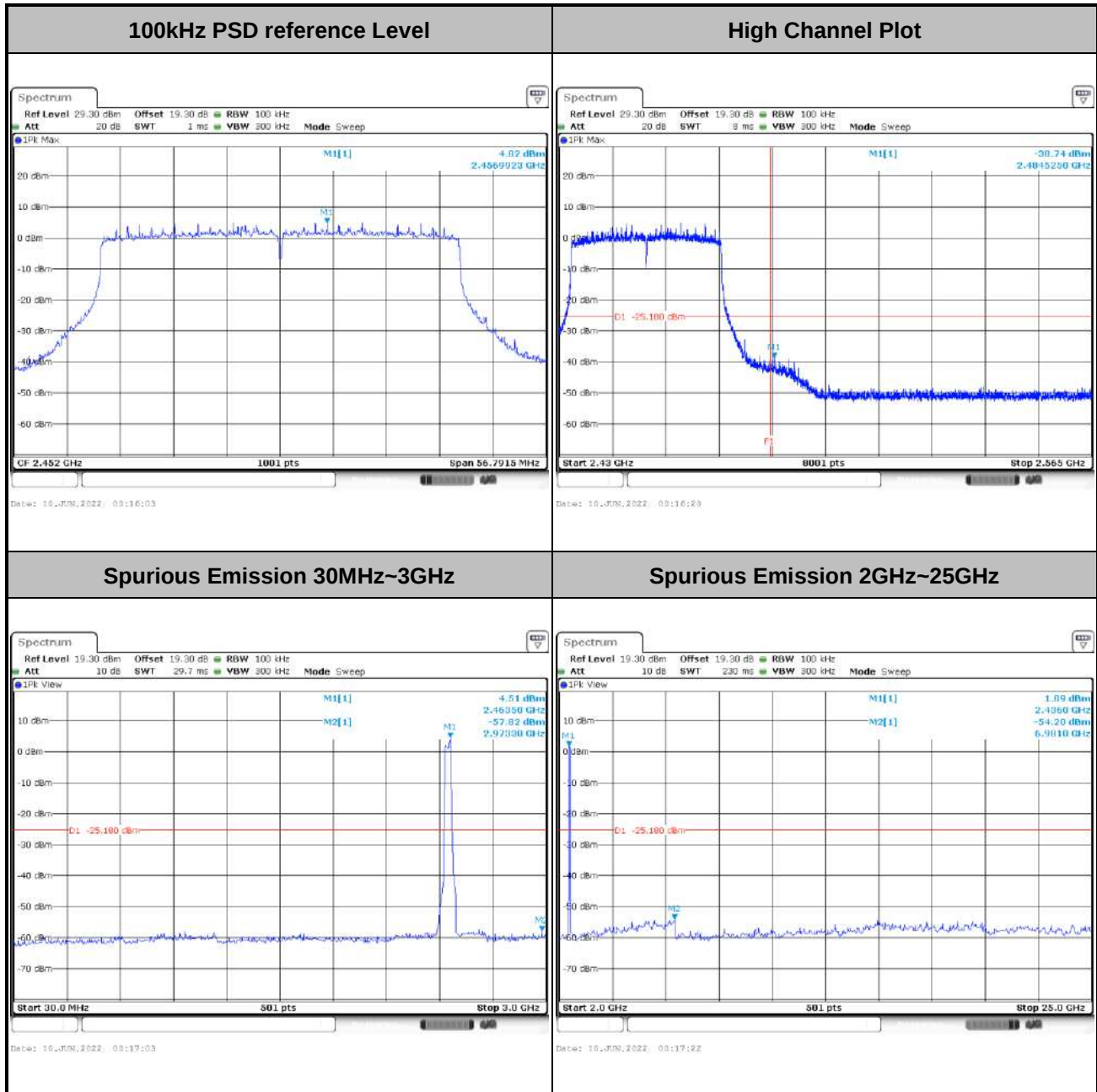


Spurious Emission 2GHz~25GHz





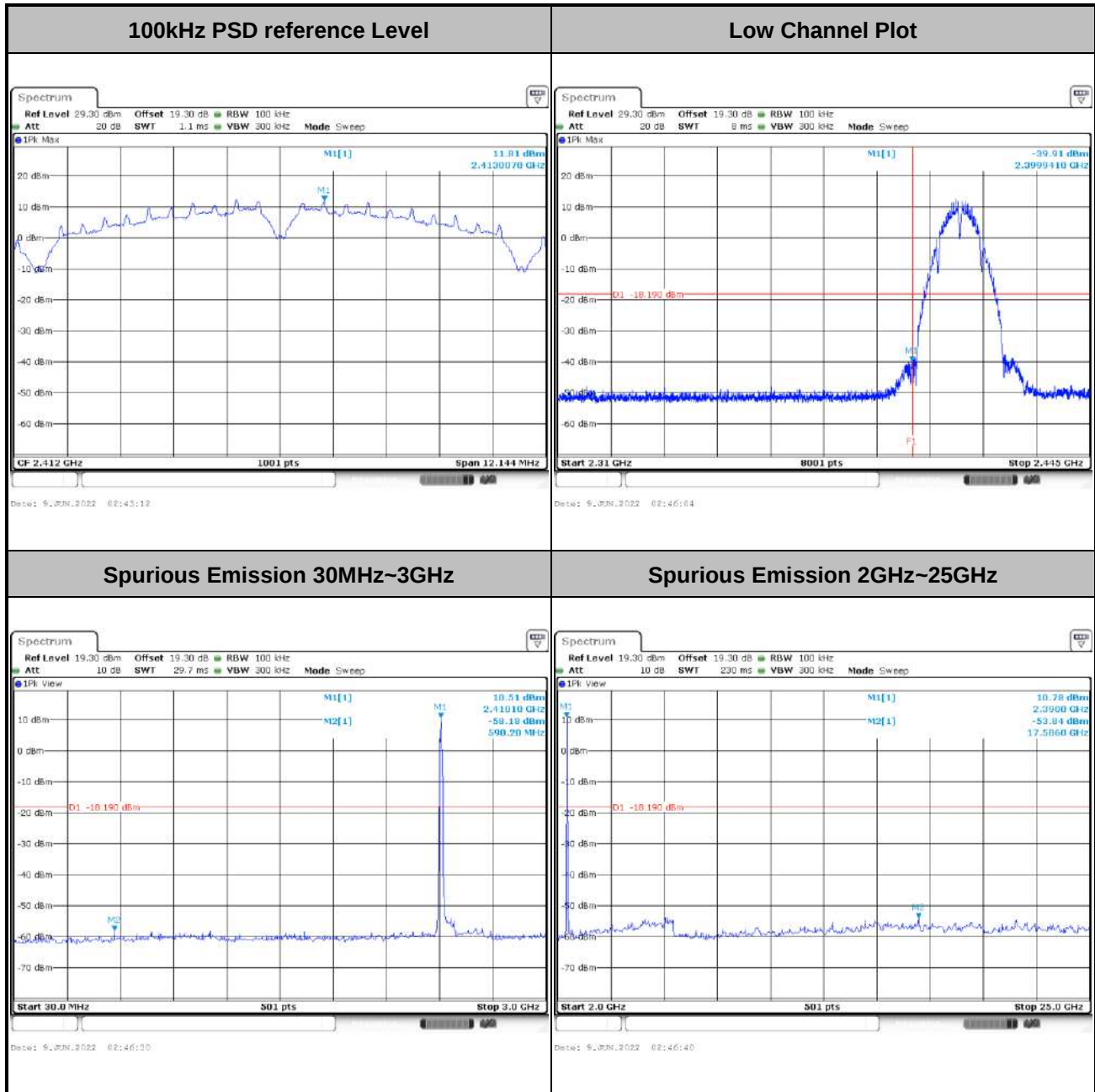
Test Mode :	802.11ax HE40	Test Channel :	09 Full RU
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Number of TX = 2, Ant. 2 (Measured)

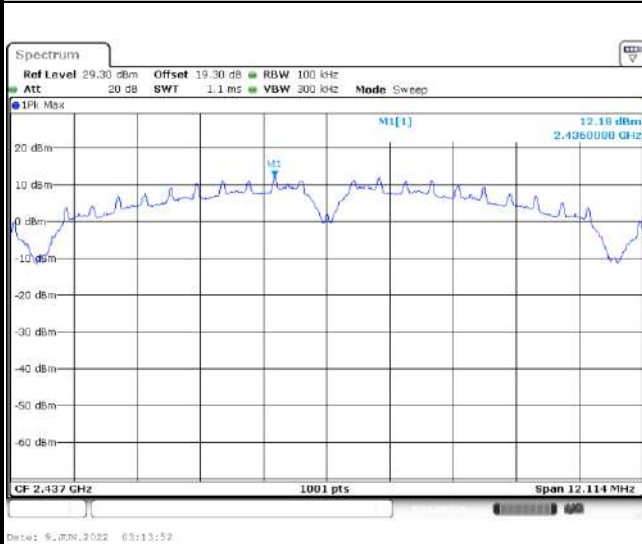
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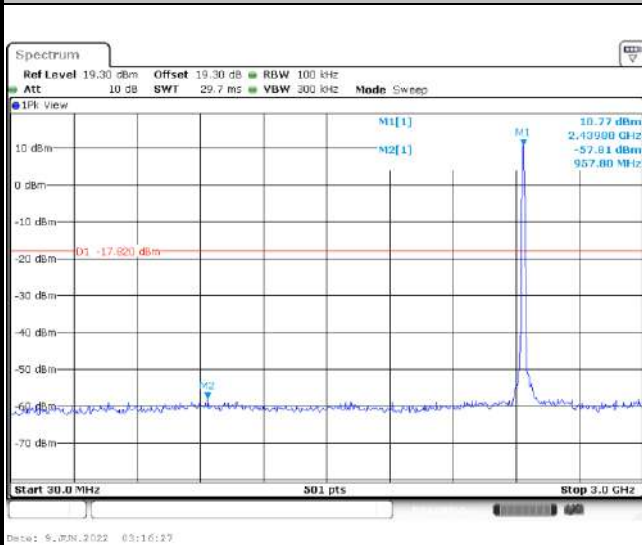
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100kHz PSD reference Level

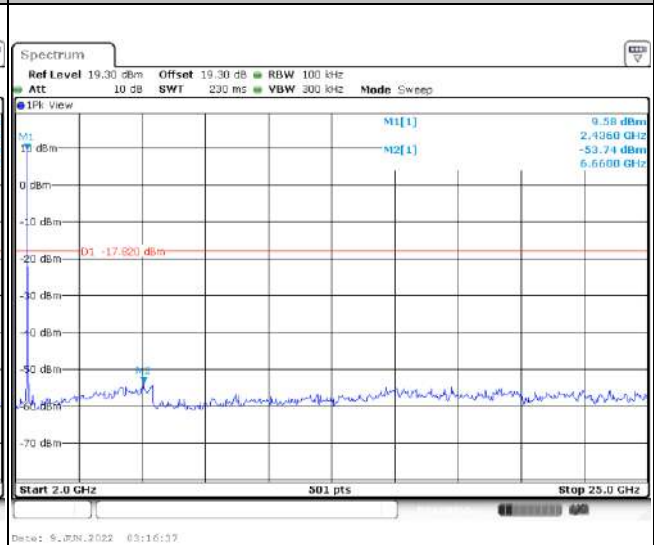


Mid Channel Plot

Spurious Emission 30MHz~3GHz

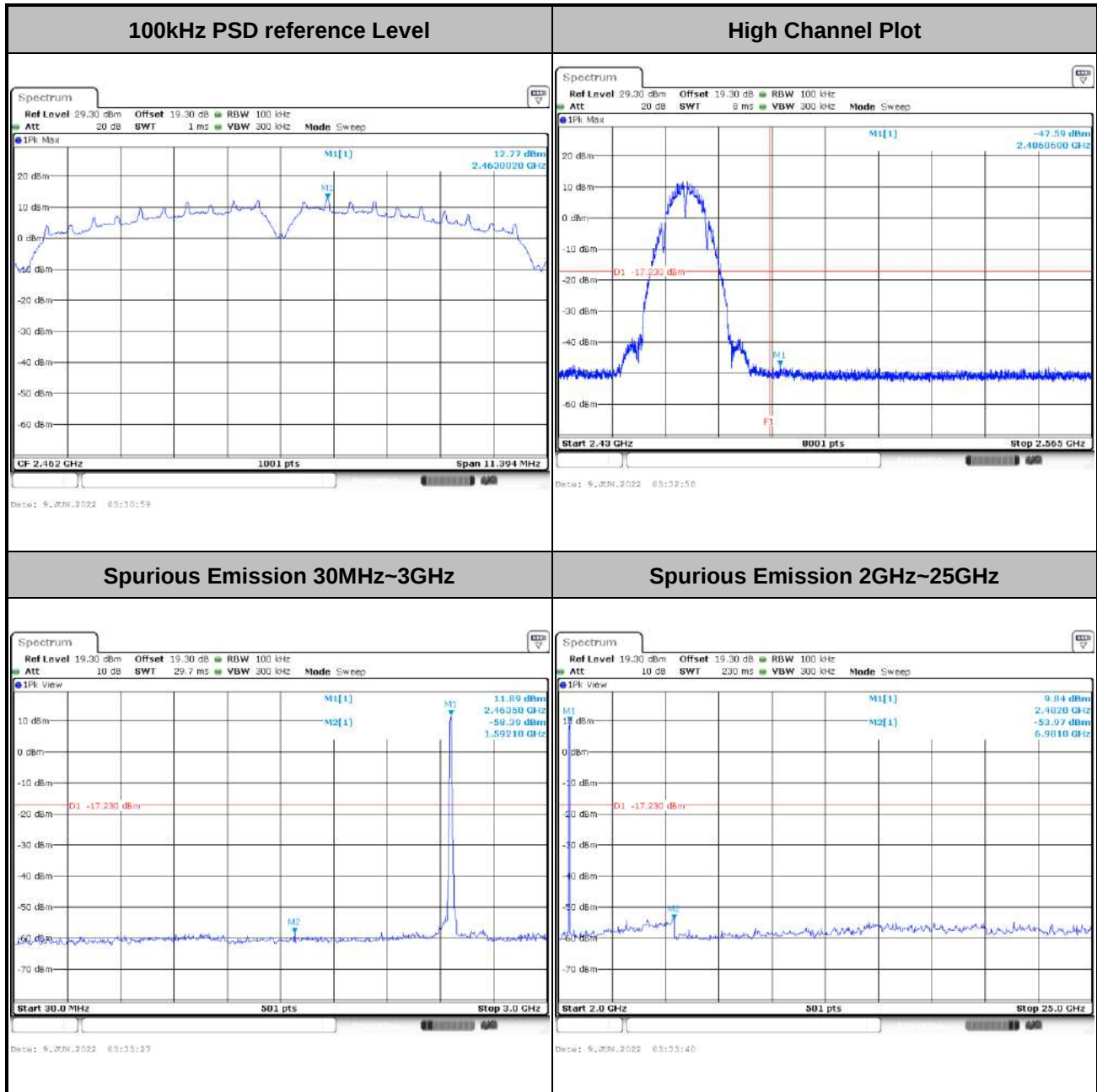


Spurious Emission 2GHz~25GHz



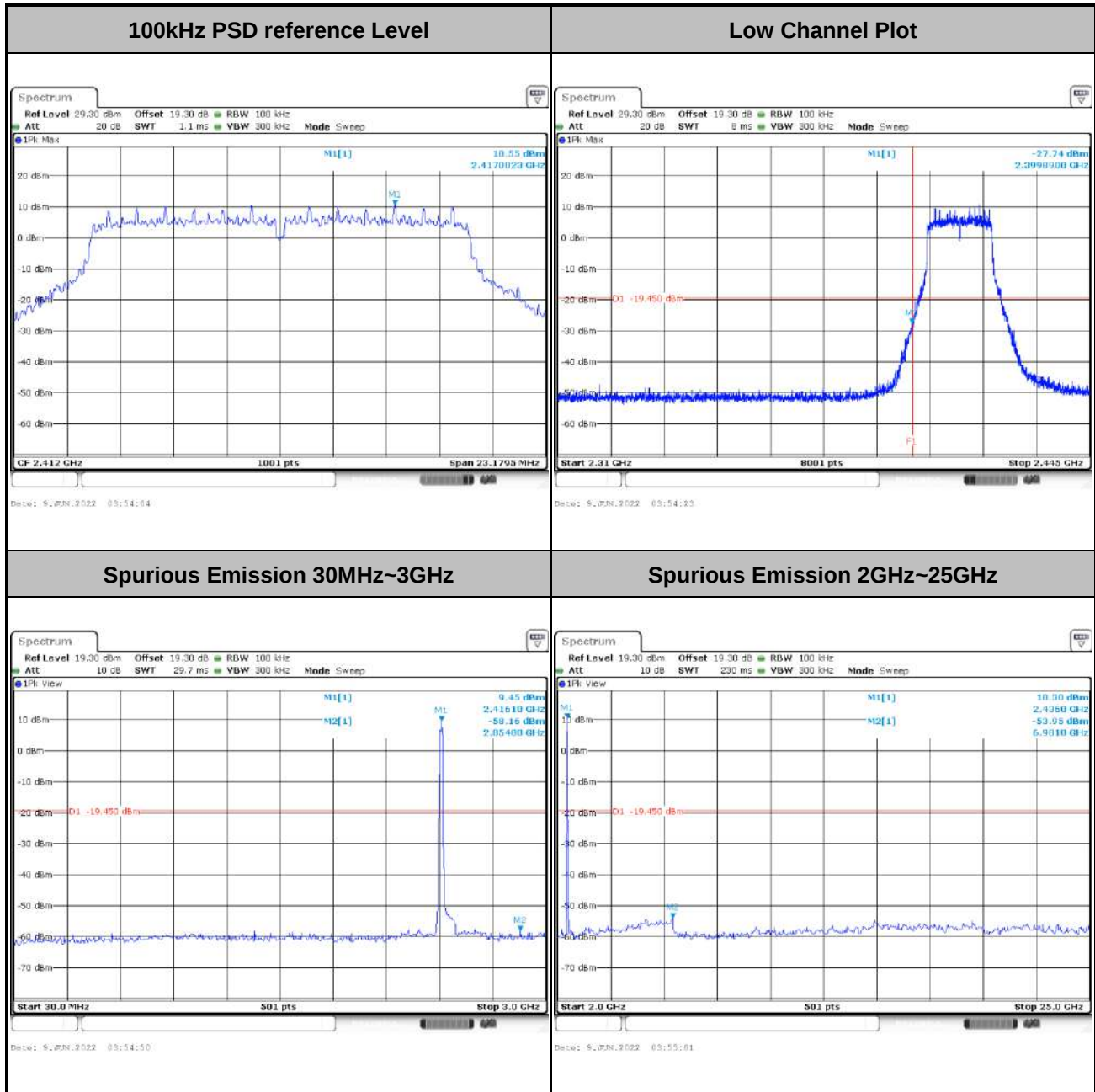


Test Mode :	802.11b	Test Channel :	11
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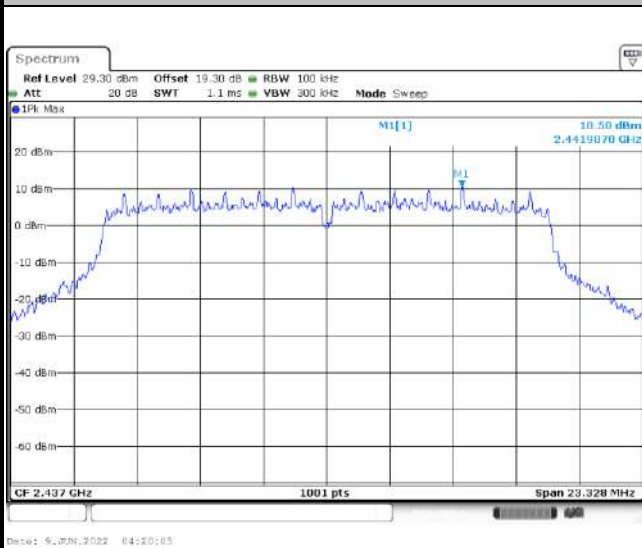
Test Mode :	802.11g	Test Channel :	01
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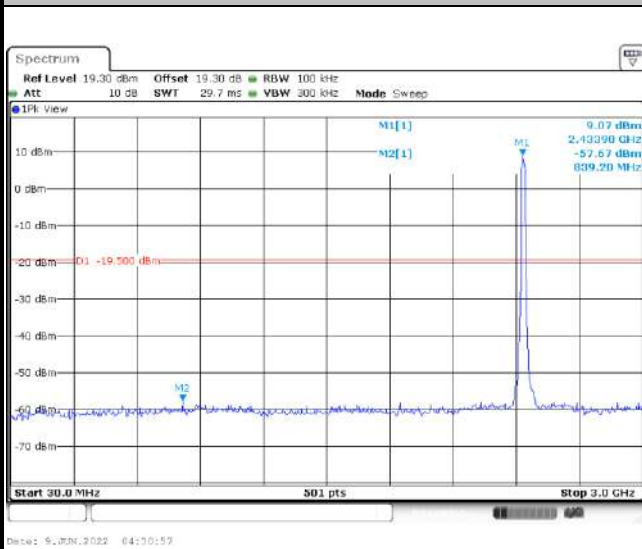
Test Mode :	802.11g	Test Channel :	06
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100kHz PSD reference Level

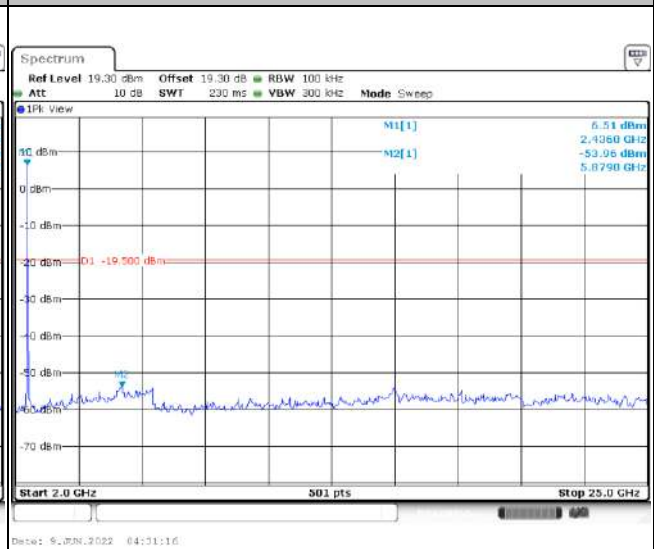


Mid Channel Plot

Spurious Emission 30MHz~3GHz

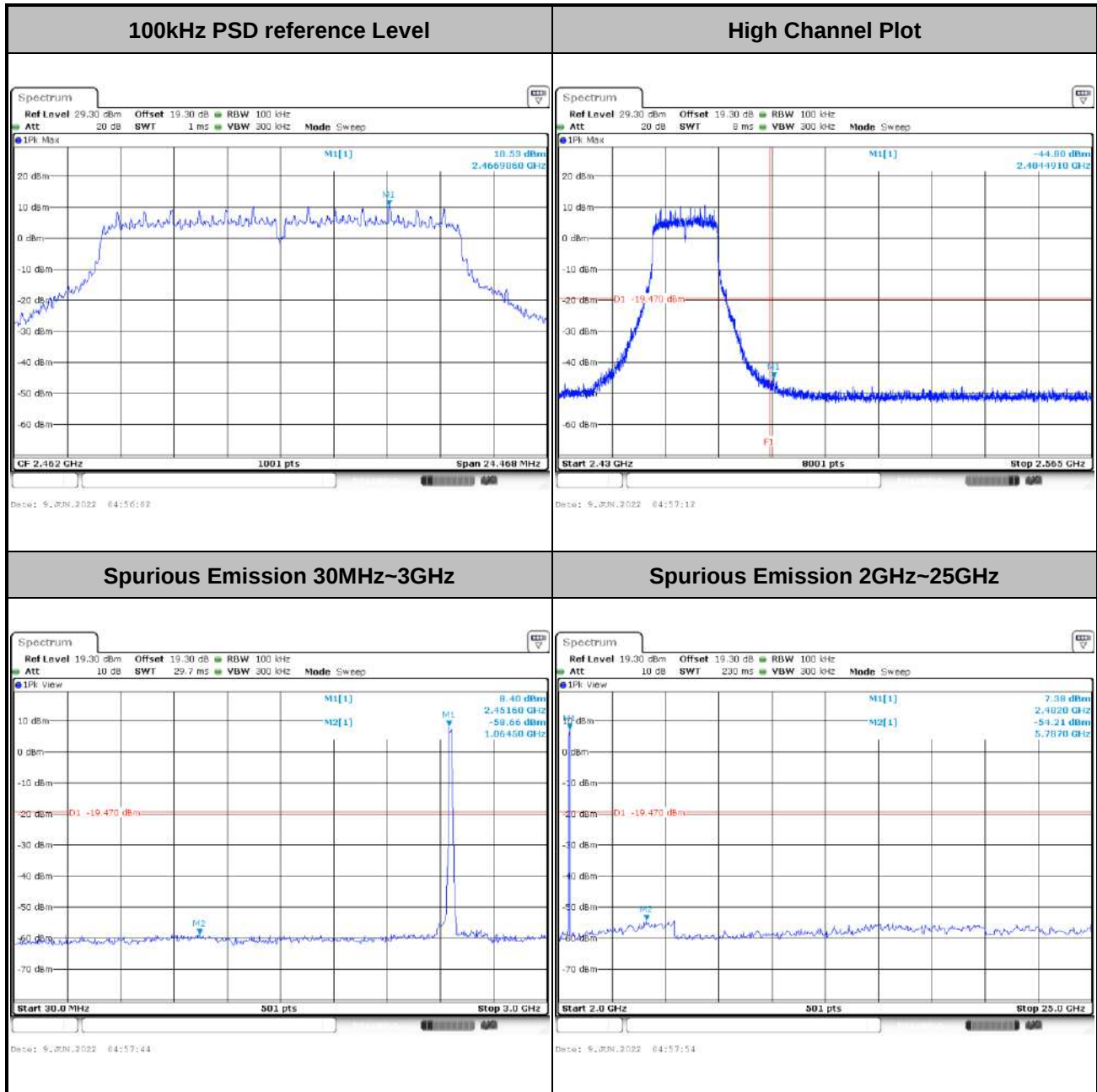


Spurious Emission 2GHz~25GHz



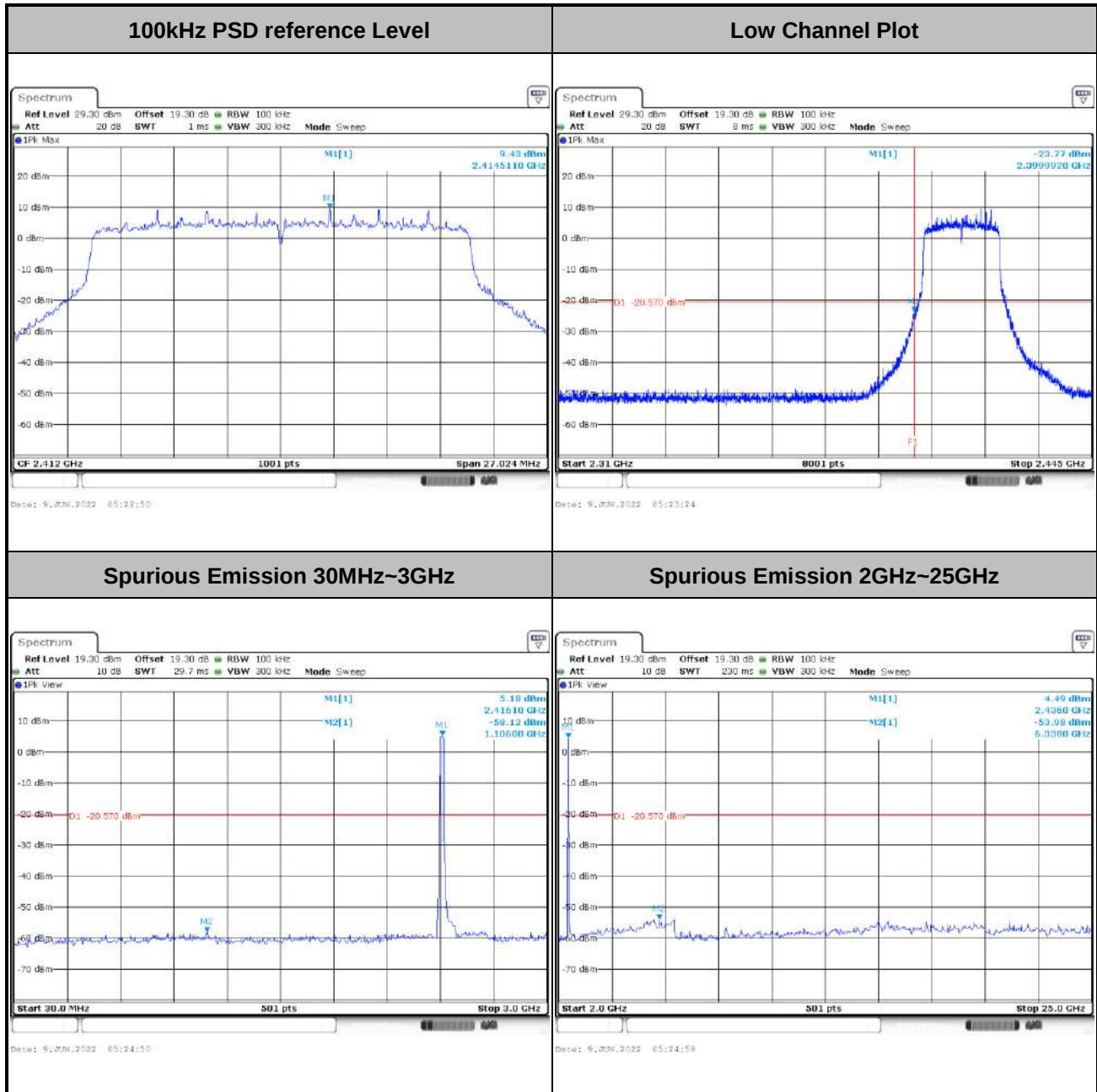


Test Mode :	802.11g	Test Channel :	11
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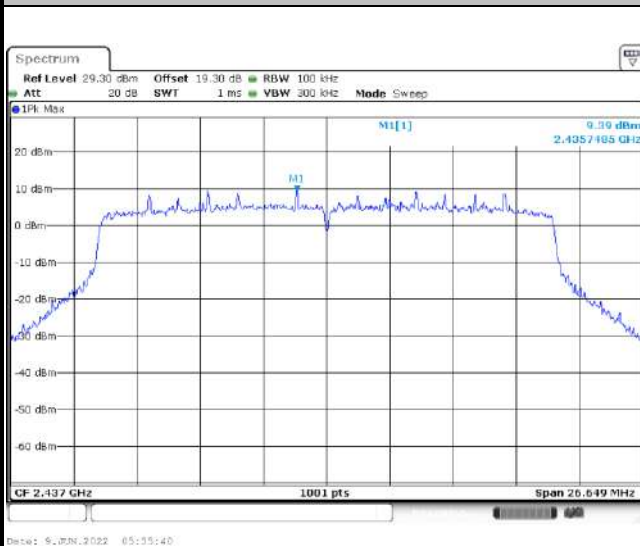
Test Mode :	802.11ax HE20	Test Channel :	01 Full RU
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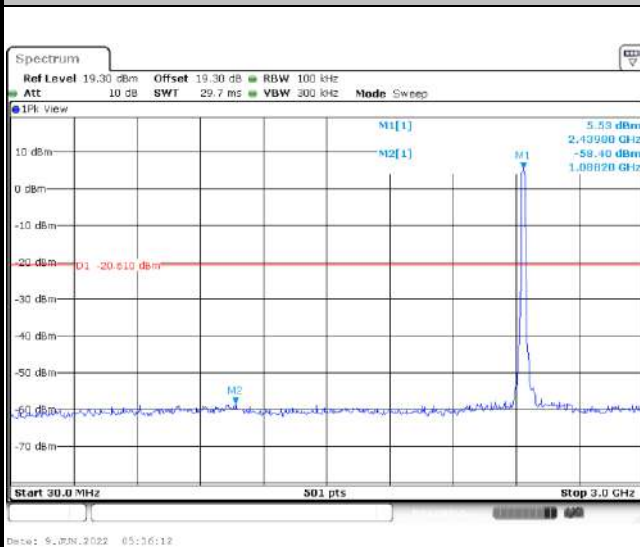
Test Mode :	802.11ax HE20	Test Channel :	06 Full RU
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100kHz PSD reference Level

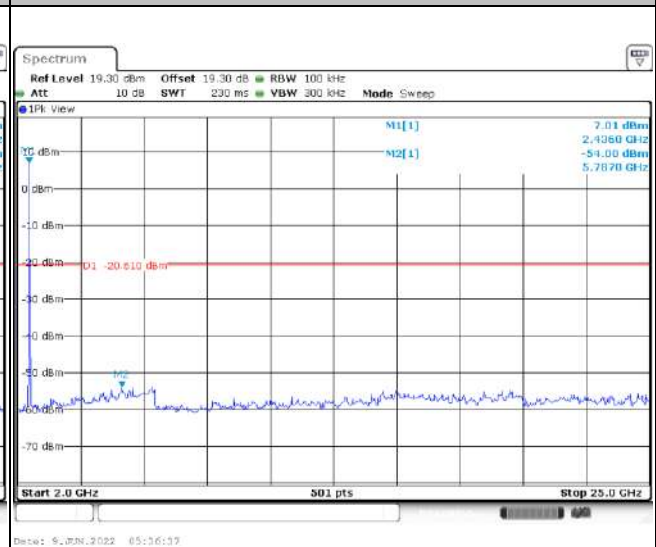


Mid Channel Plot

Spurious Emission 30MHz~3GHz

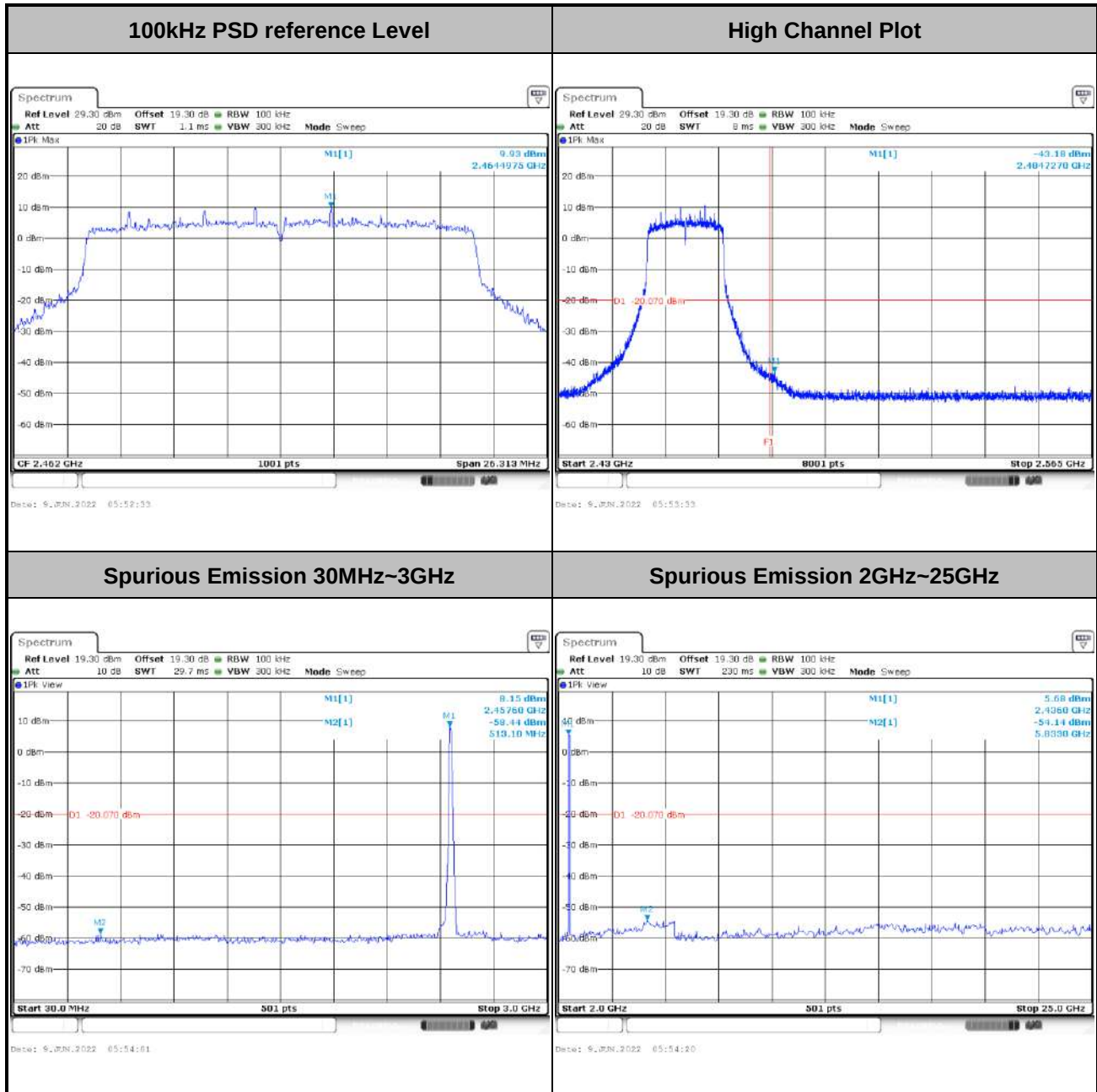


Spurious Emission 2GHz~25GHz





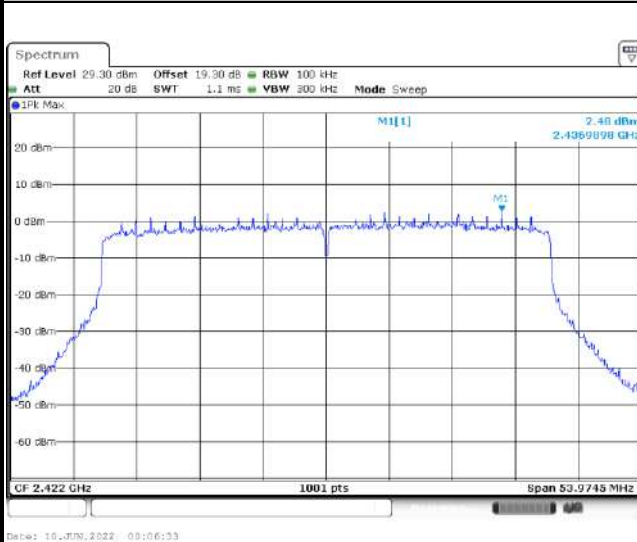
Test Mode :	802.11ax HE20	Test Channel :	11 Full RU
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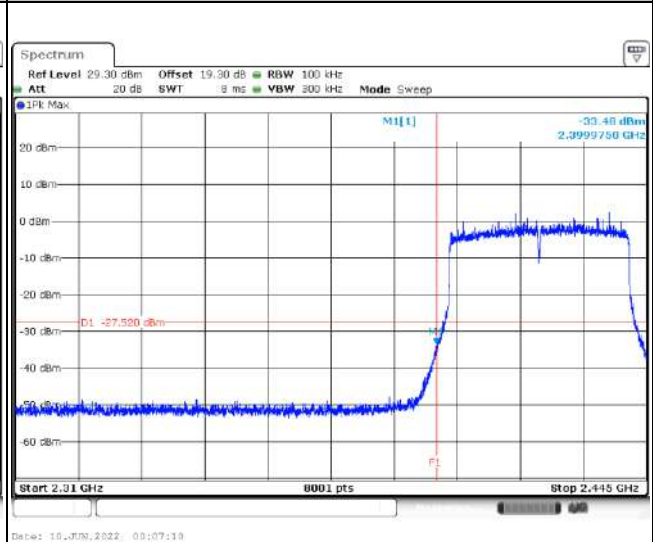


Test Mode :	802.11ax HE40	Test Channel :	03 Full RU
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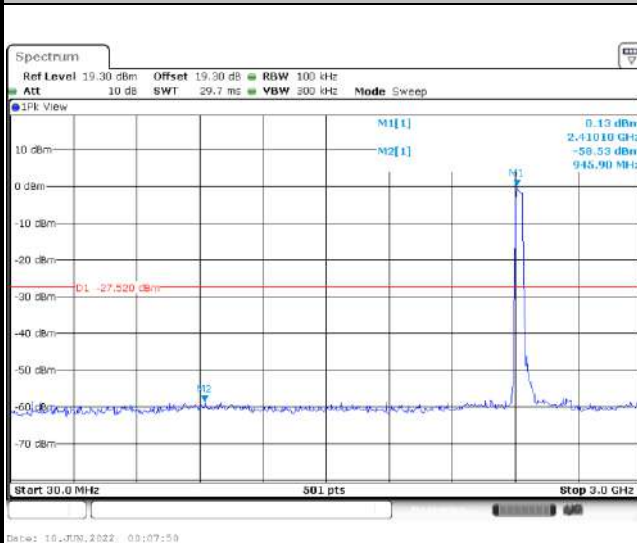
100kHz PSD reference Level



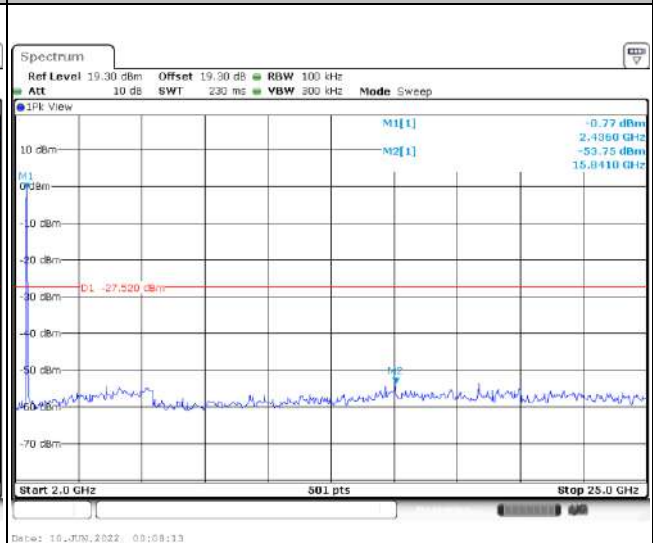
Low Channel Plot

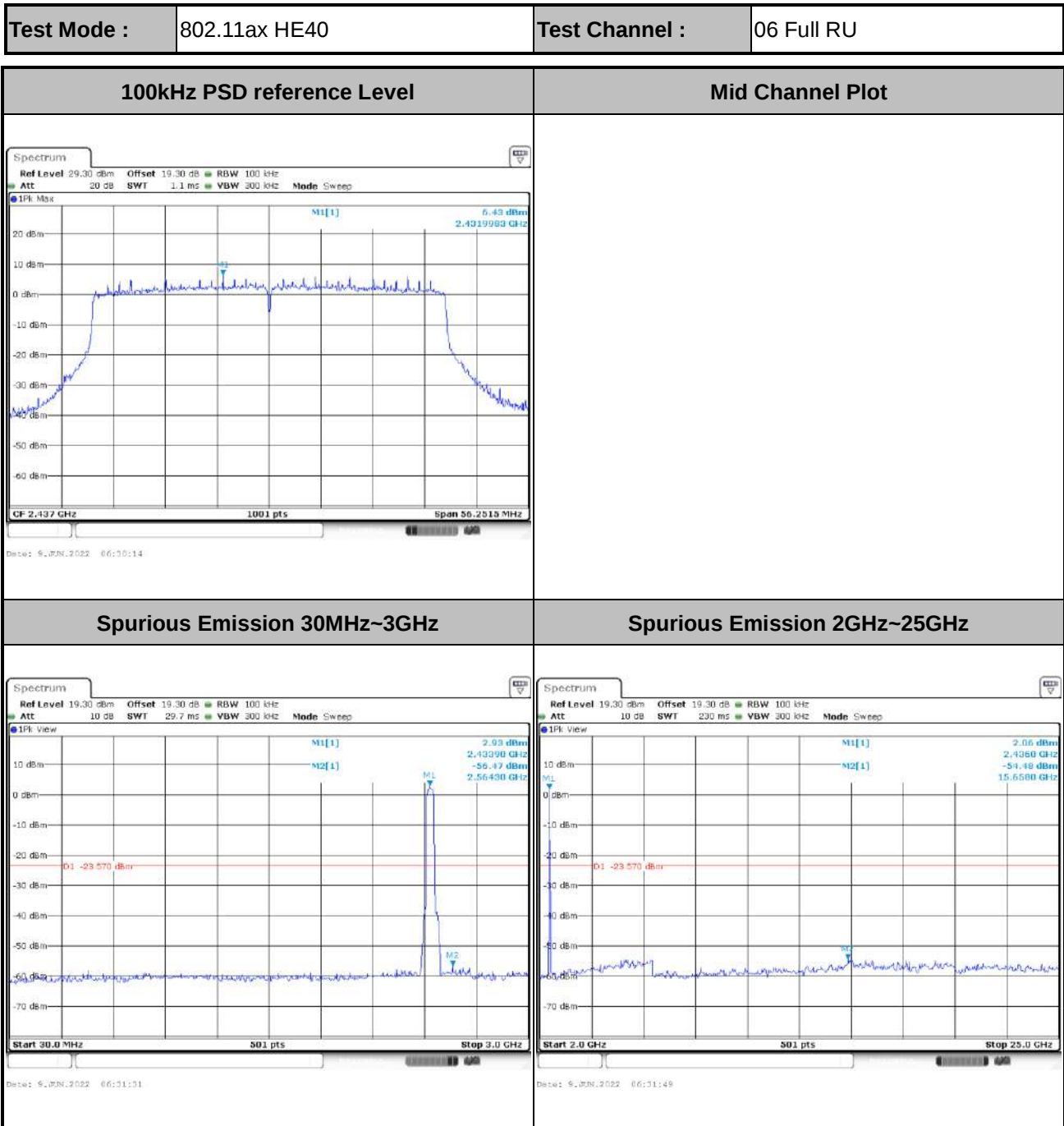


Spurious Emission 30MHz~3GHz



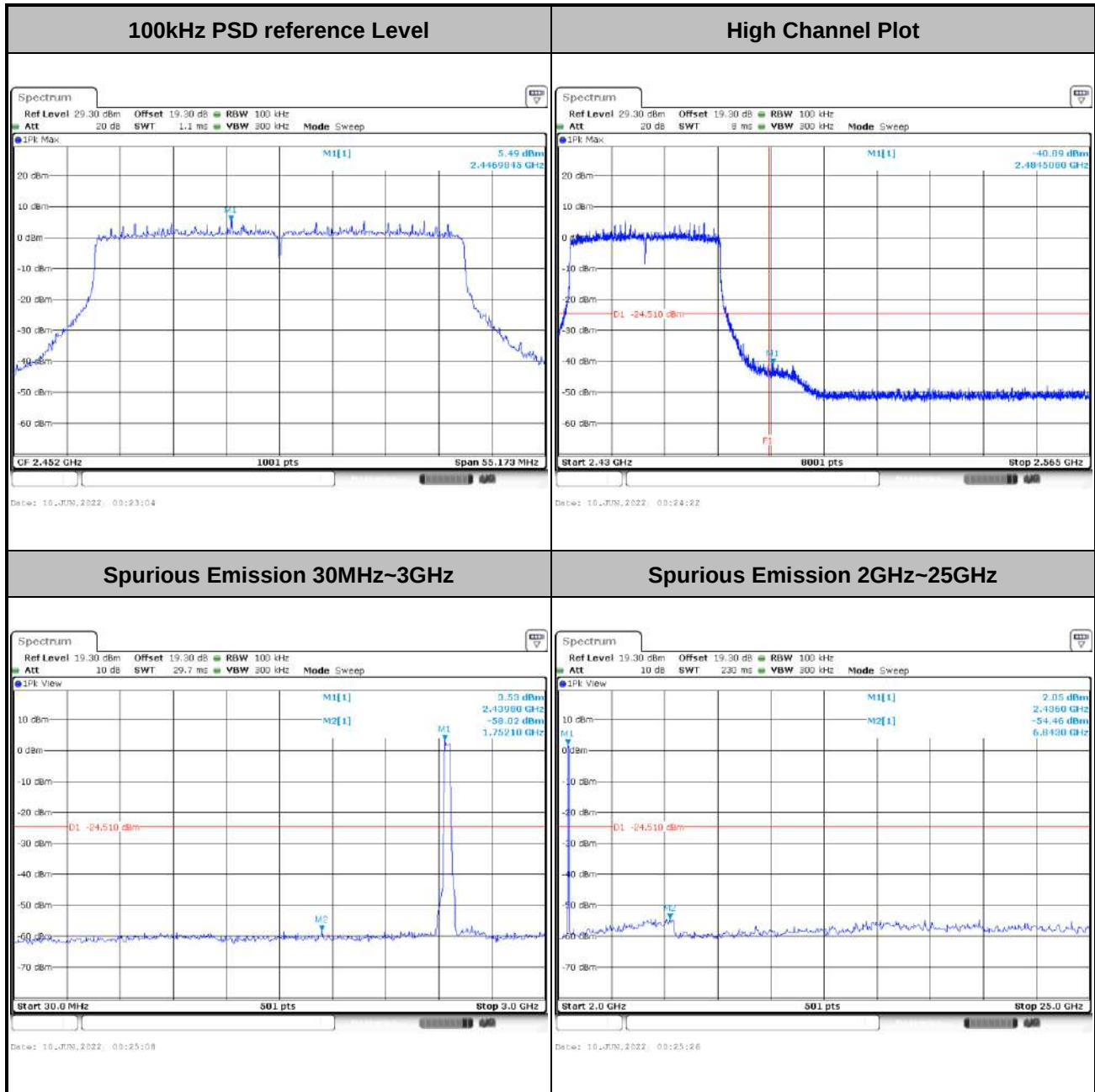
Spurious Emission 2GHz~25GHz







Test Mode :	802.11ax HE40	Test Channel :	09 Full RU
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3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device is 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

Please refer to the measuring equipment list in this test report.

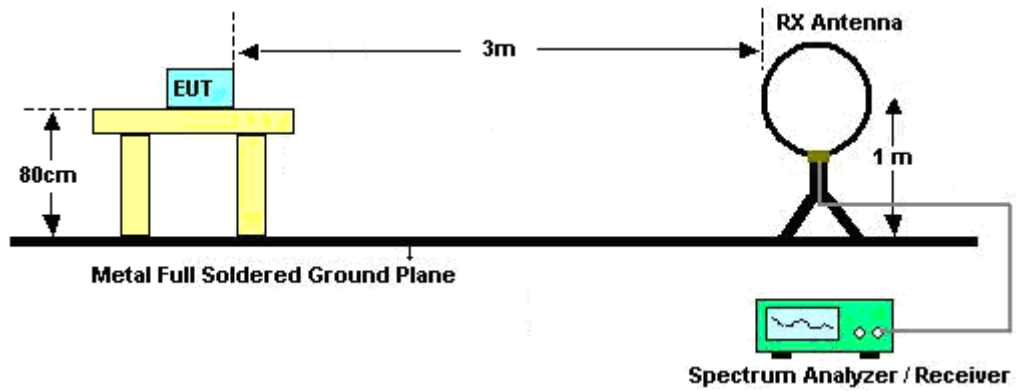


3.5.3 Test Procedures

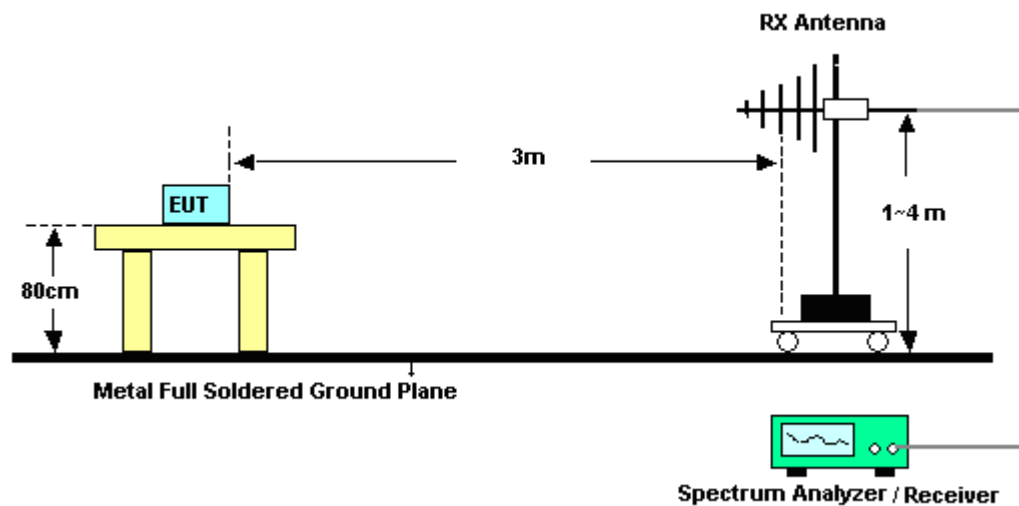
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-”.
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-”.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW = 100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3 MHz for $f \geq 1$ GHz for peak measurement.For average measurement:
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

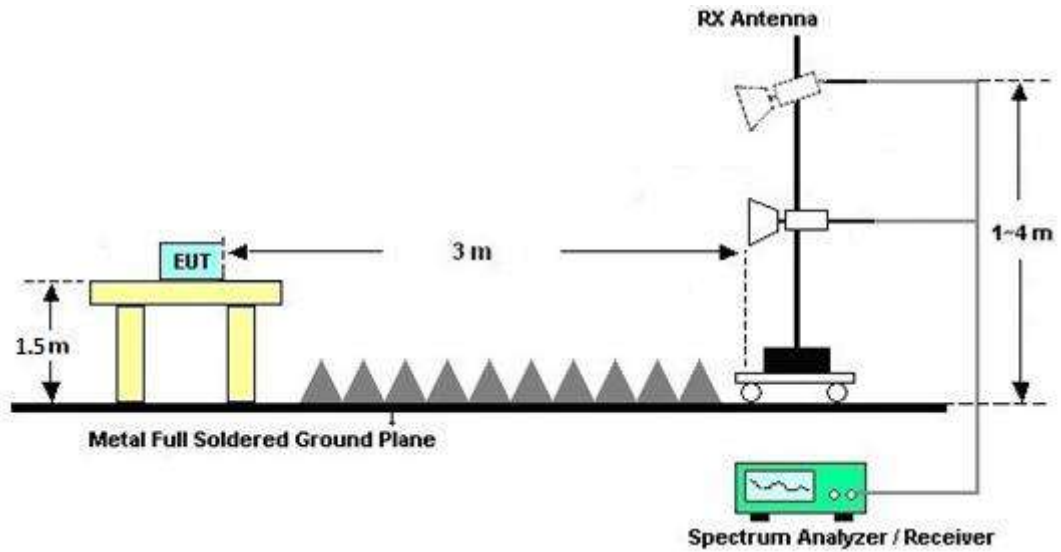
For radiated emissions below 30MHz



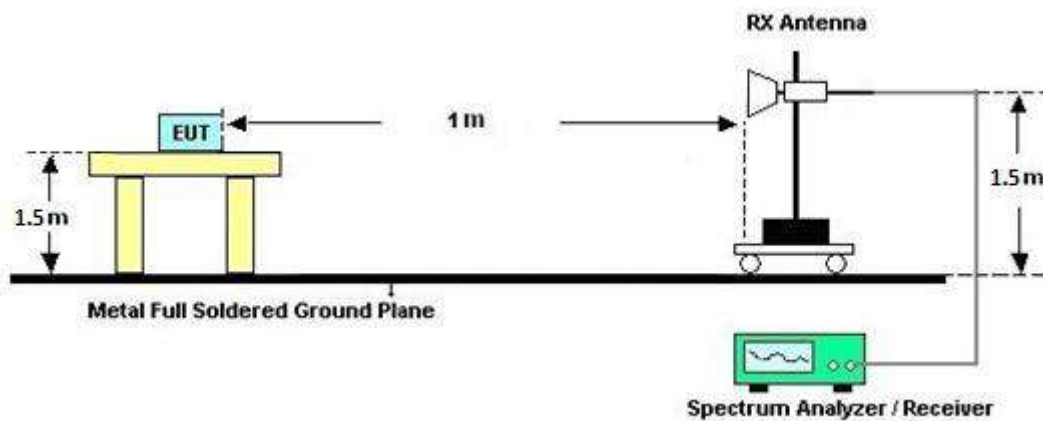
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

Frequency of Emission (MHz)	Conducted Limit (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.

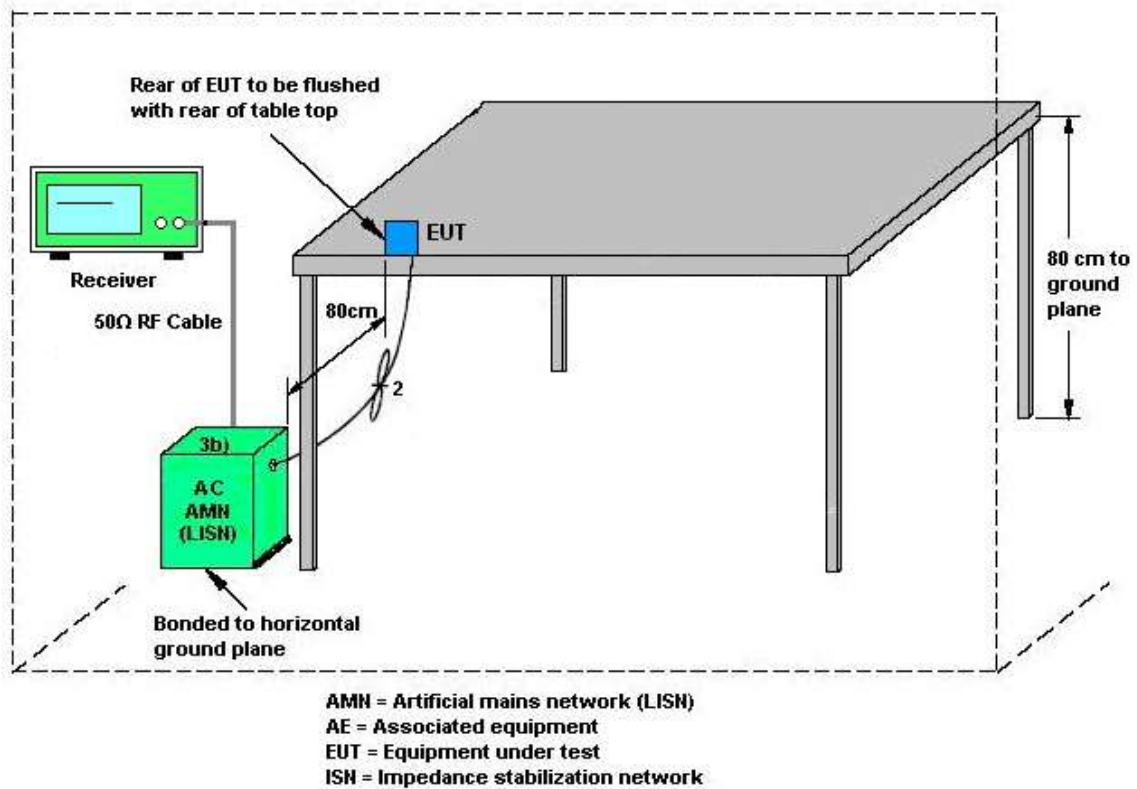
3.6.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.6.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
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 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain;

The EUT supports CDD mode.

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain "DG" is calculated as following table.

<CDD Modes>						
			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 1	Ant. 2	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
2.4 GHz	2.44	2.44	2.44	5.45	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	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 09, 2021	Mar. 27, 2022~ Jun. 09, 2022	Sep. 08, 2022	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Feb. 06, 2022	Mar. 27, 2022~ Jun. 09, 2022	Feb. 05, 2023	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 27, 2021	Mar. 27, 2022~ Jun. 09, 2022	Dec. 26, 2022	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02038	1GHz~18GHz	Aug. 04, 2021	Mar. 27, 2022~ Jun. 09, 2022	Aug. 03, 2022	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA917025 1	18GHz~40GHz	Nov. 30, 2021	Mar. 27, 2022~ Jun. 09, 2022	Nov. 29, 2022	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-30 3	17100018000 55006	1GHz~18GHz	May 06, 2021	Apr. 30, 2022~ May 04, 2022	May 05, 2022	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-30 3	17100018000 55006	1GHz~18GHz	May 05, 2022	Mar. 05, 2022~ Jun. 09, 2022	May 04, 2023	Radiation (03CH15-HY)
Preamplifier	EM Electronics	EM01G18G	060803	1GHz-18GHz	Dec. 16, 2021	Mar. 27, 2022~ Jun. 09, 2022	Dec. 15, 2022	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060801	18-40GHz	Jun. 22, 2021	Mar. 27, 2022~ Jun. 09, 2022	Jun. 21, 2022	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Oct. 21, 2021	Mar. 27, 2022~ Jun. 09, 2022	Oct. 20, 2022	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	May 07, 2021	Mar.27, 2022~ May 05, 2022	May 06, 2022	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz~44GHz	Mar. 07, 2022	May 06, 2022~ Jun. 09, 2022	Mar. 06, 2023	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Mar. 27, 2022~ Jun. 09, 2022	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Mar. 27, 2022~ Jun. 09, 2022	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(k5)	RK-000451	N/A	N/A	Mar. 27, 2022~ Jun. 09, 2022	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY36980/4, MY9838/4PE, 508405/2E	30MHz~18G	Nov. 15, 2021	Mar. 27, 2022~ May 11, 2022	Nov. 14, 2022	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY9838/4PE, 508405/2E,58 2185/4	30MHz~18G	May 12, 2022	May 12, 2022~ Jun. 09, 2022	May 11, 2023	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2,804 012/2	30MHz~40GHz	Jan. 04, 2022	Mar. 27, 2022~ Jun. 09, 2022	Jan. 03, 2023	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz~30MHz	Mar. 10, 2022	Mar. 27, 2022~ Jun. 09, 2022	Mar. 09, 2023	Radiation (03CH15-HY)
Filter	Wainwright	WLJ4-1000-15 30-6000-40ST	SN4	1.53GHz Low Pass Filter	Jul. 02, 2021	Mar. 27, 2022~ Jun. 09, 2022	Jul. 01, 2022	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 OST	SN4	3GHz High Pass Filter	Sep. 15, 2021	Mar. 27, 2022~ Jun. 09, 2022	Sep. 14, 2022	Radiation (03CH15-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECEPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Mar. 17, 2022~ Jun. 10, 2022	Nov. 15, 2022	Conducted (TH05-HY)
USB Power Sensor	DARE	RPR3006W	16I00054SNO 12 (NO:113)	10MHz~6GHz	Dec. 16, 2021	Mar. 17, 2022~ Jun. 10, 2022	Dec. 15, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 30, 2021	Mar. 17, 2022~ Jun. 10, 2022	Aug. 29, 2022	Conducted (TH05-HY)
Switch Control Mainframe	E-IUSTRUMENT	ETF-1405-0	EC1900067 (BOX7)	N/A	Aug. 12, 2021	Mar. 17, 2022~ Jun. 10, 2022	Aug. 11, 2022	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Feb. 19, 2022	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 01, 2021	Feb. 19, 2022	Nov. 30, 2022	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 17, 2021	Feb. 19, 2022	Nov. 16, 2022	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 03, 2021	Feb. 19, 2022	Dec. 02, 2022	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Feb. 19, 2022	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-FN	00691	N/A	Jul. 28, 2021	Feb. 19, 2022	Jul. 27, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 30, 2021	Feb. 19, 2022	Dec. 29, 2022	Conduction (CO05-HY)



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.1 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.3 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.6 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Hank Hsu/Shiming Liu	Temperature:	21~25	°C
Test Date:	2022/3/17~2022/6/10	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	13.29	13.29	8.10	8.10	0.50	Pass
11b	1Mbps	2	6	2437	13.34	13.24	7.60	8.08	0.50	Pass
11b	1Mbps	2	11	2462	13.29	13.29	7.10	7.60	0.50	Pass
11g	6Mbps	2	1	2412	16.98	17.08	16.33	15.45	0.50	Pass
11g	6Mbps	2	6	2437	17.03	17.08	16.29	15.55	0.50	Pass
11g	6Mbps	2	11	2462	16.98	17.03	15.55	16.31	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	2	1	2412	20.90	20.50	23.71	30.00		2.44		26.15		36.00		Pass
11b	1Mbps	2	6	2437	21.00	20.50	23.77	30.00		2.44		26.21		36.00		Pass
11b	1Mbps	2	11	2462	20.50	20.70	23.61	30.00		2.44		26.05		36.00		Pass
11g	6Mbps	2	1	2412	20.80	20.70	23.76	30.00		2.44		26.20		36.00		Pass
11g	6Mbps	2	6	2437	21.10	20.80	23.96	30.00		2.44		26.40		36.00		Pass
11g	6Mbps	2	11	2462	20.60	20.40	23.51	30.00		2.44		25.95		36.00		Pass
HT20	MCS0	2	1	2412	19.40	19.30	22.36	30.00		2.44		24.80		36.00		Pass
HT20	MCS0	2	6	2437	20.00	19.50	22.77	30.00		2.44		25.21		36.00		Pass
HT20	MCS0	2	11	2462	19.90	19.60	22.76	30.00		2.44		25.20		36.00		Pass
HT40	MCS0	2	3	2422	15.90	15.60	18.76	30.00		2.44		21.20		36.00		Pass
HT40	MCS0	2	6	2437	19.50	19.20	22.36	30.00		2.44		24.80		36.00		Pass
HT40	MCS0	2	9	2452	18.20	18.50	21.36	30.00		2.44		23.80		36.00		Pass
VHT20	MCS0	2	1	2412	19.50	19.40	22.46	30.00		2.44		24.90		36.00		Pass
VHT20	MCS0	2	6	2437	20.10	19.60	22.87	30.00		2.44		25.31		36.00		Pass
VHT20	MCS0	2	11	2462	20.00	19.70	22.86	30.00		2.44		25.30		36.00		Pass
VHT40	MCS0	2	3	2422	16.00	15.70	18.86	30.00		2.44		21.30		36.00		Pass
VHT40	MCS0	2	6	2437	19.60	19.30	22.46	30.00		2.44		24.90		36.00		Pass
VHT40	MCS0	2	9	2452	18.30	18.60	21.46	30.00		2.44		23.90		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	-0.85	-1.21	2.16	5.45		8.00		Pass
11b	1Mbps	2	6	2437	-0.91	-0.99	2.10	5.45		8.00		Pass
11b	1Mbps	2	11	2462	-1.17	-1.35	1.84	5.45		8.00		Pass
11g	6Mbps	2	1	2412	-6.53	-6.10	-3.09	5.45		8.00		Pass
11g	6Mbps	2	6	2437	-6.37	-6.40	-3.36	5.45		8.00		Pass
11g	6Mbps	2	11	2462	-6.22	-6.30	-3.21	5.45		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	N _{TX}	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	19.33	19.38	17.94	18.02	0.50	Pass
HE20	MCS0	2	6	2437	Full	19.33	19.38	17.94	17.77	0.50	Pass
HE20	MCS0	2	11	2462	Full	19.38	19.33	17.91	17.54	0.50	Pass
HE40	MCS0	2	3	2422	Full	37.86	37.96	37.94	35.98	0.50	Pass
HE40	MCS0	2	6	2437	Full	37.96	37.86	36.74	37.50	0.50	Pass
HE40	MCS0	2	9	2452	Full	37.96	37.96	37.86	36.78	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																	
Mod.	Data Rate	NtX	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
HE20	MCS0	2	1	2412	Full	19.60	19.50	22.56	30.00		2.44		25.00		36.00		Pass
HE20	MCS0	2	6	2437	Full	20.20	19.70	22.97	30.00		2.44		25.41		36.00		Pass
HE20	MCS0	2	11	2462	Full	20.10	19.80	22.96	30.00		2.44		25.40		36.00		Pass
HE40	MCS0	2	3	2422	Full	16.10	15.80	18.96	30.00		2.44		21.40		36.00		Pass
HE40	MCS0	2	6	2437	Full	19.70	19.40	22.56	30.00		2.44		25.00		36.00		Pass
HE40	MCS0	2	9	2452	Full	18.40	18.70	21.56	30.00		2.44		24.00		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	-6.65	-6.53	-3.52	5.45		8.00		Pass
HE20	MCS0	2	6	2437	Full	-6.07	-6.57	-3.06	5.45		8.00		Pass
HE20	MCS0	2	11	2462	Full	-6.33	-6.10	-3.09	5.45		8.00		Pass
HE40	MCS0	2	3	2422	Full	-12.21	-12.51	-9.20	5.45		8.00		Pass
HE40	MCS0	2	6	2437	Full	-8.78	-8.75	-5.74	5.45		8.00		Pass
HE40	MCS0	2	9	2452	Full	-10.17	-9.34	-6.33	5.45		8.00		Pass

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



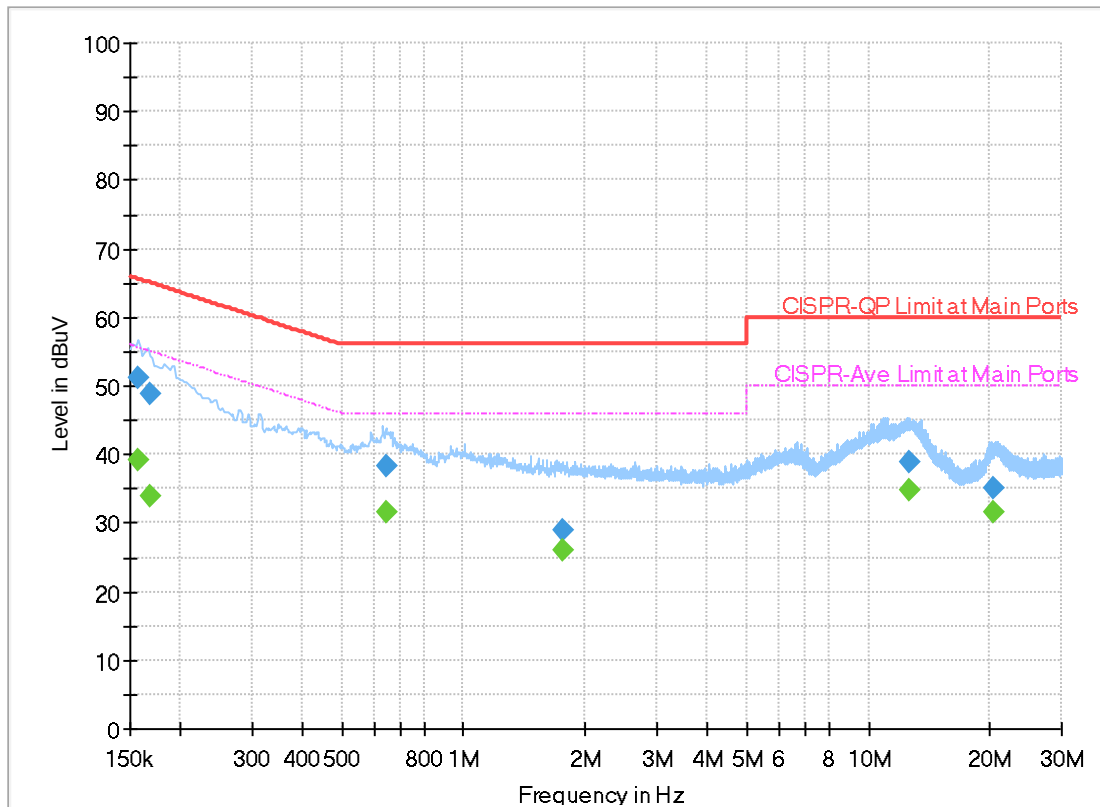
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Calvin Wang	Temperature :	23~26℃
		Relative Humidity :	45~55%

EUT Information

Report NO : 211326
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



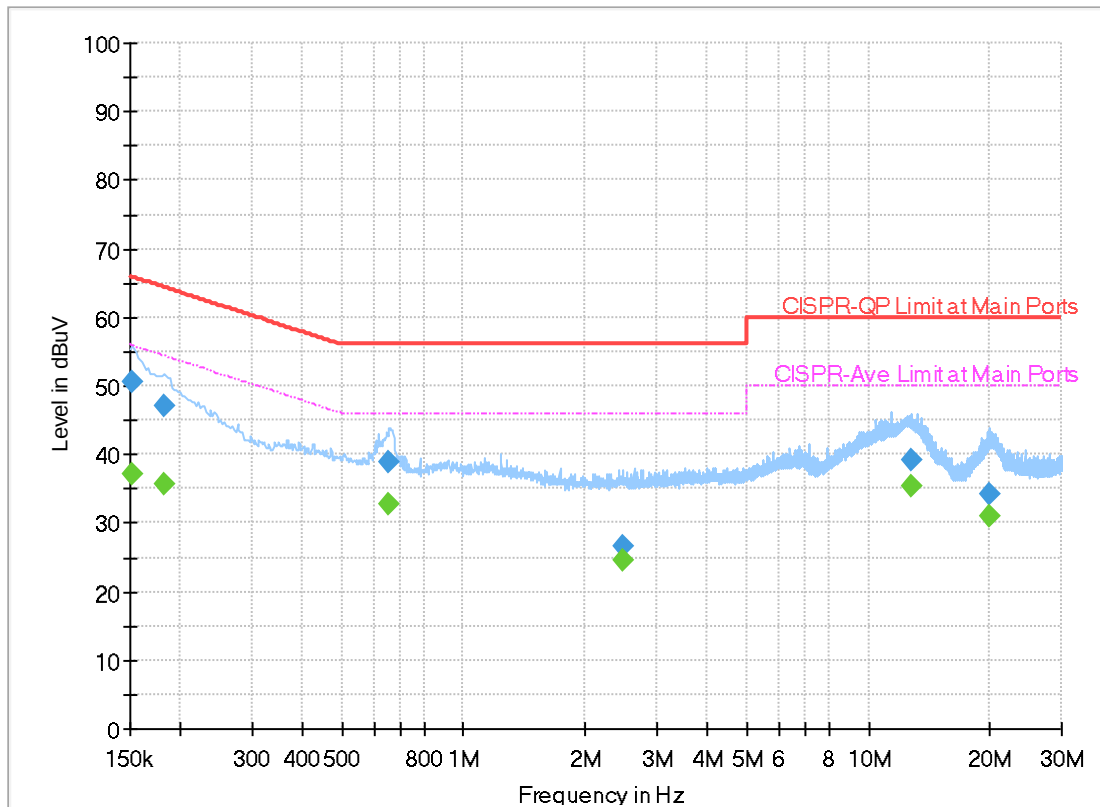
Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.156750	---	39.30	55.63	16.33	L1	OFF	19.6
0.156750	51.23	---	65.63	14.40	L1	OFF	19.6
0.168000	---	33.89	55.06	21.17	L1	OFF	19.6
0.168000	48.86	---	65.06	16.20	L1	OFF	19.6
0.642750	---	31.62	46.00	14.38	L1	OFF	19.6
0.642750	38.30	---	56.00	17.70	L1	OFF	19.6
1.756500	---	26.05	46.00	19.95	L1	OFF	19.7
1.756500	29.02	---	56.00	26.98	L1	OFF	19.7
12.549750	---	34.91	50.00	15.09	L1	OFF	20.1
12.549750	38.83	---	60.00	21.17	L1	OFF	20.1
20.343750	---	31.50	50.00	18.50	L1	OFF	20.4
20.343750	34.96	---	60.00	25.04	L1	OFF	20.4

EUT Information

Report NO : 211326
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Neutral

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	37.18	55.88	18.70	N	OFF	19.6
0.152250	50.59	---	65.88	15.29	N	OFF	19.6
0.181500	---	35.54	54.42	18.88	N	OFF	19.6
0.181500	47.21	---	64.42	17.21	N	OFF	19.6
0.654000	---	32.69	46.00	13.31	N	OFF	19.6
0.654000	38.88	---	56.00	17.12	N	OFF	19.6
2.476500	---	24.61	46.00	21.39	N	OFF	19.7
2.476500	26.47	---	56.00	29.53	N	OFF	19.7
12.725250	---	35.26	50.00	14.74	N	OFF	20.2
12.725250	39.15	---	60.00	20.85	N	OFF	20.2
19.819500	---	31.01	50.00	18.99	N	OFF	20.4
19.819500	34.23	---	60.00	25.77	N	OFF	20.4



Appendix C. Radiated Spurious Emission

Test Engineer :	Leo Lee and Bigshow Wang	Temperature :	22.1~23.1°C
		Relative Humidity :	55~60%

<Sample 1>

2.4GHz 2400~2483.5MHz

WIFI 802.11b (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)
802.11b CH 01 2412MHz		2356.41	50.84	-23.16	74	43.95	27.23	16.51	36.85	100	136	P	H
		2379.615	41.91	-12.09	54	34.88	27.32	16.55	36.84	100	136	A	H
	*	2412	104.81	-	-	97.61	27.42	16.6	36.82	100	136	P	H
	*	2412	101.73	-	-	94.53	27.42	16.6	36.82	100	136	A	H
													H
		2360.82	51.57	-22.43	74	44.65	27.24	16.52	36.84	239	128	P	V
		2389.8	43.1	-10.9	54	36.01	27.36	16.56	36.83	239	128	A	V
	*	2412	114.54	-	-	107.34	27.42	16.6	36.82	239	128	P	V
	*	2412	111.35	-	-	104.15	27.42	16.6	36.82	239	128	A	V
													V
802.11b CH 06 2437MHz		2356.24	51.12	-22.88	74	44.24	27.22	16.51	36.85	100	137	P	H
		2384.24	41.8	-12.2	54	34.74	27.34	16.55	36.83	100	137	A	H
	*	2437	103.9	-	-	96.6	27.47	16.64	36.81	100	137	P	H
	*	2437	100.72	-	-	93.42	27.47	16.64	36.81	100	137	A	H
		2491.81	51.41	-22.59	74	43.8	27.67	16.72	36.78	100	137	P	H
		2495.77	42.77	-11.23	54	35.14	27.68	16.73	36.78	100	137	A	H
		2389.52	51.94	-22.06	74	44.85	27.36	16.56	36.83	235	106	P	V
		2389.52	42.78	-11.22	54	35.69	27.36	16.56	36.83	235	106	A	V
	*	2437	115.65	-	-	108.35	27.47	16.64	36.81	235	106	P	V
	*	2437	112.26	-	-	104.96	27.47	16.64	36.81	235	106	A	V
		2486.95	52.94	-21.06	74	45.37	27.65	16.71	36.79	235	106	P	V
		2486.86	43.86	-10.14	54	36.29	27.65	16.71	36.79	235	106	A	V



802.11b CH 11 2462MHz	*	2462	104.05	-	-	96.62	27.55	16.68	36.8	100	134	P	H
	*	2462	100.95	-	-	93.52	27.55	16.68	36.8	100	134	A	H
		2498.88	51.81	-22.19	74	44.16	27.7	16.73	36.78	100	134	P	H
		2496	42.47	-11.53	54	34.84	27.68	16.73	36.78	100	134	A	H
													H
													H
	*	2462	115.39	-	-	107.96	27.55	16.68	36.8	252	118	P	V
	*	2462	112.27	-	-	104.84	27.55	16.68	36.8	252	118	A	V
		2484.28	53.6	-20.4	74	46.04	27.64	16.71	36.79	252	118	P	V
		2485.32	44.56	-9.44	54	37	27.64	16.71	36.79	252	118	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	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)
802.11b CH 01 2412MHz		4824	40.63	-33.37	74	56.99	32.35	10.15	58.86	-	-	P	H
		12360	49.55	-24.45	74	57.39	38.74	15.49	62.07	-	-	P	H
		12360	39.77	-14.23	54	47.61	38.74	15.49	62.07	-	-	A	H
		14490	49.58	-24.42	74	55.38	40.51	16.86	63.17	-	-	P	H
		14490	40.8	-13.2	54	46.6	40.51	16.86	63.17	-	-	A	H
		17985	52.52	-21.48	74	47.88	42.97	18.94	57.27	-	-	P	H
		17985	42.74	-11.26	54	38.1	42.97	18.94	57.27	-	-	A	H
													H
													H
													H
													H
													H
		4824	43.34	-30.66	74	59.7	32.35	10.15	58.86	-	-	P	V
		11055	49.36	-24.64	74	56.84	38.6	14.78	60.86	-	-	P	V
		11055	39.58	-14.42	54	47.06	38.6	14.78	60.86	-	-	A	V
		14505	49.16	-24.84	74	54.97	40.49	16.87	63.17	-	-	P	V
		14505	41.38	-12.62	54	47.19	40.49	16.87	63.17	-	-	A	V
		18000	52.93	-21.07	74	48.12	43.1	18.95	57.24	-	-	P	V
		18000	43.15	-10.85	54	38.34	43.1	18.95	57.24	-	-	A	V
													V
													V
													V
													V
													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)
802.11b CH 06 2437MHz		4874	39.97	-34.03	74	56.17	32.5	10.2	58.9	-	-	P	H
		7311	43.55	-30.45	74	53	36.56	12.42	58.43	-	-	P	H
		12615	48.33	-25.67	74	55.97	38.83	15.67	62.14	-	-	P	H
		12615	38.55	-15.45	54	46.19	38.83	15.67	62.14	-	-	A	H
		14475	48.96	-25.04	74	54.76	40.53	16.85	63.18	-	-	P	H
		14475	40.18	-13.82	54	45.98	40.53	16.85	63.18	-	-	A	H
		18000	52.1	-21.9	74	47.29	43.1	18.95	57.24	-	-	P	H
		18000	42.32	-11.68	54	37.51	43.1	18.95	57.24	-	-	A	H
													H
													H
													H
													H
		4874	41.47	-32.53	74	57.67	32.5	10.2	58.9	-	-	P	V
		7311	43.76	-30.24	74	53.21	36.56	12.42	58.43	-	-	P	V
		11220	49.17	-24.83	74	56.34	38.82	14.87	60.86	-	-	P	V
		11220	39.39	-14.61	54	46.56	38.82	14.87	60.86	-	-	A	V
		14490	48.68	-25.32	74	54.48	40.51	16.86	63.17	-	-	P	V
		14490	39.9	-14.1	54	45.7	40.51	16.86	63.17	-	-	A	V
		18000	52.22	-21.78	74	47.41	43.1	18.95	57.24	-	-	P	V
		18000	42.44	-11.56	54	37.63	43.1	18.95	57.24	-	-	A	V
													V
													V
													V
													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)
802.11b CH 11 2462MHz		4924	39.68	-34.32	74	55.68	32.7	10.25	58.95	-	-	P	H
		7386	43.46	-30.54	74	53.13	36.18	12.44	58.29	-	-	P	H
		11460	48.81	-25.19	74	55.77	38.92	14.99	60.87	-	-	P	H
		11460	39.03	-14.97	54	45.99	38.92	14.99	60.87	-	-	A	H
		14475	49.13	-24.87	74	54.93	40.53	16.85	63.18	-	-	P	H
		14475	40.35	-13.65	54	46.15	40.53	16.85	63.18	-	-	A	H
		18000	52.32	-21.68	74	47.51	43.1	18.95	57.24	-	-	P	H
		18000	42.54	-11.46	54	37.73	43.1	18.95	57.24	-	-	A	H
													H
													H
													H
													H
		4924	39.5	-34.5	74	55.5	32.7	10.25	58.95	-	-	P	V
		7386	43.53	-30.47	74	53.2	36.18	12.44	58.29	-	-	P	V
		10620	48.76	-25.24	74	56.31	38.8	14.56	60.91	-	-	P	V
		10620	38.98	-15.02	54	46.53	38.8	14.56	60.91	-	-	A	V
		14505	49.23	-24.77	74	55.04	40.49	16.87	63.17	-	-	P	V
		14505	40.45	-13.55	54	46.26	40.49	16.87	63.17	-	-	A	V
		18000	52.05	-21.95	74	47.24	43.1	18.95	57.24	-	-	P	V
		18000	42.27	-11.73	54	37.46	43.1	18.95	57.24	-	-	A	V
													V
													V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												
	3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												
	4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



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		2389.38	52.42	-21.58	74	45.33	27.36	16.56	36.83	100	164	P	H
		2389.59	41.67	-12.33	54	34.58	27.36	16.56	36.83	100	164	A	H
	*	2412	106	-	-	98.8	27.42	16.6	36.82	100	164	P	H
	*	2412	97.79	-	-	90.59	27.42	16.6	36.82	100	164	A	H
													H
													H
		2389.59	59.09	-14.91	74	52	27.36	16.56	36.83	255	355	P	V
		2390	48.99	-5.01	54	41.9	27.36	16.56	36.83	255	355	A	V
	*	2412	118.05	-	-	110.85	27.42	16.6	36.82	255	355	P	V
	*	2412	110.73	-	-	103.53	27.42	16.6	36.82	255	355	A	V
													V
													V
802.11g CH 06 2437MHz		2380.88	50.72	-23.28	74	43.68	27.32	16.55	36.83	121	151	P	H
		2384.4	41.22	-12.78	54	34.16	27.34	16.55	36.83	121	151	A	H
	*	2437	107.53	-	-	100.23	27.47	16.64	36.81	121	151	P	H
	*	2437	100.04	-	-	92.74	27.47	16.64	36.81	121	151	A	H
		2486.77	51.67	-22.33	74	44.1	27.65	16.71	36.79	121	151	P	H
		2495.95	42.36	-11.64	54	34.73	27.68	16.73	36.78	121	151	A	H
		2390	52.56	-21.44	74	45.47	27.36	16.56	36.83	244	273	P	V
		2390	43.52	-10.48	54	36.43	27.36	16.56	36.83	244	273	A	V
	*	2437	118.85	-	-	111.55	27.47	16.64	36.81	244	273	P	V
	*	2437	111.27	-	-	103.97	27.47	16.64	36.81	244	273	A	V
		2487.58	54.15	-19.85	74	46.57	27.65	16.72	36.79	244	273	P	V
		2485.33	44.69	-9.31	54	37.13	27.64	16.71	36.79	244	273	A	V



802.11g CH 11 2462MHz	*	2462	106.83	-	-	99.4	27.55	16.68	36.8	100	187	P	H
	*	2462	99.1	-	-	91.67	27.55	16.68	36.8	100	187	A	H
		2487	52.04	-21.96	74	44.47	27.65	16.71	36.79	100	187	P	H
		2484.24	42.52	-11.48	54	34.96	27.64	16.71	36.79	100	187	A	H
													H
													H
	*	2462	118.29	-	-	110.86	27.55	16.68	36.8	250	279	P	V
	*	2462	110.33	-	-	102.9	27.55	16.68	36.8	250	279	A	V
		2483.84	60.01	-13.99	74	52.45	27.64	16.71	36.79	250	279	P	V
		2483.52	49.33	-4.67	54	41.78	27.63	16.71	36.79	250	279	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	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		4824	39.66	-34.34	74	56.02	32.35	10.15	58.86	-	-	P	H
		12045	48.56	-25.44	74	56.02	38.74	15.28	61.48	-	-	P	H
		12045	38.78	-15.22	54	46.24	38.74	15.28	61.48	-	-	A	H
		14490	49.48	-24.52	74	55.28	40.51	16.86	63.17	-	-	P	H
		14490	40.5	-13.5	54	46.3	40.51	16.86	63.17	-	-	A	H
		17985	52.67	-21.33	74	48.03	42.97	18.94	57.27	-	-	P	H
		17985	42.89	-11.11	54	38.25	42.97	18.94	57.27	-	-	A	H
													H
													H
													H
													H
													H
		4824	39.51	-34.49	74	55.87	32.35	10.15	58.86	-	-	P	V
		12030	48.6	-25.4	74	56.1	38.69	15.27	61.46	-	-	P	V
		12030	38.82	-15.18	54	46.32	38.69	15.27	61.46	-	-	A	V
		14505	48.53	-25.47	74	54.34	40.49	16.87	63.17	-	-	P	V
		14505	39.75	-14.25	54	45.56	40.49	16.87	63.17	-	-	A	V
		17925	51.84	-22.16	74	47.93	42.42	18.9	57.41	-	-	P	V
		17925	42.06	-11.94	54	38.15	42.42	18.9	57.41	-	-	A	V
													V
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													V
													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)
802.11g CH 06 2437MHz		4874	39.97	-34.03	74	56.17	32.5	10.2	58.9	-	-	P	H
		7311	43.12	-30.88	74	52.57	36.56	12.42	58.43	-	-	P	H
		10785	48.73	-25.27	74	56	38.97	14.65	60.89	-	-	P	H
		10785	38.95	-15.05	54	46.22	38.97	14.65	60.89	-	-	A	H
		14490	49.06	-24.94	74	54.86	40.51	16.86	63.17	-	-	P	H
		14490	40.28	-13.72	54	46.08	40.51	16.86	63.17	-	-	A	H
		17985	52.34	-21.66	74	47.7	42.97	18.94	57.27	-	-	P	H
		17985	42.56	-11.44	54	37.92	42.97	18.94	57.27	-	-	A	H
													H
													H
													H
													H
		4874	40.39	-33.61	74	56.59	32.5	10.2	58.9	-	-	P	V
		7311	43.26	-30.74	74	52.71	36.56	12.42	58.43	-	-	P	V
		11190	48.69	-25.31	74	55.92	38.78	14.85	60.86	-	-	P	V
		11190	38.91	-15.09	54	46.14	38.78	14.85	60.86	-	-	A	V
		14505	48.82	-25.18	74	54.63	40.49	16.87	63.17	-	-	P	V
		14505	40.04	-13.96	54	45.85	40.49	16.87	63.17	-	-	A	V
		18000	51.89	-22.11	74	47.08	43.1	18.95	57.24	-	-	P	V
		18000	42.11	-11.89	54	37.3	43.1	18.95	57.24	-	-	A	V
													V
													V
													V
													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)
802.11g CH 11 2462MHz		4924	42.35	-31.65	74	58.35	32.7	10.25	58.95	-	-	P	H
		7386	43.68	-30.32	74	53.35	36.18	12.44	58.29	-	-	P	H
		12675	48.66	-25.34	74	56.03	38.95	15.72	62.04	-	-	P	H
		12675	38.88	-15.12	54	46.25	38.95	15.72	62.04	-	-	A	H
		14475	48.64	-25.36	74	54.44	40.53	16.85	63.18	-	-	P	H
		14475	39.86	-14.14	54	45.66	40.53	16.85	63.18	-	-	A	H
		17985	51.37	-22.63	74	46.73	42.97	18.94	57.27	-	-	P	H
		17985	41.59	-12.41	54	36.95	42.97	18.94	57.27	-	-	A	H
													H
													H
													H
													H
		4924	41.14	-32.86	74	57.14	32.7	10.25	58.95	-	-	P	V
		7386	42.78	-31.22	74	52.45	36.18	12.44	58.29	-	-	P	V
		12045	48.54	-25.46	74	56	38.74	15.28	61.48	-	-	P	V
		12045	38.76	-15.24	54	46.22	38.74	15.28	61.48	-	-	A	V
		14475	50.9	-23.1	74	56.7	40.53	16.85	63.18	-	-	P	V
		14475	42.16	-11.84	54	47.96	40.53	16.85	63.18	-	-	A	V
		18000	51.76	-22.24	74	46.95	43.1	18.95	57.24	-	-	P	V
		18000	41.98	-12.02	54	37.17	43.1	18.95	57.24	-	-	A	V
													V
													V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												
	3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												
	4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



2.4GHz 2400~2483.5MHz

WIFI 802.11ax 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		2389.695	52.4	-21.6	74	45.31	27.36	16.56	36.83	100	131	P	H
		2390	42.14	-11.86	54	35.05	27.36	16.56	36.83	100	131	A	H
	*	2412	107.53	-	-	100.33	27.42	16.6	36.82	100	131	P	H
	*	2412	98.35	-	-	91.15	27.42	16.6	36.82	100	131	A	H
													H
													H
		2390	59.3	-14.7	74	52.21	27.36	16.56	36.83	194	25	P	V
		2390	49.23	-4.77	54	42.14	27.36	16.56	36.83	194	25	A	V
	*	2412	118.07	-	-	110.87	27.42	16.6	36.82	194	25	P	V
	*	2412	109.27	-	-	102.07	27.42	16.6	36.82	194	25	A	V
													V
													V
802.11ax HE20 Full CH 06 2437MHz		2357.74	51.33	-22.67	74	44.44	27.23	16.51	36.85	145	154	P	H
		2384.06	40.6	-13.4	54	33.54	27.34	16.55	36.83	145	154	A	H
	*	2437	107.54	-	-	100.24	27.47	16.64	36.81	145	154	P	H
	*	2437	98.98	-	-	91.68	27.47	16.64	36.81	145	154	A	H
		2493.56	50.55	-23.45	74	42.93	27.67	16.73	36.78	145	154	P	H
		2495.8	42	-12	54	34.37	27.68	16.73	36.78	145	154	A	H
		2388.26	52.19	-21.81	74	45.11	27.35	16.56	36.83	230	277	P	V
		2389.8	43.1	-10.9	54	36.01	27.36	16.56	36.83	230	277	A	V
	*	2437	119.57	-	-	112.27	27.47	16.64	36.81	230	277	P	V
	*	2437	110.09	-	-	102.79	27.47	16.64	36.81	230	277	A	V
		2486.63	53.46	-20.54	74	45.89	27.65	16.71	36.79	230	277	P	V
		2486.42	44.13	-9.87	54	36.56	27.65	16.71	36.79	230	277	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 11 2462MHz	*	2462	107.6	-	-	100.17	27.55	16.68	36.8	100	132	P	H
	*	2462	99.29	-	-	91.86	27.55	16.68	36.8	100	132	A	H
		2484.48	52.01	-21.99	74	44.45	27.64	16.71	36.79	100	132	P	H
		2486.2	42.14	-11.86	54	34.58	27.64	16.71	36.79	100	132	A	H
													H
													H
	*	2462	119.53	-	-	112.1	27.55	16.68	36.8	130	275	P	V
	*	2462	109.99	-	-	102.56	27.55	16.68	36.8	130	275	A	V
		2484.44	60.71	-13.29	74	53.15	27.64	16.71	36.79	130	275	P	V
		2483.56	50.2	-3.8	54	42.65	27.63	16.71	36.79	130	275	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	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	38.57	-35.43	74	54.93	32.35	10.15	58.86	-	-	P	H
		10785	48.28	-25.72	74	55.55	38.97	14.65	60.89	-	-	P	H
		10785	38.5	-15.5	54	45.77	38.97	14.65	60.89	-	-	A	H
		14475	48.7	-25.3	74	54.5	40.53	16.85	63.18	-	-	P	H
		14475	39.92	-14.08	54	45.72	40.53	16.85	63.18	-	-	A	H
		18000	52.18	-21.82	74	47.37	43.1	18.95	57.24	-	-	P	H
		18000	42.4	-11.6	54	37.59	43.1	18.95	57.24	-	-	A	H
													H
													H
													H
													H
													H
		4824	39.5	-34.5	74	55.86	32.35	10.15	58.86	-	-	P	V
		12660	48.53	-25.47	74	55.96	38.92	15.71	62.06	-	-	P	V
		12660	38.75	-15.25	54	46.18	38.92	15.71	62.06	-	-	A	V
		14505	48.75	-25.25	74	54.56	40.49	16.87	63.17	-	-	P	V
		14505	39.97	-14.03	54	45.78	40.49	16.87	63.17	-	-	A	V
		17955	51.39	-22.61	74	47.12	42.69	18.92	57.34	-	-	P	V
		17955	41.61	-12.39	54	37.34	42.69	18.92	57.34	-	-	A	V
													V
													V
													V
													V
													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		4874	39.21	-34.79	74	55.41	32.5	10.2	58.9	-	-	P	H
		7311	43.26	-30.74	74	52.71	36.56	12.42	58.43	-	-	P	H
		12045	49.13	-24.87	74	56.59	38.74	15.28	61.48	-	-	P	H
		12045	39.35	-14.65	54	46.81	38.74	15.28	61.48	-	-	A	H
		14505	49	-25	74	54.81	40.49	16.87	63.17	-	-	P	H
		14505	40.22	-13.78	54	46.03	40.49	16.87	63.17	-	-	A	H
		18000	52.44	-21.56	74	47.63	43.1	18.95	57.24	-	-	P	H
		18000	42.66	-11.34	54	37.85	43.1	18.95	57.24	-	-	A	H
													H
													H
													H
													H
		4874	39.26	-34.74	74	55.46	32.5	10.2	58.9	-	-	P	V
		7311	43.57	-30.43	74	53.02	36.56	12.42	58.43	-	-	P	V
		11145	49.24	-24.76	74	56.58	38.69	14.83	60.86	-	-	P	V
		11145	39.46	-14.54	54	46.8	38.69	14.83	60.86	-	-	A	V
		14505	48.55	-25.45	74	54.36	40.49	16.87	63.17	-	-	P	V
		14505	39.77	-14.23	54	45.58	40.49	16.87	63.17	-	-	A	V
		17985	51.36	-22.64	74	46.72	42.97	18.94	57.27	-	-	P	V
		17985	41.58	-12.42	54	36.94	42.97	18.94	57.27	-	-	A	V
													V
													V
													V
													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 11 2462MHz		4924	40.1	-33.9	74	56.1	32.7	10.25	58.95	-	-	P	H	
		7386	42.86	-31.14	74	52.53	36.18	12.44	58.29	-	-	P	H	
		11235	48.57	-25.43	74	55.73	38.83	14.87	60.86	-	-	P	H	
		11235	38.79	-15.21	54	45.95	38.83	14.87	60.86	-	-	A	H	
		14490	49.64	-24.36	74	55.44	40.51	16.86	63.17	-	-	P	H	
		14490	40.86	-13.14	54	46.66	40.51	16.86	63.17	-	-	A	H	
		18000	52	-22	74	47.19	43.1	18.95	57.24	-	-	P	H	
		18000	42.22	-11.78	54	37.41	43.1	18.95	57.24	-	-	A	H	
														H
														H
														H
														H
		4924	40.58	-33.42	74	56.58	32.7	10.25	58.95	-	-	P	V	
		7386	43.31	-30.69	74	52.98	36.18	12.44	58.29	-	-	P	V	
		11970	48.44	-25.56	74	55.98	38.6	15.23	61.37	-	-	P	V	
		11970	38.66	-15.34	54	46.2	38.6	15.23	61.37	-	-	A	V	
		14475	48.71	-25.29	74	54.51	40.53	16.85	63.18	-	-	P	V	
		14475	39.93	-14.07	54	45.73	40.53	16.85	63.18	-	-	A	V	
		18000	52.8	-21.2	74	47.99	43.1	18.95	57.24	-	-	P	V	
		18000	43.09	-10.91	54	38.21	43.1	18.95	57.17	-	-	A	V	
													V	
													V	
													V	
													V	
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													
	3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.													
	4. The emission level close to 18GHz is checked that the average emission level is noise floor only.													



2.4GHz 2400~2483.5MHz

WIFI 802.11ax 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		2389.66	52.46	-21.54	74	45.37	27.36	16.56	36.83	100	126	P	H
		2389.94	42.96	-11.04	54	35.87	27.36	16.56	36.83	100	126	A	H
	*	2422	103.95	-	-	96.72	27.44	16.61	36.82	100	126	P	H
	*	2422	92.37	-	-	85.14	27.44	16.61	36.82	100	126	A	H
		2484.88	52.16	-21.84	74	44.6	27.64	16.71	36.79	100	126	P	H
		2489.01	42.17	-11.83	54	34.58	27.66	16.72	36.79	100	126	A	H
		2389.24	60.9	-13.1	74	53.81	27.36	16.56	36.83	200	111	P	V
		2389.94	51.37	-2.63	54	44.28	27.36	16.56	36.83	200	111	A	V
	*	2422	112.02	-	-	104.79	27.44	16.61	36.82	200	111	P	V
	*	2422	102.19	-	-	94.96	27.44	16.61	36.82	200	111	A	V
		2483.55	58.88	-15.12	74	51.33	27.63	16.71	36.79	200	111	P	V
		2483.55	47.9	-6.1	54	40.35	27.63	16.71	36.79	200	111	A	V
802.11ax HE40 Full CH 06 2437MHz		2388.4	51.45	-22.55	74	44.37	27.35	16.56	36.83	119	134	P	H
		2387.98	40.86	-13.14	54	33.78	27.35	16.56	36.83	119	134	A	H
	*	2437	104.25	-	-	96.95	27.47	16.64	36.81	119	134	P	H
	*	2437	95.15	-	-	87.85	27.47	16.64	36.81	119	134	A	H
		2484.18	52.88	-21.12	74	45.32	27.64	16.71	36.79	119	134	P	H
		2483.62	42.81	-11.19	54	35.26	27.63	16.71	36.79	119	134	A	H
		2389.24	60.3	-13.7	74	53.21	27.36	16.56	36.83	224	275	P	V
		2389.94	50.83	-3.17	54	43.74	27.36	16.56	36.83	224	275	A	V
	*	2437	116.26	-	-	108.96	27.47	16.64	36.81	224	275	P	V
	*	2437	107.65	-	-	100.35	27.47	16.64	36.81	224	275	A	V
		2483.76	57.04	-16.96	74	49.48	27.64	16.71	36.79	224	275	P	V
		2483.52	48.18	-5.82	54	40.63	27.63	16.71	36.79	224	275	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		2344.72	50.68	-23.32	74	43.86	27.18	16.49	36.85	100	192	P	H
		2389.66	40.58	-13.42	54	33.49	27.36	16.56	36.83	100	192	A	H
	*	2452	100.89	-	-	93.52	27.51	16.66	36.8	100	192	P	H
	*	2452	92.63	-	-	85.26	27.51	16.66	36.8	100	192	A	H
		2488.31	52.03	-21.97	74	44.45	27.65	16.72	36.79	100	192	P	H
		2487.68	42.53	-11.47	54	34.95	27.65	16.72	36.79	100	192	A	H
		2386.44	51.41	-22.59	74	44.33	27.35	16.56	36.83	179	276	P	V
		2389.94	42.27	-11.73	54	35.18	27.36	16.56	36.83	179	276	A	V
	*	2452	115.29	-	-	107.92	27.51	16.66	36.8	179	276	P	V
	*	2452	106.18	-	-	98.81	27.51	16.66	36.8	179	276	A	V
		2488.03	61.76	-12.24	74	54.18	27.65	16.72	36.79	179	276	P	V
		2484.46	51.01	-2.99	54	43.45	27.64	16.71	36.79	179	276	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 HE40 Full CH 03 2422MHz		4844	39.07	-34.93	74	55.39	32.39	10.17	58.88	-	-	P	H
		7266	44.7	-29.3	74	54.13	36.67	12.41	58.51	-	-	P	H
		10665	48.59	-25.41	74	56.11	38.8	14.59	60.91	-	-	P	H
		10665	38.81	-15.19	54	46.33	38.8	14.59	60.91	-	-	A	H
		14475	48.96	-25.04	74	54.76	40.53	16.85	63.18	-	-	P	H
		14475	40.18	-13.82	54	45.98	40.53	16.85	63.18	-	-	A	H
		18000	52.32	-21.68	74	47.51	43.1	18.95	57.24	-	-	P	H
		18000	42.54	-11.46	54	37.73	43.1	18.95	57.24	-	-	A	H
													H
													H
													H
													H
		4844	39.22	-34.78	74	55.54	32.39	10.17	58.88	-	-	P	V
		7266	43.59	-30.41	74	53.02	36.67	12.41	58.51	-	-	P	V
		10635	48.85	-25.15	74	56.39	38.8	14.57	60.91	-	-	P	V
		10635	39.07	-14.93	54	46.61	38.8	14.57	60.91	-	-	A	V
		14490	49.54	-24.46	74	55.34	40.51	16.86	63.17	-	-	P	V
		14490	40.76	-13.24	54	46.56	40.51	16.86	63.17	-	-	A	V
		18000	52.27	-21.73	74	47.46	43.1	18.95	57.24	-	-	P	V
		18000	42.49	-11.51	54	37.68	43.1	18.95	57.24	-	-	A	V
													V
													V
													V
													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 06 2437MHz		4874	39.33	-34.67	74	55.53	32.5	10.2	58.9	-	-	P	H
		7311	43.9	-30.1	74	53.35	36.56	12.42	58.43	-	-	P	H
		11295	48.88	-25.12	74	55.95	38.9	14.9	60.87	-	-	P	H
		11295	39.1	-14.9	54	46.17	38.9	14.9	60.87	-	-	A	H
		14505	49.01	-24.99	74	54.82	40.49	16.87	63.17	-	-	P	H
		14505	40.23	-13.77	54	46.04	40.49	16.87	63.17	-	-	A	H
		18000	52.21	-21.79	74	47.4	43.1	18.95	57.24	-	-	P	H
		18000	43.43	-10.57	54	38.62	43.1	18.95	57.24	-	-	A	H
													H
													H
													H
													H
		4874	38.7	-35.3	74	54.9	32.5	10.2	58.9	-	-	P	V
		7311	44.2	-29.8	74	53.65	36.56	12.42	58.43	-	-	P	V
		11040	48.85	-25.15	74	56.33	38.6	14.78	60.86	-	-	P	V
		11040	39.07	-14.93	54	46.55	38.6	14.78	60.86	-	-	A	V
		14475	49.75	-24.25	74	55.55	40.53	16.85	63.18	-	-	P	V
		14475	40.97	-13.03	54	46.77	40.53	16.85	63.18	-	-	A	V
		17985	51.85	-22.15	74	47.21	42.97	18.94	57.27	-	-	P	V
		17985	42.07	-11.93	54	37.43	42.97	18.94	57.27	-	-	A	V
													V
													V
													V
													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		4904	39.91	-34.09	74	56	32.62	10.22	58.93	-	-	P	H
		7356	44.62	-29.38	74	54.17	36.36	12.44	58.35	-	-	P	H
		11280	48.5	-25.5	74	55.59	38.88	14.9	60.87	-	-	P	H
		11280	38.72	-15.28	54	45.81	38.88	14.9	60.87	-	-	A	H
		14505	49.1	-24.9	74	54.91	40.49	16.87	63.17	-	-	P	H
		14505	40.32	-13.68	54	46.13	40.49	16.87	63.17	-	-	A	H
		17985	51.56	-22.44	74	46.92	42.97	18.94	57.27	-	-	P	H
		17985	41.78	-12.22	54	37.14	42.97	18.94	57.27	-	-	A	H
													H
													H
													H
													H
		4904	39.83	-34.17	74	55.92	32.62	10.22	58.93	-	-	P	V
		7356	43.58	-30.42	74	53.13	36.36	12.44	58.35	-	-	P	V
		10740	48.64	-25.36	74	56.04	38.88	14.62	60.9	-	-	P	V
		10740	38.86	-15.14	54	46.26	38.88	14.62	60.9	-	-	A	V
		14505	48.4	-25.6	74	54.21	40.49	16.87	63.17	-	-	P	V
		14505	39.62	-14.38	54	45.43	40.49	16.87	63.17	-	-	A	V
		18000	51.7	-22.3	74	46.89	43.1	18.95	57.24	-	-	P	V
		18000	41.92	-12.08	54	37.11	43.1	18.95	57.24	-	-	A	V
													V
													V
													V
													V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												
	3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												
	4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



2.4GHz WIFI 802.11ax HE40 (SHF)

TEL : 886-3-327-0868
FAX : 886-3-327-0855

Emission below 1GHz

2.4GHz WIFI 802.11ax HE40 (LF)

[illegible]



<Sample 2>

2.4GHz 2400~2483.5MHz

WIFI 802.11ax 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		2389.24	51.79	-22.21	74	44.7	27.36	16.56	36.83	155	136	P	H
		2389.94	43.02	-10.98	54	35.93	27.36	16.56	36.83	155	136	A	H
	*	2422	102	-	-	94.77	27.44	16.61	36.82	155	136	P	H
	*	2422	93.9	-	-	86.67	27.44	16.61	36.82	155	136	A	H
		2487.47	52.14	-21.86	74	44.56	27.65	16.72	36.79	155	136	P	H
		2487.47	41.97	-12.03	54	34.39	27.65	16.72	36.79	155	136	A	H
		2389.94	59.53	-14.47	74	52.44	27.36	16.56	36.83	192	78	P	V
		2389.94	50.25	-3.75	54	43.16	27.36	16.56	36.83	192	78	A	V
	*	2422	111.08	-	-	103.85	27.44	16.61	36.82	192	78	P	V
	*	2422	101.81	-	-	94.58	27.44	16.61	36.82	192	78	A	V
		2489.99	57.31	-16.69	74	49.71	27.66	16.72	36.78	192	78	P	V
		2483.55	47.51	-6.49	54	39.96	27.63	16.71	36.79	192	78	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 HE40 Full CH 03 2422MHz		4844	39.4	-34.6	74	55.4	32.39	10.17	58.56	-	-	P	H
		7266	43.92	-30.08	74	52.95	36.67	12.41	58.11	-	-	P	H
		11460	49.03	-24.97	74	55.89	38.92	14.99	60.77	-	-	P	H
		11460	39.27	-14.73	54	46.13	38.92	14.99	60.77	-	-	A	H
		14505	50.32	-23.68	74	56.44	40.49	16.87	63.48	-	-	P	H
		14505	41.54	-12.46	54	47.66	40.49	16.87	63.48	-	-	A	H
		18000	54.41	-19.59	74	49.53	43.1	18.95	57.17	-	-	P	H
		18000	44.63	-9.37	54	39.75	43.1	18.95	57.17	-	-	A	H
													H
													H
													H
													H
		4844	38.5	-35.5	74	55.67	31.22	10.17	58.56	-	-	P	V
		7266	43.11	-30.89	74	52.51	36.3	12.41	58.11	-	-	P	V
		11385	49.89	-24.11	74	55.59	40.17	14.95	60.82	-	-	P	V
		11385	40.11	-13.89	54	45.81	40.17	14.95	60.82	-	-	A	V
		14490	49.76	-24.24	74	55.01	41.37	16.86	63.48	-	-	P	V
		14490	40.98	-13.02	54	46.23	41.37	16.86	63.48	-	-	A	V
		18000	59.89	-14.11	74	49.71	48.4	18.95	57.17	-	-	P	V
		18000	49.8	-4.2	54	39.62	48.4	18.95	57.17	-	-	A	V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



2.4GHz WIFI 802.11ax HE40 (SHF)

[illegible]

Emission below 1GHz

2.4GHz WIFI 802.11ax HE40 (LF)

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)
2.4GHz 802.11ax HE40 LF		62.01	31.83	-8.17	40	51.62	11.74	1.01	32.54	-	-	P	H
		159.01	28.42	-15.08	43.5	42.68	16.5	1.69	32.45	-	-	P	H
		250.19	29.84	-16.16	46	41.84	18.35	2.1	32.45	-	-	P	H
		490.75	29.98	-16.02	46	35.91	23.75	2.77	32.45	-	-	P	H
		732.28	32.24	-13.76	46	33.77	27.42	3.37	32.32	-	-	P	H
		893.3	32.39	-13.61	46	31.41	28.75	3.8	31.57	-	-	P	H
													H
													H
													H
													H
													H
													H
		60.07	32.22	-7.78	40	52.04	11.73	1	32.55	300	85	Q	V
		96.93	29.39	-14.11	43.5	45.14	15.49	1.22	32.46	-	-	P	V
		250.19	26.28	-19.72	46	38.28	18.35	2.1	32.45	-	-	P	V
		697.36	28.73	-17.27	46	31.58	26.24	3.31	32.4	-	-	P	V
		875.84	30.95	-15.05	46	30.15	28.76	3.77	31.73	-	-	P	V
		915.61	32.56	-13.44	46	31.01	29.12	3.85	31.42	-	-	P	V
													V
													V
												V	
												V	
												V	
												V	
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as “-” means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.												



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 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		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
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. Radiated Spurious Emission Plots

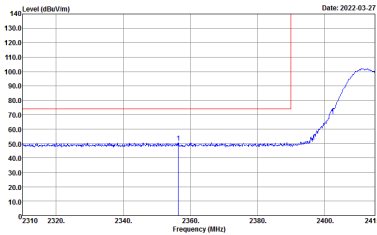
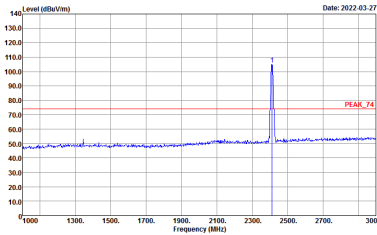
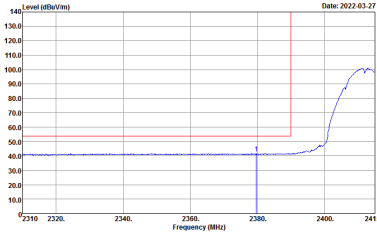
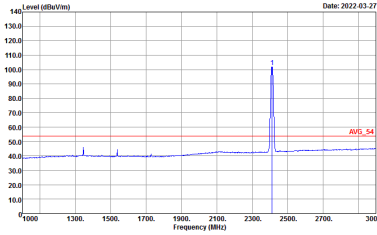
Test Engineer :	Leo Lee and Bigshow Wang	Temperature :	22.1~23.1°C
		Relative Humidity :	55~60%

Note symbol

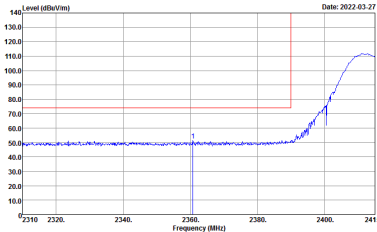
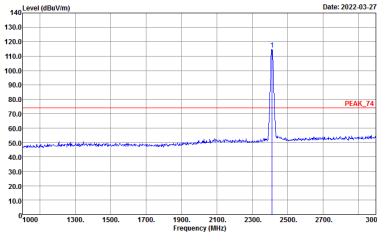
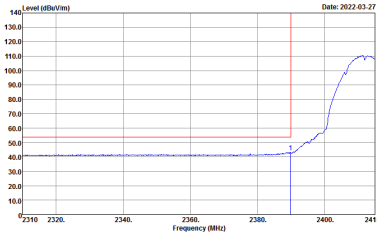
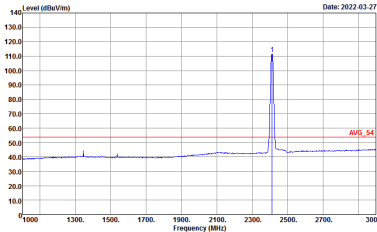
-L	Low channel location
-R	High channel location

<Sample 1>

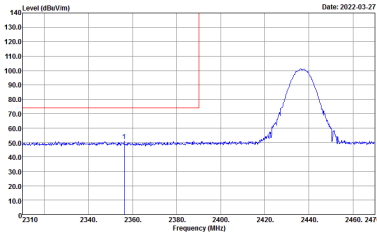
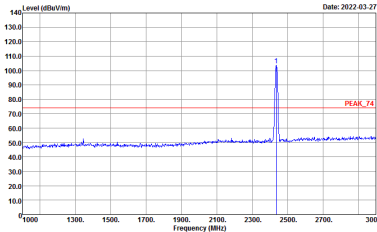
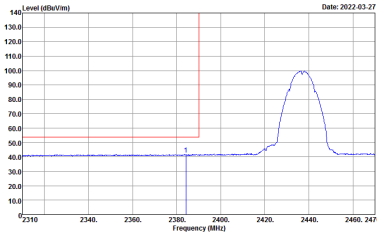
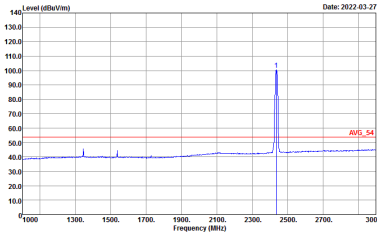
2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AV6_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000kHz VBW:3.000kHz SWT:Auto	 Site : 03CH15-HY Condition : AV6_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000kHz VBW:3.000kHz SWT:Auto

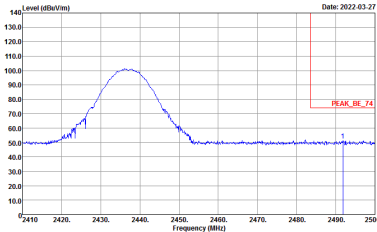
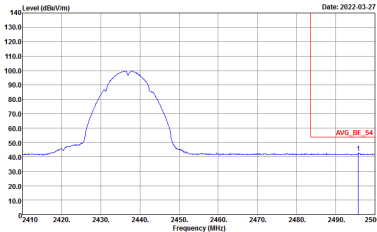


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

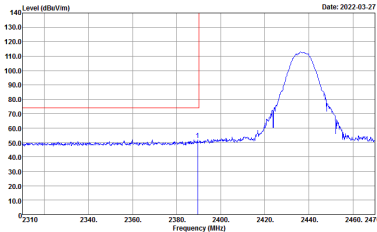
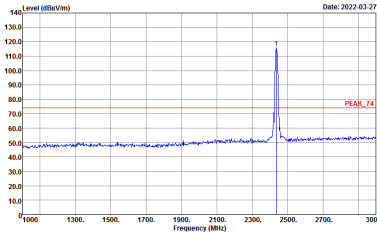
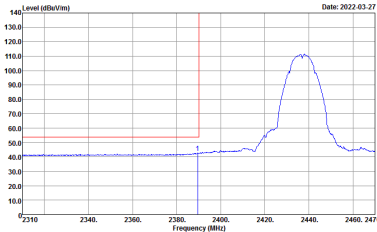
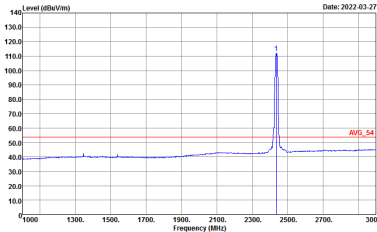


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

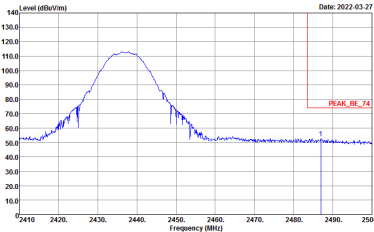
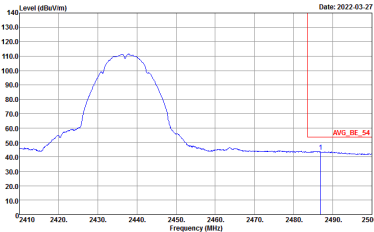


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

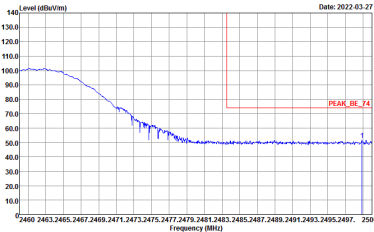
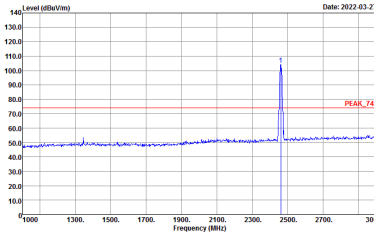
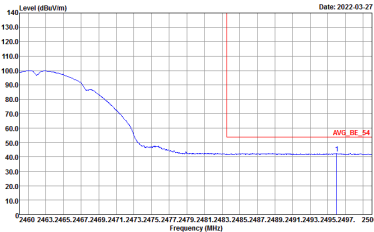
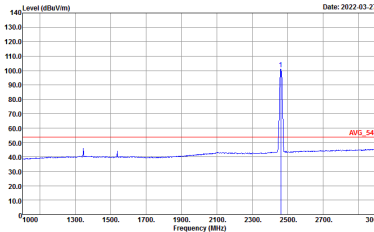


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

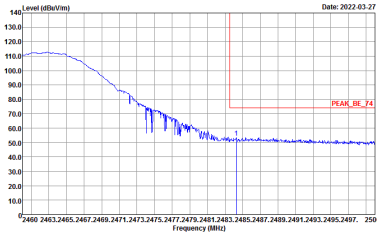
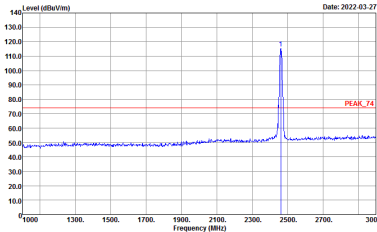
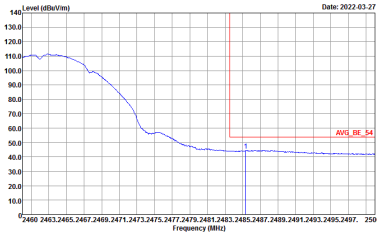
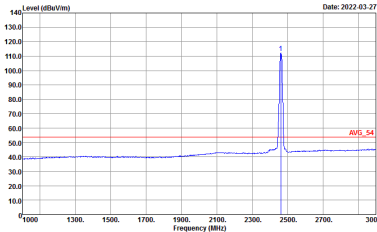


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto



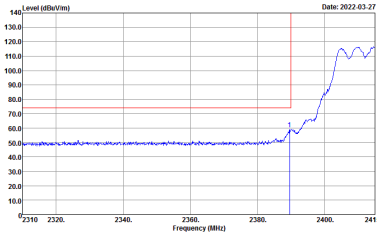
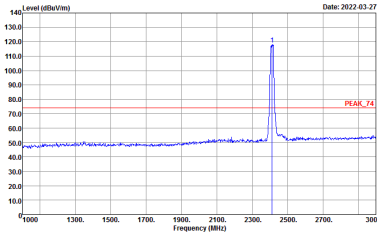
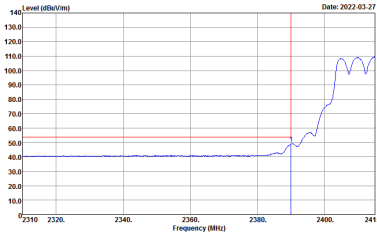
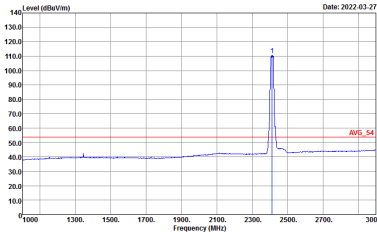
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto



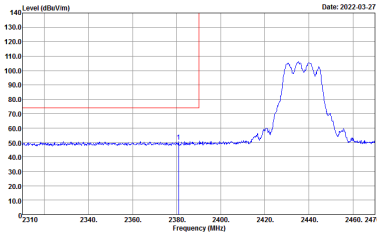
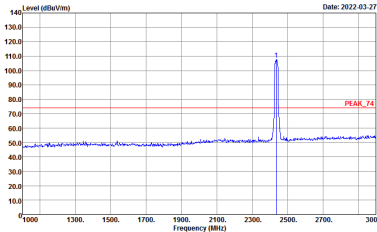
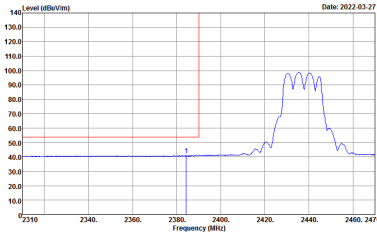
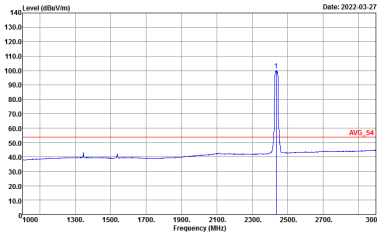
2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Fundamental
Peak	Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

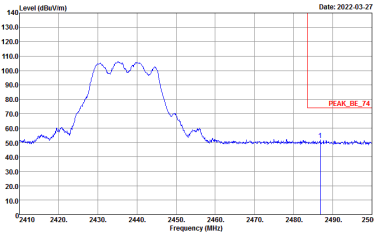
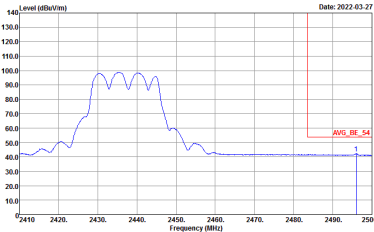


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

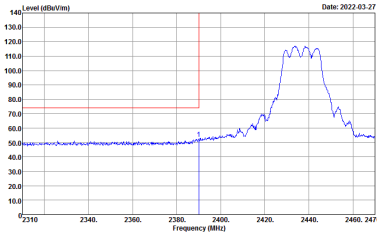
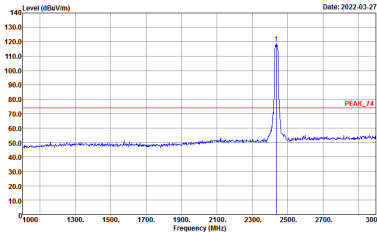
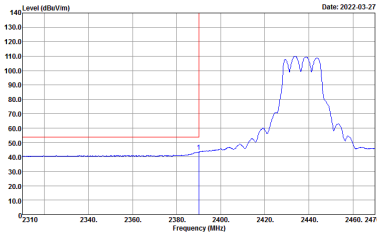
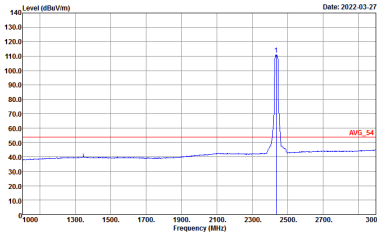


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

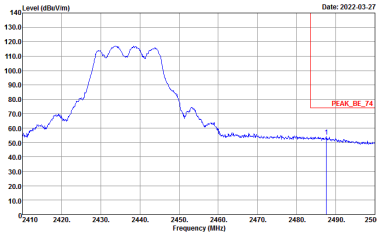
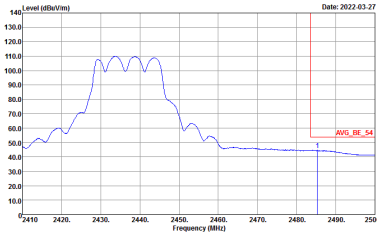


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank

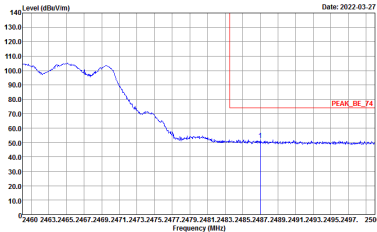
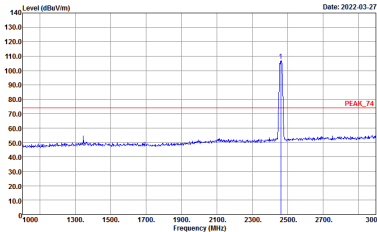
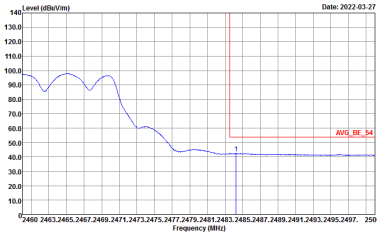
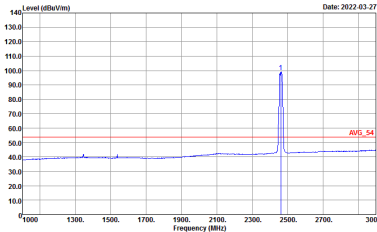


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

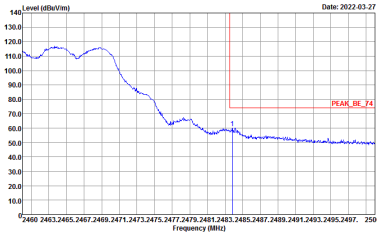
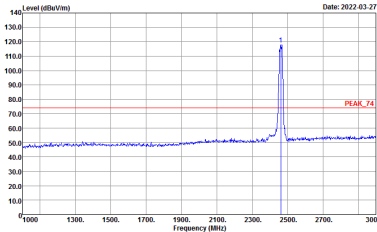
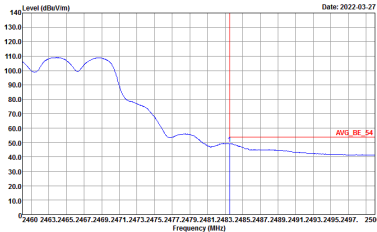
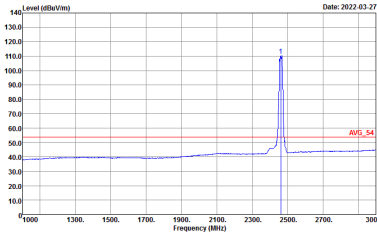


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left Blank

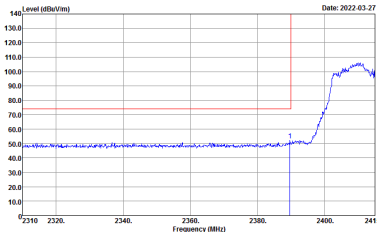
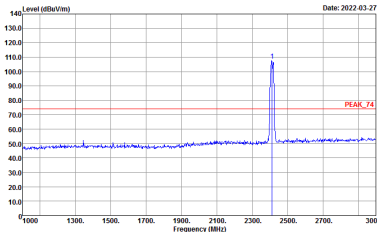
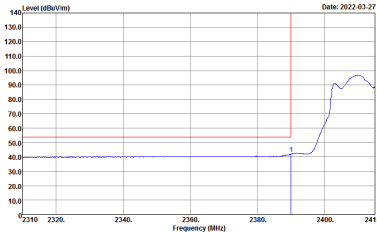
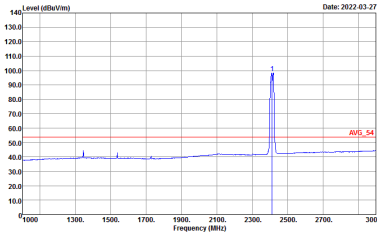


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

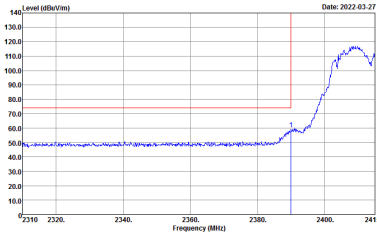
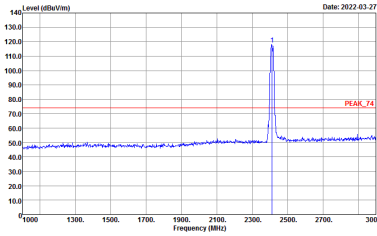
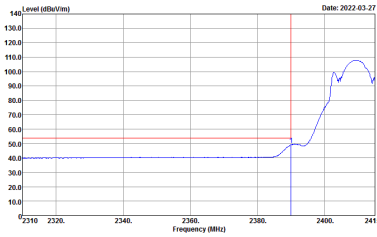
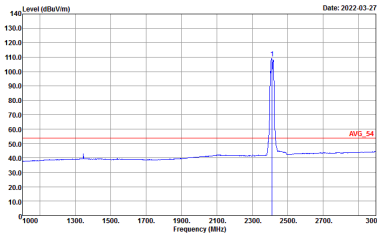


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto

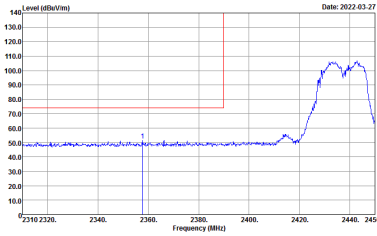
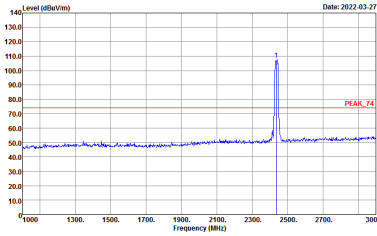
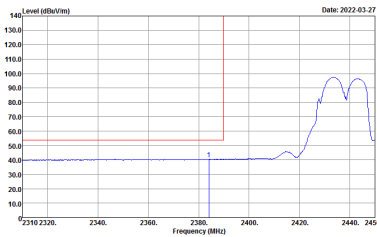
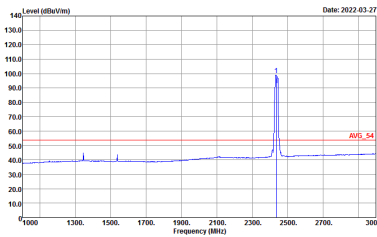
2.4GHz 2400~2483.5MHz
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

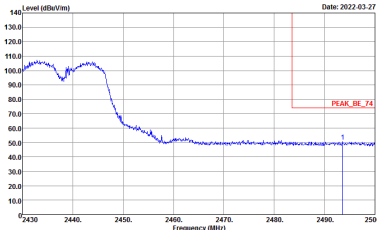
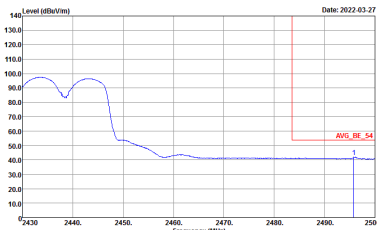


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.		

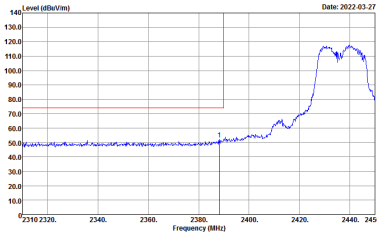
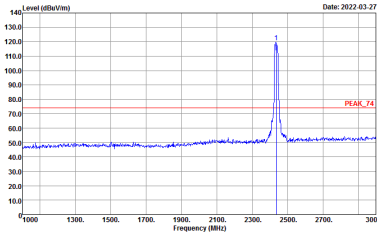
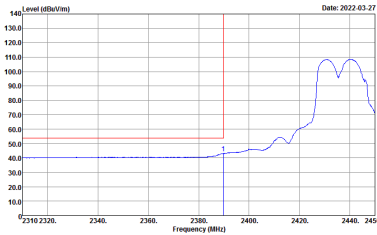
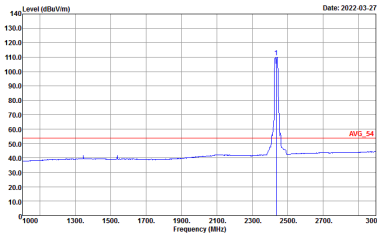


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

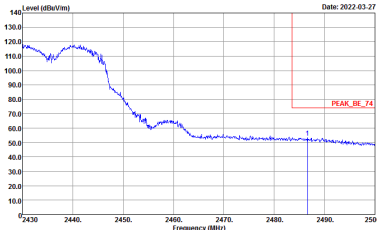
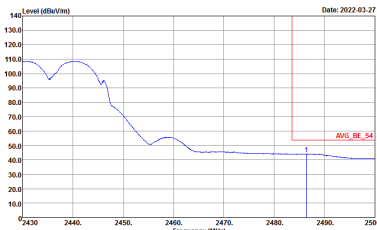


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

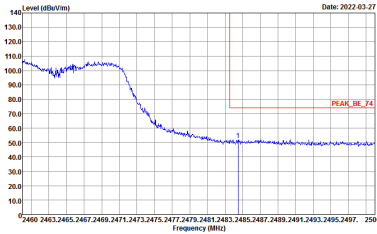
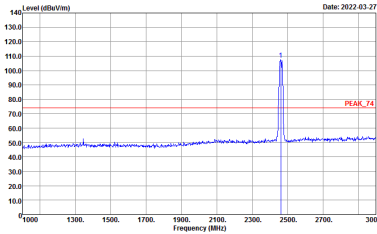
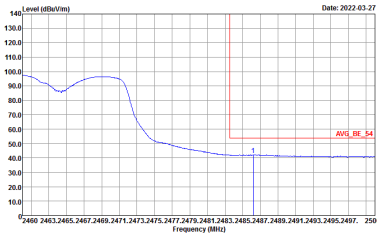
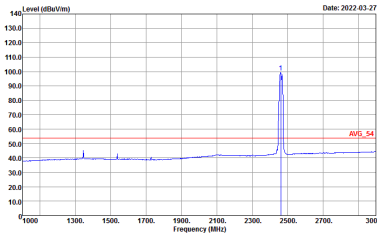


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

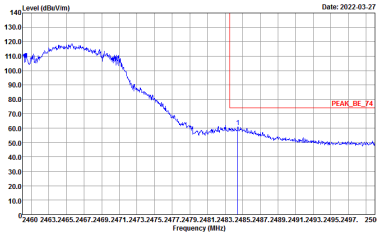
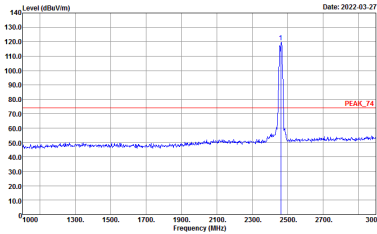
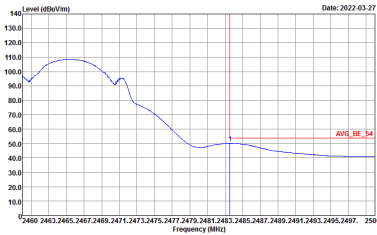
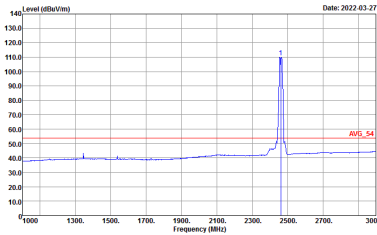


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

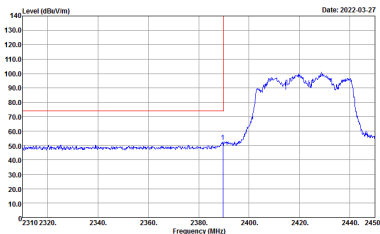
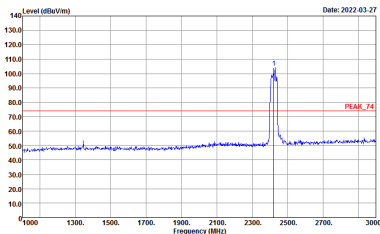
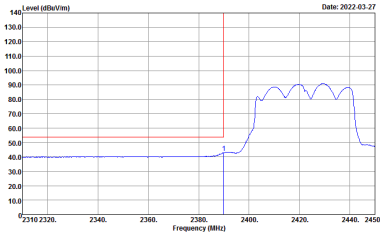
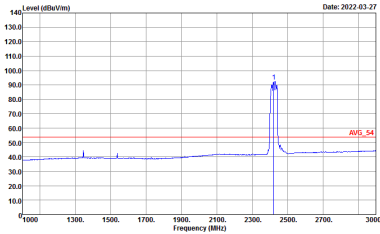


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.		

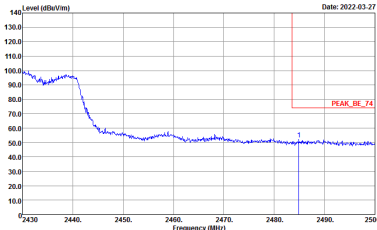
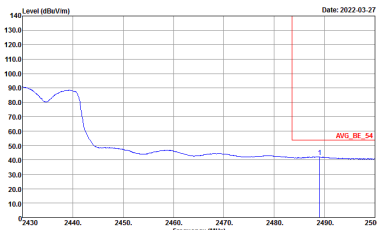


2.4GHz 2400~2483.5MHz

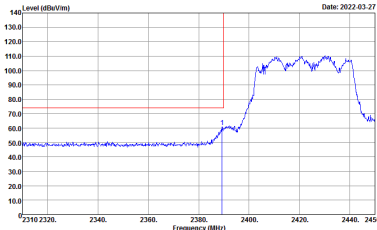
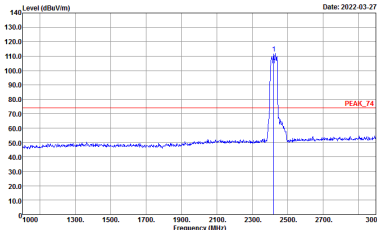
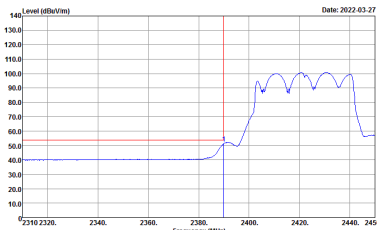
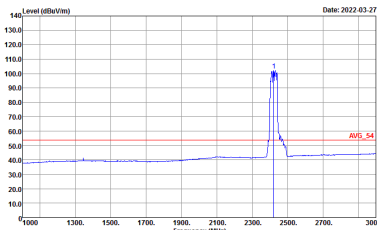
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

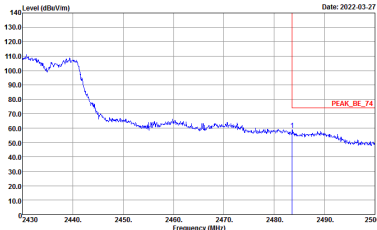
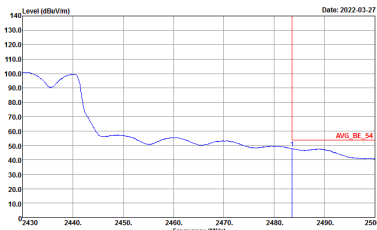


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

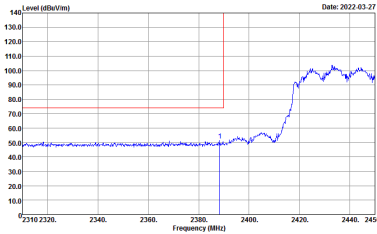
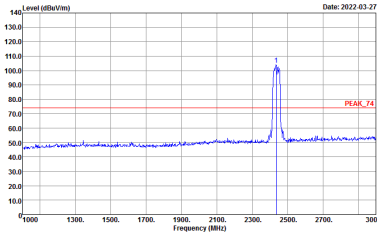
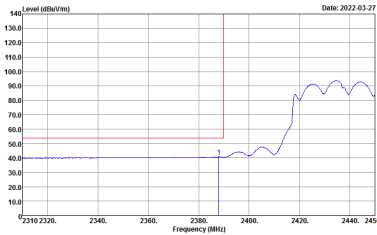
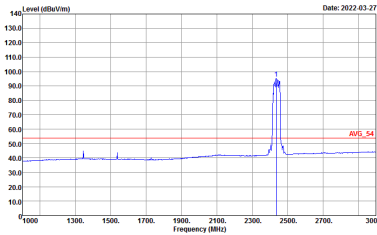


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

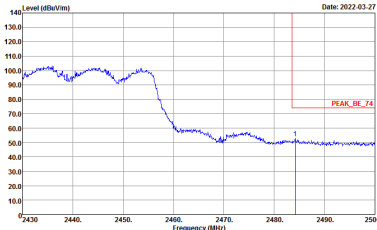
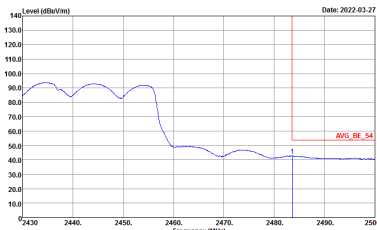


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

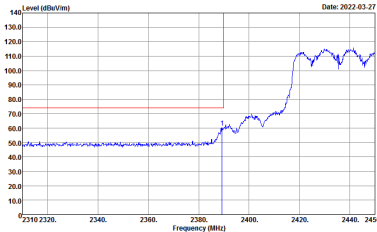
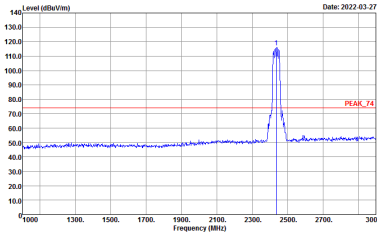
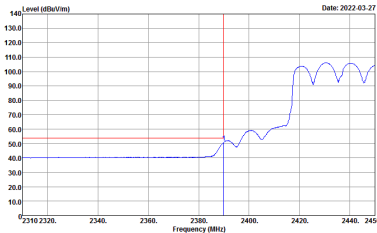
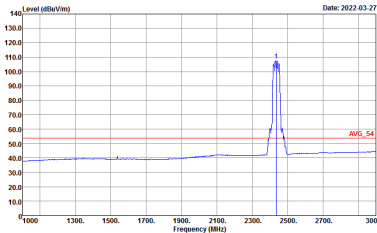


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

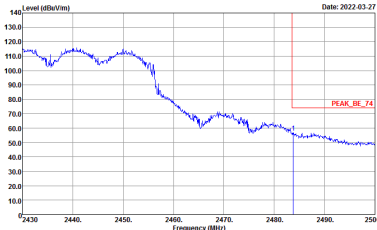
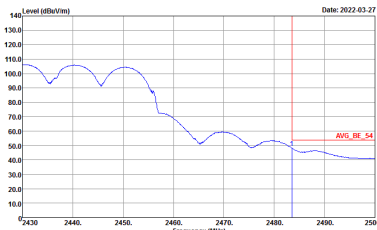


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

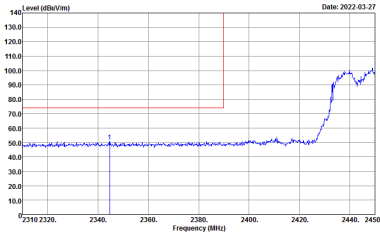
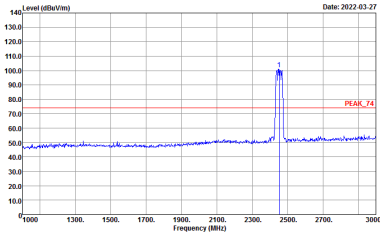
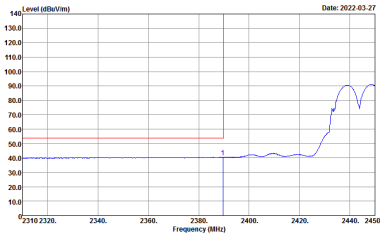
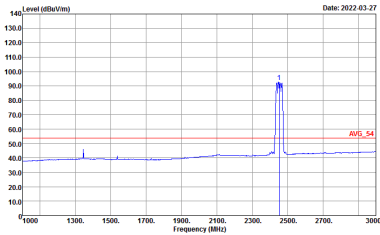


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

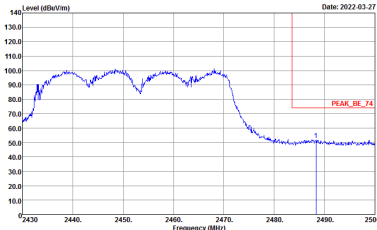
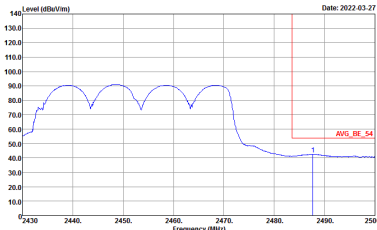


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

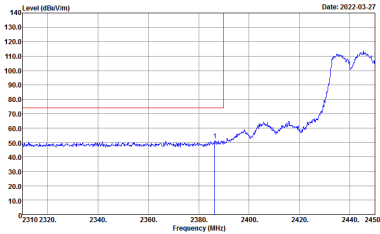
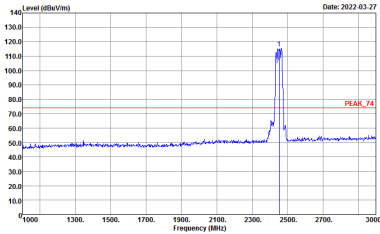
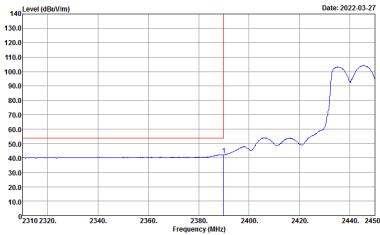
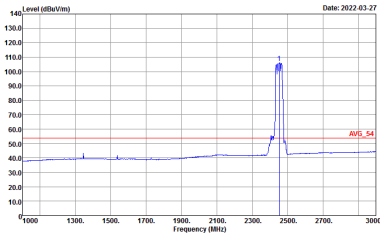


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

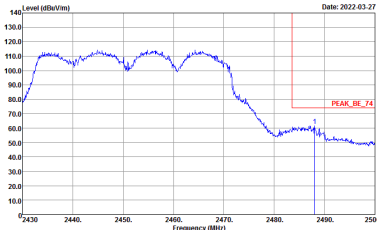
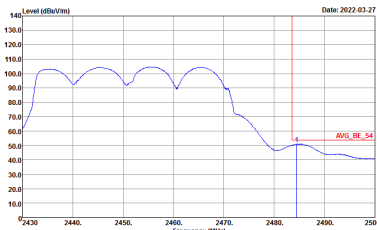


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



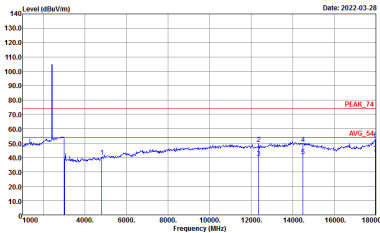
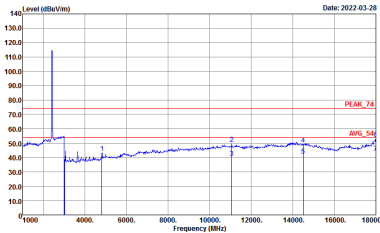
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.		



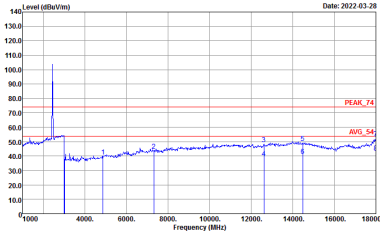
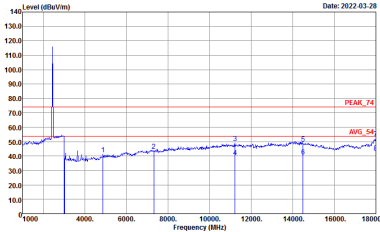
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



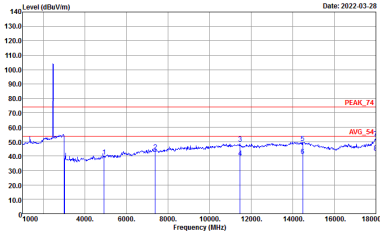
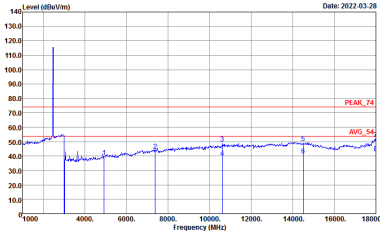
2.4GHz 2400~2483.5MHz
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL



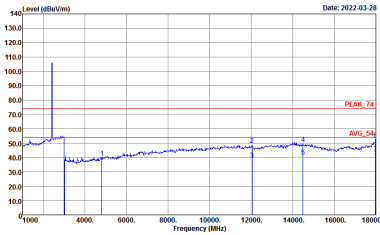
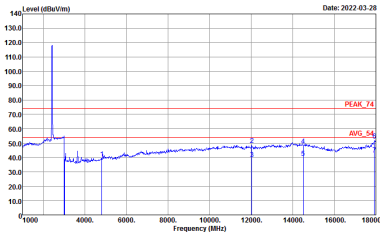
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH115-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	 Site : 03CH115-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL



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

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBu/m) Date: 2022-03-28 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	Level (dBu/m) Date: 2022-03-28 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL

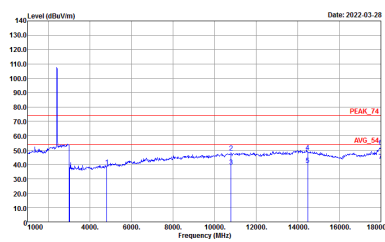
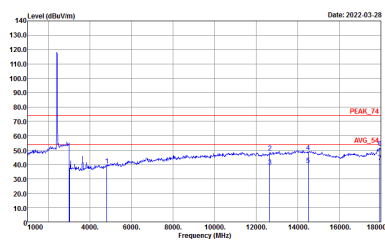


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBu/m) Date: 2022-03-28 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	Level (dBu/m) Date: 2022-03-28 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL

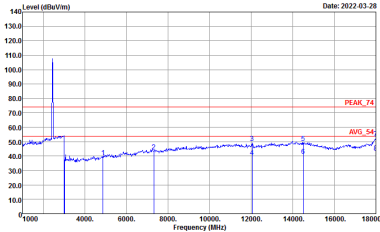
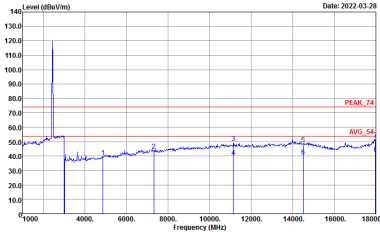


2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH01 2412MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL

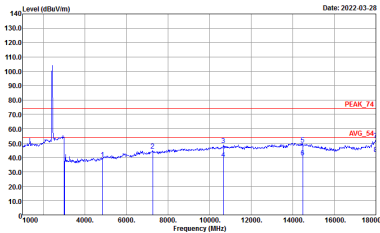
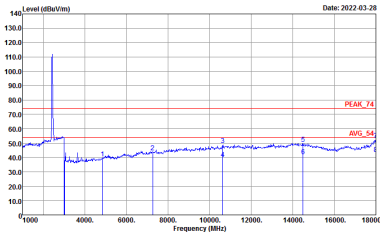


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH11 2462MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBu/m) Date: 2022-03-28 PEAK_74 Avg_54 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	Level (dBu/m) Date: 2022-03-28 PEAK_74 Avg_54 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL

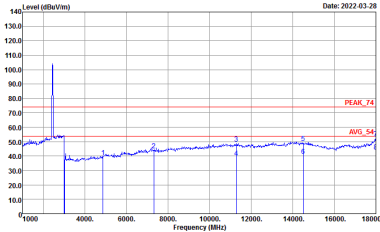
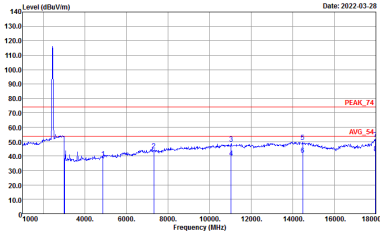


2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE40 Full (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE40 Full CH03 2422MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL



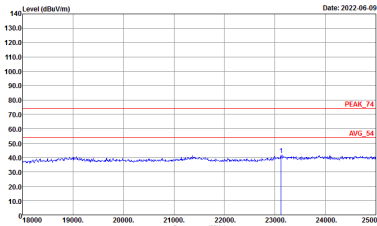
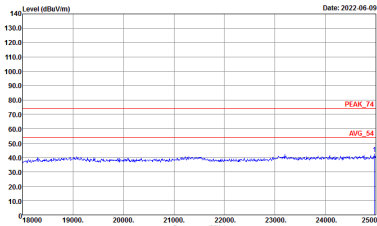
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE40 Full CH06 2437MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE40 Full CH09 2452MHz	
1+2	Horizontal	Vertical
Peak Avg.	Level (dBu/m) Date: 2022-03-28 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	Level (dBu/m) Date: 2022-03-28 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 VERTICAL

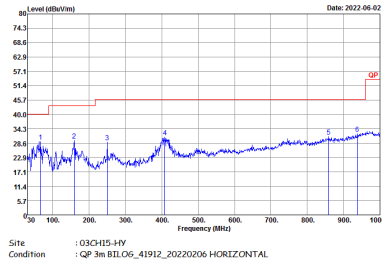
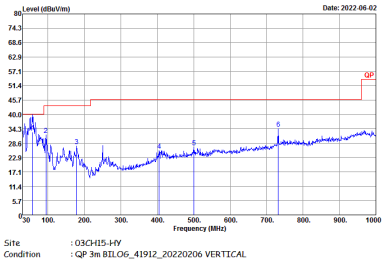


Emission above 18GHz
2.4GHz WIFI 802.11ax HE40 Full (SHF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ax HE40 Full SHF	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 1m SHF ANT_9170_00993 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 1m SHF ANT_9170_00993 VERTICAL



Emission below 1GHz
2.4GHz WIFI 802.11ax HE40 Full (LF)

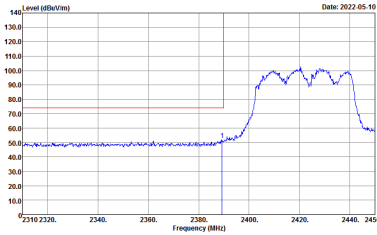
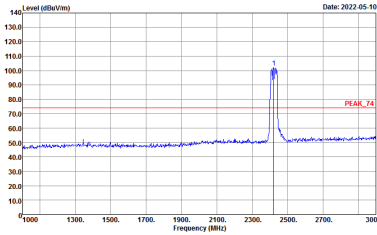
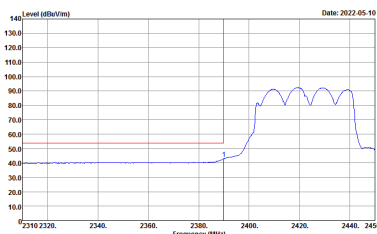
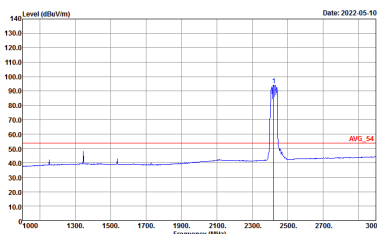
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ax HE40 Full LF	
1+2	Horizontal	Vertical
QP / Peak	 Site : 03CH15-HY Condition : QP 3m B1LOG_41912_20220206 HORIZONTAL	 Site : 03CH15-HY Condition : QP 3m B1LOG_41912_20220206 VERTICAL



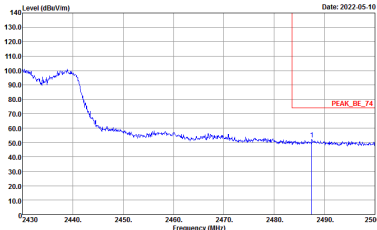
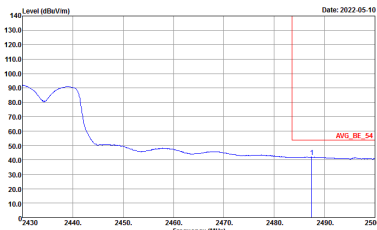
<Sample 2>

2.4GHz 2400~2483.5MHz

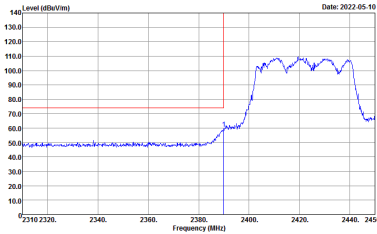
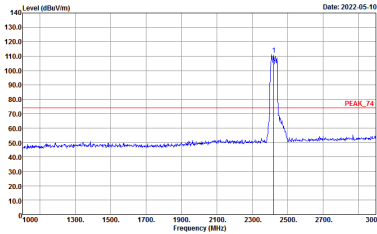
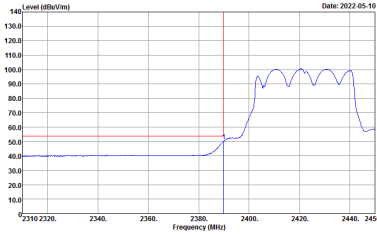
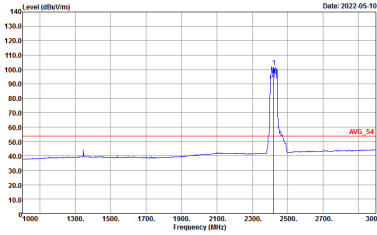
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

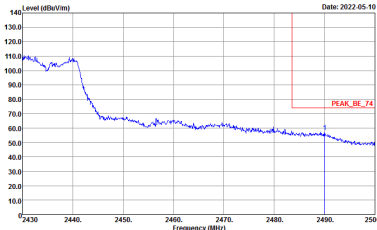
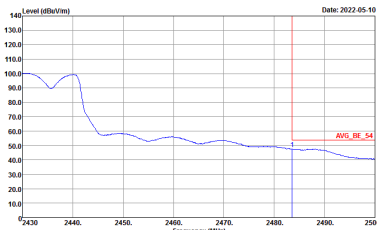


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - L	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : PEAK_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH15-HY Condition : AVG_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.		

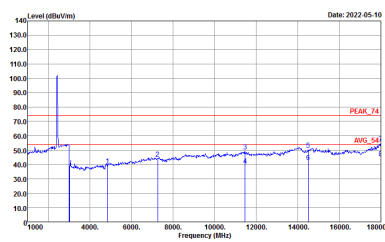
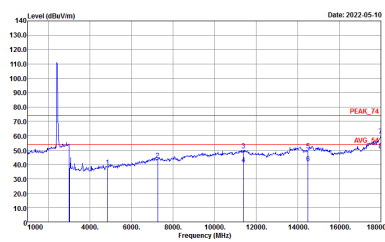


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - R	
Peak	 Site : 03CH15-HY Condition : PEAK_BE_74 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH15-HY Condition : AVG_BE_54 3m 90120_02038_20210804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE40 Full (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE40 Full CH03 2422MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH15-HY Condition : PEAK_74 3m 9D120_02038_20210804 HORIZONTAL	 Site : 03CH15-HY Condition : PEAK_74 3m 9120D_1620_20211025 VERTICAL



Emission above 18GHz
2.4GHz WIFI 802.11ax HE40 Full (SHF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ax HE40 Full SHF	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : PEAK_74 1m SHF ANT_9170_00993 HORIZONTAL	Site : 03CH11-HY Condition : PEAK_74 1m SHF ANT_9170_00993 VERTICAL



Emission below 1GHz
2.4GHz WIFI 802.11ax HE40 Full (LF)

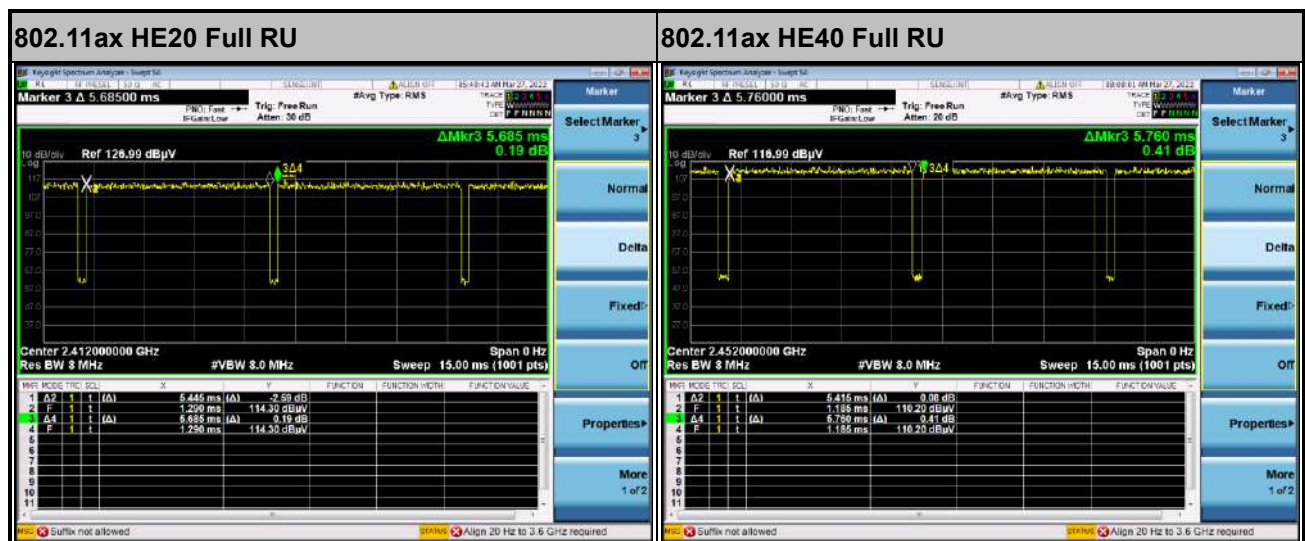
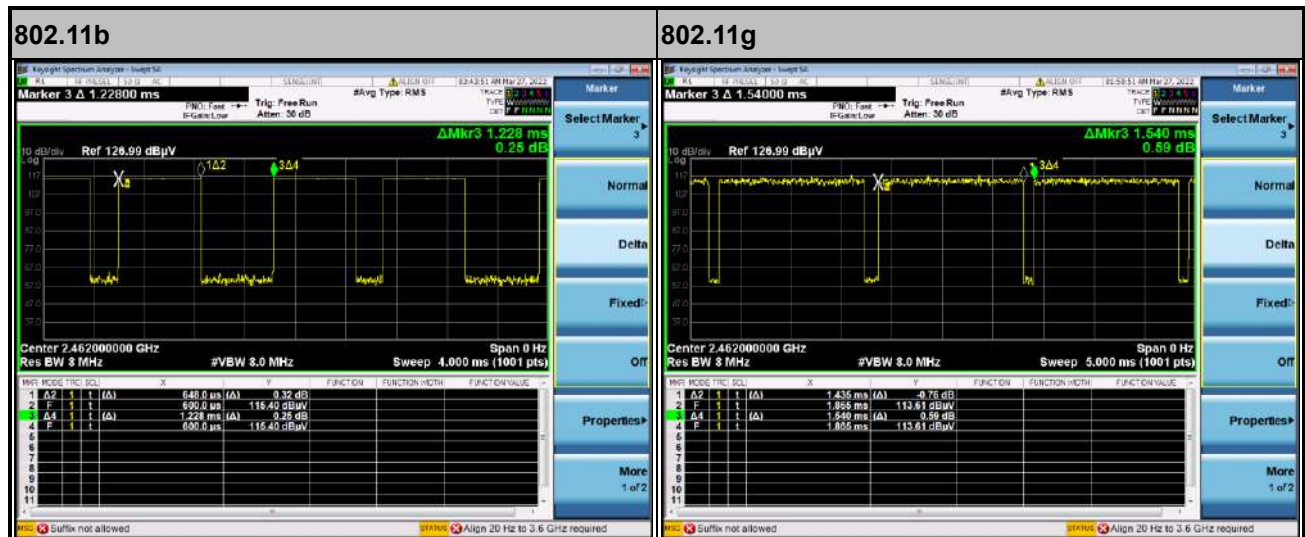
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ax HE40 Full LF	
1+2	Horizontal	Vertical
QP / Peak	Level (dBuV/m) Date: 2022-06-02 Site : 03CH15-HY Condition : QP 3m B1LOG_41912_20220206 HORIZONTAL	Level (dBuV/m) Date: 2022-06-02 Site : 03CH15-HY Condition : QP 3m B1LOG_41912_20220206 VERTICAL



Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1+2	802.11b	52.77	648	1.54	3kHz
1+2	802.11g	93.18	1435	0.70	1kHz
1+2	2.4GHz 802.11ax HE20 Full RU	95.78	5445	0.18	300Hz
1+2	2.4GHz 802.11ax HE40 Full RU	94.01	5415	0.18	300Hz

MIMO <Ant. 1+2>



Appendix F. Setup Photographs

<Conducted Emission>

Mode 1

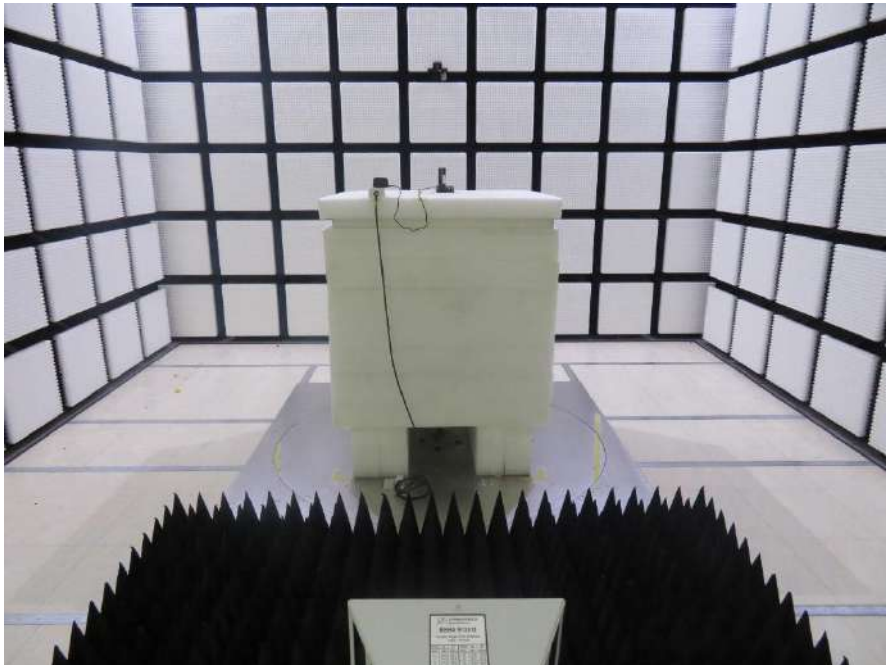
Remote View



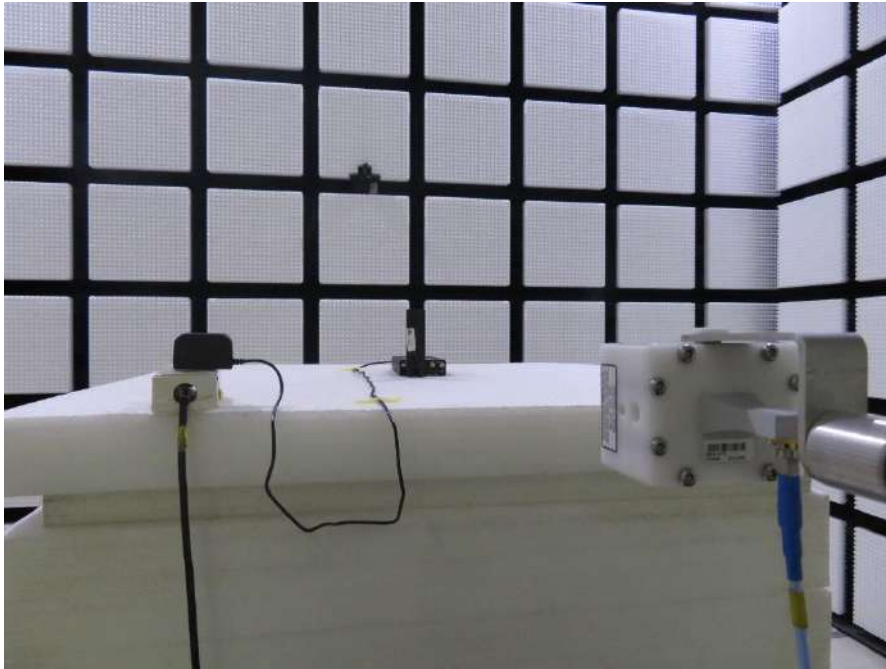


Rear View



<Radiated Emission>**Ant. Degree 90****LF****HF**

SHF



————THE END————