



FCC RADIO TEST REPORT

FCC ID : PKRISGM3000A
Equipment : M3000A
Brand Name : Inseego
Model Name : M3000A
Marketing Name : M3000
Applicant : Inseego Corp.
9710 Scranton Road Suite 200, San Diego,, CA 92121
Manufacturer : Inseego Corp.
9710 Scranton Road Suite 200, San Diego,, CA 92121
Standard : FCC Part 15 Subpart C §15.247

The product was received on Mar. 29, 2022 and testing was performed from Apr. 12, 2022 to May 19, 2022. We, Sporton International Inc. EMC & Wireless Communications 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. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Product Feature of Equipment Under Test.....	5
1.2 Modification of EUT	5
1.3 Testing Location	6
1.4 Applicable Standards.....	6
2 Test Configuration of Equipment Under Test	7
2.1 Carrier Frequency and Channel	7
2.2 Test Mode.....	8
2.3 Connection Diagram of Test System.....	9
2.4 Support Unit used in test configuration and system	10
2.5 EUT Operation Test Setup	10
2.6 Measurement Results Explanation Example.....	10
3 Test Result	11
3.1 6dB and 99% Bandwidth Measurement	11
3.2 Output Power Measurement.....	14
3.3 Power Spectral Density Measurement	15
3.4 Conducted Band Edges and Spurious Emission Measurement	17
3.5 Radiated Band Edges and Spurious Emission Measurement	36
3.6 AC Conducted Emission Measurement.....	41
3.7 Antenna Requirements.....	43
4 List of Measuring Equipment.....	45
5 Uncertainty of Evaluation	47
Appendix A. Conducted Test Results	
Appendix B. AC Conducted Emission Test Result	
Appendix C. Radiated Spurious Emission	
Appendix D. Radiated Spurious Emission Plots	
Appendix E. Duty Cycle Plots	
Appendix F. Setup Photographs	



History of this test report

Report No.	Version	Description	Issue Date
FR1D2414A	01	Initial issue of report	Jun. 15, 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	4.99 dB under the limit at 2483.520 MHz
3.6	15.207	AC Conducted Emission	Pass	5.01 dB under the limit at 0.191 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	Pass	-

Declaration of Conformity:

1. 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.
2. 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: William Chen

Report Producer: Cindy Liu

1 General Description

1.1 Product Feature of Equipment Under Test

3G-WCDMA, 4G-LTE, 5G-FR1 & FR2, Wi-Fi 2.4GHz 802.11b/g/n/ax, Wi-Fi 5GHz 802.11a/n/ac/ax and GNSS.

Product Feature		
Antenna Type	WWAN: Fixed Internal Antenna	
	WLAN	
	<Ant. 0>: Internal Antenna	
	<Ant. 1>: Internal Antenna	
	GPS / Glonass / BDS / Galileo: Internal Antenna	

Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	Ant. 0: 0.90
		Ant. 1: 4.30

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, 03CH07-HY

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 (TAF Code: 3786)
Remark	The Conducted test item subcontracted to Sporton International Inc. Wensan Laboratory

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 three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find X plane 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 802.11ax mode is investigated among different tones, full resource units (RU), partial resource units. The partial RU has no higher power than full RU's, thus the full RU is chosen as main test configuration.

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

The 802.11n 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 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
802.11ax HE20	MCS0

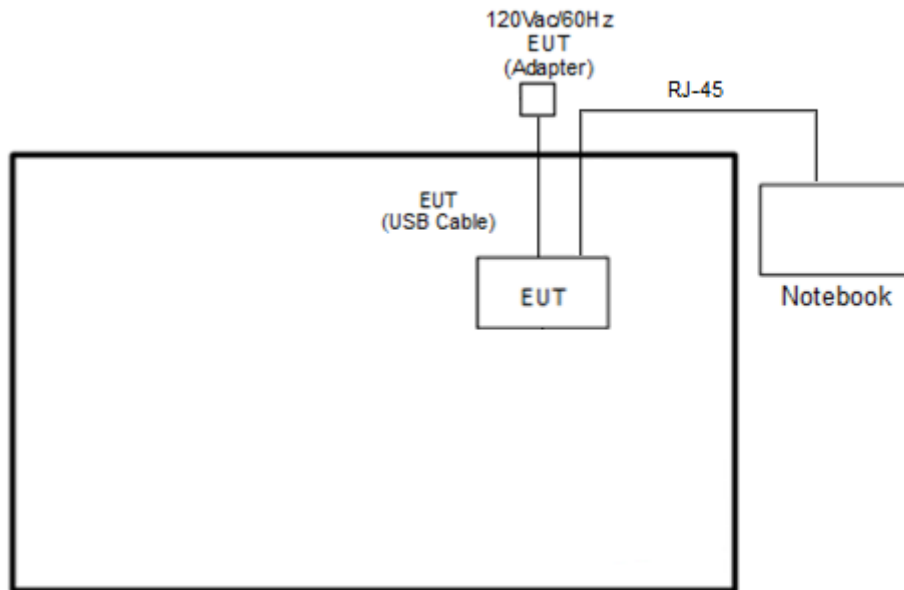
Test Cases	
AC Conducted Emission	Mode 1 :WLAN (2.4GHz) Link + LAN Link + USB Cable (Charging from Adapter)

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

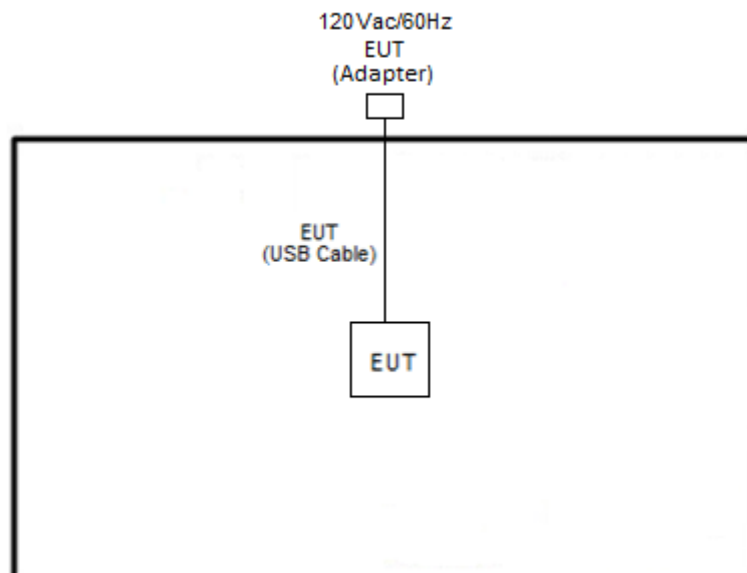
Remark: For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.

2.3 Connection Diagram of Test System

<AC Conducted Emission Mode>



<WLAN Tx Mode>



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

2.5 EUT Operation Test Setup

The RF test items, utility "QRCT 4.0.00195.0" 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.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.2 + 10 = 14.2 \text{ (dB)}\end{aligned}$$

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.

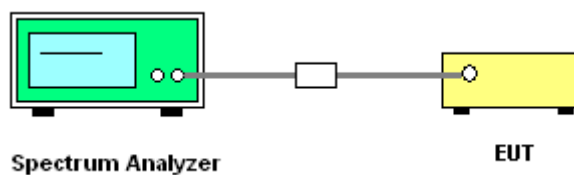
3.1.2 Measuring Instruments

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

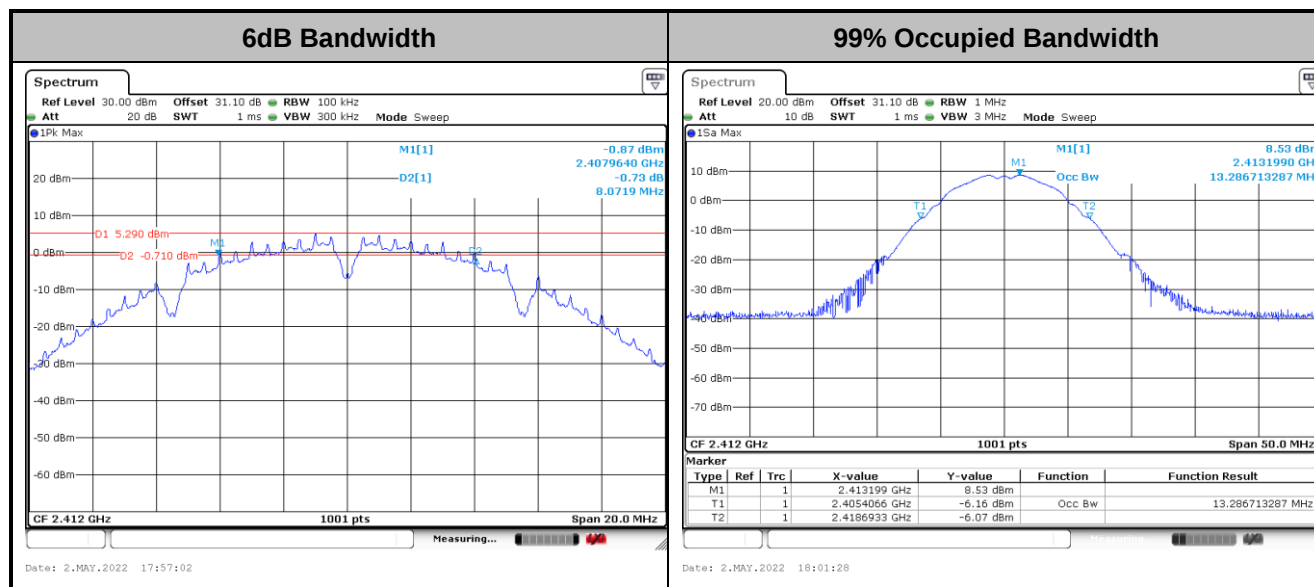




3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

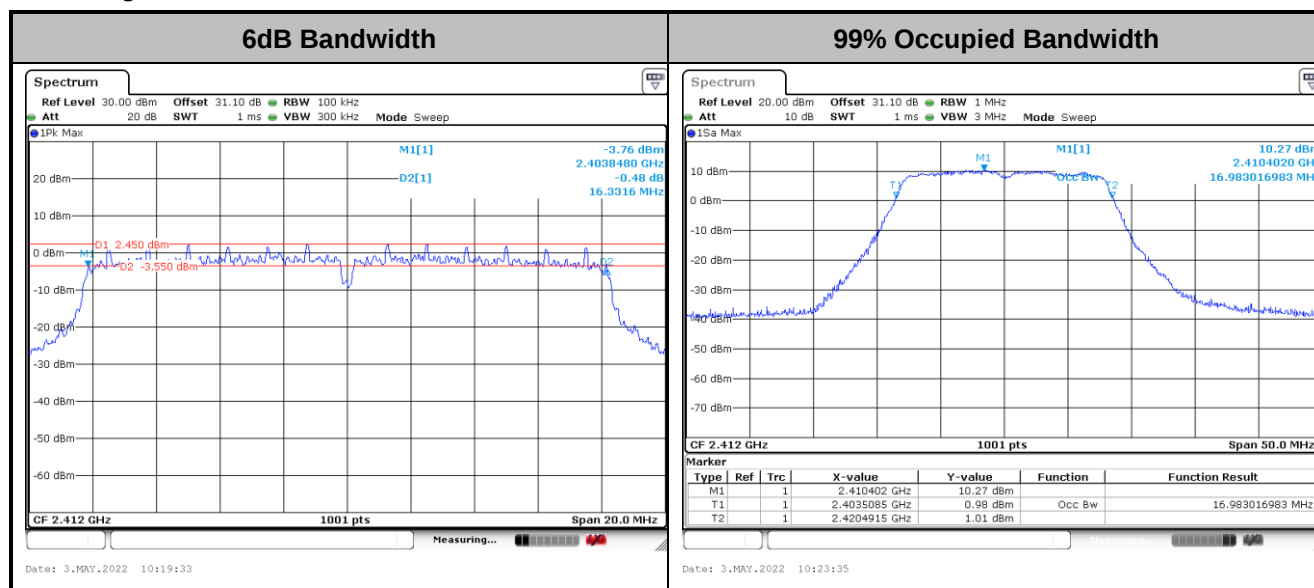
Please refer to Appendix A.

<802.11b>



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

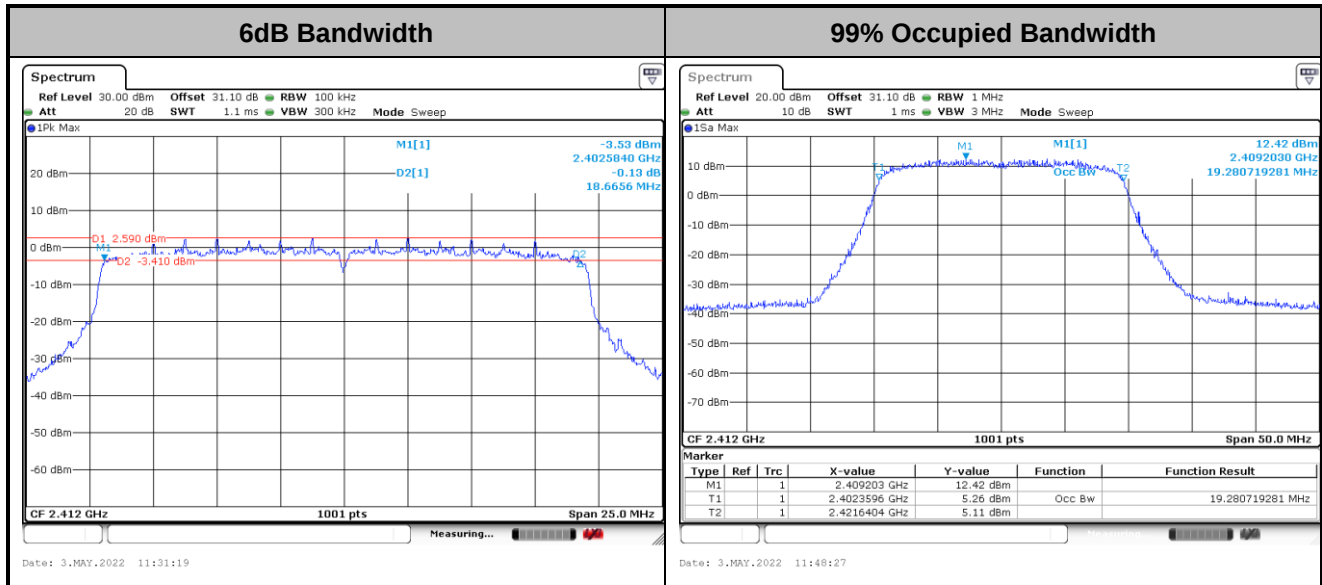
<802.11g>



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.

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.

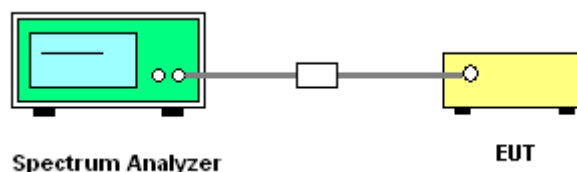
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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

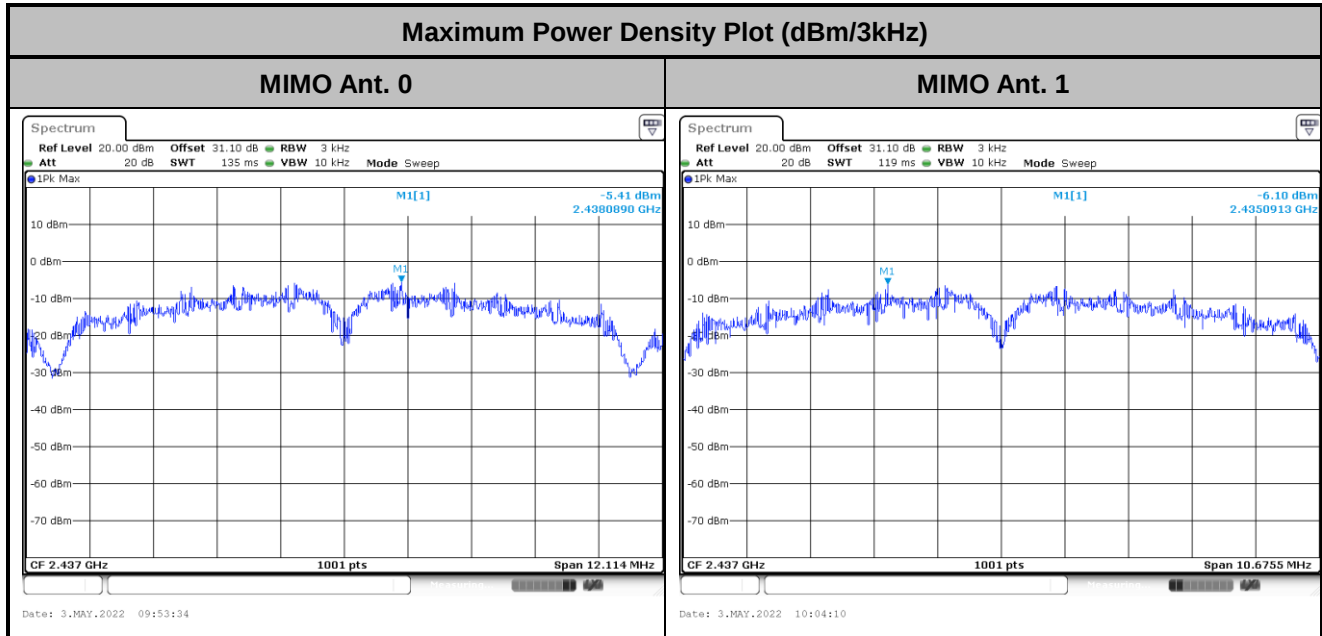




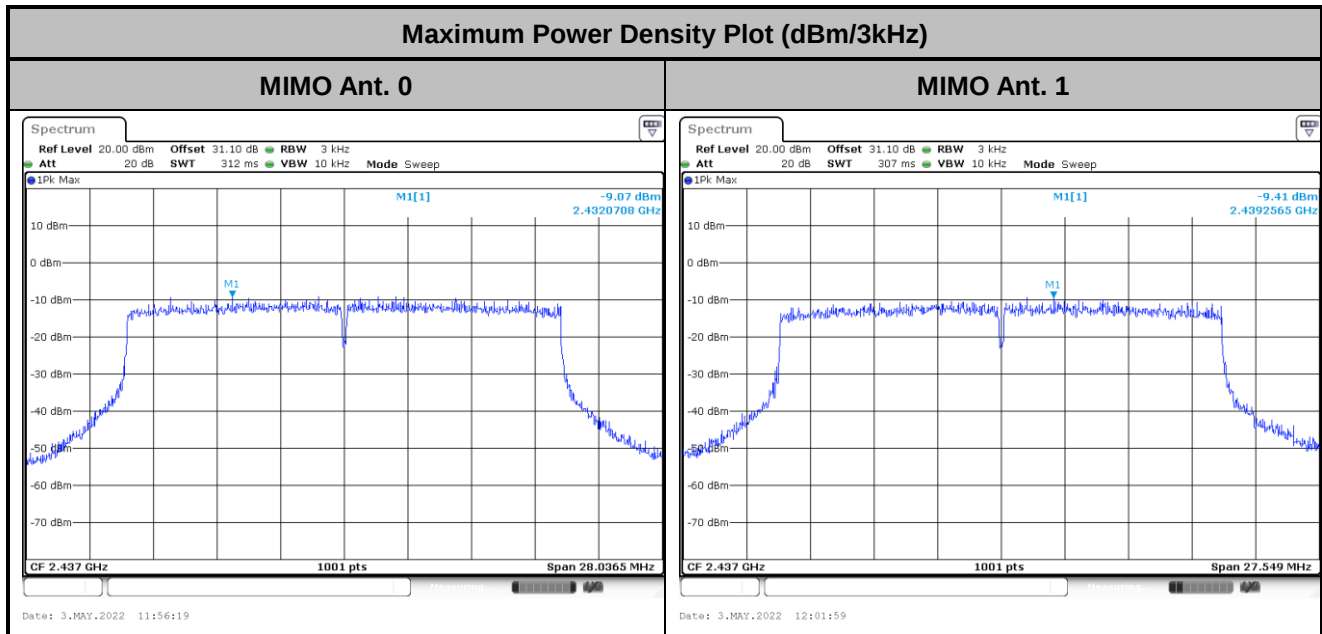
3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

<802.11b>



<802.11ax>



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.

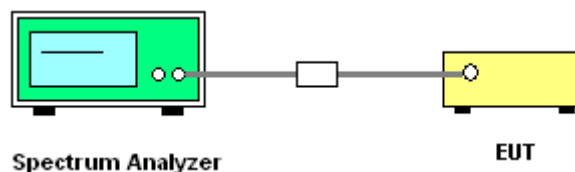
3.4.2 Measuring Instruments

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

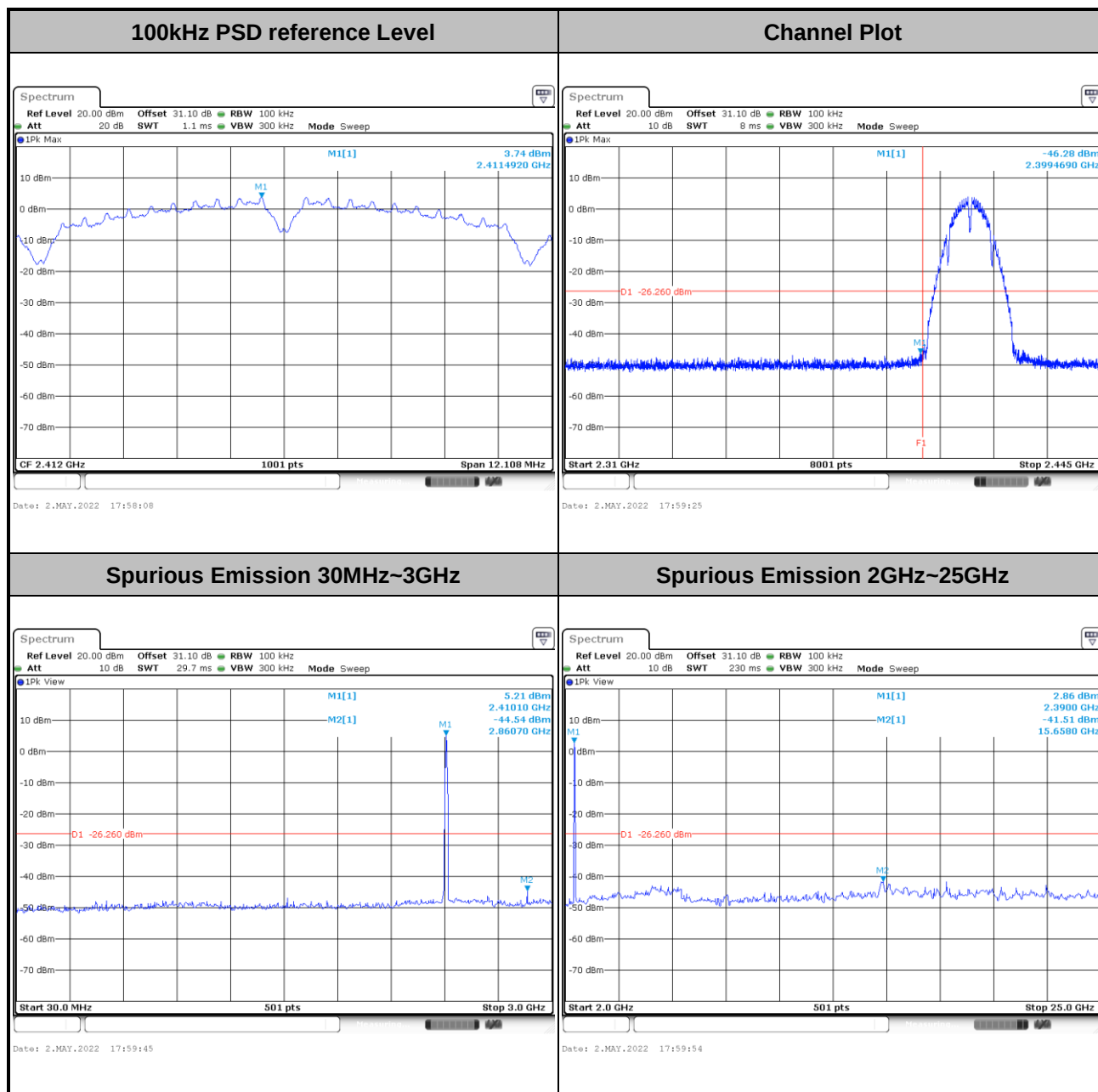




3.4.5 Test Result of Conducted Band Edges and Spurious Emission

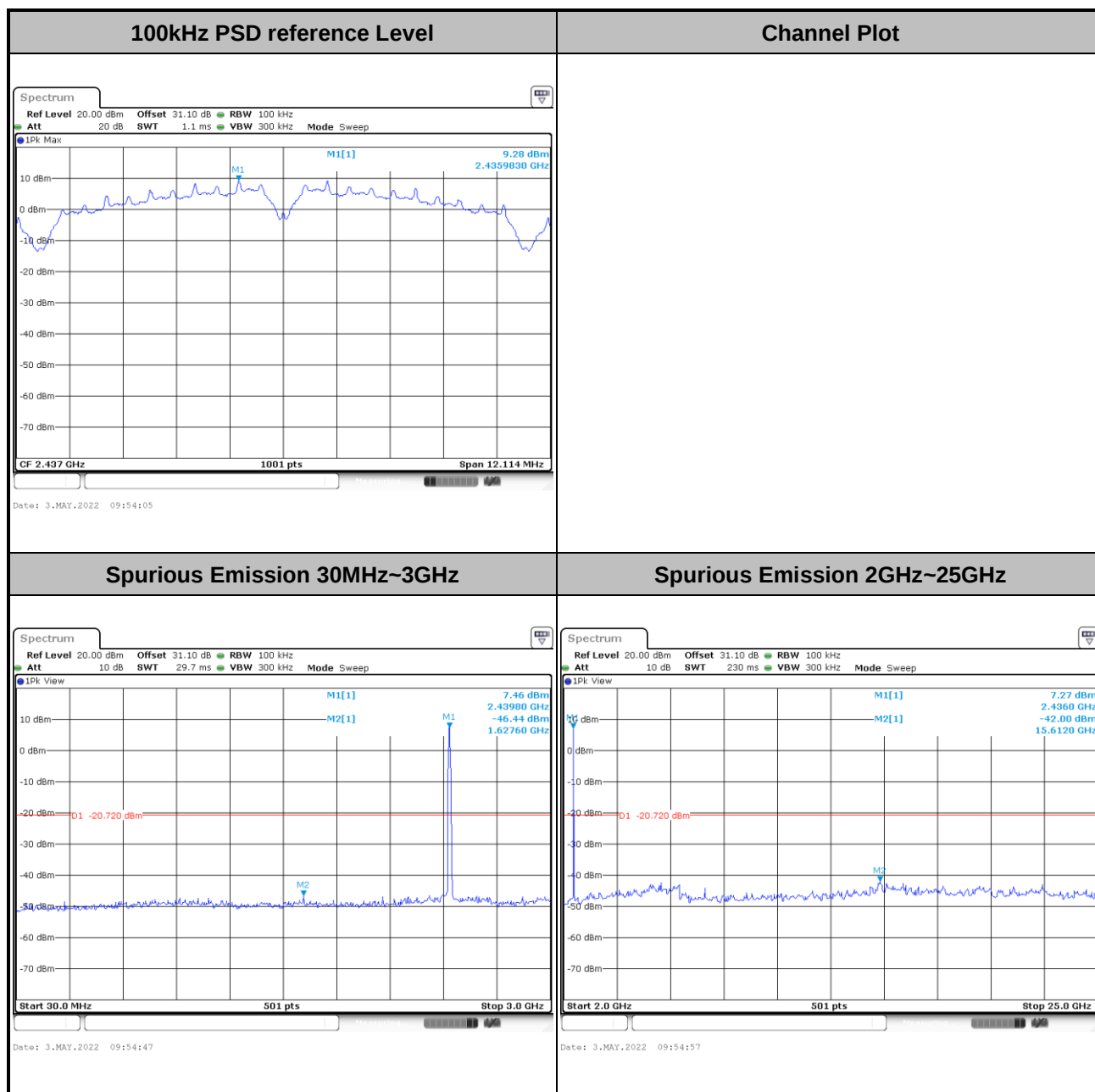
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Test Mode :	802.11b	Test Channel :	01
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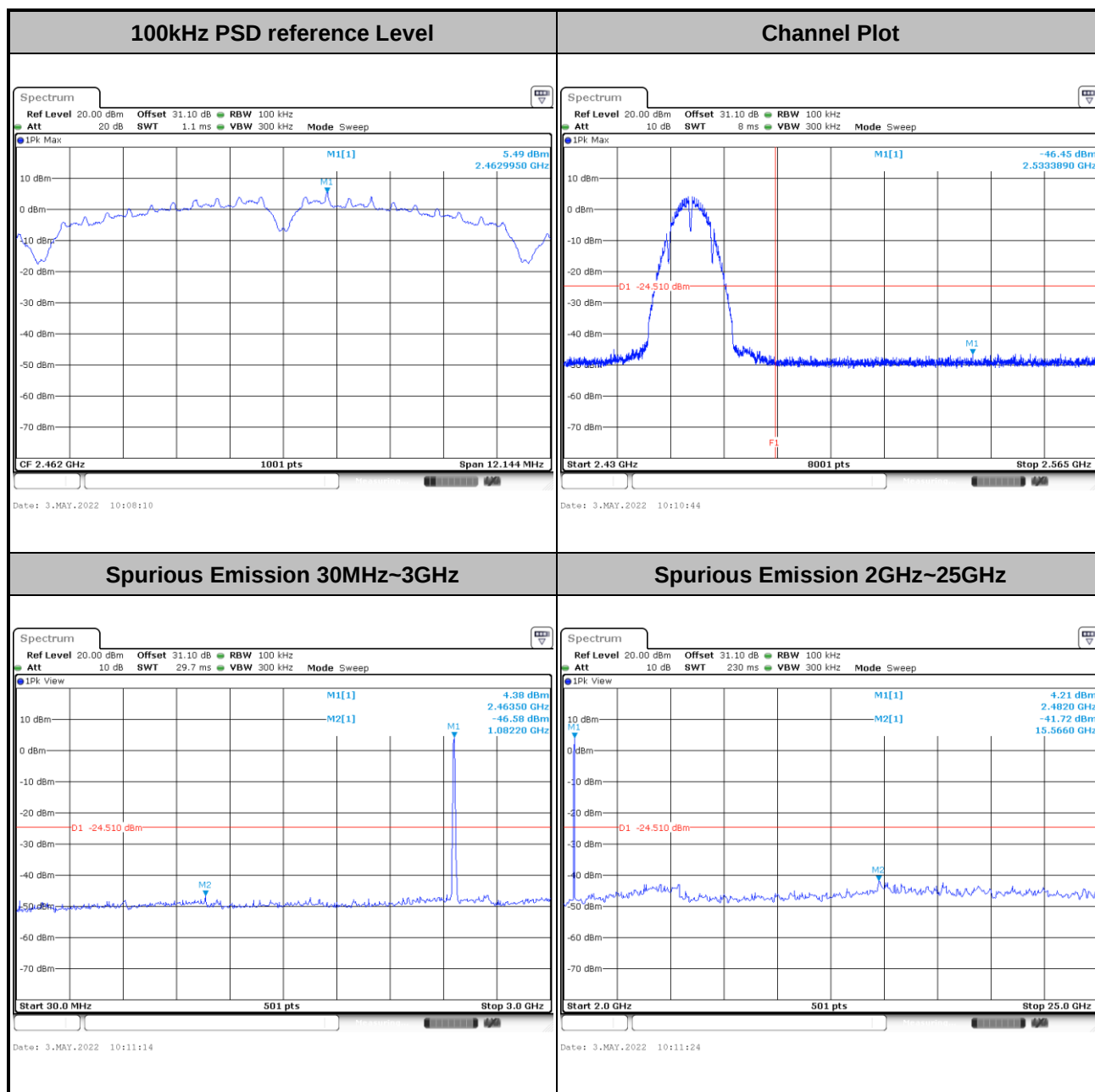


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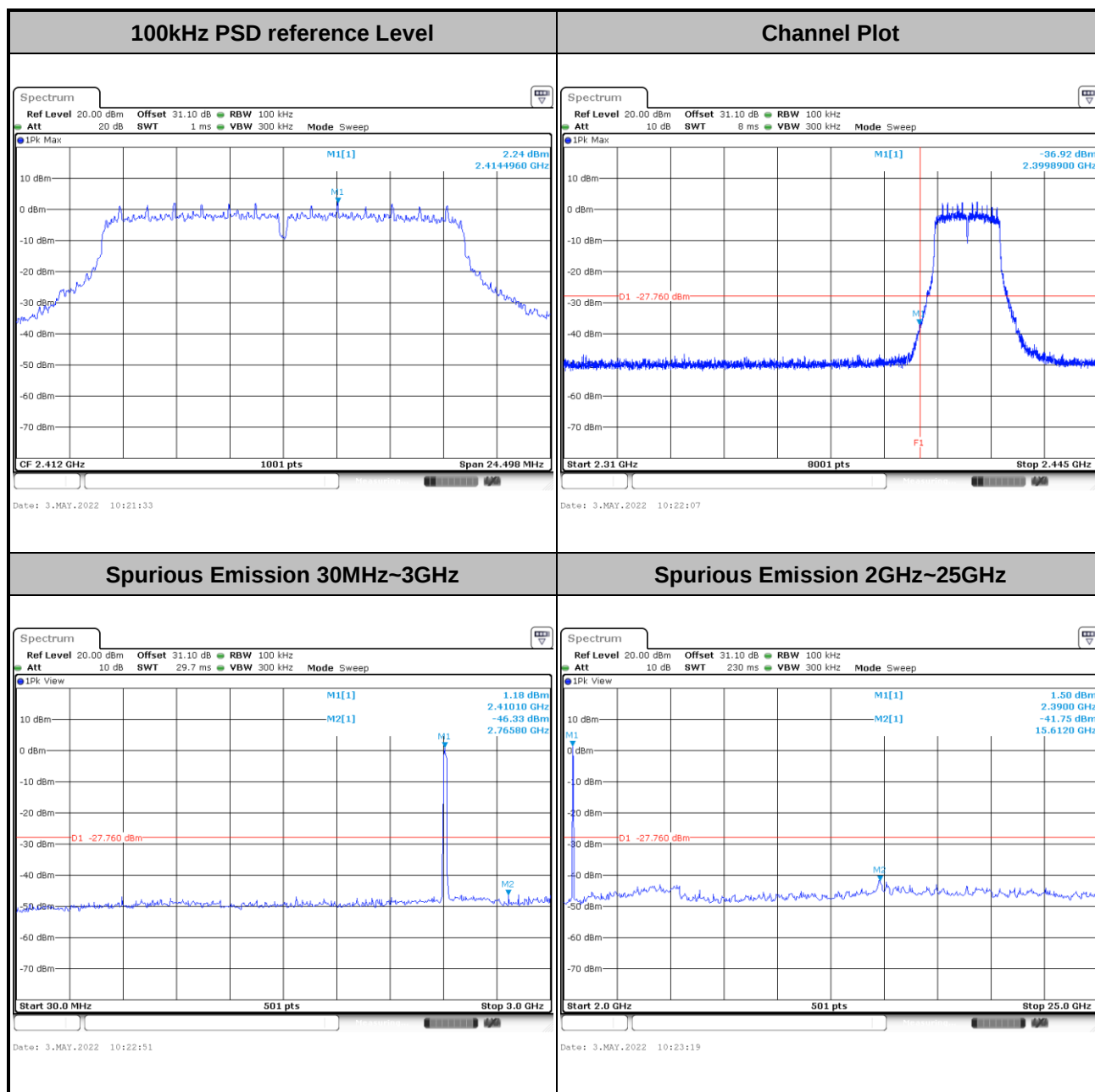


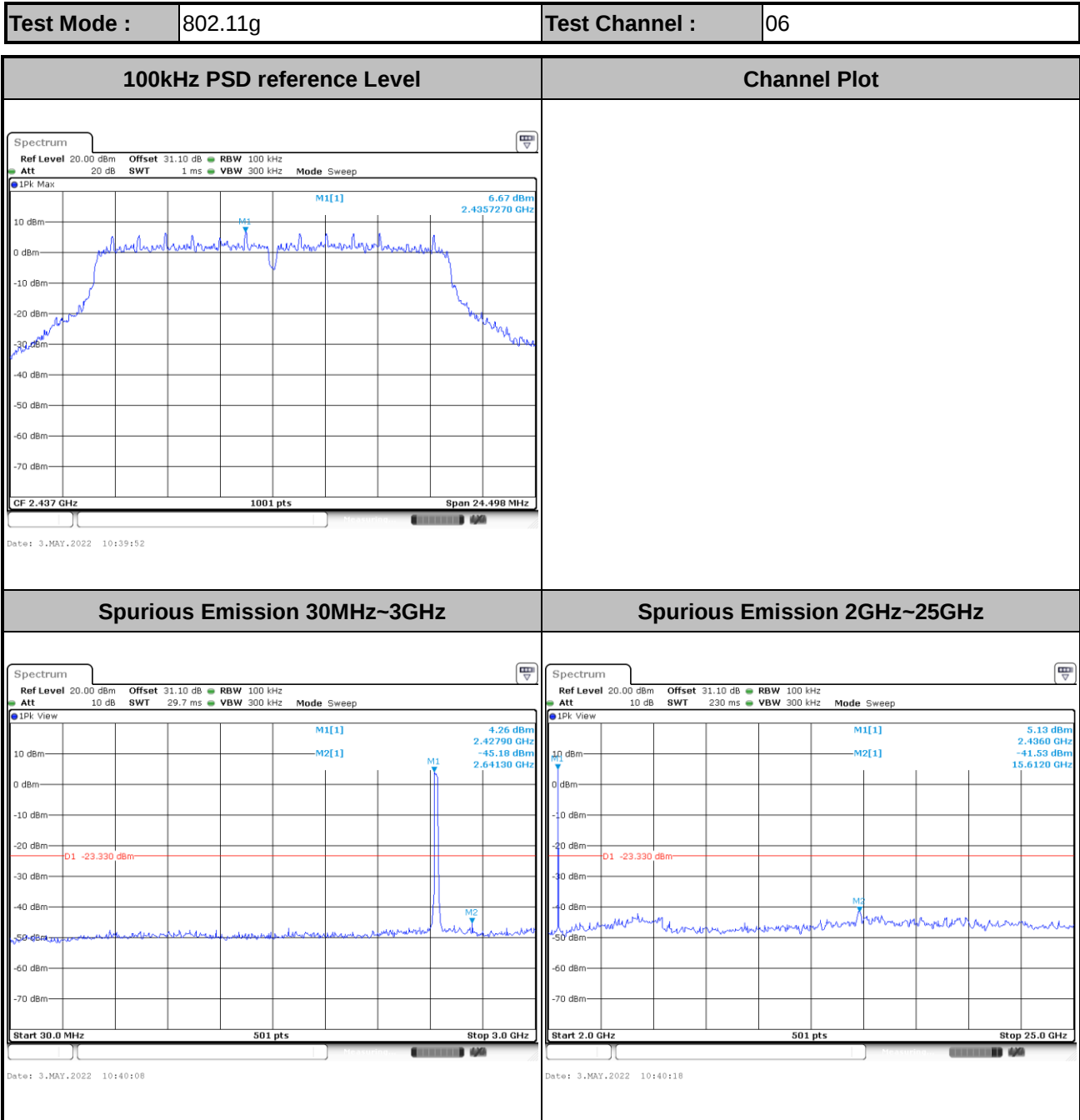
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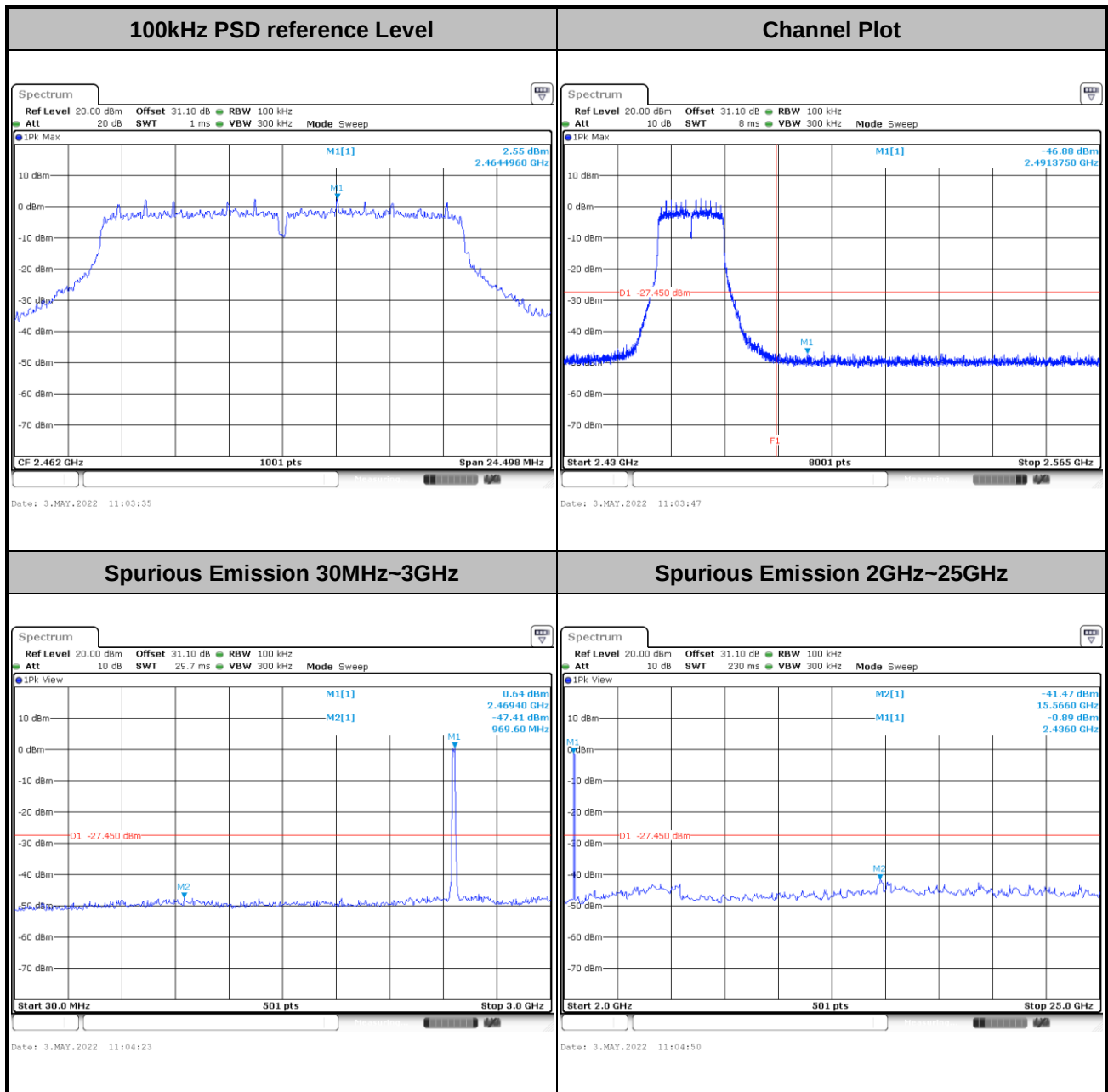
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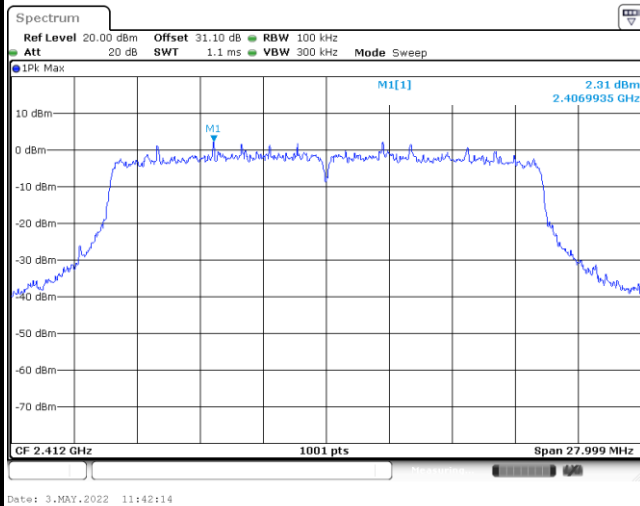
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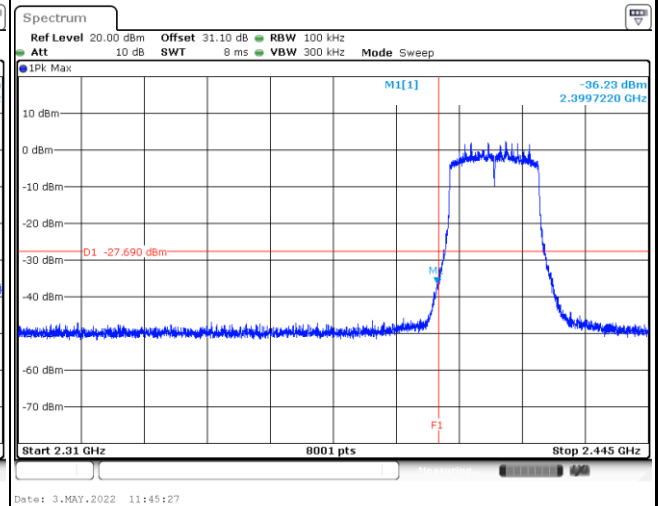


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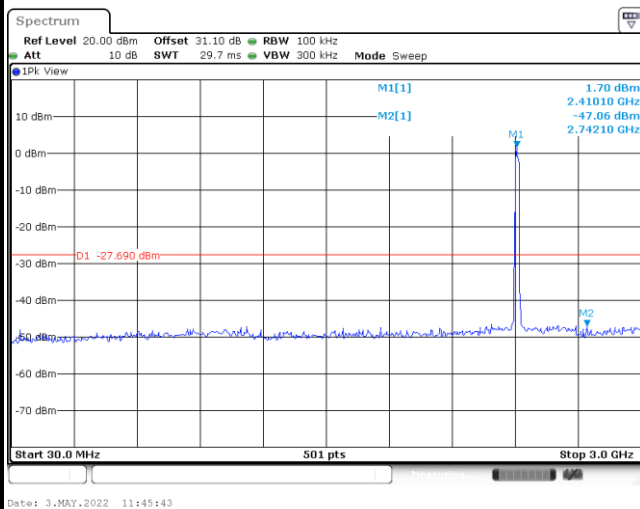
100kHz PSD reference Level



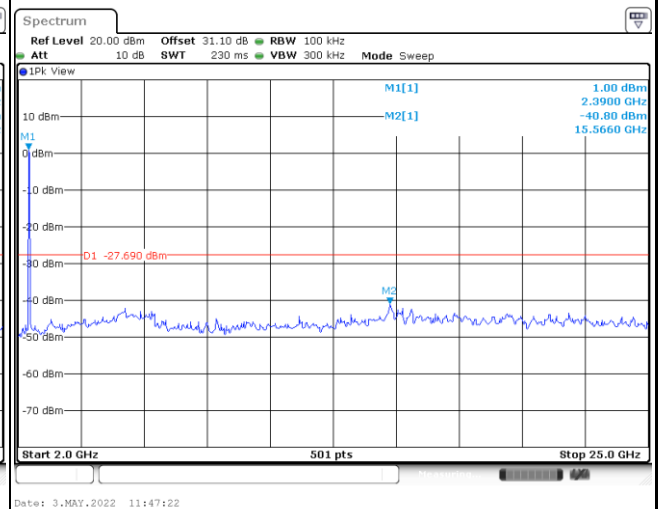
Channel Plot



Spurious Emission 30MHz~3GHz

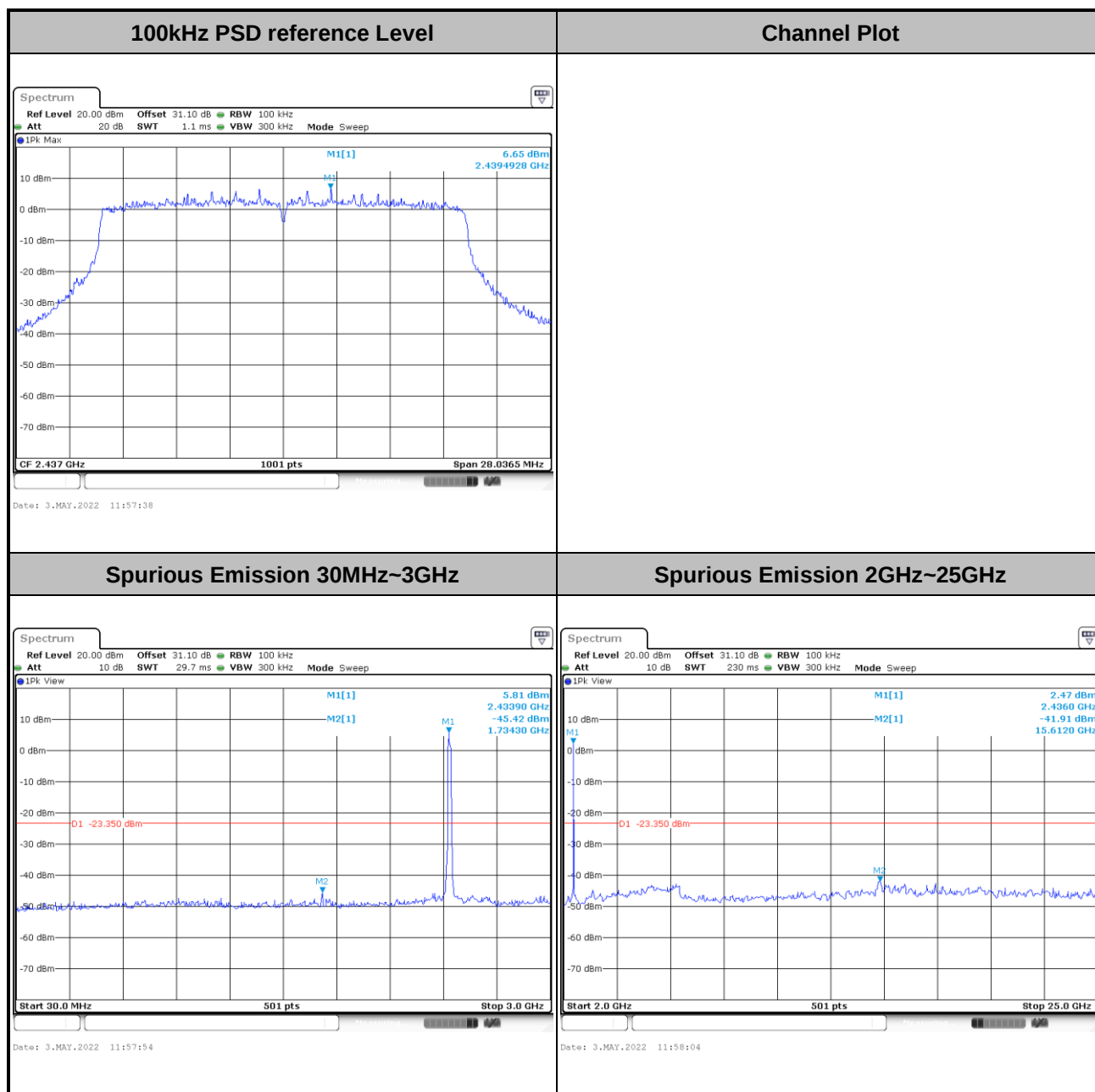


Spurious Emission 2GHz~25GHz



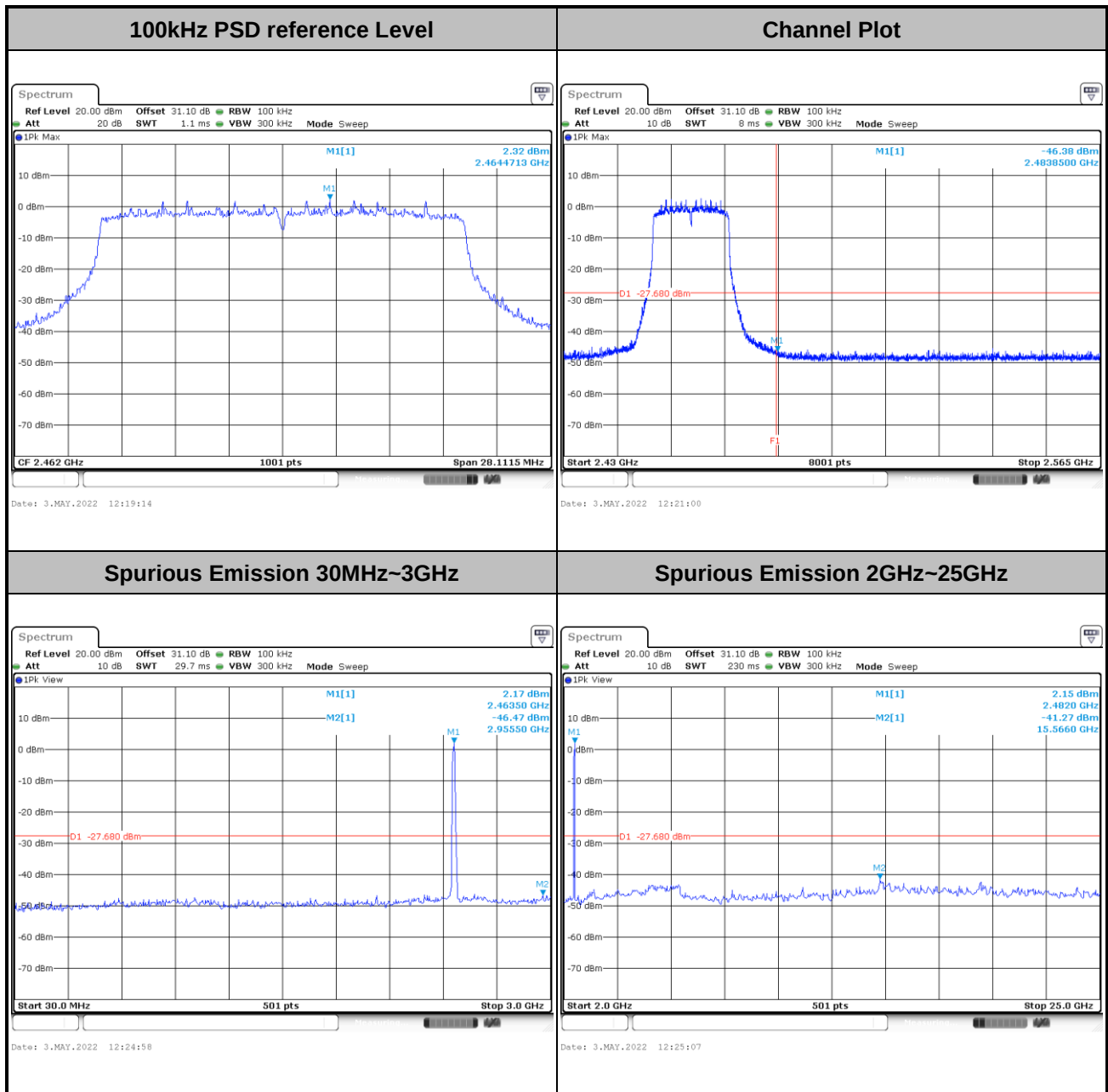


Test Mode :	802.11ax HE20 Full	Test Channel :	06
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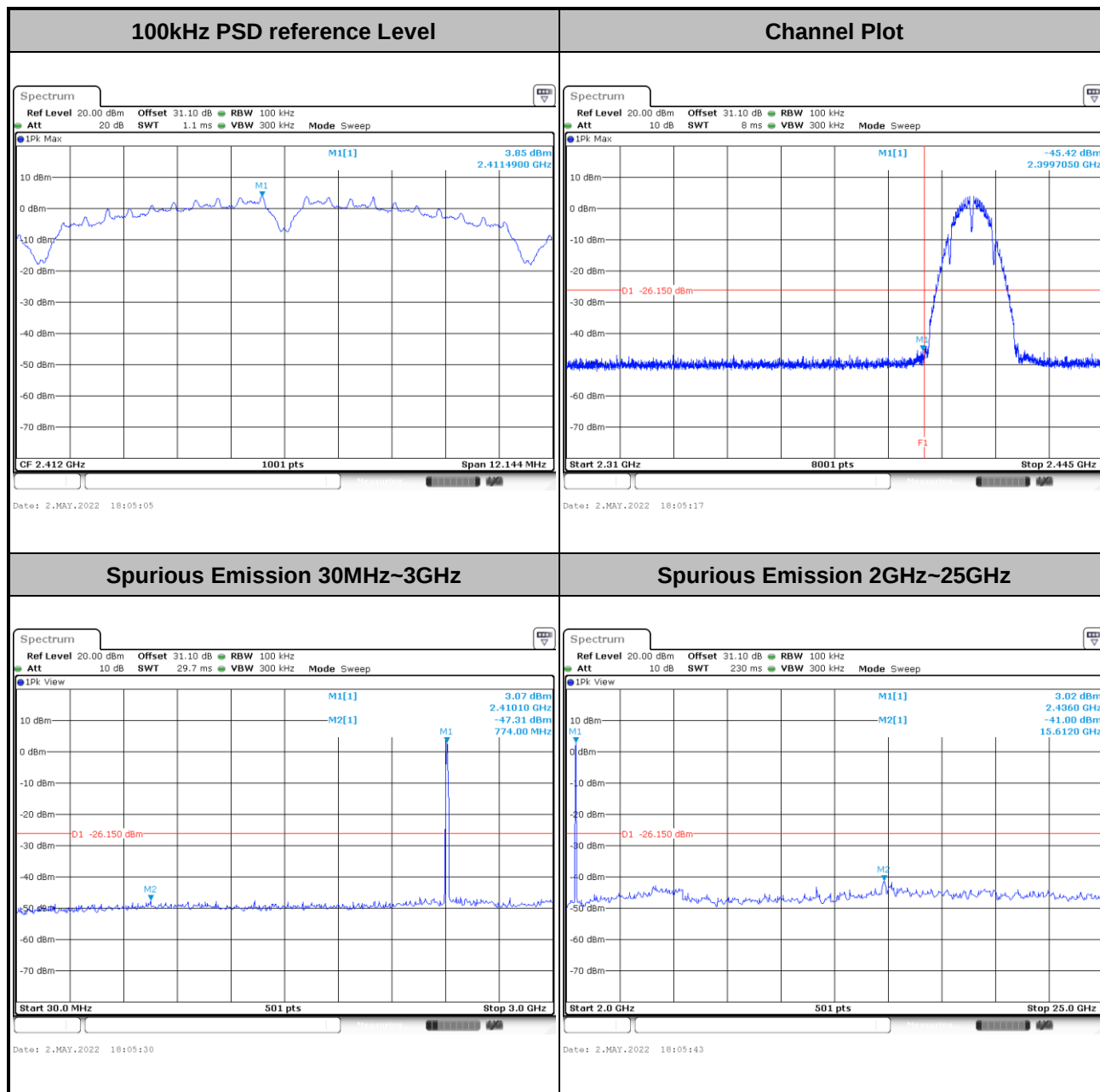
Test Mode :	802.11ax HE20 Full	Test Channel :	11
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Number of TX = 2, Ant. 1 (Measured)

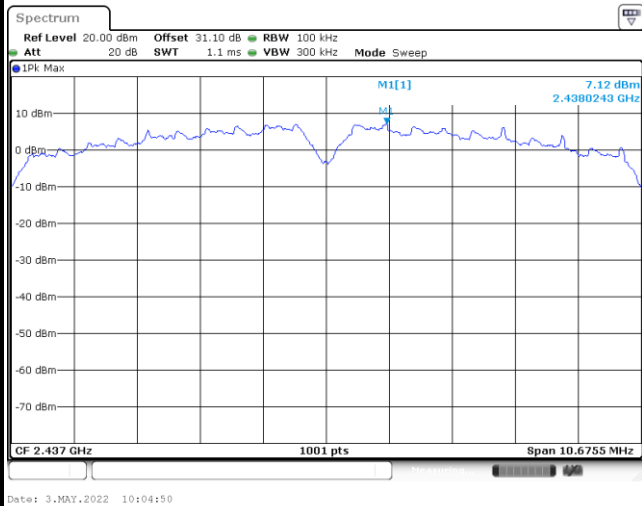
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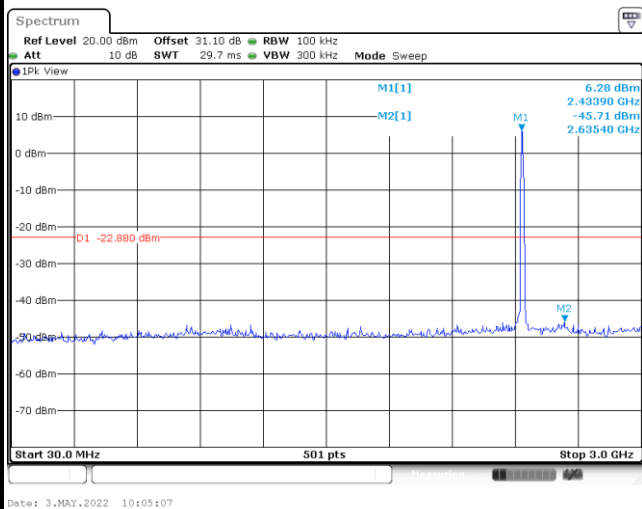
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100kHz PSD reference Level

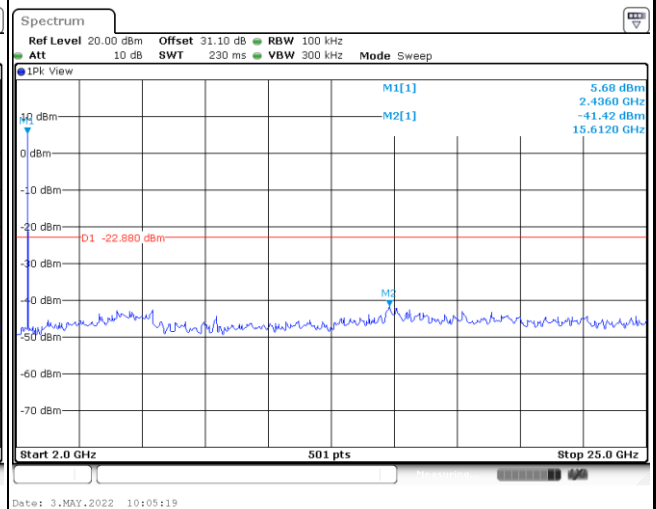


Channel Plot

Spurious Emission 30MHz~3GHz

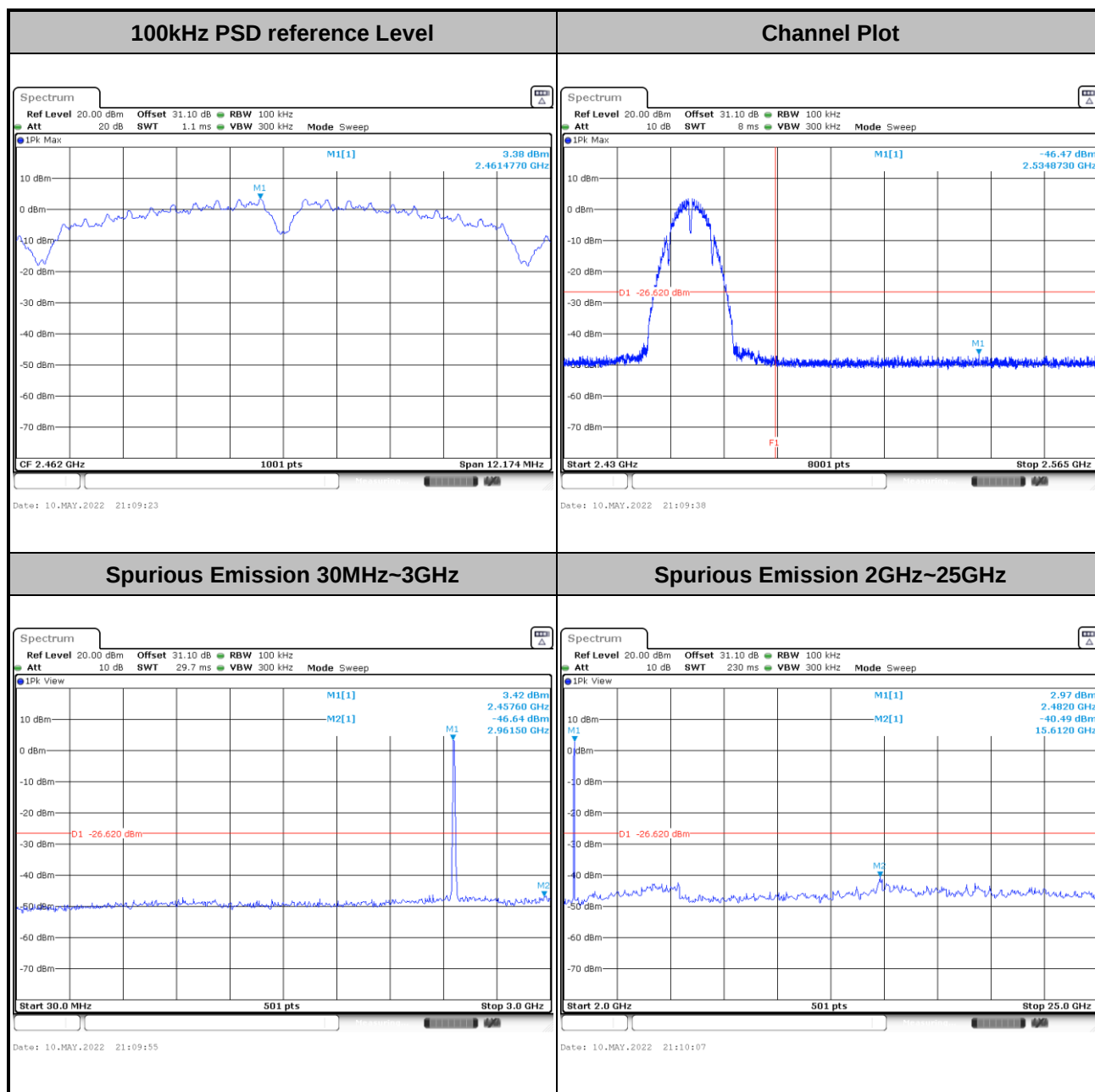


Spurious Emission 2GHz~25GHz





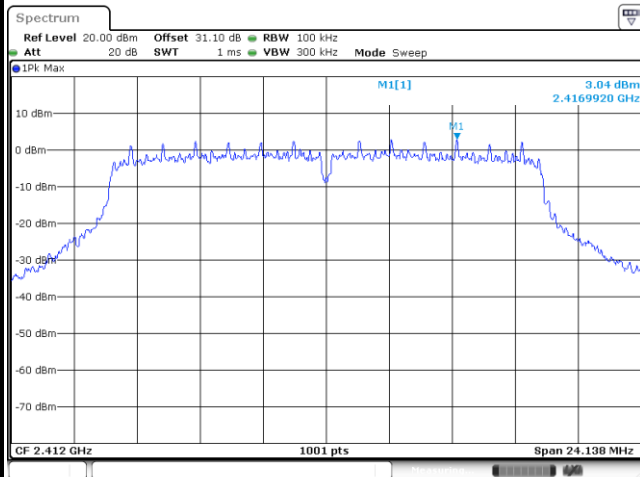
Test Mode :	802.11b	Test Channel :	11
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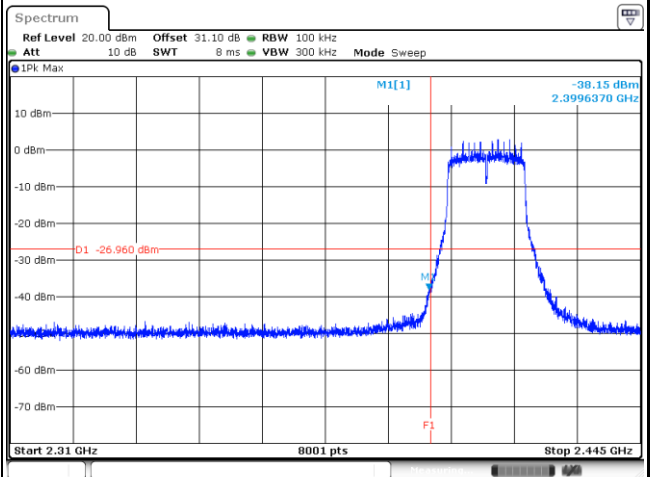


Test Mode :	802.11g	Test Channel :	01
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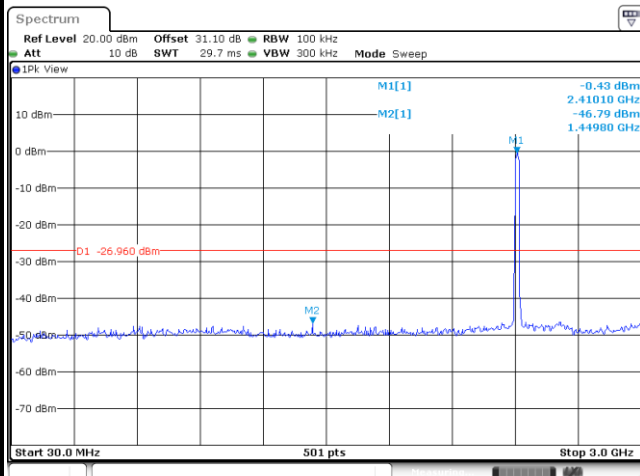
100kHz PSD reference Level



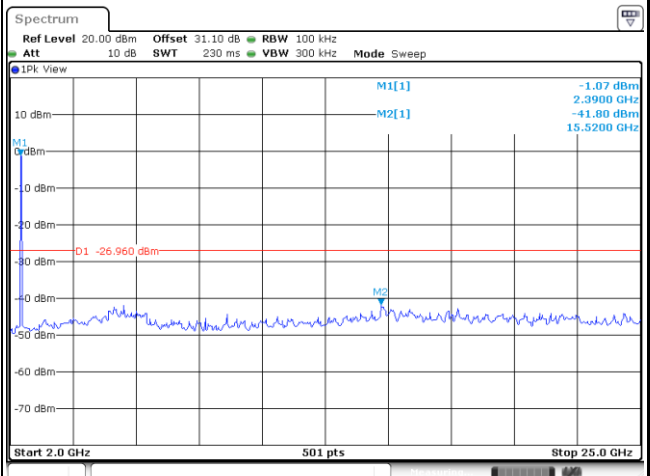
Channel Plot



Spurious Emission 30MHz~3GHz

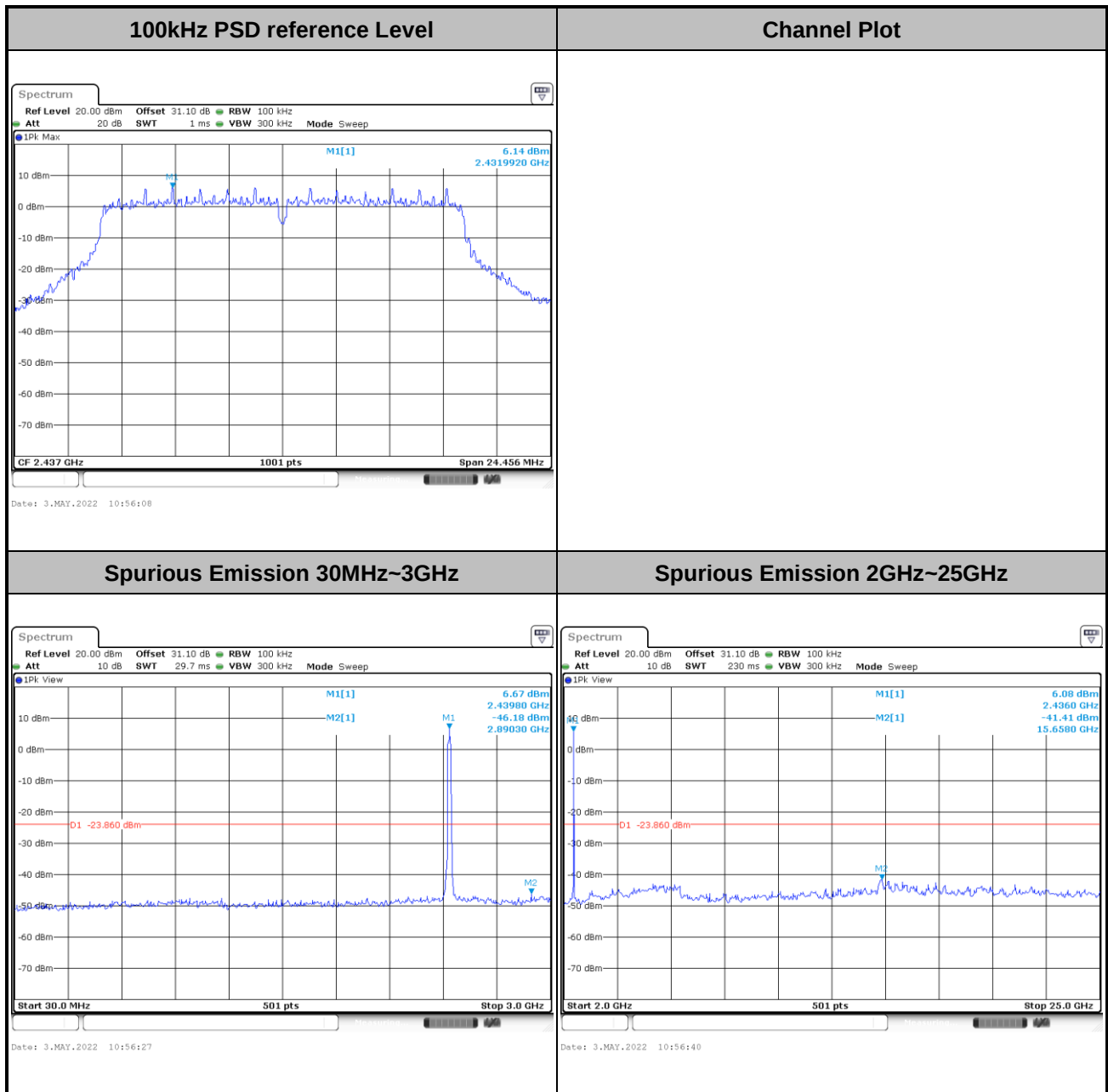


Spurious Emission 2GHz~25GHz



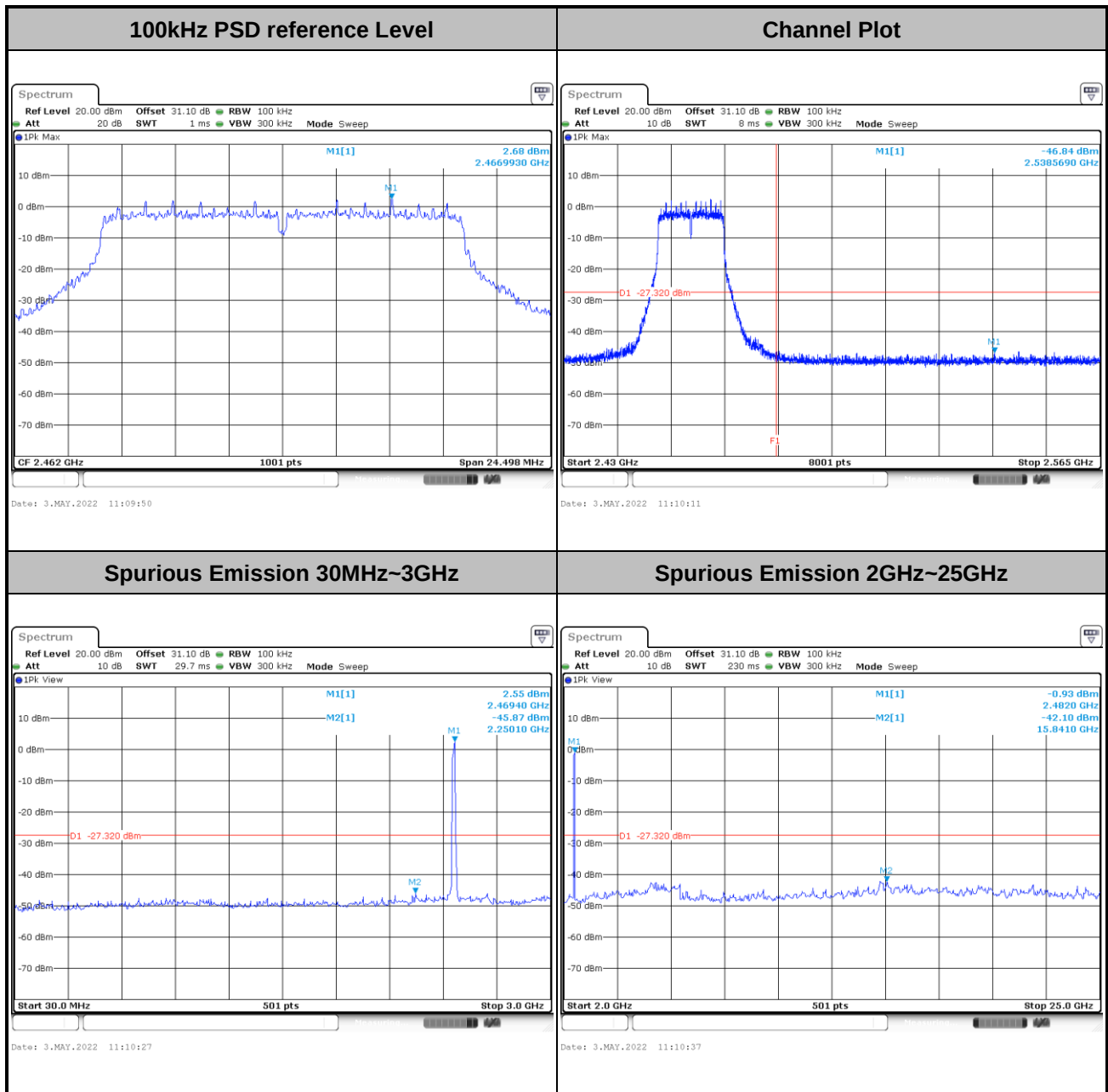


Test Mode :	802.11g	Test Channel :	06
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Test Mode :	802.11g	Test Channel :	11
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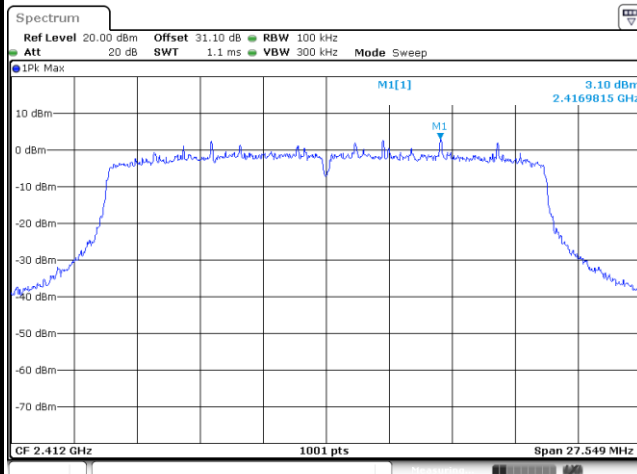




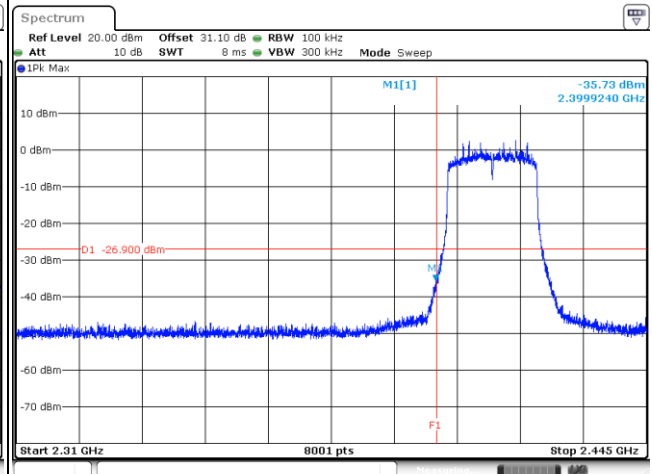
Test Mode : 802.11ax HE20 Full

Test Channel : 01

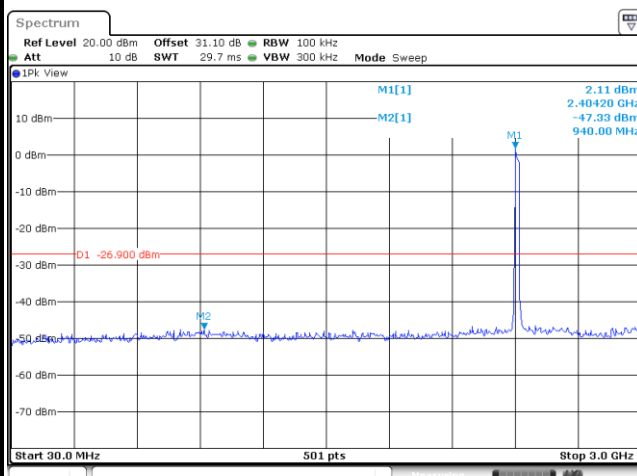
100kHz PSD reference Level



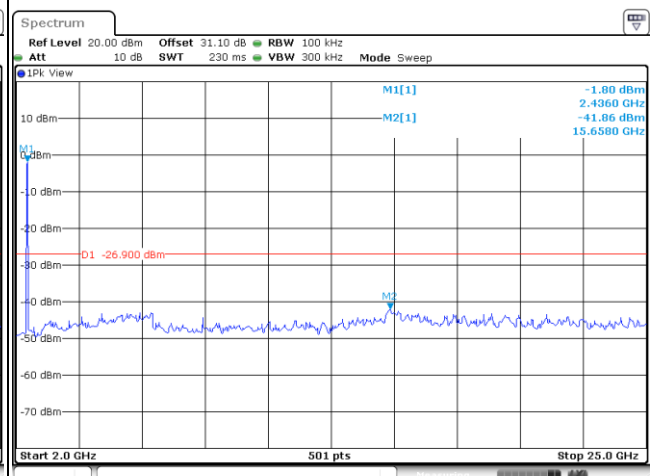
Channel Plot



Spurious Emission 30MHz~3GHz

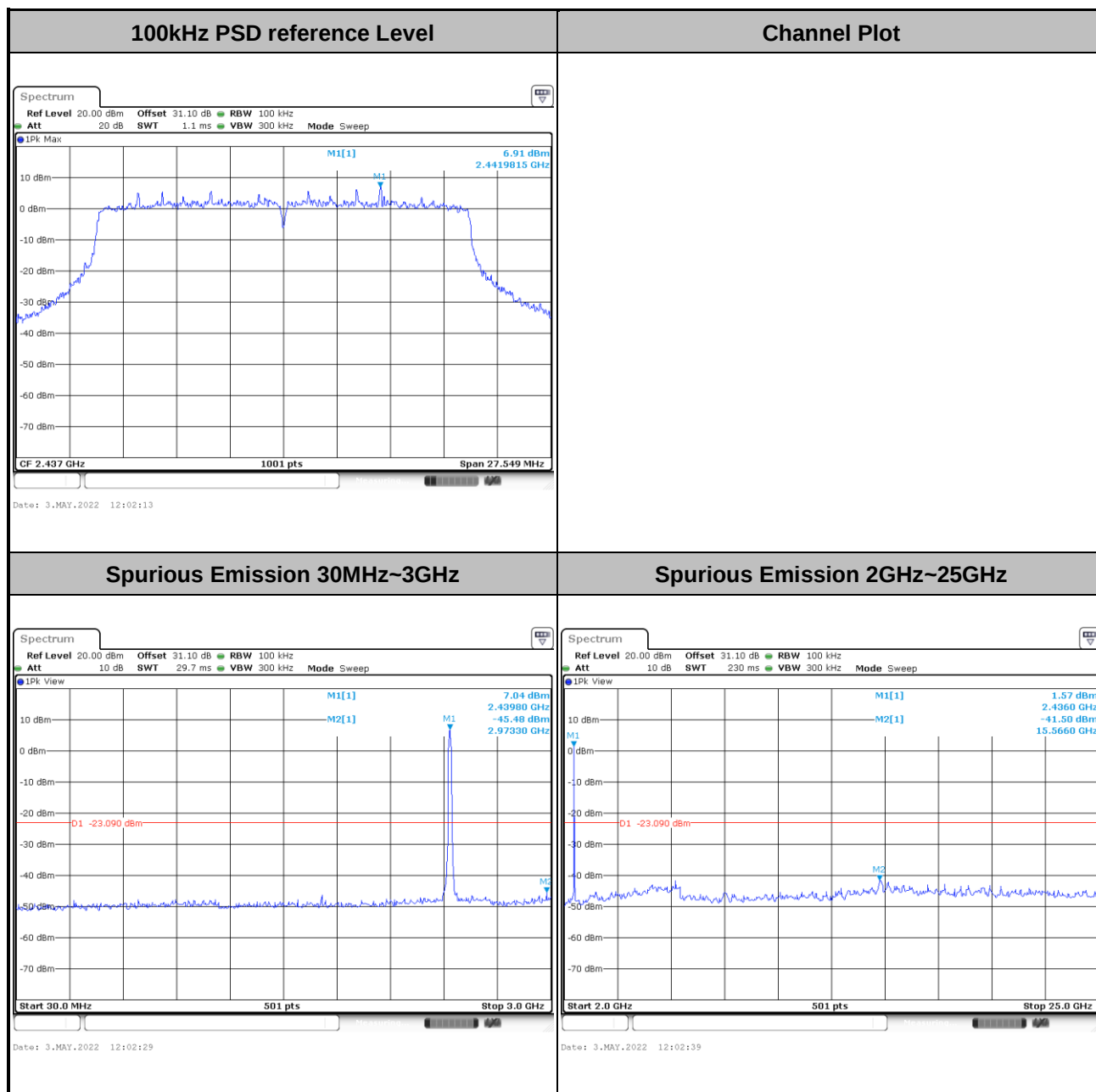


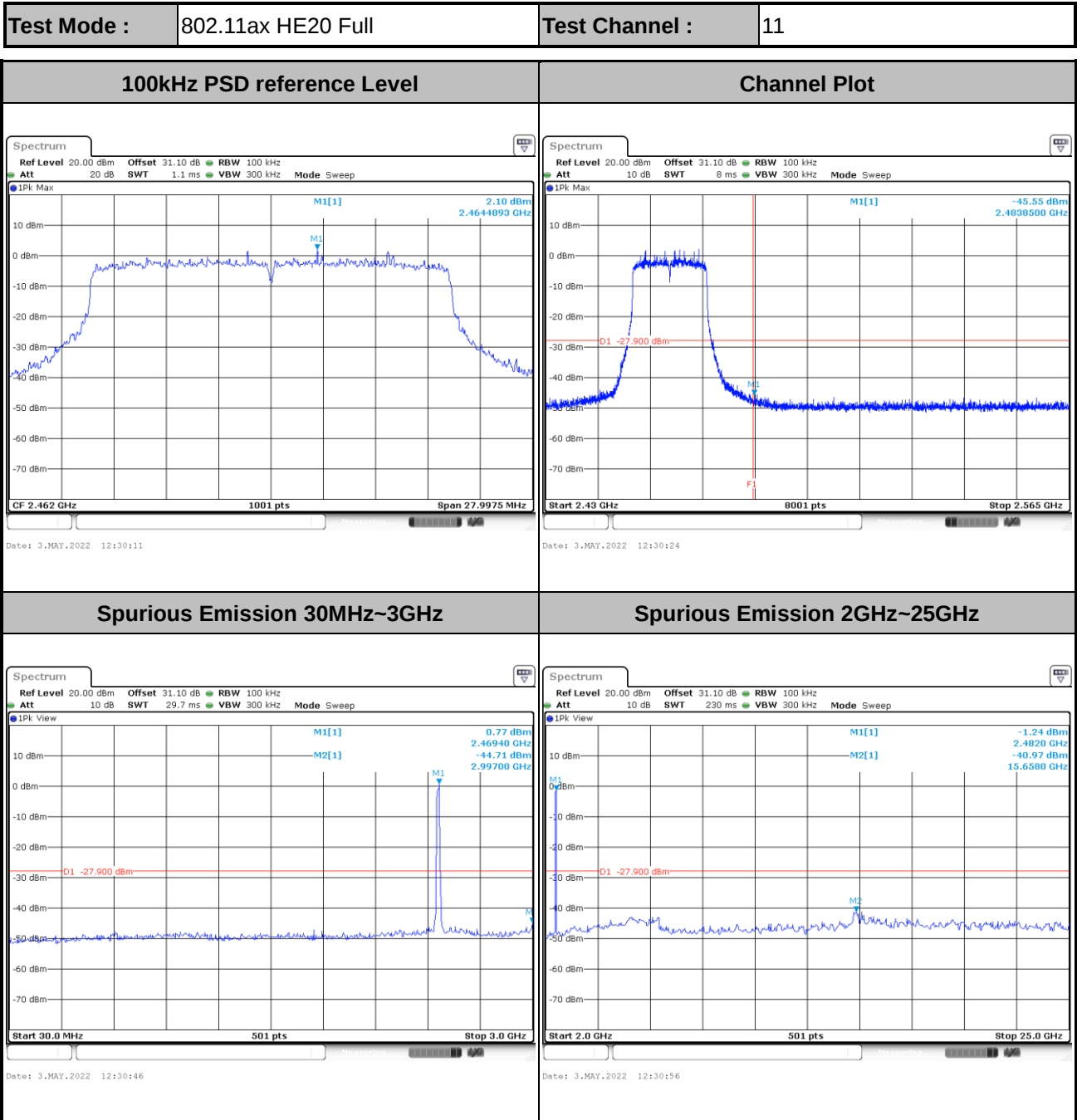
Spurious Emission 2GHz~25GHz





Test Mode :	802.11ax HE20 Full	Test Channel :	06
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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

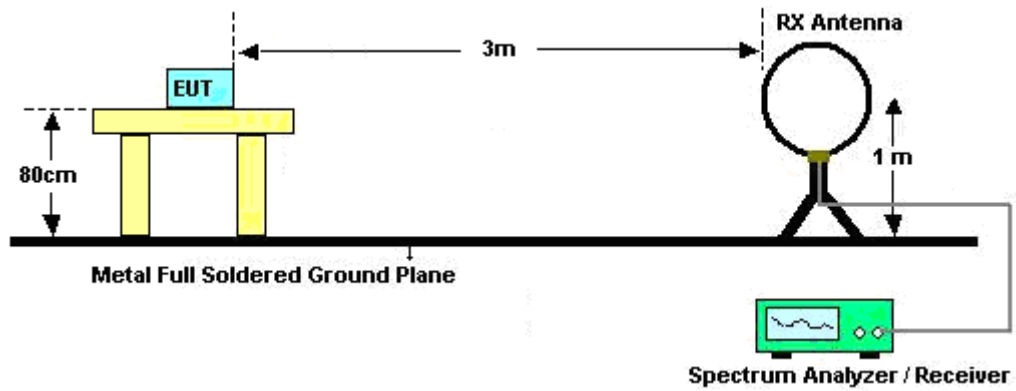
Please refer to the measuring equipment list in this test report.

3.5.3 Test Procedures

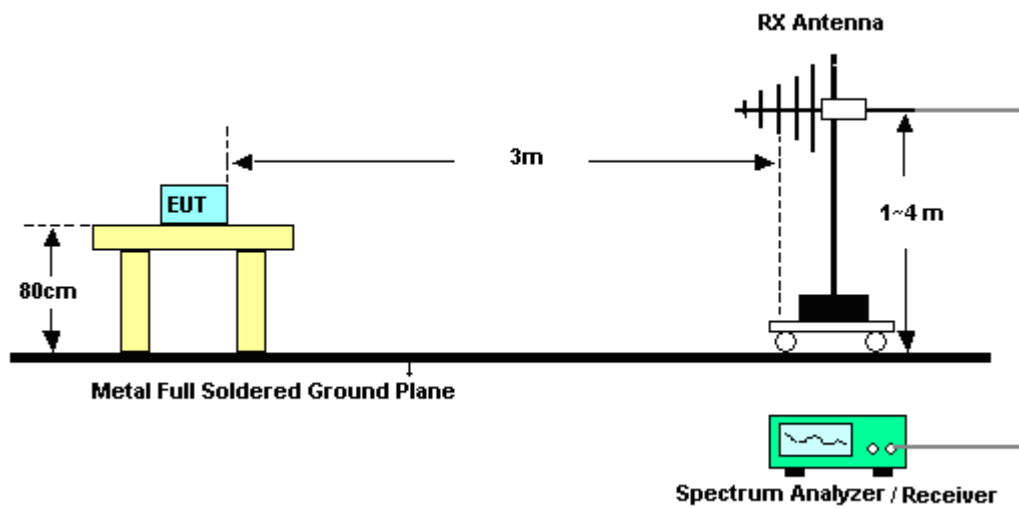
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the 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 - Preamplifier 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

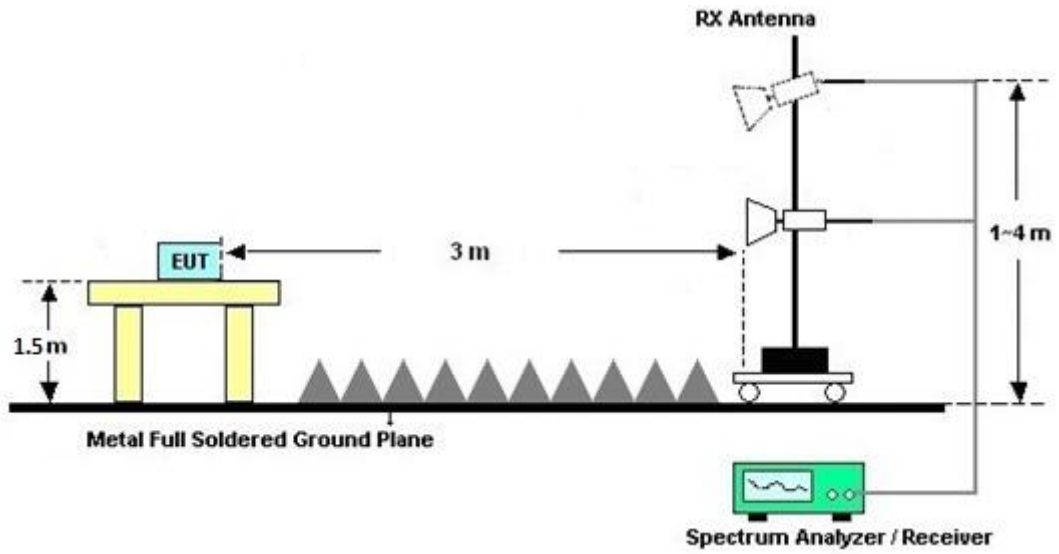
For radiated emissions below 30MHz



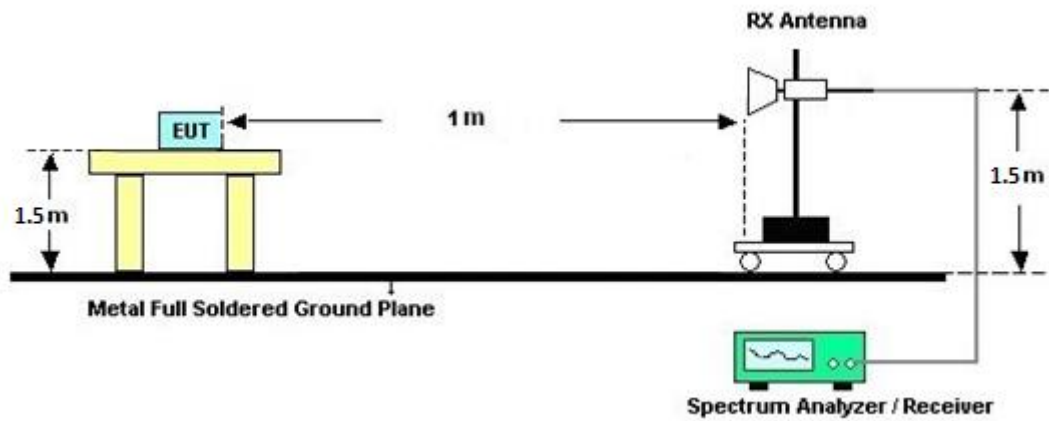
For radiated emissions from 30MHz to 1GHz



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.

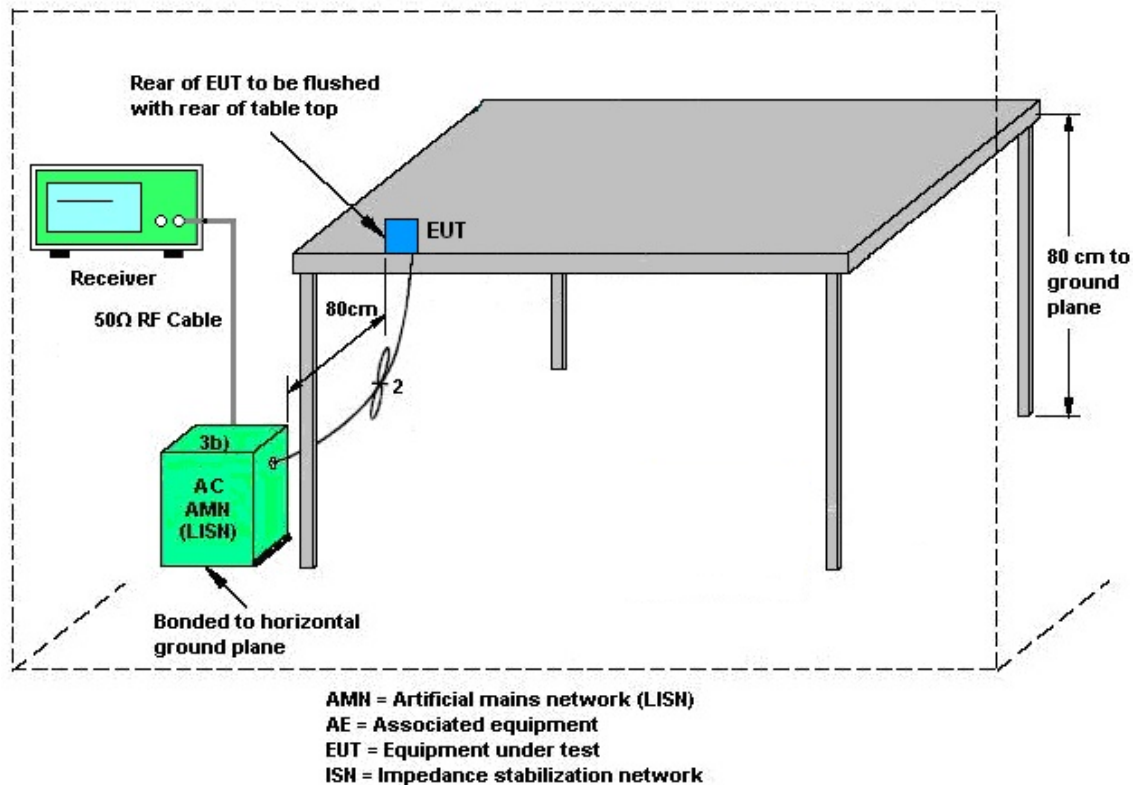
3.6.2 Measuring Instruments

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 power measurements on IEEE 802.11 devices,

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

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

G_{ANT} is set equal to the gain of the antenna having the highest gain.

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

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

As minimum $N_{SS}=1$ is supported by EUT, the formula can be simplified as:

Directional gain = $10 \cdot \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}]$ dBi

Where $G_1, G_2, \dots, G_N$ denote single antenna gain.

For example: If a device has two antenna, $G_{ANT1} = 3.6$ dBi; $G_{ANT2} = 4.2$ dBi

Directional gain of power measurement = $\max(3.6, 4.2) + 0 = 4.2$ dBi

Directional gain of PSD measurement = $10 \cdot \log[(10^{3.6/20} + 10^{4.2/20})^2 / 2] = 6.92$ dBi

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

<CDD Modes>						
			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 0	Ant. 1	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band I	0.90	4.30	4.30	5.78	0.00	0.00

Power limit reduction = Composite gain – 6dBi, (min = 0)

PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)

Calculation example:

The DG for PSD is derived from formula is

$$10 \times \log \{ \{ [10^{\wedge} (0.90 \text{ dBi} / 20) + 10^{\wedge} (4.30 \text{ dBi} / 20)] ^ 2 \} / 2 \}$$

$$= 5.78 \text{ dBi}$$



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	100315	9 kHz~30 MHz	Jan. 07, 2022	Apr. 29, 2022~ May 13, 2022	Jan. 06, 2023	Radiation (03CH07-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	35419 & 03	30MHz~1GHz	Apr. 24, 2022	Apr. 29, 2022~ May 13, 2022	Apr. 23, 2023	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 03, 2021	Apr. 29, 2022~ May 13, 2022	Dec. 02, 2022	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA917025 1	18GHz~40GHz	Nov. 30, 2021	Apr. 29, 2022~ May 13, 2022	Nov. 29, 2022	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz~18GHz	Apr. 21, 2022	Apr. 29, 2022~ May 13, 2022	Apr. 20, 2023	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz~1GHz	Oct. 04, 2021	Apr. 29, 2022~ May 13, 2022	Oct. 03, 2022	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~26.5GHz	Oct. 04, 2021	Apr. 29, 2022~ May 13, 2022	Oct. 03, 2022	Radiation (03CH07-HY)
Preamplifier	EMEC	EM18G40G	0600789	18-40GHz	Jul. 23, 2021	Apr. 29, 2022~ May 13, 2022	Jul. 22, 2022	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9030A	MY52350276	3Hz~44GHz	Jul. 22, 2021	Apr. 29, 2022~ May 13, 2022	Jul. 21, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY15682/4	30MHz to 18GHz	Feb. 23, 2022	Apr. 29, 2022~ May 13, 2022	Feb. 22, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY24971/4	9kHz to 18GHz	Feb. 23, 2022	Apr. 29, 2022~ May 13, 2022	Feb. 22, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4	9kHz to 18GHz	Feb. 23, 2022	Apr. 29, 2022~ May 13, 2022	Feb. 22, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126	532078/126E	30MHz~18GHz	Sep. 17, 2021	Apr. 29, 2022~ May 13, 2022	Sep. 16, 2022	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2	18GHz~40GHz	Feb. 23, 2022	Apr. 29, 2022~ May 13, 2022	Feb. 22, 2023	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	801606/2	9KHz ~ 40GHz	Apr. 14, 2022	Apr. 29, 2022~ May 13, 2022	Apr. 13, 2023	Radiation (03CH07-HY)
Antenna Mast	EMEC	AM-BS-4500E	N/A	Boresight mast 1M~4M	N/A	Apr. 29, 2022~ May 13, 2022	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Apr. 29, 2022~ May 13, 2022	N/A	Radiation (03CH07-HY)
Software	Audix	E3	N/A	N/A	N/A	Apr. 29, 2022~ May 13, 2022	N/A	Radiation (03CH07-HY)
USB Data Logger	TECPEL	TR-32	HE17XB1148	N/A	Oct. 25, 2021	Apr. 29, 2022~ May 13, 2022	Oct. 24, 2022	Radiation (03CH07-HY)
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 16, 2021	Apr. 12, 2022~ May 19, 2022	Nov. 15, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO 12 (NO:113)	10MHz~6GHz	Dec. 16, 2021	Apr. 12, 2022~ May 19, 2022	Dec. 15, 2022	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101566	10Hz~40GHz	Aug. 30, 2021	Apr. 12, 2022~ May 19, 2022	Aug. 29, 2022	Conducted (TH05-HY)
Switch Control Mainframe	E-IUSTRUME NT	ETF-1405-0	EC1900067 (BOX7)	N/A	Aug. 12, 2021	Apr. 12, 2022~ May 19, 2022	Aug. 11, 2022	Conducted (TH05-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 05, 2022	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 01, 2021	May 05, 2022	Nov. 30, 2022	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 17, 2021	May 05, 2022	Nov. 16, 2022	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 03, 2021	May 05, 2022	Dec. 02, 2022	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	May 05, 2022	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-FN	00691	N/A	Jul. 28, 2021	May 05, 2022	Jul. 27, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 30, 2021	May 05, 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
--	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.1 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.0 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Mina Liu/Jacob Yu	Temperature:	21~25	°C
Test Date:	2022/4/12~2022/05/19	Relative Humidity:	51~54	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band MIMO										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant0	Ant1	Ant0	Ant1		
11b	1Mbps	2	1	2412	13.29	13.34	8.07	8.10	0.50	Pass
11b	1Mbps	2	6	2437	13.34	13.24	8.08	7.12	0.50	Pass
11b	1Mbps	2	11	2462	13.44	13.49	8.10	8.12	0.50	Pass
11g	6Mbps	2	1	2412	16.98	17.13	16.33	16.09	0.50	Pass
11g	6Mbps	2	6	2437	16.98	17.23	16.33	16.30	0.50	Pass
11g	6Mbps	2	11	2462	17.08	17.23	16.33	16.33	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
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	2	1	2412	13.90	14.00	16.96	30.00		4.30		21.26		36.00		Pass
11b	1Mbps	2	6	2437	18.00	17.80	20.91	30.00		4.30		25.21		36.00		Pass
11b	1Mbps	2	11	2462	14.00	13.90	16.96	30.00		4.30		21.26		36.00		Pass
11g	6Mbps	2	1	2412	13.90	14.00	16.96	30.00		4.30		21.26		36.00		Pass
11g	6Mbps	2	6	2437	18.00	17.70	20.86	30.00		4.30		25.16		36.00		Pass
11g	6Mbps	2	11	2462	14.00	13.80	16.91	30.00		4.30		21.21		36.00		Pass
HT20	MCS0	2	1	2412	13.70	13.90	16.81	30.00		4.30		21.11		36.00		Pass
HT20	MCS0	2	6	2437	17.90	17.60	20.76	30.00		4.30		25.06		36.00		Pass
HT20	MCS0	2	11	2462	13.70	13.60	16.66	30.00		4.30		20.96		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
					Ant0	Ant1	Worse + 3.01	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	2	1	2412	-9.69	-9.54	-6.53	5.78		8.00		Pass
11b	1Mbps	2	6	2437	-5.41	-6.10	-2.40	5.78		8.00		Pass
11b	1Mbps	2	11	2462	-9.24	-9.98	-6.23	5.78		8.00		Pass
11g	6Mbps	2	1	2412	-13.22	-12.88	-9.87	5.78		8.00		Pass
11g	6Mbps	2	6	2437	-9.08	-8.77	-5.76	5.78		8.00		Pass
11g	6Mbps	2	11	2462	-13.07	-12.81	-9.80	5.78		8.00		Pass

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

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band MIMO											
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
						Ant0	Ant1	Ant0	Ant1		
HE20	MCS0	2	1	2412	Full	19.28	19.33	18.67	18.37	0.50	Pass
HE20	MCS0	2	6	2437	Full	19.33	19.33	18.69	18.37	0.50	Pass
HE20	MCS0	2	11	2462	Full	19.33	19.38	18.74	18.67	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
						Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	2	1	2412	Full	13.80	14.00	16.91	30.00		4.30		21.21		36.00		Pass
HE20	MCS0	2	1	2412	26/0	5.50	5.60	8.56	30.00		4.30		12.86		36.00		Pass
HE20	MCS0	2	1	2412	52/37	8.10	7.80	10.96	30.00		4.30		15.26		36.00		Pass
HE20	MCS0	2	1	2412	106/53	9.90	10.20	13.06	30.00		4.30		17.36		36.00		Pass
HE20	MCS0	2	6	2437	Full	18.00	17.70	20.86	30.00		4.30		25.16		36.00		Pass
HE20	MCS0	2	6	2437	26/4	9.30	8.80	12.07	30.00		4.30		16.37		36.00		Pass
HE20	MCS0	2	6	2437	52/39	10.90	11.20	14.06	30.00		4.30		18.36		36.00		Pass
HE20	MCS0	2	6	2437	106/53	13.50	13.40	16.46	30.00		4.30		20.76		36.00		Pass
HE20	MCS0	2	11	2462	Full	13.80	13.70	16.76	30.00		4.30		21.06		36.00		Pass
HE20	MCS0	2	11	2462	26/8	5.70	6.00	8.86	30.00		4.30		13.16		36.00		Pass
HE20	MCS0	2	11	2462	52/40	7.60	7.60	10.61	30.00		4.30		14.91		36.00		Pass
HE20	MCS0	2	11	2462	106/54	9.40	9.60	12.51	30.00		4.30		16.81		36.00		Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band MIMO													
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
						Ant0	Ant1	Worse + 3.01	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	2	1	2412	Full	-12.85	-12.65	-9.64	5.78		8.00		Pass
HE20	MCS0	2	1	2412	26/0	-13.25	-12.98	-9.97	5.78		8.00		Pass
HE20	MCS0	2	1	2412	52/37	-13.05	-12.66	-9.65	5.78		8.00		Pass
HE20	MCS0	2	1	2412	106/53	-13.02	-12.77	-9.76	5.78		8.00		Pass
HE20	MCS0	2	6	2437	Full	-9.07	-9.41	-6.06	5.78		8.00		Pass
HE20	MCS0	2	6	2437	26/4	-9.57	-9.86	-6.56	5.78		8.00		Pass
HE20	MCS0	2	6	2437	52/39	-9.34	-9.48	-6.33	5.78		8.00		Pass
HE20	MCS0	2	6	2437	106/53	-9.17	-9.60	-6.16	5.78		8.00		Pass
HE20	MCS0	2	11	2462	Full	-12.99	-12.95	-9.94	5.78		8.00		Pass
HE20	MCS0	2	11	2462	26/8	-13.22	-13.24	-10.21	5.78		8.00		Pass
HE20	MCS0	2	11	2462	52/40	-13.08	-12.98	-9.97	5.78		8.00		Pass
HE20	MCS0	2	11	2462	106/54	-13.10	-13.27	-10.09	5.78		8.00		Pass

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



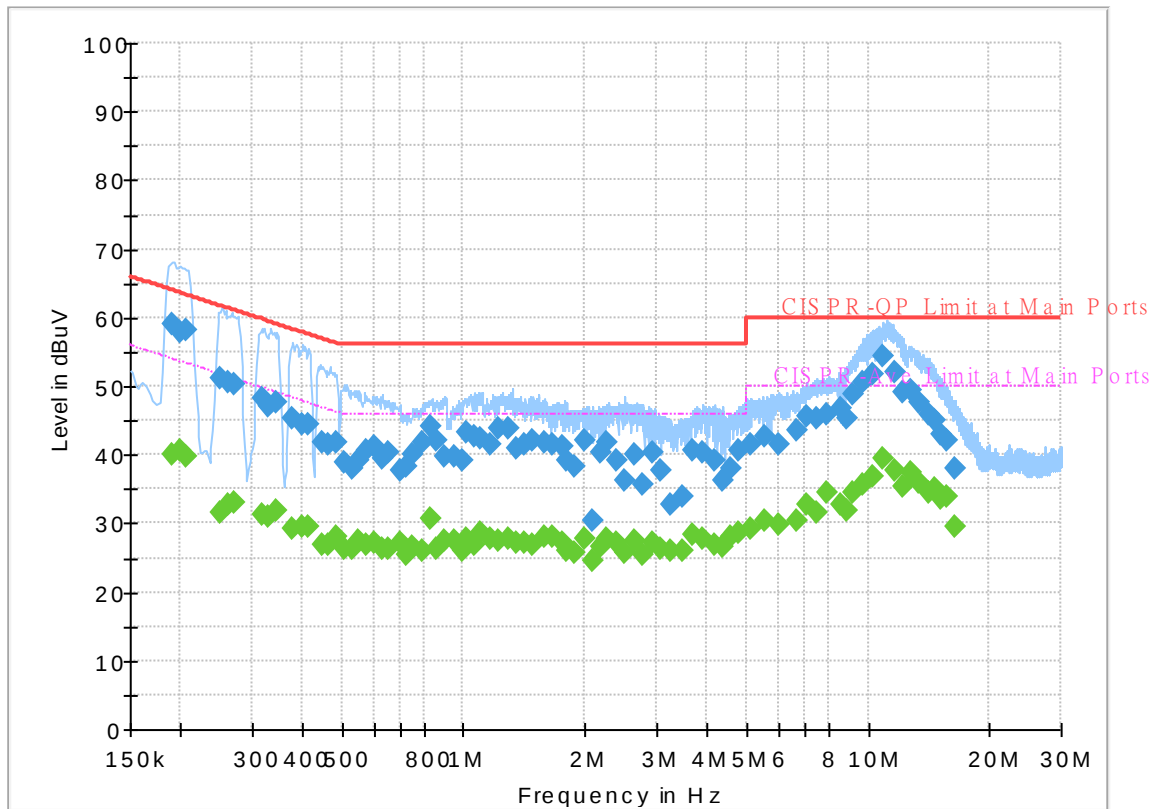
Appendix B. AC Conducted Emission Test Results

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

EUT Information

Report NO : 1D2414
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)
0.190500	---	39.97	54.02	14.05	L1	OFF	19.6
0.190500	59.01	---	64.02	5.01	L1	OFF	19.6
0.199500	---	40.63	53.63	13.00	L1	OFF	19.6
0.199500	57.87	---	63.63	5.76	L1	OFF	19.6
0.206250	---	39.76	53.36	13.60	L1	OFF	19.6
0.206250	58.05	---	63.36	5.31	L1	OFF	19.6
0.251250	---	31.55	51.72	20.17	L1	OFF	19.6
0.251250	51.14	---	61.72	10.58	L1	OFF	19.6
0.262500	---	32.80	51.35	18.55	L1	OFF	19.6
0.262500	50.61	---	61.35	10.74	L1	OFF	19.6
0.271500	---	33.01	51.07	18.06	L1	OFF	19.6
0.271500	50.34	---	61.07	10.73	L1	OFF	19.6
0.318750	---	31.23	49.74	18.51	L1	OFF	19.6
0.318750	48.23	---	59.74	11.51	L1	OFF	19.6
0.330000	---	30.89	49.45	18.56	L1	OFF	19.6
0.330000	47.06	---	59.45	12.39	L1	OFF	19.6
0.343500	---	31.97	49.12	17.15	L1	OFF	19.6
0.343500	47.65	---	59.12	11.47	L1	OFF	19.6
0.379500	---	29.31	48.29	18.98	L1	OFF	19.6
0.379500	45.21	---	58.29	13.08	L1	OFF	19.6
0.399750	---	29.39	47.86	18.47	L1	OFF	19.6

0.399750	44.41	---	57.86	13.45	L1	OFF	19.6
0.415500	---	29.67	47.54	17.87	L1	OFF	19.6
0.415500	44.55	---	57.54	12.99	L1	OFF	19.6
0.449250	---	27.01	46.89	19.88	L1	OFF	19.6
0.449250	41.84	---	56.89	15.05	L1	OFF	19.6
0.462750	---	26.85	46.64	19.79	L1	OFF	19.6
0.462750	41.58	---	56.64	15.06	L1	OFF	19.6
0.483000	---	27.94	46.29	18.35	L1	OFF	19.6
0.483000	41.74	---	56.29	14.55	L1	OFF	19.6
0.510000	---	26.23	46.00	19.77	L1	OFF	19.6
0.510000	38.94	---	56.00	17.06	L1	OFF	19.6
0.530250	---	26.18	46.00	19.82	L1	OFF	19.6
0.530250	38.12	---	56.00	17.88	L1	OFF	19.6
0.552750	---	27.48	46.00	18.52	L1	OFF	19.6
0.552750	39.19	---	56.00	16.81	L1	OFF	19.6
0.573000	---	26.84	46.00	19.16	L1	OFF	19.6
0.573000	40.64	---	56.00	15.36	L1	OFF	19.6
0.600000	---	27.23	46.00	18.77	L1	OFF	19.6
0.600000	41.21	---	56.00	14.79	L1	OFF	19.6
0.631500	---	26.24	46.00	19.76	L1	OFF	19.6
0.631500	39.44	---	56.00	16.56	L1	OFF	19.6
0.654000	---	26.25	46.00	19.75	L1	OFF	19.6
0.654000	40.26	---	56.00	15.74	L1	OFF	19.6
0.694500	---	27.16	46.00	18.84	L1	OFF	19.6
0.694500	37.66	---	56.00	18.34	L1	OFF	19.6
0.723750	---	25.45	46.00	20.55	L1	OFF	19.6
0.723750	38.40	---	56.00	17.60	L1	OFF	19.6
0.746250	---	26.62	46.00	19.38	L1	OFF	19.6
0.746250	39.93	---	56.00	16.07	L1	OFF	19.6
0.789000	---	26.12	46.00	19.88	L1	OFF	19.6
0.789000	41.70	---	56.00	14.30	L1	OFF	19.6
0.827250	---	30.67	46.00	15.33	L1	OFF	19.6
0.827250	44.18	---	56.00	11.82	L1	OFF	19.6
0.861000	---	26.23	46.00	19.77	L1	OFF	19.6
0.861000	42.14	---	56.00	13.86	L1	OFF	19.6
0.901500	---	27.38	46.00	18.62	L1	OFF	19.6
0.901500	39.65	---	56.00	16.35	L1	OFF	19.6
0.946500	---	27.41	46.00	18.59	L1	OFF	19.6
0.946500	39.89	---	56.00	16.11	L1	OFF	19.6
0.991500	---	26.12	46.00	19.88	L1	OFF	19.6
0.991500	39.30	---	56.00	16.70	L1	OFF	19.6
1.011750	---	27.84	46.00	18.16	L1	OFF	19.7
1.011750	43.34	---	56.00	12.66	L1	OFF	19.7
1.059000	---	26.93	46.00	19.07	L1	OFF	19.7
1.059000	42.56	---	56.00	13.44	L1	OFF	19.7
1.106250	---	28.74	46.00	17.26	L1	OFF	19.7
1.106250	42.38	---	56.00	13.62	L1	OFF	19.7
1.164750	---	27.82	46.00	18.18	L1	OFF	19.7
1.164750	41.38	---	56.00	14.62	L1	OFF	19.7
1.221000	---	27.61	46.00	18.39	L1	OFF	19.7
1.221000	43.76	---	56.00	12.24	L1	OFF	19.7
1.295250	---	27.71	46.00	18.29	L1	OFF	19.7
1.295250	43.81	---	56.00	12.19	L1	OFF	19.7
1.353750	---	27.06	46.00	18.94	L1	OFF	19.7
1.353750	40.81	---	56.00	15.19	L1	OFF	19.7
1.423500	---	27.12	46.00	18.88	L1	OFF	19.7
1.423500	41.50	---	56.00	14.50	L1	OFF	19.7
1.488750	---	27.02	46.00	18.98	L1	OFF	19.7
1.488750	42.00	---	56.00	14.00	L1	OFF	19.7
1.578750	---	27.98	46.00	18.02	L1	OFF	19.7
1.578750	41.94	---	56.00	14.06	L1	OFF	19.7
1.657500	---	28.13	46.00	17.87	L1	OFF	19.7
1.657500	41.46	---	56.00	14.54	L1	OFF	19.7
1.761000	---	27.08	46.00	18.92	L1	OFF	19.7
1.761000	41.29	---	56.00	14.71	L1	OFF	19.7
1.803750	---	26.12	46.00	19.88	L1	OFF	19.7
1.803750	39.08	---	56.00	16.92	L1	OFF	19.7
1.891500	---	25.72	46.00	20.28	L1	OFF	19.7
1.891500	38.36	---	56.00	17.64	L1	OFF	19.7
1.990500	---	27.82	46.00	18.18	L1	OFF	19.7
1.990500	42.02	---	56.00	13.98	L1	OFF	19.7

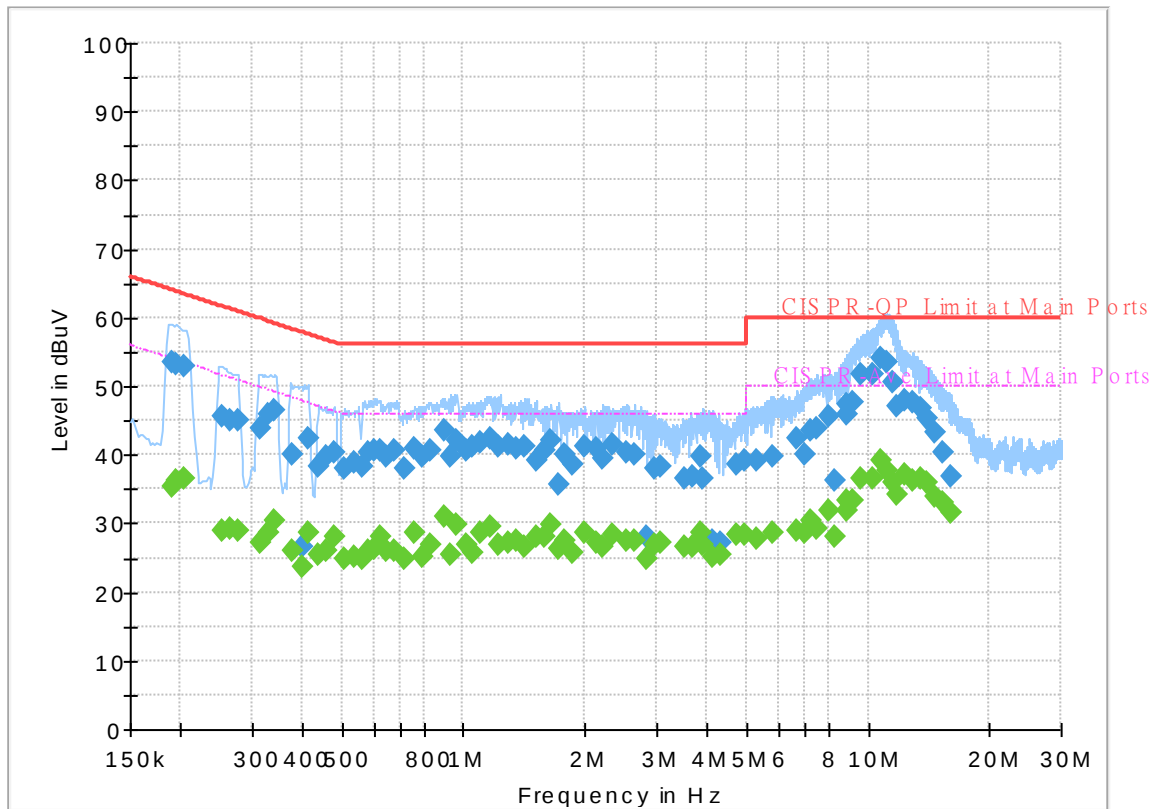
2.080500	---	24.45	46.00	21.55	L1	OFF	19.7
2.080500	30.40	---	56.00	25.60	L1	OFF	19.7
2.181750	---	26.55	46.00	19.45	L1	OFF	19.7
2.181750	40.27	---	56.00	15.73	L1	OFF	19.7
2.265000	---	27.86	46.00	18.14	L1	OFF	19.7
2.265000	41.96	---	56.00	14.04	L1	OFF	19.7
2.384250	---	27.21	46.00	18.79	L1	OFF	19.7
2.384250	39.28	---	56.00	16.72	L1	OFF	19.7
2.496750	---	25.87	46.00	20.13	L1	OFF	19.7
2.496750	36.27	---	56.00	19.73	L1	OFF	19.7
2.658750	---	27.53	46.00	18.47	L1	OFF	19.7
2.658750	40.14	---	56.00	15.86	L1	OFF	19.7
2.778000	---	25.55	46.00	20.45	L1	OFF	19.7
2.778000	35.63	---	56.00	20.37	L1	OFF	19.7
2.951250	---	27.24	46.00	18.76	L1	OFF	19.7
2.951250	40.32	---	56.00	15.68	L1	OFF	19.7
3.086250	---	26.38	46.00	19.62	L1	OFF	19.7
3.086250	37.58	---	56.00	18.42	L1	OFF	19.7
3.259500	---	25.94	46.00	20.06	L1	OFF	19.8
3.259500	32.80	---	56.00	23.20	L1	OFF	19.8
3.468750	---	25.90	46.00	20.10	L1	OFF	19.8
3.468750	34.04	---	56.00	21.96	L1	OFF	19.8
3.705000	---	28.46	46.00	17.54	L1	OFF	19.8
3.705000	40.58	---	56.00	15.42	L1	OFF	19.8
3.912000	---	27.71	46.00	18.29	L1	OFF	19.8
3.912000	40.41	---	56.00	15.59	L1	OFF	19.8
4.188750	---	26.89	46.00	19.11	L1	OFF	19.8
4.188750	39.14	---	56.00	16.86	L1	OFF	19.8
4.364250	---	26.70	46.00	19.30	L1	OFF	19.8
4.364250	36.31	---	56.00	19.69	L1	OFF	19.8
4.602750	---	28.02	46.00	17.98	L1	OFF	19.8
4.602750	38.14	---	56.00	17.86	L1	OFF	19.8
4.805250	---	28.59	46.00	17.41	L1	OFF	19.8
4.805250	40.67	---	56.00	15.33	L1	OFF	19.8
5.145000	---	29.25	50.00	20.75	L1	OFF	19.8
5.145000	41.38	---	60.00	18.62	L1	OFF	19.8
5.529750	---	30.46	50.00	19.54	L1	OFF	19.9
5.529750	42.66	---	60.00	17.34	L1	OFF	19.9
6.033750	---	29.91	50.00	20.09	L1	OFF	19.9
6.033750	41.62	---	60.00	18.38	L1	OFF	19.9
6.659250	---	30.52	50.00	19.48	L1	OFF	19.9
6.659250	43.61	---	60.00	16.39	L1	OFF	19.9
7.086750	---	32.63	50.00	17.37	L1	OFF	19.9
7.086750	45.57	---	60.00	14.43	L1	OFF	19.9
7.482750	---	31.71	50.00	18.29	L1	OFF	20.0
7.482750	45.37	---	60.00	14.63	L1	OFF	20.0
7.919250	---	34.40	50.00	15.60	L1	OFF	20.0
7.919250	45.84	---	60.00	14.16	L1	OFF	20.0
8.533500	---	32.78	50.00	17.22	L1	OFF	20.0
8.533500	46.89	---	60.00	13.11	L1	OFF	20.0
8.913750	---	31.77	50.00	18.23	L1	OFF	20.0
8.913750	45.45	---	60.00	14.55	L1	OFF	20.0
9.195000	---	34.59	50.00	15.41	L1	OFF	20.0
9.195000	48.95	---	60.00	11.05	L1	OFF	20.0
9.683250	---	35.58	50.00	14.42	L1	OFF	20.1
9.683250	50.52	---	60.00	9.48	L1	OFF	20.1
10.232250	---	36.85	50.00	13.15	L1	OFF	20.1
10.232250	51.76	---	60.00	8.24	L1	OFF	20.1
10.927500	---	39.59	50.00	10.41	L1	OFF	20.1
10.927500	54.39	---	60.00	5.61	L1	OFF	20.1
11.607000	---	37.62	50.00	12.38	L1	OFF	20.1
11.607000	52.01	---	60.00	7.99	L1	OFF	20.1
12.140250	---	35.25	50.00	14.75	L1	OFF	20.2
12.140250	49.23	---	60.00	10.77	L1	OFF	20.2
12.792750	---	37.54	50.00	12.46	L1	OFF	20.2
12.792750	49.41	---	60.00	10.59	L1	OFF	20.2
13.407000	---	35.89	50.00	14.11	L1	OFF	20.2
13.407000	47.71	---	60.00	12.29	L1	OFF	20.2
14.091000	---	34.60	50.00	15.40	L1	OFF	20.2
14.091000	46.04	---	60.00	13.96	L1	OFF	20.2
14.687250	---	34.95	50.00	15.05	L1	OFF	20.3

14.687250	45.08	---	60.00	14.92	L1	OFF	20.3
15.159750	---	33.73	50.00	16.27	L1	OFF	20.3
15.159750	42.87	---	60.00	17.13	L1	OFF	20.3
15.643500	---	33.91	50.00	16.09	L1	OFF	20.3
15.643500	42.01	---	60.00	17.99	L1	OFF	20.3
16.388250	---	29.57	50.00	20.43	L1	OFF	20.3
16.388250	38.04	---	60.00	21.96	L1	OFF	20.3

EUT Information

Report NO : 1D2414
 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)
0.190500	---	35.36	54.02	18.66	N	OFF	19.6
0.190500	53.44	---	64.02	10.58	N	OFF	19.6
0.195000	---	36.16	53.82	17.66	N	OFF	19.6
0.195000	53.10	---	63.82	10.72	N	OFF	19.6
0.204000	---	36.66	53.45	16.79	N	OFF	19.6
0.204000	53.04	---	63.45	10.41	N	OFF	19.6
0.253500	---	29.04	51.64	22.60	N	OFF	19.6
0.253500	45.64	---	61.64	16.00	N	OFF	19.6
0.264750	---	29.23	51.28	22.05	N	OFF	19.6
0.264750	45.16	---	61.28	16.12	N	OFF	19.6
0.276000	---	28.94	50.94	22.00	N	OFF	19.6
0.276000	45.02	---	60.94	15.92	N	OFF	19.6
0.314250	---	27.29	49.86	22.57	N	OFF	19.6
0.314250	43.93	---	59.86	15.93	N	OFF	19.6
0.327750	---	28.66	49.51	20.85	N	OFF	19.6
0.327750	45.82	---	59.51	13.69	N	OFF	19.6
0.341250	---	30.51	49.17	18.66	N	OFF	19.6
0.341250	46.45	---	59.17	12.72	N	OFF	19.6
0.377250	---	26.03	48.34	22.31	N	OFF	19.6
0.377250	40.19	---	58.34	18.15	N	OFF	19.6
0.397500	---	23.70	47.91	24.21	N	OFF	19.6

0.397500	26.69	---	57.91	31.22	N	OFF	19.6
0.413250	---	28.54	47.58	19.04	N	OFF	19.6
0.413250	42.44	---	57.58	15.14	N	OFF	19.6
0.440250	---	25.55	47.06	21.51	N	OFF	19.6
0.440250	38.28	---	57.06	18.78	N	OFF	19.6
0.458250	---	26.00	46.72	20.72	N	OFF	19.6
0.458250	39.78	---	56.72	16.94	N	OFF	19.6
0.478500	---	28.04	46.37	18.33	N	OFF	19.6
0.478500	40.25	---	56.37	16.12	N	OFF	19.6
0.507750	---	24.72	46.00	21.28	N	OFF	19.6
0.507750	37.92	---	56.00	18.08	N	OFF	19.6
0.539250	---	25.02	46.00	20.98	N	OFF	19.6
0.539250	38.87	---	56.00	17.13	N	OFF	19.6
0.561750	---	24.77	46.00	21.23	N	OFF	19.6
0.561750	38.36	---	56.00	17.64	N	OFF	19.6
0.584250	---	25.99	46.00	20.01	N	OFF	19.6
0.584250	40.33	---	56.00	15.67	N	OFF	19.6
0.602250	---	26.41	46.00	19.59	N	OFF	19.6
0.602250	40.73	---	56.00	15.27	N	OFF	19.6
0.620250	---	28.02	46.00	17.98	N	OFF	19.6
0.620250	40.63	---	56.00	15.37	N	OFF	19.6
0.645000	---	25.93	46.00	20.07	N	OFF	19.6
0.645000	39.82	---	56.00	16.18	N	OFF	19.6
0.674250	---	26.03	46.00	19.97	N	OFF	19.6
0.674250	40.57	---	56.00	15.43	N	OFF	19.6
0.714750	---	24.89	46.00	21.11	N	OFF	19.6
0.714750	38.02	---	56.00	17.98	N	OFF	19.6
0.755250	---	28.78	46.00	17.22	N	OFF	19.6
0.755250	41.05	---	56.00	14.95	N	OFF	19.6
0.791250	---	25.22	46.00	20.78	N	OFF	19.6
0.791250	39.66	---	56.00	16.34	N	OFF	19.6
0.829500	---	26.84	46.00	19.16	N	OFF	19.6
0.829500	40.71	---	56.00	15.29	N	OFF	19.6
0.892500	---	30.91	46.00	15.09	N	OFF	19.6
0.892500	43.46	---	56.00	12.54	N	OFF	19.6
0.928500	---	25.51	46.00	20.49	N	OFF	19.6
0.928500	39.69	---	56.00	16.31	N	OFF	19.6
0.962250	---	29.68	46.00	16.32	N	OFF	19.6
0.962250	42.24	---	56.00	13.76	N	OFF	19.6
1.011750	---	26.79	46.00	19.21	N	OFF	19.6
1.011750	40.71	---	56.00	15.29	N	OFF	19.6
1.054500	---	25.62	46.00	20.38	N	OFF	19.6
1.054500	41.14	---	56.00	14.86	N	OFF	19.6
1.101750	---	28.71	46.00	17.29	N	OFF	19.6
1.101750	41.78	---	56.00	14.22	N	OFF	19.6
1.162500	---	29.57	46.00	16.43	N	OFF	19.6
1.162500	42.27	---	56.00	13.73	N	OFF	19.6
1.221000	---	26.77	46.00	19.23	N	OFF	19.6
1.221000	41.23	---	56.00	14.77	N	OFF	19.6
1.288500	---	27.20	46.00	18.80	N	OFF	19.7
1.288500	41.58	---	56.00	14.42	N	OFF	19.7
1.351500	---	27.52	46.00	18.48	N	OFF	19.7
1.351500	40.92	---	56.00	15.08	N	OFF	19.7
1.416750	---	26.73	46.00	19.27	N	OFF	19.7
1.416750	41.21	---	56.00	14.79	N	OFF	19.7
1.513500	---	28.07	46.00	17.93	N	OFF	19.7
1.513500	39.31	---	56.00	16.69	N	OFF	19.7
1.583250	---	27.96	46.00	18.04	N	OFF	19.7
1.583250	40.76	---	56.00	15.24	N	OFF	19.7
1.648500	---	29.91	46.00	16.09	N	OFF	19.7
1.648500	42.01	---	56.00	13.99	N	OFF	19.7
1.720500	---	26.40	46.00	19.60	N	OFF	19.7
1.720500	35.59	---	56.00	20.41	N	OFF	19.7
1.788000	---	27.46	46.00	18.54	N	OFF	19.7
1.788000	40.02	---	56.00	15.98	N	OFF	19.7
1.866750	---	25.63	46.00	20.37	N	OFF	19.7
1.866750	38.54	---	56.00	17.46	N	OFF	19.7
1.990500	---	28.77	46.00	17.23	N	OFF	19.7
1.990500	41.15	---	56.00	14.85	N	OFF	19.7
2.139000	---	27.21	46.00	18.79	N	OFF	19.7
2.139000	40.80	---	56.00	15.20	N	OFF	19.7

2.206500	---	26.62	46.00	19.38	N	OFF	19.7
2.206500	39.41	---	56.00	16.59	N	OFF	19.7
2.334750	---	28.51	46.00	17.49	N	OFF	19.7
2.334750	41.63	---	56.00	14.37	N	OFF	19.7
2.528250	---	27.38	46.00	18.62	N	OFF	19.7
2.528250	40.32	---	56.00	15.68	N	OFF	19.7
2.638500	---	27.50	46.00	18.50	N	OFF	19.7
2.638500	40.09	---	56.00	15.91	N	OFF	19.7
2.820750	---	24.84	46.00	21.16	N	OFF	19.7
2.820750	28.02	---	56.00	27.98	N	OFF	19.7
2.955750	---	26.81	46.00	19.19	N	OFF	19.7
2.955750	38.04	---	56.00	17.96	N	OFF	19.7
3.088500	---	27.16	46.00	18.84	N	OFF	19.7
3.088500	38.20	---	56.00	17.80	N	OFF	19.7
3.518250	---	26.59	46.00	19.41	N	OFF	19.8
3.518250	36.51	---	56.00	19.49	N	OFF	19.8
3.669000	---	26.67	46.00	19.33	N	OFF	19.8
3.669000	36.85	---	56.00	19.15	N	OFF	19.8
3.840000	---	28.66	46.00	17.34	N	OFF	19.8
3.840000	39.84	---	56.00	16.16	N	OFF	19.8
3.921000	---	26.89	46.00	19.11	N	OFF	19.8
3.921000	36.59	---	56.00	19.41	N	OFF	19.8
4.130250	---	25.10	46.00	20.90	N	OFF	19.8
4.130250	27.49	---	56.00	28.51	N	OFF	19.8
4.330500	---	25.31	46.00	20.69	N	OFF	19.8
4.330500	27.31	---	56.00	28.69	N	OFF	19.8
4.749000	---	28.25	46.00	17.75	N	OFF	19.8
4.749000	38.54	---	56.00	17.46	N	OFF	19.8
4.985250	---	28.43	46.00	17.57	N	OFF	19.8
4.985250	39.11	---	56.00	16.89	N	OFF	19.8
5.293500	---	27.69	50.00	22.31	N	OFF	19.8
5.293500	39.17	---	60.00	20.83	N	OFF	19.8
5.844750	---	28.59	50.00	21.41	N	OFF	19.9
5.844750	39.87	---	60.00	20.13	N	OFF	19.9
6.672750	---	28.95	50.00	21.05	N	OFF	19.9
6.672750	42.32	---	60.00	17.68	N	OFF	19.9
6.949500	---	28.56	50.00	21.44	N	OFF	19.9
6.949500	40.00	---	60.00	20.00	N	OFF	19.9
7.224000	---	30.55	50.00	19.45	N	OFF	19.9
7.224000	43.69	---	60.00	16.31	N	OFF	19.9
7.503000	---	29.16	50.00	20.84	N	OFF	20.0
7.503000	43.97	---	60.00	16.03	N	OFF	20.0
7.991250	---	31.80	50.00	18.20	N	OFF	20.0
7.991250	45.47	---	60.00	14.53	N	OFF	20.0
8.324250	---	28.16	50.00	21.84	N	OFF	20.0
8.324250	36.17	---	60.00	23.83	N	OFF	20.0
8.817000	---	33.29	50.00	16.71	N	OFF	20.0
8.817000	47.24	---	60.00	12.76	N	OFF	20.0
8.871000	---	31.86	50.00	18.14	N	OFF	20.0
8.871000	45.89	---	60.00	14.11	N	OFF	20.0
9.145500	---	33.23	50.00	16.77	N	OFF	20.0
9.145500	47.76	---	60.00	12.24	N	OFF	20.0
9.629250	---	36.66	50.00	13.34	N	OFF	20.1
9.629250	51.80	---	60.00	8.20	N	OFF	20.1
10.245750	---	36.48	50.00	13.52	N	OFF	20.1
10.245750	51.65	---	60.00	8.35	N	OFF	20.1
10.797000	---	39.08	50.00	10.92	N	OFF	20.1
10.797000	54.17	---	60.00	5.83	N	OFF	20.1
11.078250	---	37.72	50.00	12.28	N	OFF	20.1
11.078250	53.54	---	60.00	6.46	N	OFF	20.1
11.559750	---	36.03	50.00	13.97	N	OFF	20.1
11.559750	50.68	---	60.00	9.32	N	OFF	20.1
11.829750	---	34.31	50.00	15.69	N	OFF	20.1
11.829750	46.95	---	60.00	13.05	N	OFF	20.1
12.354000	---	37.16	50.00	12.84	N	OFF	20.2
12.354000	48.01	---	60.00	11.99	N	OFF	20.2
12.966000	---	36.38	50.00	13.62	N	OFF	20.2
12.966000	47.71	---	60.00	12.29	N	OFF	20.2
13.440750	---	36.49	50.00	13.51	N	OFF	20.2
13.440750	46.77	---	60.00	13.23	N	OFF	20.2
13.987500	---	35.91	50.00	14.09	N	OFF	20.2

13.987500	45.43	---	60.00	14.57	N	OFF	20.2
14.658000	---	34.04	50.00	15.96	N	OFF	20.3
14.658000	43.16	---	60.00	16.84	N	OFF	20.3
15.310500	---	32.90	50.00	17.10	N	OFF	20.3
15.310500	40.45	---	60.00	19.55	N	OFF	20.3
16.037250	---	31.68	50.00	18.32	N	OFF	20.3
16.037250	36.92	---	60.00	23.08	N	OFF	20.3



Appendix C. Radiated Spurious Emission

Test Engineer :	Jesse Wang, Stan Hsieh and Ken Wu	Temperature :	20~26.9°C
		Relative Humidity :	54.1~67.6%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2330.895	53.42	-20.58	74	39.06	31.48	18.27	35.39	204	218	P	H
		2389.065	43.13	-10.87	54	28.7	31.4	18.44	35.41	204	218	A	H
	*	2412	107.23	-	-	92.65	31.5	18.5	35.42	204	218	P	H
	*	2412	104.19	-	-	89.61	31.5	18.5	35.42	204	218	A	H
													H
													H
		2357.67	54.22	-19.78	74	39.87	31.4	18.35	35.4	393	160	P	V
		2389.275	42.95	-11.05	54	28.52	31.4	18.44	35.41	393	160	A	V
	*	2412	103.5	-	-	88.92	31.5	18.5	35.42	393	160	P	V
	*	2412	100.52	-	-	85.94	31.5	18.5	35.42	393	160	A	V
													V
													V
802.11b CH 06 2437MHz		2359	53.16	-20.84	74	38.81	31.4	18.35	35.4	200	219	P	H
		2389.8	43.08	-10.92	54	28.65	31.4	18.45	35.42	200	219	A	H
	*	2437	110.56	-	-	95.76	31.7	18.53	35.43	200	219	P	H
	*	2437	107.34	-	-	92.54	31.7	18.53	35.43	200	219	A	H
		2486.49	54.05	-19.95	74	38.8	32.09	18.61	35.45	200	219	P	H
		2484.46	44	-10	54	28.76	32.08	18.61	35.45	200	219	A	H
		2346.68	54.17	-19.83	74	39.85	31.41	18.31	35.4	343	169	P	V
		2389.24	42.92	-11.08	54	28.49	31.4	18.44	35.41	343	169	A	V
	*	2437	105.74	-	-	90.94	31.7	18.53	35.43	343	169	P	V
	*	2437	102.69	-	-	87.89	31.7	18.53	35.43	343	169	A	V
		2488.66	54.43	-19.57	74	39.16	32.11	18.61	35.45	343	169	P	V
		2499.86	43.9	-10.1	54	28.53	32.2	18.63	35.46	343	169	A	V



802.11b CH 11 2462MHz	*	2462	108.5	-	-	93.47	31.9	18.57	35.44	121	211	P	H
	*	2462	105.33	-	-	90.3	31.9	18.57	35.44	121	211	A	H
		2497.76	55.4	-18.6	74	40.05	32.18	18.63	35.46	121	211	P	H
		2485.48	43.99	-10.01	54	28.75	32.08	18.61	35.45	121	211	A	H
													H
													H
	*	2462	102.61	-	-	87.58	31.9	18.57	35.44	380	170	P	V
	*	2462	99.48	-	-	84.45	31.9	18.57	35.44	380	170	A	V
		2494.44	54.37	-19.63	74	39.05	32.16	18.62	35.46	380	170	P	V
		2499.96	43.94	-10.06	54	28.57	32.2	18.63	35.46	380	170	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. 0+1	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	41.57	-32.43	74	53.75	34.05	12.73	58.96	-	-	P	H
		14499	47.69	-26.31	74	43.95	39.6	21.66	57.52	-	-	P	H
		16170	48.9	-25.1	74	41.11	41.2	22.69	56.1	-	-	P	H
		16170	39.29	-14.71	54	31.5	41.2	22.69	56.1	-	-	A	H
		17730	51.49	-22.51	74	41.57	41.53	23.56	55.17	-	-	P	H
		17730	40.74	-13.26	54	30.82	41.53	23.56	55.17	-	-	A	H
													H
													H
													H
													H
													H
													H
		4824	40.68	-33.32	74	52.86	34.05	12.73	58.96	-	-	P	V
		14499	47.19	-26.81	74	43.45	39.6	21.66	57.52	-	-	P	V
		16140	48.83	-25.17	74	41.03	41.2	22.68	56.08	-	-	P	V
		16140	38.95	-15.05	54	31.15	41.2	22.68	56.08	-	-	A	V
		17835	51.21	-22.79	74	41.19	41.53	23.62	55.13	-	-	P	V
		17835	40.87	-13.13	54	30.85	41.53	23.62	55.13	-	-	A	V
													V
													V
													V
													V
													V
													V



WIFI Ant. 0+1	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	40.41	-33.59	74	52.48	34.05	12.75	58.87	-	-	P	H
		7311	42.06	-31.94	74	48.88	35.64	15.04	57.5	-	-	P	H
		14499	47.59	-26.41	74	43.85	39.6	21.66	57.52	-	-	P	H
		16005	48.74	-25.26	74	41.12	41.01	22.6	55.99	-	-	P	H
		16005	39.17	-14.83	54	31.55	41.01	22.6	55.99	-	-	A	H
		17715	51.06	-22.94	74	41.18	41.51	23.55	55.18	-	-	P	H
		17715	41.35	-12.65	54	31.47	41.51	23.55	55.18	-	-	A	H
													H
													H
													H
													H
													H
		4874	40.02	-33.98	74	52.09	34.05	12.75	58.87	-	-	P	V
		7311	41.69	-32.31	74	48.51	35.64	15.04	57.5	-	-	P	V
		14499	47.67	-26.33	74	43.93	39.6	21.66	57.52	-	-	P	V
		15705	49.06	-24.94	74	42.7	40.42	22.41	56.47	-	-	P	V
		15705	38.2	-15.8	54	31.84	40.42	22.41	56.47	-	-	A	V
		17775	51.4	-22.6	74	41.39	41.57	23.59	55.15	-	-	P	V
		17775	41.37	-12.63	54	31.36	41.57	23.59	55.15	-	-	A	V
													V
													V
													V
													V
													V

WIFI Ant. 0+1	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	40.69	-33.31	74	52.63	34.05	12.79	58.78	-	-	P	H
		7386	40.7	-33.3	74	47.38	35.87	15	57.55	-	-	P	H
		14499	47.44	-26.56	74	43.7	39.6	21.66	57.52	-	-	P	H
		16140	49.03	-24.97	74	41.23	41.2	22.68	56.08	-	-	P	H
		16140	39.42	-14.58	54	31.62	41.2	22.68	56.08	-	-	A	H
		17715	51.06	-22.94	74	41.18	41.51	23.55	55.18	-	-	P	H
		17715	41.71	-12.29	54	31.83	41.51	23.55	55.18	-	-	A	H
													H
													H
													H
													H
													H
		4924	40.16	-33.84	74	52.1	34.05	12.79	58.78	-	-	P	V
		7386	41.07	-32.93	74	47.75	35.87	15	57.55	-	-	P	V
		14499	47.38	-26.62	74	43.64	39.6	21.66	57.52	-	-	P	V
		15855	49.2	-24.8	74	42.11	40.81	22.51	56.23	-	-	P	V
		15855	38.62	-15.38	54	31.53	40.81	22.51	56.23	-	-	A	V
		17700	51.17	-22.83	74	41.31	41.5	23.55	55.19	-	-	P	V
		17700	41.63	-12.37	54	31.77	41.5	23.55	55.19	-	-	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 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI Ant. 0+1	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		2387.805	53.81	-20.19	74	39.38	31.4	18.44	35.41	123	219	P	H
		2390	43.94	-10.06	54	29.51	31.4	18.45	35.42	123	219	A	H
	*	2412	107.84	-	-	93.26	31.5	18.5	35.42	123	219	P	H
	*	2412	100.02	-	-	85.44	31.5	18.5	35.42	123	219	A	H
													H
													H
		2380.56	54.08	-19.92	74	39.67	31.4	18.42	35.41	394	158	P	V
		2390	43.67	-10.33	54	29.24	31.4	18.45	35.42	394	158	A	V
	*	2412	104.2	-	-	89.62	31.5	18.5	35.42	394	158	P	V
	*	2412	97.18	-	-	82.6	31.5	18.5	35.42	394	158	A	V
													V
													V
802.11g CH 06 2437MHz		2332.26	54.15	-19.85	74	39.8	31.47	18.27	35.39	105	215	P	H
		2389.94	43.34	-10.66	54	28.91	31.4	18.45	35.42	105	215	A	H
	*	2437	110.32	-	-	95.52	31.7	18.53	35.43	105	215	P	H
	*	2437	103.6	-	-	88.8	31.7	18.53	35.43	105	215	A	H
		2485.23	54.65	-19.35	74	39.41	32.08	18.61	35.45	105	215	P	H
		2483.5	44.27	-9.73	54	29.05	32.07	18.6	35.45	105	215	A	H
		2335.2	53.53	-20.47	74	39.18	31.46	18.28	35.39	332	176	P	V
		2389.94	43.04	-10.96	54	28.61	31.4	18.45	35.42	332	176	A	V
	*	2437	109.66	-	-	94.86	31.7	18.53	35.43	332	176	P	V
	*	2437	102	-	-	87.2	31.7	18.53	35.43	332	176	A	V
		2496.92	54.68	-19.32	74	39.34	32.18	18.62	35.46	332	176	P	V
		2485.02	43.85	-10.15	54	28.61	32.08	18.61	35.45	332	176	A	V



802.11g CH 11 2462MHz	*	2462	110.17	-	-	95.14	31.9	18.57	35.44	122	210	P	H
	*	2462	102.63	-	-	87.6	31.9	18.57	35.44	122	210	A	H
		2483.84	56.89	-17.11	74	41.67	32.07	18.6	35.45	122	210	P	H
		2483.52	47.07	-6.93	54	31.85	32.07	18.6	35.45	122	210	A	H
													H
													H
	*	2462	104.99	-	-	89.96	31.9	18.57	35.44	291	174	P	V
	*	2462	97.66	-	-	82.63	31.9	18.57	35.44	291	174	A	V
		2498.48	54.33	-19.67	74	38.97	32.19	18.63	35.46	291	174	P	V
		2483.52	44.33	-9.67	54	29.11	32.07	18.6	35.45	291	174	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. 0+1	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	41.12	-32.88	74	53.3	34.05	12.73	58.96	-	-	P	H
		14499	47.33	-26.67	74	43.59	39.6	21.66	57.52	-	-	P	H
		16140	48.78	-25.22	74	40.98	41.2	22.68	56.08	-	-	P	H
		16140	38.62	-15.38	54	30.82	41.2	22.68	56.08	-	-	A	H
		17820	51.25	-22.75	74	41.21	41.56	23.61	55.13	-	-	P	H
		17820	41.46	-12.54	54	31.42	41.56	23.61	55.13	-	-	A	H
													H
													H
													H
													H
													H
													H
		4824	40.35	-33.65	74	52.53	34.05	12.73	58.96	-	-	P	V
		14499	46.82	-27.18	74	43.08	39.6	21.66	57.52	-	-	P	V
		16095	48.73	-25.27	74	40.94	41.19	22.65	56.05	-	-	P	V
		16095	38.89	-15.11	54	31.1	41.19	22.65	56.05	-	-	A	V
		17790	51.15	-22.85	74	41.11	41.59	23.6	55.15	-	-	P	V
		17790	41.3	-12.7	54	31.26	41.59	23.6	55.15	-	-	A	V
													V
													V
													V
													V
													V
													V



WIFI Ant. 0+1	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	40.69	-33.31	74	52.76	34.05	12.75	58.87	-	-	P	H
		7311	44.33	-29.67	74	51.15	35.64	15.04	57.5	-	-	P	H
		14499	47.62	-26.38	74	43.88	39.6	21.66	57.52	-	-	P	H
		16110	48.79	-25.21	74	40.98	41.2	22.67	56.06	-	-	P	H
		16110	38.93	-15.07	54	31.12	41.2	22.67	56.06	-	-	A	H
		17715	50.52	-23.48	74	40.64	41.51	23.55	55.18	-	-	P	H
		17715	40.55	-13.45	54	30.67	41.51	23.55	55.18	-	-	A	H
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													H
		4874	40.92	-33.08	74	52.99	34.05	12.75	58.87	-	-	P	V
		7311	47.43	-26.57	74	54.25	35.64	15.04	57.5	-	-	P	V
		14499	46.95	-27.05	74	43.21	39.6	21.66	57.52	-	-	P	V
		16170	48.84	-25.16	74	41.05	41.2	22.69	56.1	-	-	P	V
		16170	39.31	-14.69	54	31.52	41.2	22.69	56.1	-	-	A	V
		17805	51.42	-22.58	74	41.37	41.59	23.6	55.14	-	-	P	V
		17805	40.9	-13.1	54	30.85	41.59	23.6	55.14	-	-	A	V
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													V
													V

WIFI Ant. 0+1	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	40.39	-33.61	74	52.33	34.05	12.79	58.78	-	-	P	H
		7386	40.75	-33.25	74	47.43	35.87	15	57.55	-	-	P	H
		14499	47.49	-26.51	74	43.75	39.6	21.66	57.52	-	-	P	H
		16155	49.53	-24.47	74	41.73	41.2	22.69	56.09	-	-	P	H
		16155	38.61	-15.39	54	30.81	41.2	22.69	56.09	-	-	A	H
		17745	51.01	-22.99	74	41.07	41.54	23.57	55.17	-	-	P	H
		17745	40.83	-13.17	54	30.89	41.54	23.57	55.17	-	-	A	H
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		4924	40.25	-33.75	74	52.19	34.05	12.79	58.78	-	-	P	V
		7386	40.69	-33.31	74	47.37	35.87	15	57.55	-	-	P	V
		14499	47.11	-26.89	74	43.37	39.6	21.66	57.52	-	-	P	V
		16125	49.3	-24.7	74	41.5	41.2	22.67	56.07	-	-	P	V
		16125	39.51	-14.49	54	31.71	41.2	22.67	56.07	-	-	A	V
		17745	50.9	-23.1	74	40.96	41.54	23.57	55.17	-	-	P	V
		17745	40.81	-13.19	54	30.87	41.54	23.57	55.17	-	-	A	V
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													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. 0+1	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	55.34	-18.66	74	40.9	31.4	18.45	35.41	173	218	P	H
		2390	46.9	-7.1	54	32.47	31.4	18.45	35.42	173	218	A	H
	*	2412	108.95	-	-	94.37	31.5	18.5	35.42	173	218	P	H
	*	2412	99.78	-	-	85.2	31.5	18.5	35.42	173	218	A	H
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													H
		2388.96	54.41	-19.59	74	39.98	31.4	18.44	35.41	394	160	P	V
		2390	44.35	-9.65	54	29.92	31.4	18.45	35.42	394	160	A	V
	*	2412	106.12	-	-	91.54	31.5	18.5	35.42	394	160	P	V
	*	2412	96.38	-	-	81.8	31.5	18.5	35.42	394	160	A	V
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802.11ax HE20 Full CH 06 2437MHz		2379.86	53.71	-20.29	74	39.3	31.4	18.42	35.41	199	215	P	H
		2389.94	43.38	-10.62	54	28.95	31.4	18.45	35.42	199	215	A	H
	*	2437	111.94	-	-	97.14	31.7	18.53	35.43	199	215	P	H
	*	2437	103.8	-	-	89	31.7	18.53	35.43	199	215	A	H
		2483.5	54.2	-19.8	74	38.98	32.07	18.6	35.45	199	215	P	H
		2483.62	44.4	-9.6	54	29.18	32.07	18.6	35.45	199	215	A	H
		2381.12	53.31	-20.69	74	38.89	31.4	18.43	35.41	376	159	P	V
		2389.8	42.97	-11.03	54	28.54	31.4	18.45	35.42	376	159	A	V
	*	2437	107.34	-	-	92.54	31.7	18.53	35.43	376	159	P	V
	*	2437	98.66	-	-	83.86	31.7	18.53	35.43	376	159	A	V
		2490.55	54.68	-19.32	74	39.4	32.12	18.61	35.45	376	159	P	V
		2483.5	43.96	-10.04	54	28.74	32.07	18.6	35.45	376	159	A	V



WIFI Ant. 0+1	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	109.21	-	-	94.18	31.9	18.57	35.44	120	208	P	H
	*	2462	101	-	-	85.97	31.9	18.57	35.44	120	208	A	H
		2483.76	58.64	-15.36	74	43.42	32.07	18.6	35.45	120	208	P	H
		2483.52	49.01	-4.99	54	33.79	32.07	18.6	35.45	120	208	A	H
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													H
	*	2462	103.5	-	-	88.47	31.9	18.57	35.44	379	162	P	V
	*	2462	95.16	-	-	80.13	31.9	18.57	35.44	379	162	A	V
		2483.76	56.01	-17.99	74	40.79	32.07	18.6	35.45	379	162	P	V
		2483.52	45.69	-8.31	54	30.47	32.07	18.6	35.45	379	162	A	V
													V
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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. 0+1	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	40.8	-33.2	74	52.98	34.05	12.73	58.96	-	-	P	H
		14499	47.26	-26.74	74	43.52	39.6	21.66	57.52	-	-	P	H
		16170	48.79	-25.21	74	41	41.2	22.69	56.1	-	-	P	H
		16170	39.22	-14.78	54	31.43	41.2	22.69	56.1	-	-	A	H
		17775	51.26	-22.74	74	41.25	41.57	23.59	55.15	-	-	P	H
		17775	40.77	-13.23	54	30.76	41.57	23.59	55.15	-	-	A	H
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		4824	40.44	-33.56	74	52.62	34.05	12.73	58.96	-	-	P	V
		14499	47.96	-26.04	74	44.22	39.6	21.66	57.52	-	-	P	V
		16185	48.96	-25.04	74	41.17	41.2	22.7	56.11	-	-	P	V
		16185	39.56	-14.44	54	31.77	41.2	22.7	56.11	-	-	A	V
		17760	51.05	-22.95	74	41.08	41.56	23.57	55.16	-	-	P	V
		17760	40.97	-13.03	54	31	41.56	23.57	55.16	-	-	A	V
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WIFI Ant. 0+1	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	40.49	-33.51	74	52.56	34.05	12.75	58.87	-	-	P	H
		7311	47.62	-26.38	74	54.44	35.64	15.04	57.5	-	-	P	H
		14499	47.03	-26.97	74	43.29	39.6	21.66	57.52	-	-	P	H
		16035	48.92	-25.08	74	41.24	41.07	22.62	56.01	-	-	P	H
		16035	38.92	-15.08	54	31.24	41.07	22.62	56.01	-	-	A	H
		17865	51.57	-22.43	74	41.57	41.47	23.64	55.11	-	-	P	H
		17865	41.07	-12.93	54	31.07	41.47	23.64	55.11	-	-	A	H
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		4874	40.38	-33.62	74	52.45	34.05	12.75	58.87	-	-	P	V
		7311	41.67	-32.33	74	48.49	35.64	15.04	57.5	-	-	P	V
		14499	47.68	-26.32	74	43.94	39.6	21.66	57.52	-	-	P	V
		15975	49.29	-24.71	74	41.76	40.97	22.59	56.03	-	-	P	V
		15975	39.08	-14.92	54	31.55	40.97	22.59	56.03	-	-	A	V
		17730	51.36	-22.64	74	41.44	41.53	23.56	55.17	-	-	P	V
		17730	41.03	-12.97	54	31.11	41.53	23.56	55.17	-	-	A	V
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2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 26/0 CH 01 2412MHz		2317.98	53.45	-20.55	74	39.08	31.53	18.23	35.39	179	207	P	H
		2390	43.28	-10.72	54	28.85	31.4	18.45	35.42	179	207	A	H
	*	2412	116.82	-	-	102.24	31.5	18.5	35.42	179	207	P	H
	*	2412	108.27	-	-	93.69	31.5	18.5	35.42	179	207	A	H
													H
													H
		2344.755	53.5	-20.5	74	39.17	31.42	18.31	35.4	400	173	P	V
		2388.225	43.04	-10.96	54	28.61	31.4	18.44	35.41	400	173	A	V
	*	2412	112.33	-	-	97.75	31.5	18.5	35.42	400	173	P	V
	*	2412	103.66	-	-	89.08	31.5	18.5	35.42	400	173	A	V
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802.11ax HE20 Partial 26/8 CH 11 2462MHz	*	2462	117.49	-	-	102.46	31.9	18.57	35.44	283	223	P	H
	*	2462	110.03	-	-	95	31.9	18.57	35.44	283	223	A	H
		2485.04	56.03	-17.97	74	40.79	32.08	18.61	35.45	283	223	P	H
		2483.84	44.08	-9.92	54	28.86	32.07	18.6	35.45	283	223	A	H
													H
													H
	*	2462	112.79	-	-	97.76	31.9	18.57	35.44	366	174	P	V
	*	2462	104.95	-	-	89.92	31.9	18.57	35.44	366	174	A	V
		2484.36	59.93	-14.07	74	44.7	32.07	18.61	35.45	366	174	P	V
		2483.56	43.89	-10.11	54	28.67	32.07	18.6	35.45	366	174	A	V
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Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission above 18GHz

2.4GHz WIFI 802.11ax HE20 (SHF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11ax HE20 SHF		23635	39.41	-34.59	74	50.35	38.81	8.64	58.39	-	-	P	H
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Emission below 1GHz

2.4GHz WIFI 802.11ax HE20 (LF)

[illegible]



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	Peak or Average
H/V	Horizontal or Vertical



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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

2. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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



Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Jesse Wang, Stan Hsieh and Ken Wu	Temperature :	20~26.9°C
		Relative Humidity :	54.1~67.6%

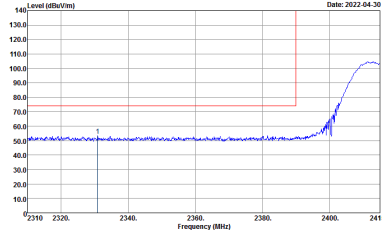
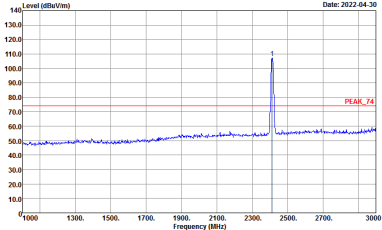
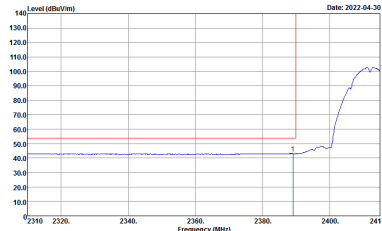
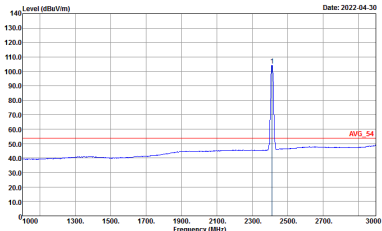
Note symbol

-L	Low channel location
-R	High channel location

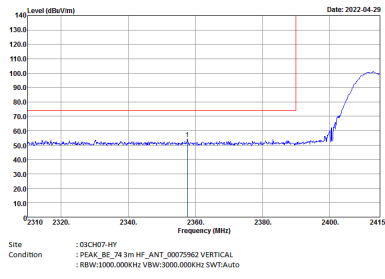
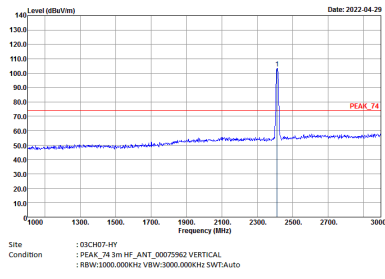
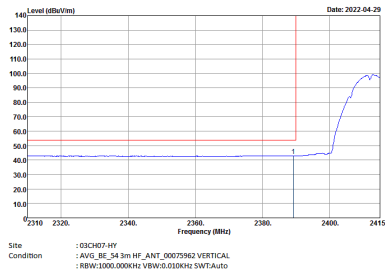
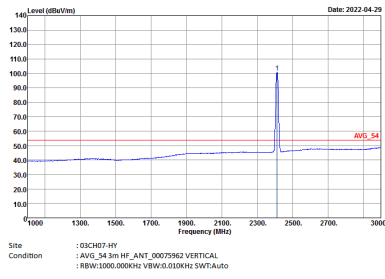


2.4GHz 2400~2483.5MHz

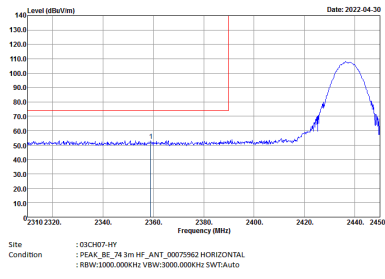
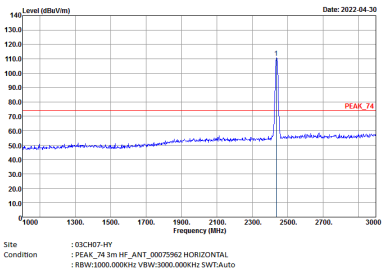
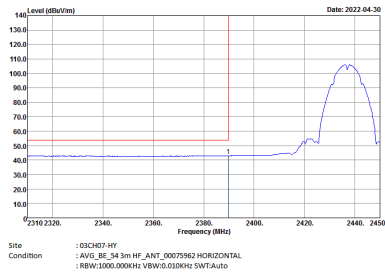
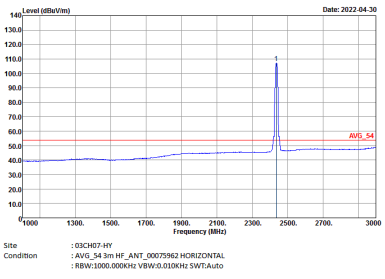
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_78 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : PEAK_78 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

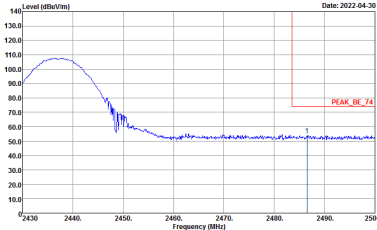
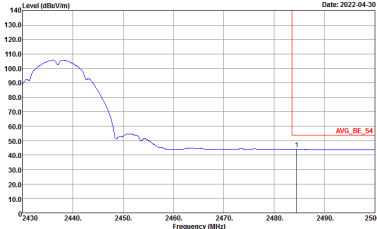


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.0100kHz SWT:Auto	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.0100kHz SWT:Auto

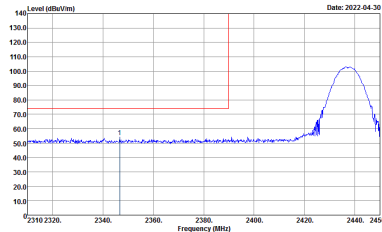
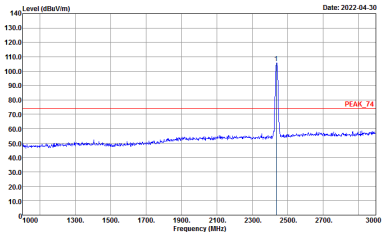
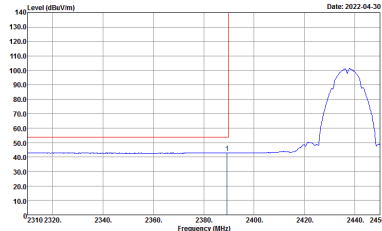
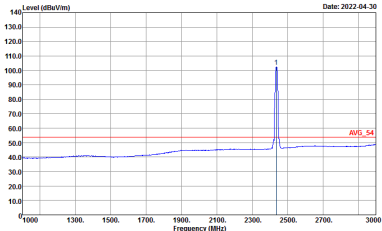


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_RE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH07-HY Condition : : AVG_RE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

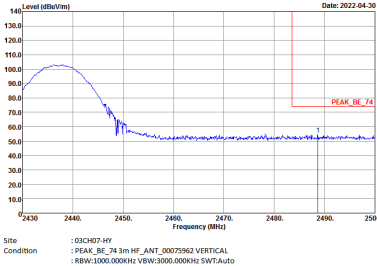
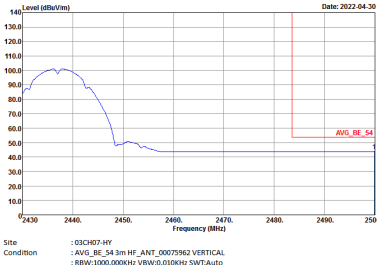


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PSKAIK_BE_74.3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54.3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3.010kHz SWT:Auto	Left blank

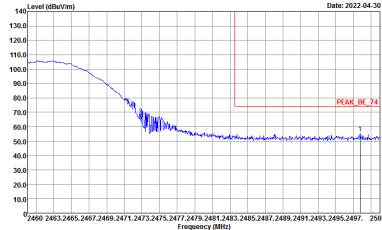
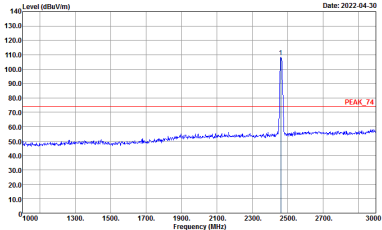
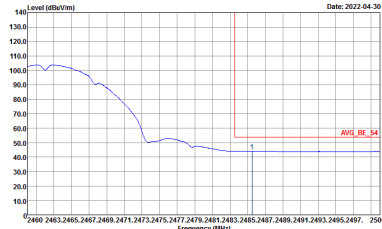
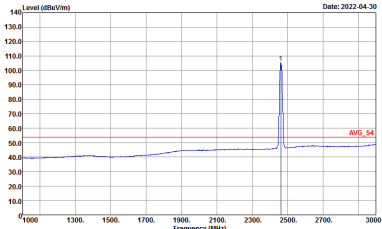


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.0100kHz SWT:Auto	 Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.0100kHz SWT:Auto

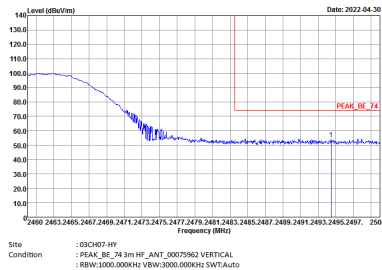
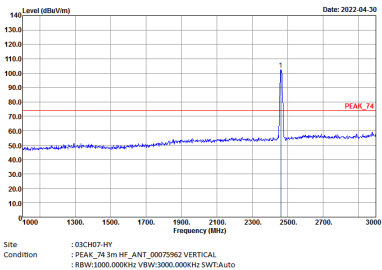
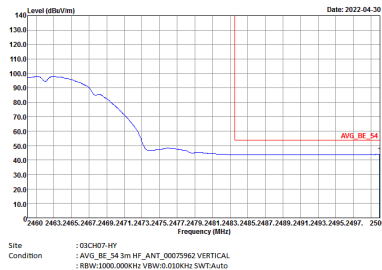
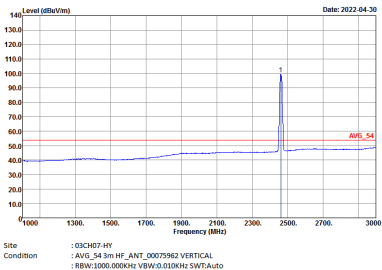


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PSKAIK_BE_74.3m HF_ANT_00075962 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54.3m HF_ANT_00075962 VERTICAL RBW:1000.000kHz VBW:0.0100kHz SWT:Auto	Left blank



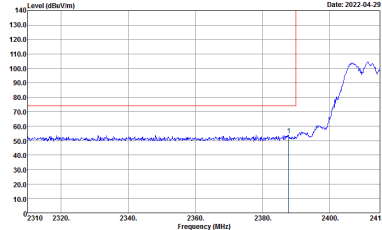
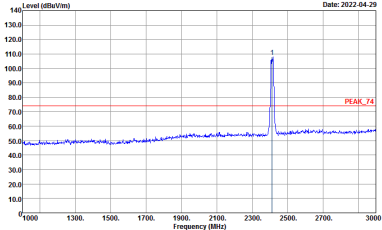
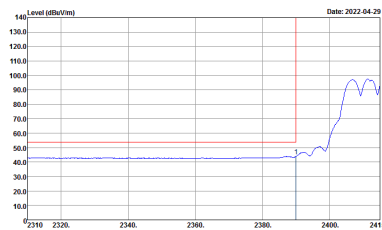
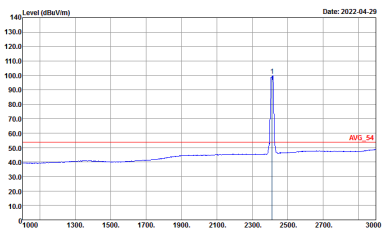
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.010kHz 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	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_78 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : PEAK_78 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

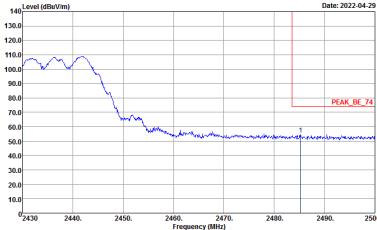
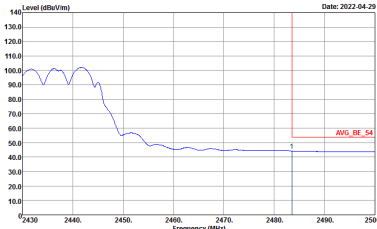


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
0+1	Vertical	Fundamental
Peak		
Avg.		

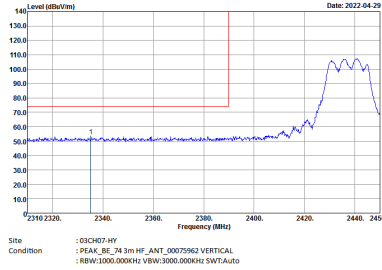
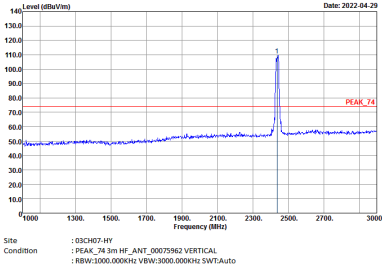
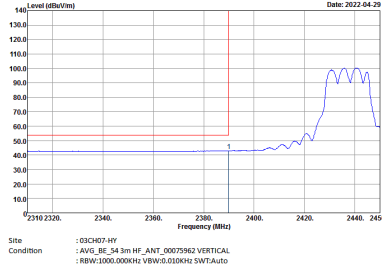
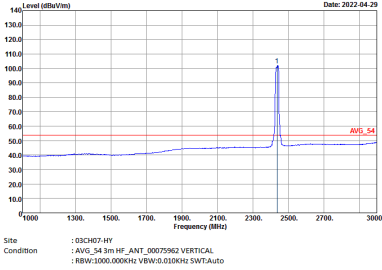


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak		
Avg.		

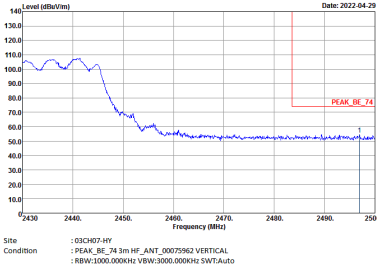
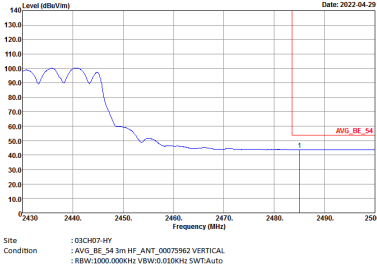


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank
Avg.	 Site : 03CH07-HY Condition : : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank

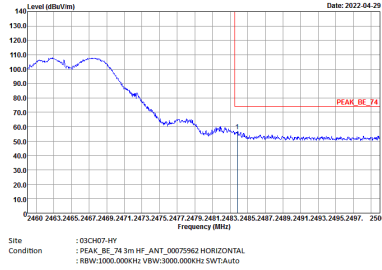
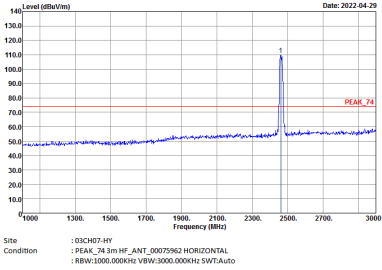
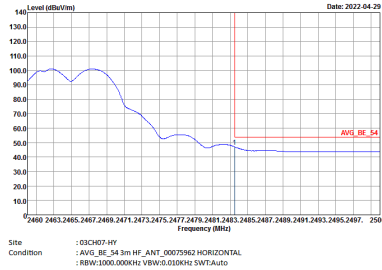
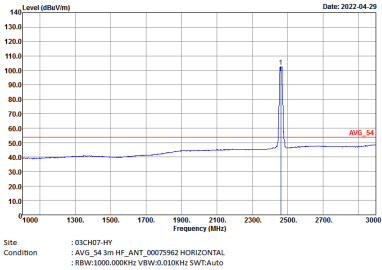


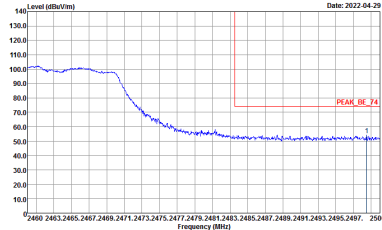
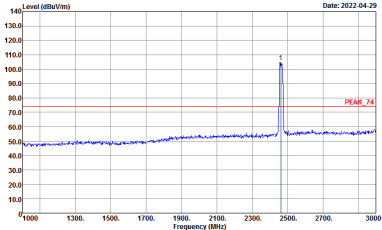
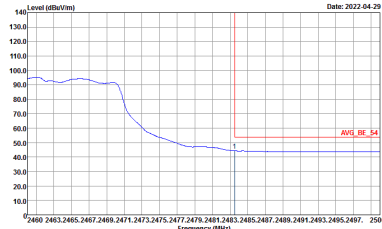
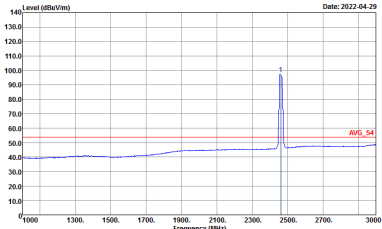
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak		
		



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : : PSIAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left Blank
Avg.	 Site : 03CH07-HY Condition : : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH07-HY Condition : : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH07-HY Condition : : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

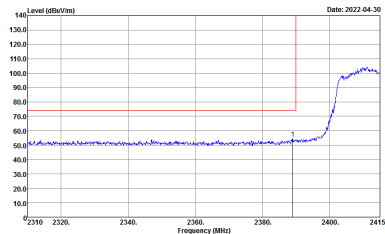
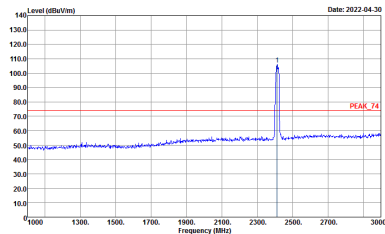
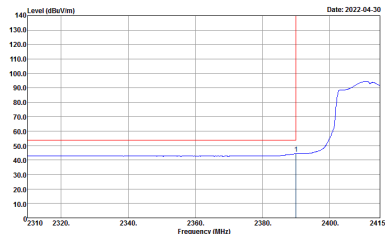
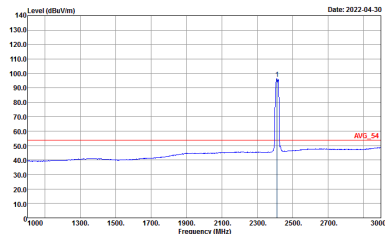


2.4GHz 2400~2483.5MHz

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	Site : 03CH07-HY Condition : PEAK_BE_78 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

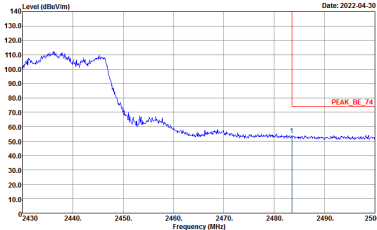
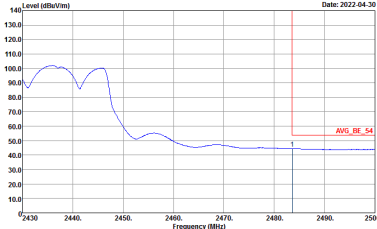


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH07-HY Condition : AVG_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : AVG_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

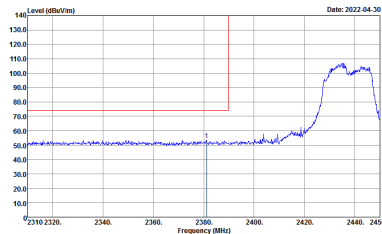
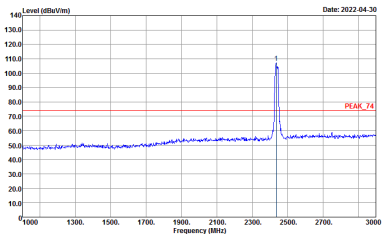
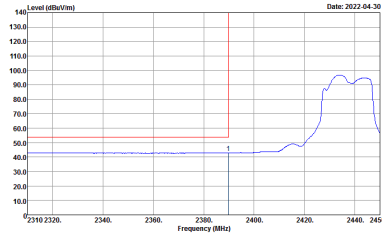
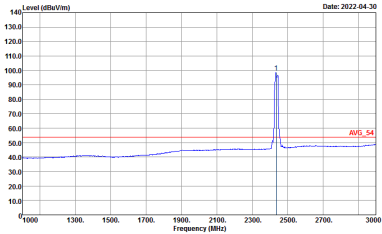


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

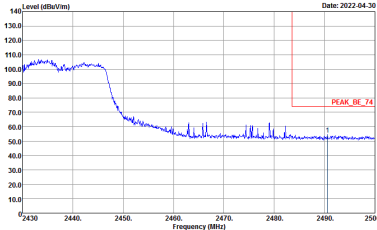
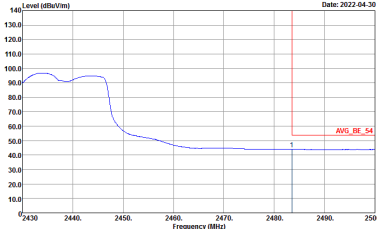


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWTAuto	Left blank
Avg.	 Site : 03CH07-HY Condition : : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWTAuto	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_RE_74.3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : : PEAK_74.3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : : AVG_RE_54.3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH07-HY Condition : : AVG_54.3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

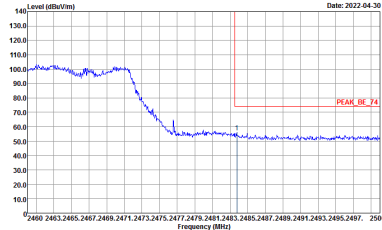
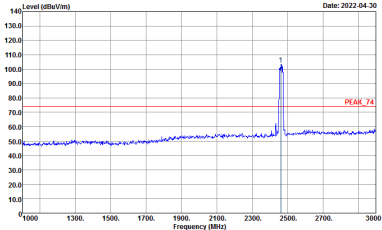
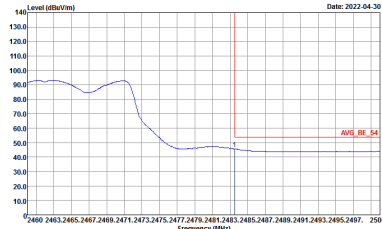
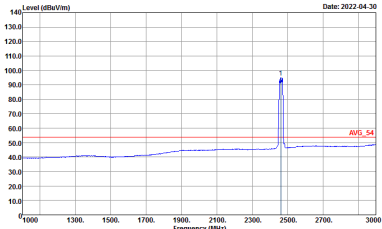


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 VERTICAL RBW:1000.000kHz VBW:0.0100kHz SWT:Auto	Left blank

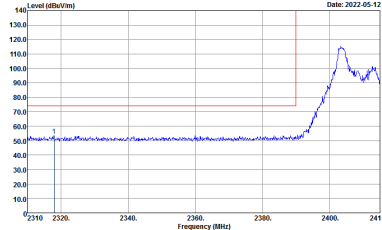
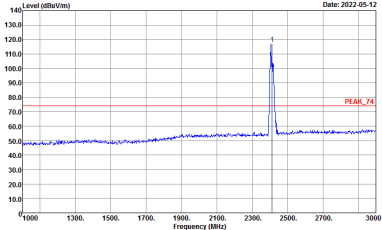
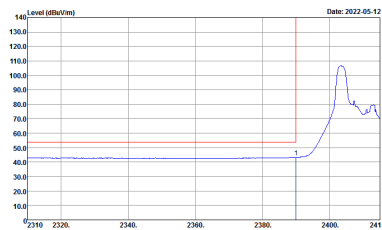
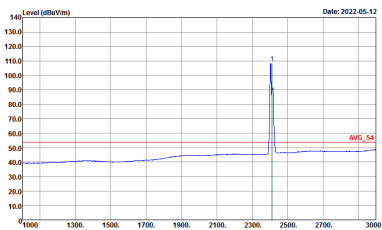


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization. The plot shows a blue line representing the spectrum with a red vertical line at 2462 MHz. A red horizontal line at approximately 75 dBuV/m is labeled 'PEAK_BE_74'. The x-axis ranges from 2400 to 2500 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH07-HY Condition : : PEAK_BE_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Level (dBuV/m) vs Frequency (MHz) plot for Fundamental polarization. The plot shows a blue line representing the spectrum with a red vertical line at 2462 MHz. A red horizontal line at approximately 75 dBuV/m is labeled 'PEAK_74'. The x-axis ranges from 1000 to 3000 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal polarization. The plot shows a blue line representing the spectrum with a red vertical line at 2462 MHz. A red horizontal line at approximately 55 dBuV/m is labeled 'AVG_BE_54'. The x-axis ranges from 2400 to 2500 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH07-HY Condition : : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	Level (dBuV/m) vs Frequency (MHz) plot for Fundamental polarization. The plot shows a blue line representing the spectrum with a red vertical line at 2462 MHz. A red horizontal line at approximately 55 dBuV/m is labeled 'AVG_54'. The x-axis ranges from 1000 to 3000 MHz, and the y-axis ranges from 10.0 to 140.0 dBuV/m. Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH07-HY Condition : : PEAK_BE_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH07-HY Condition : : AVG_BE_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.0100kHz SWT:Auto	 Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.0100kHz SWT:Auto

2.4GHz 2400~2483.5MHz
WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH07-HY Condition : PEAK_BE_78 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH07-HY Condition : PEAK_24 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH07-HY Condition : AVG_BE_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH07-HY Condition : AVG_54 3m HF_ANT_00075962 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Site : 03CH07-HY Condition : : PEAK_74 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	Site : 03CH07-HY Condition : : AVG_54 3m HF_ANT_00075962 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto