

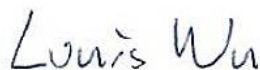


FCC RADIO TEST REPORT

FCC ID : A5MLM21C81
Equipment : Mobile Phone
Brand Name : Lenovo
Model Name : Lenovo L70081
Applicant : LENOVO (BEIJING) LIMITED
201-H2-6, Floor 2, Building 2, No.6
Shangdi West Road, Haidian District,
Beijing, China 100085
Manufacturer : Lenovo PC HK Limited
23/F, Lincoln House, Taikoo
Place 979 King's Road, Quarry Bay,
Hong Kong, P.R. China
Standard : FCC Part 15 Subpart C §15.247

The product was received on Jan. 25, 2021 and testing was started from Jan. 30, 2021 and completed on Apr. 12, 2021. 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 of 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

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 Product Specification of Equipment Under Test.....	5
1.3 Modification of EUT	6
1.4 Testing Location	6
1.5 Applicable Standards.....	7
2 Test Configuration of Equipment Under Test	8
2.1 Carrier Frequency and Channel	8
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.....	13
3.3 Power Spectral Density Measurement	14
3.4 Conducted Band Edges and Spurious Emission Measurement	17
3.5 Radiated Band Edges and Spurious Emission Measurement	42
3.6 AC Conducted Emission Measurement.....	46
3.7 Antenna Requirements.....	48
4 List of Measuring Equipment.....	49
5 Uncertainty of Evaluation	50
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	Issued Date
FR112124-02C	01	Initial issue of report	Jun. 10, 2021

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	Under limit 3.14 dB at 2390.000 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 13.52 dB at 0.499 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	Pass	-

Remark: The test report by adding Wi-Fi 6e Function. Since the device RF and antenna design is the same and test result is not affected, except AC Conducted Emissions is carrying out, FR112124-02C report reuse test data from the TR112124C report.

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Keven Cheng

Report Producer: Lucy Wu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Lenovo
Model Name	Lenovo L70081
FCC ID	A5MLM21C81
EUT supports Radios application	GSM/WCDMA/HSPA/LTE/5G NR/NFC/GNSS WLAN 11a/b/g/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80/VHT160 WLAN 11ax HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer.

1.2 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Frequency Range	2412 MHz ~ 2462 MHz
Maximum Output Power to Antenna	MIMO <Ant. 6+7> 802.11b: 20.71 dBm / 0.1178 W 802.11g: 19.67 dBm / 0.0927 W 802.11n HT20: 19.48 dBm / 0.0887 W 802.11n HT40: 13.28 dBm / 0.0213 W 802.11ac VHT20: 19.38 dBm / 0.0867 W 802.11ac VHT40: 13.18 dBm / 0.0208 W 802.11ax HE20: 19.58 dBm / 0.0908 W 802.11ax HE40: 13.38 dBm / 0.0218 W
99% Occupied Bandwidth	MIMO <Ant. 6> 802.11b: 13.30 MHz 802.11g: 16.35 MHz 802.11ax HE20: 18.95 MHz 802.11ax HE40: 37.80 MHz MIMO <Ant. 7> 802.11b: 13.45 MHz 802.11g: 16.40 MHz 802.11ax HE20: 18.95 MHz 802.11ax HE40: 37.90 MHz

Product Specification subjective to this standard	
Antenna Type / Gain	<Ant. 6> : PIFA Antenna with gain 1.5 dBi <Ant. 7> : PIFA Antenna with gain 0 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11 ac: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM) 802.11 ax: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM /1024QAM)

Remark:

1. MIMO Ant. 6+7 is a calculated result from sum of the power MIMO Ant. 6 and MIMO Ant. 7.
2. The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.

1.3 Modification of EUT

No modifications are made to the EUT during all test items.

1.4 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
Test Site No.	Sporton Site No.
	TH02-HY, CO05-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
Test Site No.	Sporton Site No.
	03CH16-HY (TAF Code: 3786)
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

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

FCC designation No.: TW1190 and TW3786



1.5 Applicable Standards

According to the specifications of 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 test items were verified and recorded according to the standards and without any deviation during the test.
2. The TAF code is not including all the FCC KDB listed without accreditation.

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, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Z plane) were recorded in this report.
- 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

Final test modes are considering the modulation and worse data rates as below table.

MIMO Mode

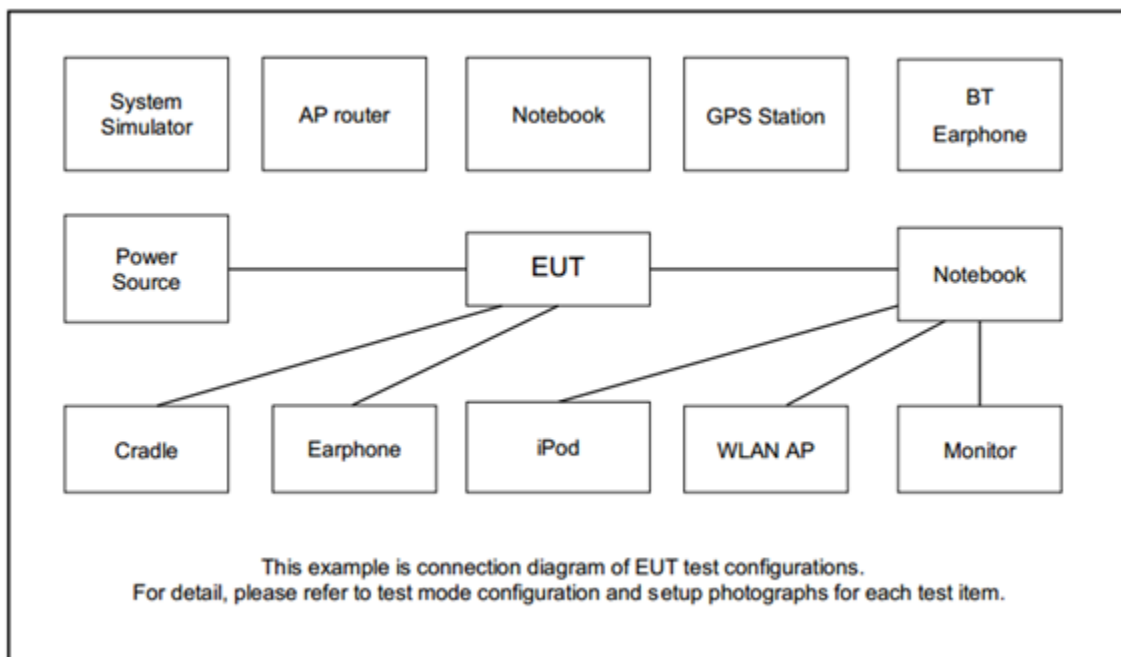
Modulation	Data Rate
802.11b	1 Mbps, Nss=2
802.11g	6 Mbps, Nss=2
802.11n HT20 (Covered by HE20)	MCS0, Nss=2
802.11n HT40 (Covered by HE40)	MCS0, Nss=2
802.11ac VHT20 (Covered by HE20)	MCS0, Nss=2
802.11ac VHT40 (Covered by HE40)	MCS0, Nss=2
802.11ax HE20	MCS0, Nss=2
802.11ax HE40	MCS0, Nss=2

Test Cases	
AC Conducted Emission	Mode 1: GSM850 Link + Bluetooth Link + WLAN (2.4GHz) Link + MPEG4 + USB Cable (Port 1) (Charging from Adapter (Port 1)) + USB Cable (Port 2) (Data Link with Notebook) (Read) + SIM 1
Remark: Data Link with Notebook means data application transferred mode between EUT and Notebook.	

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

Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8m
3.	Bluetooth Earphone	Sony Ericsson	MW600	PY700A2029	N/A	N/A
4.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	iPod	Apple	A1285	DoC	Shielded, 1.0m	N/A

2.5 EUT Operation Test Setup

The RF test items, utility "QRCT 4.0.00158.0" 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.

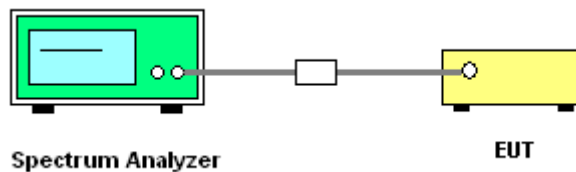
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

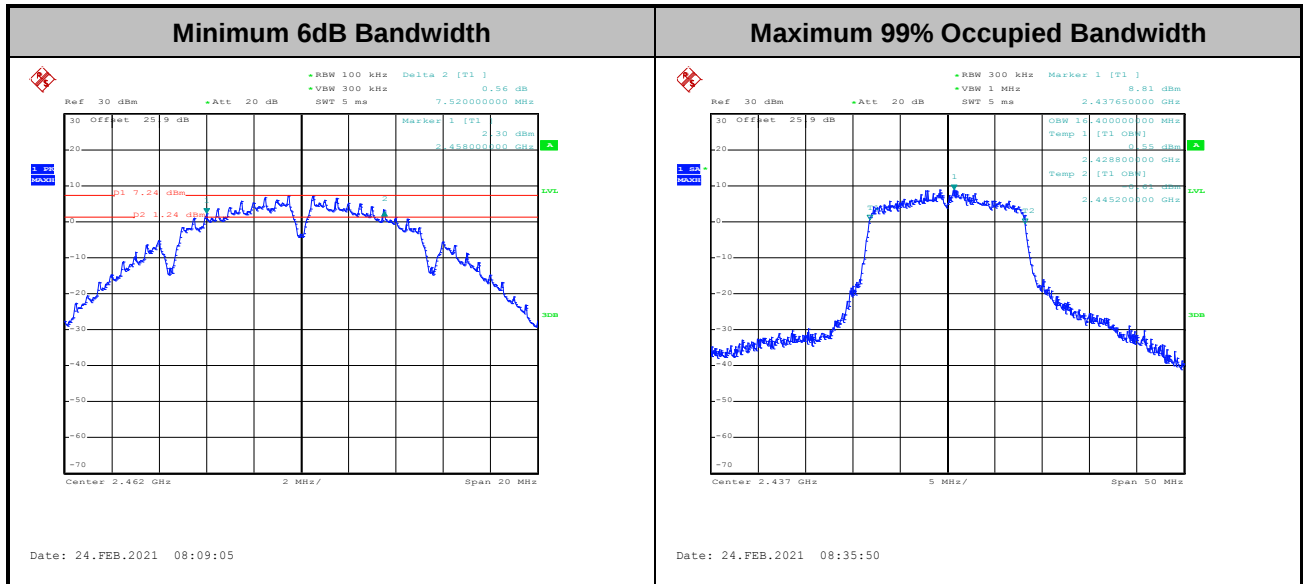
1. The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit 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



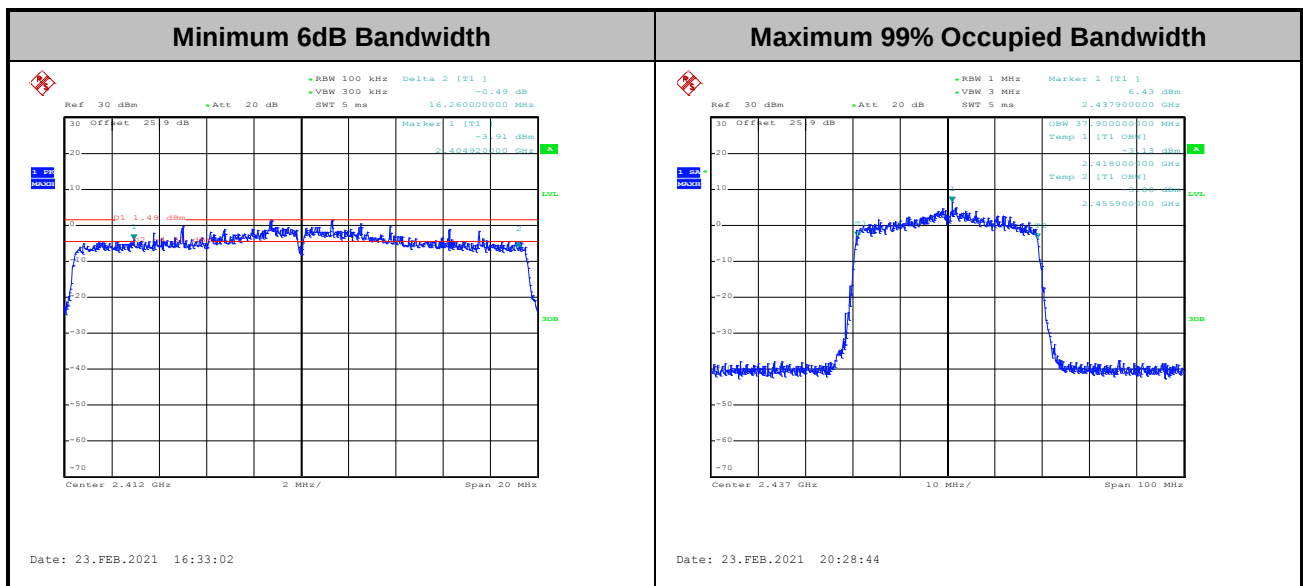
3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.



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

<For 802.11ax Mode>



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.

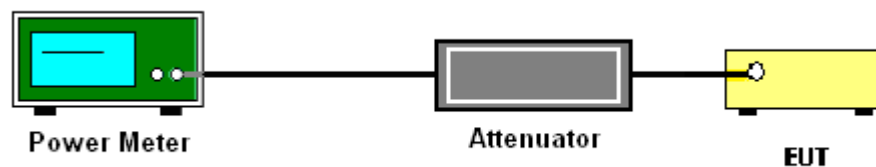
3.2.2 Measuring Instruments

See list of measuring equipment of 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 was connected to the power meter by RF cable and attenuator. The path loss was 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

See list of measuring equipment of 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 was connected to the spectrum analyzer by RF cable and attenuator. The path loss was 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.

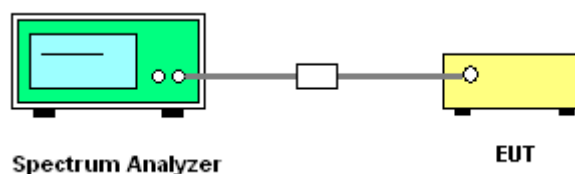
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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.

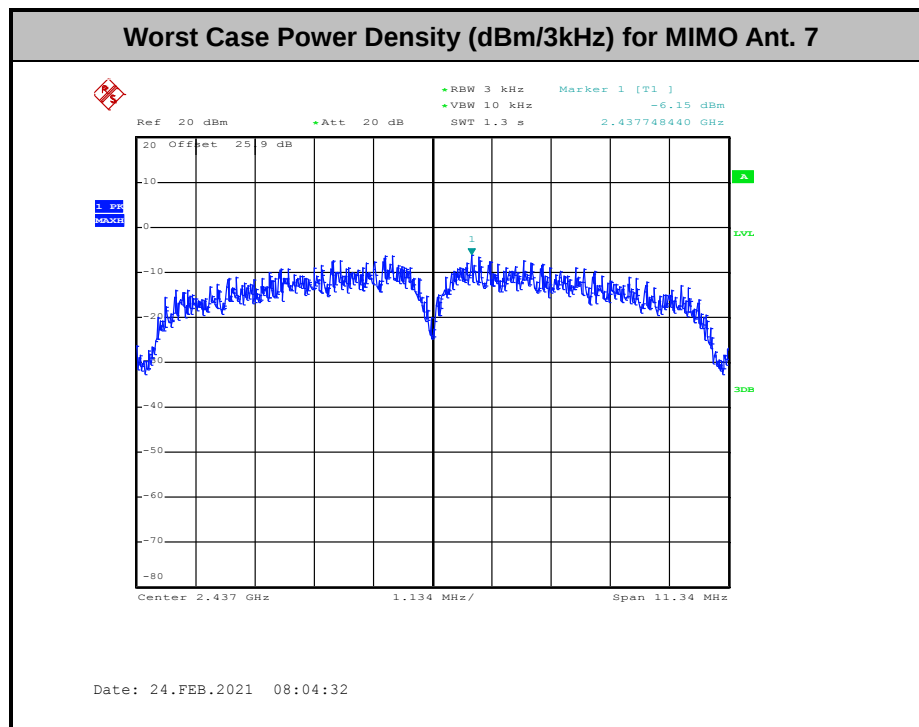
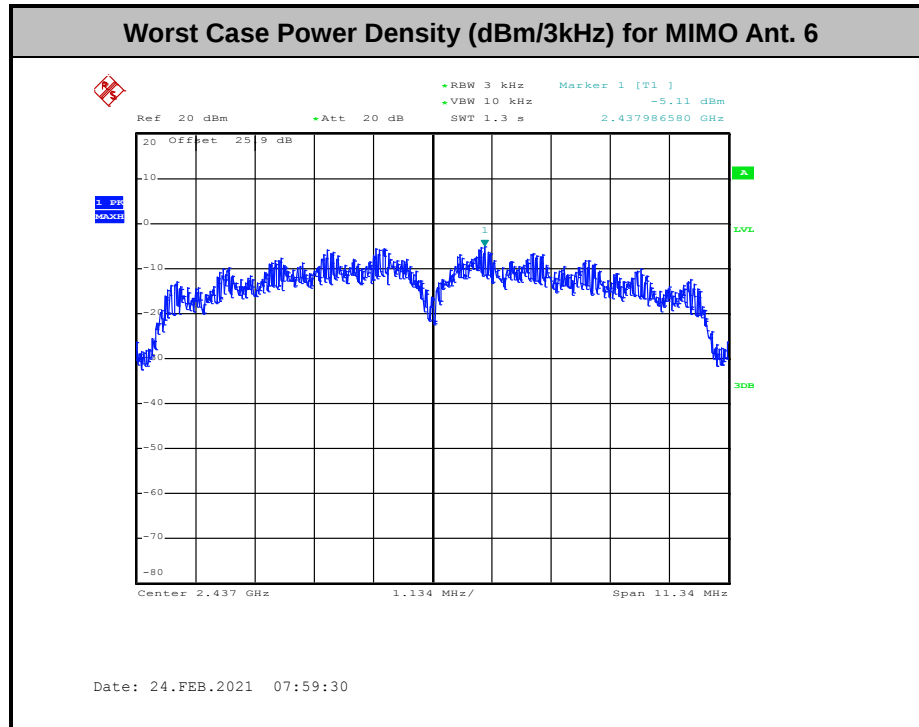
Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=2)

3.3.4 Test Setup



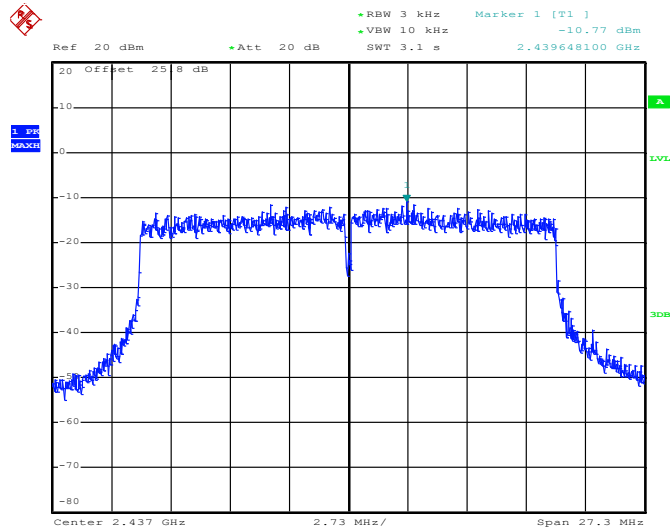
3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



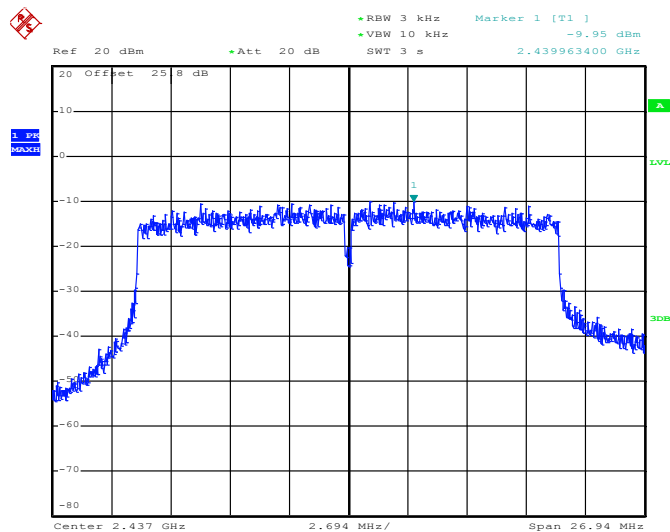
<For 802.11ax Mode>

Worst Case Power Density (dBm/3kHz) for MIMO Ant. 6



Date: 30.JAN.2021 12:00:39

Worst Case Power Density (dBm/3kHz) for MIMO Ant. 7



Date: 30.JAN.2021 12:03:38

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.

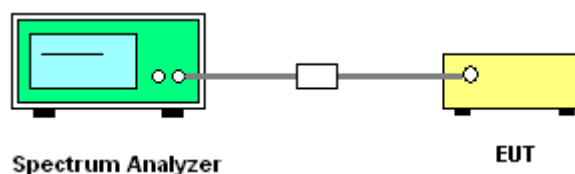
3.4.2 Measuring Instruments

See list of measuring equipment of 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 was connected to the spectrum analyzer by RF cable and attenuator. The path loss was 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



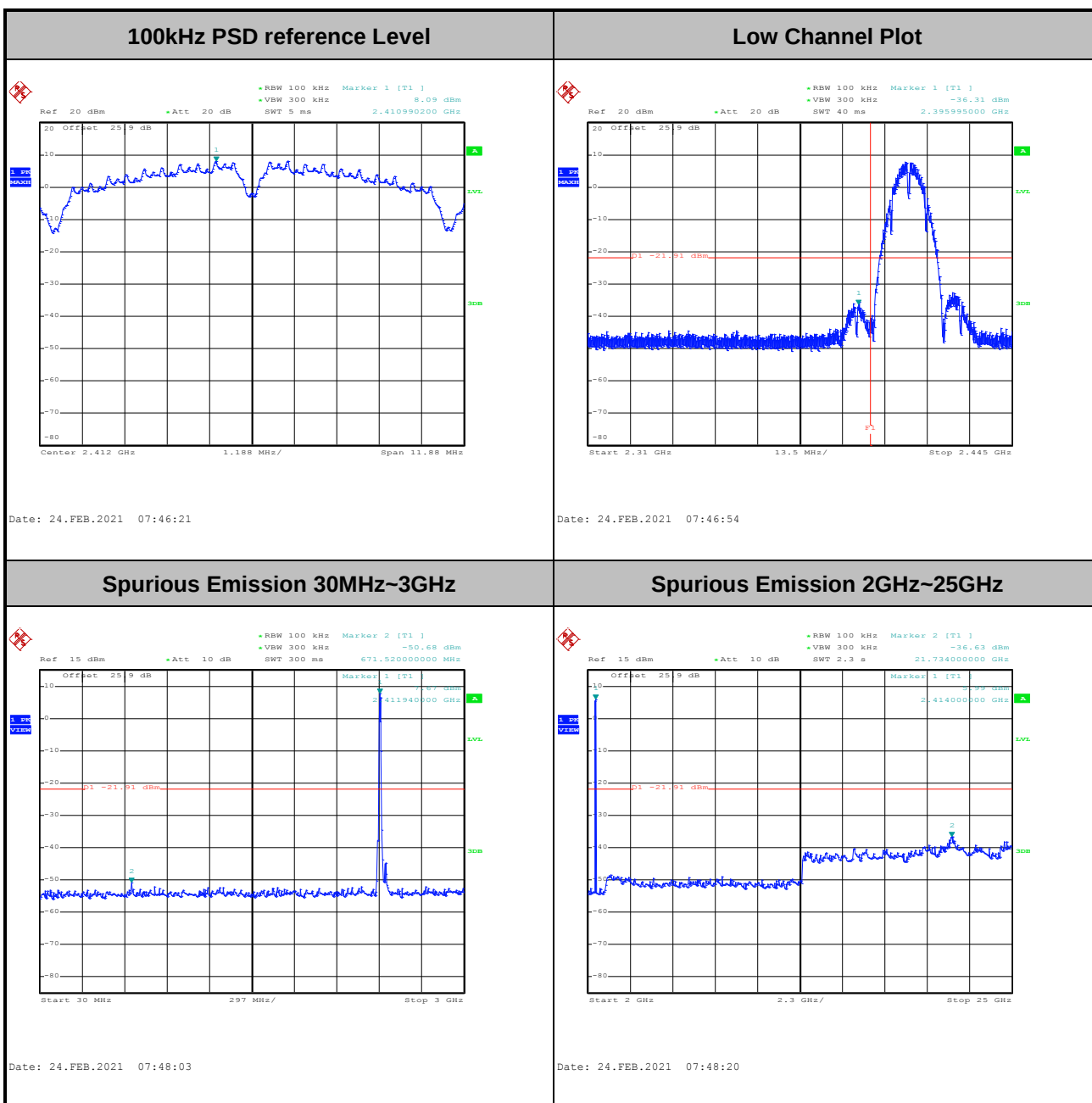


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer :	Mina Liu	Temperature :	22.3~25.5°C
		Relative Humidity :	56.3~59.1%

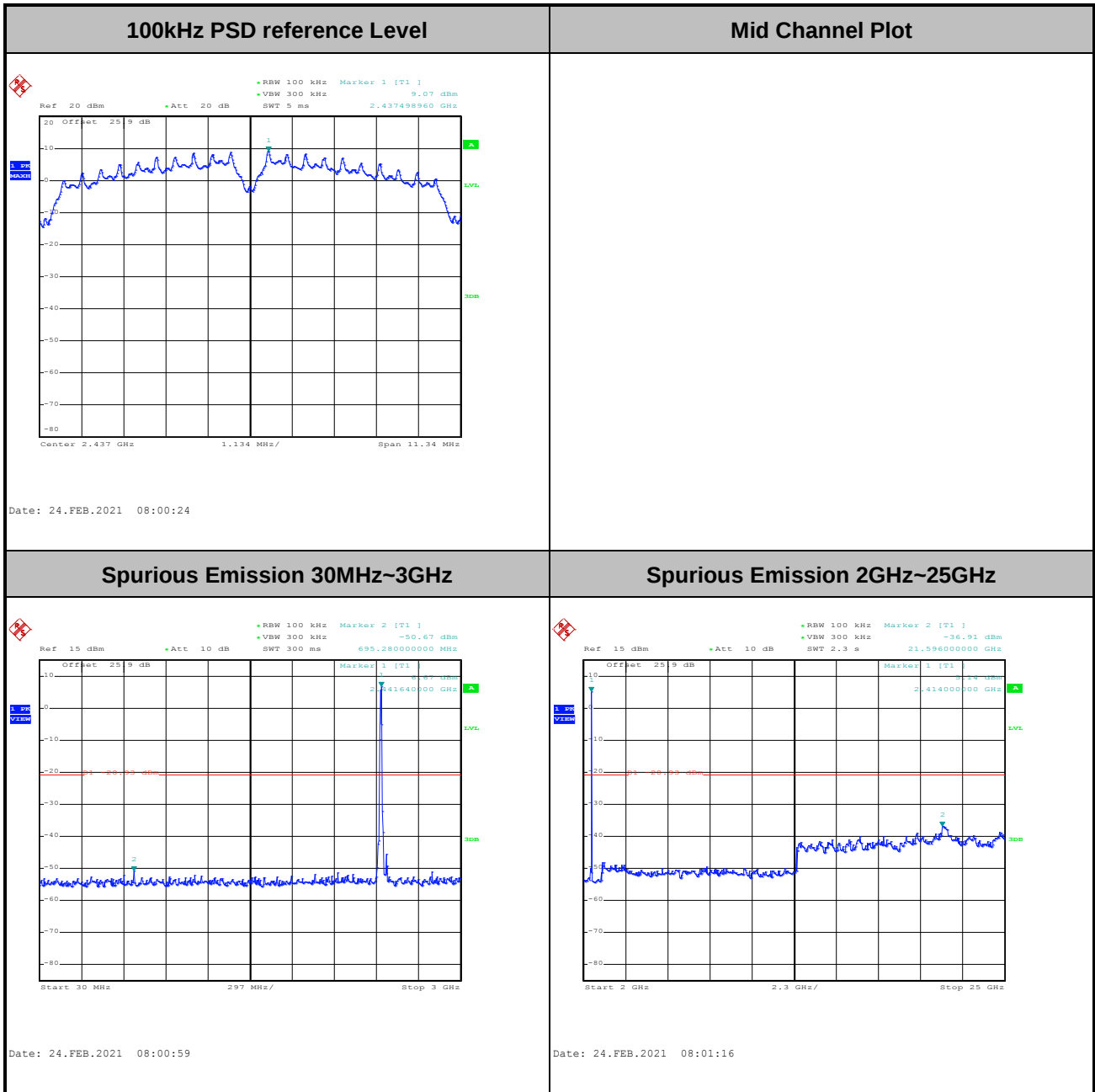
Number of TX = 2, Ant. 6 (Measured)

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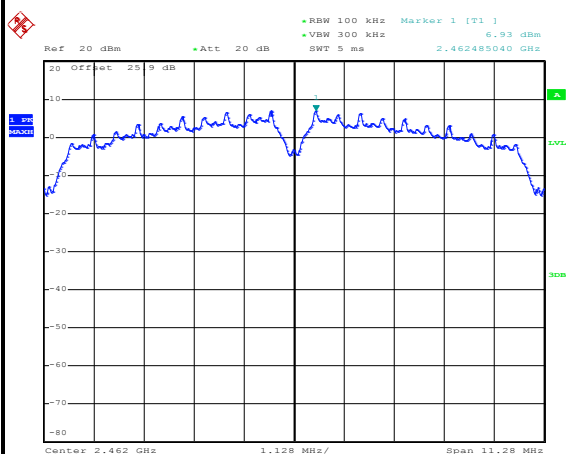
Test Mode :	802.11b	Test Channel :	06
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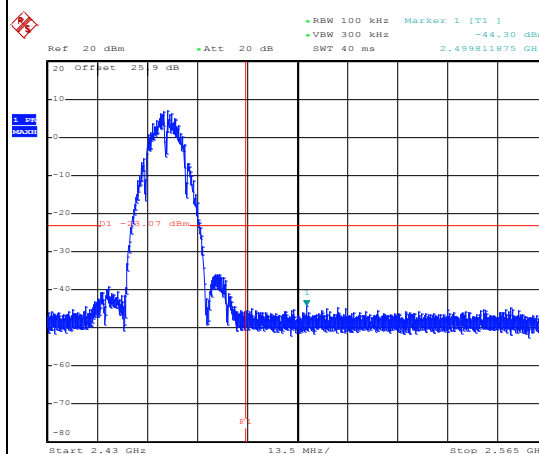
Test Mode :	802.11b	Test Channel :	11
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100kHz PSD reference Level



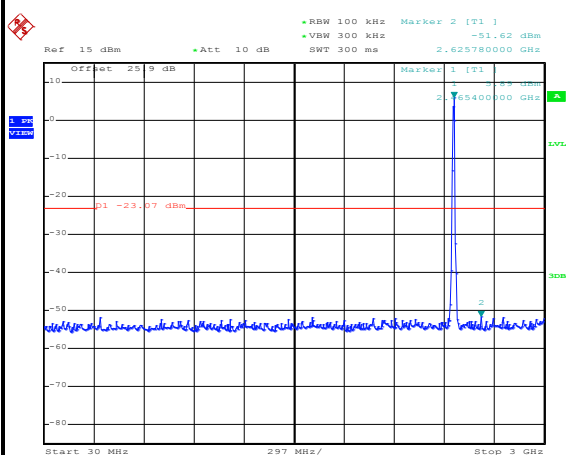
Date: 24.FEB.2021 08:09:44

High Channel Plot



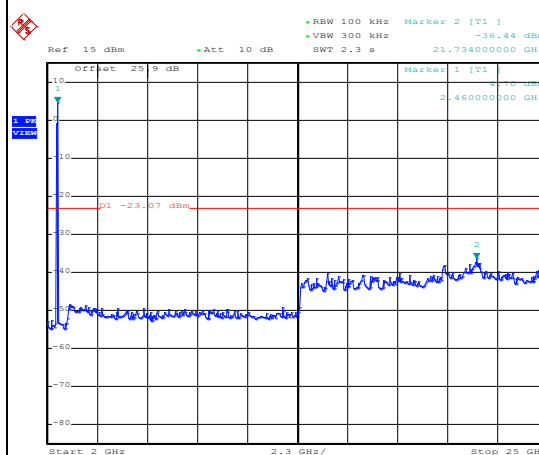
Date: 24.FEB.2021 08:10:06

Spurious Emission 30MHz~3GHz



Date: 24.FEB.2021 08:10:27

Spurious Emission 2GHz~25GHz

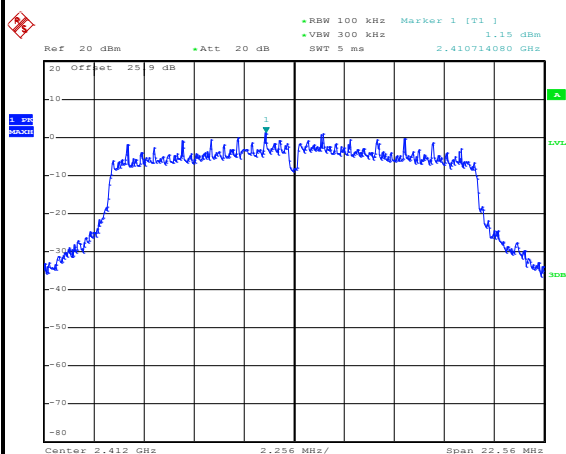


Date: 24.FEB.2021 08:10:42



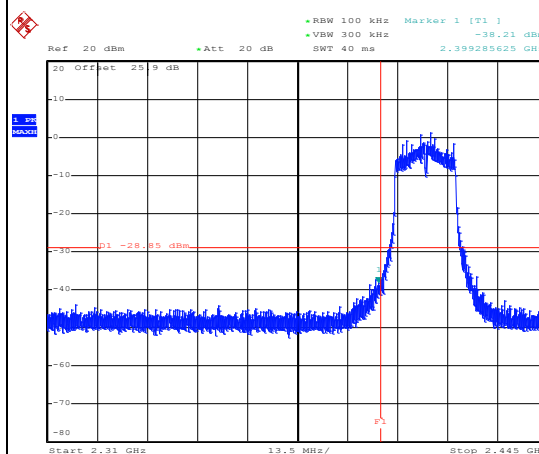
Test Mode :	802.11g	Test Channel :	01
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100kHz PSD reference Level



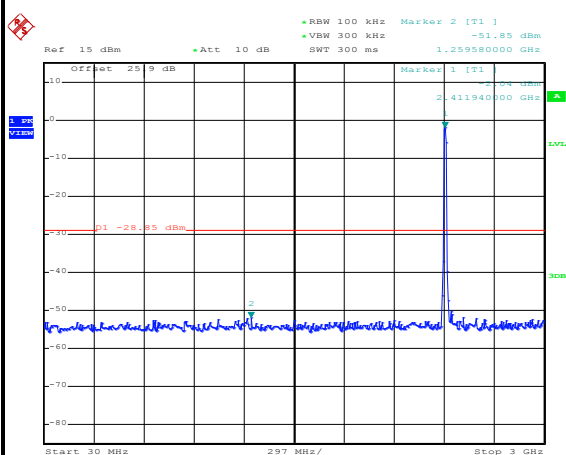
Date: 24.FEB.2021 08:22:32

Low Channel Plot



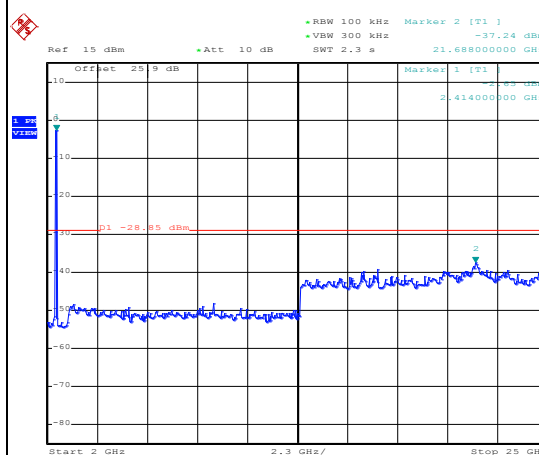
Date: 24.FEB.2021 08:22:48

Spurious Emission 30MHz~3GHz



Date: 24.FEB.2021 08:23:06

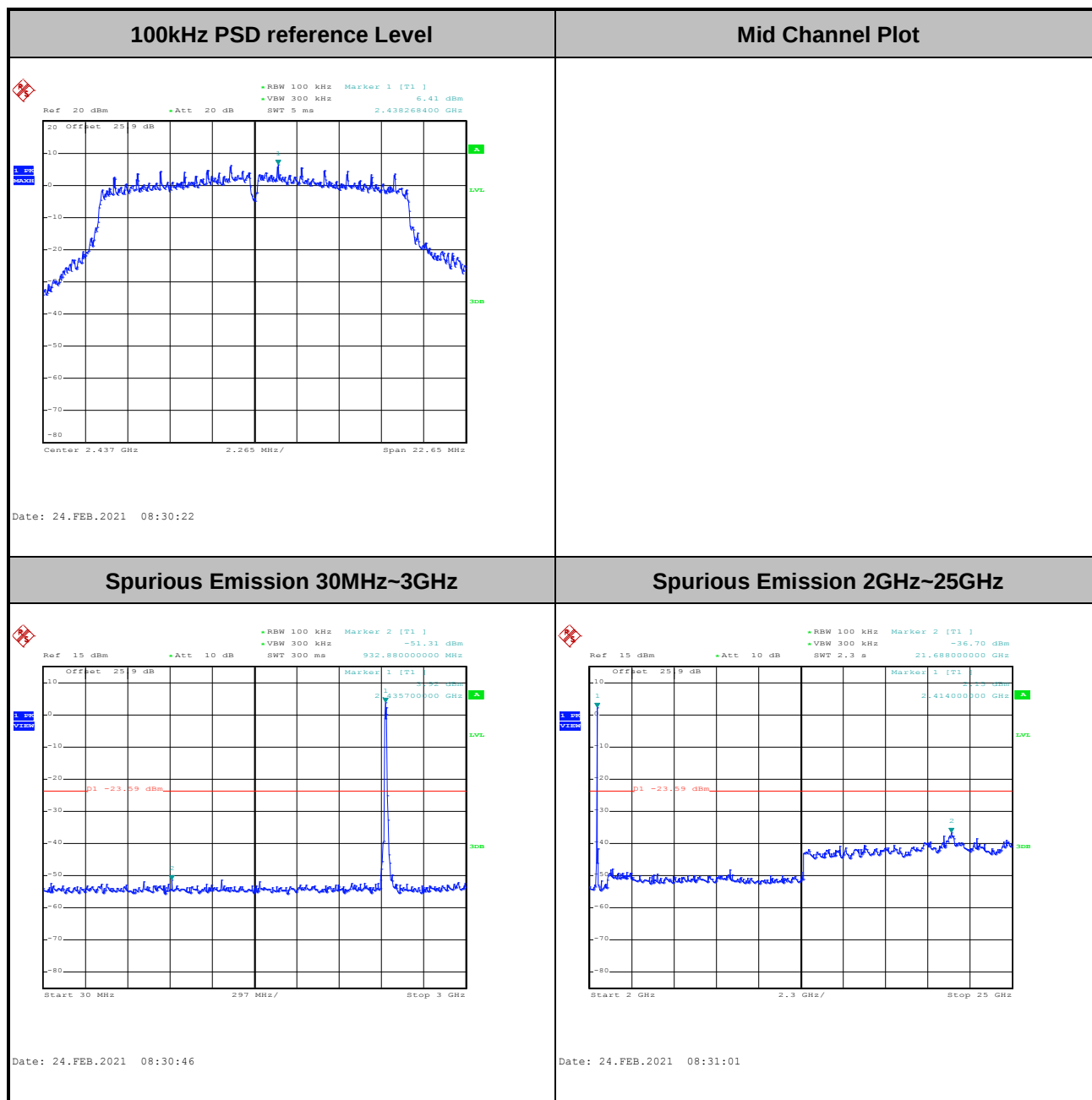
Spurious Emission 2GHz~25GHz



Date: 24.FEB.2021 08:23:21



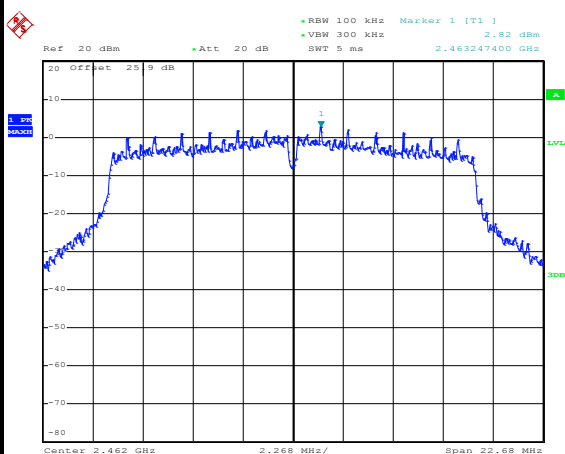
Test Mode :	802.11g	Test Channel :	06
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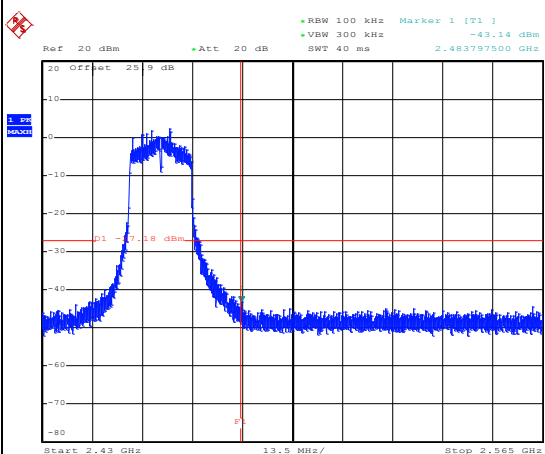
Test Mode :	802.11g	Test Channel :	11
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100kHz PSD reference Level



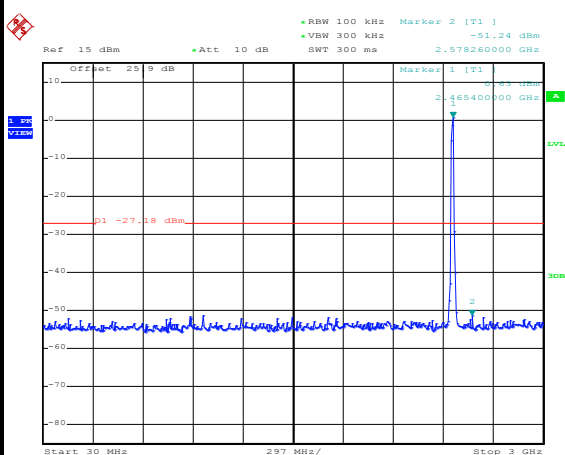
Date: 24.FEB.2021 08:39:39

High Channel Plot



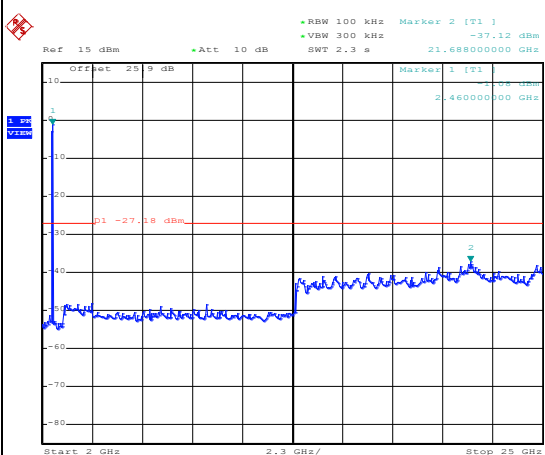
Date: 24.FEB.2021 08:40:23

Spurious Emission 30MHz~3GHz



Date: 24.FEB.2021 08:40:41

Spurious Emission 2GHz~25GHz

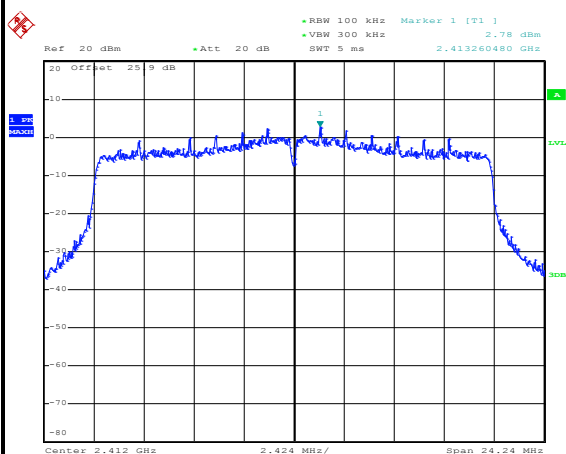


Date: 24.FEB.2021 08:40:57



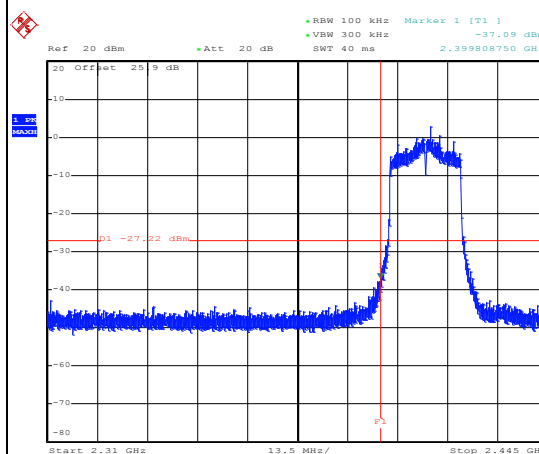
Test Mode :	802.11ax HE20	Test Channel :	01 Full RU
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100kHz PSD reference Level



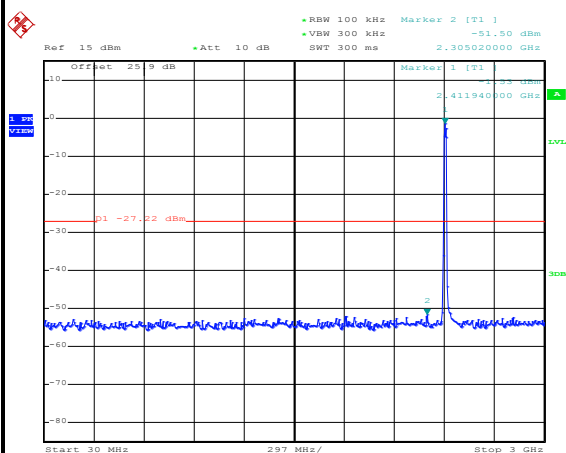
Date: 23.FEB.2021 16:28:55

Low Channel Plot



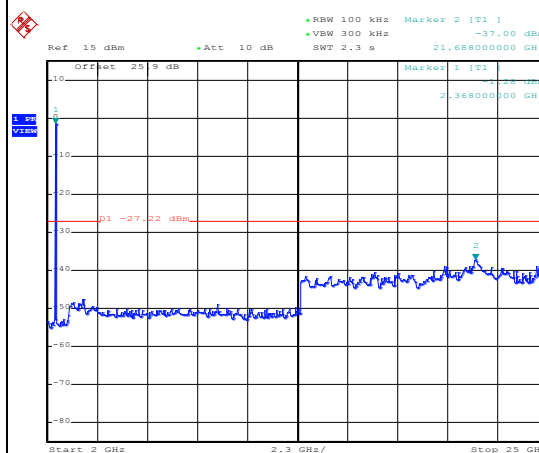
Date: 23.FEB.2021 16:29:12

Spurious Emission 30MHz~3GHz



Date: 23.FEB.2021 19:17:39

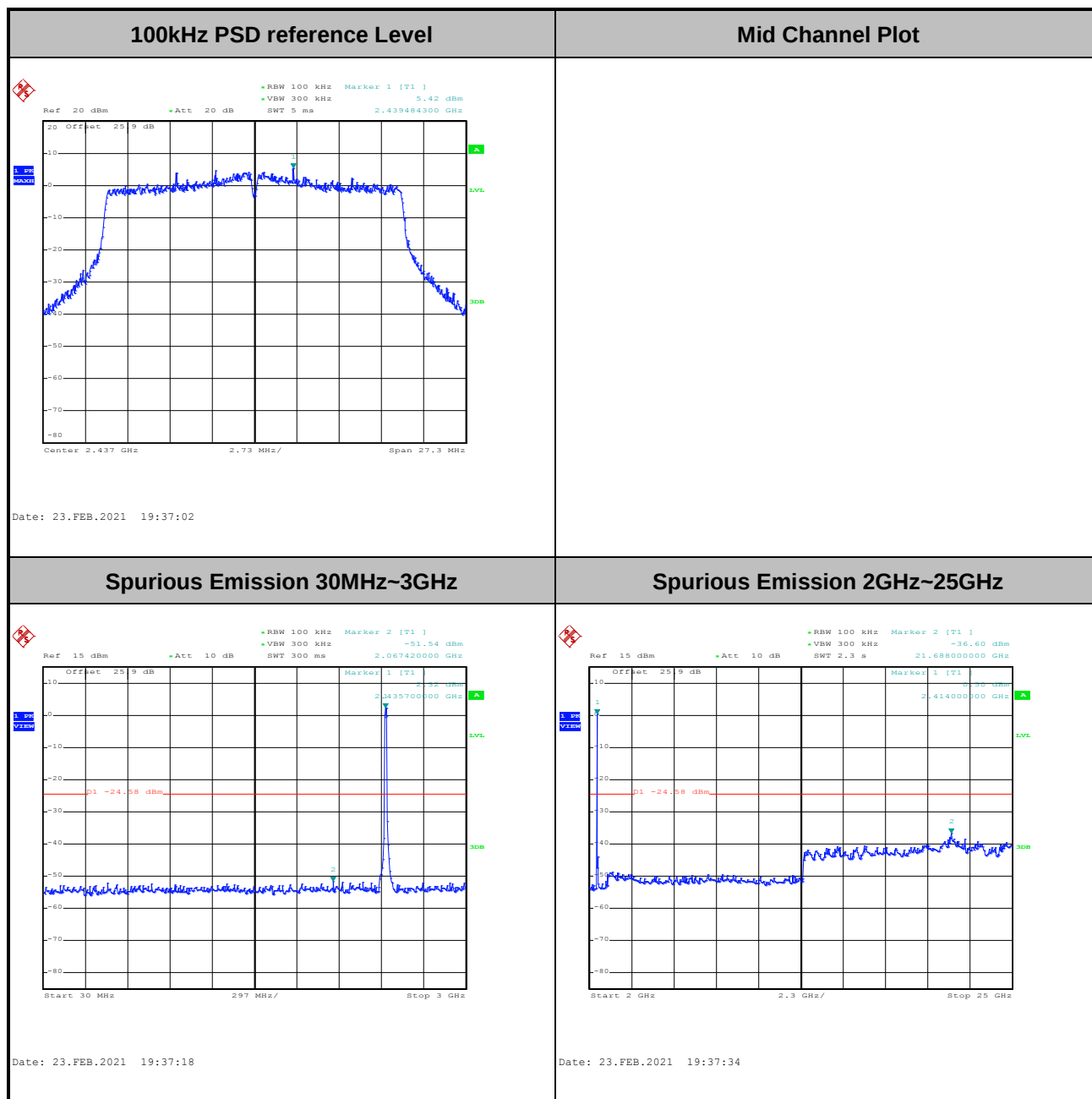
Spurious Emission 2GHz~25GHz



Date: 23.FEB.2021 19:17:55

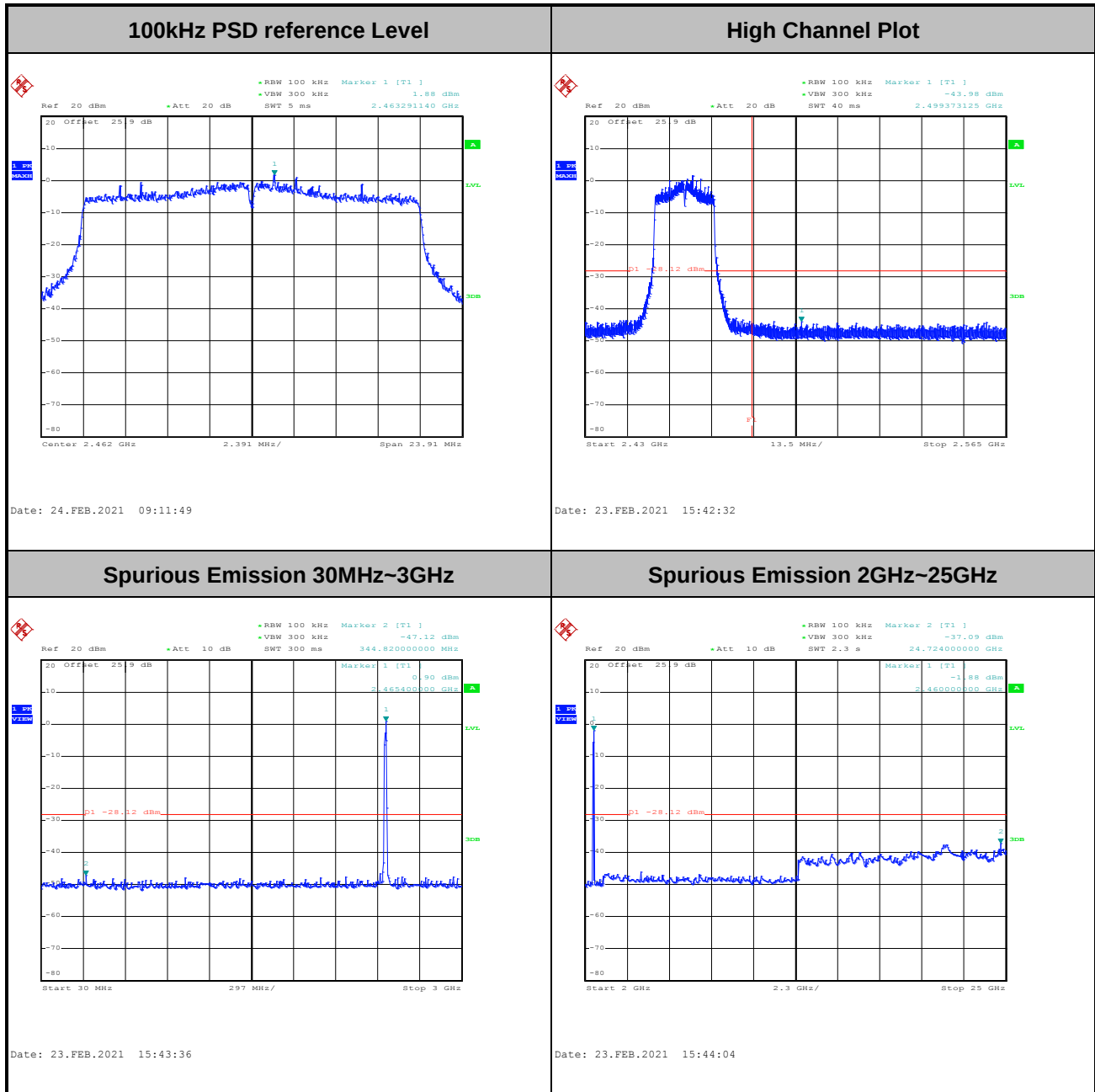


Test Mode :	802.11ax HE20	Test Channel :	06 Full RU
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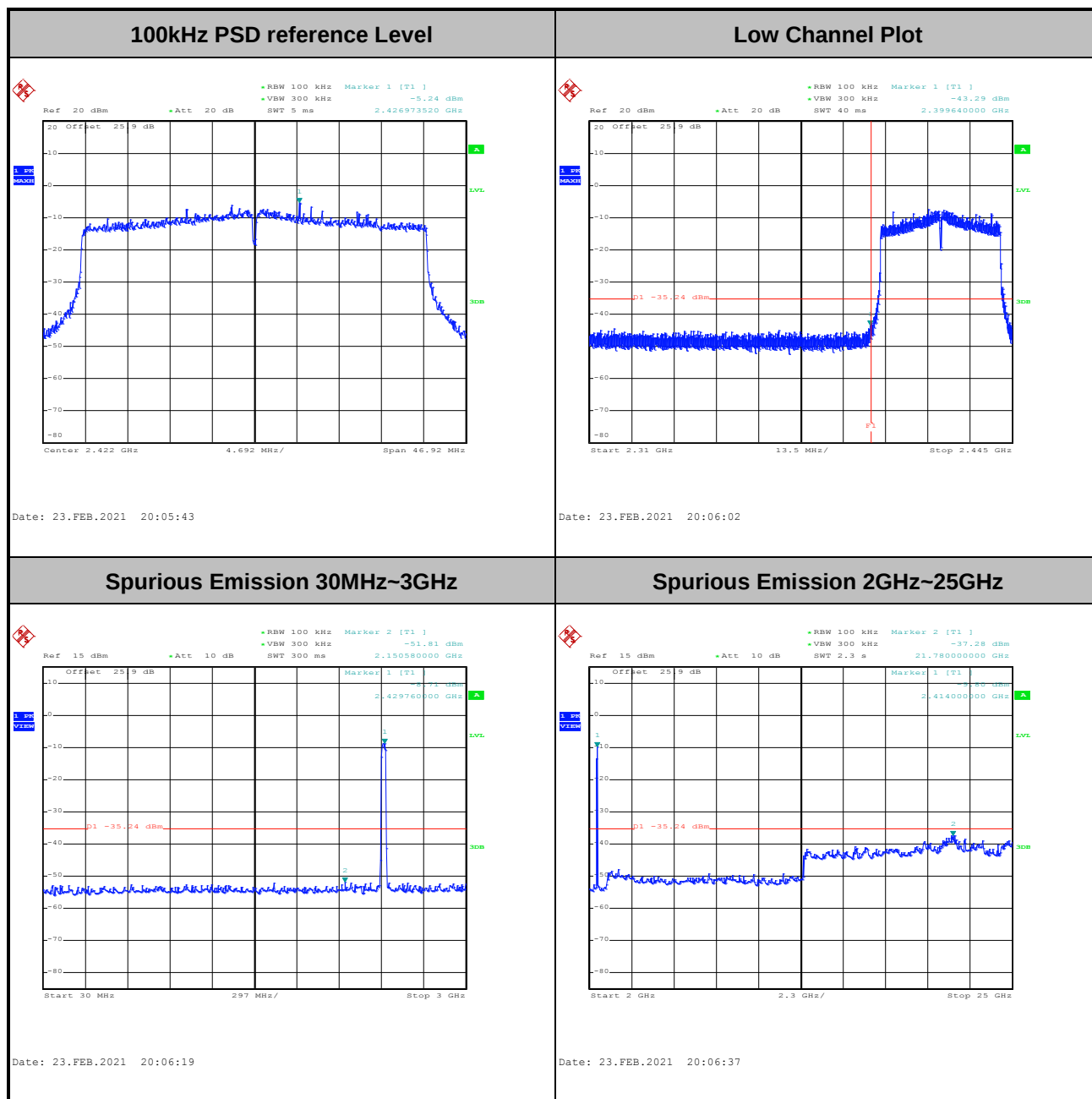


Test Mode :	802.11ax HE20	Test Channel :	11 Full RU
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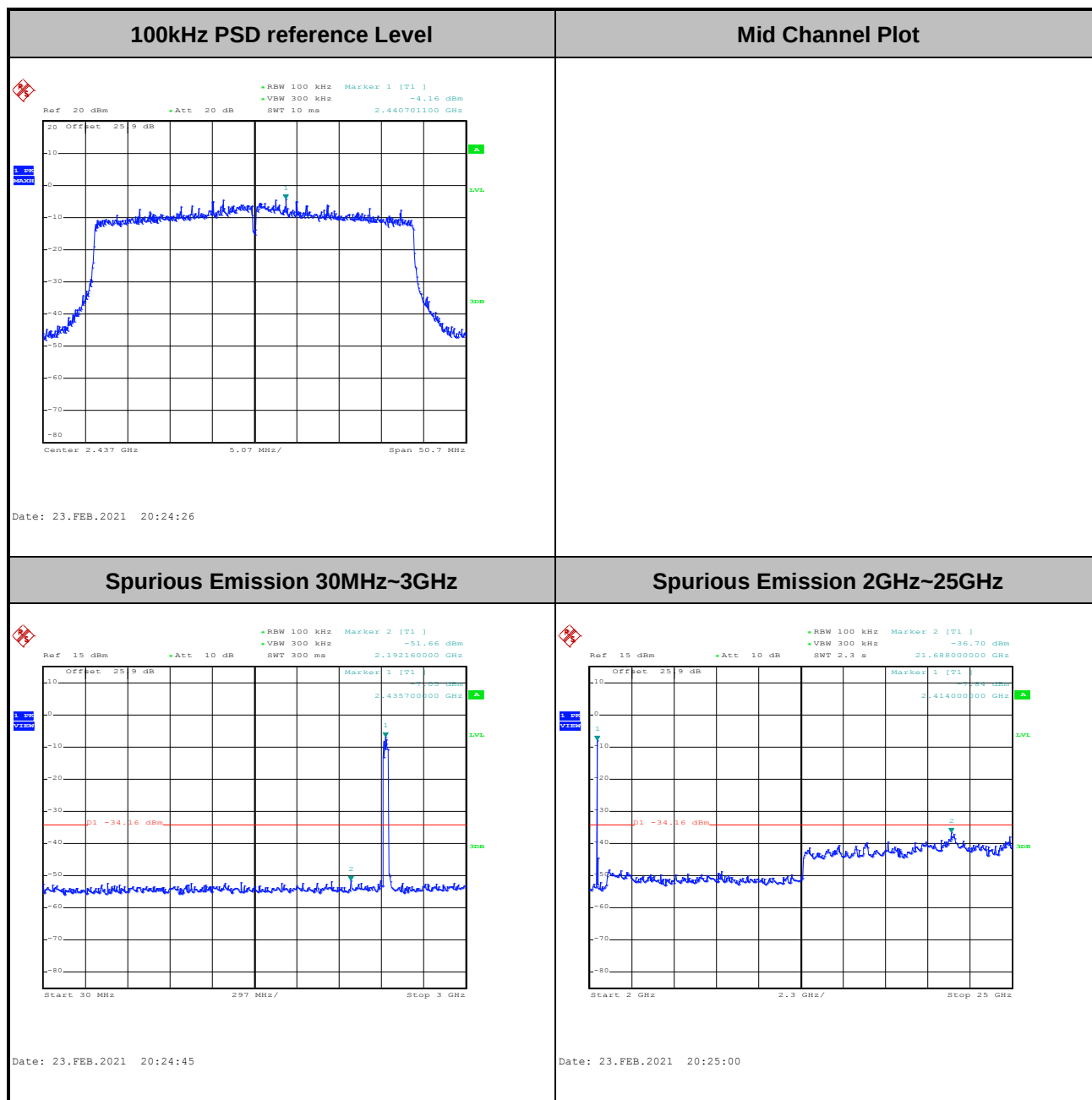


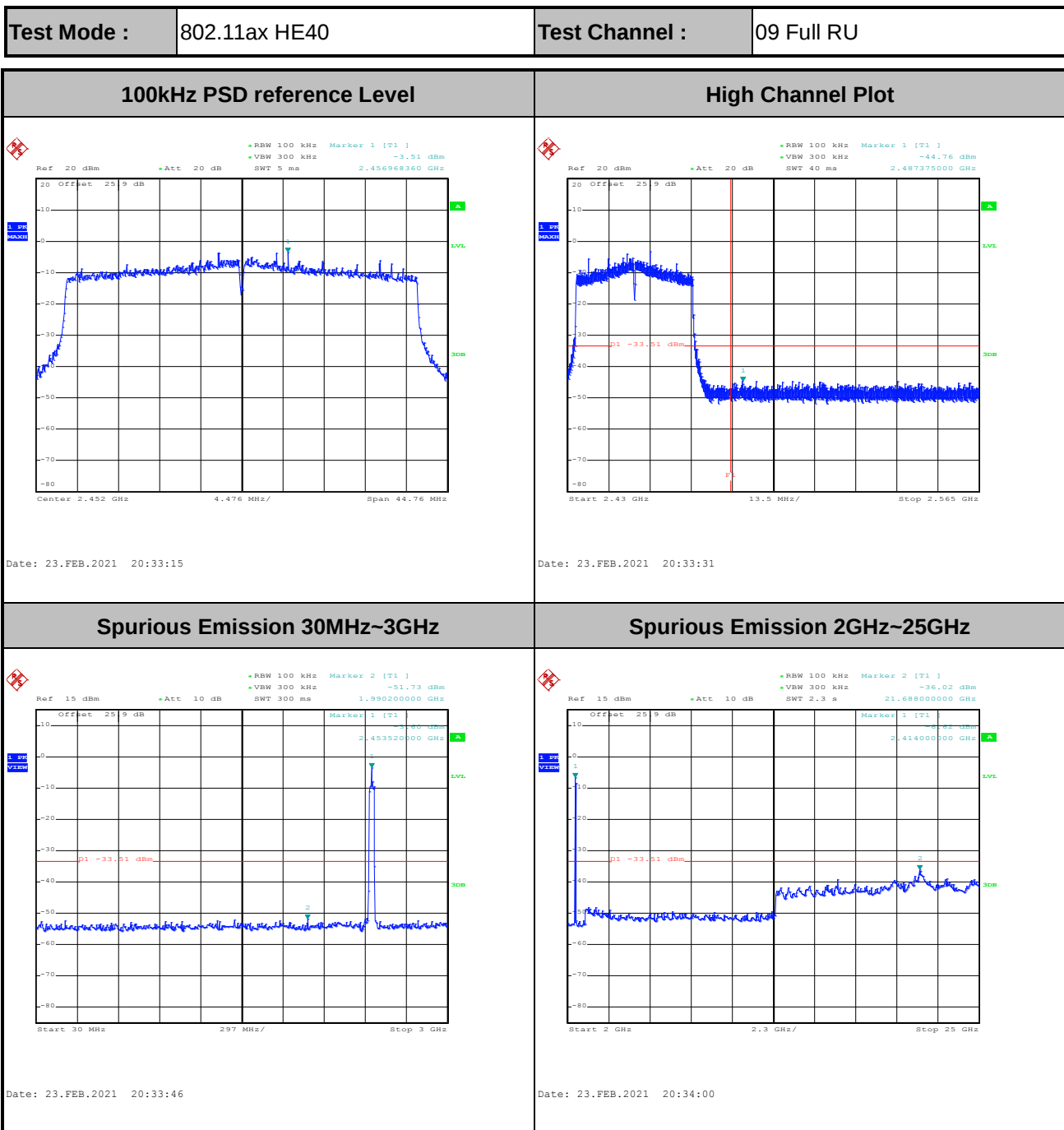
Test Mode :	802.11ax HE40	Test Channel :	03 Full RU
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Test Mode :	802.11ax HE40	Test Channel :	06 Full RU
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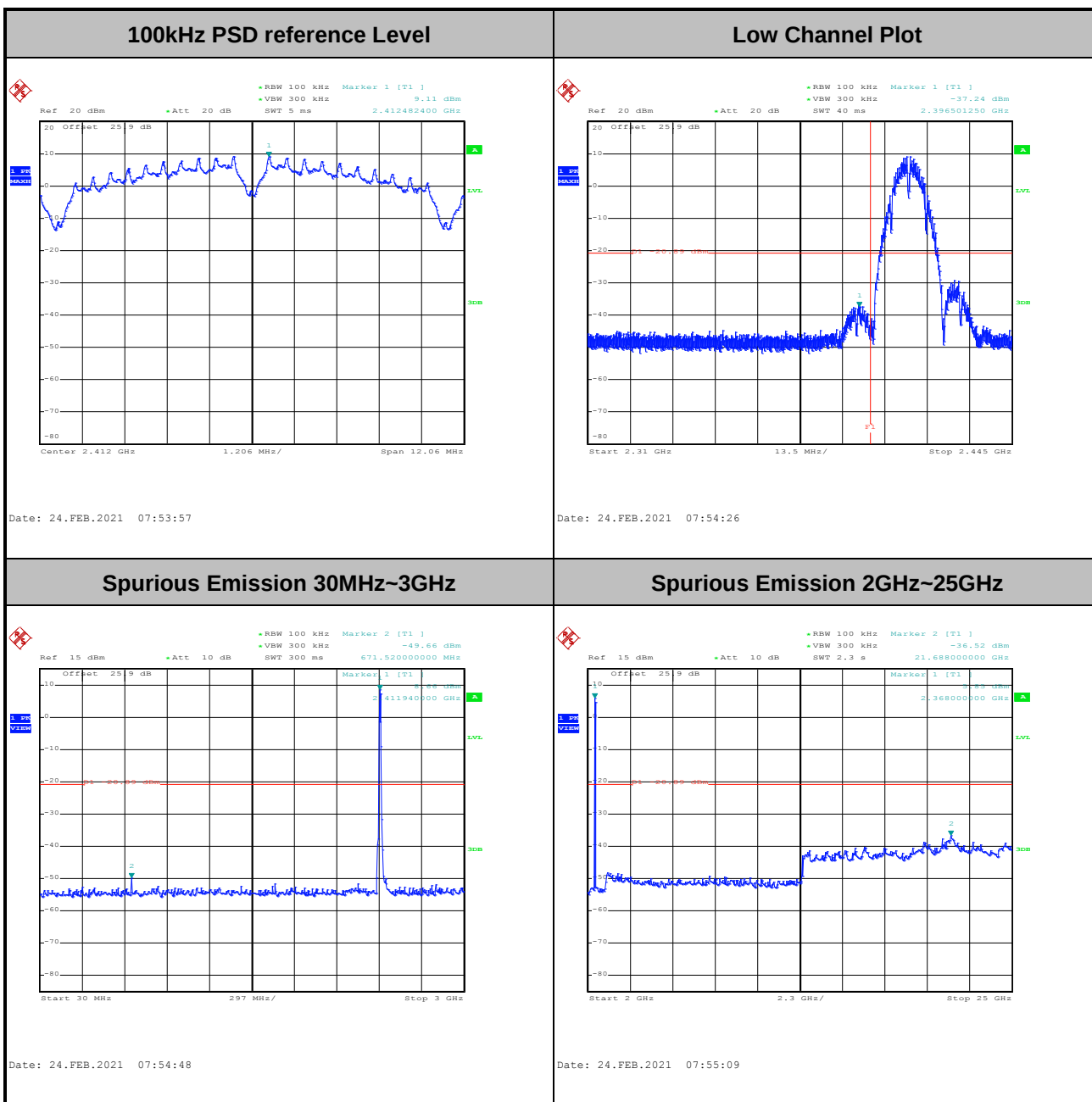






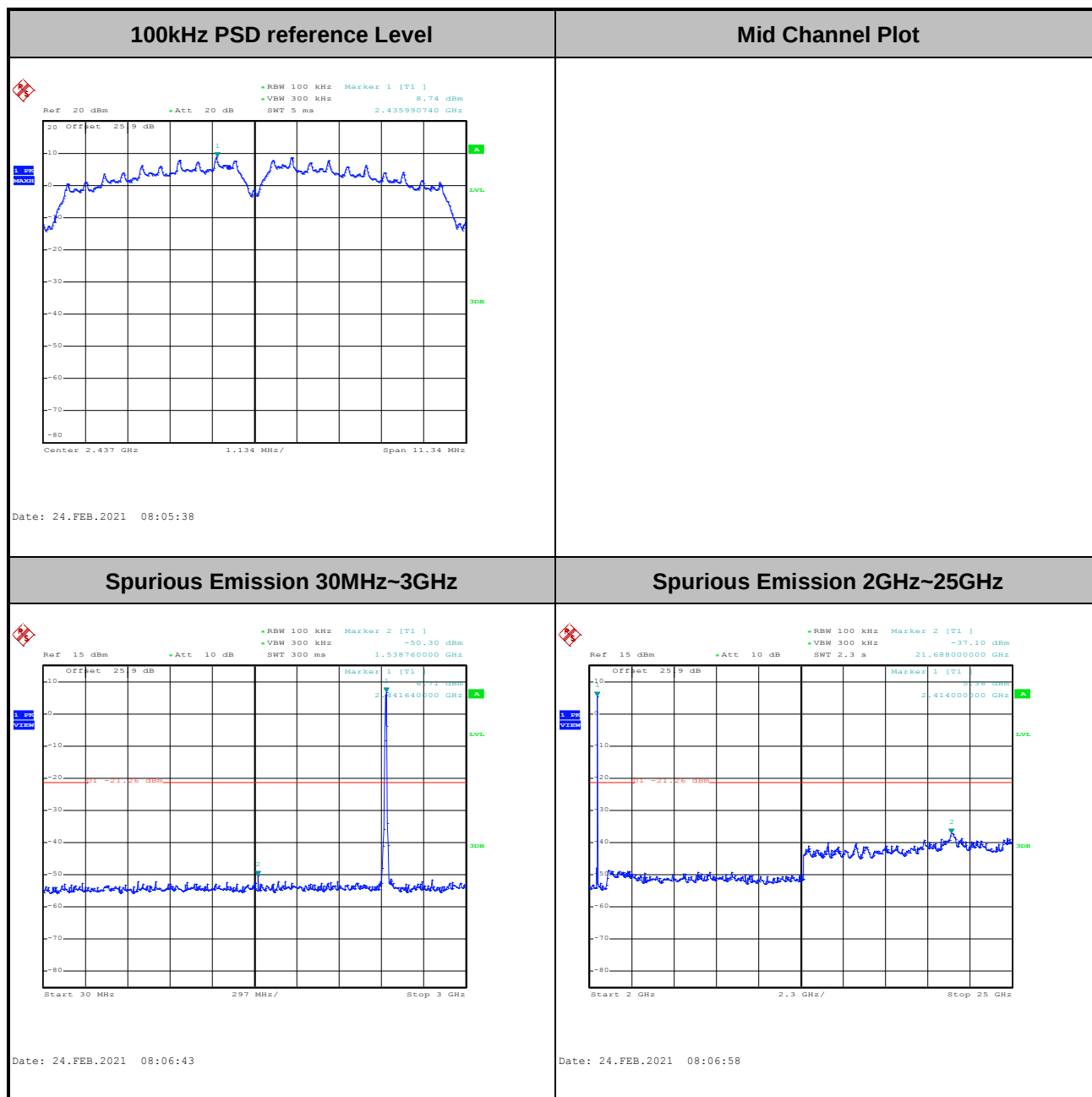
Number of TX = 2, Ant. 7 (Measured)

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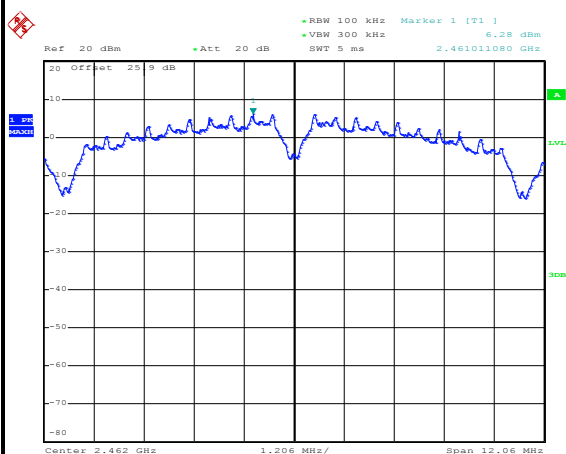
Test Mode :	802.11b	Test Channel :	06
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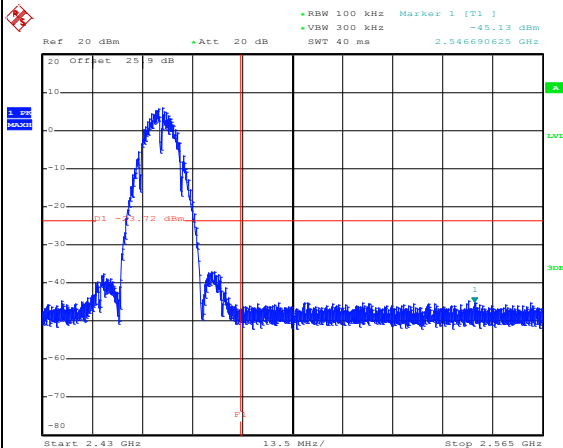
Test Mode :	802.11b	Test Channel :	11
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100kHz PSD reference Level



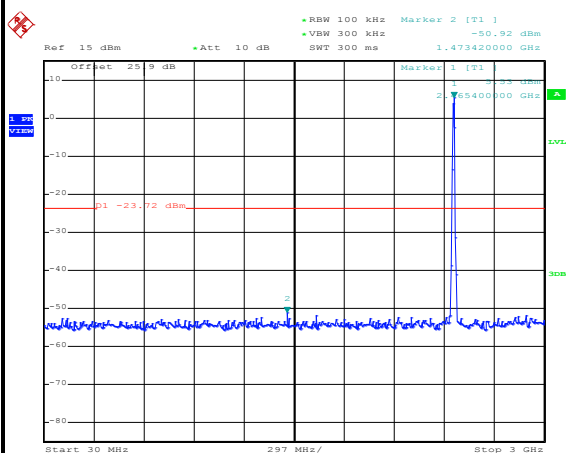
Date: 24.FEB.2021 08:13:26

High Channel Plot



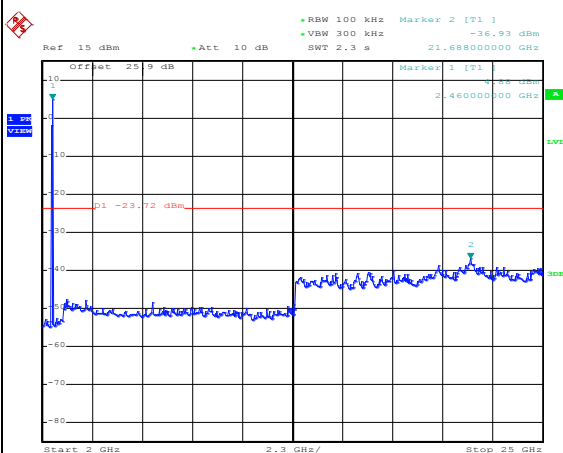
Date: 24.FEB.2021 08:13:48

Spurious Emission 30MHz~3GHz



Date: 24.FEB.2021 08:14:04

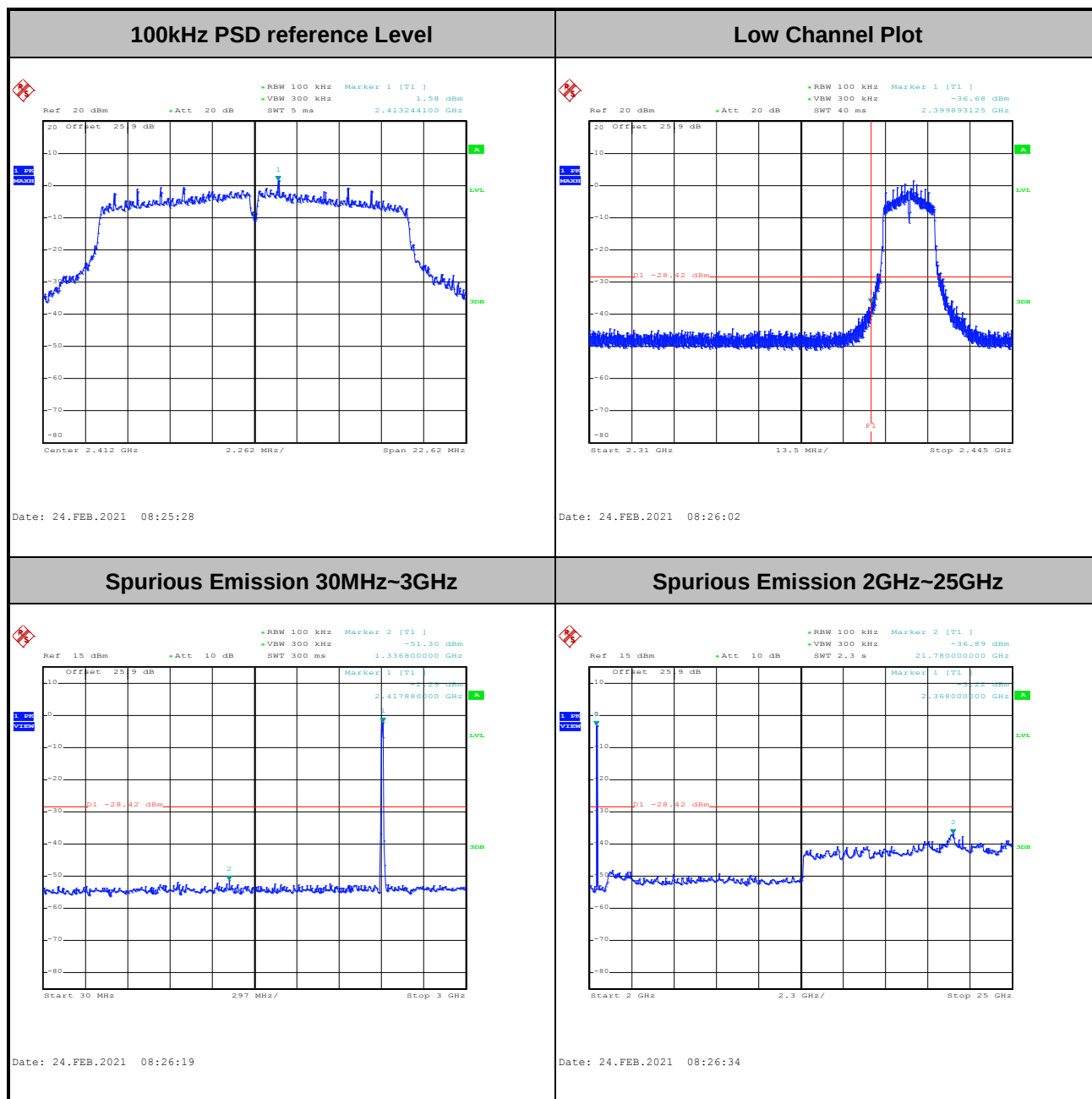
Spurious Emission 2GHz~25GHz



Date: 24.FEB.2021 08:14:21

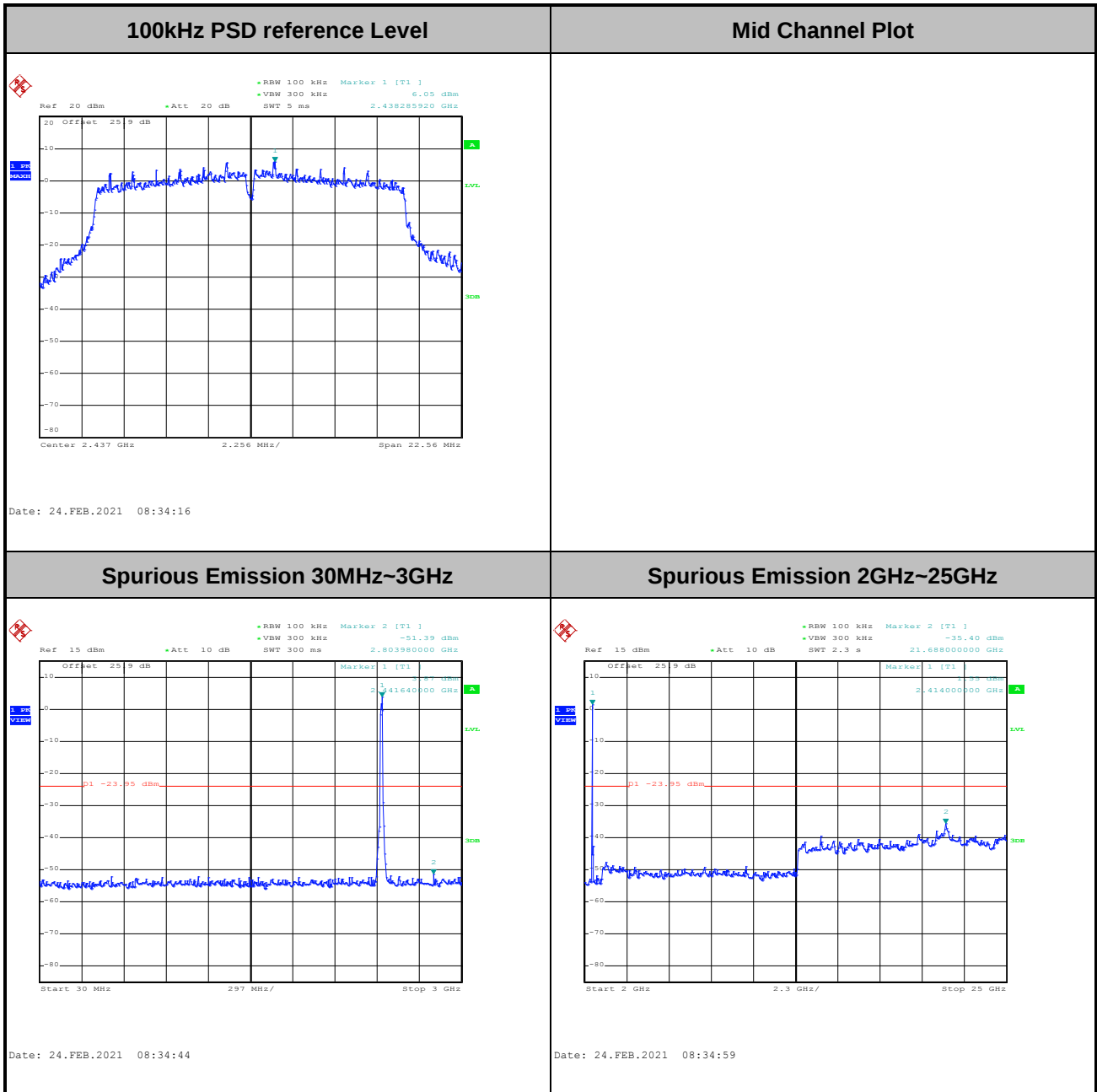


Test Mode :	802.11g	Test Channel :	01
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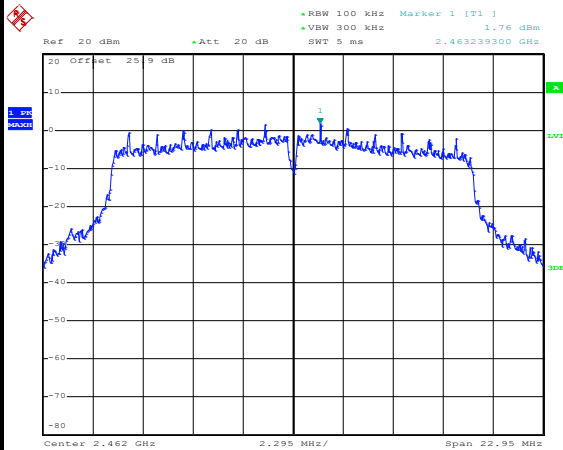
Test Mode :	802.11g	Test Channel :	06
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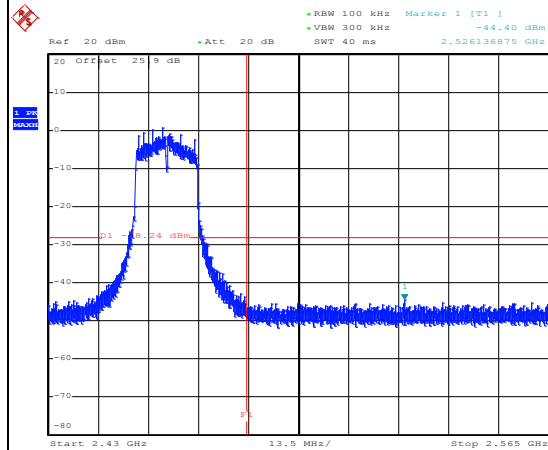
Test Mode :	802.11g	Test Channel :	11
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100kHz PSD reference Level



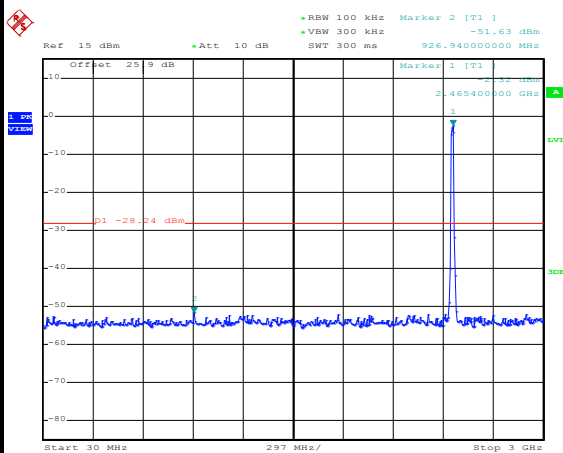
Date: 24.FEB.2021 08:48:06

High Channel Plot



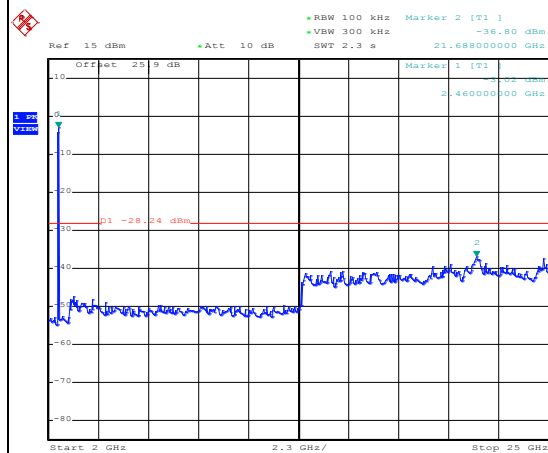
Date: 24.FEB.2021 08:48:24

Spurious Emission 30MHz~3GHz

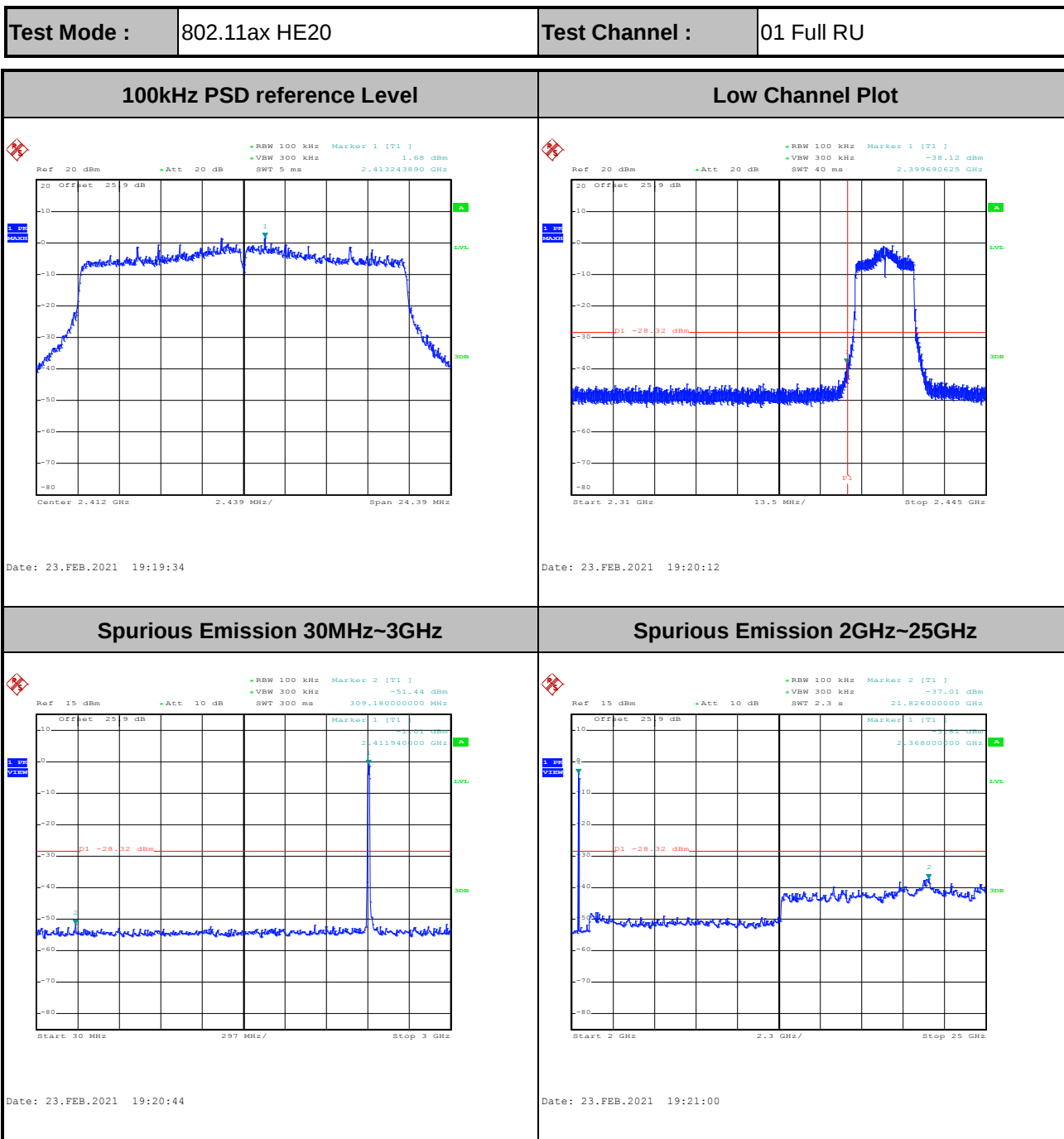


Date: 24.FEB.2021 08:48:45

Spurious Emission 2GHz~25GHz

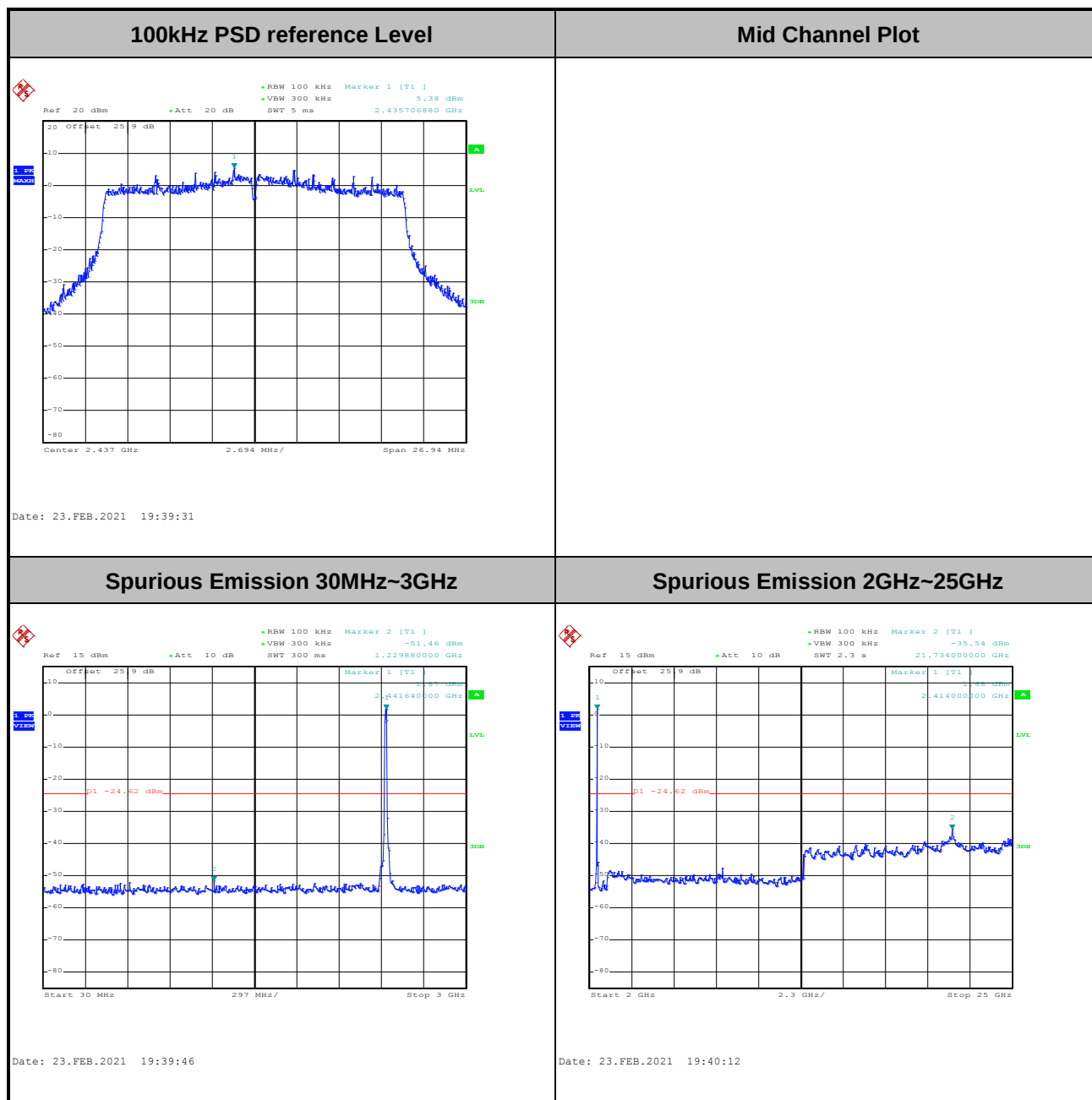


Date: 24.FEB.2021 08:49:02



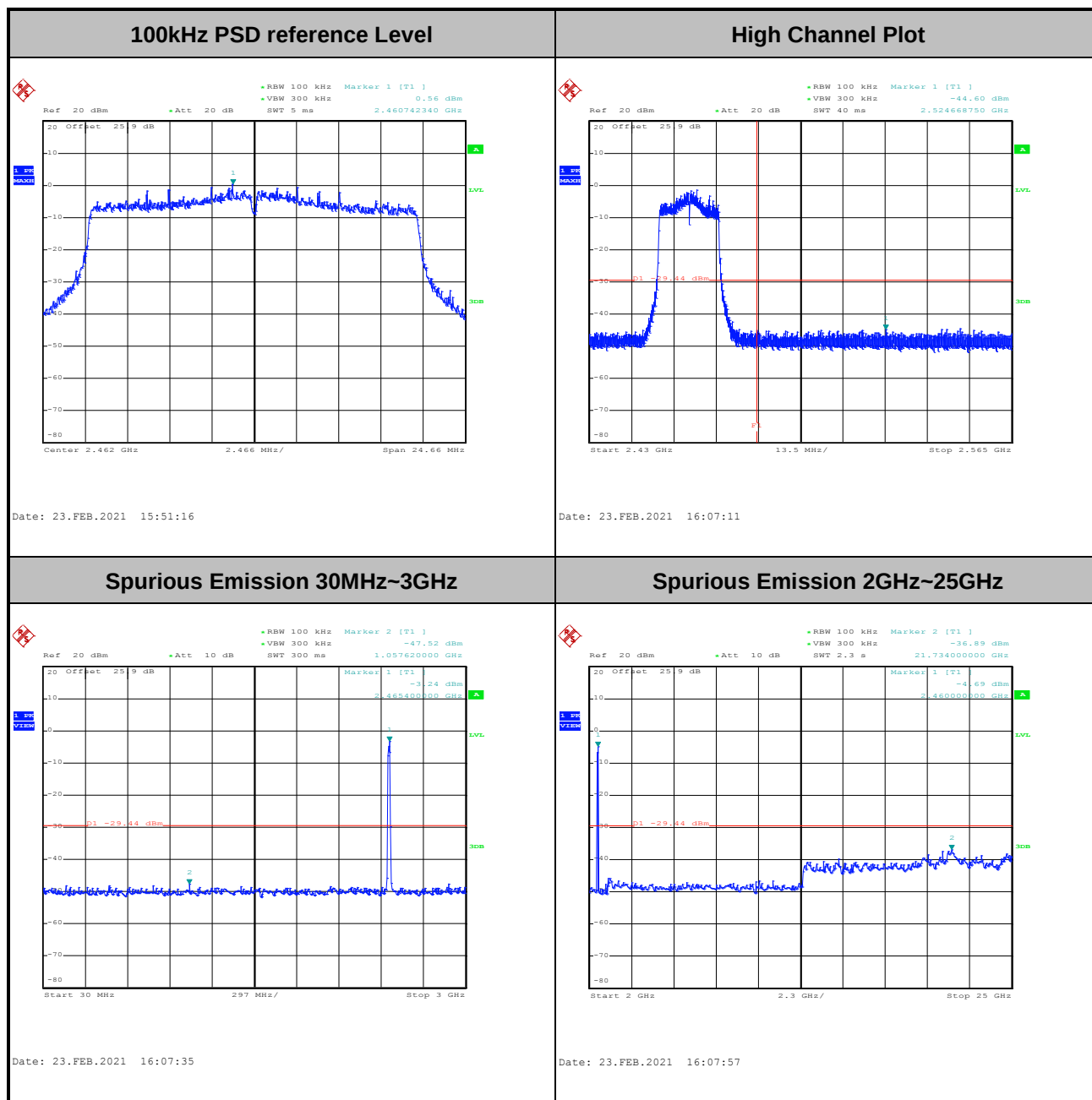


Test Mode :	802.11ax HE20	Test Channel :	06 Full RU
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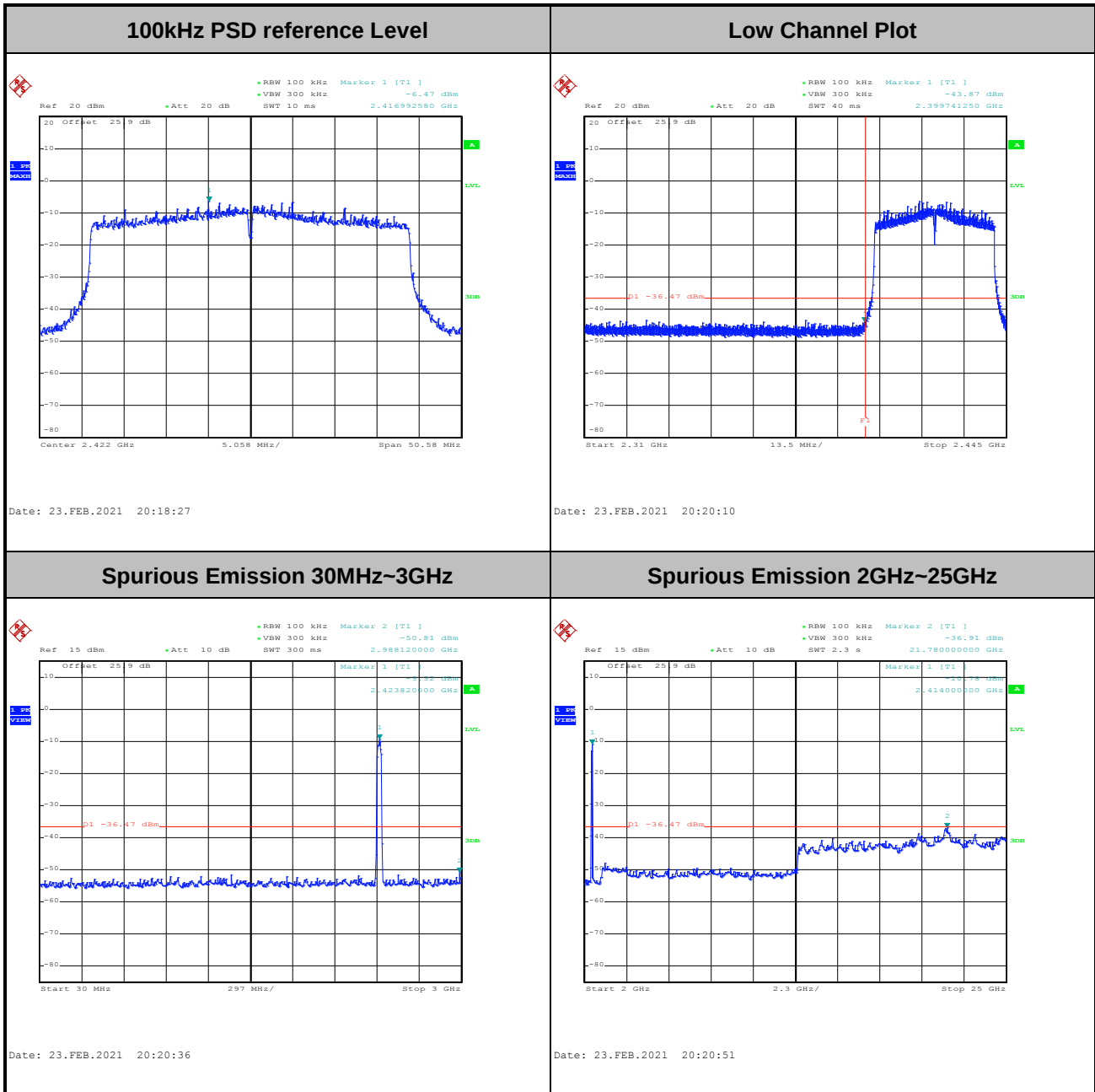


Test Mode :	802.11ax HE20	Test Channel :	11 Full RU
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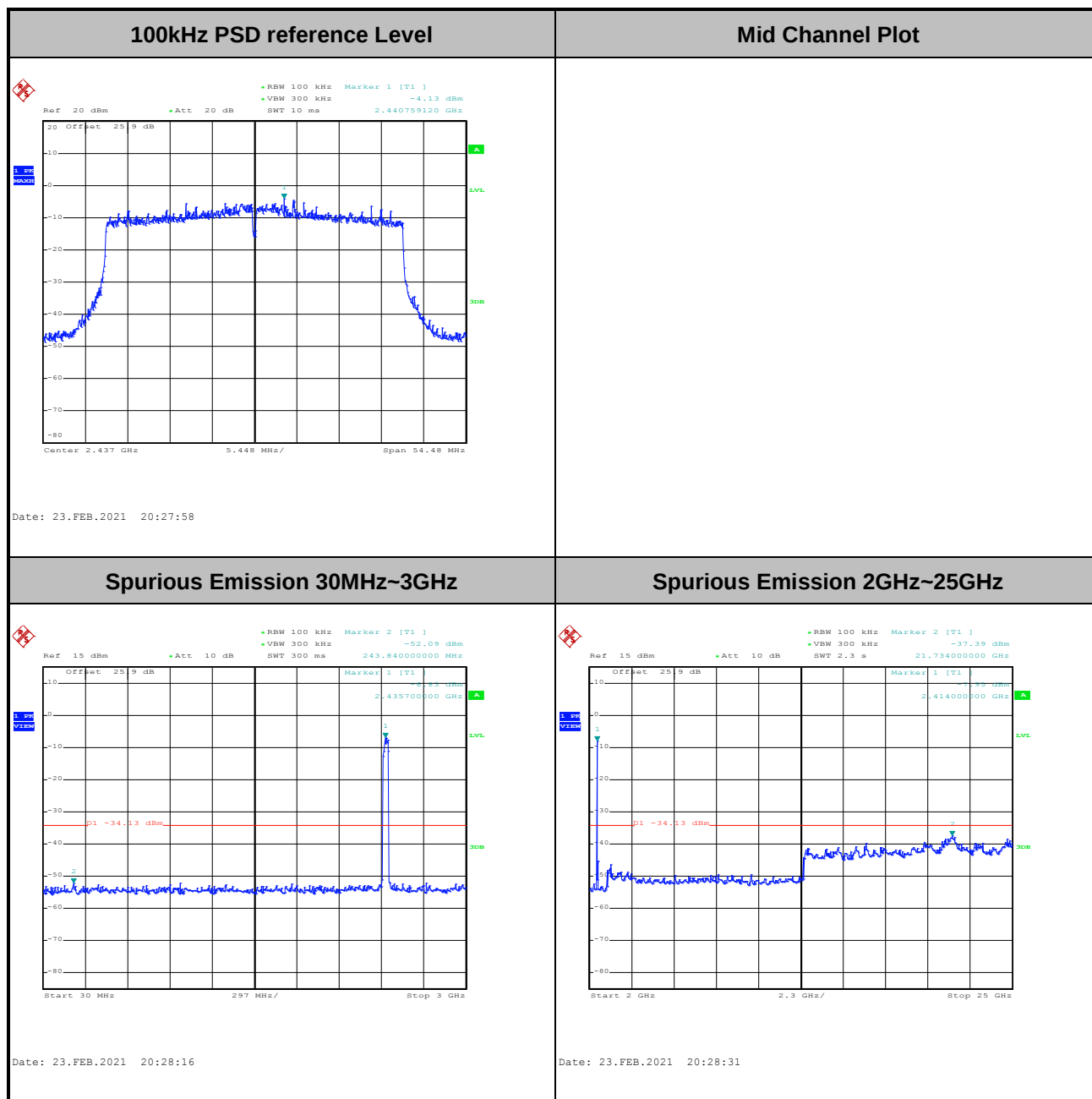


Test Mode :	802.11ax HE40	Test Channel :	03 Full RU
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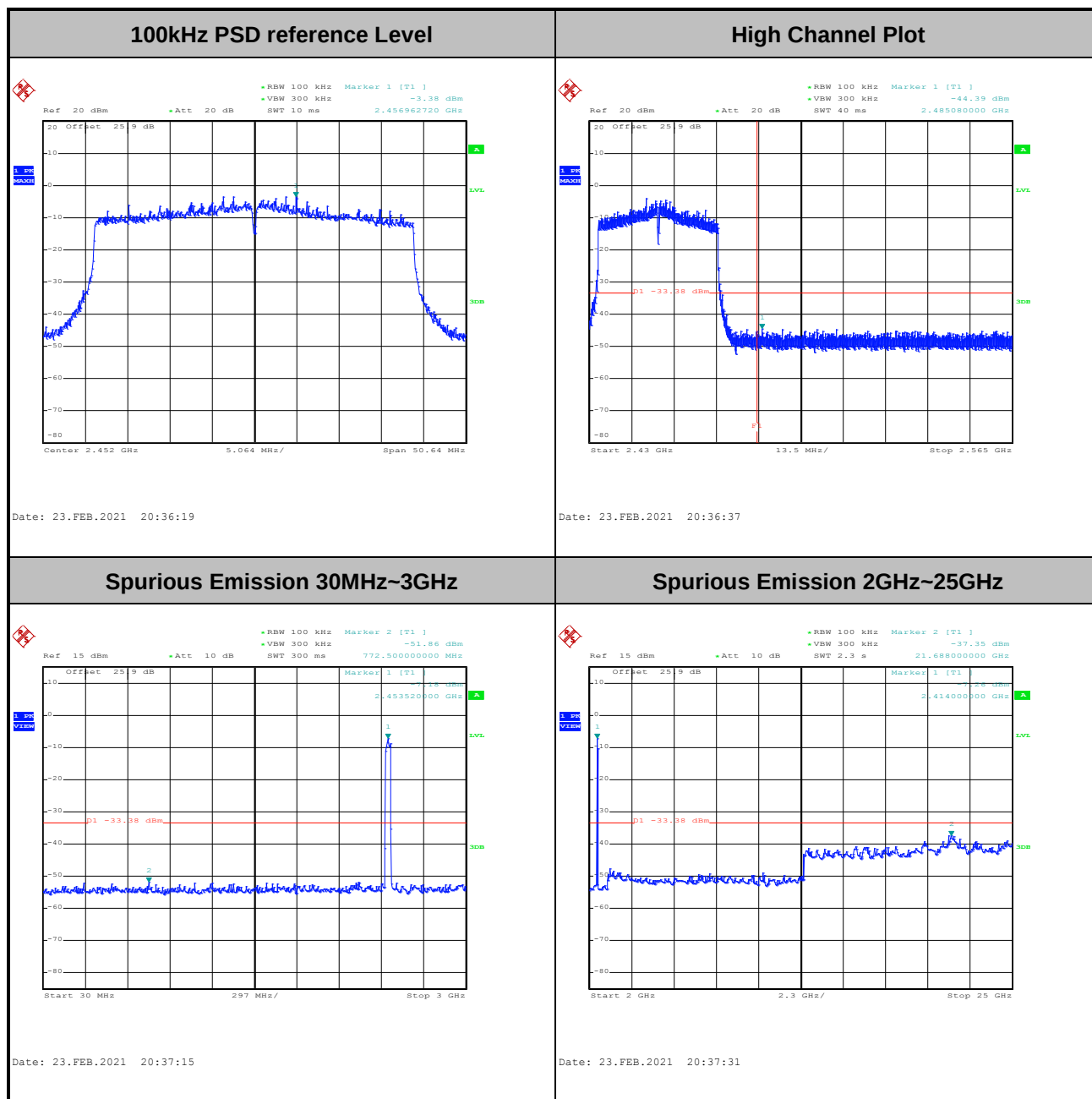


Test Mode :	802.11ax HE40	Test Channel :	06 Full RU
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Test Mode :	802.11ax HE40	Test Channel :	09 Full RU
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3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

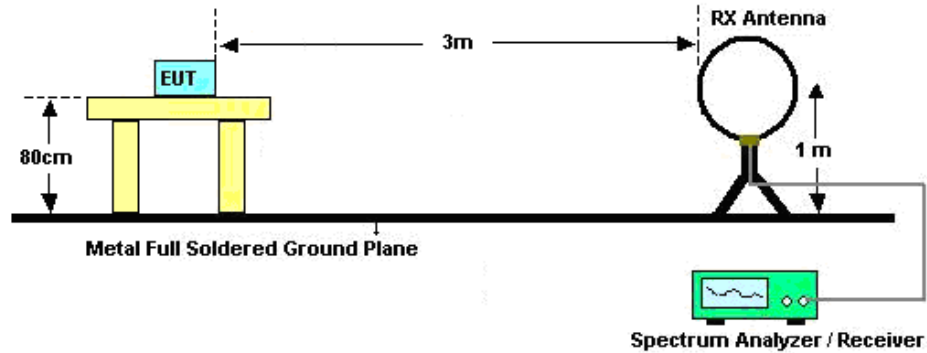
See list of measuring equipment of this test report.

3.5.3 Test Procedures

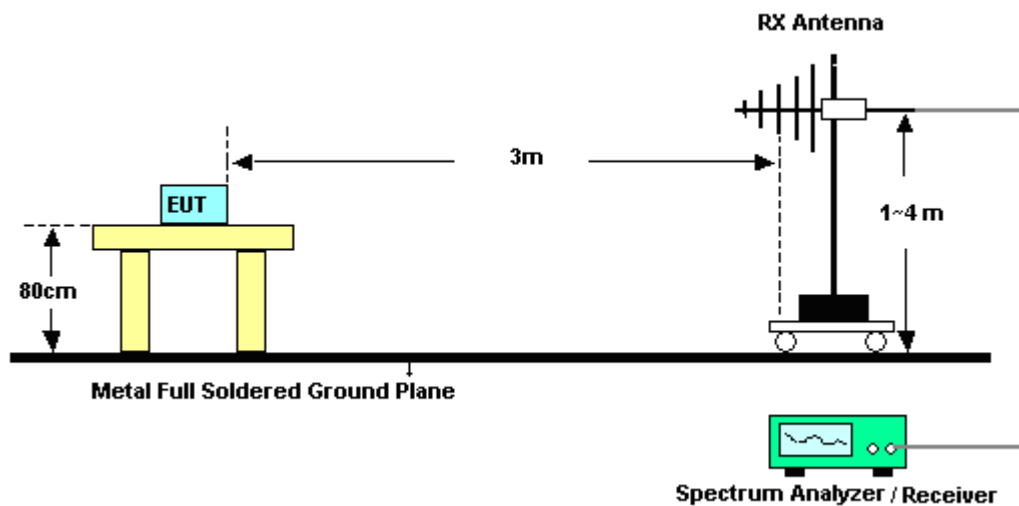
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1 GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1 GHz, the emission level of the EUT in peak mode was 20 dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW = 100 kHz for $f < 1$ GHz; VBW $\geq$ 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

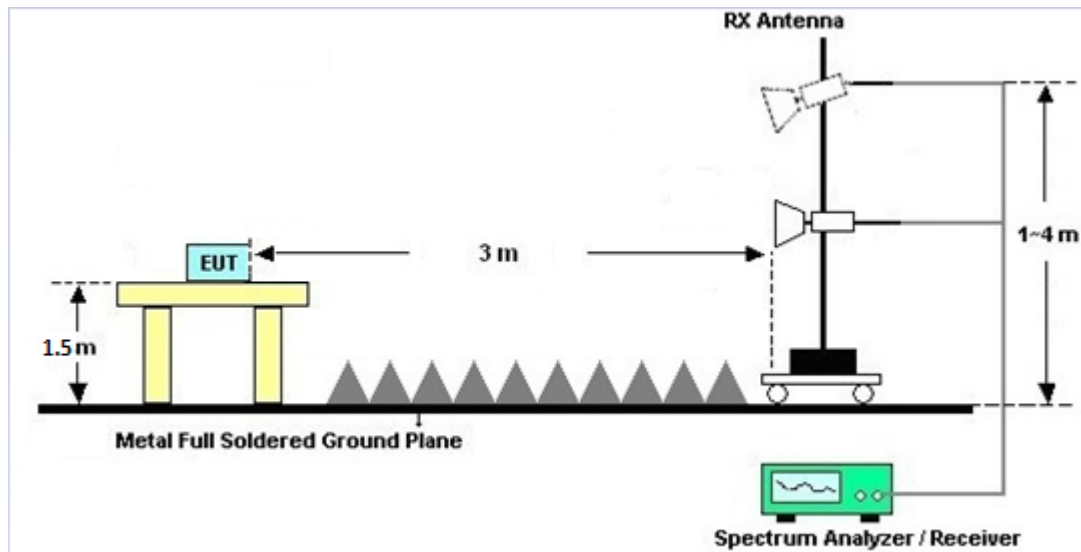
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated test above 1GHz



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

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

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came 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.

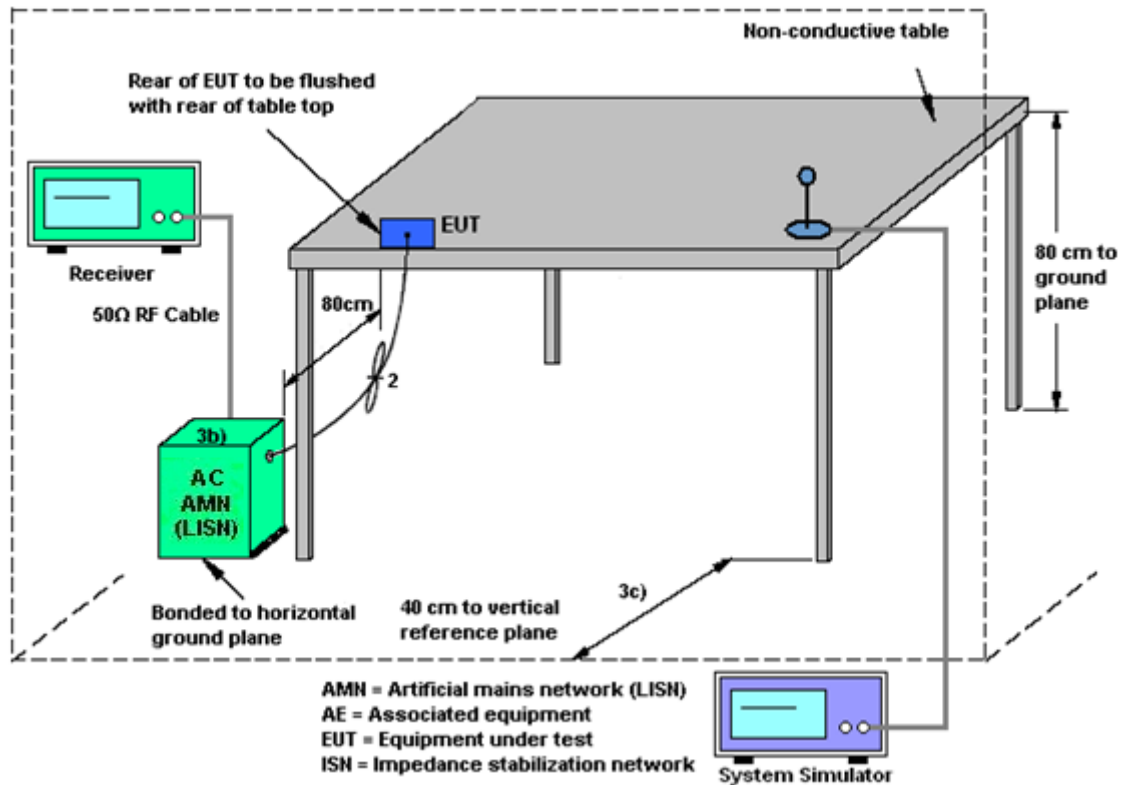
3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 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

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

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

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

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

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

			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant. 6 (dBi)	Ant. 7 (dBi)				
2.4 GHz	1.50	0.00	1.50	1.50	0.00	0.00

$Power\ Limit\ Reduction = DG(Power) - 6dBi, (min = 0)$

$PSD\ Limit\ Reduction = DG(PSD) - 6dBi, (min = 0)$



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Sensor	DARE	RPR3006W	16I00054S NO12	10MHz~6GHz	Dec. 16, 2020	Jan. 30, 2021~ Feb. 26, 2021	Dec. 15, 2021	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz-40GHz	Jan. 21, 2021	Jan. 30, 2021~ Feb. 26, 2021	Jan. 20, 2022	Conducted (TH02-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2020	Jan. 30, 2021~ Feb. 26, 2021	Mar. 16, 2021	Conducted (TH02-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Apr. 12, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 11, 2020	Apr. 12, 2021	Sep. 10, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Apr. 12, 2021	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 01, 2020	Apr. 12, 2021	Nov. 30, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Apr. 12, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Apr. 12, 2021	N/A	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Apr. 12, 2021	Dec. 30, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Feb. 25, 2021	Apr. 12, 2021	Feb. 24, 2022	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jul. 14, 2020	Feb. 11, 2021~ Feb. 21, 2021	Jul. 13, 2021	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01 N-06	47020 & 06	30MHz to 1GHz	Oct. 11, 2020	Feb. 11, 2021~ Feb. 21, 2021	Oct. 10, 2021	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-152 2	1G~18GHz	Sep. 29, 2020	Feb. 11, 2021~ Feb. 21, 2021	Sep. 28, 2021	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170 576	18GHz ~40GHz	May 22, 2020	Feb. 11, 2021~ Feb. 21, 2021	May 21, 2021	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1G	Sep. 30, 2020	Feb. 11, 2021~ Feb. 21, 2021	Sep. 29, 2021	Radiation (03CH16-HY)
Amplifier	EMCI	EMC051845S E	980729	1-18GHz	Jul. 10, 2020	Feb. 11, 2021~ Feb. 21, 2021	Jul. 09, 2021	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY532702 64	1GHz~26.5GHz	Dec. 10, 2020	Feb. 11, 2021~ Feb. 21, 2021	Dec. 09, 2021	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A (MXE)	MY572901 11	3Hz~26.5GHz	Dec. 11, 2020	Feb. 11, 2021~ Feb. 21, 2021	Dec. 10, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/ 4PE	NA	Aug. 29, 2020	Feb. 11, 2021~ Feb. 21, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11688/ 4PE	NA	Aug. 29, 2020	Feb. 11, 2021~ Feb. 21, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300 -5757	NA	Aug. 29, 2020	Feb. 11, 2021~ Feb. 21, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Feb. 11, 2021~ Feb. 21, 2021	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Feb. 11, 2021~ Feb. 21, 2021	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Feb. 11, 2021~ Feb. 21, 2021	N/A	Radiation (03CH16-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.3
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5
---	-----

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.3
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.7
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Mina Liu	Temperature:	22.3~25.5	°C
Test Date:	2021/01/30~2021/02/26	Relative Humidity:	56.3~59.1	%

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
					Ant6	Ant7	Ant6	Ant7		
11b	1Mbps	2	1	2412	13.15	13.25	7.92	8.04	0.50	Pass
11b	1Mbps	2	6	2437	13.20	13.35	7.56	7.56	0.50	Pass
11b	1Mbps	2	11	2462	13.30	13.45	7.52	8.04	0.50	Pass
11g	6Mbps	2	1	2412	16.35	16.35	15.04	15.08	0.50	Pass
11g	6Mbps	2	6	2437	16.35	16.40	15.10	15.04	0.50	Pass
11g	6Mbps	2	11	2462	16.35	16.35	15.12	15.30	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
					Ant6	Ant7	SUM	Ant6	Ant7	Ant6	Ant7	Ant6	Ant7	Ant6	Ant7	
11b	1Mbps	2	1	2412	17.90	17.50	20.71	30.00		1.50		22.21		36.00		Pass
11b	1Mbps	2	6	2437	17.90	17.10	20.53	30.00		1.50		22.03		36.00		Pass
11b	1Mbps	2	11	2462	16.10	15.50	18.82	30.00		1.50		20.32		36.00		Pass
11g	6Mbps	2	1	2412	11.40	11.40	14.41	30.00		1.50		15.91		36.00		Pass
11g	6Mbps	2	6	2437	17.00	16.30	19.67	30.00		1.50		21.17		36.00		Pass
11g	6Mbps	2	11	2462	13.20	12.40	15.83	30.00		1.50		17.33		36.00		Pass
HT20	MCS0	2	1	2412	12.60	12.10	15.37	30.00		1.50		16.87		36.00		Pass
HT20	MCS0	2	6	2437	16.90	16.00	19.48	30.00		1.50		20.98		36.00		Pass
HT20	MCS0	2	11	2462	11.90	11.00	14.48	30.00		1.50		15.98		36.00		Pass
HT40	MCS0	2	3	2422	8.10	7.10	10.64	30.00		1.50		12.14		36.00		Pass
HT40	MCS0	2	6	2437	10.50	10.00	13.27	30.00		1.50		14.77		36.00		Pass
HT40	MCS0	2	9	2452	10.70	9.80	13.28	30.00		1.50		14.78		36.00		Pass
VHT20	MCS0	2	1	2412	12.50	12.00	15.27	30.00		1.50		16.77		36.00		Pass
VHT20	MCS0	2	6	2437	16.80	15.90	19.38	30.00		1.50		20.88		36.00		Pass
VHT20	MCS0	2	11	2462	11.80	10.90	14.38	30.00		1.50		15.88		36.00		Pass
VHT40	MCS0	2	3	2422	8.00	7.00	10.54	30.00		1.50		12.04		36.00		Pass
VHT40	MCS0	2	6	2437	10.40	9.90	13.17	30.00		1.50		14.67		36.00		Pass
VHT40	MCS0	2	9	2452	10.60	9.70	13.18	30.00		1.50		14.68		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
					Ant6	Ant7	Worse + 3.01	Ant6	Ant7	Ant6	Ant7	
11b	1Mbps	2	1	2412	-6.17	-5.71	-2.70	1.50		8.00		Pass
11b	1Mbps	2	6	2437	-5.11	-6.15	-2.10	1.50		8.00		Pass
11b	1Mbps	2	11	2462	-7.82	-7.84	-4.81	1.50		8.00		Pass
11g	6Mbps	2	1	2412	-15.03	-14.89	-11.88	1.50		8.00		Pass
11g	6Mbps	2	6	2437	-10.06	-9.74	-6.73	1.50		8.00		Pass
11g	6Mbps	2	11	2462	-12.92	-14.16	-9.91	1.50		8.00		Pass

Note: 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
						Ant6	Ant7	Ant6	Ant7		
HE20	MCS0	2	1	2412	Full	18.95	18.90	16.44	16.26	0.50	Pass
HE20	MCS0	2	6	2437	Full	18.90	18.90	18.20	17.96	0.50	Pass
HE20	MCS0	2	11	2462	Full	18.90	18.90	16.76	16.44	0.50	Pass
HE40	MCS0	2	3	2422	Full	37.80	37.80	31.28	33.72	0.50	Pass
HE40	MCS0	2	6	2437	Full	37.80	37.90	33.80	36.32	0.50	Pass
HE40	MCS0	2	9	2452	Full	37.80	37.70	29.84	33.76	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
						Ant6	Ant7	SUM	Ant6	Ant7	Ant6	Ant7	Ant6	Ant7	Ant6	Ant7	
HE20	MCS0	2	1	2412	Full	12.70	12.20	15.47	30.00		1.50		16.97		36.00		Pass
HE20	MCS0	2	1	2412	26/0	3.80	4.20	7.01	30.00		1.50		8.51		36.00		Pass
HE20	MCS0	2	6	2437	Full	17.00	16.10	19.58	30.00		1.50		21.08		36.00		Pass
HE20	MCS0	2	11	2462	Full	12.00	11.10	14.58	30.00		1.50		16.08		36.00		Pass
HE20	MCS0	2	11	2462	26/8	2.80	4.20	6.57	30.00		1.50		8.07		36.00		Pass
HE40	MCS0	2	3	2422	Full	8.20	7.20	10.74	30.00		1.50		12.24		36.00		Pass
HE40	MCS0	2	6	2437	Full	10.60	10.10	13.37	30.00		1.50		14.87		36.00		Pass
HE40	MCS0	2	9	2452	Full	10.80	9.90	13.38	30.00		1.50		14.88		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
						Ant6	Ant7	Worse + 3.01	Ant6	Ant7	Ant6	Ant7	
HE20	MCS0	2	1	2412	Full	-13.11	-13.17	-10.10	1.50		8.00		Pass
HE20	MCS0	2	1	2412	26/0	-14.31	-13.12	-10.11	1.50		8.00		Pass
HE20	MCS0	2	6	2437	Full	-10.77	-9.95	-6.94	1.50		8.00		Pass
HE20	MCS0	2	11	2462	Full	-14.09	-15.36	-11.08	1.50		8.00		Pass
HE20	MCS0	2	11	2462	26/8	-14.70	-14.60	-11.59	1.50		8.00		Pass
HE40	MCS0	2	3	2422	Full	-19.32	-20.21	-16.31	1.50		8.00		Pass
HE40	MCS0	2	6	2437	Full	-19.01	-18.74	-15.73	1.50		8.00		Pass
HE40	MCS0	2	9	2452	Full	-18.39	-18.56	-15.38	1.50		8.00		Pass

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



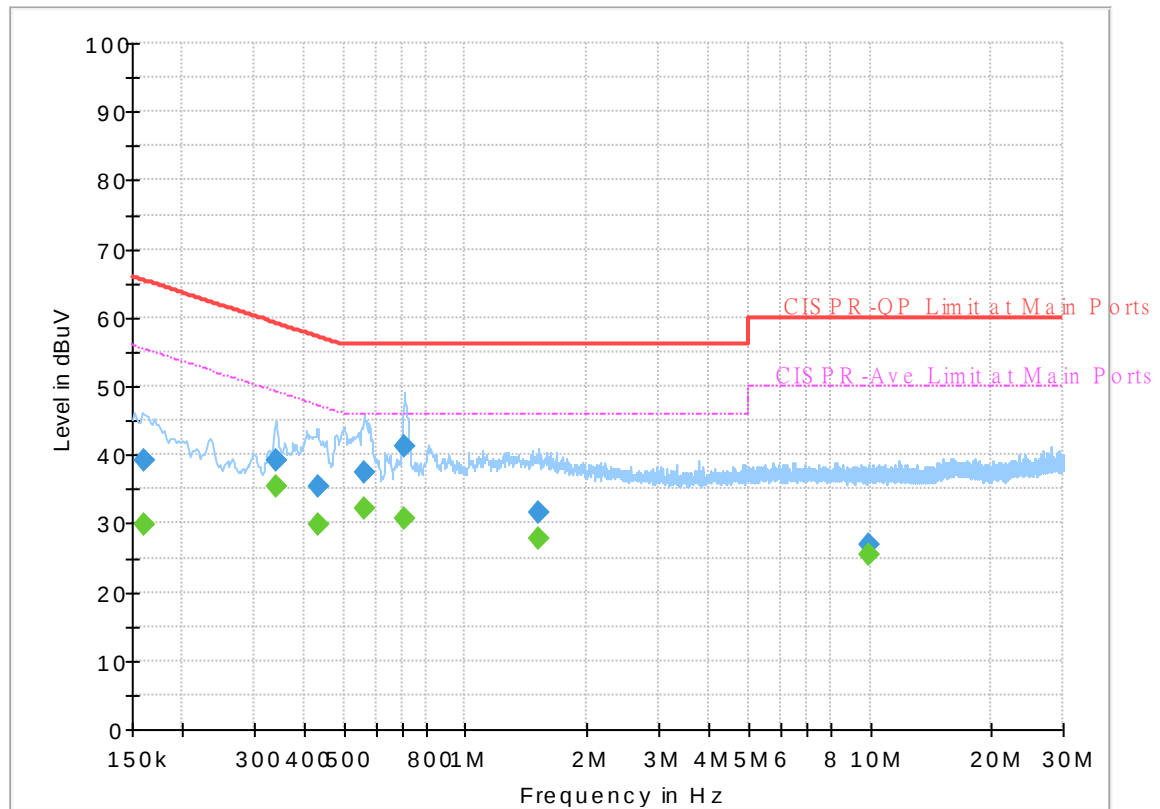
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Howard Huang	Temperature :	23~26℃
		Relative Humidity :	40~50%

EUT Information

Report NO : 112124-02
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



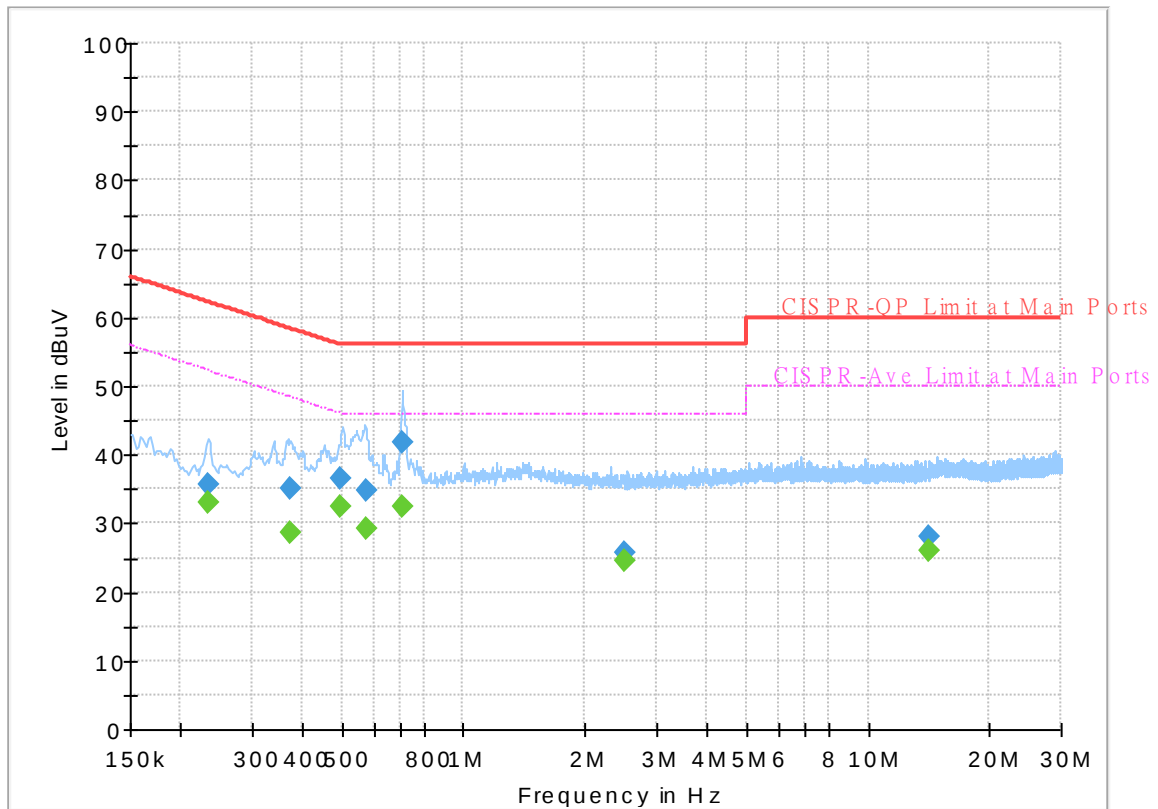
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.161250	---	29.71	55.40	25.69	L1	OFF	19.7
0.161250	39.19	---	65.40	26.21	L1	OFF	19.7
0.339000	---	35.40	49.23	13.83	L1	OFF	19.7
0.339000	39.21	---	59.23	20.02	L1	OFF	19.7
0.431250	---	29.96	47.23	17.27	L1	OFF	19.8
0.431250	35.27	---	57.23	21.96	L1	OFF	19.8
0.561750	---	32.22	46.00	13.78	L1	OFF	19.9
0.561750	37.45	---	56.00	18.55	L1	OFF	19.9
0.705750	---	30.84	46.00	15.16	L1	OFF	20.1
0.705750	41.29	---	56.00	14.71	L1	OFF	20.1
1.513500	---	27.66	46.00	18.34	L1	OFF	20.2
1.513500	31.62	---	56.00	24.38	L1	OFF	20.2
9.955500	---	25.53	50.00	24.47	L1	OFF	20.2
9.955500	26.89	---	60.00	33.11	L1	OFF	20.2

EUT Information

Report NO : 112124-02
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)
0.233250	---	33.03	52.33	19.30	N	OFF	19.7
0.233250	35.69	---	62.33	26.64	N	OFF	19.7
0.375000	---	28.66	48.39	19.73	N	OFF	19.8
0.375000	35.05	---	58.39	23.34	N	OFF	19.8
0.498750	---	32.50	46.02	13.52	N	OFF	19.9
0.498750	36.59	---	56.02	19.43	N	OFF	19.9
0.573000	---	29.24	46.00	16.76	N	OFF	20.0
0.573000	34.82	---	56.00	21.18	N	OFF	20.0
0.705750	---	32.41	46.00	13.59	N	OFF	20.1
0.705750	41.94	---	56.00	14.06	N	OFF	20.1
2.503500	---	24.53	46.00	21.47	N	OFF	20.2
2.503500	25.87	---	56.00	30.13	N	OFF	20.2
14.178750	---	26.11	50.00	23.89	N	OFF	20.4
14.178750	28.07	---	60.00	31.93	N	OFF	20.4



Appendix C. Radiated Spurious Emission

Test Engineer :	Karl Hou, Caster Liao and Andy Yang	Temperature :	20~25°C
		Relative Humidity :	50~60%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preampl Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
6+7		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2387.805	57.25	-16.75	74	41.48	27.57	18.48	30.28	113	58	P	H
		2388.96	47.82	-6.18	54	32.05	27.57	18.48	30.28	113	58	A	H
	*	2412	106.84	-	-	91.11	27.48	18.52	30.27	113	58	P	H
	*	2412	103.72	-	-	87.99	27.48	18.52	30.27	113	58	A	H
													H
													H
		2387.07	58.42	-15.58	74	42.64	27.58	18.48	30.28	100	85	P	V
		2388.96	50.12	-3.88	54	34.35	27.57	18.48	30.28	100	85	A	V
	*	2412	108.71	-	-	92.98	27.48	18.52	30.27	100	85	P	V
	*	2412	105.6	-	-	89.87	27.48	18.52	30.27	100	85	A	V
													V
													V
802.11b CH 06 2437MHz		2378.88	55.88	-18.12	74	40.07	27.63	18.46	30.28	321	64	P	H
		2389.94	44.39	-9.61	54	28.63	27.56	18.48	30.28	321	64	A	H
	*	2437	109.5	-	-	93.77	27.43	18.57	30.27	321	64	P	H
	*	2437	106.47	-	-	90.74	27.43	18.57	30.27	321	64	A	H
		2491.95	55.8	-18.2	74	39.97	27.4	18.68	30.25	321	64	P	H
		2484.81	44.56	-9.44	54	28.74	27.4	18.67	30.25	321	64	A	H
		2338.28	56.75	-17.25	74	40.84	27.82	18.39	30.3	100	101	P	V
		2388.4	44.5	-9.5	54	28.73	27.57	18.48	30.28	100	101	A	V
	*	2437	112.3	-	-	96.57	27.43	18.57	30.27	100	101	P	V
	*	2437	109.27	-	-	93.54	27.43	18.57	30.27	100	101	A	V
		2497.06	56.65	-17.35	74	40.81	27.4	18.69	30.25	100	101	P	V
		2484.53	44.82	-9.18	54	29.01	27.4	18.66	30.25	100	101	A	V



802.11b CH 11 2462MHz	*	2462	105.42	-	-	89.66	27.4	18.62	30.26	124	58	P	H
	*	2462	102.44	-	-	86.68	27.4	18.62	30.26	124	58	A	H
		2483.76	57.22	-16.78	74	41.41	27.4	18.66	30.25	124	58	P	H
		2483.52	47.12	-6.88	54	31.31	27.4	18.66	30.25	124	58	A	H
													H
													H
	*	2462	108.17	-	-	92.41	27.4	18.62	30.26	100	111	P	V
	*	2462	105.26	-	-	89.5	27.4	18.62	30.26	100	111	A	V
		2485.48	58.88	-15.12	74	43.06	27.4	18.67	30.25	100	111	P	V
		2483.52	49.48	-4.52	54	33.67	27.4	18.66	30.25	100	111	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. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	40.04	-33.96	74	50.89	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
		4824	40.91	-33.09	74	51.76	31.15	13.36	55.36	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	40.99	-33.01	74	51.85	31.15	13.36	55.37	100	0	P	H
		7311	48.46	-25.54	74	52.14	36.42	16.16	56.26	100	0	P	H
													H
													H
		4874	41.15	-32.85	74	52.01	31.15	13.36	55.37	100	0	P	V
		7311	49.09	-24.91	74	52.77	36.42	16.16	56.26	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	39.97	-34.03	74	50.79	31.2	13.36	55.38	100	0	P	H
		7386	47	-27	74	50.49	36.43	16.36	56.28	100	0	P	H
													H
													H
		4924	40.11	-33.89	74	50.93	31.2	13.36	55.38	100	0	P	V
		7386	46.76	-27.24	74	50.25	36.43	16.36	56.28	100	0	P	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 (Band Edge @ 3m)

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		2389.8	59.16	-14.84	74	43.4	27.56	18.48	30.28	106	55	P	H
		2390	48.15	-5.85	54	32.39	27.56	18.48	30.28	106	55	A	H
	*	2412	107.73	-	-	92	27.48	18.52	30.27	106	55	P	H
	*	2412	100.9	-	-	85.17	27.48	18.52	30.27	106	55	A	H
													H
													H
		2390	60.59	-13.41	74	44.83	27.56	18.48	30.28	100	86	P	V
		2390	49.98	-4.02	54	34.22	27.56	18.48	30.28	100	86	A	V
	*	2412	109.37	-	-	93.64	27.48	18.52	30.27	100	86	P	V
	*	2412	102.58	-	-	86.85	27.48	18.52	30.27	100	86	A	V
													V
													V
802.11g CH 06 2437MHz		2379.3	56.59	-17.41	74	40.79	27.62	18.46	30.28	223	56	P	H
		2389.94	46.19	-7.81	54	30.43	27.56	18.48	30.28	223	56	A	H
	*	2437	114.55	-	-	98.82	27.43	18.57	30.27	223	56	P	H
	*	2437	106.97	-	-	91.24	27.43	18.57	30.27	223	56	A	H
		2486.7	56.53	-17.47	74	40.71	27.4	18.67	30.25	223	56	P	H
		2485.51	45.38	-8.62	54	29.56	27.4	18.67	30.25	223	56	A	H
		2389.1	57.42	-16.58	74	41.65	27.57	18.48	30.28	100	85	P	V
		2389.94	47.14	-6.86	54	31.38	27.56	18.48	30.28	100	85	A	V
	*	2437	116.19	-	-	100.46	27.43	18.57	30.27	100	85	P	V
	*	2437	108.75	-	-	93.02	27.43	18.57	30.27	100	85	A	V
		2486.35	58.2	-15.8	74	42.38	27.4	18.67	30.25	100	85	P	V
		2485.65	46.14	-7.86	54	30.32	27.4	18.67	30.25	100	85	A	V



802.11g CH 11 2462MHz	*	2462	109.24	-	-	93.48	27.4	18.62	30.26	123	55	P	H
	*	2462	101.37	-	-	85.61	27.4	18.62	30.26	123	55	A	H
		2484.72	59.96	-14.04	74	44.14	27.4	18.67	30.25	123	55	P	H
		2484.6	48.54	-5.46	54	32.73	27.4	18.66	30.25	123	55	A	H
													H
													H
	*	2462	111.36	-	-	95.6	27.4	18.62	30.26	100	112	P	V
	*	2462	103.58	-	-	87.82	27.4	18.62	30.26	100	112	A	V
		2484.88	61.69	-12.31	74	45.87	27.4	18.67	30.25	100	112	P	V
		2484.88	49.92	-4.08	54	34.1	27.4	18.67	30.25	100	112	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. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	40.26	-33.74	74	51.11	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
		4824	39.97	-34.03	74	50.82	31.15	13.36	55.36	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	40.75	-33.25	74	51.61	31.15	13.36	55.37	100	0	P	H
		7311	46.31	-27.69	74	49.99	36.42	16.16	56.26	100	0	P	H
													H
													H
		4874	41.62	-32.38	74	52.48	31.15	13.36	55.37	100	0	P	V
		7311	46.78	-27.22	74	50.46	36.42	16.16	56.26	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	40.9	-33.1	74	51.72	31.2	13.36	55.38	100	0	P	H
		7386	46.24	-27.76	74	49.73	36.43	16.36	56.28	100	0	P	H
													H
													H
		4924	40.61	-33.39	74	51.43	31.2	13.36	55.38	100	0	P	V
		7386	46.49	-27.51	74	49.98	36.43	16.36	56.28	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

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

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 01 2412MHz		2389.59	61.67	-12.33	74	45.91	27.56	18.48	30.28	103	55	P	H
		2390	49.73	-4.27	54	33.97	27.56	18.48	30.28	103	55	A	H
	*	2412	111.68	-	-	95.95	27.48	18.52	30.27	103	55	P	H
	*	2412	101.2	-	-	85.47	27.48	18.52	30.27	103	55	A	H
													H
													H
		2389.695	61.73	-12.27	74	45.97	27.56	18.48	30.28	101	103	P	V
		2390	50.86	-3.14	54	35.1	27.56	18.48	30.28	101	103	A	V
	*	2412	111.57	-	-	95.84	27.48	18.52	30.27	101	103	P	V
	*	2412	102.11	-	-	86.38	27.48	18.52	30.27	101	103	A	V
													V
													V
802.11ax HE20 Full CH 06 2437MHz		2389.1	56.66	-17.34	74	40.89	27.57	18.48	30.28	224	55	P	H
		2389.94	46.31	-7.69	54	30.55	27.56	18.48	30.28	224	55	A	H
	*	2437	115.39	-	-	99.66	27.43	18.57	30.27	224	55	P	H
	*	2437	106.47	-	-	90.74	27.43	18.57	30.27	224	55	A	H
		2483.83	59.1	-14.9	74	43.29	27.4	18.66	30.25	224	55	P	H
		2483.5	47.54	-6.46	54	31.73	27.4	18.66	30.25	224	55	A	H
		2389.94	56.84	-17.16	74	41.08	27.56	18.48	30.28	100	86	P	V
		2389.94	46.68	-7.32	54	30.92	27.56	18.48	30.28	100	86	A	V
	*	2437	117.3	-	-	101.57	27.43	18.57	30.27	100	86	P	V
	*	2437	108.5	-	-	92.77	27.43	18.57	30.27	100	86	A	V
		2484.32	60.31	-13.69	74	44.5	27.4	18.66	30.25	100	86	P	V
		2483.62	49.05	-4.95	54	33.24	27.4	18.66	30.25	100	86	A	V



WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
8802.11ax HE20 Full CH 11 2462MHz	*	2462	108.17	-	-	92.41	27.4	18.62	30.26	355	61	P	H
	*	2462	99.41	-	-	83.65	27.4	18.62	30.26	355	61	A	H
		2486	59.87	-14.13	74	44.05	27.4	18.67	30.25	355	61	P	H
		2483.52	47.85	-6.15	54	32.04	27.4	18.66	30.25	355	61	A	H
													H
													H
	*	2462	110.04	-	-	94.28	27.4	18.62	30.26	100	114	P	V
	*	2462	101.08	-	-	85.32	27.4	18.62	30.26	100	114	A	V
		2483.6	60.79	-13.21	74	44.98	27.4	18.66	30.25	100	114	P	V
		2483.52	50.1	-3.9	54	34.29	27.4	18.66	30.25	100	114	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Full CH 01 2412MHz		4824	40.33	-33.67	74	51.18	31.15	13.36	55.36	100	0	P	H
													H
													H
													H
		4824	40.09	-33.91	74	50.94	31.15	13.36	55.36	100	0	P	V
													V
													V
													V
802.11ax HE20 Full CH 06 2437MHz		4874	39.94	-34.06	74	50.8	31.15	13.36	55.37	100	0	P	H
		7311	48.87	-25.13	74	52.55	36.42	16.16	56.26	100	0	P	H
													H
													H
		4874	40.34	-33.66	74	51.2	31.15	13.36	55.37	100	0	P	V
		7311	49.12	-24.88	74	52.8	36.42	16.16	56.26	100	0	P	V
													V
													V
802.11ax HE20 Full CH 11 2462MHz		4924	40.79	-33.21	74	51.61	31.2	13.36	55.38	100	0	P	H
		7386	46.32	-27.68	74	49.81	36.43	16.36	56.28	100	0	P	H
													H
													H
		4924	40.98	-33.02	74	51.8	31.2	13.36	55.38	100	0	P	V
		7386	45.48	-28.52	74	48.97	36.43	16.36	56.28	100	0	P	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 802.11ax HE20 Partial 26 (Band Edge @ 3m)**

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 26/0 CH 01 2412MHz		2388.12	56.9	-17.1	74	41.13	27.57	18.48	30.28	138	60	P	H
		2387.595	44.3	-9.7	54	28.53	27.57	18.48	30.28	138	60	A	H
	*	2412	106.27	-	-	90.54	27.48	18.52	30.27	138	60	P	H
	*	2412	99.05	-	-	83.32	27.48	18.52	30.27	138	60	A	H
													H
													H
		2390	57.79	-16.21	74	42.03	27.56	18.48	30.28	101	114	P	V
		2390	44.36	-9.64	54	28.6	27.56	18.48	30.28	101	114	A	V
	*	2412	106.99	-	-	91.26	27.48	18.52	30.27	101	114	P	V
	*	2412	99.95	-	-	84.22	27.48	18.52	30.27	101	114	A	V
													V
													V



2.4GHz 2400~2483.5MHz

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

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 03 2422MHz		2387.98	59.51	-14.49	74	43.74	27.57	18.48	30.28	289	65	P	H
		2389.8	48.24	-5.76	54	32.48	27.56	18.48	30.28	289	65	A	H
	*	2422	103.04	-	-	87.31	27.46	18.54	30.27	289	65	P	H
	*	2422	94.5	-	-	78.77	27.46	18.54	30.27	289	65	A	H
		2489.22	56.72	-17.28	74	40.9	27.4	18.67	30.25	289	65	P	H
		2491.04	43.99	-10.01	54	28.16	27.4	18.68	30.25	289	65	A	H
		2389.66	61.68	-12.32	74	45.92	27.56	18.48	30.28	100	114	P	V
		2389.66	49.79	-4.21	54	34.03	27.56	18.48	30.28	100	114	A	V
	*	2422	103.85	-	-	88.12	27.46	18.54	30.27	100	114	P	V
	*	2422	95.81	-	-	80.08	27.46	18.54	30.27	100	114	A	V
		2486.84	56.49	-17.51	74	40.67	27.4	18.67	30.25	100	114	P	V
		2498.67	43.98	-10.02	54	28.14	27.4	18.69	30.25	100	114	A	V
802.11ax HE40 Full CH 06 2437MHz		2389.8	57.21	-16.79	74	41.45	27.56	18.48	30.28	255	55	P	H
		2389.94	47.04	-6.96	54	31.28	27.56	18.48	30.28	255	55	A	H
	*	2437	105.9	-	-	90.17	27.43	18.57	30.27	255	55	P	H
	*	2437	97.63	-	-	81.9	27.43	18.57	30.27	255	55	A	H
		2483.76	59.74	-14.26	74	43.93	27.4	18.66	30.25	255	55	P	H
		2483.5	48.88	-5.12	54	33.07	27.4	18.66	30.25	255	55	A	H
		2389.94	57.13	-16.87	74	41.37	27.56	18.48	30.28	100	109	P	V
		2389.94	47.59	-6.41	54	31.83	27.56	18.48	30.28	100	109	A	V
	*	2437	108.31	-	-	92.58	27.43	18.57	30.27	100	109	P	V
	*	2437	99.14	-	-	83.41	27.43	18.57	30.27	100	109	A	V
		2483.97	61.88	-12.12	74	46.07	27.4	18.66	30.25	100	109	P	V
		2483.55	50.39	-3.61	54	34.58	27.4	18.66	30.25	100	109	A	V



WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 09 2452MHz		2323.02	57.38	-16.62	74	41.47	27.85	18.36	30.3	284	56	P	H
		2358.58	43.86	-10.14	54	27.98	27.75	18.42	30.29	284	56	A	H
	*	2452	106.01	-	-	90.27	27.4	18.6	30.26	284	56	P	H
	*	2452	97.73	-	-	81.99	27.4	18.6	30.26	284	56	A	H
		2484.74	62.65	-11.35	74	46.83	27.4	18.67	30.25	284	56	P	H
		2487.61	49.83	-4.17	54	34.01	27.4	18.67	30.25	284	56	A	H
		2346.54	56.03	-17.97	74	40.11	27.81	18.4	30.29	100	112	P	V
		2387	43.95	-10.05	54	28.17	27.58	18.48	30.28	100	112	A	V
	*	2452	107.09	-	-	91.35	27.4	18.6	30.26	100	112	P	V
	*	2452	98.16	-	-	82.42	27.4	18.6	30.26	100	112	A	V
		2486.28	64.06	-9.94	74	48.24	27.4	18.67	30.25	100	112	P	V
		2488.38	50.62	-3.38	54	34.8	27.4	18.67	30.25	100	112	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE40 Full (Harmonic @ 3m)

WIFI Ant. 6+7	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE40 Full CH 03 2422MHz		4844	40.8	-33.2	74	51.62	31.19	13.36	55.37	100	0	P	H
		7266	45.45	-28.55	74	49.39	36.26	16.05	56.25	100	0	P	H
													H
													H
		4844	41.02	-32.98	74	51.84	31.19	13.36	55.37	100	0	P	V
		7266	45.67	-28.33	74	49.61	36.26	16.05	56.25	100	0	P	V
													V
													V
802.11ax HE40 Full CH 06 2437MHz		4874	40.84	-33.16	74	51.7	31.15	13.36	55.37	100	0	P	H
		7311	45.65	-28.35	74	49.33	36.42	16.16	56.26	100	0	P	H
													H
													H
		4874	40.42	-33.58	74	51.28	31.15	13.36	55.37	100	0	P	V
		7311	45.72	-28.28	74	49.4	36.42	16.16	56.26	100	0	P	V
													V
													V
802.11ax HE40 Full CH 09 2452MHz		4904	39.66	-34.34	74	50.56	31.12	13.36	55.38	100	0	P	H
		7356	45.92	-28.08	74	49.42	36.49	16.28	56.27	100	0	P	H
													H
													H
		4904	39.94	-34.06	74	50.84	31.12	13.36	55.38	100	0	P	V
		7356	46.25	-27.75	74	49.75	36.49	16.28	56.27	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

2.4GHz WIFI 802.11ax HE20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
6+7		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11ax HE20 LF		96.93	29.42	-14.08	43.5	44.83	15.7	1.51	32.62	-	-	P	H
		183.26	35.96	-7.54	43.5	51.54	15.05	2.23	32.86	-	-	P	H
		303.54	28.48	-17.52	46	38.79	19.3	2.93	32.54	-	-	P	H
		511.12	29.32	-16.68	46	33.96	24.19	3.83	32.66	-	-	P	H
		714.82	35.63	-10.37	46	36.53	26.95	4.62	32.47	-	-	P	H
		824.43	38.62	-7.38	46	38.03	28.33	5.01	32.75	100	0	P	H
													H
													H
													H
													H
													H
													H
		97.9	34.26	-9.24	43.5	49.47	15.88	1.52	32.61	100	0	P	V
		302.57	21.36	-24.64	46	31.69	19.3	2.92	32.55	-	-	P	V
		511.12	27.21	-18.79	46	31.85	24.19	3.83	32.66	-	-	P	V
		571.26	29.57	-16.43	46	32.07	26.08	4.09	32.67	-	-	P	V
		711.91	33.14	-12.86	46	34.13	26.86	4.6	32.45	-	-	P	V
		824.43	36.45	-9.55	46	35.86	28.33	5.01	32.75	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
6+7		(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”.



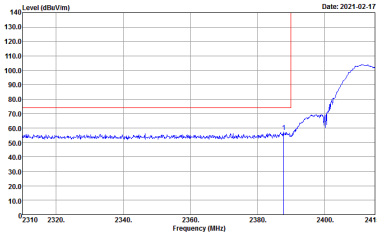
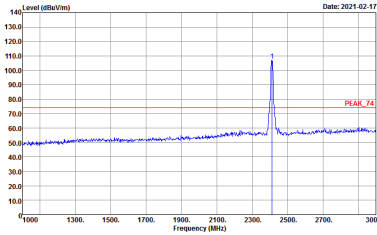
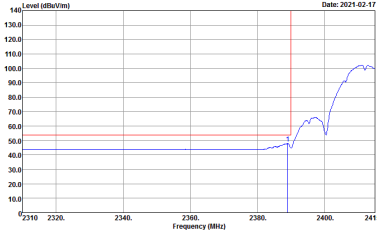
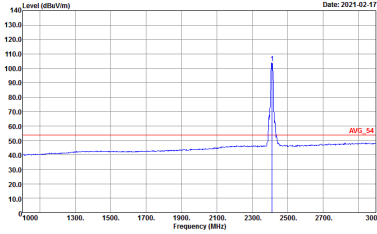
Appendix D. Radiated Spurious Emission Plots

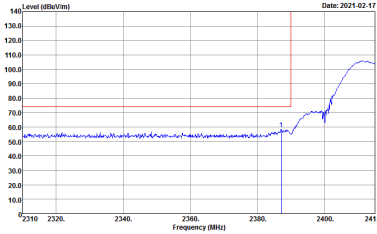
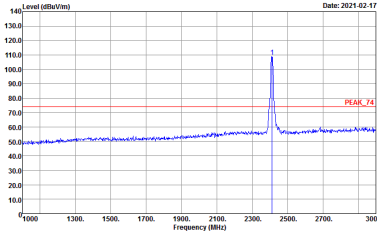
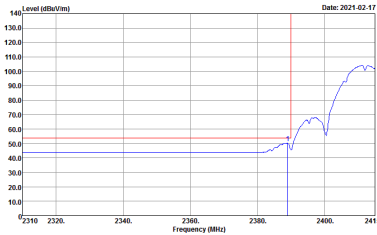
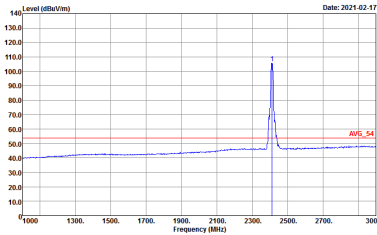
Test Engineer :	Karl Hou, Caster Liao and Andy Yang	Temperature :	20~25°C
		Relative Humidity :	50~60%

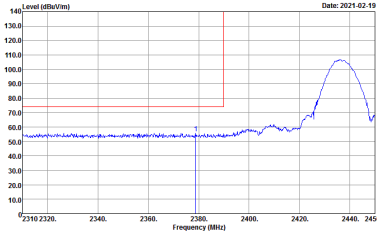
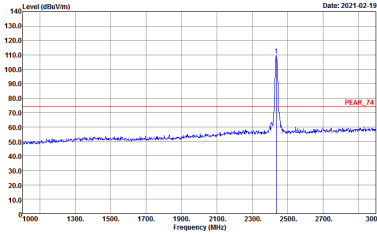
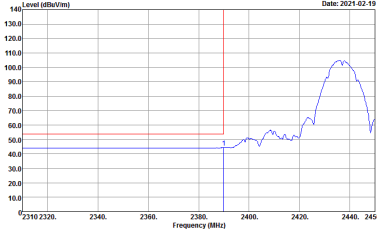
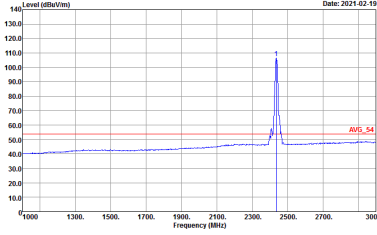
Note symbol

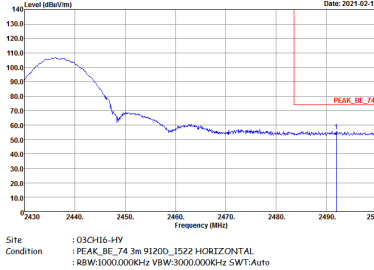
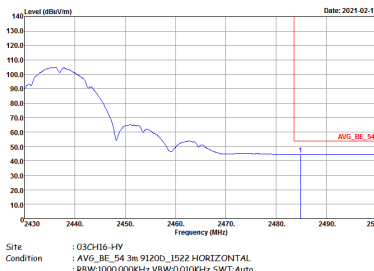
-L	Low channel location
-R	High channel location

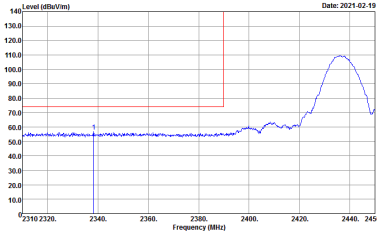
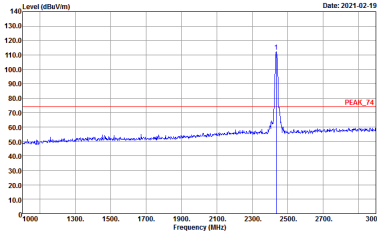
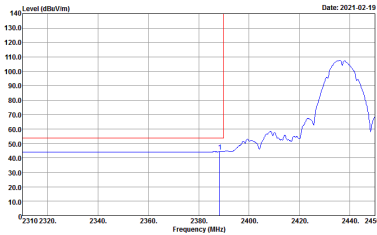
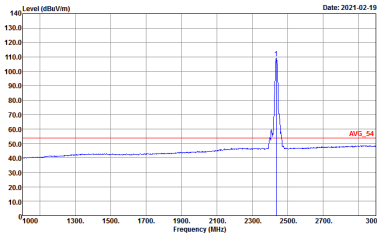
2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

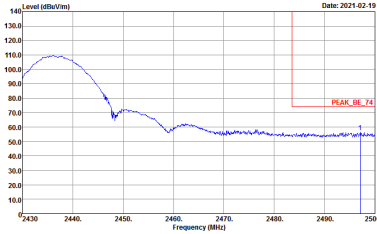
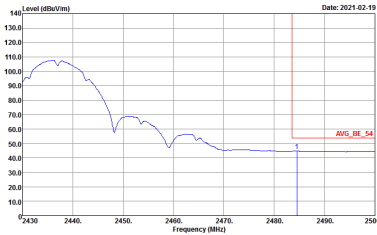
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

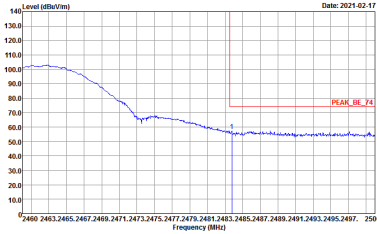
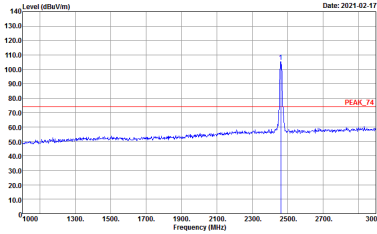
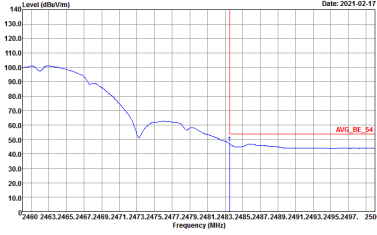
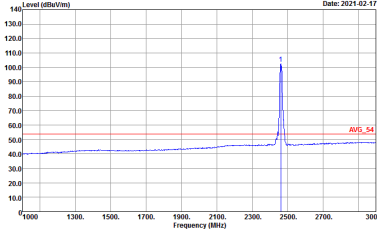
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

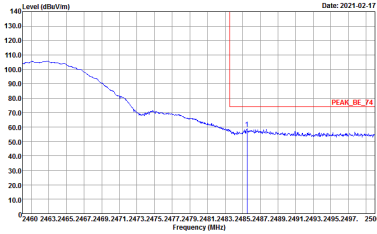
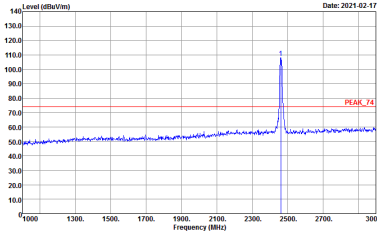
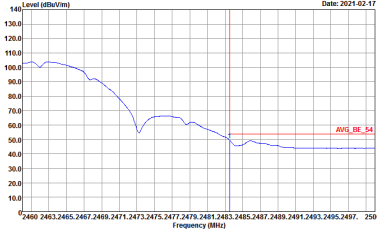
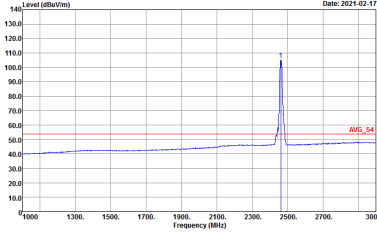
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
6+7	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

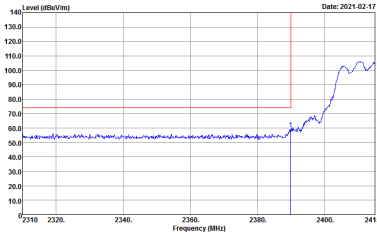
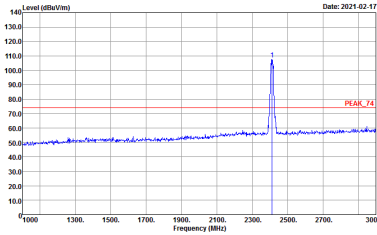
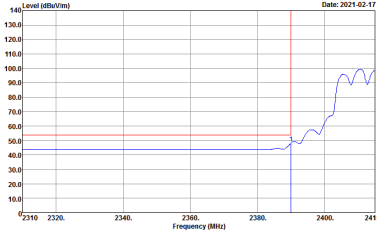
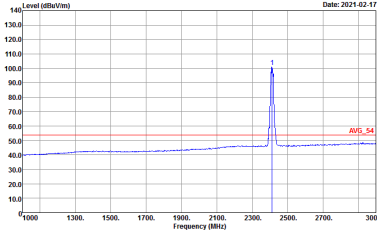
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

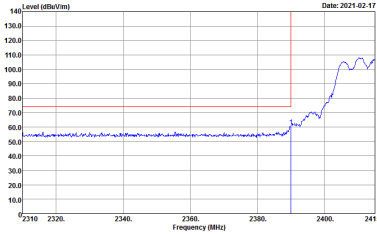
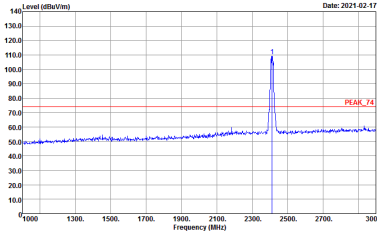
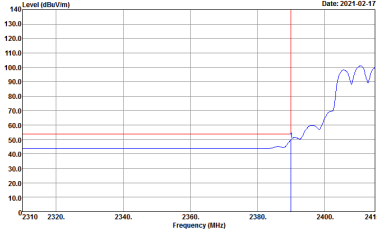
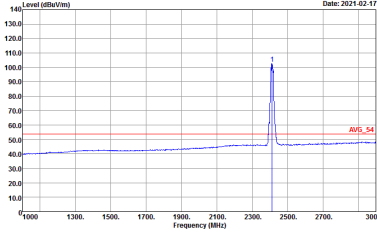
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

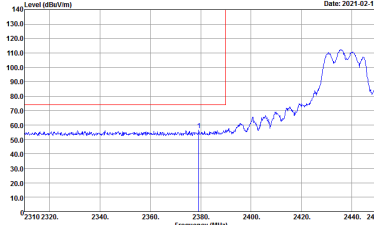
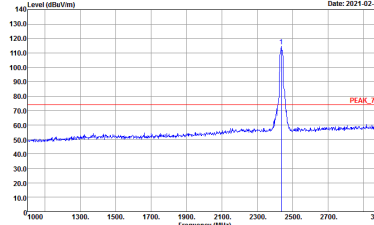
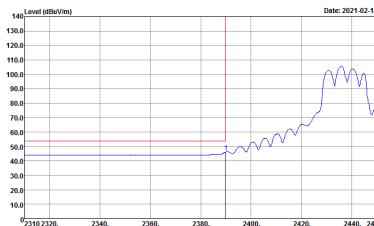
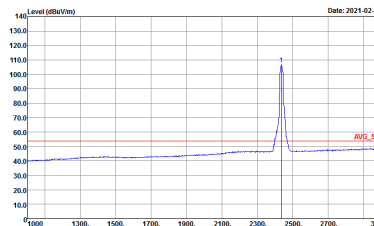
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

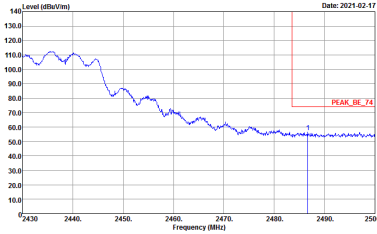
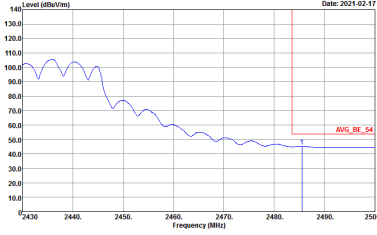
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

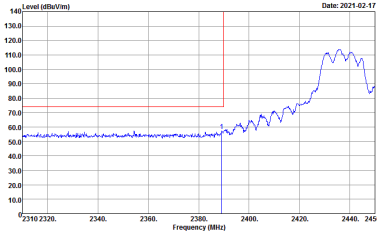
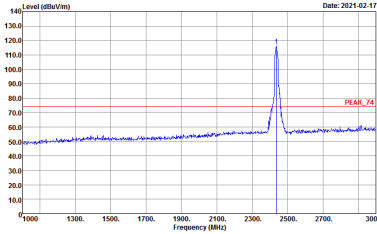
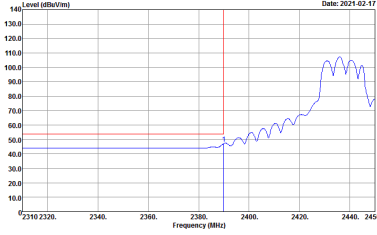
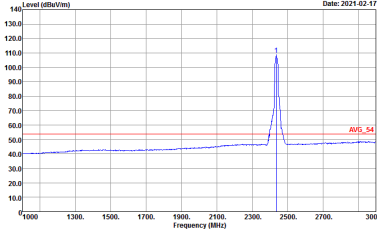
2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

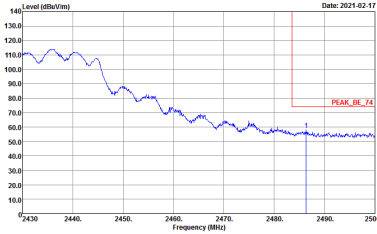
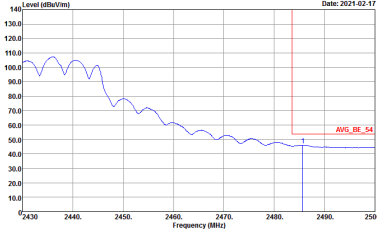
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

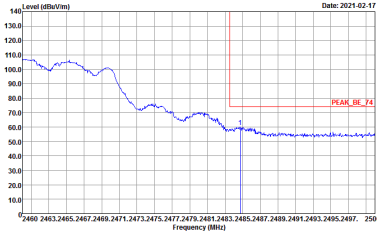
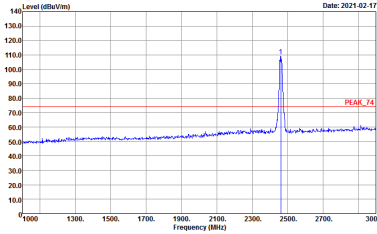
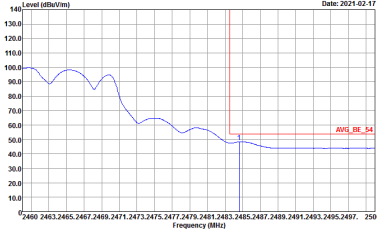
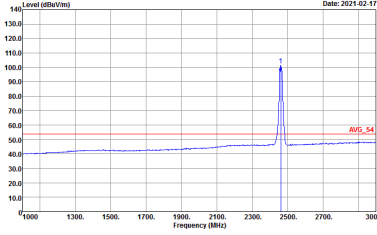
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

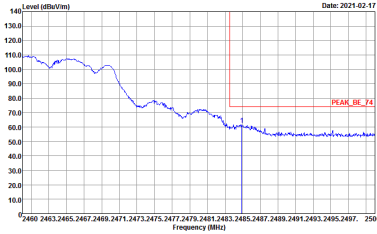
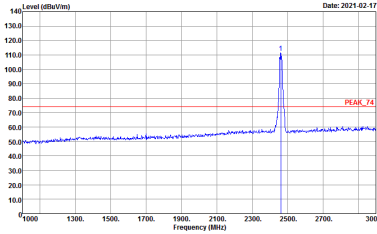
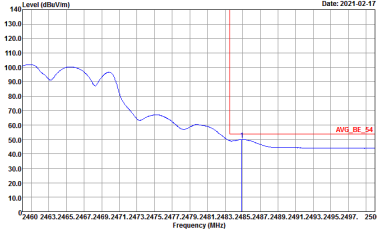
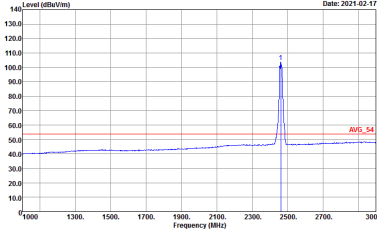
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

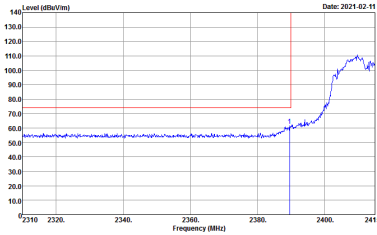
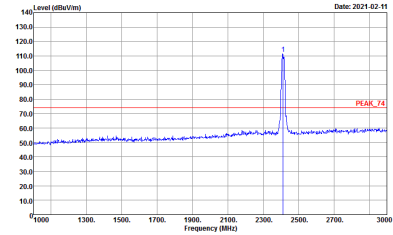
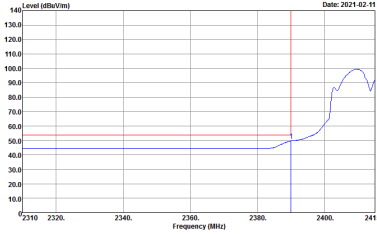
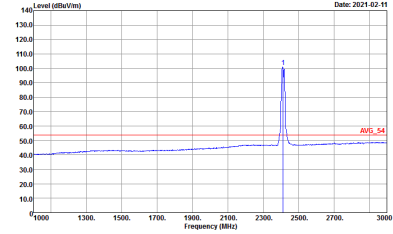


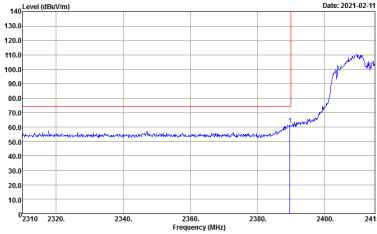
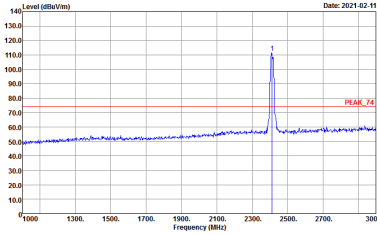
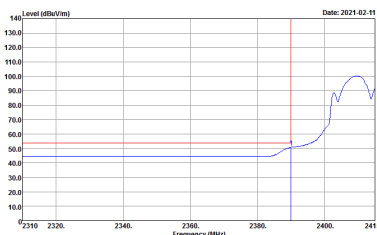
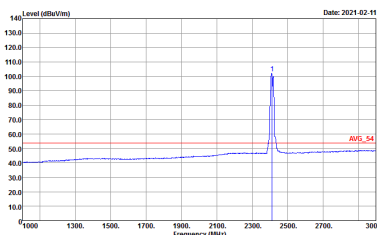
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left Blank

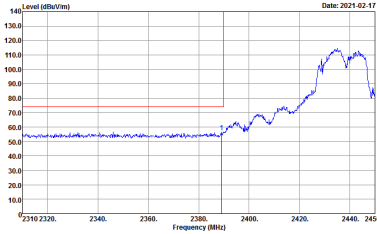
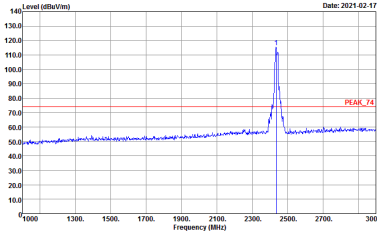
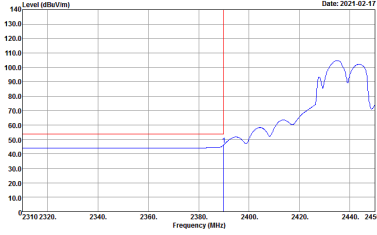
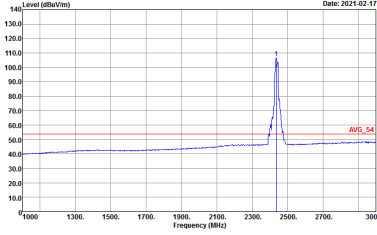
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

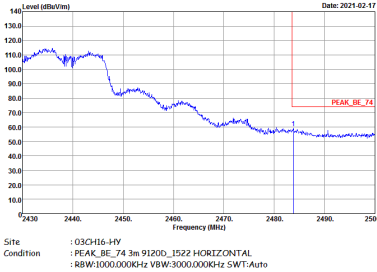
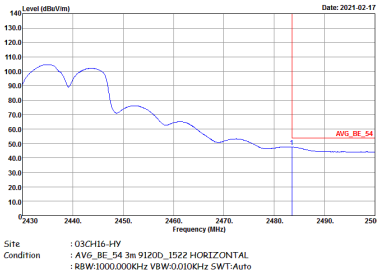
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

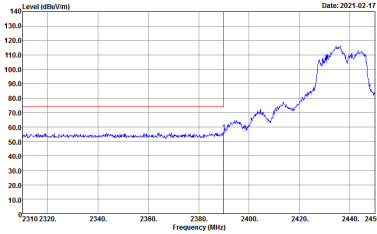
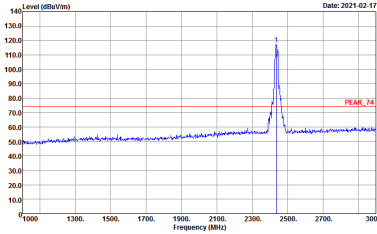
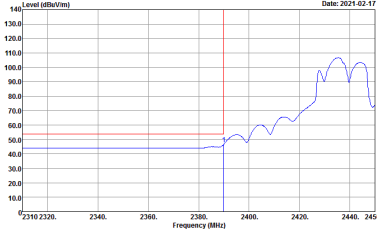
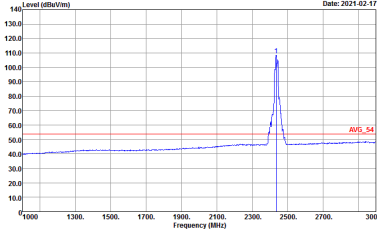
2.4GHz 2400~2483.5MHz
WIFI 802.11ax HE20 Full (Band Edge @ 3m)

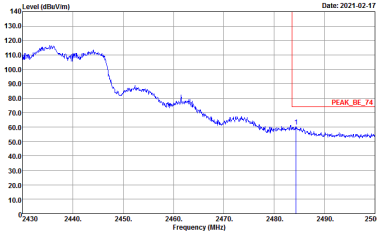
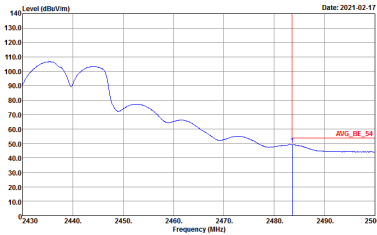
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

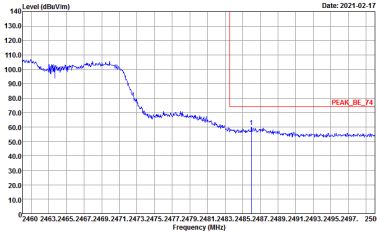
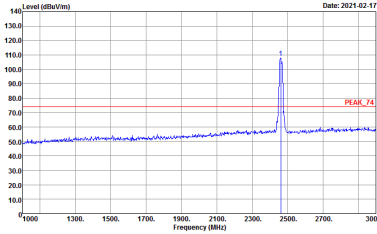
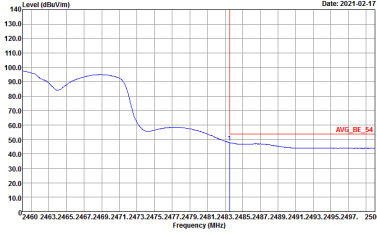
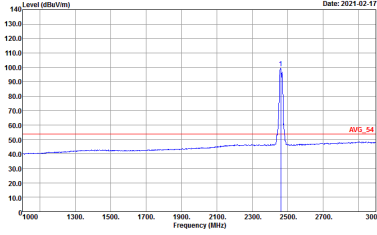
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

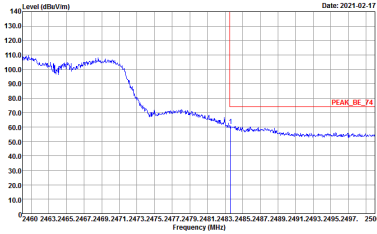
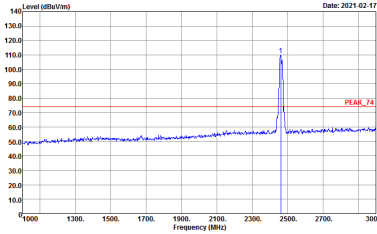
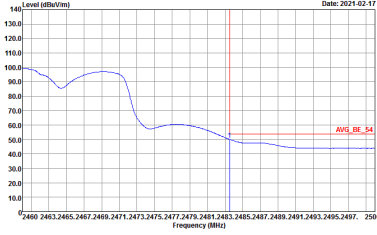
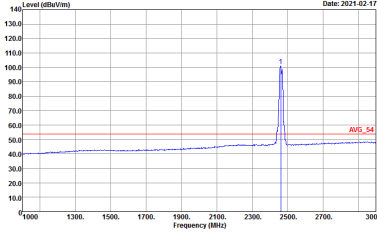
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
6+7	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

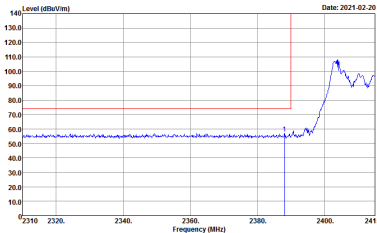
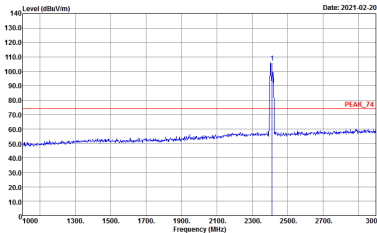
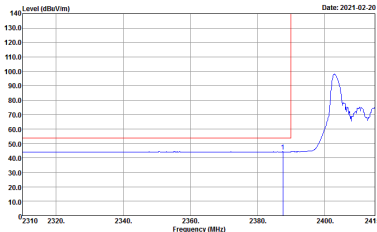
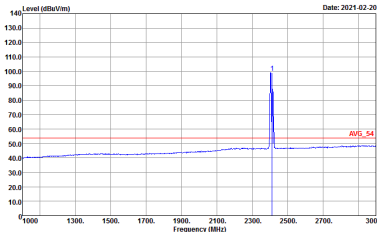
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - L	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

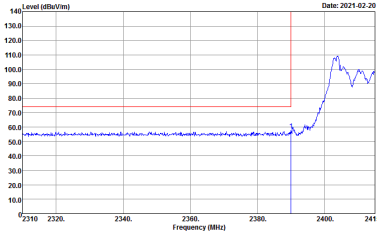
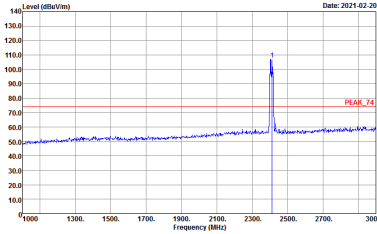
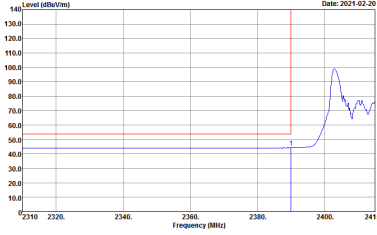
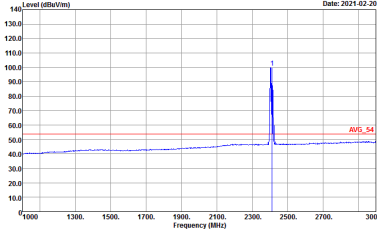
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH06 2437MHz - R	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

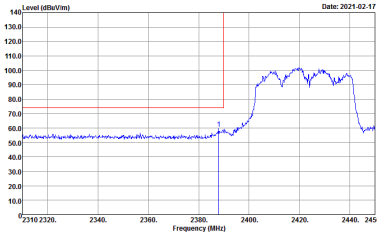
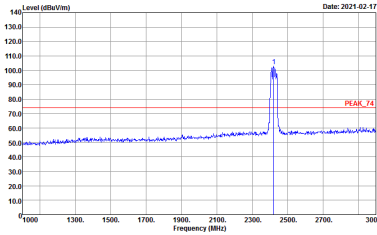
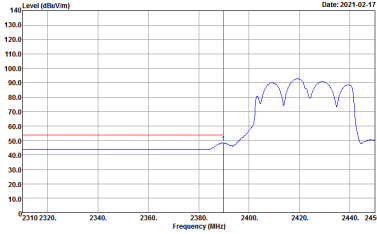
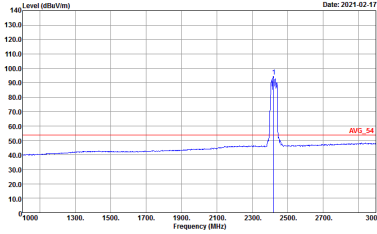
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH11 2462MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

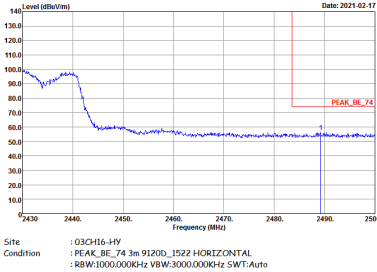
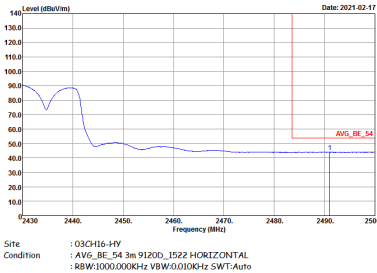
2.4GHz 2400~2483.5MHz
WIFI 802.11ax HE20 Partial 26 (Band Edge @ 3m)

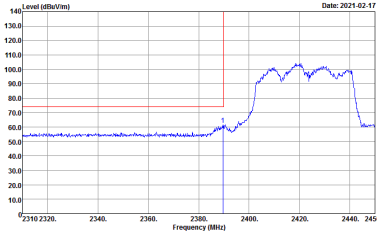
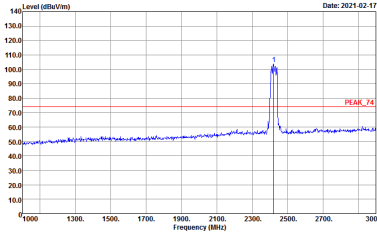
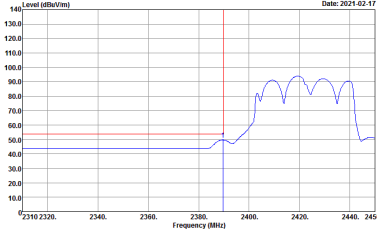
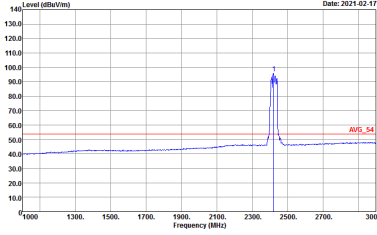
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto
Avg.		

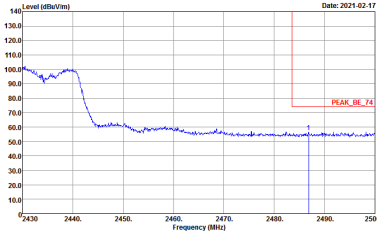
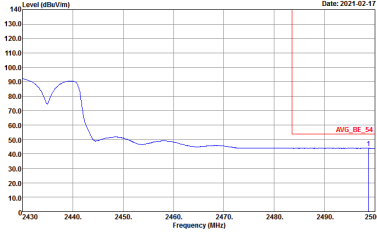
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Partial 26/0 CH01 2412MHz	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

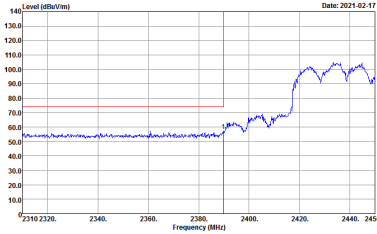
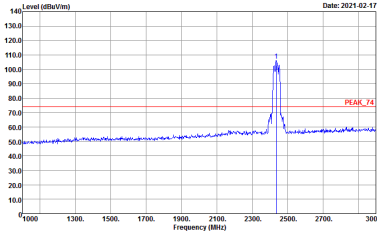
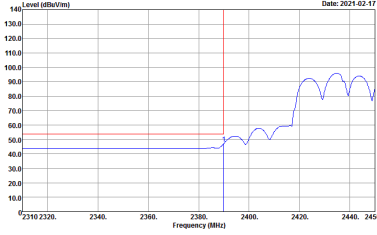
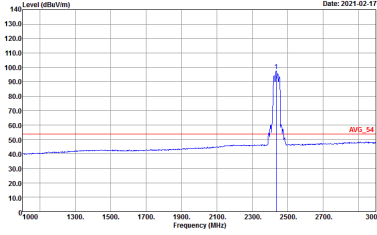
2.4GHz 2400~2483.5MHz
WIFI 802.11ax HE40 Full (Band Edge @ 3m)

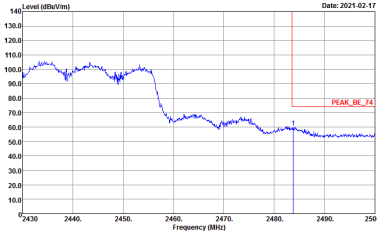
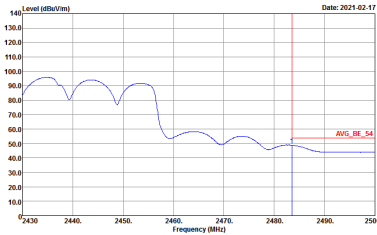
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - L	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

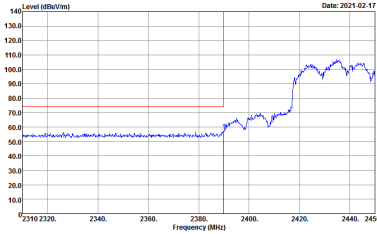
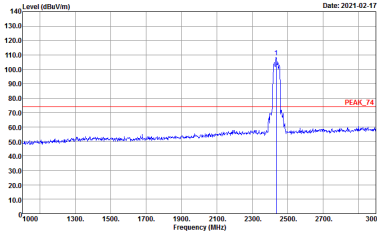
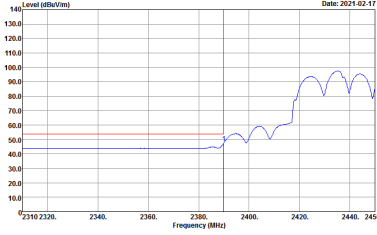
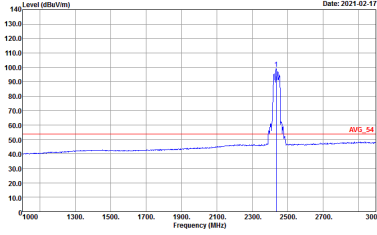
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - R	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

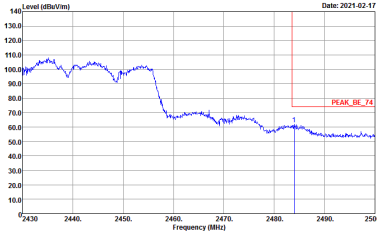
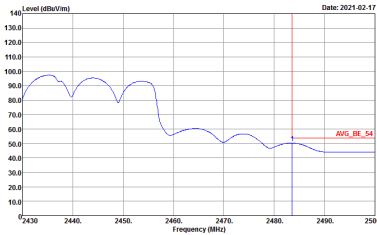
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - L	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

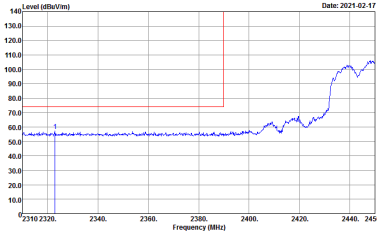
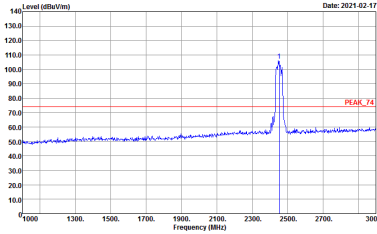
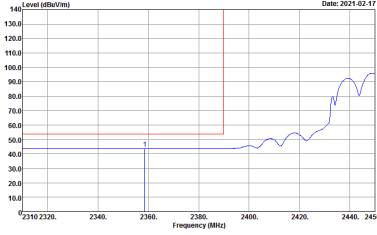
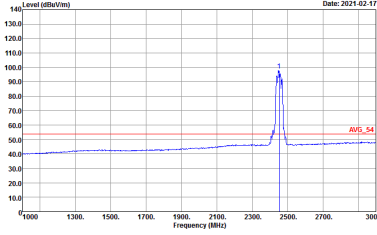
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH03 2422MHz - R	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

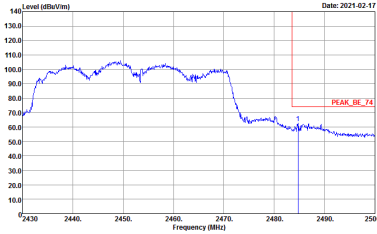
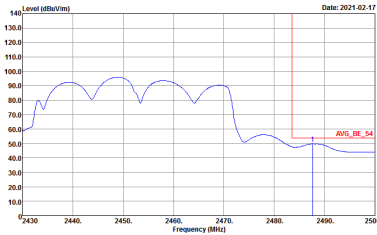
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - L	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

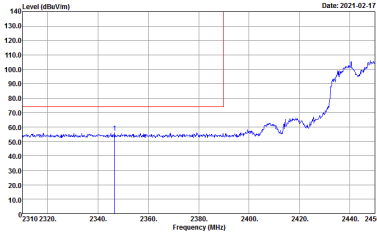
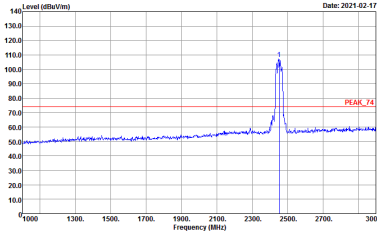
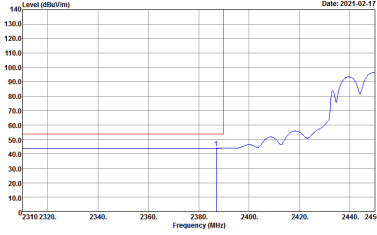
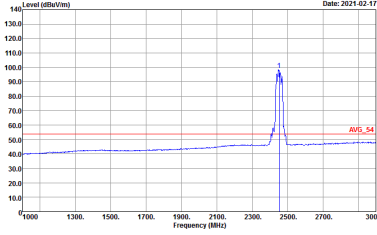
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - R	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	Left blank

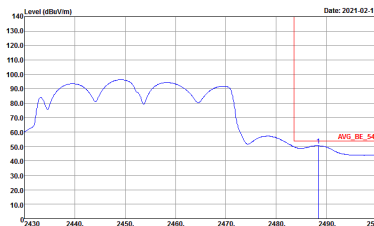
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - L	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH06 2437MHz - R	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - L	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

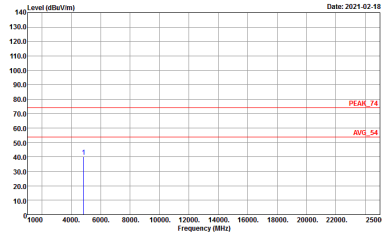
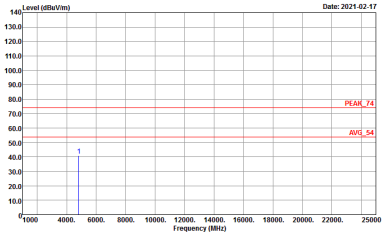
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - R	
6+7	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - L	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE40 Full CH09 2452MHz - R	
6+7	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank



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

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
6+7	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL Detector : Peak	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL Detector : Peak



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
6+7	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL

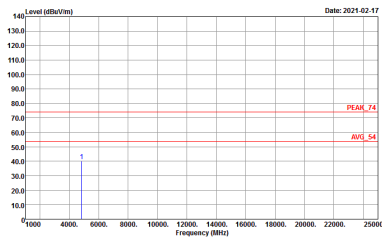
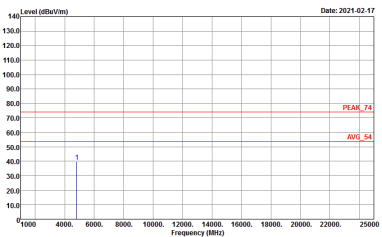


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
6+7	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
6+7	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
6+7	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL

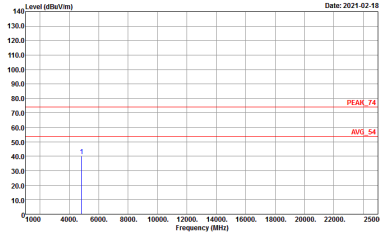
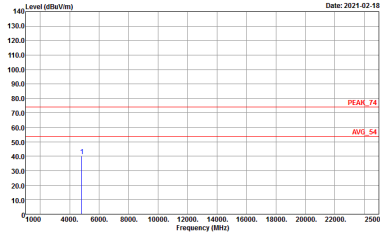


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
6+7	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL



2.4GHz 2400~2483.5MHz

WIFI 802.11 ax HE20 Full (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH01 2412MHz	
6+7	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL

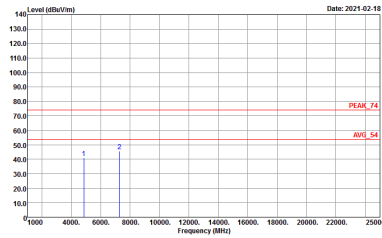
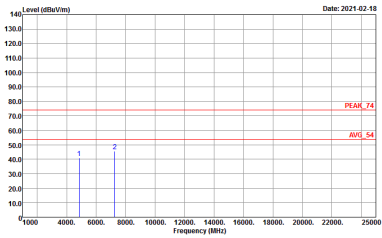


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH06 2437MHz	
6+7	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE20 Full CH11 2462MHz	
6+7	Horizontal	Vertical
Peak Avg.	Level (dBu/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 HORIZONTAL	Level (dBu/m) Date: 2021-02-17 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL

2.4GHz 2400~2483.5MHz
WIFI 802.11 ax HE40 Full (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE40 Full CH03 2422MHz	
6+7	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL

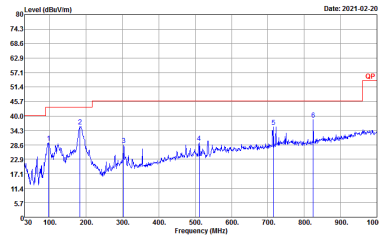
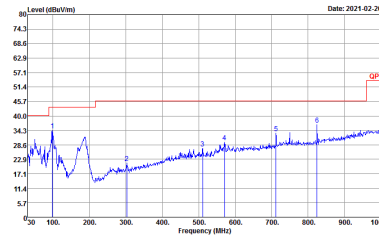


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE40 Full CH06 2437MHz	
6+7	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-02-18 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-02-18 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL



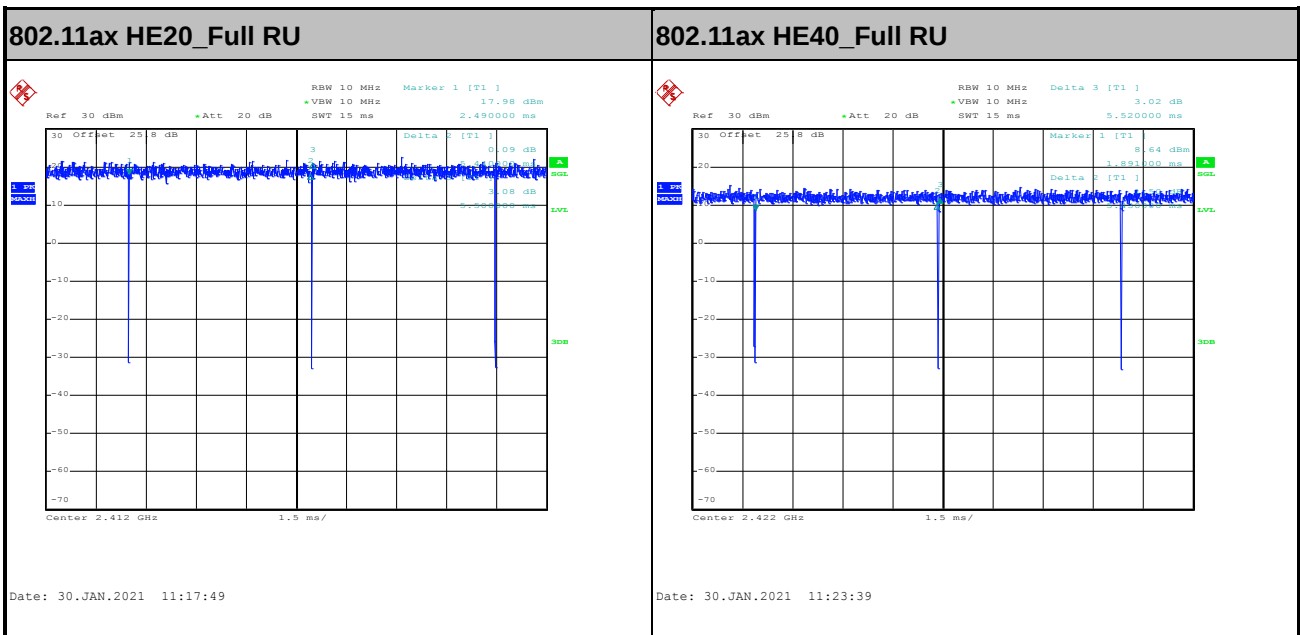
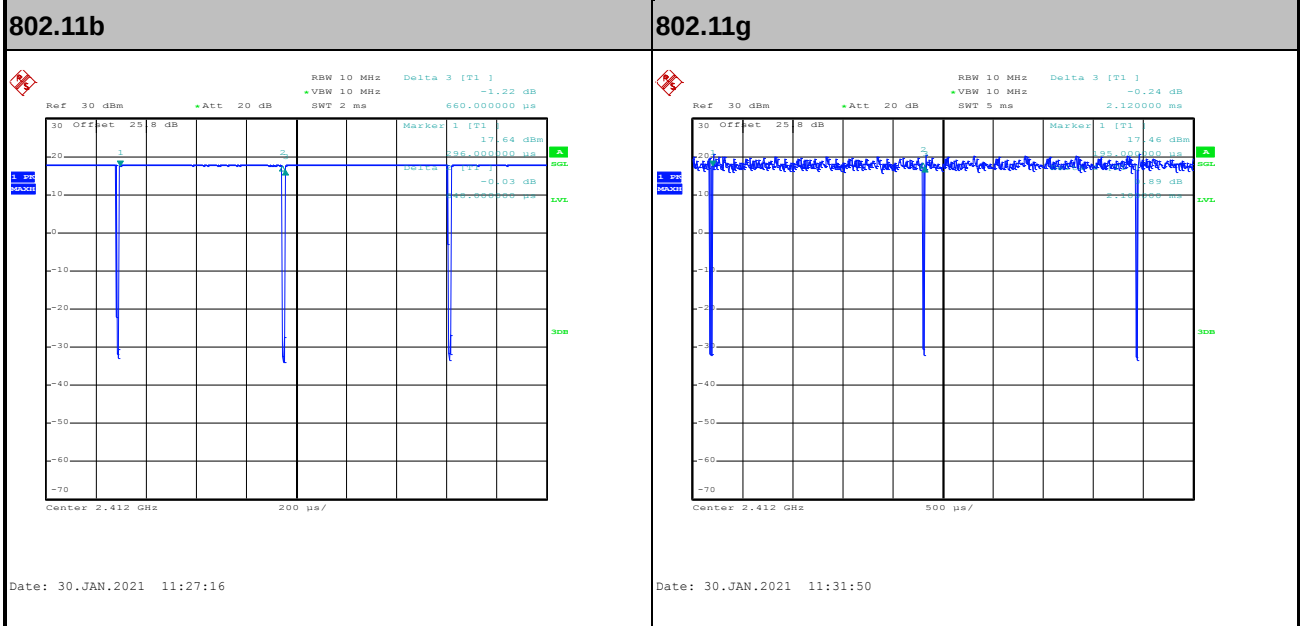
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11 ax HE40 Full CH09 2452MHz	
6+7	Horizontal	Vertical
Peak Avg.	Level (dBu/m) Date: 2021-02-18 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 HORIZONTAL	Level (dBu/m) Date: 2021-02-18 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL

Emission above 18GHz
2.4GHz WIFI 802.11ax HE20 Full (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11ax HE20 Full LF	
6+7	Horizontal	Vertical
QP / Peak	 Site : 03CH16-HY Condition : QP 3m BILOG_47020406 HORIZONTAL	 Site : 03CH16-HY Condition : QP 3m BILOG_47020406 VERTICAL

Appendix E. Duty Cycle Plots

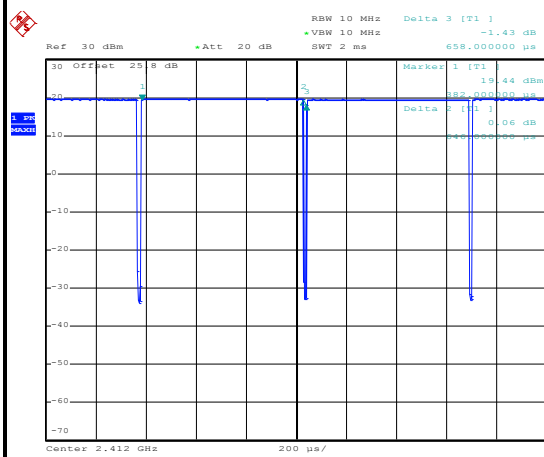
Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting	Duty Factor(dB)
6+7	802.11b for Ant 6	98.18	-	-	10Hz	0.08
6+7	802.11b for Ant 7	98.18	-	-	10Hz	0.08
6+7	802.11g for Ant 6	99.06	-	-	10Hz	0.04
6+7	802.11g for Ant 7	98.59	-	-	10Hz	0.06
6+7	2.4GHz 802.11ax20 for Ant 6 Full RU	98.91	-	-	10Hz	0.05
6+7	2.4GHz 802.11ax20 for Ant 7 Full RU	98.73	-	-	10Hz	0.06
6+7	2.4GHz 802.11ax40 for Ant 6 Full RU	98.37	-	-	10Hz	0.07
6+7	2.4GHz 802.11ax40 for Ant 7 Full RU	98.73	-	-	10Hz	0.06

MIMO <Ant. 6>




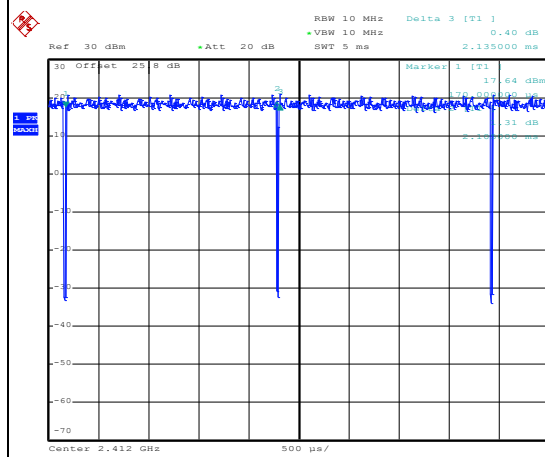
MIMO <Ant. 7>

802.11b



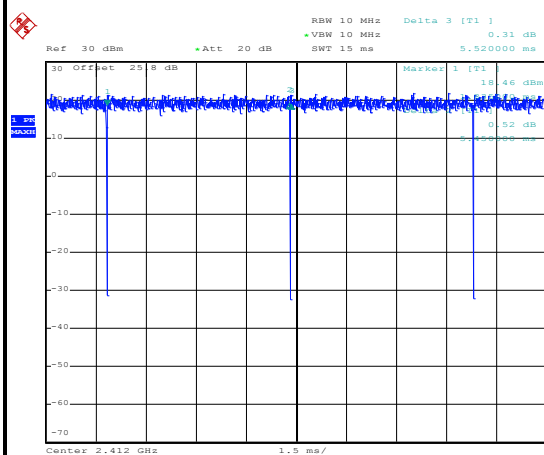
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802.11g



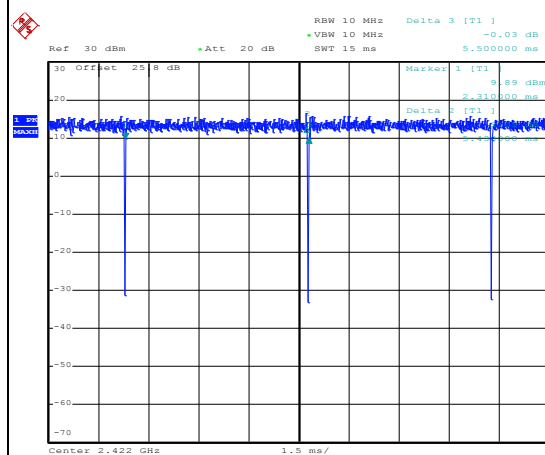
Date: 30.JAN.2021 11:32:34

802.11ax HE20_Full RU



Date: 30.JAN.2021 11:19:24

802.11ax HE40_Full RU



Date: 30.JAN.2021 11:25:06