



FCC RADIO TEST REPORT

FCC ID : PY7-08372L
Equipment : GSM/WCDMA/LTE Phone with BT,
DTS/UNII a/b/g/n/ac/ax, GPS, and NFC
Brand Name : Sony
Applicant : Sony Mobile Communications Inc.
4-12-3 Higashi-Shinagawa, Shinagawa-ku,
Tokyo, 140-0002, Japan
Manufacturer : Sony Mobile Communications Inc.
4-12-3 Higashi-Shinagawa, Shinagawa-ku,
Tokyo, 140-0002, Japan
Standard : FCC Part 15 Subpart C §15.247

The product was received on Jul. 01, 2020 and testing was started from Jul. 09, 2020 and completed on Aug. 08, 2020. 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.

Louis Wu

Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FR042242-02C	01	Initial issue of report	Aug. 13, 2020
FR042242-02C	02	Revising test data description	Aug. 24, 2020

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 8.78 dB at 42.610 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 13.26 dB at 1.580 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	Pass	-

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: Wii Chang

Report Producer: Amy Chen

1 General Description

1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, DTS/UNII a/b/g/n/ac/ax, FM Receiver, NFC, and GNSS.

Standards-related Product Specification	
Antenna Type / Gain	<Ant. 0> : Loop Antenna with gain -1.80 dBi <Ant. 1> : Loop Antenna with gain -11.50 dBi

EUT Information List			
HW Version	SW Version	S/N	Performed Test Item
A	9.29	QV71007D40	RF conducted measurement
	9.29	QV7100BH40	Radiated Spurious Emission
	6.47	QV71008W40	AC Conducted Emission

Accessory List	
AC Adapter	Model Name : UCH32
	S/N: 6218W30200005 (for Radiated Spurious Emission) 6218W30200015 (for Conducted Emission)
Earphone	Model Name.: STH40D
	S/N : N/A
Bluetooth Earphone	Model Name : SBH82D
	S/N : N/A
USB Cable	Model Name.: UCB 24
	S/N : N/A

Note:

1. Above EUT list used are electrically identical per declared by manufacturer.
2. Above the accessories list are used to exercise the EUT during test, and the serial number of each type of accessories is listed in each section of this report. .
3. For other wireless features of this EUT, test report will be issued separately.

1.2 Modification of EUT

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



1.3 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory	
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	Sporton Site No.	
	TH05-HY	CO05-HY

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

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory	
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855	
Test Site No.	Sporton Site No.	
	03CH12-HY	

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

FCC designation No.: TW1190 and TW0007

1.4 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.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, 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.

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11ax HE20	MCS0

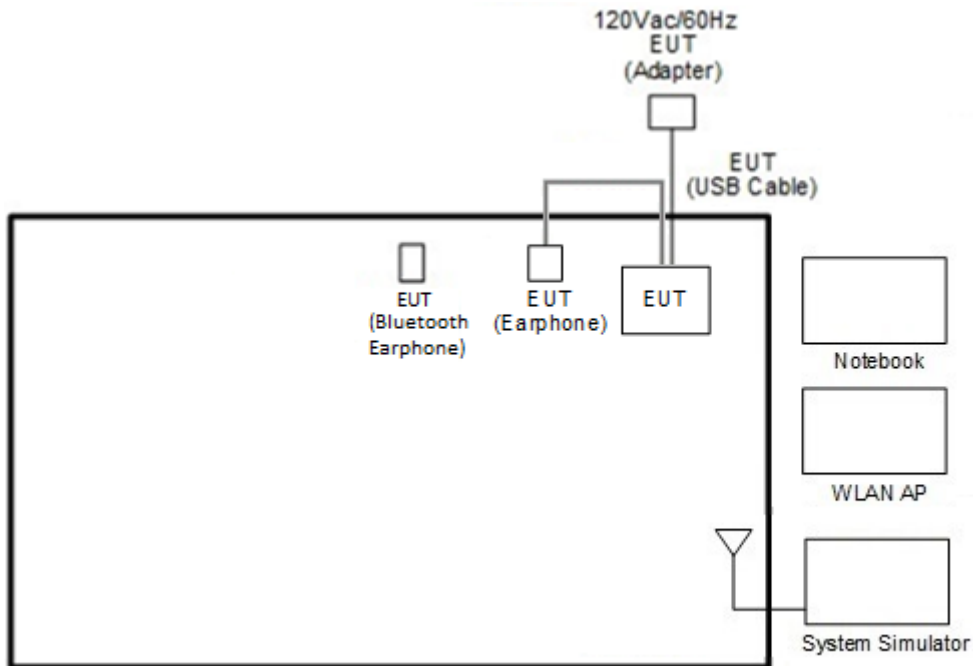
Test Cases	
AC Conducted Emission	Mode 1 : GSM 850 Idle + Bluetooth Link + WLAN (2.4GHz) Link + MPEG4 + Earphone + USB Cable (Charging from AC Adapter)

Ch. #	2400-2483.5 MHz			
	802.11b	802.11g	802.11n HT20	802.11ax HE20
Low	01	01	01	01
Middle	06	06	06	06
High	11	11	11	11

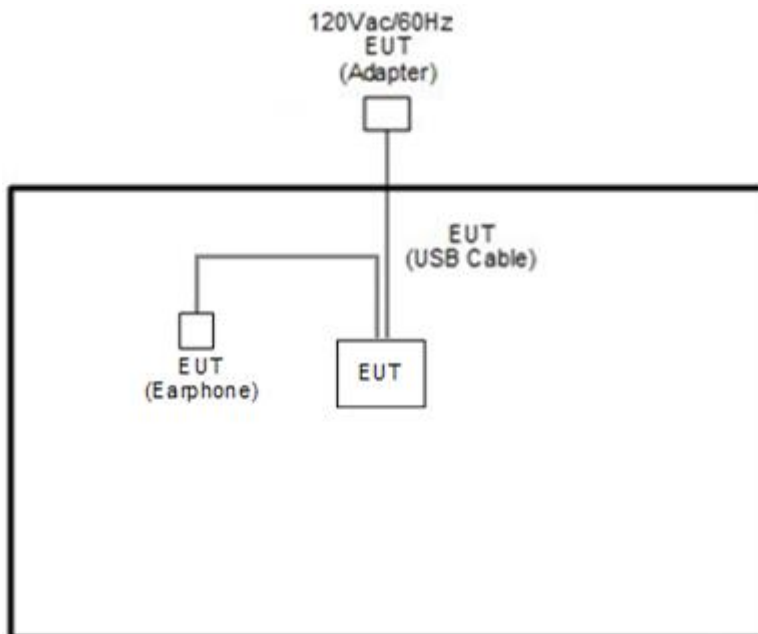
Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System

<AC Conducted Emission>



<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	8820C	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8 m
3.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
4.	Notebook	Dell	Latitude3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility “FTMC_bridge V.0.39” 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 10dB attenuator.

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

= 4.2 + 10 = 14.2 (dB)

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

3.1.2 Measuring Instruments

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 to the maximum power setting and enable the EUT 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.

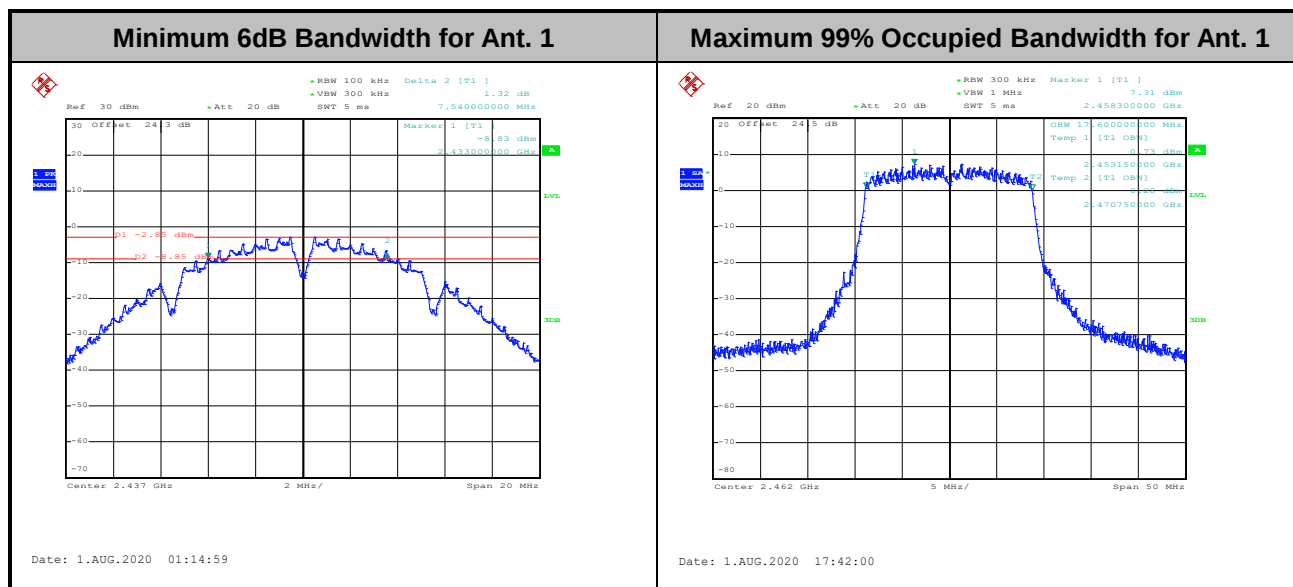
3.1.4 Test Setup





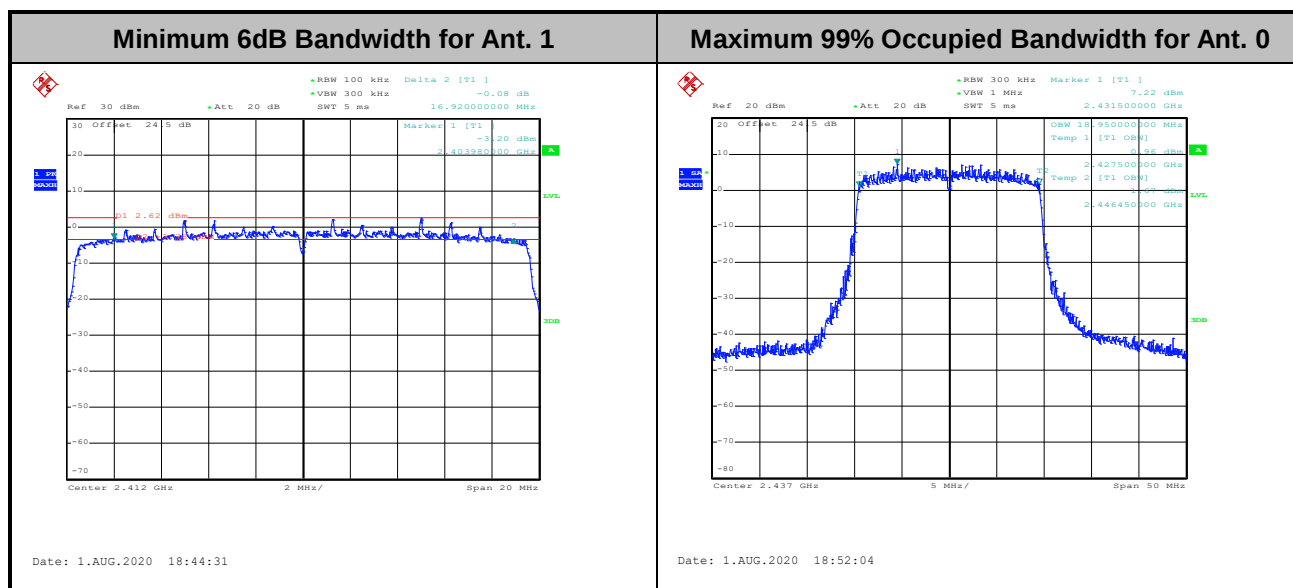
3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.



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

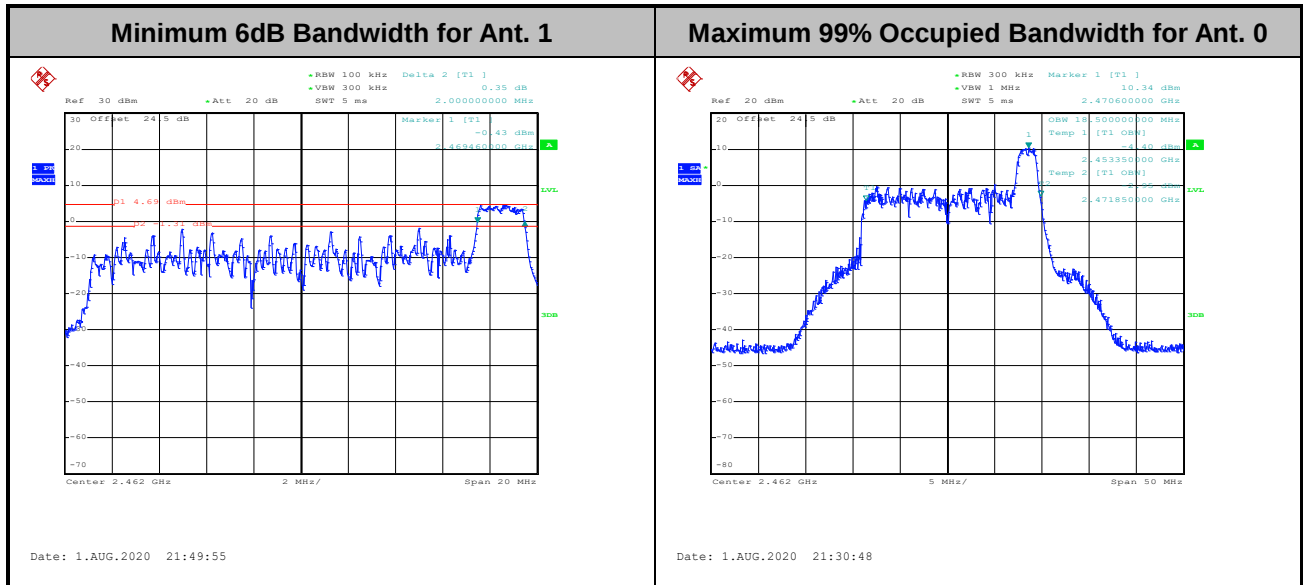
<For Full Loaded RUs>



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



<For Partially Loaded RUs>



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 2400-2483.5MHz, the limit for output power is 30dBm. If transmitting antenna with directional gain greater than 6dBi 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 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

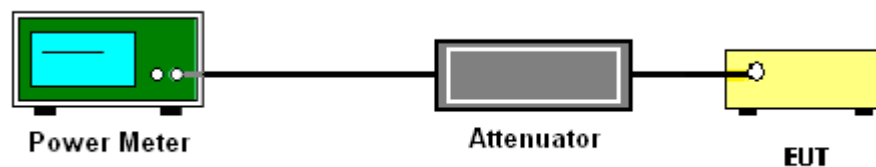
3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 Test Procedures

1. For Peak Power, the testing follows ANSI C63.10 Section 11.9.1.3 PKPM1
2. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
3. 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.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Measure the conducted output power and record the results in the test report.
6. 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 Peak Output Power

Please refer to Appendix A.

3.2.6 Test Result of Average Output Power (Reporting Only)

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 8dBm in any 3kHz 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 to the maximum power setting and enable the EUT 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.

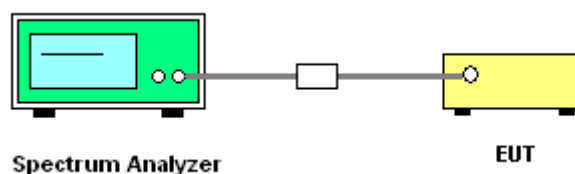
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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.

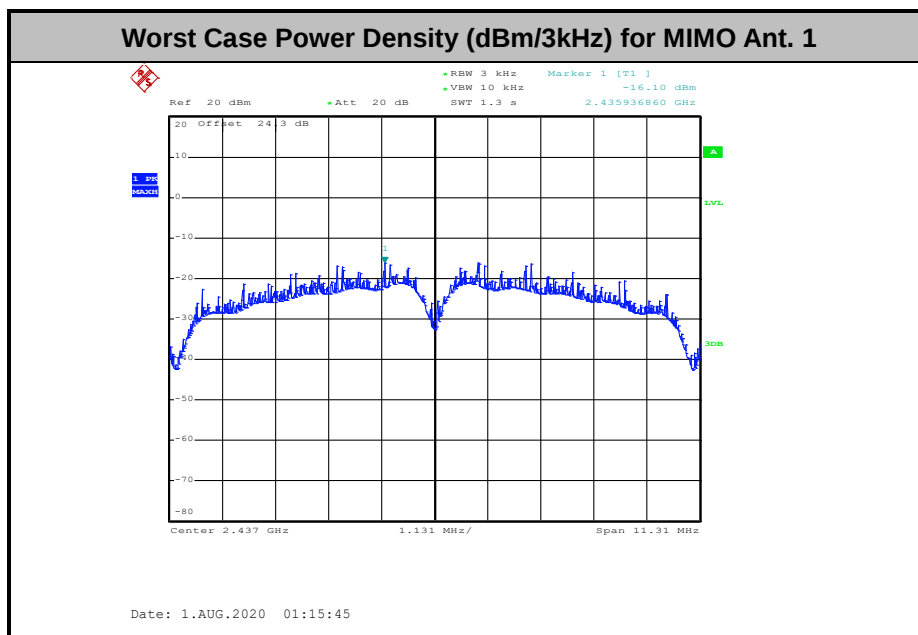
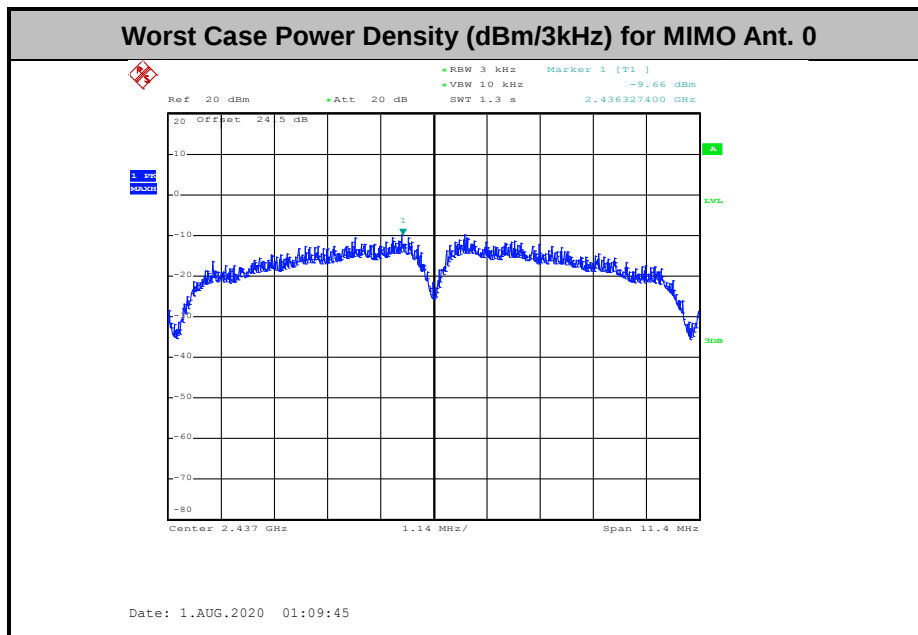
Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=2)

3.3.4 Test Setup



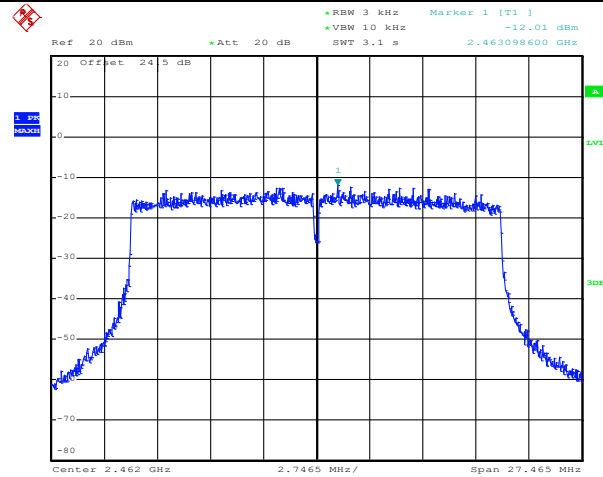
3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



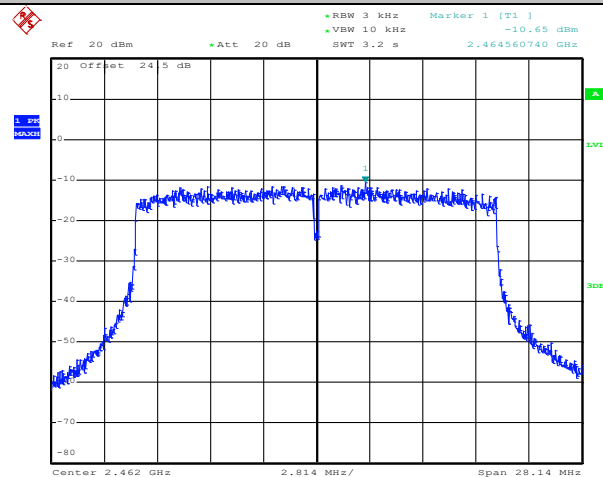
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Worst Case Power Density (dBm/3kHz) for MIMO Ant. 0



Date: 1.AUG.2020 18:59:56

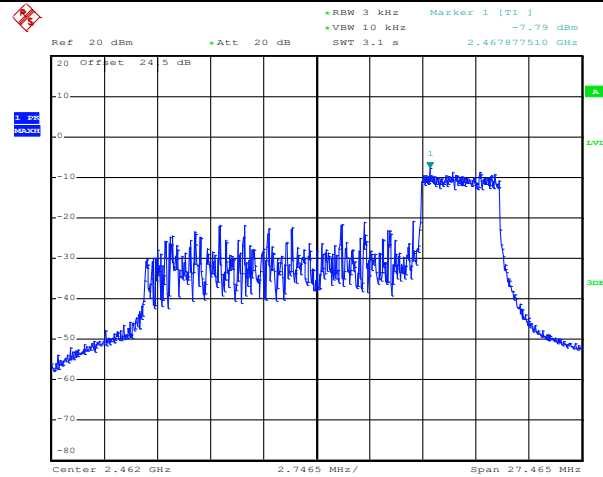
Worst Case Power Density (dBm/3kHz) for MIMO Ant. 1



Date: 1.AUG.2020 19:06:55

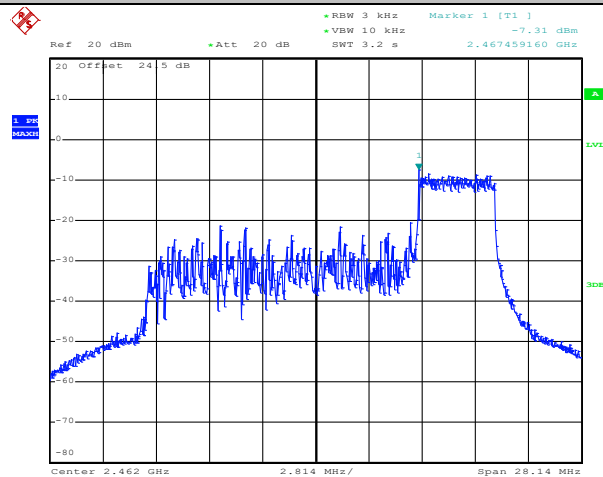
<For Partially Loaded RUs>

Worst Case Power Density (dBm/3kHz) for MIMO Ant. 0



Date: 1.AUG.2020 23:15:18

Worst Case Power Density (dBm/3kHz) for MIMO Ant. 1



Date: 1.AUG.2020 23:23:58

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.

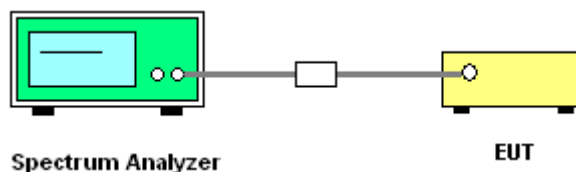
3.4.2 Measuring Instruments

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 to the maximum power setting and enable the EUT 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



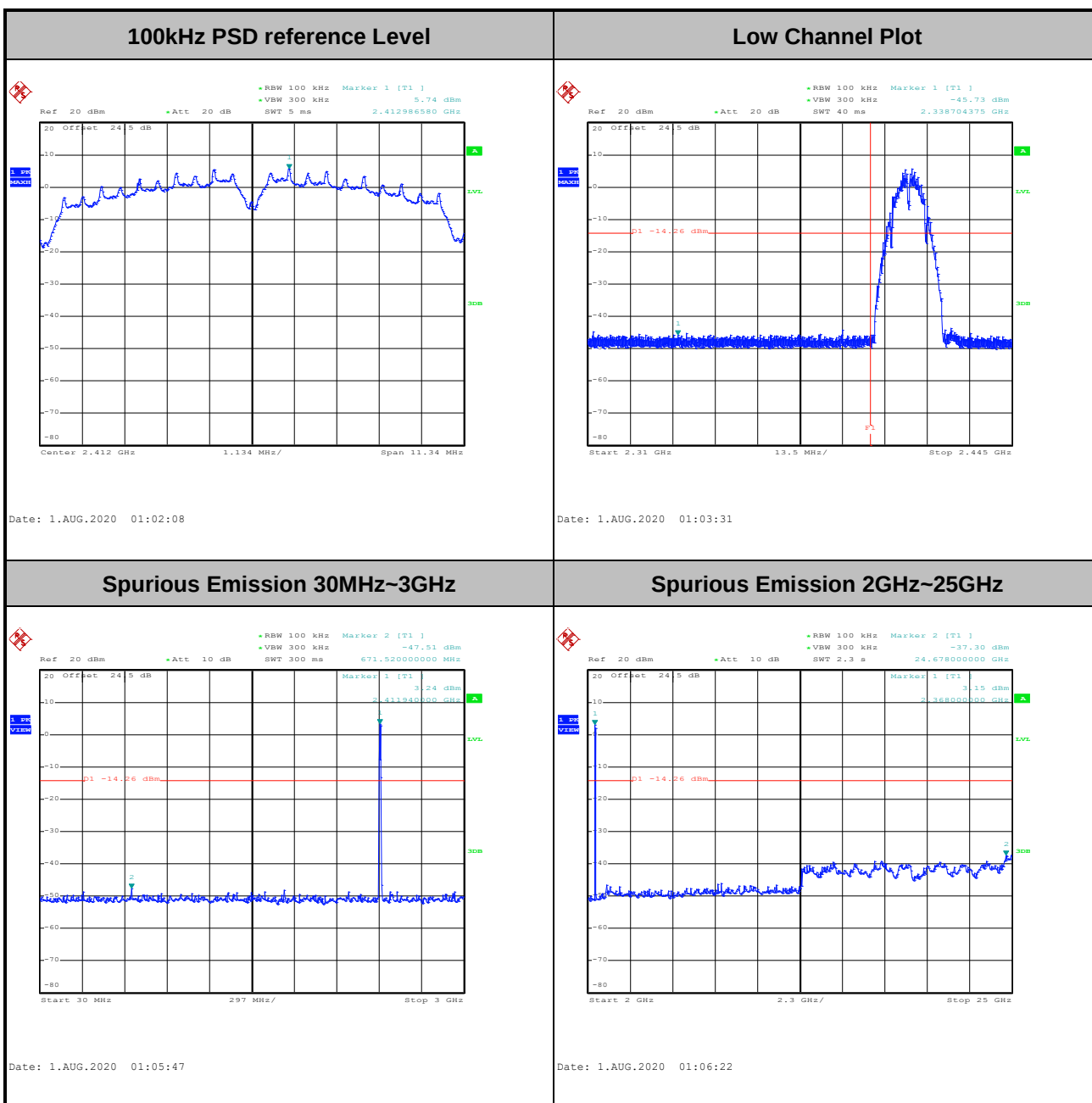


3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Test Engineer :	Kathy Chen and Kai Liao	Temperature :	23.5~24.2°C
		Relative Humidity :	52.8~53.7%

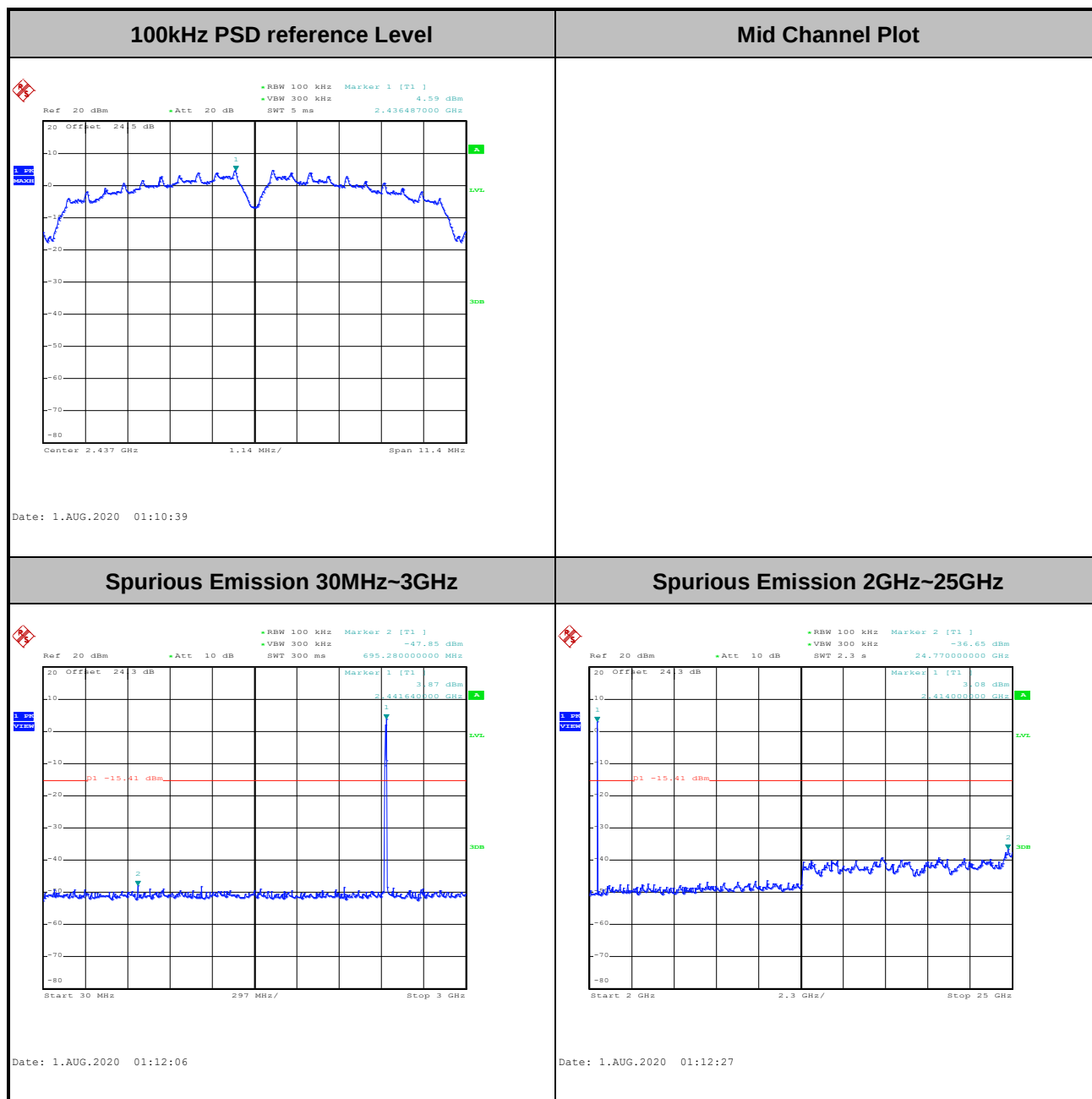
Number of TX = 2, Ant. 0 (Measured)

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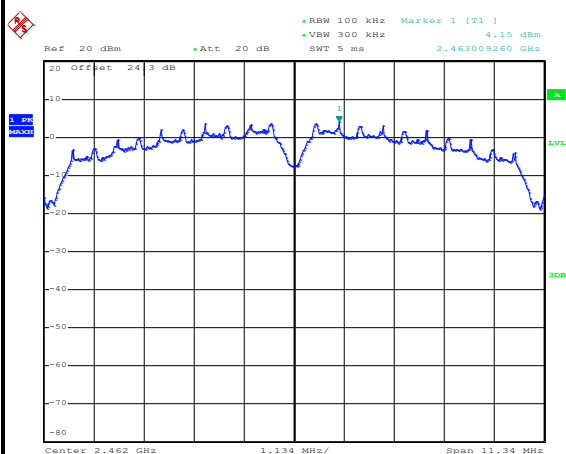
Test Mode :	802.11b	Test Channel :	06
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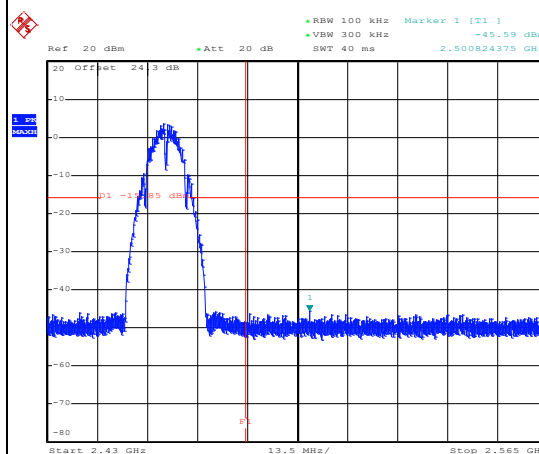
Test Mode :	802.11b	Test Channel :	11
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100kHz PSD reference Level



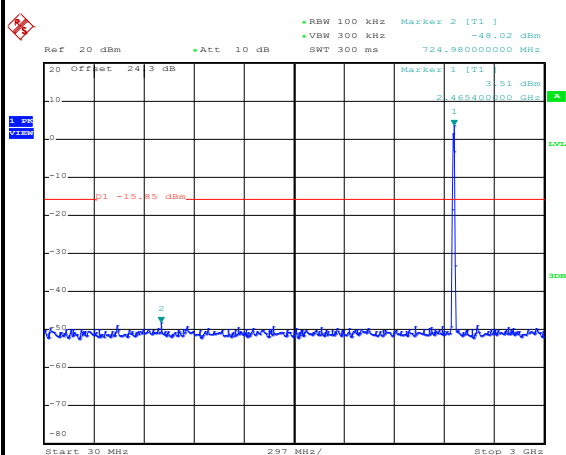
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High Channel Plot



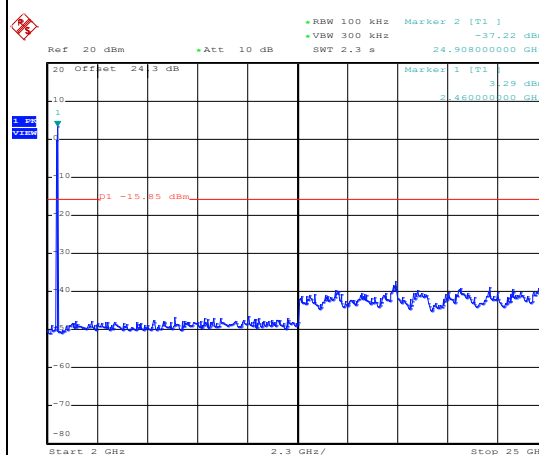
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Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 01:28:49

Spurious Emission 2GHz~25GHz

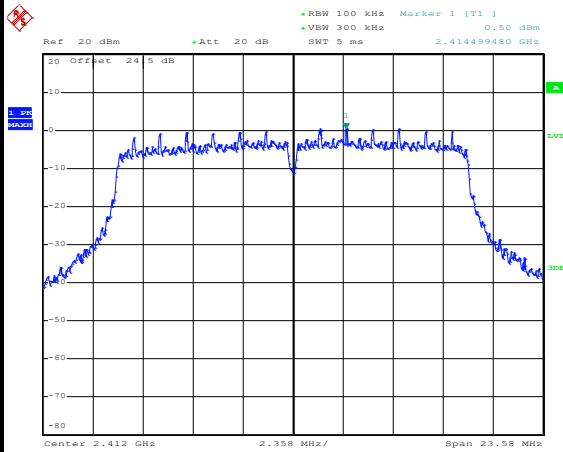


Date: 1.AUG.2020 01:29:27



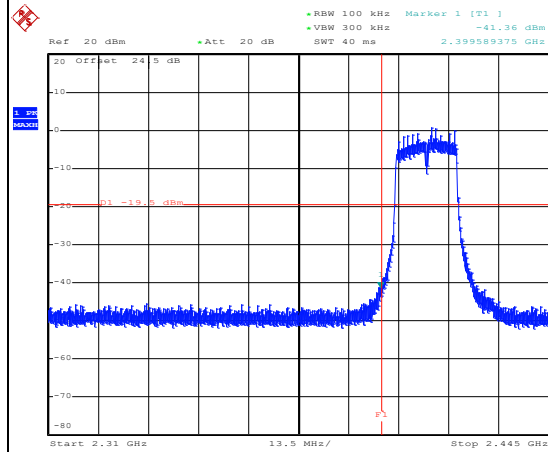
Test Mode :	802.11g	Test Channel :	01
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100kHz PSD reference Level



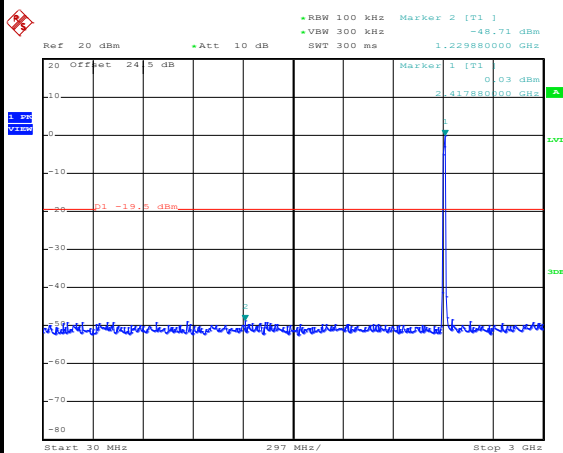
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Low Channel Plot



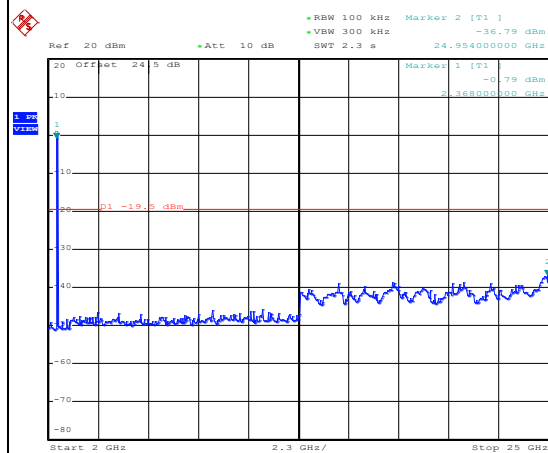
Date: 1.AUG.2020 19:25:15

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 19:25:32

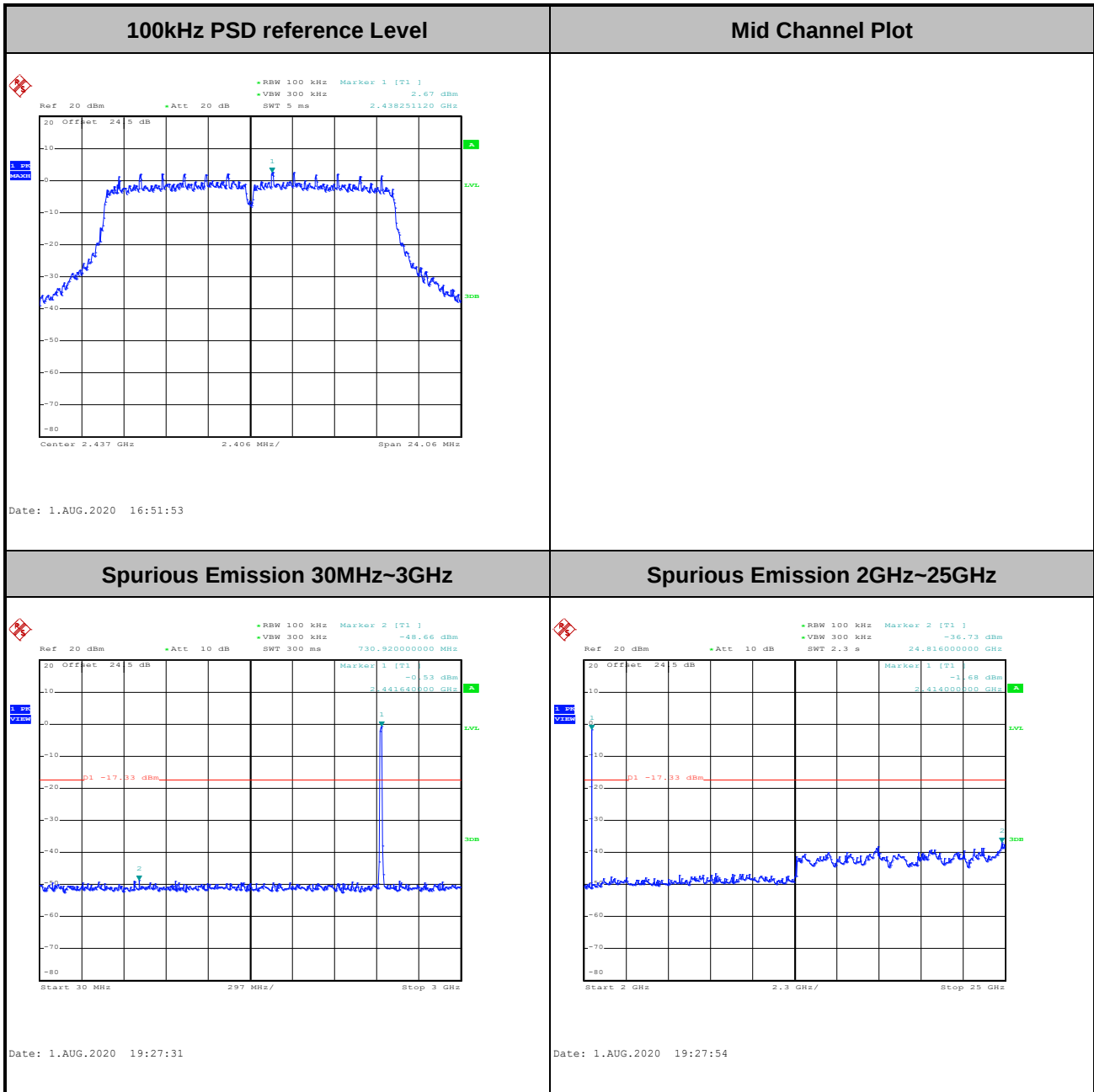
Spurious Emission 2GHz~25GHz



Date: 1.AUG.2020 19:26:29



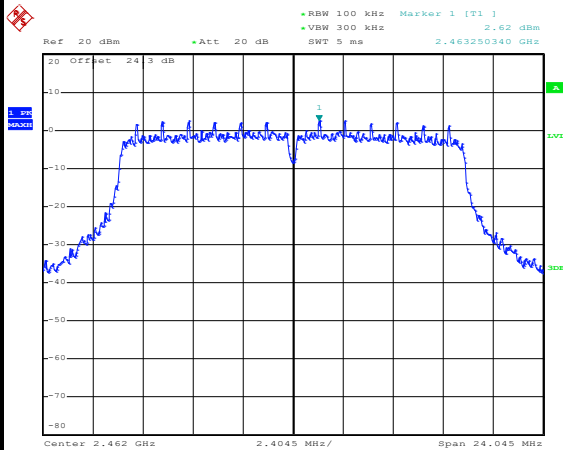
Test Mode :	802.11g	Test Channel :	06
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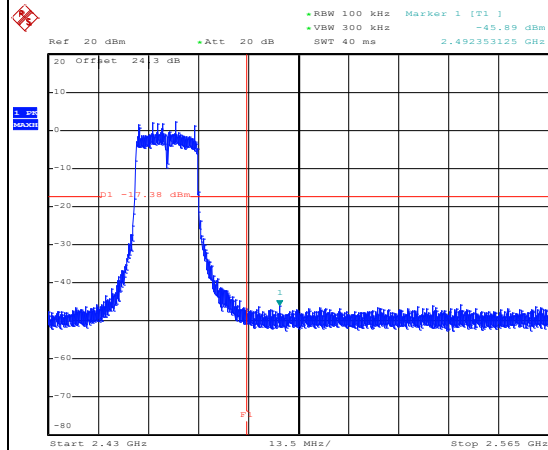
Test Mode :	802.11g	Test Channel :	11
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100kHz PSD reference Level



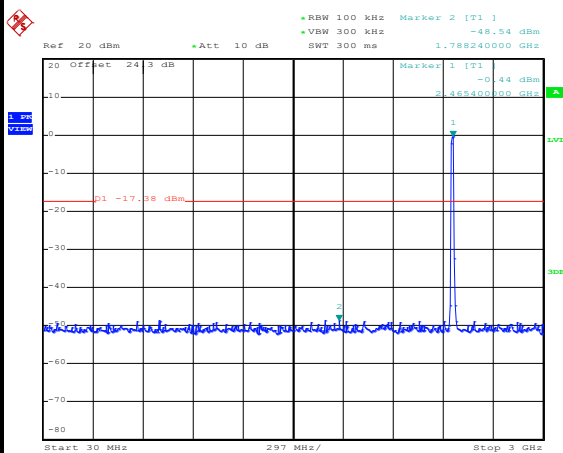
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High Channel Plot



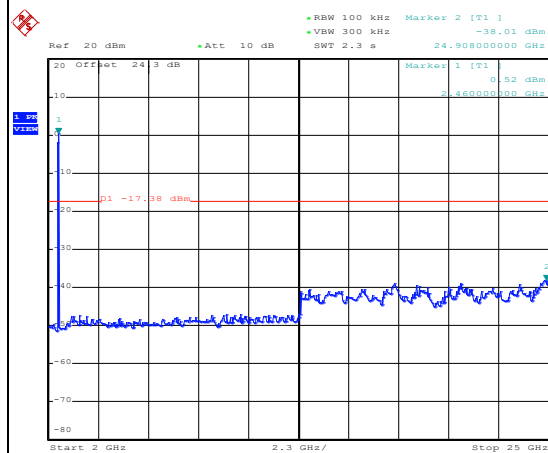
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Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 01:36:14

Spurious Emission 2GHz~25GHz

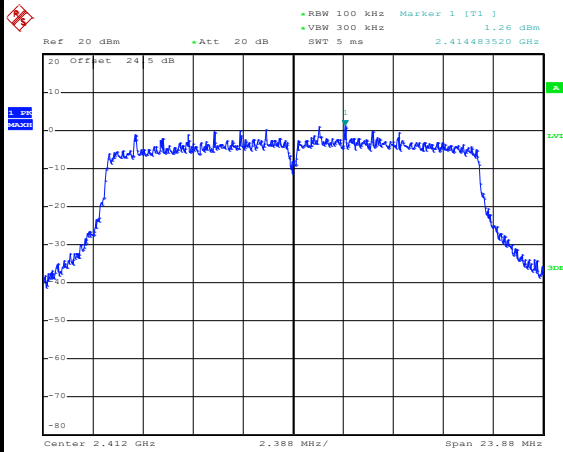


Date: 1.AUG.2020 01:37:05



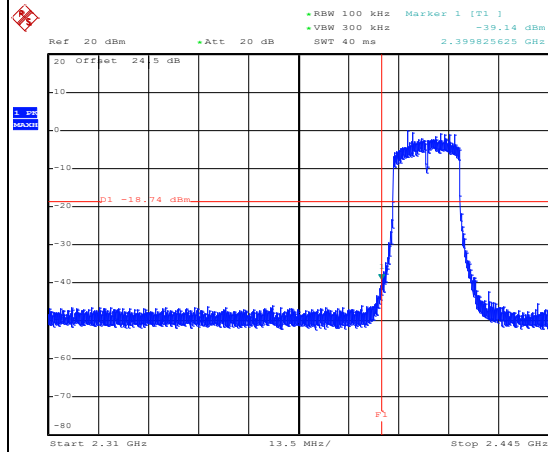
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100kHz PSD reference Level



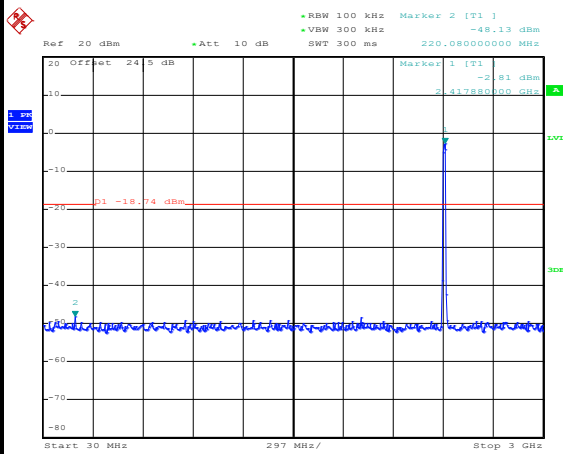
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Low Channel Plot



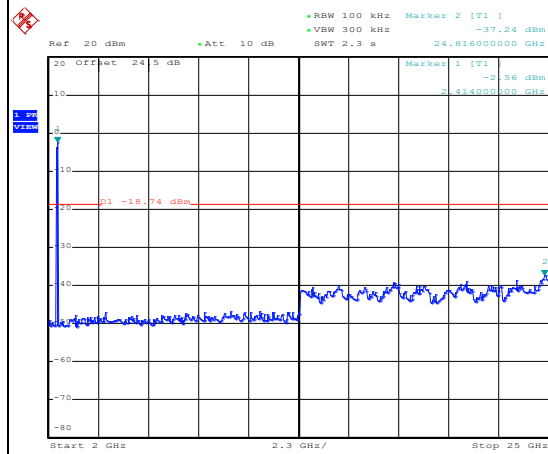
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Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 19:39:06

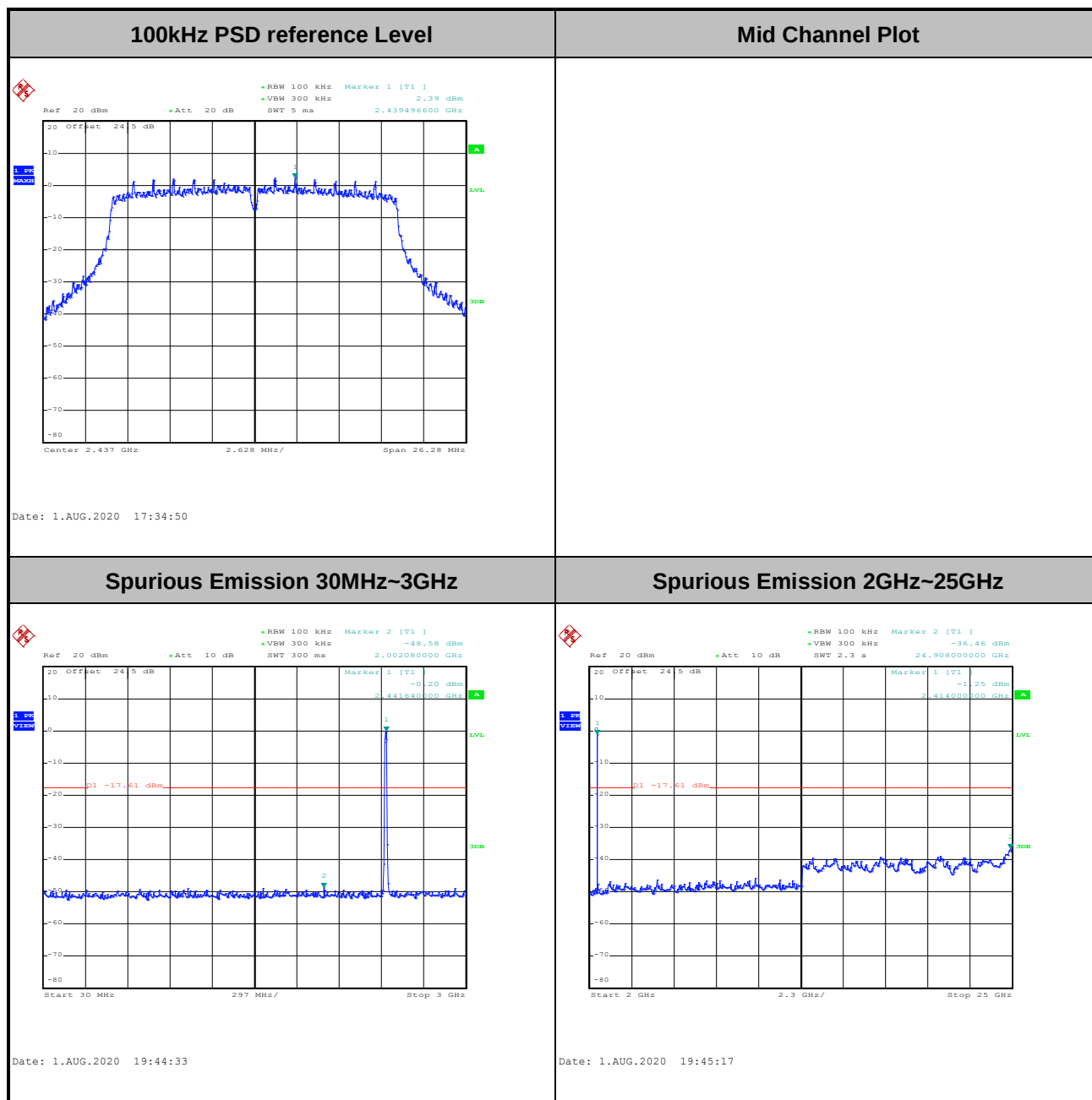
Spurious Emission 2GHz~25GHz



Date: 1.AUG.2020 19:39:26

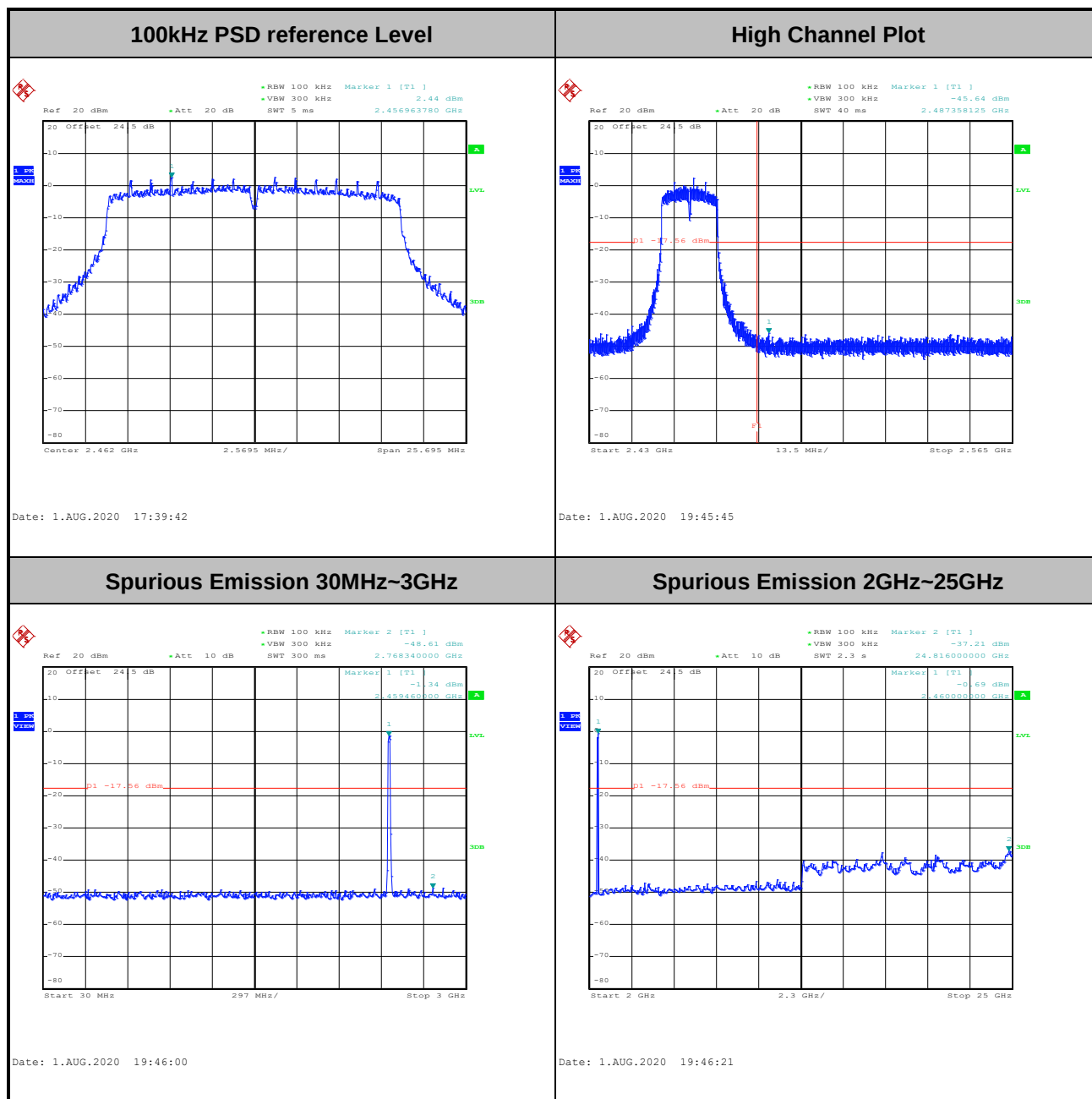


Test Mode :	802.11n HT20	Test Channel :	06
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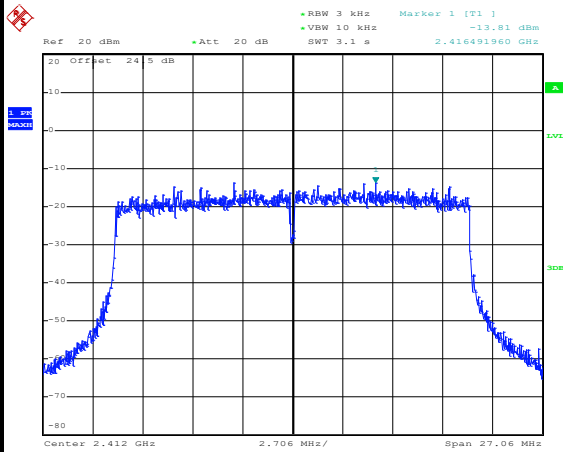
Test Mode :	802.11n HT20	Test Channel :	11
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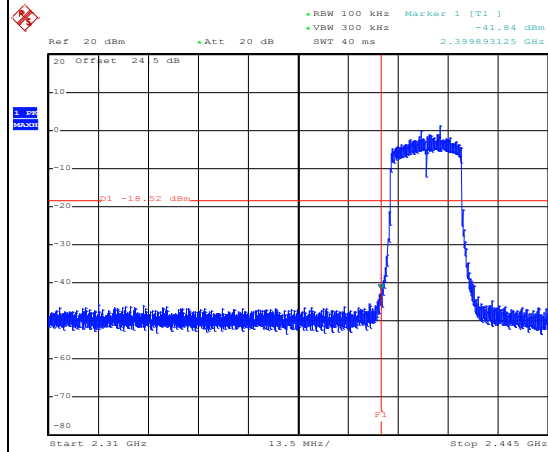
Test Mode :	802.11ax HE20	Test Channel :	01 Full RU
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100kHz PSD reference Level



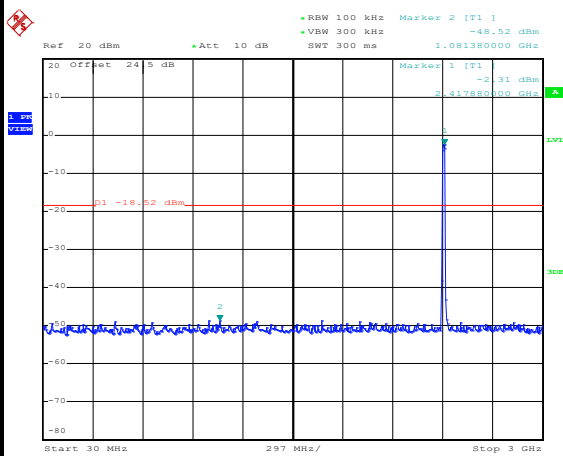
Date: 1.AUG.2020 18:36:46

Low Channel Plot



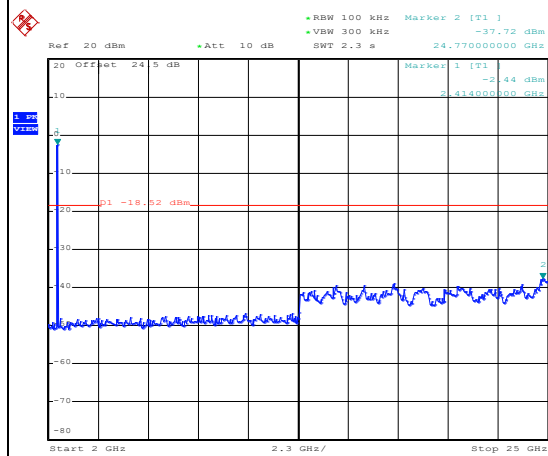
Date: 1.AUG.2020 20:10:48

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 20:39:05

Spurious Emission 2GHz~25GHz

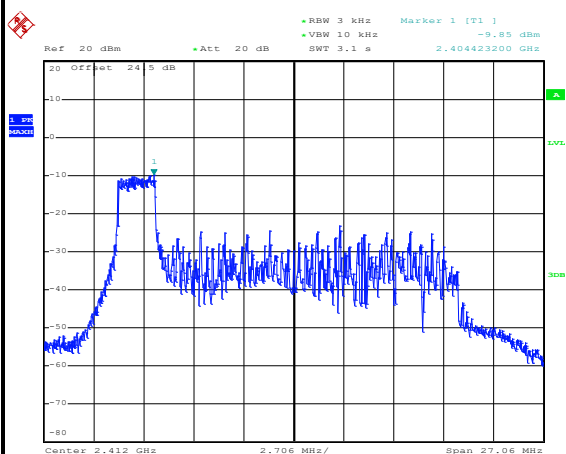


Date: 1.AUG.2020 20:39:22



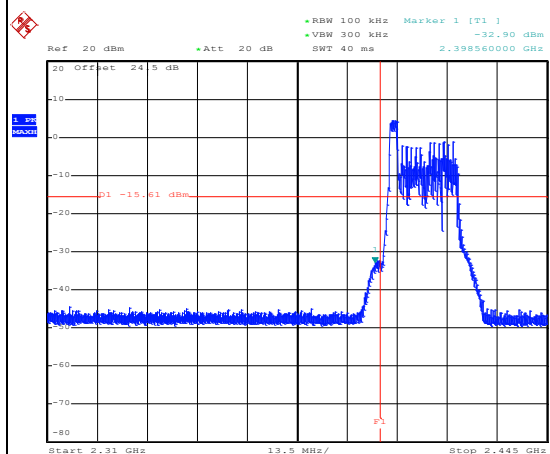
Test Mode :	802.11ax HE20	Test Channel :	01 Partial RU 26/0
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100kHz PSD reference Level



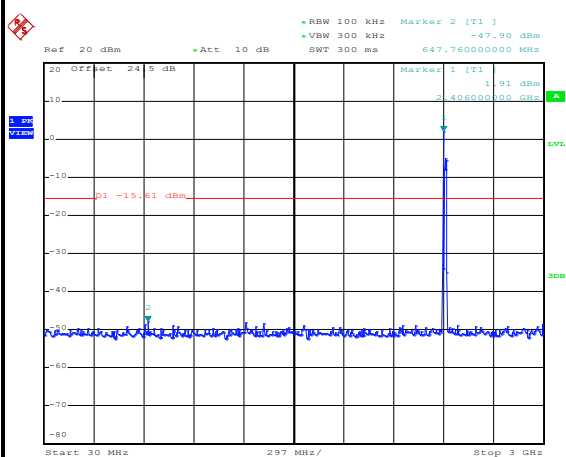
Date: 1.AUG.2020 19:18:28

Low Channel Plot



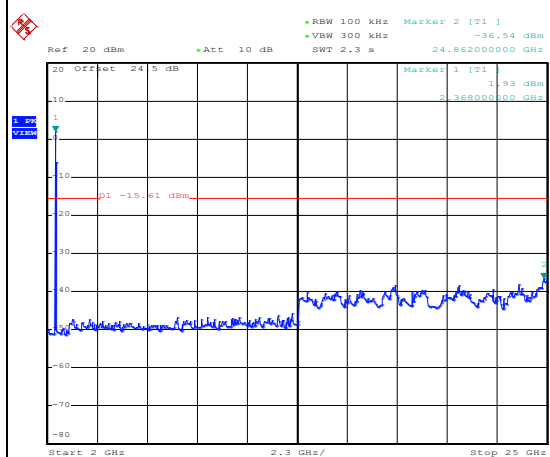
Date: 1.AUG.2020 19:22:20

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 19:22:58

Spurious Emission 2GHz~25GHz

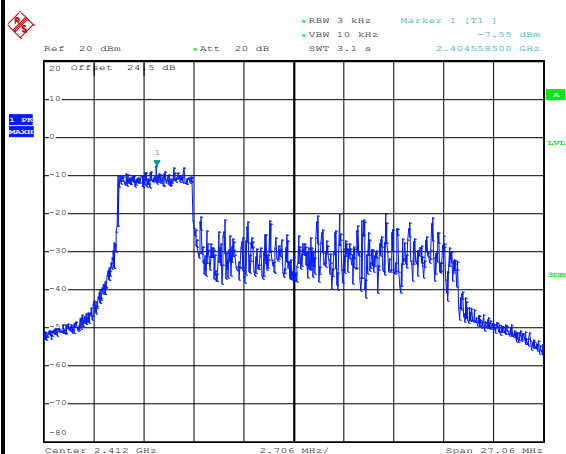


Date: 1.AUG.2020 19:23:25



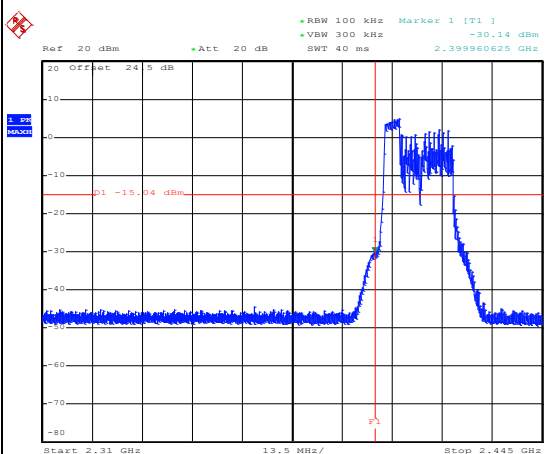
Test Mode :	802.11ax HE20	Test Channel :	01 Partial RU 52/37
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100kHz PSD reference Level



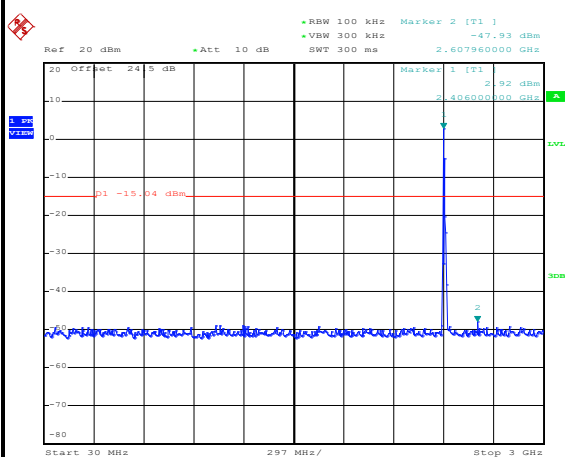
Date: 1.AUG.2020 22:05:05

Low Channel Plot



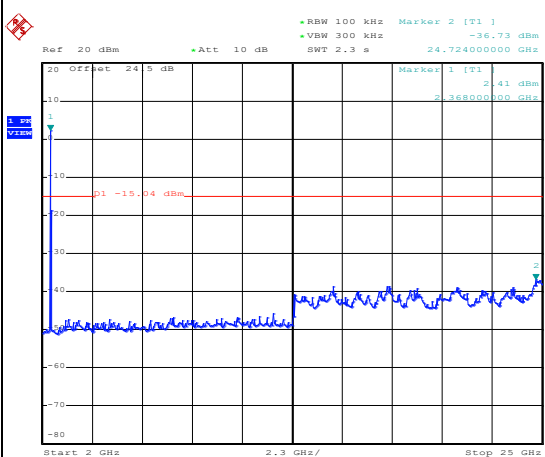
Date: 1.AUG.2020 22:09:28

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 22:10:41

Spurious Emission 2GHz~25GHz

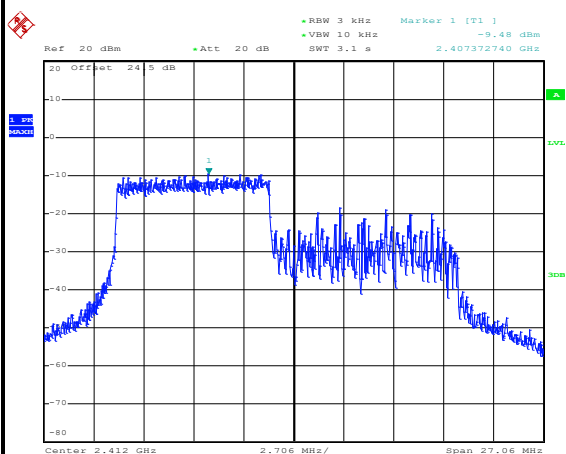


Date: 1.AUG.2020 22:11:18



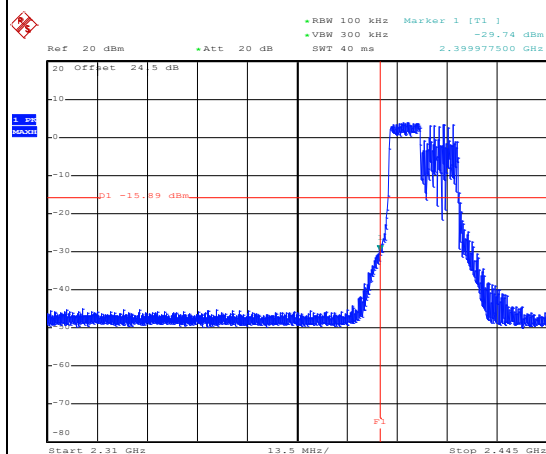
Test Mode :	802.11ax HE20	Test Channel :	01 Partial RU 106/53
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100kHz PSD reference Level



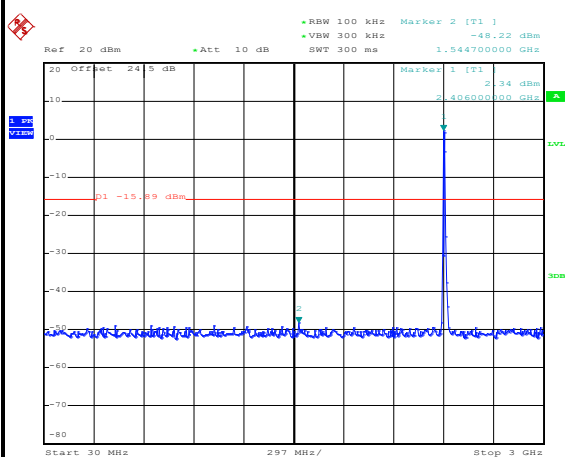
Date: 1.AUG.2020 23:33:19

Low Channel Plot



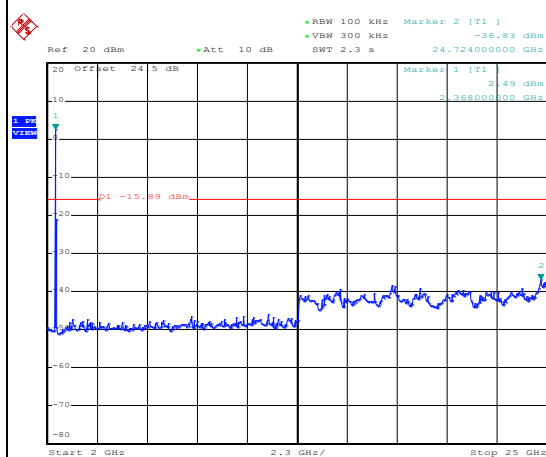
Date: 1.AUG.2020 23:35:51

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 23:36:21

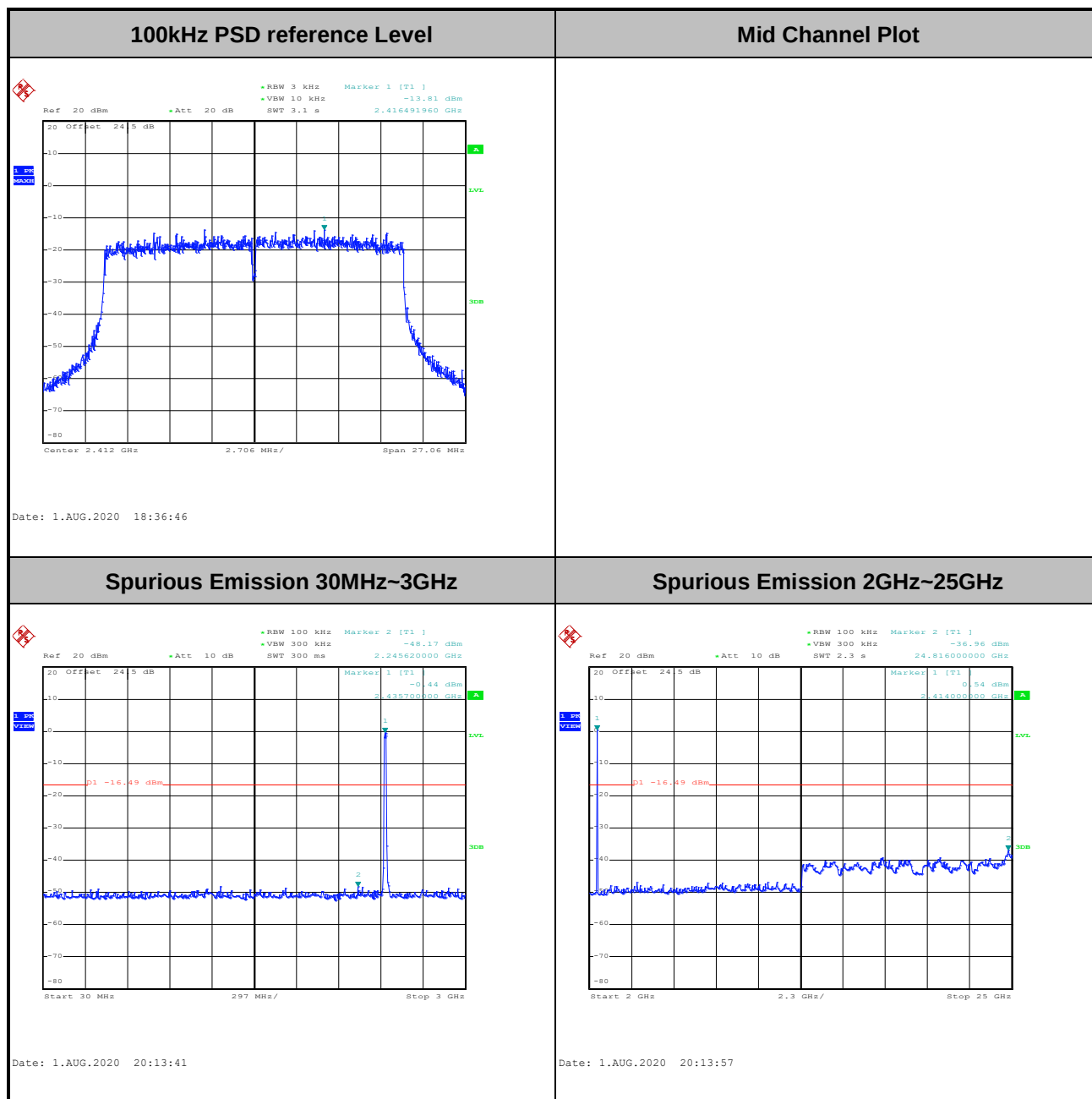
Spurious Emission 2GHz~25GHz



Date: 1.AUG.2020 23:36:54

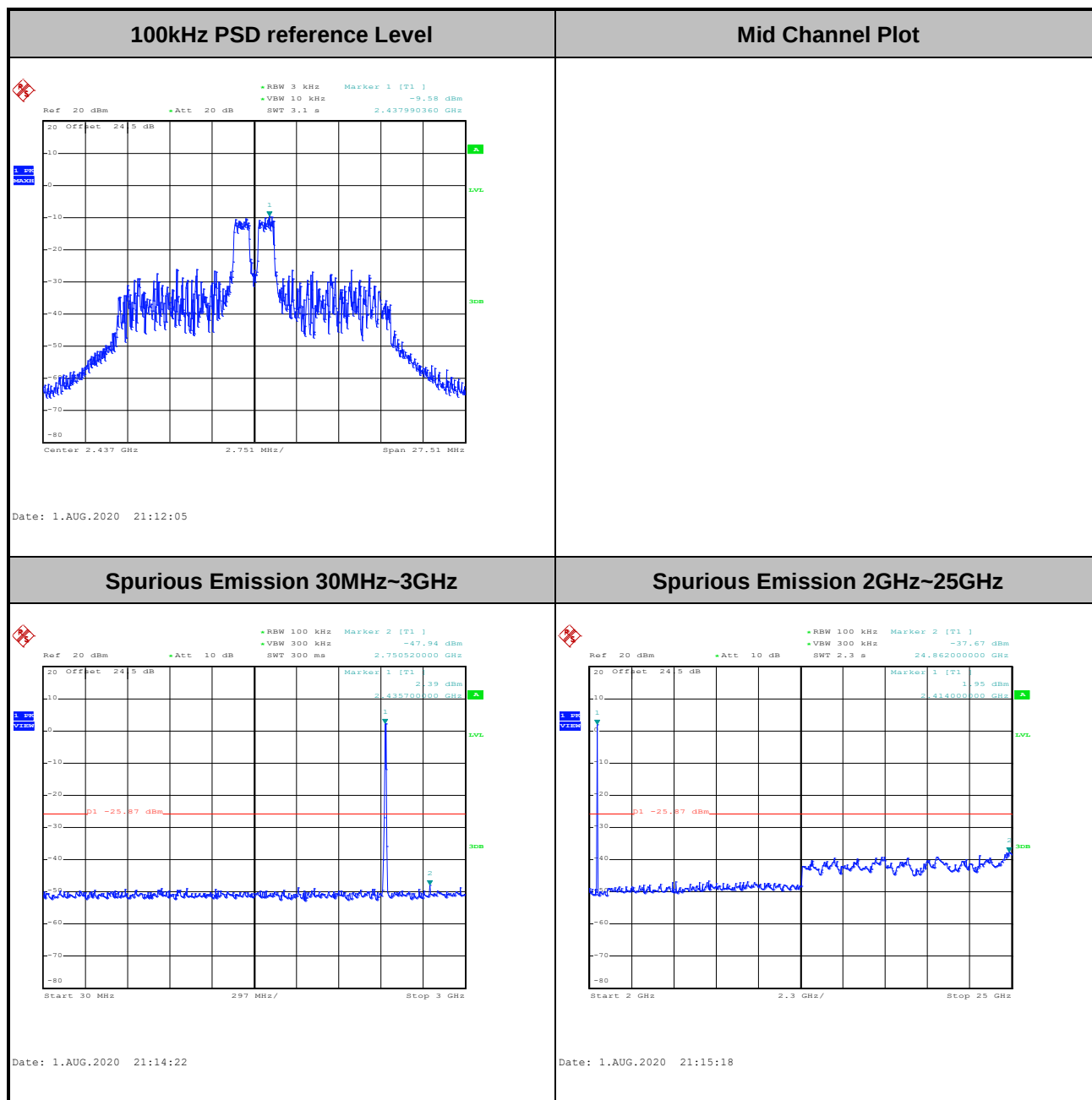


Test Mode :	802.11ax HE20	Test Channel :	06 Full RU
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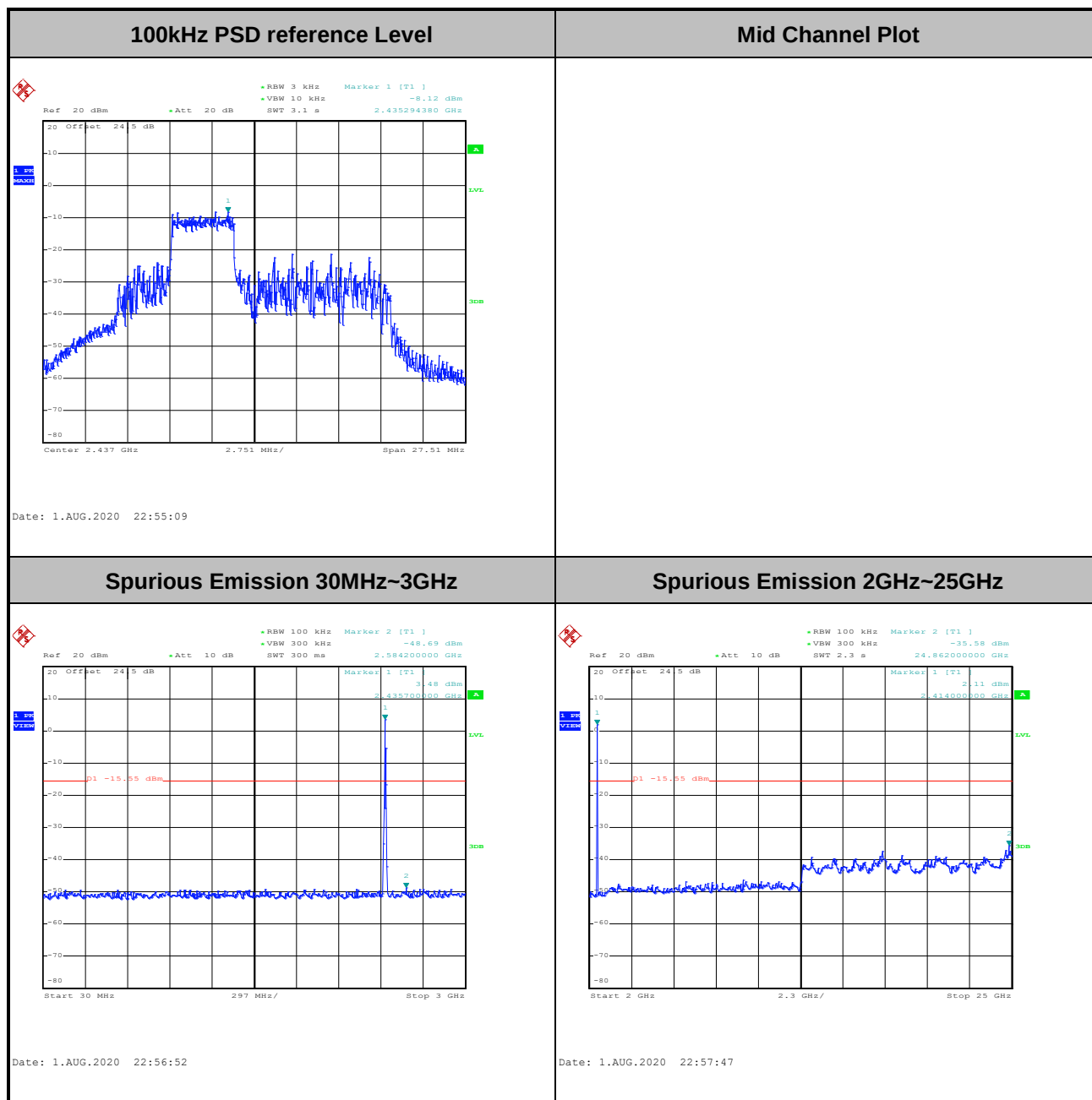


Test Mode :	802.11ax HE20	Test Channel :	06 Partial RU 26/4
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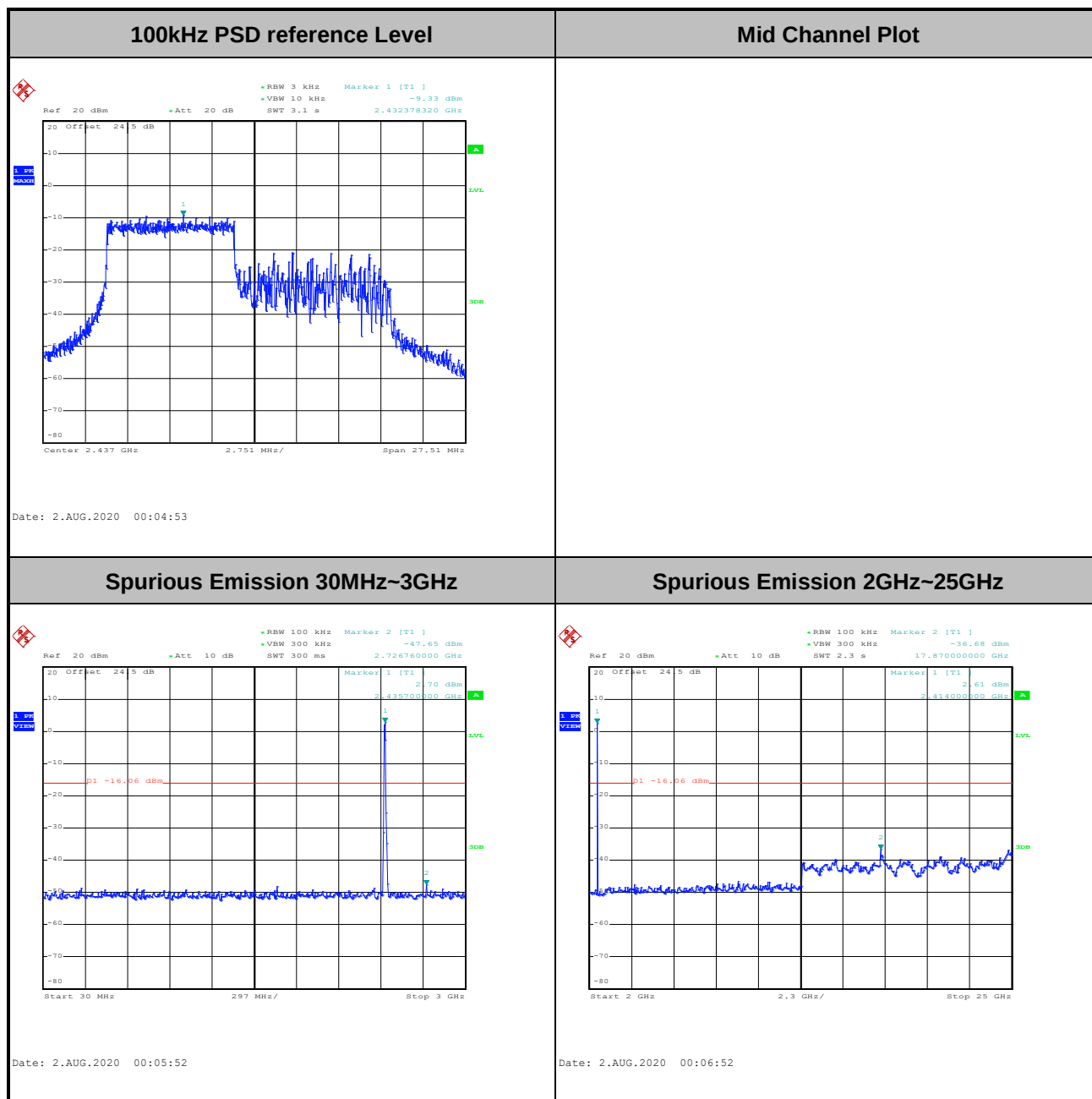


Test Mode :	802.11ax HE20	Test Channel :	06 Partial RU 52/38
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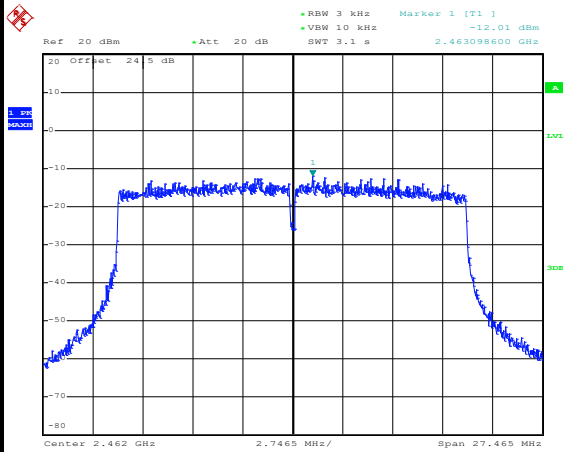
Test Mode :	802.11ax HE20	Test Channel :	06 Partial RU 106/53
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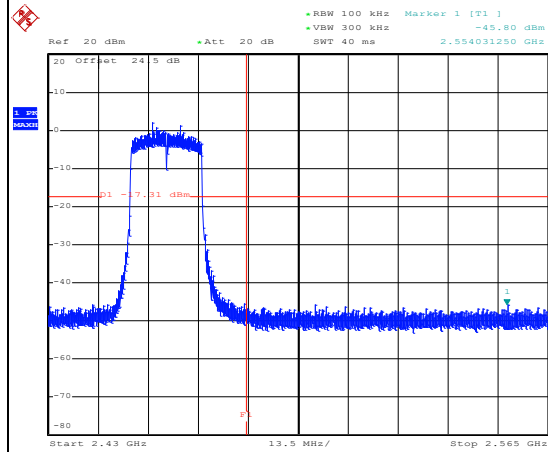
Test Mode :	802.11ax HE20	Test Channel :	11 Full RU
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100kHz PSD reference Level



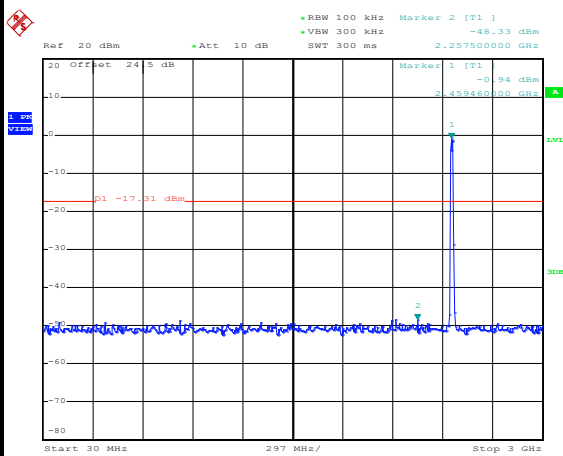
Date: 1.AUG.2020 18:59:56

High Channel Plot



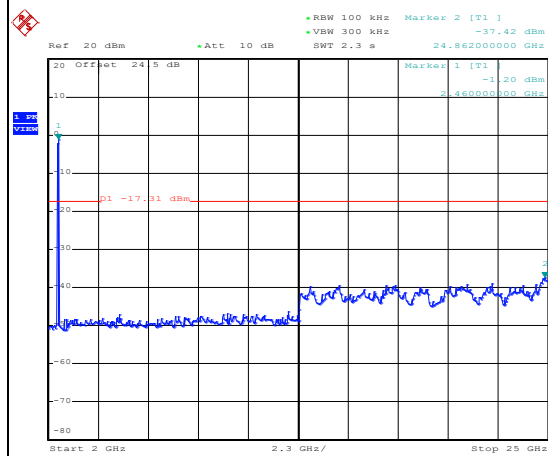
Date: 1.AUG.2020 20:14:36

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 20:15:16

Spurious Emission 2GHz~25GHz

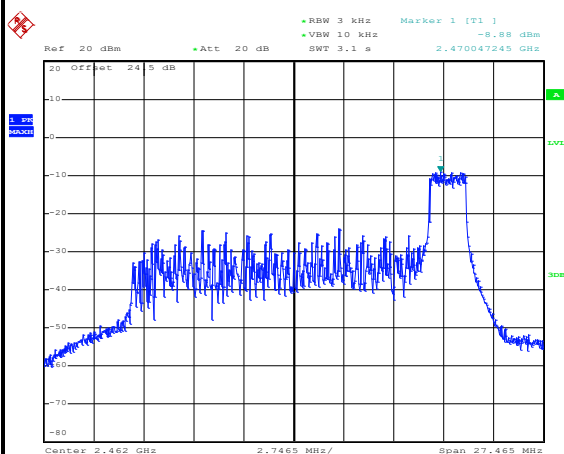


Date: 1.AUG.2020 20:15:33



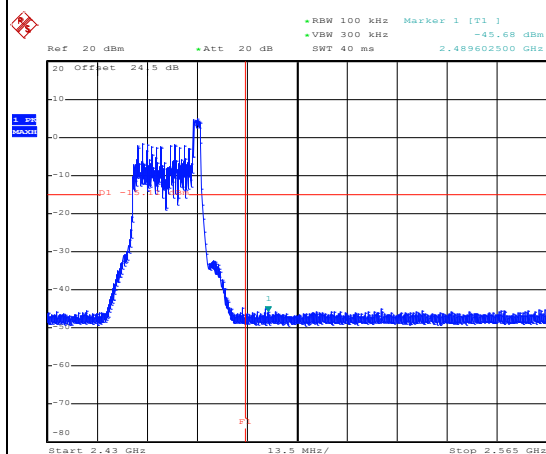
Test Mode :	802.11ax HE20	Test Channel :	11 Partial RU 26/8
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100kHz PSD reference Level



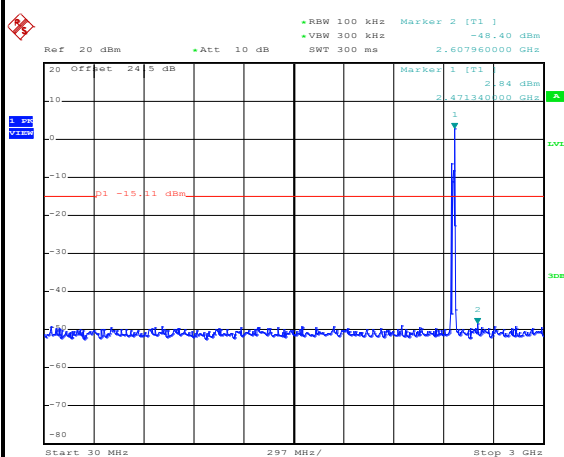
Date: 1.AUG.2020 21:37:16

High Channel Plot



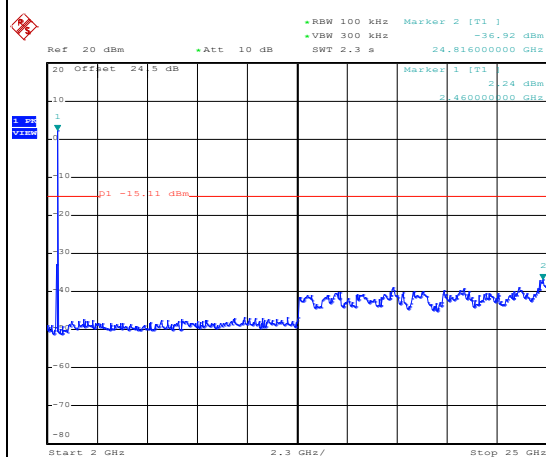
Date: 1.AUG.2020 21:42:37

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 21:45:04

Spurious Emission 2GHz~25GHz

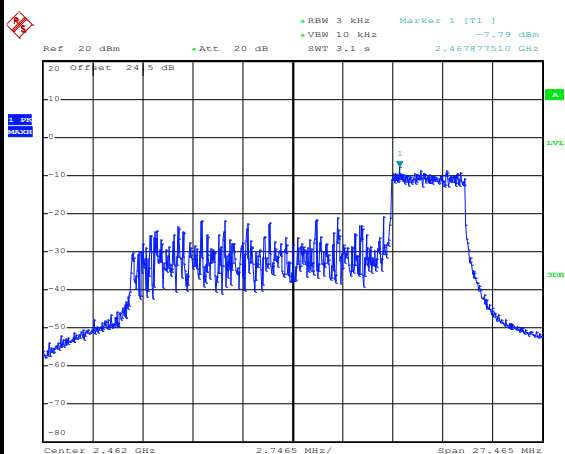


Date: 1.AUG.2020 21:45:57



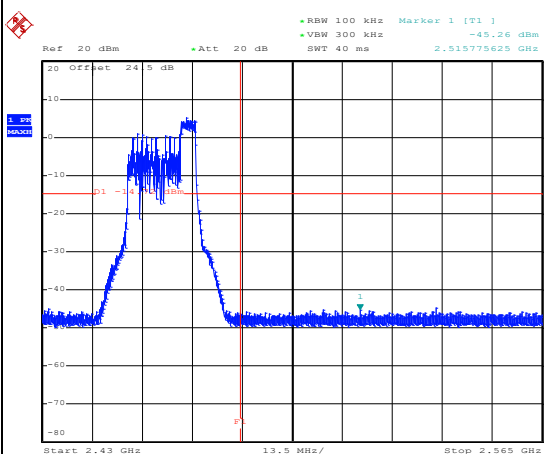
Test Mode :	802.11ax HE20	Test Channel :	11 Partial RU 52/40
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100kHz PSD reference Level



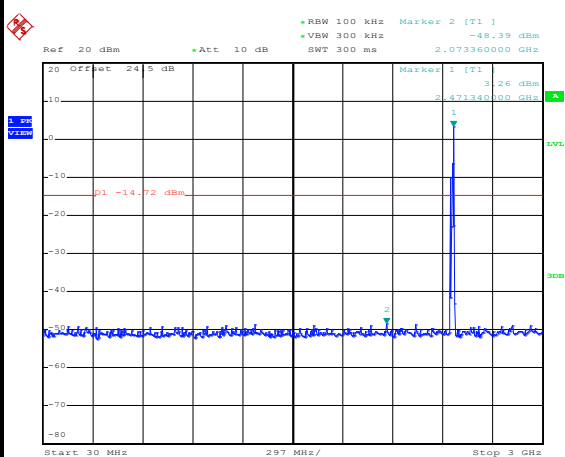
Date: 1.AUG.2020 23:15:18

High Channel Plot



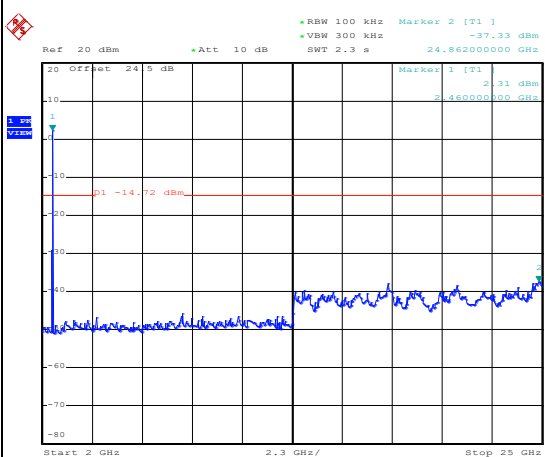
Date: 1.AUG.2020 23:18:10

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 23:18:38

Spurious Emission 2GHz~25GHz

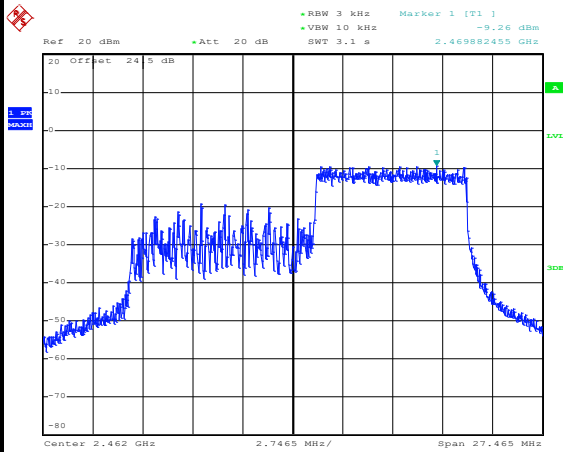


Date: 1.AUG.2020 23:19:19



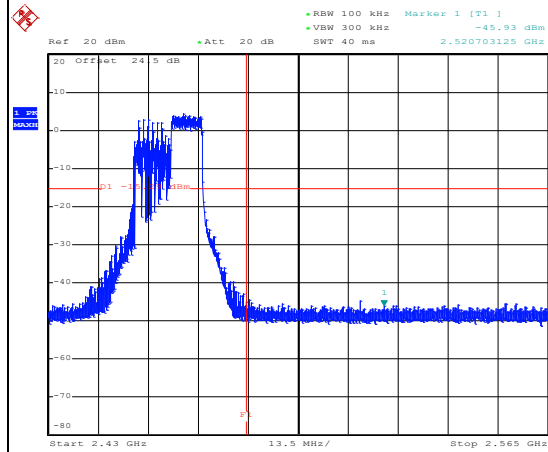
Test Mode :	802.11ax HE20	Test Channel :	11 Partial RU 106/54
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100kHz PSD reference Level



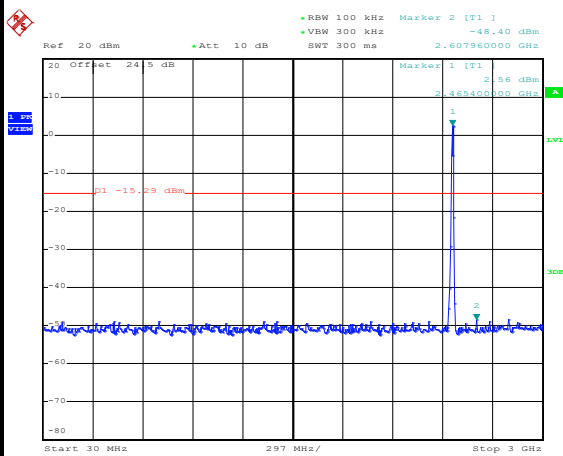
Date: 2.AUG.2020 00:19:45

High Channel Plot



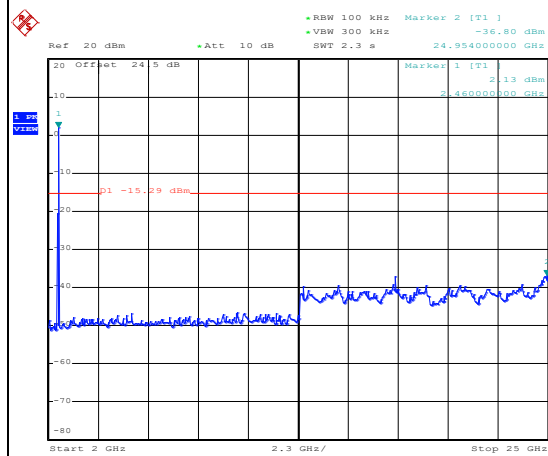
Date: 2.AUG.2020 00:21:39

Spurious Emission 30MHz~3GHz



Date: 2.AUG.2020 00:22:18

Spurious Emission 2GHz~25GHz

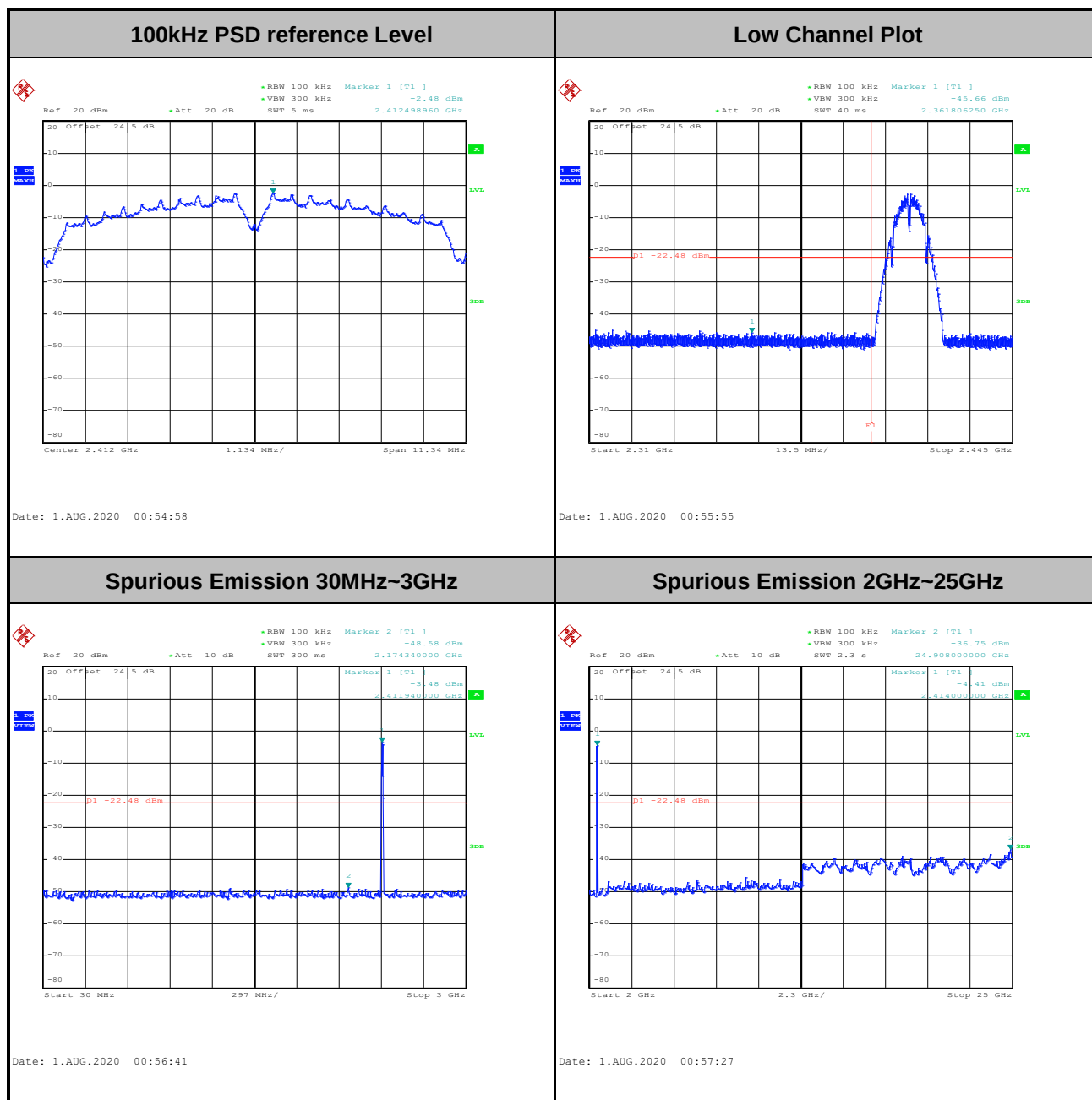


Date: 2.AUG.2020 00:22:55



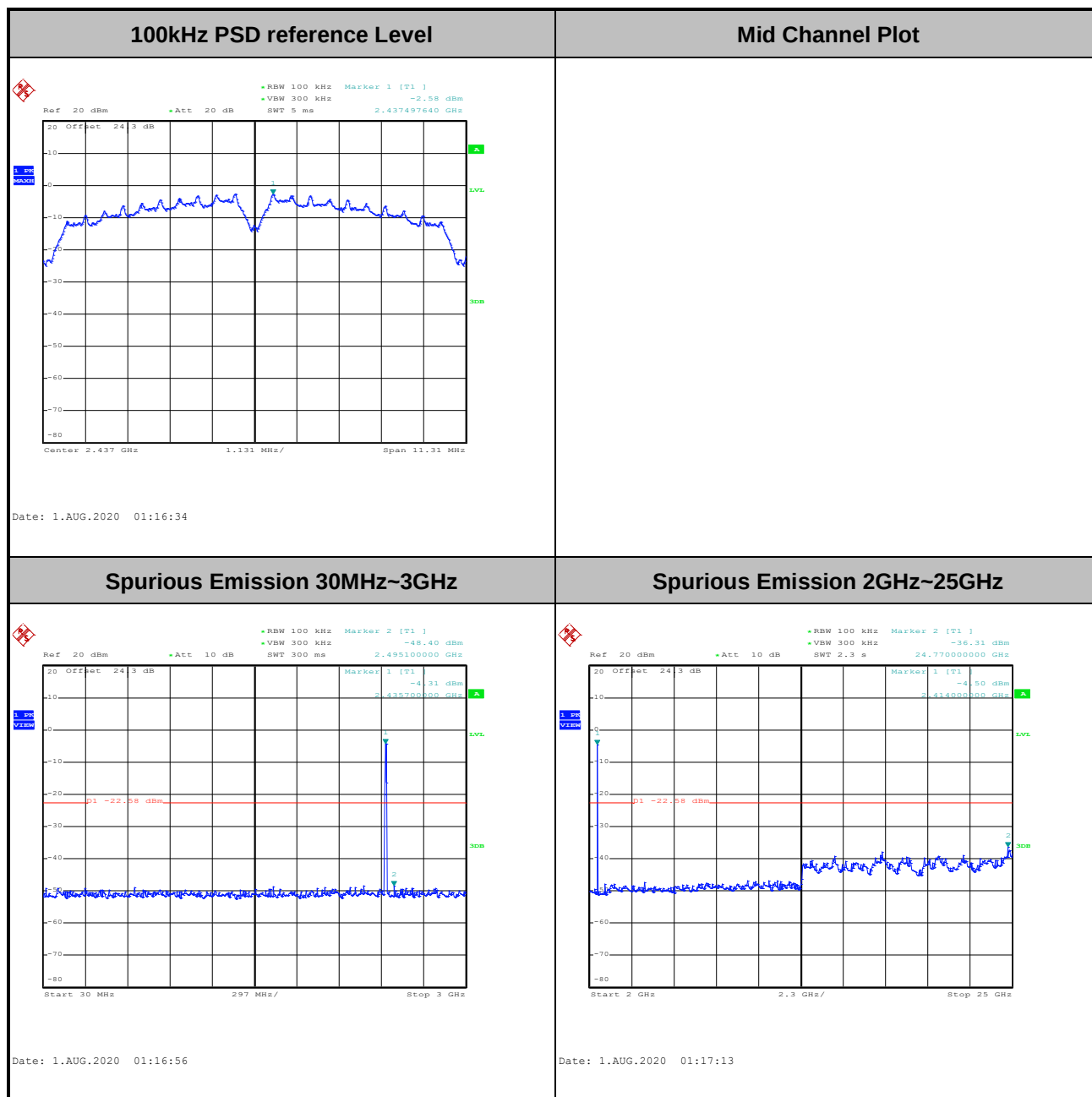
Number of TX = 2, Ant. 1 (Measured)

Test Mode :	802.11b	Test Channel :	01
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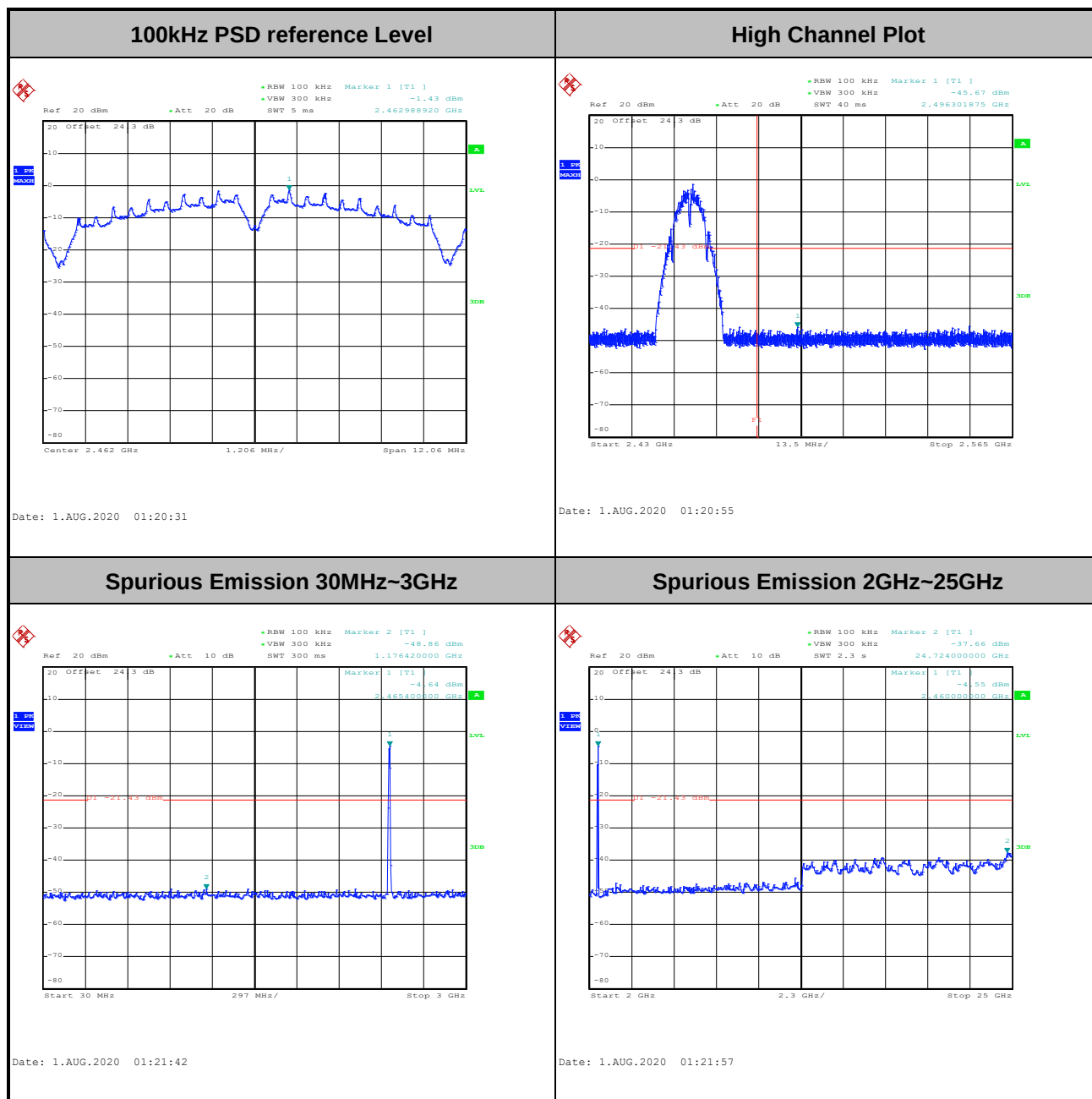


Test Mode :	802.11b	Test Channel :	06
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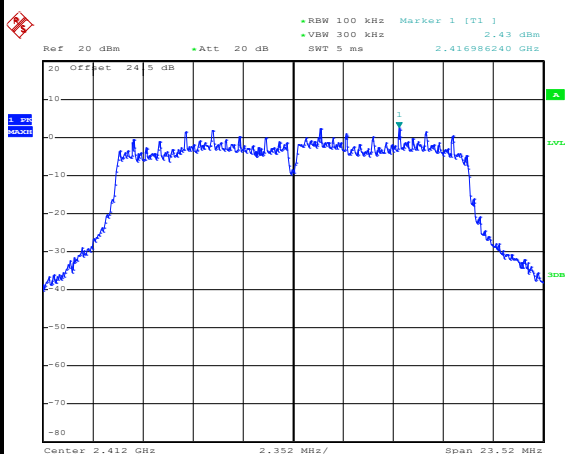
Test Mode :	802.11b	Test Channel :	11
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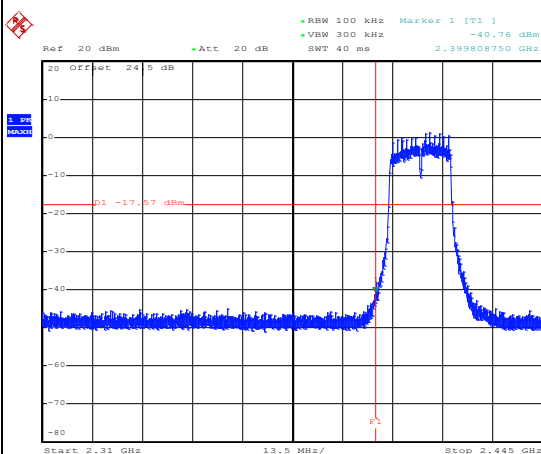
Test Mode :	802.11g	Test Channel :	01
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100kHz PSD reference Level



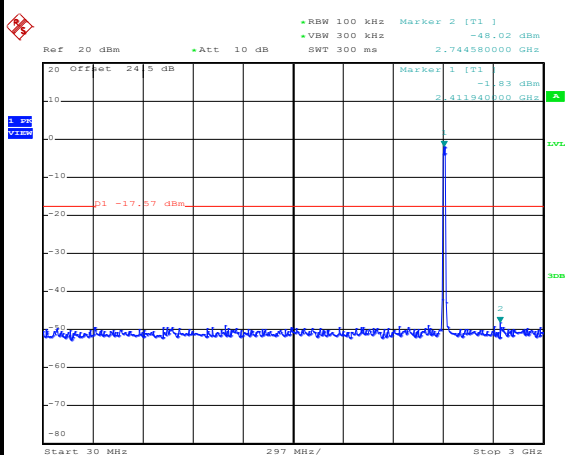
Date: 1.AUG.2020 17:03:59

Low Channel Plot



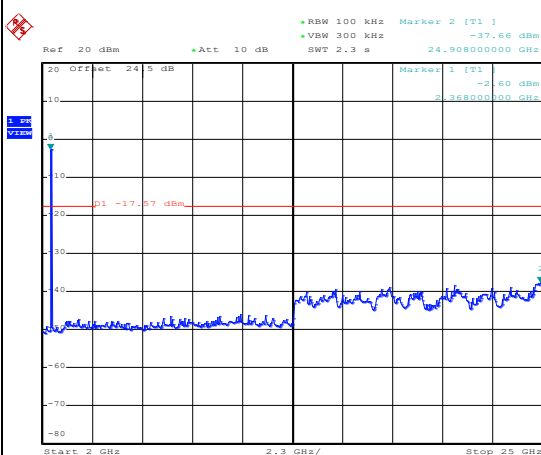
Date: 1.AUG.2020 19:31:07

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 19:35:42

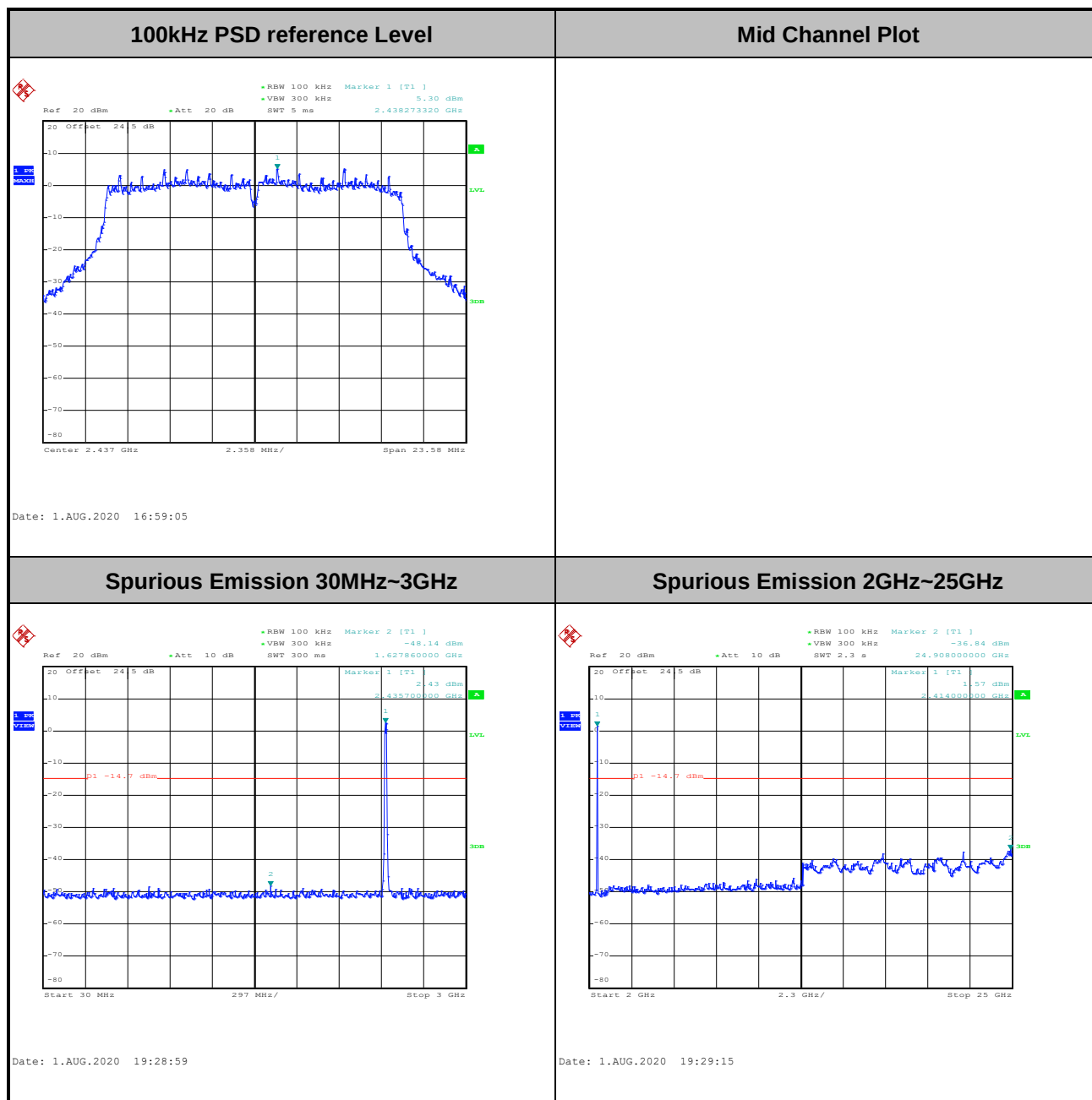
Spurious Emission 2GHz~25GHz



Date: 1.AUG.2020 19:36:25



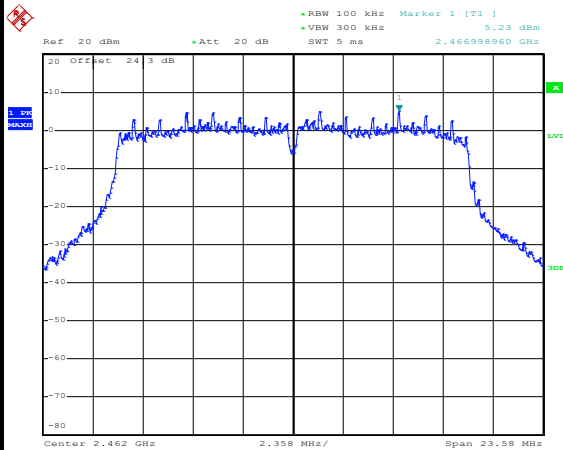
Test Mode :	802.11g	Test Channel :	06
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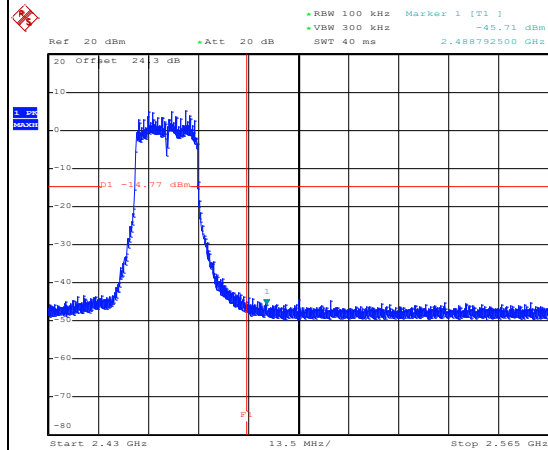
Test Mode :	802.11g	Test Channel :	11
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100kHz PSD reference Level



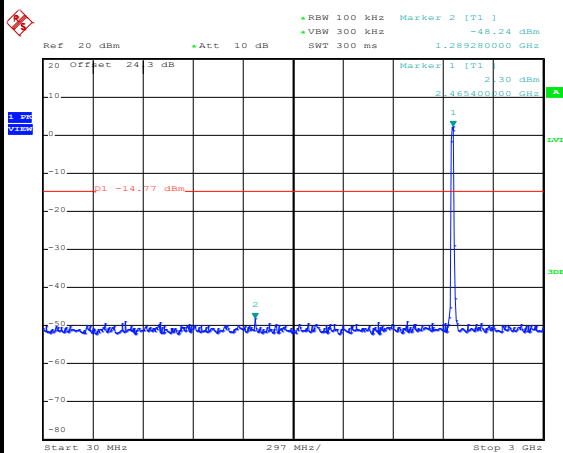
Date: 1.AUG.2020 01:41:50

High Channel Plot



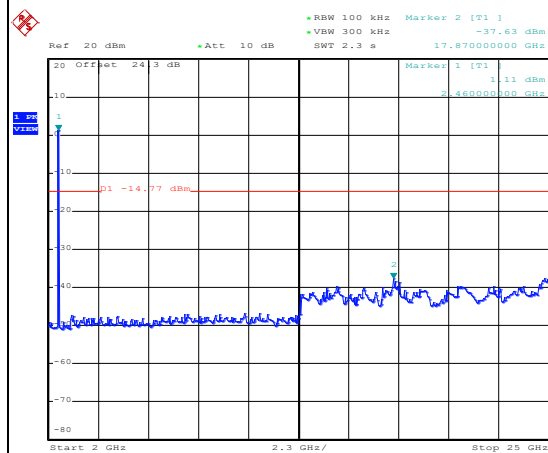
Date: 1.AUG.2020 01:44:55

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 01:45:36

Spurious Emission 2GHz~25GHz

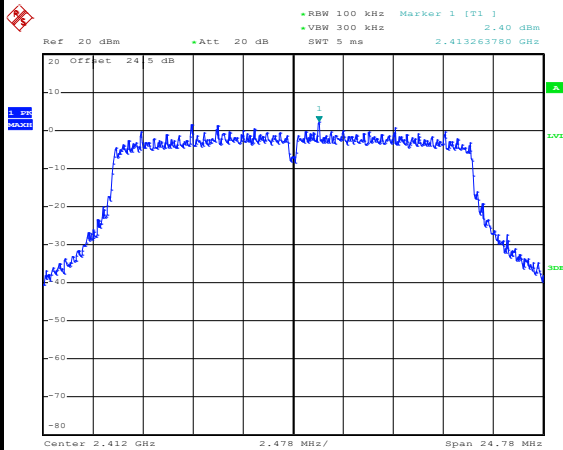


Date: 1.AUG.2020 01:46:59



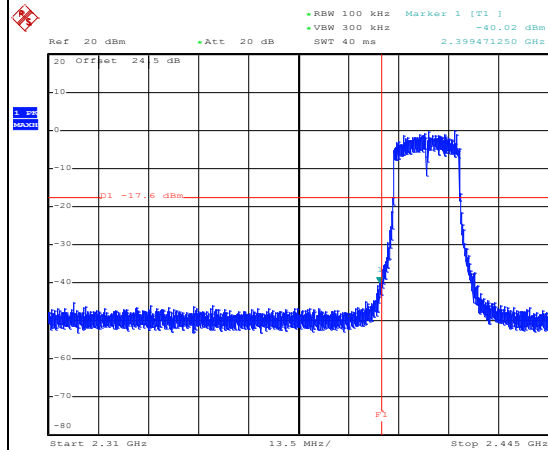
Test Mode :	802.11n HT20	Test Channel :	01
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100kHz PSD reference Level



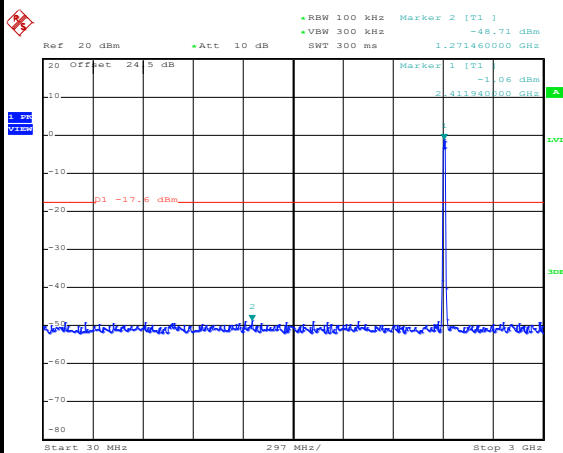
Date: 1.AUG.2020 17:24:30

Low Channel Plot



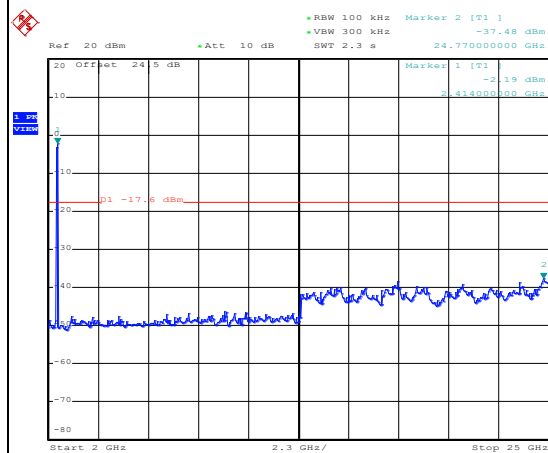
Date: 1.AUG.2020 20:33:12

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 20:33:52

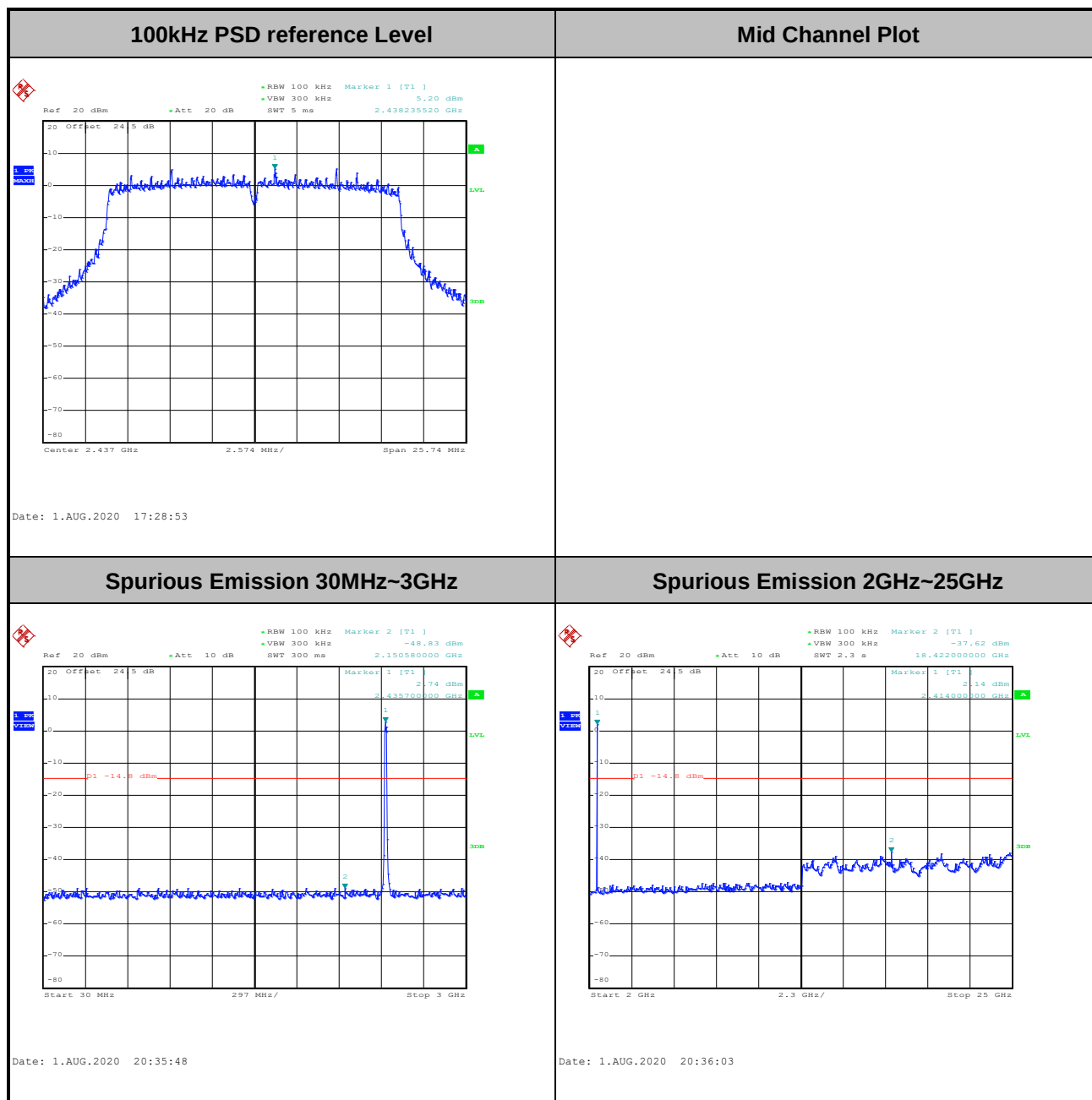
Spurious Emission 2GHz~25GHz



Date: 1.AUG.2020 20:34:10



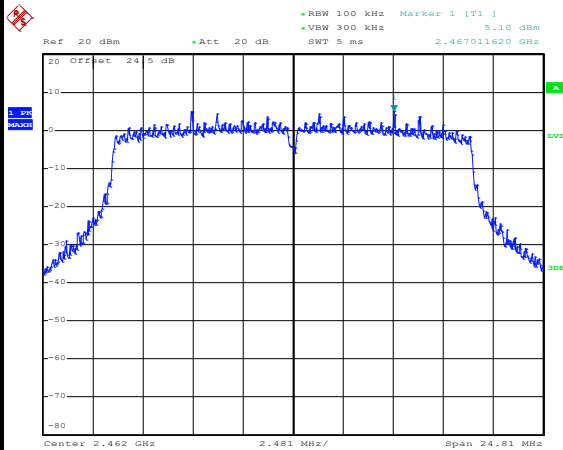
Test Mode :	802.11n HT20	Test Channel :	06
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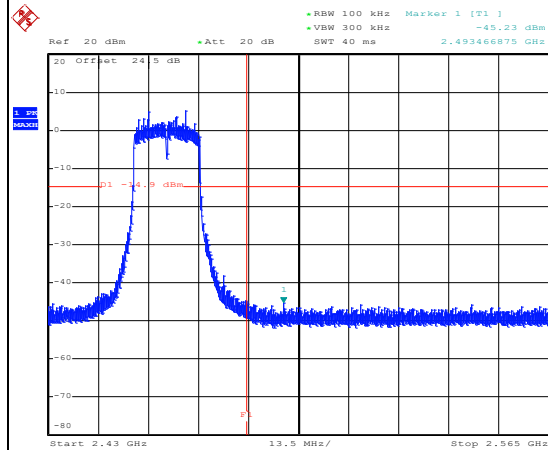
Test Mode :	802.11n HT20	Test Channel :	11
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100kHz PSD reference Level



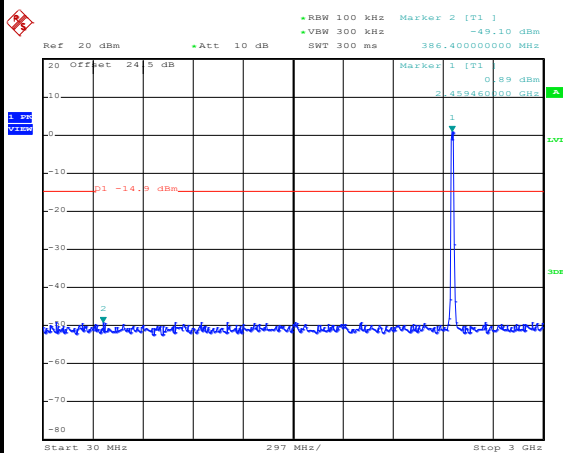
Date: 1.AUG.2020 17:43:43

High Channel Plot



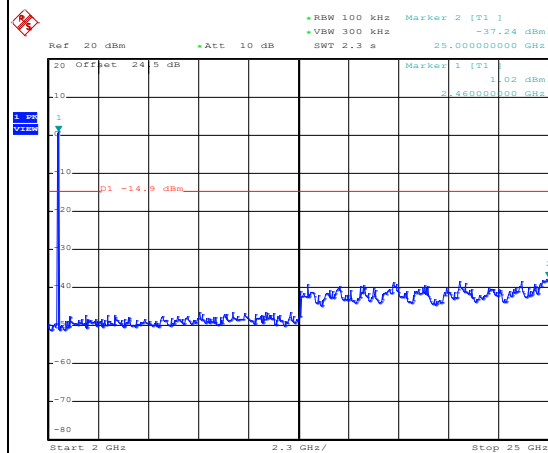
Date: 1.AUG.2020 20:01:33

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 20:01:55

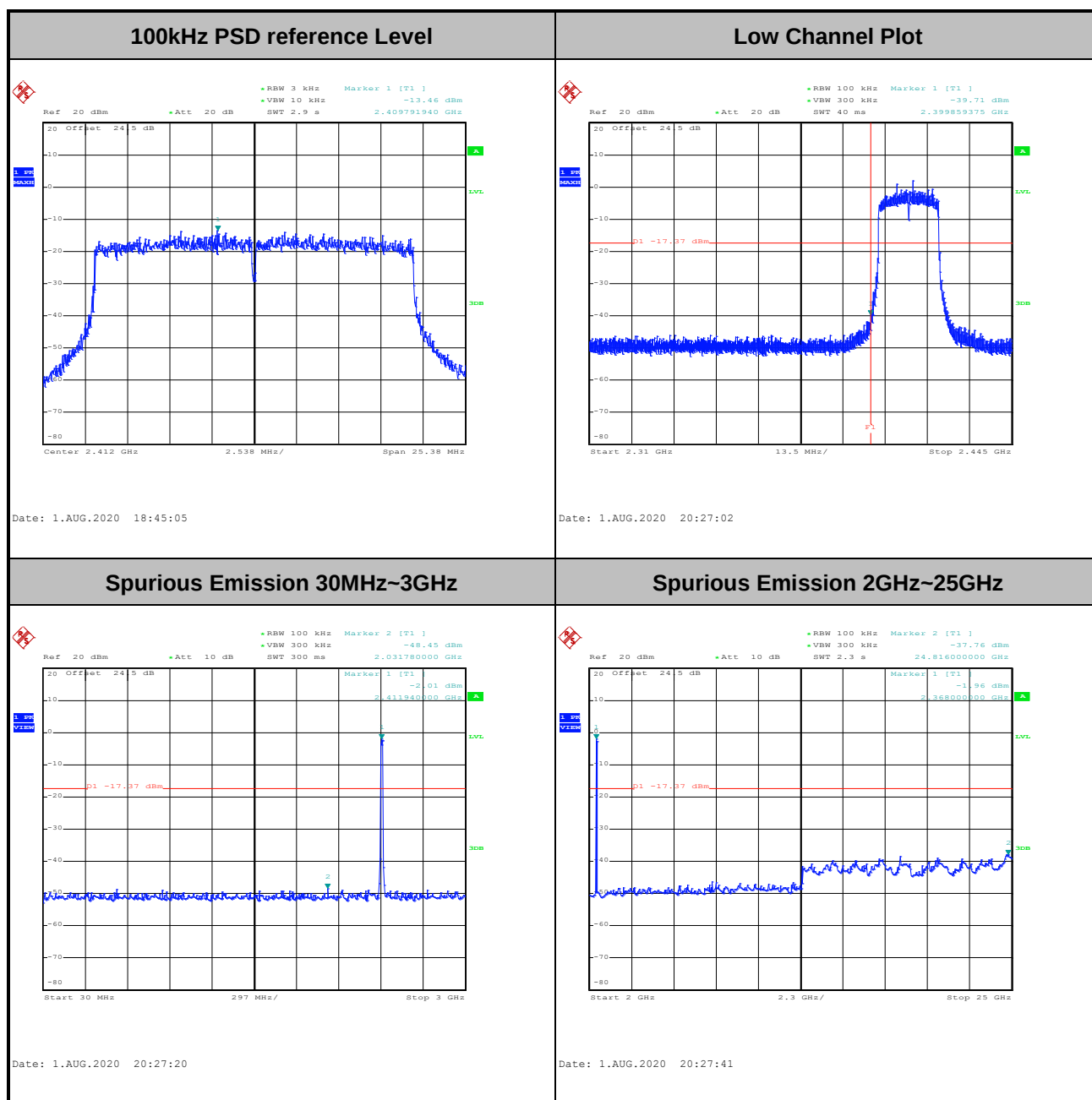
Spurious Emission 2GHz~25GHz



Date: 1.AUG.2020 20:02:15



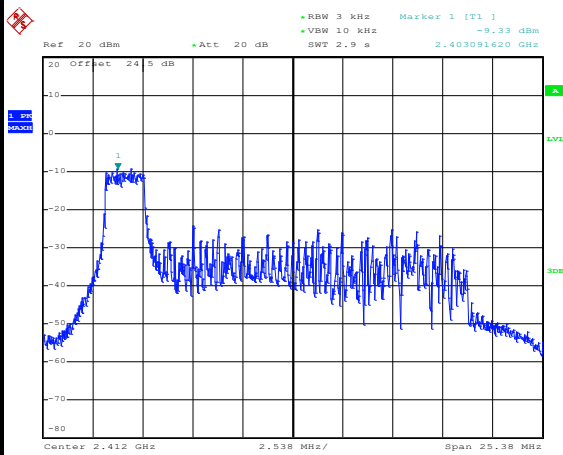
Test Mode :	802.11ax HE20	Test Channel :	01 Full RU
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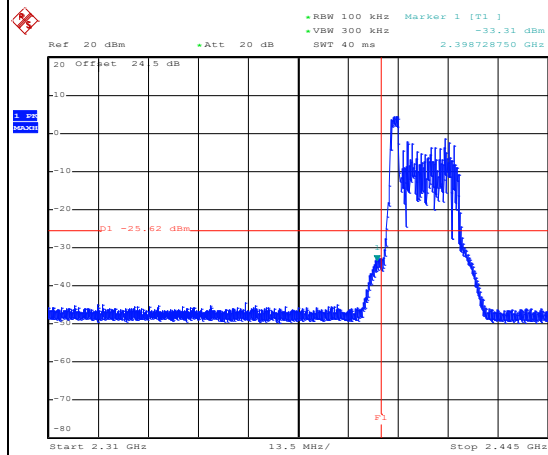
Test Mode :	802.11ax HE20	Test Channel :	01 Partial RU 26/0
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100kHz PSD reference Level



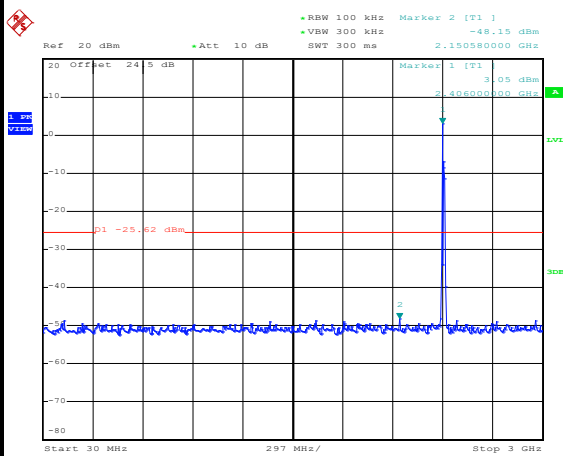
Date: 1.AUG.2020 21:02:59

Low Channel Plot



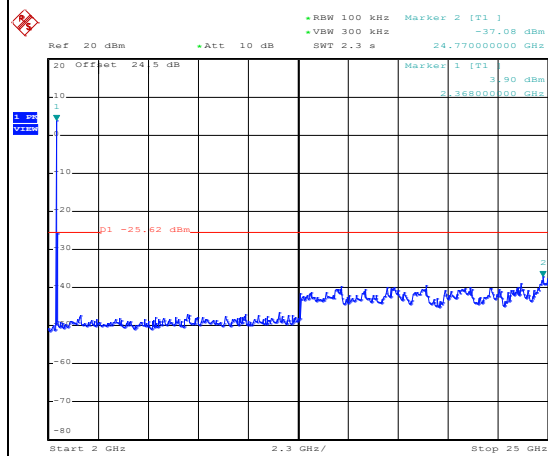
Date: 1.AUG.2020 21:05:48

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 21:06:17

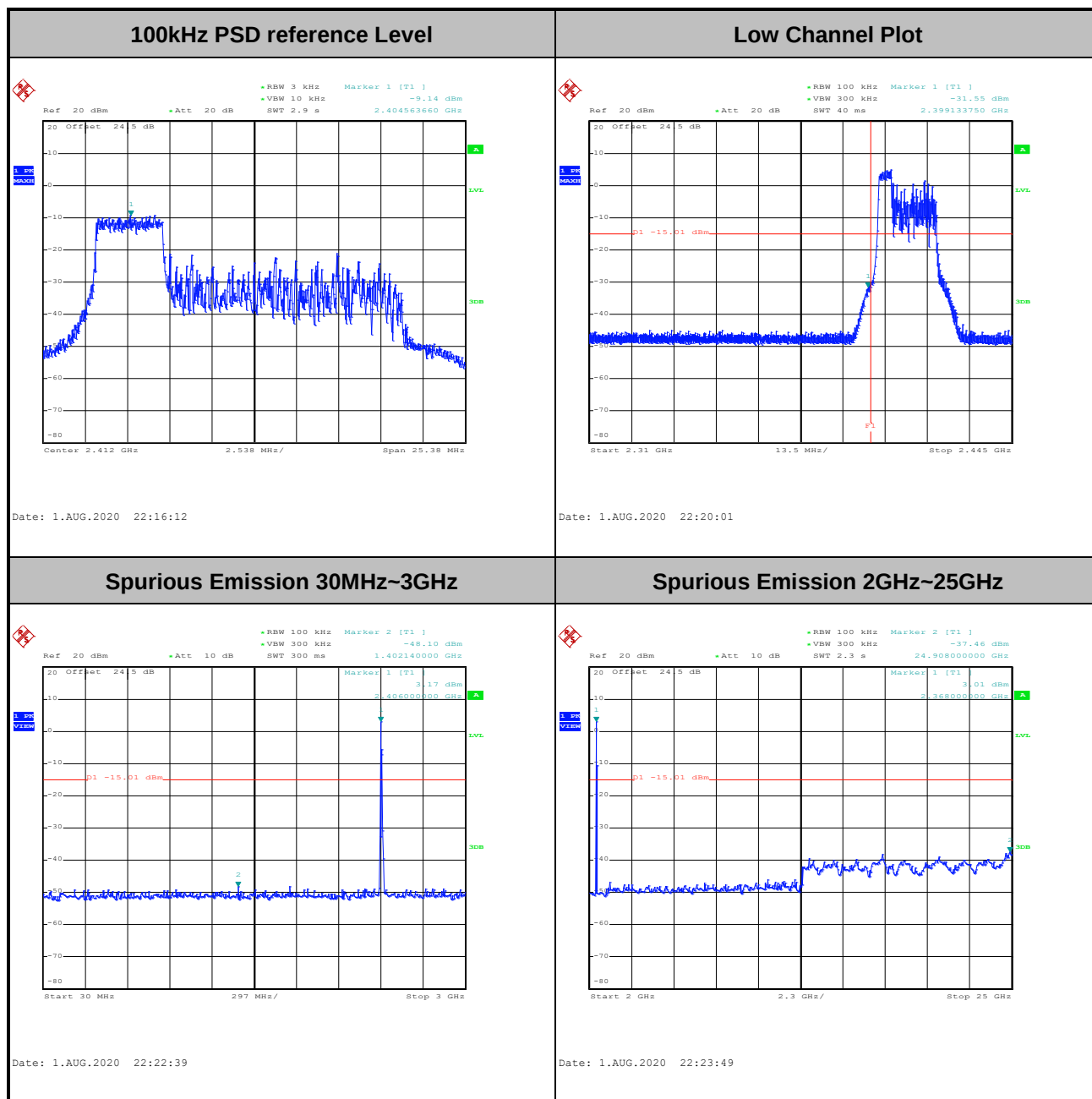
Spurious Emission 2GHz~25GHz



Date: 1.AUG.2020 21:07:42

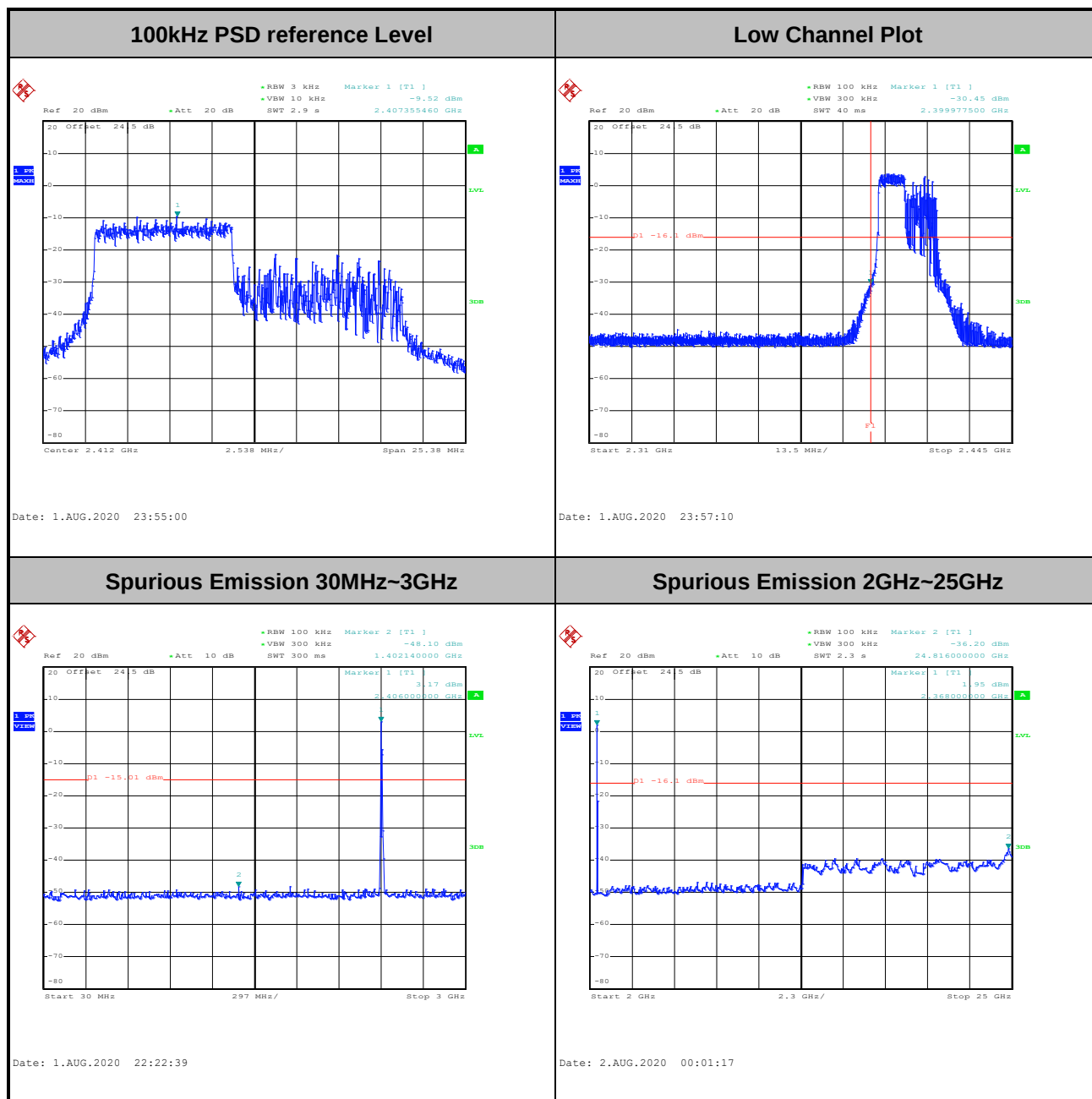


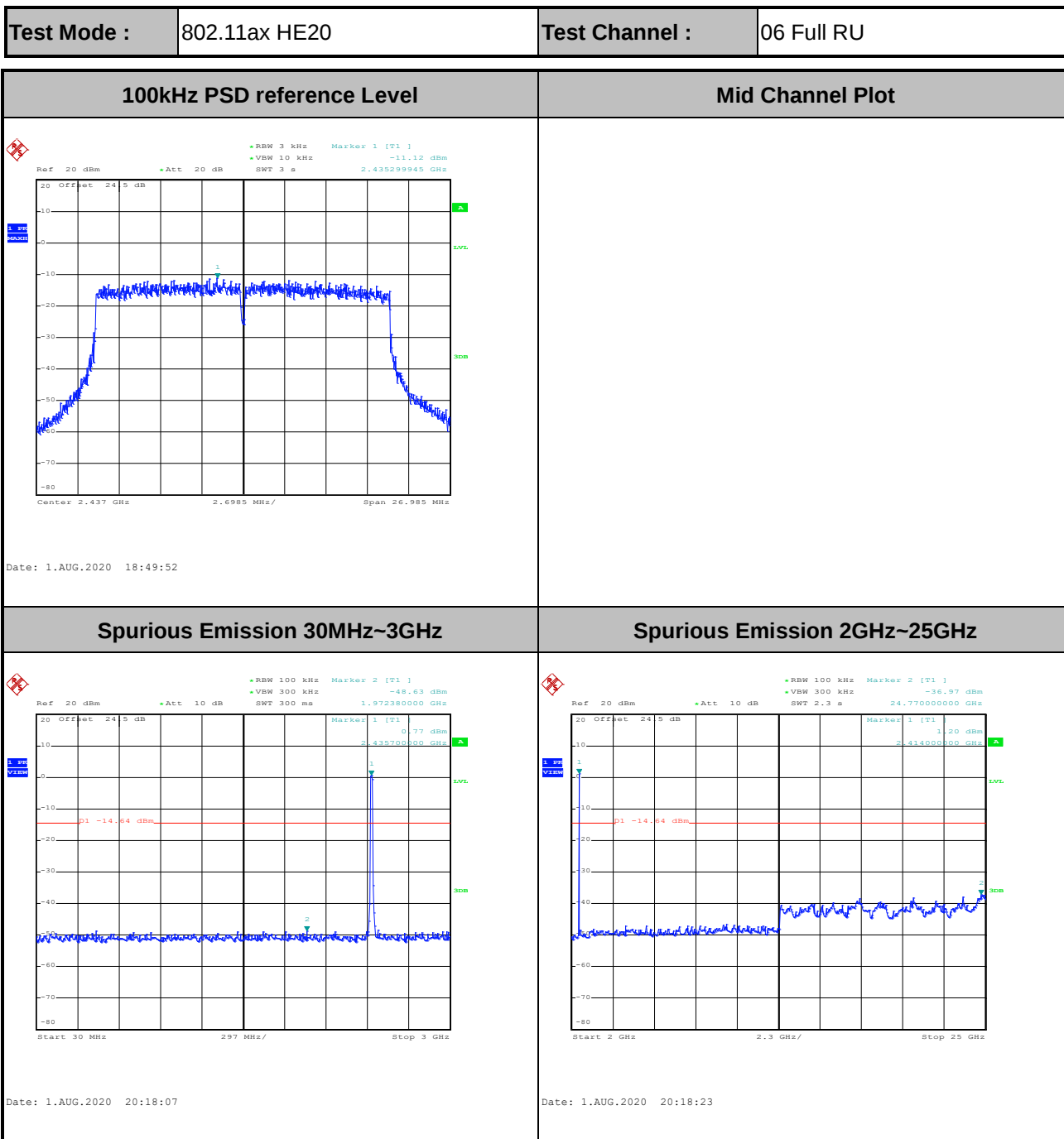
Test Mode :	802.11ax HE20	Test Channel :	01 Partial RU 52/37
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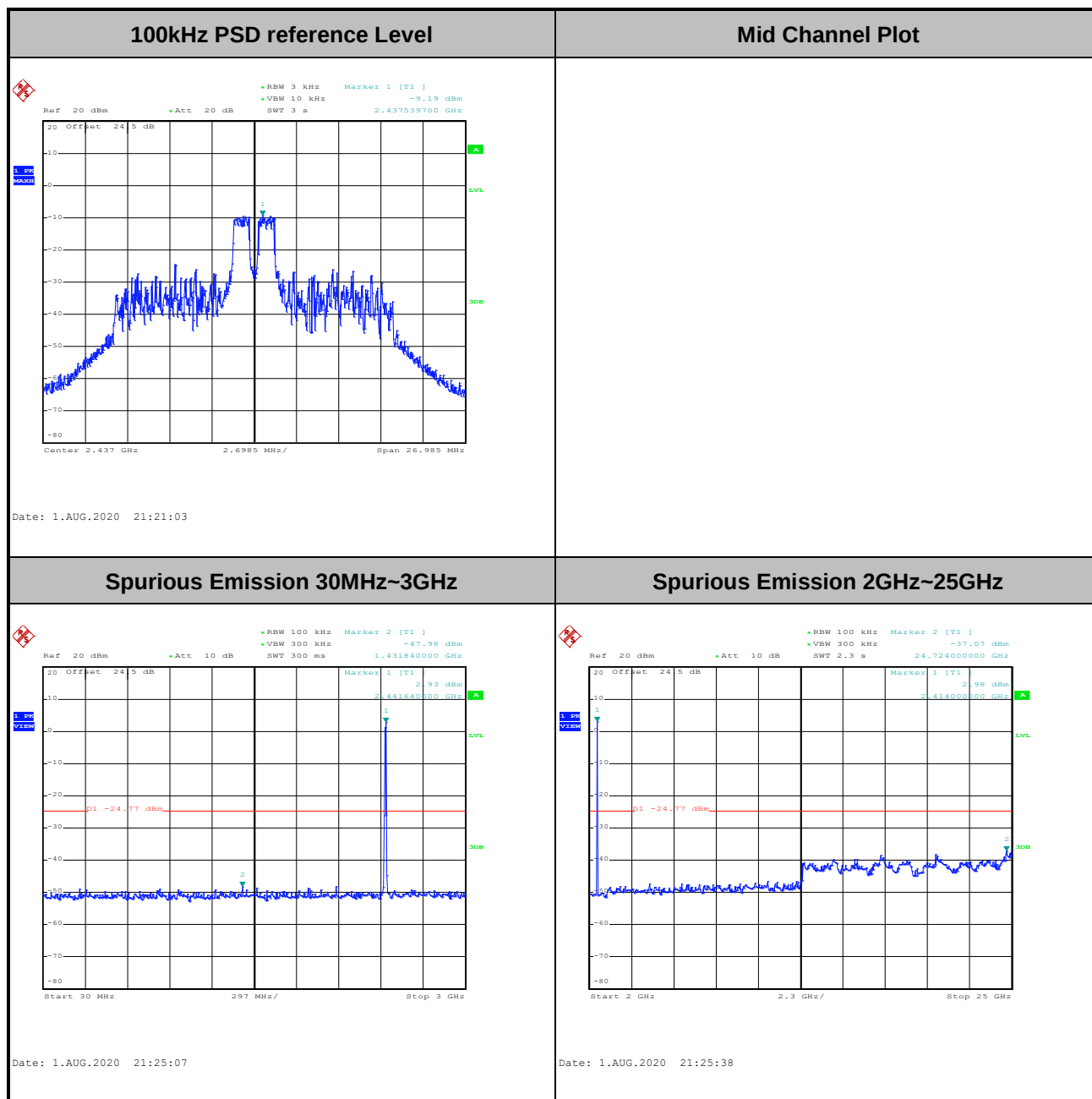
Test Mode :	802.11ax HE20	Test Channel :	01 106 RU 53
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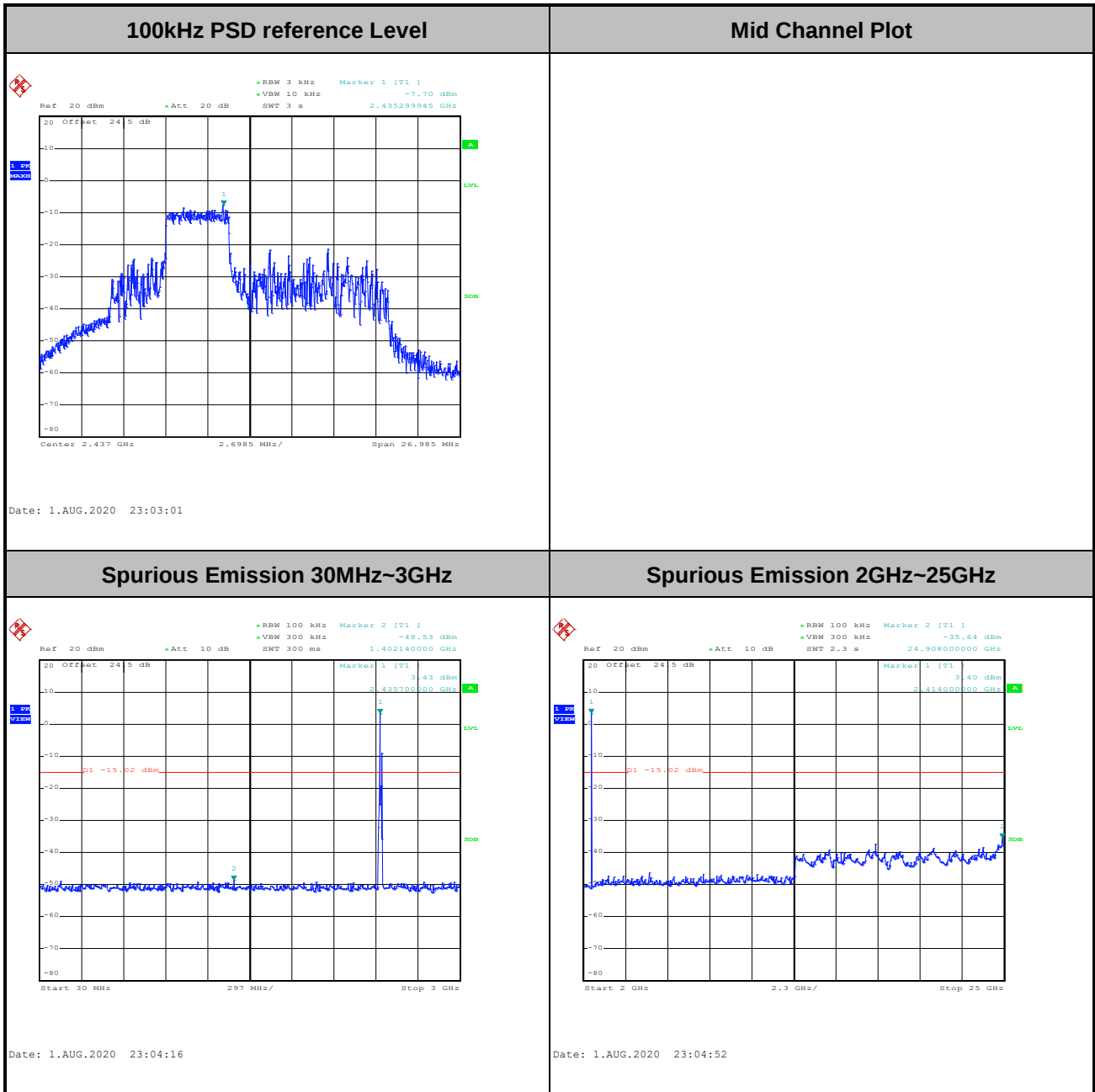


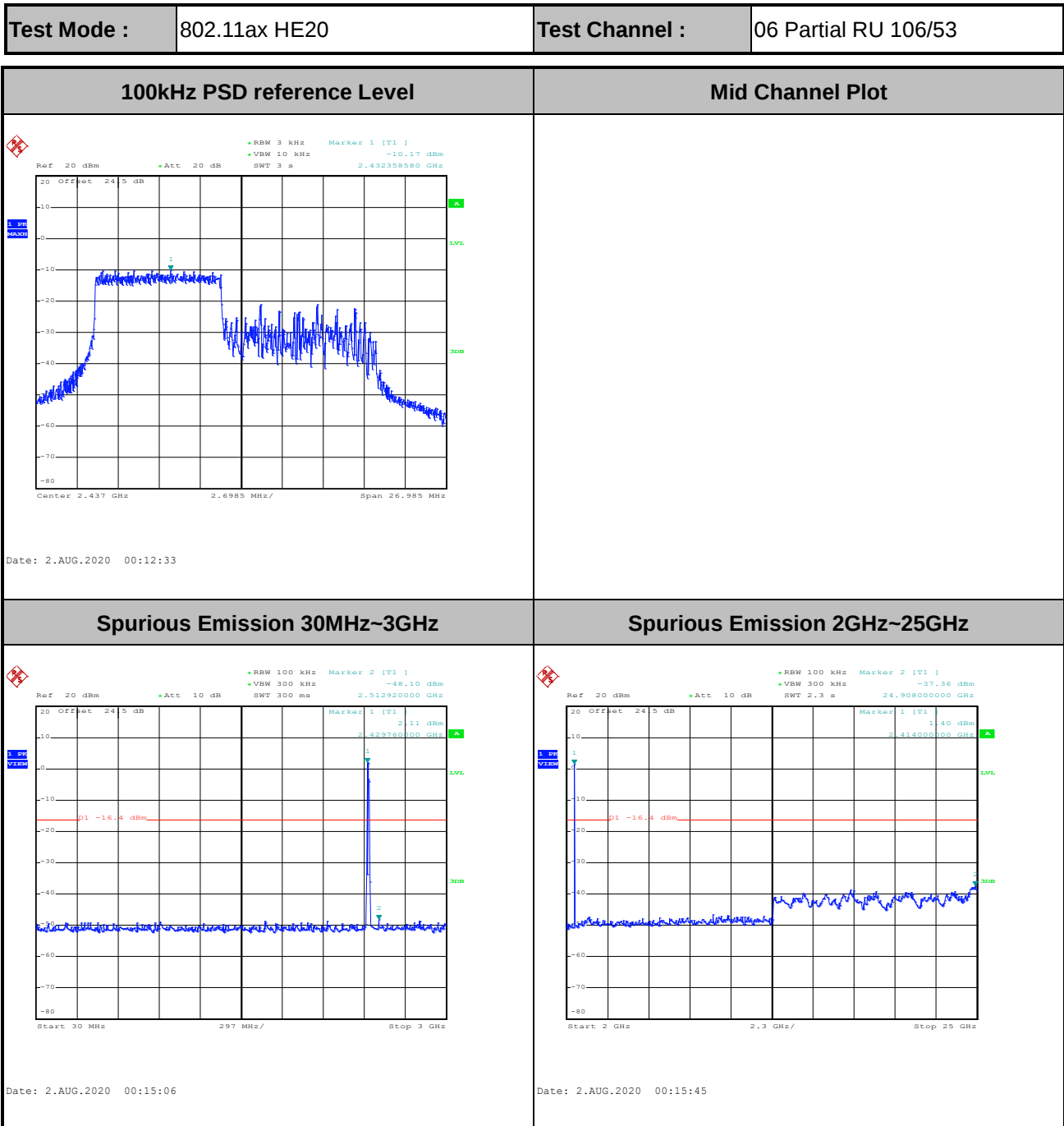
Test Mode :	802.11ax HE20	Test Channel :	06 Partial RU 26/4
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Test Mode :	802.11ax HE20	Test Channel :	06 Partial RU 52/38
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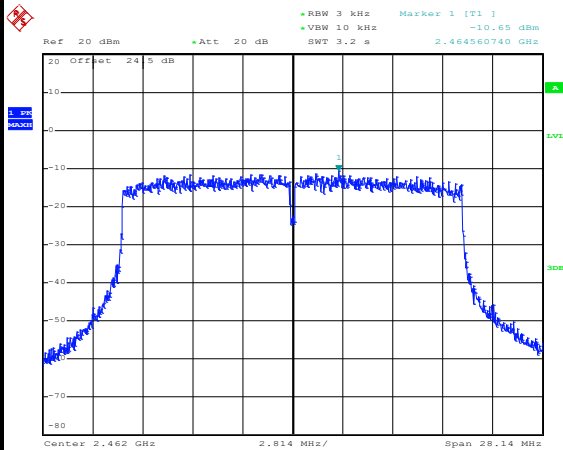






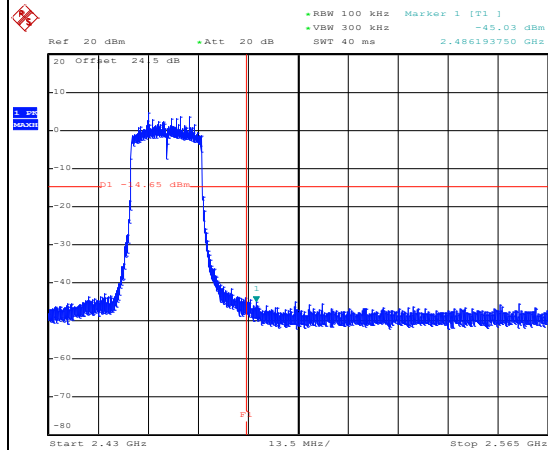
Test Mode :	802.11ax HE20	Test Channel :	11 Full RU
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100kHz PSD reference Level



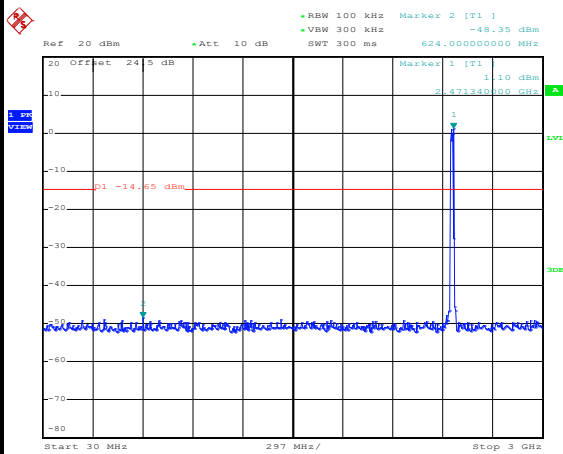
Date: 1.AUG.2020 19:06:55

High Channel Plot



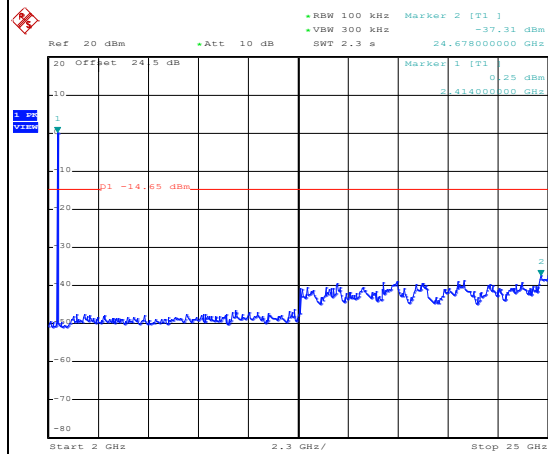
Date: 1.AUG.2020 20:17:00

Spurious Emission 30MHz~3GHz

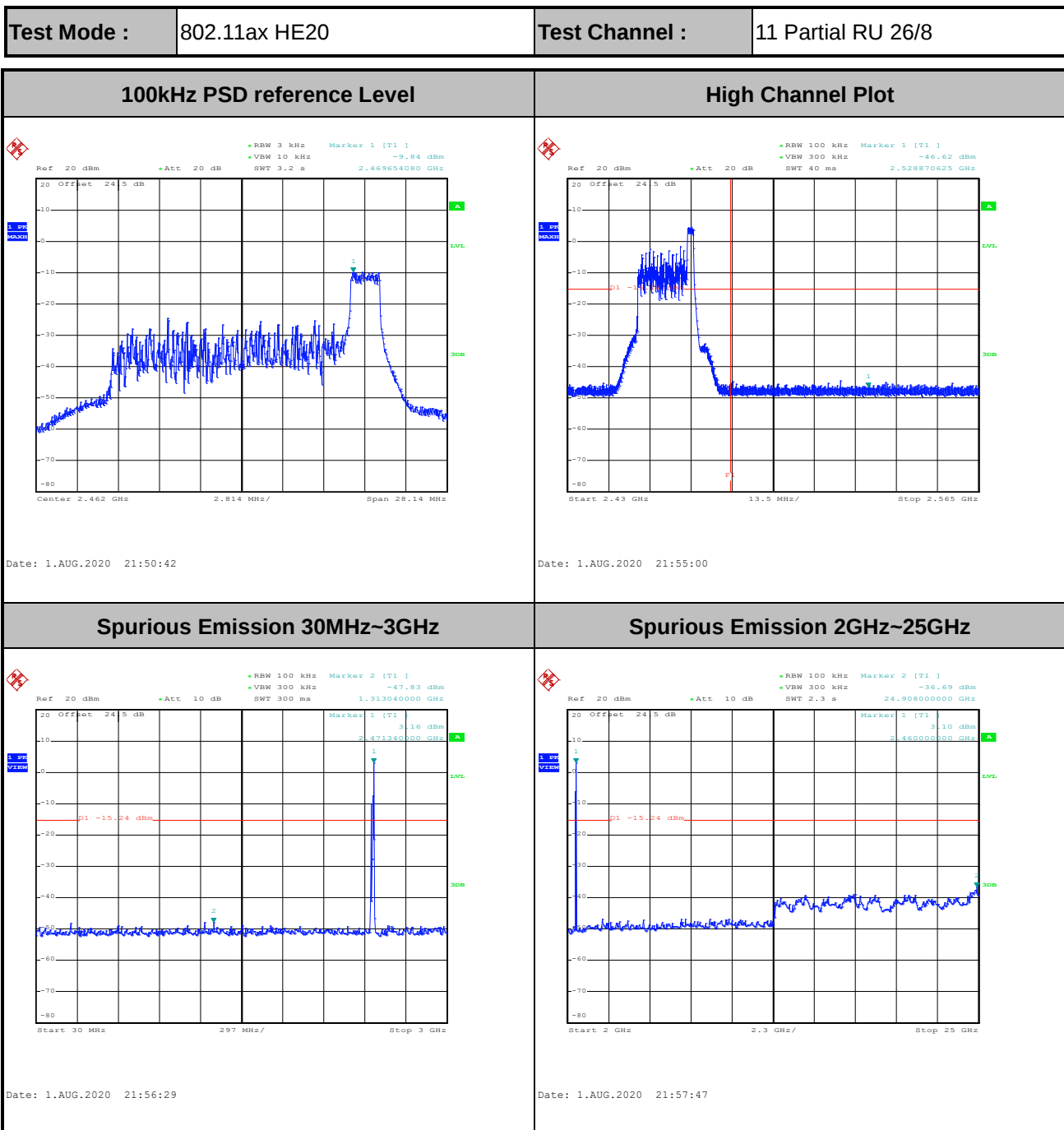


Date: 1.AUG.2020 20:17:18

Spurious Emission 2GHz~25GHz



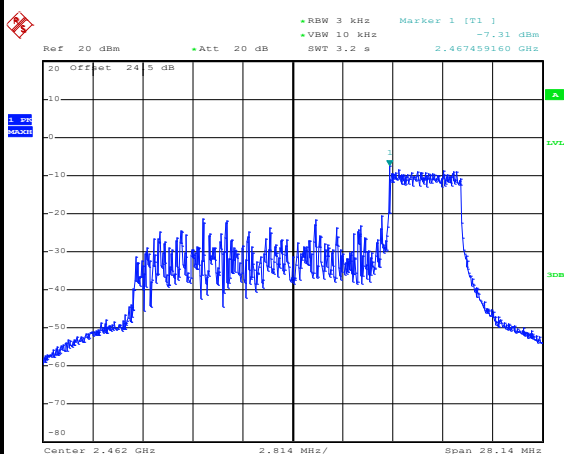
Date: 1.AUG.2020 20:17:37





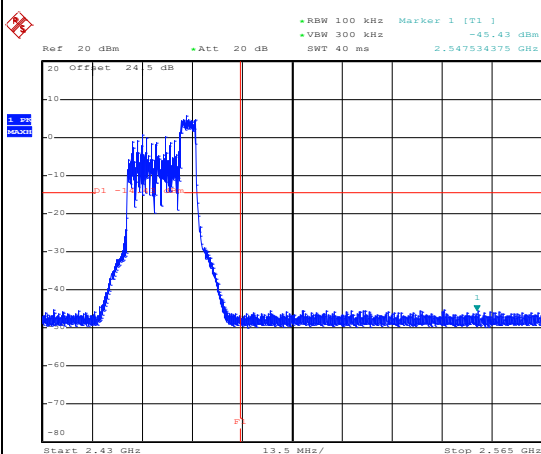
Test Mode :	802.11ax HE20	Test Channel :	11 Partial RU 52/40
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100kHz PSD reference Level



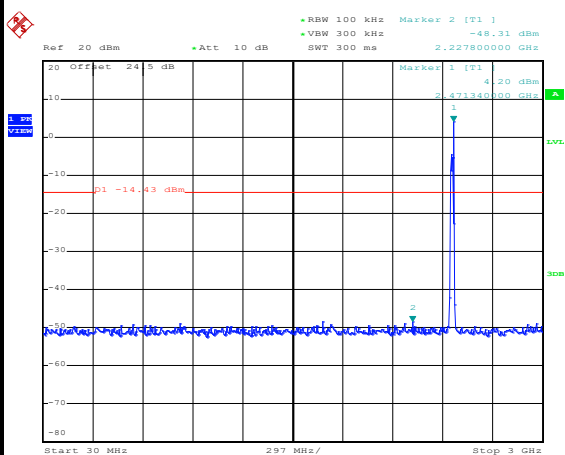
Date: 1.AUG.2020 23:23:58

High Channel Plot



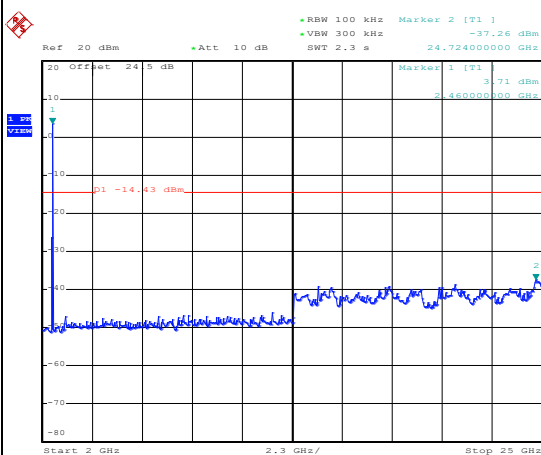
Date: 1.AUG.2020 23:27:35

Spurious Emission 30MHz~3GHz



Date: 1.AUG.2020 23:27:58

Spurious Emission 2GHz~25GHz

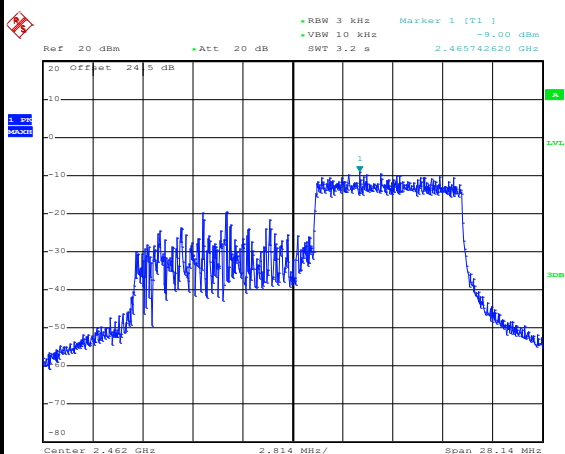


Date: 1.AUG.2020 23:28:30



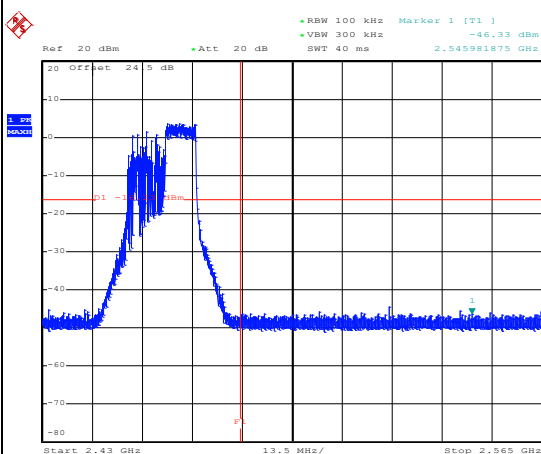
Test Mode :	802.11ax HE20	Test Channel :	11 Partial RU 106/54
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100kHz PSD reference Level



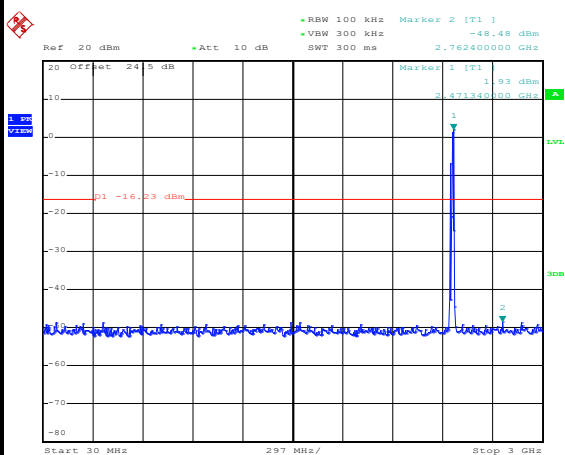
Date: 2.AUG.2020 00:27:02

High Channel Plot



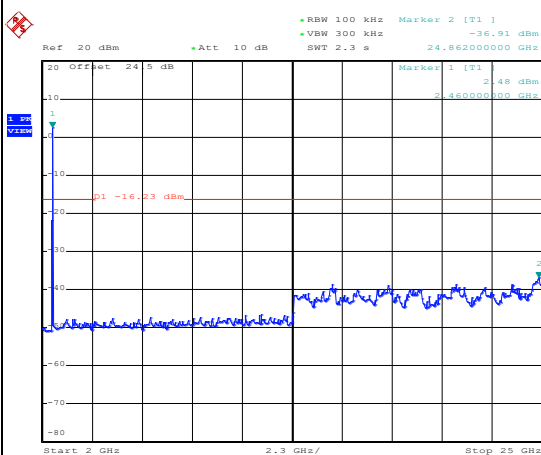
Date: 2.AUG.2020 00:28:37

Spurious Emission 30MHz~3GHz



Date: 2.AUG.2020 00:29:00

Spurious Emission 2GHz~25GHz



Date: 2.AUG.2020 00:29:25

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

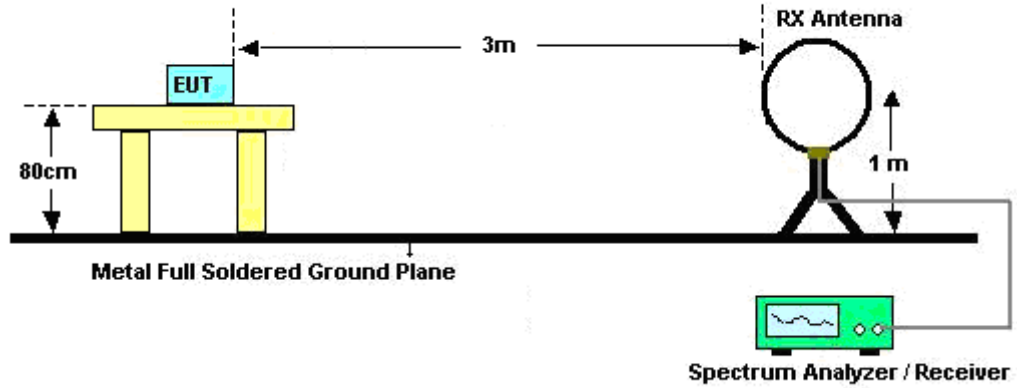
See list of measuring equipment of this test report.

3.5.3 Test Procedures

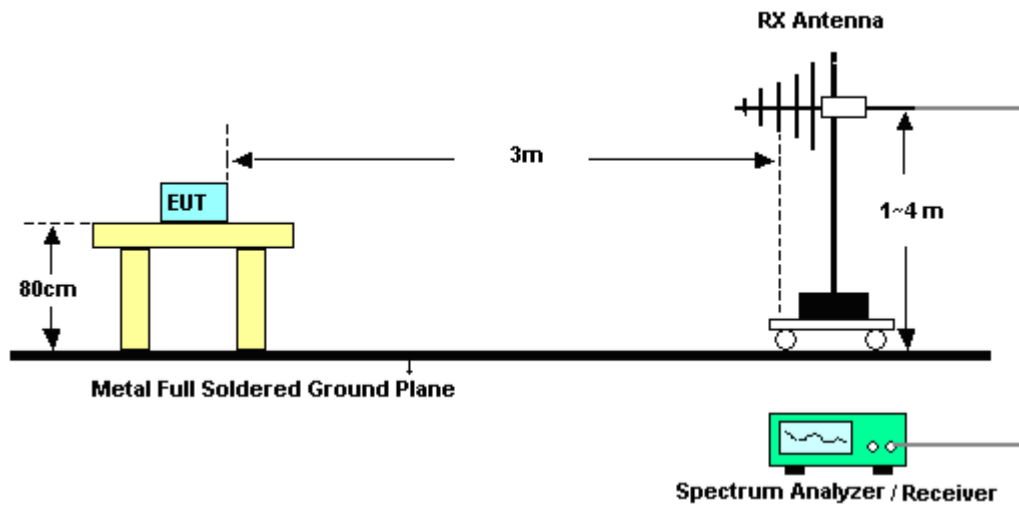
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than 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= 3MHz for $f \geq 1$ GHz for peak measurement.
For average measurement:
 - $VBW = 10$ Hz, when duty cycle is no less than 98 percent.
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

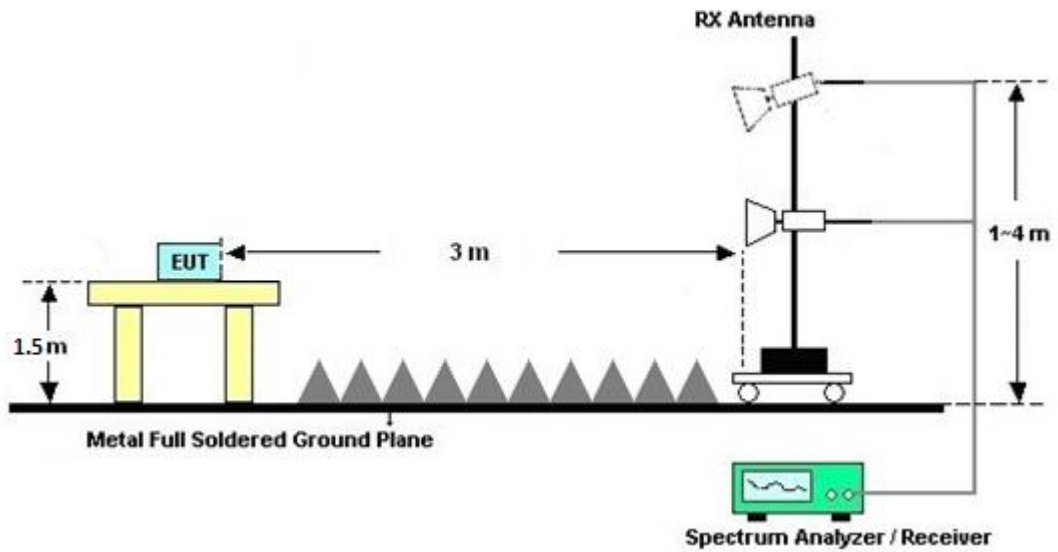
For radiated emissions below 30MHz



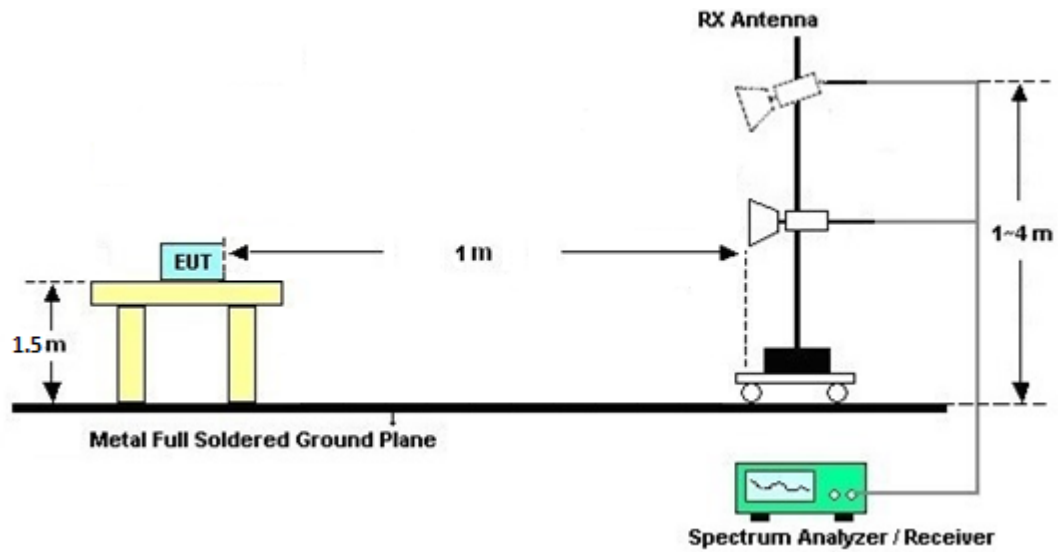
For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



For radiated emissions above 18GHz





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.

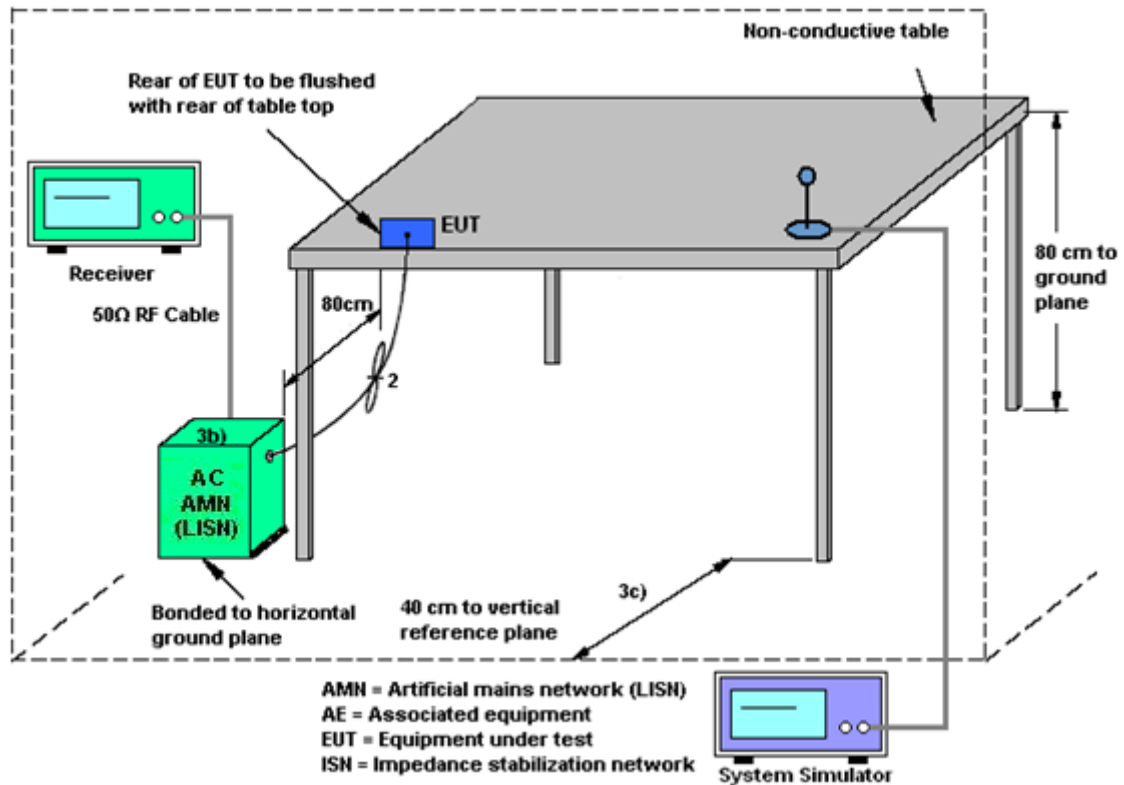
3.6.2 Measuring Instruments

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 should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF bandwidth = 9kHz) with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting Antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached Antenna or of an Antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

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

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

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

For power measurements on IEEE 802.11 devices,

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

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

The EUT supports CDD mode.

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

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

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

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

<CDD Modes>						
			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant. 0	Ant. 1	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
2.4 GHz	-1.80	-11.50	-1.80	-2.35	0.00	0.00

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

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



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Dec. 26, 2019	Jul. 31, 2020~ Aug. 08, 2020	Dec. 25, 2020	Radiation (03CH12-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	37059 & 01	30MHz~1GHz	Oct. 12, 2019	Jul. 31, 2020~ Aug. 08, 2020	Oct. 11, 2020	Radiation (03CH12-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1328	1GHz~18GHz	Nov. 14, 2019	Jul. 31, 2020~ Aug. 08, 2020	Nov. 13, 2020	Radiation (03CH12-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz~40GHz	Dec. 10, 2019	Jul. 31, 2020~ Aug. 08, 2020	Dec. 09, 2020	Radiation (03CH12-HY)
Preamplifier	COM-POWER	PA-103	161075	10MHz~1GHz	Mar. 25, 2020	Jul. 31, 2020~ Aug. 08, 2020	Mar. 24, 2021	Radiation (03CH12-HY)
Preamplifier	Agilent	8449B	3008A02375	1GHz~26.5GHz	Mar. 26, 2020	Jul. 31, 2020~ Aug. 08, 2020	Mar. 25, 2021	Radiation (03CH12-HY)
Preamplifier	Jet-Power	JPA0118-55-303K	1710001800054002	1GHz~18GHz	Feb. 07, 2020	Jul. 31, 2020~ Aug. 08, 2020	Feb. 06, 2021	Radiation (03CH12-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 13, 2019	Jul. 31, 2020~ Aug. 08, 2020	Dec. 12, 2020	Radiation (03CH12-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV30	103738	10Hz~30GHz	May 14, 2020	Jul. 31, 2020~ Aug. 08, 2020	May 13, 2021	Radiation (03CH12-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101408	10Hz~40GHz	Aug. 13, 2019	Jul. 31, 2020~ Aug. 08, 2020	Aug. 12, 2020	Radiation (03CH12-HY)
Signal Generator	Rohde & Schwarz	SMB100A	101107	100kHz~40GHz	Aug. 27, 2019	Jul. 31, 2020~ Aug. 08, 2020	Aug. 26, 2020	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 126E	0058/126E	30MHz~18GHz	Dec. 12, 2019	Jul. 31, 2020~ Aug. 08, 2020	Dec. 11, 2020	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz~40GHz	Feb. 25, 2020	Jul. 31, 2020~ Aug. 08, 2020	Feb. 24, 2021	Radiation (03CH12-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz~40GHz	Feb. 25, 2020	Jul. 31, 2020~ Aug. 08, 2020	Feb. 24, 2021	Radiation (03CH12-HY)
Hygrometer	TECPEL	DTM-303B	TP140349	N/A	Oct. 25, 2019	Jul. 31, 2020~ Aug. 08, 2020	Oct. 24, 2020	Radiation (03CH12-HY)
Filter	Wainwright	WLKS1200-12SS	SN2	1.2GHz Low Pass Filter	Mar. 21, 2020	Jul. 31, 2020~ Aug. 08, 2020	Mar. 20, 2021	Radiation (03CH12-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN2	3GHz High Pass Filter	Jul. 14, 2020	Jul. 31, 2020~ Aug. 08, 2020	Jul. 13, 2021	Radiation (03CH12-HY)
Controller	EMEC	EM1000	N/A	Control Turn table & Ant Mast	N/A	Jul. 31, 2020~ Aug. 08, 2020	N/A	Radiation (03CH12-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1m~4m	N/A	Jul. 31, 2020~ Aug. 08, 2020	N/A	Radiation (03CH12-HY)
Turn Table	EMEC	TT2000	N/A	0~360 Degree	N/A	Jul. 31, 2020~ Aug. 08, 2020	N/A	Radiation (03CH12-HY)
Software	Audix	E3 6.2009-8-24	RK-000989	N/A	N/A	Jul. 31, 2020~ Aug. 08, 2020	N/A	Radiation (03CH12-HY)



Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jul. 24, 2020	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 15, 2019	Jul. 24, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 07, 2019	Jul. 24, 2020	Nov. 06, 2020	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 15, 2019	Jul. 24, 2020	Nov. 14, 2020	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jul. 24, 2020	N/A	Conduction (CO05-HY)
LF Cable	HUBER + SUHNER	RG-214/U	LF01	N/A	Jan. 02, 2020	Jul. 24, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Jan. 02, 2020	Jul. 24, 2020	Jan. 01, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 02, 2020	Jul. 09, 2020~ Aug. 02, 2020	Mar. 01, 2021	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SN O10	10MHz~6GHz	Dec. 23, 2019	Jul. 09, 2020~ Aug. 02, 2020	Dec. 22, 2020	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz-40GHz	Dec. 30, 2019	Jul. 09, 2020~ Aug. 02, 2020	Dec. 29, 2020	Conducted (TH05-HY)
Switch Control Manframe	Burgeon	ETF-058	EC1300484	N/A	Aug. 22, 2019	Jul. 09, 2020~ Aug. 02, 2020	Aug. 21, 2020	Conducted (TH05-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% ($U = 2Uc(y)$)	4.9
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.6
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Kathy Chen / Kai Liao	Temperature:	23.5~24.2	°C
Test Date:	2020/7/9 ~ 2020/8/2	Relative Humidity:	52.8~53.7	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band MIMO										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant0	Ant1	Ant0	Ant1		
11b	1Mbps	2	1	2412	12.95	13.00	7.56	7.56	0.50	Pass
11b	1Mbps	2	6	2437	13.05	13.10	7.60	7.54	0.50	Pass
11b	1Mbps	2	11	2462	13.10	13.05	7.56	8.04	0.50	Pass
11g	6Mbps	2	1	2412	16.40	16.40	15.72	15.68	0.50	Pass
11g	6Mbps	2	6	2437	16.45	16.40	16.04	15.72	0.50	Pass
11g	6Mbps	2	11	2462	16.35	16.50	15.72	16.03	0.50	Pass
HT20	MCS0	2	1	2412	17.55	17.60	15.92	16.52	0.50	Pass
HT20	MCS0	2	6	2437	17.60	17.55	17.52	17.16	0.50	Pass
HT20	MCS0	2	11	2462	17.60	17.60	17.13	16.54	0.50	Pass

TEST RESULTS DATA
Peak Output Power

2.4GHz Band Single Antenna																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	1	1	2412	16.15	9.73		30.00	30.00	-1.80	-11.50	14.35	-1.77	36.00	36.00	Pass
11b	1Mbps	1	6	2437	16.23	9.82		30.00	30.00	-1.80	-11.50	14.43	-1.68	36.00	36.00	Pass
11b	1Mbps	1	11	2462	16.16	9.64		30.00	30.00	-1.80	-11.50	14.36	-1.86	36.00	36.00	Pass
11g	6Mbps	1	1	2412	19.09	20.23		30.00	30.00	-1.80	-11.50	17.29	8.73	36.00	36.00	Pass
11g	6Mbps	1	6	2437	21.13	23.03		30.00	30.00	-1.80	-11.50	19.33	11.53	36.00	36.00	Pass
11g	6Mbps	1		2462	21.15	22.92		30.00	30.00	-1.80	-11.50	19.35	11.42	36.00	36.00	Pass
HT20	MCS0	1	1	2412	19.21	20.15		30.00	30.00	-1.80	-11.50	17.41	8.65	36.00	36.00	Pass
HT20	MCS0	1	6	2437	20.96	22.91	30.00	30.00	-1.80	-11.50	19.16	11.41	36.00	36.00	Pass	
HT20	MCS0	1	11	2462	21.05	22.87	30.00	30.00	-1.80	-11.50	19.25	11.37	36.00	36.00	Pass	

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	2	1	2412	16.25	9.80	17.14	30.00		-1.80		15.34		36.00		Pass
11b	1Mbps	2	6	2437	16.30	9.87	17.19	30.00		-1.80		15.39		36.00		Pass
11b	1Mbps	2	11	2462	16.36	9.67	17.20	30.00		-1.80		15.40		36.00		Pass
11g	6Mbps	2	1	2412	19.14	20.57	22.92	30.00		-1.80		21.12		36.00		Pass
11g	6Mbps	2	6	2437	21.15	23.18	25.29	30.00		-1.80		23.49		36.00		Pass
11g	6Mbps	2	11	2462	21.17	23.11	25.26	30.00		-1.80		23.46		36.00		Pass
HT20	MCS0	2	1	2412	19.58	20.47	23.06	30.00		-1.80		21.26		36.00		Pass
HT20	MCS0	2	6	2437	21.00	23.16	25.22	30.00		-1.80		23.42		36.00		Pass
HT20	MCS0	2	11	2462	21.10	23.13	25.24	30.00		-1.80		23.44		36.00		Pass

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

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	1	1	2412	13.61	6.68		30.00	30.00	-1.80	-11.50	11.81	-4.82	36.00	36.00	Pass
11b	1Mbps	1	6	2437	13.68	6.77		30.00	30.00	-1.80	-11.50	11.88	-4.73	36.00	36.00	Pass
11b	1Mbps	1	11	2462	13.62	6.57		30.00	30.00	-1.80	-11.50	11.82	-4.93	36.00	36.00	Pass
11g	6Mbps	1	1	2412	11.75	12.93		30.00	30.00	-1.80	-11.50	9.95	1.43	36.00	36.00	Pass
11g	6Mbps	1	6	2437	13.86	15.89		30.00	30.00	-1.80	-11.50	12.06	4.39	36.00	36.00	Pass
11g	6Mbps	1	11	2462	13.94	15.79		30.00	30.00	-1.80	-11.50	12.14	4.29	36.00	36.00	Pass
HT20	MCS0	1	1	2412	11.63	12.67		30.00	30.00	-1.80	-11.50	9.83	1.17	36.00	36.00	Pass
HT20	MCS0	1	6	2437	13.59	15.72		30.00	30.00	-1.80	-11.50	11.79	4.22	36.00	36.00	Pass
HT20	MCS0	1	11	2462	13.72	15.60		30.00	30.00	-1.80	-11.50	11.92	4.10	36.00	36.00	Pass

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	2	1	2412	13.69	6.76	14.49	30.00		-1.80		12.69		36.00		Pass
11b	1Mbps	2	6	2437	13.78	6.83	14.58	30.00		-1.80		12.78		36.00		Pass
11b	1Mbps	2	11	2462	13.81	6.61	14.57	30.00		-1.80		12.77		36.00		Pass
11g	6Mbps	2	1	2412	11.77	12.96	15.42	30.00		-1.80		13.62		36.00		Pass
11g	6Mbps	2	6	2437	13.93	15.96	18.07	30.00		-1.80		16.27		36.00		Pass
11g	6Mbps	2	11	2462	13.96	15.85	18.02	30.00		-1.80		16.22		36.00		Pass
HT20	MCS0	2	1	2412	11.94	12.76	15.38	30.00		-1.80		13.58		36.00		Pass
HT20	MCS0	2	6	2437	13.67	15.81	17.88	30.00		-1.80		16.08		36.00		Pass
HT20	MCS0	2	11	2462	13.80	15.69	17.86	30.00		-1.80		16.06		36.00		Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band MIMO												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant0	Ant1	Worse + 3.01	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	2	1	2412	-10.38	-17.23	-7.37	-2.35		8.00		Pass
11b	1Mbps	2	6	2437	-9.66	-16.10	-6.65	-2.35		8.00		Pass
11b	1Mbps	2	11	2462	-10.89	-17.55	-7.88	-2.35		8.00		Pass
11g	6Mbps	2	1	2412	-14.56	-12.80	-9.79	-2.35		8.00		Pass
11g	6Mbps	2	6	2437	-12.17	-10.37	-7.36	-2.35		8.00		Pass
11g	6Mbps	2	11	2462	-12.19	-10.81	-7.80	-2.35		8.00		Pass
HT20	MCS0	2	1	2412	-13.92	-13.98	-10.91	-2.35		8.00		Pass
HT20	MCS0	2	6	2437	-12.36	-10.00	-6.99	-2.35		8.00		Pass
HT20	MCS0	2	11	2462	-12.08	-10.30	-7.29	-2.35		8.00		Pass

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

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band MIMO											
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
						Ant0	Ant1	Ant0	Ant1		
HE20	MCS0	2	1	2412	Full	18.90	18.90	18.04	16.92	0.50	Pass
HE20	MCS0	2	1	2412	26/0	18.50	18.40	17.04	2.04	0.50	Pass
HE20	MCS0	2	1	2412	52/37	18.40	18.20	17.08	17.00	0.50	Pass
HE20	MCS0	2	1	2412	106/53	18.40	18.10	18.12	17.08	0.50	Pass
HE20	MCS0	2	6	2437	Full	18.95	18.95	18.34	17.99	0.50	Pass
HE20	MCS0	2	11	2462	Full	18.90	18.90	18.31	18.76	0.50	Pass
HE20	MCS0	2	11	2462	26/8	18.50	18.30	2.08	2.00	0.50	Pass
HE20	MCS0	2	11	2462	52/40	18.45	18.20	17.00	14.44	0.50	Pass
HE20	MCS0	2	11	2462	106/54	18.10	18.25	17.08	17.12	0.50	Pass

TEST RESULTS DATA**Peak Output Power**

2.4GHz Band Single Antenna																	
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	1	1	2412	Full	21.00	21.18		30.00	30.00	-1.80	-11.50	19.20	9.68	36.00	36.00	Pass
HE20	MCS0	1	1	2412	26/0	21.00	19.75		30.00	30.00	-1.80	-11.50	19.20	8.25	36.00	36.00	Pass
HE20	MCS0	1	1	2412	52/37	23.40	22.60		30.00	30.00	-1.80	-11.50	21.60	11.10	36.00	36.00	Pass
HE20	MCS0	1	1	2412	106/53	24.20	23.34		30.00	30.00	-1.80	-11.50	22.40	11.84	36.00	36.00	Pass
HE20	MCS0	1	6	2437	Full	22.82	23.72		30.00	30.00	-1.80	-11.50	21.02	12.22	36.00	36.00	Pass
HE20	MCS0	1	6	2437	26/4	19.80	19.20		30.00	30.00	-1.80	-11.50	18.00	7.70	36.00	36.00	Pass
HE20	MCS0	1	6	2437	52/38	22.75	22.58		30.00	30.00	-1.80	-11.50	20.95	11.08	36.00	36.00	Pass
HE20	MCS0	1	6	2437	106/53	24.09	23.15		30.00	30.00	-1.80	-11.50	22.29	11.65	36.00	36.00	Pass
HE20	MCS0	1	11	2462	Full	22.03	23.65		30.00	30.00	-1.80	-11.50	20.23	12.15	36.00	36.00	Pass
HE20	MCS0	1	11	2462	26/8	20.22	19.50		30.00	30.00	-1.80	-11.50	18.42	8.00	36.00	36.00	Pass
HE20	MCS0	1	11	2462	52/40	22.70	22.11		30.00	30.00	-1.80	-11.50	20.90	10.61	36.00	36.00	Pass
HE20	MCS0	1	11	2462	106/54	21.90	23.41		30.00	30.00	-1.80	-11.50	20.10	11.91	36.00	36.00	Pass

2.4GHz Band MIMO																	
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	Peak Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	2	1	2412	Full	21.08	21.39	24.25	30.00		-1.80		22.45		36.00		Pass
HE20	MCS0	2	1	2412	26/0	21.08	19.77	23.48	30.00		-1.80		21.68		36.00		Pass
HE20	MCS0	2	1	2412	52/37	23.60	22.63	26.15	30.00		-1.80		24.35		36.00		Pass
HE20	MCS0	2	1	2412	106/53	24.28	23.41	26.88	30.00		-1.80		25.08		36.00		Pass
HE20	MCS0	2	6	2437	Full	22.86	23.81	26.37	30.00		-1.80		24.57		36.00		Pass
HE20	MCS0	2	6	2437	26/4	19.87	19.23	22.57	30.00		-1.80		20.77		36.00		Pass
HE20	MCS0	2	6	2437	52/38	22.81	22.60	25.72	30.00		-1.80		23.92		36.00		Pass
HE20	MCS0	2	6	2437	106/53	24.11	23.19	26.68	30.00		-1.80		24.88		36.00		Pass
HE20	MCS0	2	11	2462	Full	22.07	23.78	26.02	30.00		-1.80		24.22		36.00		Pass
HE20	MCS0	2	11	2462	26/8	20.46	19.53	23.03	30.00		-1.80		21.23		36.00		Pass
HE20	MCS0	2	11	2462	52/40	22.76	22.13	25.47	30.00		-1.80		23.67		36.00		Pass
HE20	MCS0	2	11	2462	106/54	21.92	23.44	25.76	30.00		-1.80		23.96		36.00		Pass

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

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																	
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	Average Conducted Power with duty factor (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	1	1	2412	Full	12.60	12.77		30.00	30.00	-1.80	-11.50	10.80	1.27	36.00	36.00	Pass
HE20	MCS0	1	1	2412	26/0	9.26	9.06		30.00	30.00	-1.80	-11.50	7.46	-2.44	36.00	36.00	Pass
HE20	MCS0	1	1	2412	52/37	12.27	12.22		30.00	30.00	-1.80	-11.50	10.47	0.72	36.00	36.00	Pass
HE20	MCS0	1	1	2412	106/53	14.06	13.90		30.00	30.00	-1.80	-11.50	12.26	2.40	36.00	36.00	Pass
HE20	MCS0	1	6	2437	Full	14.72	15.81		30.00	30.00	-1.80	-11.50	12.92	4.31	36.00	36.00	Pass
HE20	MCS0	1	6	2437	26/4	9.15	9.30		30.00	30.00	-1.80	-11.50	7.35	-2.20	36.00	36.00	Pass
HE20	MCS0	1	6	2437	52/38	12.34	12.23		30.00	30.00	-1.80	-11.50	10.54	0.73	36.00	36.00	Pass
HE20	MCS0	1	6	2437	106/53	14.10	13.70		30.00	30.00	-1.80	-11.50	12.30	2.20	36.00	36.00	Pass
HE20	MCS0	1	11	2462	Full	13.93	15.67		30.00	30.00	-1.80	-11.50	12.13	4.17	36.00	36.00	Pass
HE20	MCS0	1	11	2462	26/8	9.25	9.27		30.00	30.00	-1.80	-11.50	7.45	-2.23	36.00	36.00	Pass
HE20	MCS0	1	11	2462	52/40	12.26	12.36		30.00	30.00	-1.80	-11.50	10.46	0.86	36.00	36.00	Pass
HE20	MCS0	1	11	2462	106/54	14.30	13.57		30.00	30.00	-1.80	-11.50	12.50	2.07	36.00	36.00	Pass

2.4GHz Band MIMO																	
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	Average Conducted Power with duty factor (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
						Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	2	1	2412	Full	12.66	12.93	15.81	30.00		-1.80		14.01		36.00		Pass
HE20	MCS0	2	1	2412	26/0	9.30	9.26	12.29	30.00		-1.80		10.49		36.00		Pass
HE20	MCS0	2	1	2412	52/37	12.28	12.23	15.27	30.00		-1.80		13.47		36.00		Pass
HE20	MCS0	2	1	2412	106/53	14.15	13.91	17.04	30.00		-1.80		15.24		36.00		Pass
HE20	MCS0	2	6	2437	Full	14.82	15.94	18.43	30.00		-1.80		16.63		36.00		Pass
HE20	MCS0	2	6	2437	26/4	9.21	9.46	12.35	30.00		-1.80		10.55		36.00		Pass
HE20	MCS0	2	6	2437	52/38	12.36	12.49	15.44	30.00		-1.80		13.64		36.00		Pass
HE20	MCS0	2	6	2437	106/53	14.27	13.85	17.08	30.00		-1.80		15.28		36.00		Pass
HE20	MCS0	2	11	2462	Full	13.95	15.80	17.98	30.00		-1.80		16.18		36.00		Pass
HE20	MCS0	2	11	2462	26/8	9.47	9.32	12.41	30.00		-1.80		10.61		36.00		Pass
HE20	MCS0	2	11	2462	52/40	12.30	12.39	15.36	30.00		-1.80		13.56		36.00		Pass
HE20	MCS0	2	11	2462	106/54	14.31	13.84	17.09	30.00		-1.80		15.29		36.00		Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band MIMO													
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
						Ant0	Ant1	Worse + 3.01	Ant0	Ant1	Ant0	Ant1	
HE20	MCS0	2	1	2412	Full	-13.81	-13.46	-10.45	-2.35		8.00		Pass
HE20	MCS0	2	1	2412	26/0	-9.85	-9.33	-6.32	-2.35		8.00		Pass
HE20	MCS0	2	1	2412	52/37	-7.55	-9.14	-4.54	-2.35		8.00		Pass
HE20	MCS0	2	1	2412	106/53	-9.48	-9.52	-6.47	-2.35		8.00		Pass
HE20	MCS0	2	6	2437	Full	-12.42	-11.12	-8.11	-2.35		8.00		Pass
HE20	MCS0	2	6	2437	26/4	-9.58	-9.19	-6.18	-2.35		8.00		Pass
HE20	MCS0	2	6	2437	52/38	-8.12	-7.70	-4.69	-2.35		8.00		Pass
HE20	MCS0	2	6	2437	106/53	-9.33	-10.17	-6.32	-2.35		8.00		Pass
HE20	MCS0	2	11	2462	Full	-12.01	-10.65	-7.64	-2.35		8.00		Pass
HE20	MCS0	2	11	2462	26/8	-8.88	-9.84	-5.87	-2.35		8.00		Pass
HE20	MCS0	2	11	2462	52/40	-7.79	-7.31	-4.30	-2.35		8.00		Pass
HE20	MCS0	2	11	2462	106/54	-9.26	-9.00	-5.99	-2.35		8.00		Pass

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



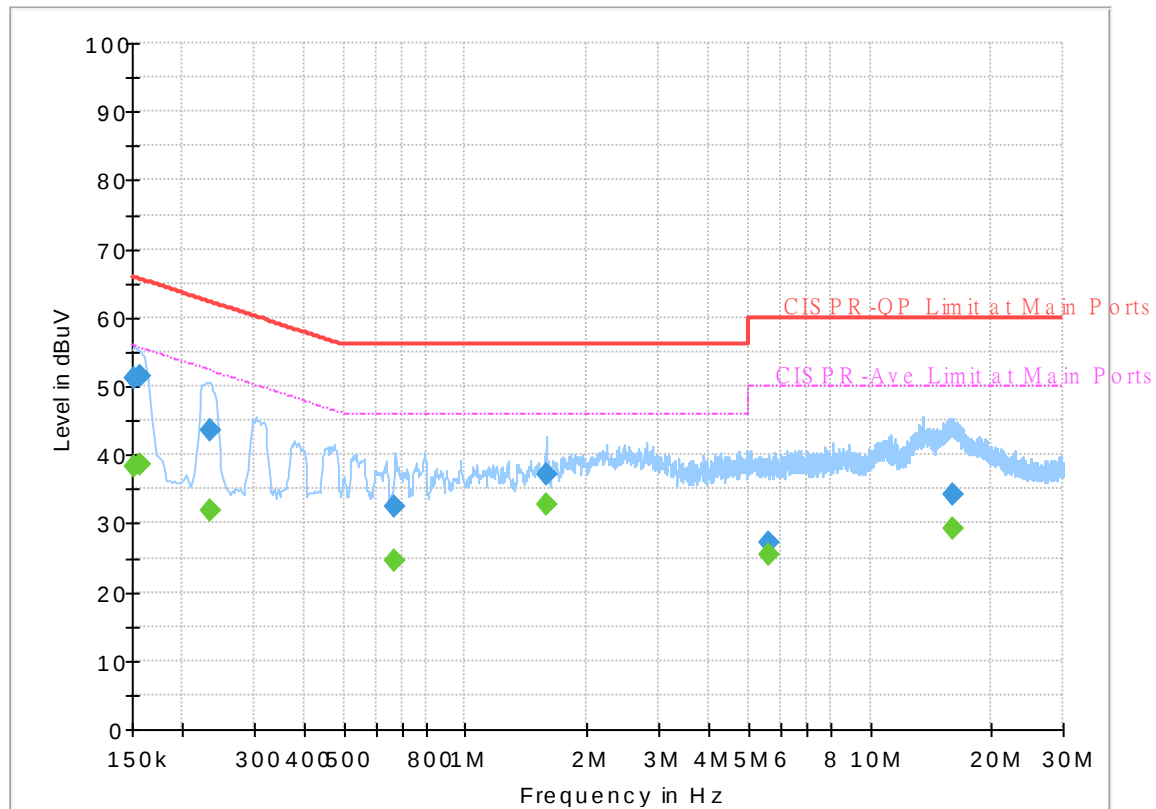
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Howard Huang	Temperature :	21~25℃
		Relative Humidity :	40~43%

EUT Information

Report NO : 042242-02
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



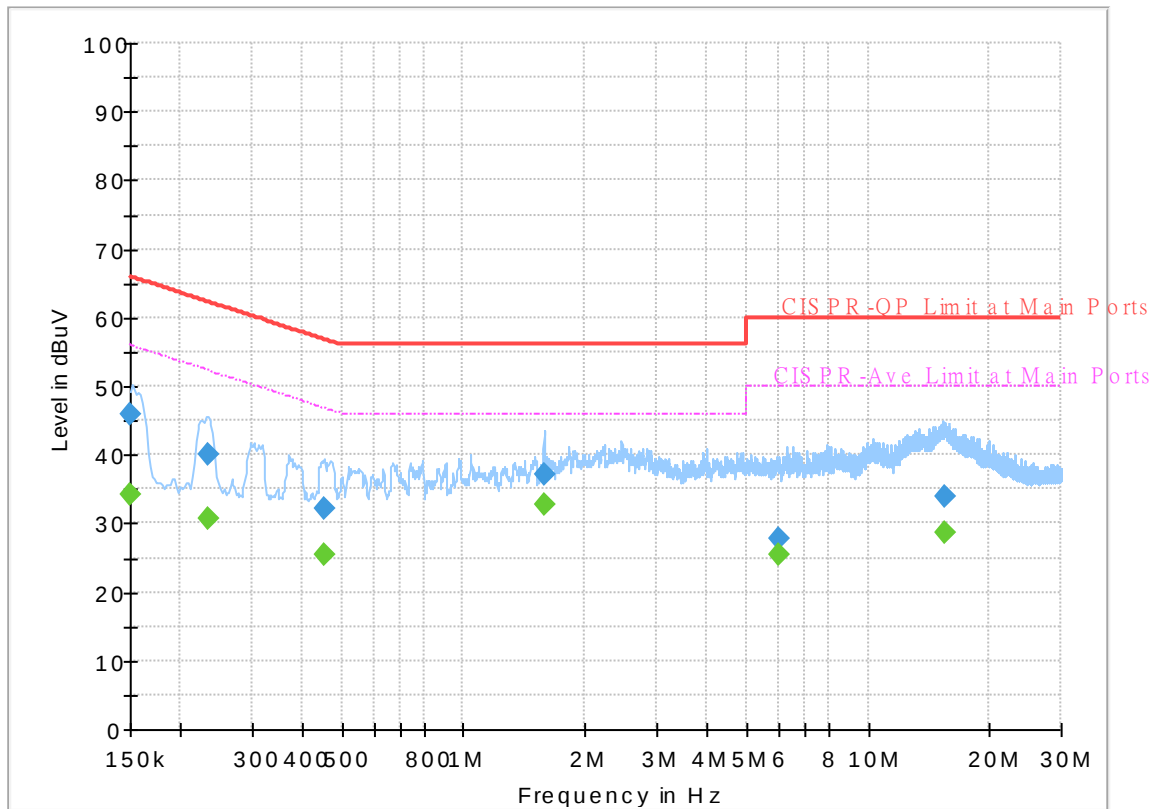
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	38.16	55.88	17.72	L1	OFF	19.6
0.152250	51.23	---	65.88	14.65	L1	OFF	19.6
0.156750	---	38.62	55.63	17.01	L1	OFF	19.6
0.156750	51.54	---	65.63	14.09	L1	OFF	19.6
0.233610	---	31.73	52.32	20.59	L1	OFF	19.6
0.233610	43.60	---	62.32	18.72	L1	OFF	19.6
0.668400	---	24.69	46.00	21.31	L1	OFF	19.6
0.668400	32.34	---	56.00	23.66	L1	OFF	19.6
1.580370	---	32.63	46.00	13.37	L1	OFF	19.6
1.580370	37.14	---	56.00	18.86	L1	OFF	19.6
5.611200	---	25.42	50.00	24.58	L1	OFF	19.8
5.611200	27.17	---	60.00	32.83	L1	OFF	19.8
16.089000	---	29.11	50.00	20.89	L1	OFF	20.3
16.089000	34.17	---	60.00	25.83	L1	OFF	20.3

EUT Information

Report NO : 042242-02
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)
0.150000	---	34.24	56.00	21.76	N	OFF	19.6
0.150000	45.85	---	66.00	20.15	N	OFF	19.6
0.232980	---	30.82	52.34	21.52	N	OFF	19.5
0.232980	40.01	---	62.34	22.33	N	OFF	19.5
0.451140	---	25.36	46.85	21.49	N	OFF	19.5
0.451140	32.25	---	56.85	24.60	N	OFF	19.5
1.580460	---	32.74	46.00	13.26	N	OFF	19.6
1.580460	37.12	---	56.00	18.88	N	OFF	19.6
6.021600	---	25.35	50.00	24.65	N	OFF	19.7
6.021600	27.64	---	60.00	32.36	N	OFF	19.7
15.481410	---	28.57	50.00	21.43	N	OFF	19.9
15.481410	34.04	---	60.00	25.96	N	OFF	19.9



Appendix C. Radiated Spurious Emission

Test Engineer :	Jack Cheng, Lance Chiang, and Chuan Chu	Temperature :	23.8~26.2°C
		Relative Humidity :	56.5~68.6%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2382.765	53.11	-20.89	74	43.89	27.53	15.84	34.15	254	2	P	H
		2311.05	39.19	-14.81	54	29.91	27.76	15.72	34.2	254	2	A	H
	*	2412	101.18	-	-	91.94	27.48	15.89	34.13	254	2	P	H
	*	2412	97.58	-	-	88.34	27.48	15.89	34.13	254	2	A	H
													H
													H
		2328.48	53.1	-20.9	74	43.85	27.69	15.75	34.19	223	72	P	V
		2311.155	39.1	-14.9	54	29.82	27.76	15.72	34.2	223	72	A	V
	*	2412	99.58	-	-	90.34	27.48	15.89	34.13	223	72	P	V
	*	2412	96	-	-	86.76	27.48	15.89	34.13	223	72	A	V
													V
													V
802.11b CH 06 2437MHz		2344.86	53.36	-20.64	74	44.14	27.62	15.78	34.18	293	4	P	H
		2312.38	39.03	-14.97	54	29.75	27.75	15.73	34.2	293	4	A	H
	*	2437	99.48	-	-	90.25	27.43	15.92	34.12	293	4	P	H
	*	2437	95.94	-	-	86.71	27.43	15.92	34.12	293	4	A	H
		2489.64	53.71	-20.29	74	44.49	27.32	15.99	34.09	293	4	P	H
		2485.44	39.15	-14.85	54	29.92	27.33	15.99	34.09	293	4	A	H
		2331.56	52.76	-21.24	74	43.51	27.67	15.76	34.18	246	90	P	V
		2310.28	38.98	-15.02	54	29.7	27.76	15.72	34.2	246	90	A	V
	*	2437	98.66	-	-	89.43	27.43	15.92	34.12	246	90	P	V
	*	2437	95.17	-	-	85.94	27.43	15.92	34.12	246	90	A	V
		2491.46	53.47	-20.53	74	44.25	27.32	15.99	34.09	246	90	P	V
		2488.87	39.14	-14.86	54	29.92	27.32	15.99	34.09	246	90	A	V



802.11b CH 11 2462MHz	*	2462	99.36	-	-	90.13	27.38	15.95	34.1	280	3	P	H
	*	2462	95.84	-	-	86.61	27.38	15.95	34.1	280	3	A	H
		2490.6	53.92	-20.08	74	44.7	27.32	15.99	34.09	280	3	P	H
		2484.72	39.2	-14.8	54	29.98	27.33	15.98	34.09	280	3	A	H
													H
													H
	*	2462	98.41	-	-	89.18	27.38	15.95	34.1	272	89	P	V
	*	2462	94.91	-	-	85.68	27.38	15.95	34.1	272	89	A	V
		2494.76	53.86	-20.14	74	44.63	27.31	16	34.08	272	89	P	V
		2484.12	39.15	-14.85	54	29.93	27.33	15.98	34.09	272	89	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	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	41.32	-32.68	74	60.8	31.1	9.86	60.44	100	0	P	H
													H
													H
													H
		4824	40.96	-33.04	74	60.44	31.1	9.86	60.44	100	0	P	V
													V
													V
													V
802.11b CH 06 2437MHz		4874	41.25	-32.75	74	60.62	31.1	9.93	60.4	100	0	P	H
		7311	45.08	-28.92	74	55.26	36.34	12.59	59.11	100	0	P	H
													H
													H
		4874	41.32	-32.68	74	60.69	31.1	9.93	60.4	100	0	P	V
		7311	44.86	-29.14	74	55.04	36.34	12.59	59.11	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	41.17	-32.83	74	60.4	31.15	9.98	60.36	100	0	P	H
		7386	44.2	-29.8	74	54.12	36.43	12.72	59.07	100	0	P	H
													H
													H
		4924	39.96	-34.04	74	59.19	31.15	9.98	60.36	100	0	P	V
		7386	44.8	-29.2	74	54.72	36.43	12.72	59.07	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. 0+1	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		2366.49	52.56	-21.44	74	43.34	27.57	15.81	34.16	227	351	P	H
		2315.775	38.47	-15.53	54	29.19	27.74	15.73	34.19	227	351	A	H
	*	2412	101.56	-	-	92.32	27.48	15.89	34.13	227	351	P	H
	*	2412	92.61	-	-	83.37	27.48	15.89	34.13	227	351	A	H
													H
													H
		2366.175	53.02	-20.98	74	43.8	27.57	15.81	34.16	324	79	P	V
		2316.825	38.57	-15.43	54	29.3	27.73	15.73	34.19	324	79	A	V
	*	2412	102.53	-	-	93.29	27.48	15.89	34.13	324	79	P	V
	*	2412	93.32	-	-	84.08	27.48	15.89	34.13	324	79	A	V
													V
													V
802.11g CH 06 2437MHz		2310.28	52.79	-21.21	74	43.51	27.76	15.72	34.2	254	350	P	H
		2328.9	38.68	-15.32	54	29.44	27.68	15.75	34.19	254	350	A	H
	*	2437	106.41	-	-	97.18	27.43	15.92	34.12	254	350	P	H
	*	2437	97.09	-	-	87.86	27.43	15.92	34.12	254	350	A	H
		2494.19	55.57	-18.43	74	46.34	27.31	16	34.08	254	350	P	H
		2485.72	38.62	-15.38	54	29.39	27.33	15.99	34.09	254	350	A	H
		2345.42	52.67	-21.33	74	43.45	27.62	15.78	34.18	316	78	P	V
		2312.94	38.49	-15.51	54	29.21	27.75	15.73	34.2	316	78	A	V
	*	2437	106.29	-	-	97.06	27.43	15.92	34.12	316	78	P	V
	*	2437	95.95	-	-	86.72	27.43	15.92	34.12	316	78	A	V
		2499.16	53.11	-20.89	74	43.89	27.3	16	34.08	316	78	P	V
		2485.16	38.43	-15.57	54	29.21	27.33	15.98	34.09	316	78	A	V



802.11g CH 11 2462MHz	*	2462	105.01	-	-	95.78	27.38	15.95	34.1	197	346	P	H
	*	2462	95.78	-	-	86.55	27.38	15.95	34.1	197	346	A	H
		2483.76	53.1	-20.9	74	43.88	27.33	15.98	34.09	197	346	P	H
		2483.52	40.53	-13.47	54	31.31	27.33	15.98	34.09	197	346	A	H
													H
													H
	*	2462	103.84	-	-	94.61	27.38	15.95	34.1	302	248	P	V
	*	2462	94.34	-	-	85.11	27.38	15.95	34.1	302	248	A	V
		2483.68	52.78	-21.22	74	43.56	27.33	15.98	34.09	302	248	P	V
		2483.56	39.61	-14.39	54	30.39	27.33	15.98	34.09	302	248	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	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	40.69	-33.31	74	60.17	31.1	9.86	60.44	100	0	P	H
													H
													H
													H
		4824	41.03	-32.97	74	60.51	31.1	9.86	60.44	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	41.77	-32.23	74	61.14	31.1	9.93	60.4	100	0	P	H
		7311	44.85	-29.15	74	55.03	36.34	12.59	59.11	100	0	P	H
													H
													H
		4874	40.67	-33.33	74	60.04	31.1	9.93	60.4	100	0	P	V
		7311	45.25	-28.75	74	55.43	36.34	12.59	59.11	100	0	P	V
													V
													V
802.11g CH 11 2462MHz		4924	39.96	-34.04	74	59.19	31.15	9.98	60.36	100	0	P	H
		7386	44.43	-29.57	74	54.35	36.43	12.72	59.07	100	0	P	H
													H
													H
		4924	40.46	-33.54	74	59.69	31.15	9.98	60.36	100	0	P	V
		7386	44.68	-29.32	74	54.6	36.43	12.72	59.07	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 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 0+1	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)
802.11n HT20 CH 01 2412MHz		2378.145	53.18	-20.82	74	43.97	27.54	15.83	34.16	206	352	P	H
		2313.15	38.64	-15.36	54	29.36	27.75	15.73	34.2	206	352	A	H
	*	2412	101.74	-	-	92.5	27.48	15.89	34.13	206	352	P	H
	*	2412	91.42	-	-	82.18	27.48	15.89	34.13	206	352	A	H
													H
													H
		2343.075	52.49	-21.51	74	43.26	27.63	15.78	34.18	322	81	P	V
		2311.995	38.56	-15.44	54	29.29	27.75	15.72	34.2	322	81	A	V
	*	2412	101.6	-	-	92.36	27.48	15.89	34.13	322	81	P	V
	*	2412	92.15	-	-	82.91	27.48	15.89	34.13	322	81	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2389.1	54.47	-19.53	74	45.25	27.52	15.85	34.15	261	16	P	H
		2323.3	38.46	-15.54	54	29.2	27.71	15.74	34.19	261	16	A	H
	*	2437	105.31	-	-	96.08	27.43	15.92	34.12	261	16	P	H
	*	2437	95.25	-	-	86.02	27.43	15.92	34.12	261	16	A	H
		2497.9	52.53	-21.47	74	43.31	27.3	16	34.08	261	16	P	H
		2485.58	38.45	-15.55	54	29.22	27.33	15.99	34.09	261	16	A	H
		2366.7	53.37	-20.63	74	44.14	27.57	15.82	34.16	316	79	P	V
		2319.38	38.41	-15.59	54	29.14	27.72	15.74	34.19	316	79	A	V
	*	2437	104.99	-	-	95.76	27.43	15.92	34.12	316	79	P	V
	*	2437	94.35	-	-	85.12	27.43	15.92	34.12	316	79	A	V
		2484.6	53.43	-20.57	74	44.21	27.33	15.98	34.09	316	79	P	V
		2488.38	38.37	-15.63	54	29.15	27.32	15.99	34.09	316	79	A	V



802.11n HT20 CH 11 2462MHz	*	2462	105.02	-	-	95.79	27.38	15.95	34.1	284	349	P	H
	*	2462	94.83	-	-	85.6	27.38	15.95	34.1	284	349	A	H
		2484	57.77	-16.23	74	48.55	27.33	15.98	34.09	284	349	P	H
		2483.52	41.2	-12.8	54	31.98	27.33	15.98	34.09	284	349	A	H
													H
													H
	*	2462	102.76	-	-	93.53	27.38	15.95	34.1	310	78	P	V
	*	2462	92.78	-	-	83.55	27.38	15.95	34.1	310	78	A	V
		2483.68	53.47	-20.53	74	44.25	27.33	15.98	34.09	310	78	P	V
		2483.52	40.12	-13.88	54	30.9	27.33	15.98	34.09	310	78	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 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 0+1	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)
802.11n HT20 CH 01 2412MHz		4824	41.62	-32.38	74	61.1	31.1	9.86	60.44	100	0	P	H
													H
													H
													H
		4824	41.22	-32.78	74	60.7	31.1	9.86	60.44	100	0	P	V
													V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	41.16	-32.84	74	60.53	31.1	9.93	60.4	100	0	P	H
		7311	44.7	-29.3	74	54.88	36.34	12.59	59.11	100	0	P	H
													H
													H
		4874	40.76	-33.24	74	60.13	31.1	9.93	60.4	100	0	P	V
		7311	45.32	-28.68	74	55.5	36.34	12.59	59.11	100	0	P	V
													V
													V
802.11n HT20 CH 11 2462MHz		4924	40.64	-33.36	74	59.87	31.15	9.98	60.36	100	0	P	H
		7386	44.88	-29.12	74	54.8	36.43	12.72	59.07	100	0	P	H
													H
													H
		4924	41.73	-32.27	74	60.96	31.15	9.98	60.36	100	0	P	V
		7386	45.03	-28.97	74	54.95	36.43	12.72	59.07	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. 0+1	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		2353.47	52.64	-21.36	74	43.43	27.59	15.79	34.17	305	17	P	H
		2390	38.83	-15.17	54	29.61	27.52	15.85	34.15	305	17	A	H
	*	2412	103.66	-	-	94.42	27.48	15.89	34.13	305	17	P	H
	*	2412	92.35	-	-	83.11	27.48	15.89	34.13	305	17	A	H
													H
													H
		2323.125	53.4	-20.6	74	44.14	27.71	15.74	34.19	320	8	P	V
		2390	38.81	-15.19	54	29.59	27.52	15.85	34.15	320	8	A	V
	*	2412	103.54	-	-	94.3	27.48	15.89	34.13	320	8	P	V
	*	2412	91.43	-	-	82.19	27.48	15.89	34.13	320	8	A	V
													V
													V
802.11ax HE20 Full CH 06 2437MHz		2362.5	53.65	-20.35	74	44.43	27.58	15.81	34.17	332	16	P	H
		2310.28	38.77	-15.23	54	29.49	27.76	15.72	34.2	332	16	A	H
	*	2437	107.33	-	-	98.1	27.43	15.92	34.12	332	16	P	H
	*	2437	94.45	-	-	85.22	27.43	15.92	34.12	332	16	A	H
		2495.1	53.21	-20.79	74	43.98	27.31	16	34.08	332	16	P	H
		2483.76	38.77	-15.23	54	29.55	27.33	15.98	34.09	332	16	A	H
		2351.3	52.68	-21.32	74	43.46	27.6	15.79	34.17	320	80	P	V
		2311.54	38.77	-15.23	54	29.5	27.75	15.72	34.2	320	80	A	V
	*	2437	105.04	-	-	95.81	27.43	15.92	34.12	320	80	P	V
	*	2437	93.88	-	-	84.65	27.43	15.92	34.12	320	80	A	V
		2490.13	52.77	-21.23	74	43.55	27.32	15.99	34.09	320	80	P	V
		2485.02	38.74	-15.26	54	29.52	27.33	15.98	34.09	320	80	A	V



WIFI Ant. 0+1	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	106.67	-	-	97.44	27.38	15.95	34.1	325	15	P	H
	*	2462	94.78	-	-	85.55	27.38	15.95	34.1	325	15	A	H
		2483.56	55.62	-18.38	74	46.4	27.33	15.98	34.09	325	15	P	H
		2483.52	42.33	-11.67	54	33.11	27.33	15.98	34.09	325	15	A	H
													H
													H
	*	2462	102.69	-	-	93.46	27.38	15.95	34.1	310	97	P	V
	*	2462	92.23	-	-	83	27.38	15.95	34.1	310	97	A	V
		2484.56	54.78	-19.22	74	45.56	27.33	15.98	34.09	310	97	P	V
		2483.52	40.91	-13.09	54	31.69	27.33	15.98	34.09	310	97	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. 0+1	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	41.08	-32.92	74	60.56	31.1	9.86	60.44	100	0	P	H
													H
													H
													H
		4824	41.09	-32.91	74	60.57	31.1	9.86	60.44	100	0	P	V
													V
													V
													V
802.11ax HE20 Full CH 06 2437MHz		4874	41.22	-32.78	74	60.59	31.1	9.93	60.4	100	0	P	H
		7311	44.76	-29.24	74	54.94	36.34	12.59	59.11	100	0	P	H
													H
													H
		4874	41.09	-32.91	74	60.46	31.1	9.93	60.4	100	0	P	V
		7311	45.05	-28.95	74	55.23	36.34	12.59	59.11	100	0	P	V
													V
													V
802.11ax HE20 Full CH 11 2462MHz		4924	40.54	-33.46	74	59.77	31.15	9.98	60.36	100	0	P	H
		7386	45.13	-28.87	74	55.05	36.43	12.72	59.07	100	0	P	H
													H
													H
		4924	40.77	-33.23	74	60	31.15	9.98	60.36	100	0	P	V
		7386	44.35	-29.65	74	54.27	36.43	12.72	59.07	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. 0+1	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		2334.99	53.53	-20.47	74	44.29	27.66	15.76	34.18	317	13	P	H
		2310.525	41.22	-12.78	54	31.94	27.76	15.72	34.2	317	13	A	H
	*	2412	108.65	-	-	99.41	27.48	15.89	34.13	317	13	P	H
	*	2412	99.99	-	-	90.75	27.48	15.89	34.13	317	13	A	H
													H
													H
		2384.235	53.14	-20.86	74	43.92	27.53	15.84	34.15	313	246	P	V
		2319.345	41.24	-12.76	54	31.97	27.72	15.74	34.19	313	246	A	V
	*	2412	107.8	-	-	98.56	27.48	15.89	34.13	313	246	P	V
	*	2412	99.03	-	-	89.79	27.48	15.89	34.13	313	246	A	V
													V
													V



802.11ax HE20 Partial 26/8 CH 11 2462MHz	*	2462	109.89	-	-	100.66	27.38	15.95	34.1	299	12	P	H
	*	2462	99.68	-	-	90.45	27.38	15.95	34.1	299	12	A	H
		2489.12	52.78	-21.22	74	43.56	27.32	15.99	34.09	299	12	P	H
		2499.16	41.14	-12.86	54	31.92	27.3	16	34.08	299	12	A	H
													H
													H
	*	2462	108.64	-	-	99.41	27.38	15.95	34.1	330	248	P	V
	*	2462	99.1	-	-	89.87	27.38	15.95	34.1	330	248	A	V
		2493.84	52.74	-21.26	74	43.51	27.31	16	34.08	330	248	P	V
		2498.68	41.14	-12.86	54	31.92	27.3	16	34.08	330	248	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 802.11ax HE20 Partial 26 (Harmonic @ 3m)

WIFI Ant. 0+1	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		4824	39.8	-34.2	74	59.28	31.1	9.86	60.44	100	0	P	H
													H
													H
													H
		4824	40.25	-33.75	74	59.73	31.1	9.86	60.44	100	0	P	V
													V
													V
802.11ax HE20 Partial 26/8 CH 11 2462MHz		4924	39.75	-34.25	74	58.98	31.15	9.98	60.36	100	0	P	H
		7386	43.71	-30.29	74	53.63	36.43	12.72	59.07	100	0	P	H
													H
													H
		4924	40.14	-33.86	74	59.37	31.15	9.98	60.36	100	0	P	V
		7386	43.91	-30.09	74	53.83	36.43	12.72	59.07	100	0	P	V
													V
Remark - No other spurious found. - All results are PASS against Peak and Average limit line.													



2.4GHz 2400~2483.5MHz

WIFI 802.11ax HE20 Partial 52 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 52/37 CH 01 2412MHz		2377.83	52.96	-21.04	74	43.75	27.54	15.83	34.16	288	212	P	H
		2389.8	41.28	-12.72	54	32.06	27.52	15.85	34.15	288	212	A	H
	*	2412	108.14	-	-	98.9	27.48	15.89	34.13	288	212	P	H
	*	2412	99.11	-	-	89.87	27.48	15.89	34.13	288	212	A	H
													H
													H
		2384.235	53.1	-20.9	74	43.88	27.53	15.84	34.15	389	6	P	V
		2310.315	41.19	-12.81	54	31.91	27.76	15.72	34.2	389	6	A	V
	*	2412	102.96	-	-	93.72	27.48	15.89	34.13	389	6	P	V
	*	2412	94.3	-	-	85.06	27.48	15.89	34.13	389	6	A	V
													V
													V
802.11ax HE20 Partial 52/40 CH 11 2462MHz	*	2462	107.54	-	-	98.31	27.38	15.95	34.1	298	10	P	H
	*	2462	99.15	-	-	89.92	27.38	15.95	34.1	298	10	A	H
		2498	51.29	-22.71	74	42.07	27.3	16	34.08	298	10	P	H
		2483.56	41.36	-12.64	54	32.14	27.33	15.98	34.09	298	10	A	H
													H
													H
	*	2462	106.65	-	-	97.42	27.38	15.95	34.1	377	265	P	V
	*	2462	97.54	-	-	88.31	27.38	15.95	34.1	377	265	A	V
		2486	51.91	-22.09	74	42.68	27.33	15.99	34.09	377	265	P	V
		2483.56	41.17	-12.83	54	31.95	27.33	15.98	34.09	377	265	A	V
													V
													V



2.4GHz 2400~2483.5MHz

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

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 52/37 CH 01 2412MHz		4824	40.37	-33.63	74	59.85	31.1	9.86	60.44	100	0	P	H
													H
													H
													H
		4824	40.02	-33.98	74	59.5	31.1	9.86	60.44	100	0	P	V
													V
													V
													V
802.11ax HE20 Partial 52/40 CH 11 2462MHz		4924	40.27	-33.73	74	59.5	31.15	9.98	60.36	100	0	P	H
		7386	44.42	-29.58	74	54.34	36.43	12.72	59.07	100	0	P	H
													H
													H
		4924	40.49	-33.51	74	59.72	31.15	9.98	60.36	100	0	P	V
		7386	44.18	-29.82	74	54.1	36.43	12.72	59.07	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 106 (Band Edge @ 3m)

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 106/53 CH 01 2412MHz		2344.755	52.66	-21.34	74	43.44	27.62	15.78	34.18	277	213	P	H
		2390	41.19	-12.81	54	31.97	27.52	15.85	34.15	277	213	A	H
	*	2412	107.11	-	-	97.87	27.48	15.89	34.13	277	213	P	H
	*	2412	97.95	-	-	88.71	27.48	15.89	34.13	277	213	A	H
													H
													H
		2389.59	52.93	-21.07	74	43.71	27.52	15.85	34.15	396	261	P	V
		2390	41.21	-12.79	54	31.99	27.52	15.85	34.15	396	261	A	V
	*	2412	106.18	-	-	96.94	27.48	15.89	34.13	396	261	P	V
	*	2412	97.23	-	-	87.99	27.48	15.89	34.13	396	261	A	V
													V
													V
802.11ax HE20 Partial 106/54 CH 11 2462MHz	*	2462	107.05	-	-	97.82	27.38	15.95	34.1	335	9	P	H
	*	2462	98.02	-	-	88.79	27.38	15.95	34.1	335	9	A	H
		2483.68	61.83	-12.17	74	52.61	27.33	15.98	34.09	335	9	P	H
		2483.52	41.79	-12.21	54	32.57	27.33	15.98	34.09	335	9	A	H
													H
													H
	*	2462	104.92	-	-	95.69	27.38	15.95	34.1	385	266	P	V
	*	2462	96.3	-	-	87.07	27.38	15.95	34.1	385	266	A	V
		2483.8	59.15	-14.85	74	49.93	27.33	15.98	34.09	385	266	P	V
		2483.6	41.26	-12.74	54	32.04	27.33	15.98	34.09	385	266	A	V
													V
													V



2.4GHz 2400~2483.5MHz

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

WIFI Ant. 0+1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ax HE20 Partial 106/53 CH 01 2412MHz		4824	40.75	-33.25	74	60.23	31.1	9.86	60.44	100	0	P	H
													H
													H
													H
		4824	40.65	-33.35	74	60.13	31.1	9.86	60.44	100	0	P	V
													V
													V
													V
802.11ax HE20 Partial 106/54 CH 11 2462MHz		4924	40.72	-33.28	74	59.95	31.15	9.98	60.36	100	0	P	H
		7386	44.02	-29.98	74	53.94	36.43	12.72	59.07	100	0	P	H
													H
													H
		4924	40.68	-33.32	74	59.91	31.15	9.98	60.36	100	0	P	V
		7386	44.7	-29.3	74	54.62	36.43	12.72	59.07	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Emission above 18GHz****2.4GHz WIFI 802.11ax HE20 (SHF)**

WIFI Ant. 0+1	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)
2.4GHz 802.11ax HE20 SHF		23467	41.97	-32.03	74	49.87	39.62	5.8	53.32	150	0	P	H
													H
													H
													H
		23502	41.94	-32.06	74	49.73	39.7	5.81	53.3	150	0	P	V
													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.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11ax HE20 LF		41.64	25.36	-14.64	40	35.94	18.54	0.53	29.65	-	-	P	H
		105.66	28.71	-14.79	43.5	40.92	16.43	0.98	29.62	-	-	P	H
		256.98	24.86	-21.14	46	33.25	19.27	1.72	29.38	-	-	P	H
		589.69	30.68	-15.32	46	31.35	25.6	2.6	28.87	-	-	P	H
		848.68	35.25	-10.75	46	31.2	28.95	3.49	28.39	100	0	P	H
		965.08	36.98	-17.02	54	30.44	30.9	3.74	28.1	-	-	P	H
													H
													H
													H
													H
													H
													H
		42.61	31.22	-8.78	40	42.32	18.02	0.53	29.65	100	0	P	V
		145.43	28.55	-14.95	43.5	39.86	17.1	1.18	29.59	-	-	P	V
		247.28	24.37	-21.63	46	34.11	17.96	1.71	29.41	-	-	P	V
		567.38	29.67	-16.33	46	29.9	26.07	2.55	28.85	-	-	P	V
		766.23	33.39	-12.61	46	30.6	28.12	3.23	28.56	-	-	P	V
		965.08	36.97	-17.03	54	30.43	30.9	3.74	28.1	-	-	P	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.	
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

2. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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



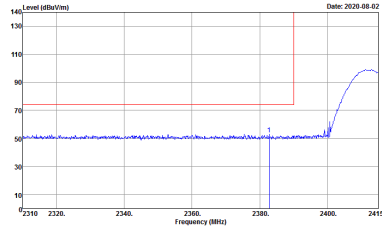
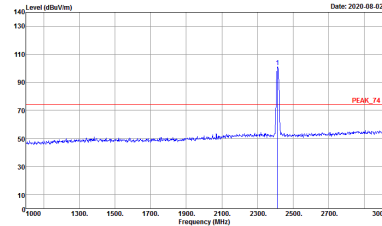
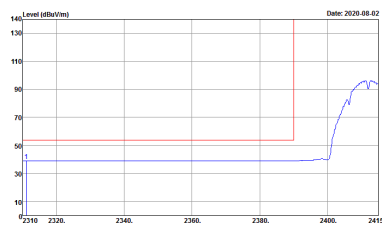
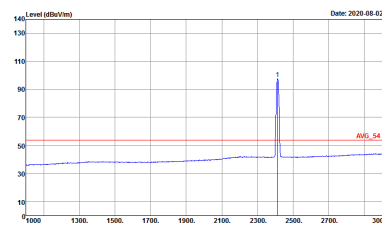
Appendix D. Radiated Spurious Emission Plots

Test Engineer :	Jack Cheng, Lance Chiang, and Chuan Chu	Temperature :	23.8~26.2°C
		Relative Humidity :	56.5~68.6%

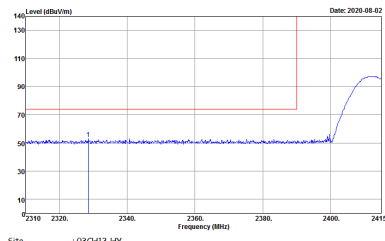
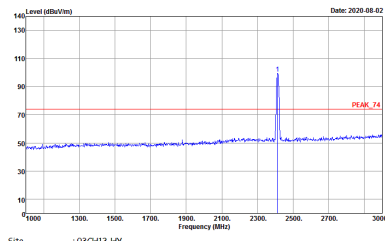
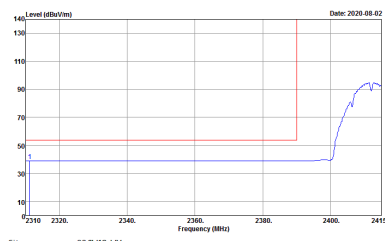
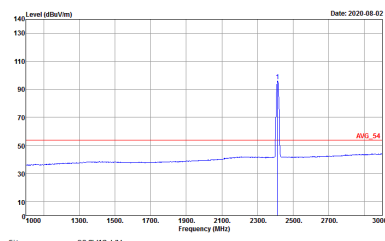
Note symbol

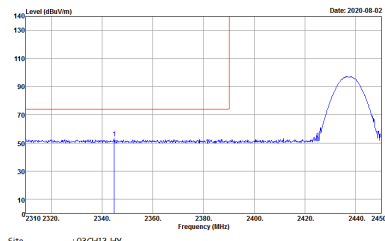
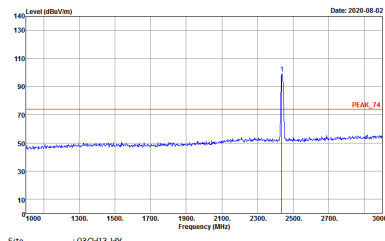
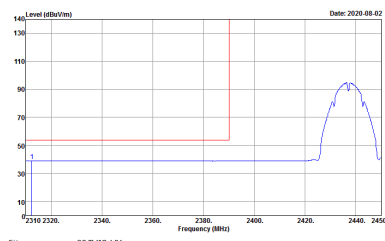
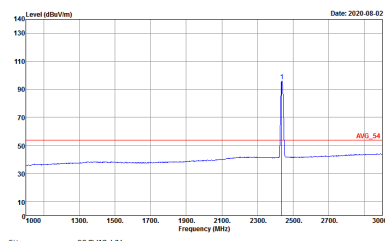
-L	Low channel location
-R	High channel location

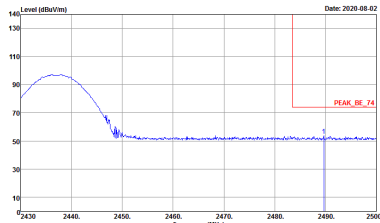
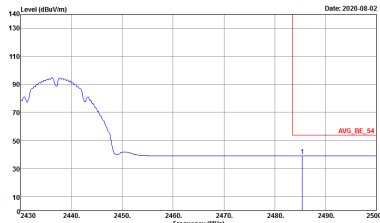
2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

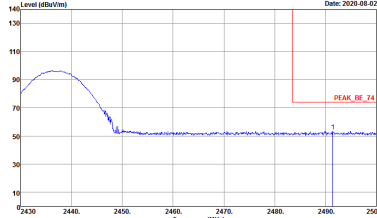
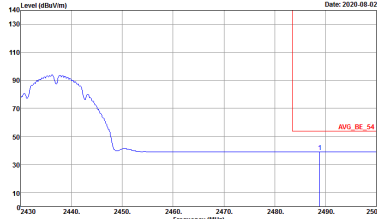
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

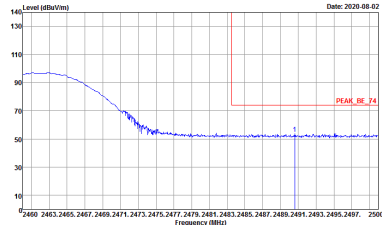
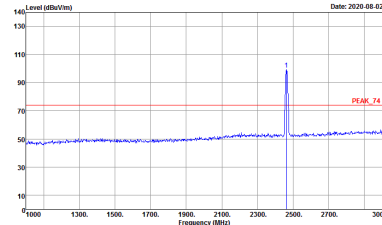
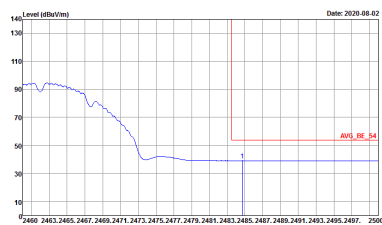
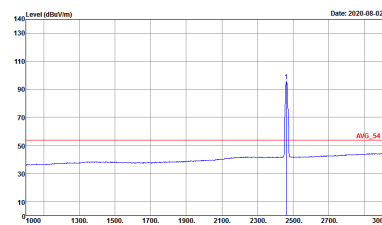
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-44Y Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH12-44Y Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

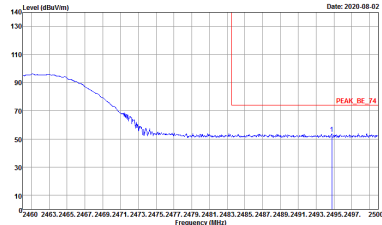
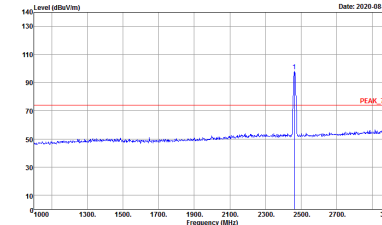
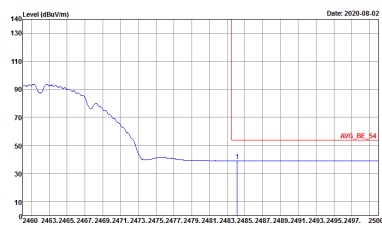
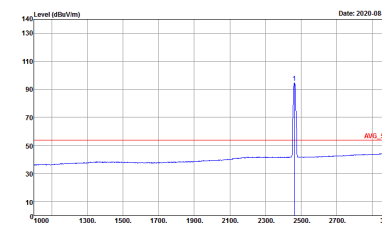


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-44Y Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH12-44Y Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

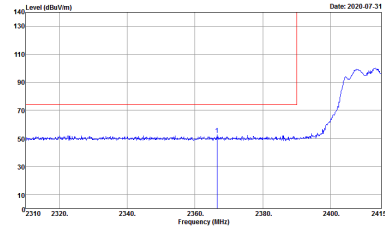
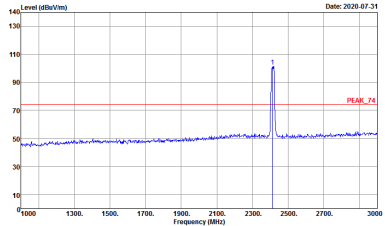
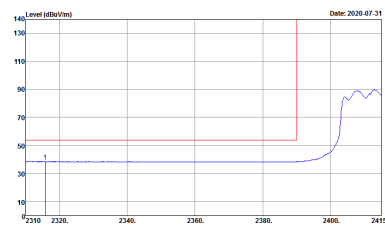
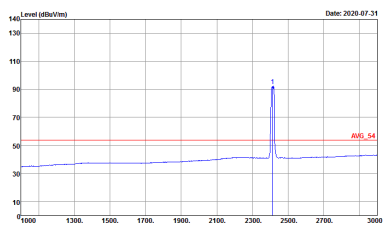
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-HV Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-HV Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-HV Condition : AV6_BE_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-HV Condition : AV6_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-14V Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-14V Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-14V Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-14V Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

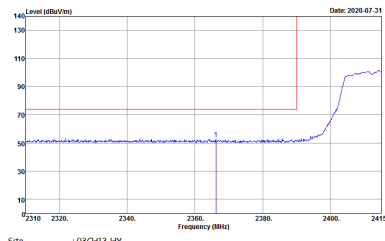
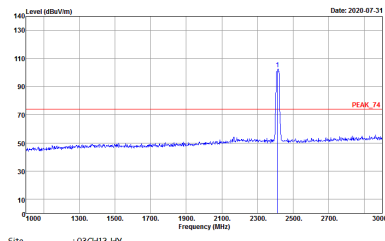
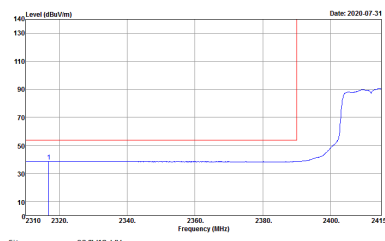
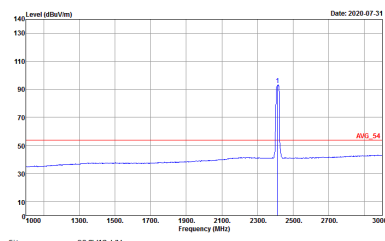


2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

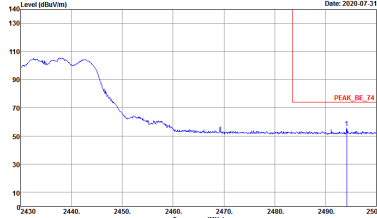
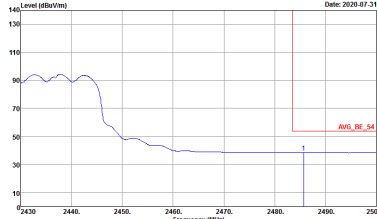
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000kHz VBW:0.010kHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-14Y Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-14Y Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-14Y Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-14Y Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



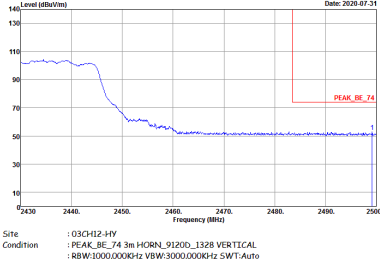
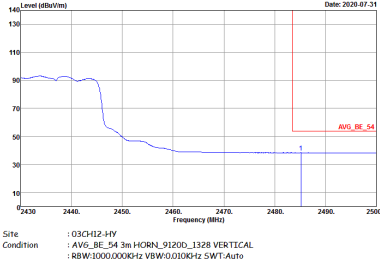
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

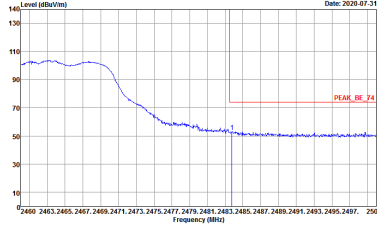
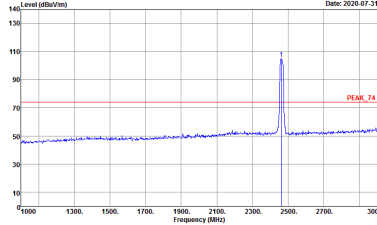
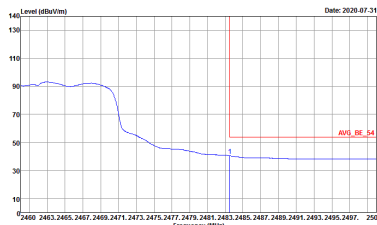
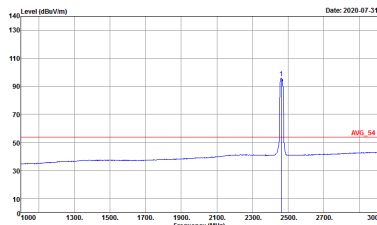
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-44Y Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH12-44Y Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank

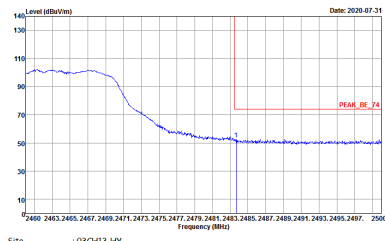
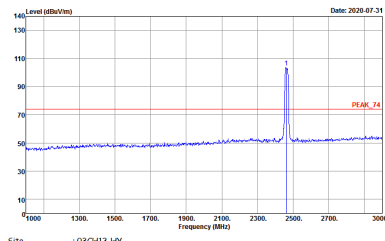
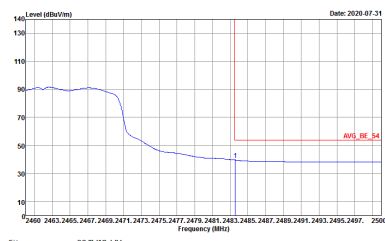
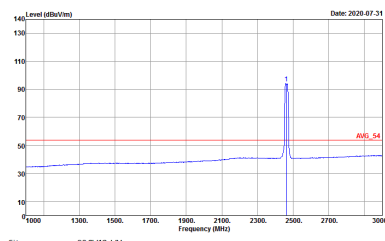


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-44Y Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH12-44Y Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left Blank

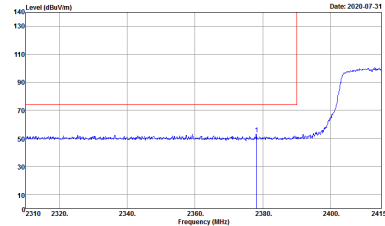
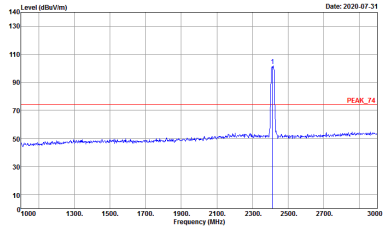
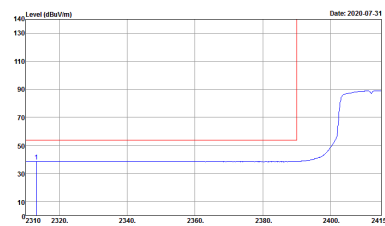
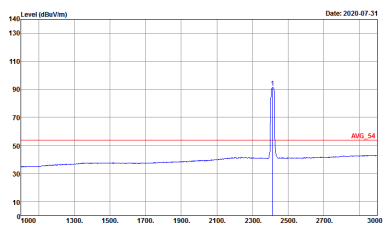
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-HV Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-HV Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-HV Condition : AV6_BE_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-HV Condition : AV6_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-HV Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-HV Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-HV Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-HV Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		



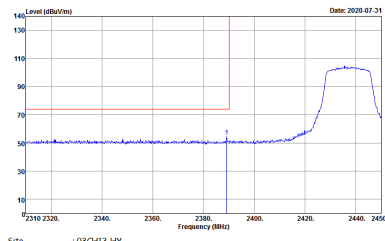
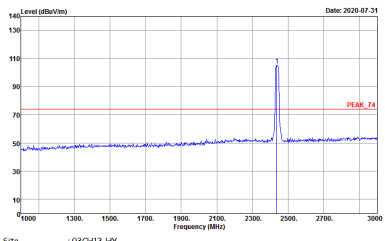
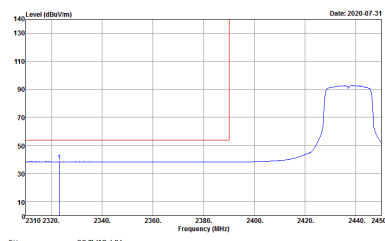
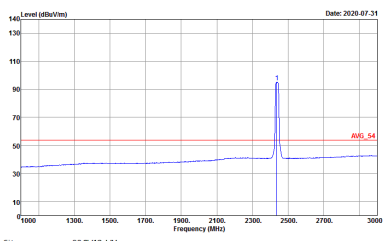
2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

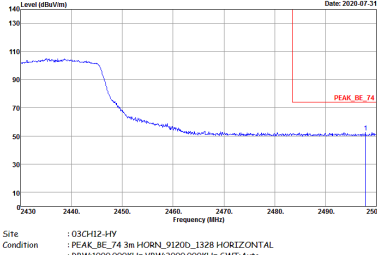
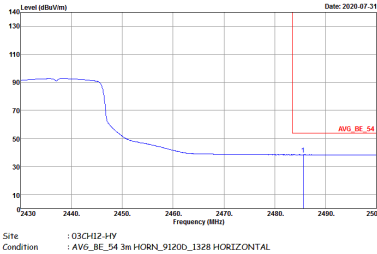
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000kHz VBW:0.010kHz SWT:Auto



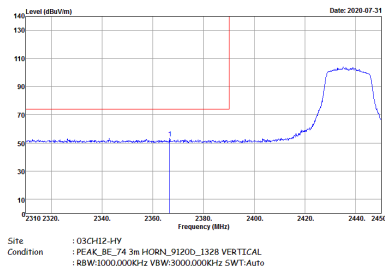
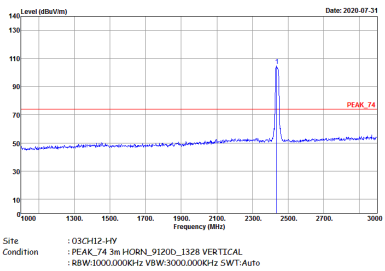
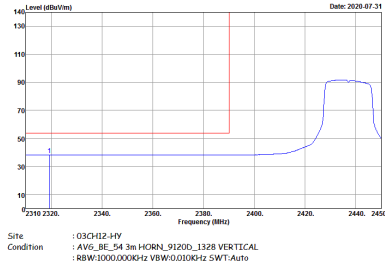
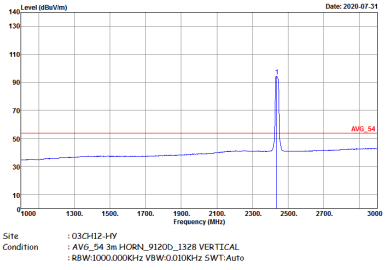
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	Site : 03CH12-14Y Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH12-14Y Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH12-14Y Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH12-14Y Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

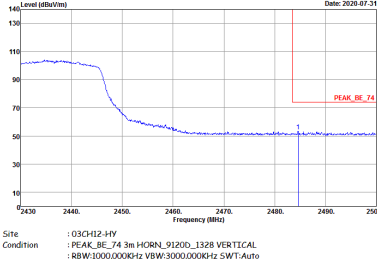
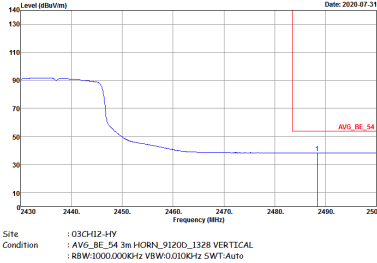


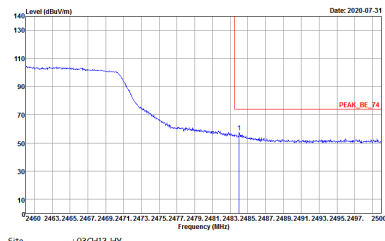
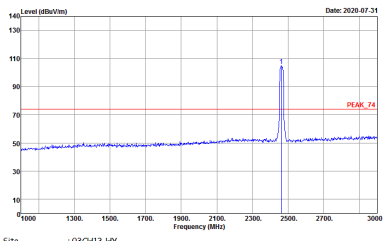
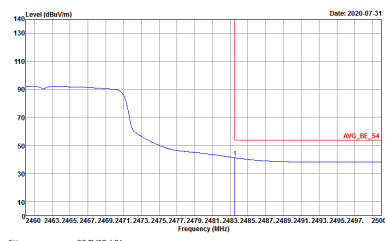
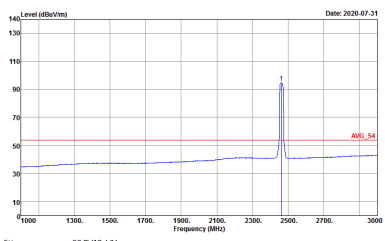
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-44Y Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Date: 2020-07-31	Left blank
Avg.	 Site : 03CH12-44Y Condition : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Date: 2020-07-31	Left blank

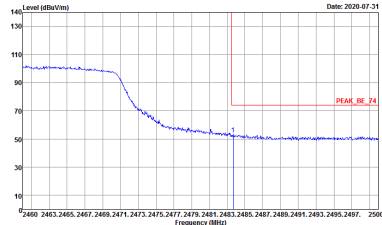
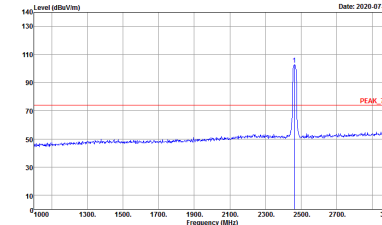
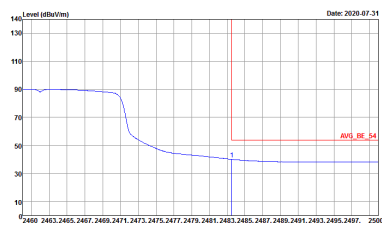
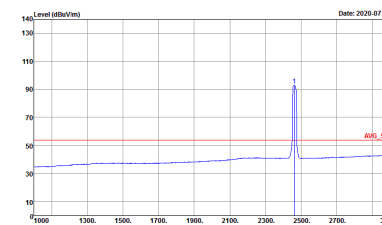


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-HY Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-HY Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-HY Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-HY Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-4Y Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH12-4Y Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank

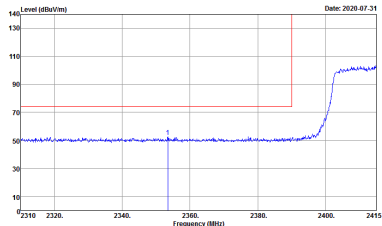
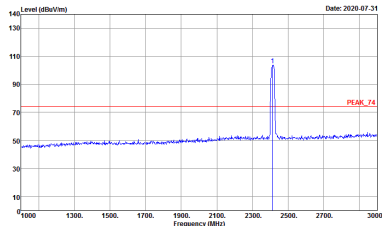
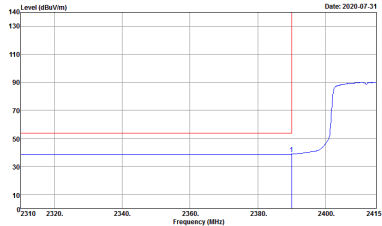
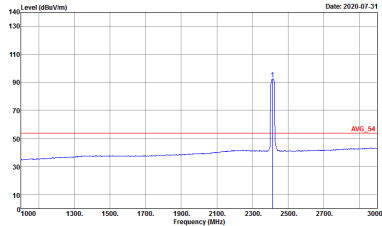
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH12-HV Condition : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-HV Condition : PEAK_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-HV Condition : AV6_BE_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-HV Condition : AV6_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-14V Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-14V Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-14V Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-14V Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto
Avg.		

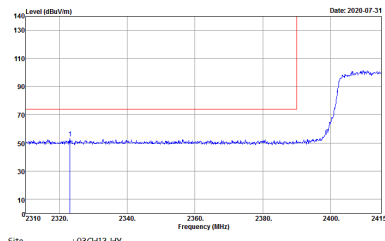
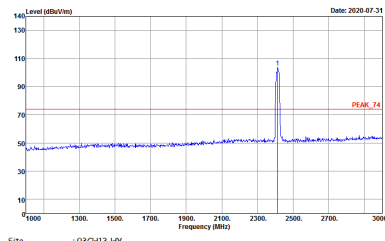
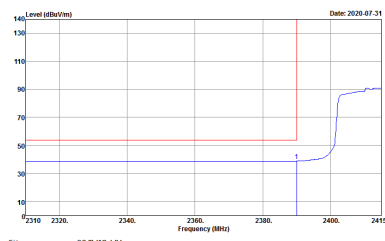
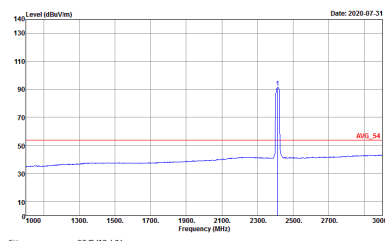


2.4GHz 2400~2483.5MHz

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	 Site Condition : 03CH12-HY : PEAK_BE_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site Condition : 03CH12-HY : PEAK_74 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site Condition : 03CH12-HY : AVG_BE_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site Condition : 03CH12-HY : AVG_54 3m HORN_9120D_1328 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ax HE20 Full CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH12-14Y Condition : PEAK_BE_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH12-14Y Condition : PEAK_74 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH12-14Y Condition : AVG_BE_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH12-14Y Condition : AVG_54 3m HORN_9120D_1328 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto