



FCC RADIO TEST REPORT

FCC ID : U8G-P1835

Equipment : PEPWAVE / peplink Wireless Product

Brand Name : PEPWAVE / peplink

Model Name : UBR Go
UBR Rugged
UBR Go LTEA
UBR Rugged LTEA
UBR-GO-LTEA-R-T-PRM
UBR-GO-LTEA-US-T-PRM
UBR-RUG-LTEA-US-T-PRM
UBR-RUG-LTEA-R-T-PRM
Pepwave UBR Go LTEA
Pepwave UBR Rugged LTEA
MAX Transit
MAX Transit LTEA
MAX Transit Pro E

Applicant : PISMO LABS TECHNOLOGY LIMITED
A8, 5/F, HK Spinners Industrial Building, Phase 6, 481
Castle Peak Road, Cheung Sha Wan, Hong Kong

Manufacturer : PISMO LABS TECHNOLOGY LIMITED
A8, 5/F, HK Spinners Industrial Building, Phase 6, 481
Castle Peak Road, Cheung Sha Wan, Hong Kong

Standard : FCC Part 15 Subpart C §15.247

The product was received on Jan. 14, 2021 and testing was started from Mar. 31, 2021 and completed on Aug. 26, 2021. We, Sporton International Inc. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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



Louis Wu

Approved by: Louis Wu

Sporton International Inc. EMC & Wireless Communications Laboratory

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



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History of this test report

Report No.	Version	Description	Issued Date
FR111402A	01	Initial issue of report	Oct. 14, 2021



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.247(a)(2)	6dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.247(b)	Power Output Measurement	Pass	-
3.3	15.247(e)	Power Spectral Density	Pass	-
3.4	15.247(d)	Conducted Band Edges	Pass	-
		Conducted Spurious Emission	Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	Pass	Under limit 0.79 dB at 120.210 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 13.47 dB at 0.152 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: Lewis Ho

Report Producer: Lucy Wu



1 General Description

1.1 Product Feature of Equipment Under Test

Wi-Fi 2.4GHz 802.11b/g/n, and Wi-Fi 5GHz 802.11a/n/ac

Product Specification subjective to this standard		
Sample 1	UBR go	
Sample 2	UBR rugged	
Antenna Type	WLAN: Omni-directional Antenna	

Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	<Ant. 0>: 2.44 <Ant. 1>: 2.44

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

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 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. TH02-HY, CO05-HY

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

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. 03CH16-HY (TAF Code: 3786)
Remark	The Radiated Spurious Emission test item subcontracted to Sporton International Inc. Wensan Laboratory.

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

FCC designation No.: TW1190 and TW3786



1.4 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). The measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in two config (Ant. Horizontal and Ant. Vertical), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and find Ant. Vertical as worst plane.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

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

2.2 Test Mode

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

MIMO Antenna

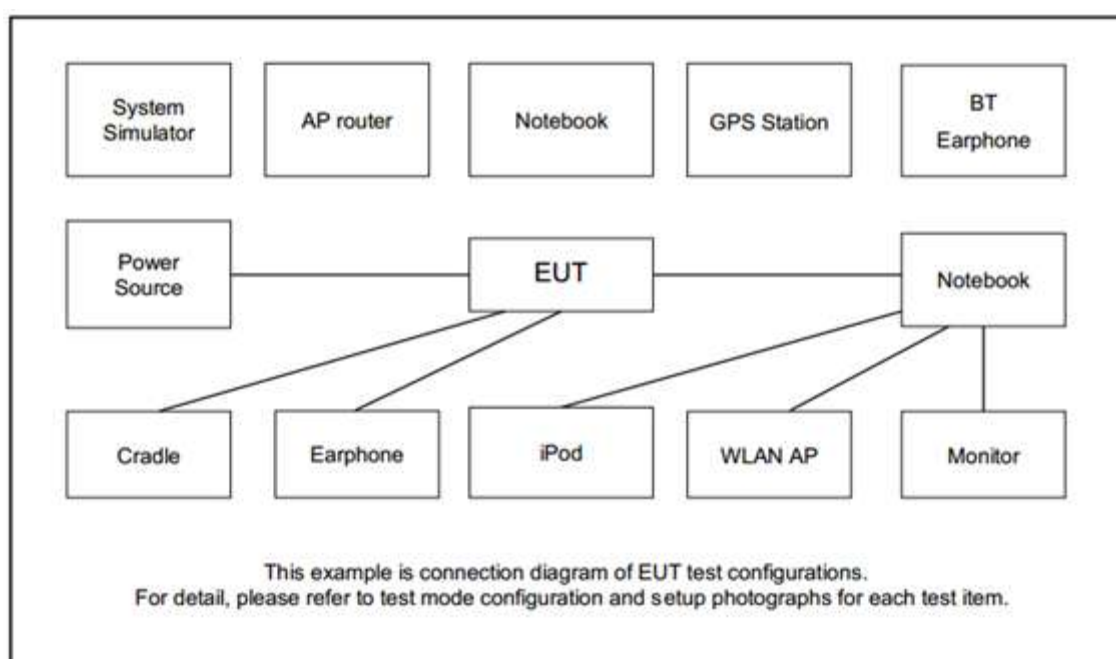
Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

Test Cases	
AC Conducted Emission	Mode 1 :WLAN (2.4GHz) Link + LAN 1 Link + WAN Link + Adapter (Y001-1310) (USB-C Port 1) + LAN 2/3 Load for Sample 1

Ch. #	2400-2483.5 MHz			
	802.11b	802.11g	802.11n HT20	802.11n HT40
Low	01	01	01	03
Middle	06	06	06	06
High	11	11	11	09

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

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility "ART2-GUI Version2.3" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.



2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

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

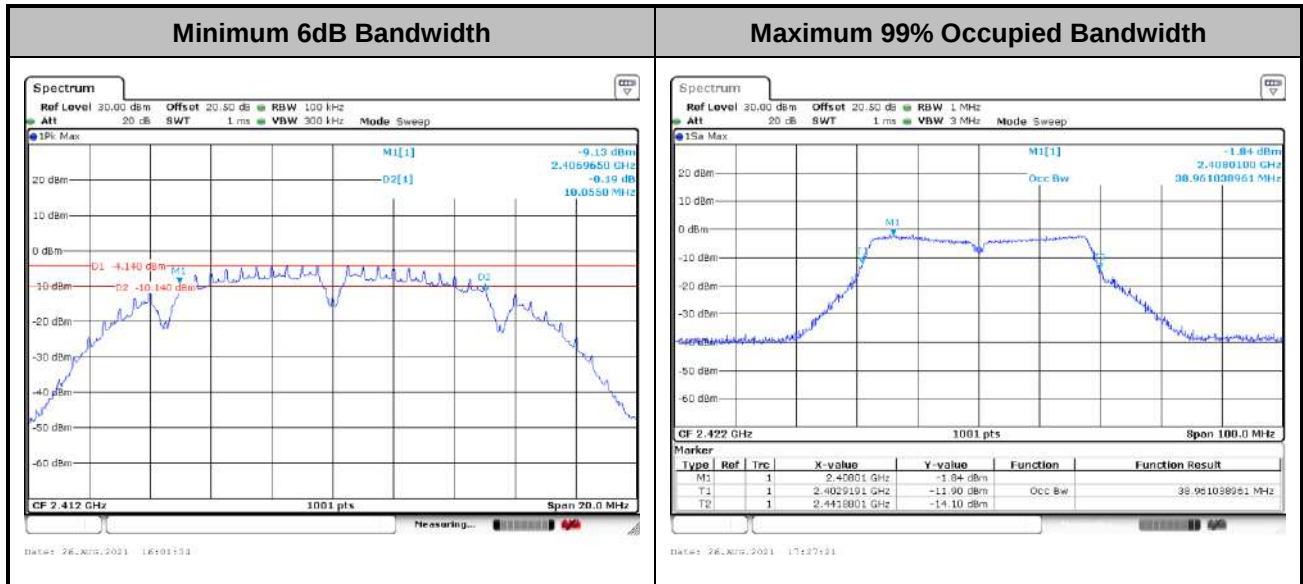
3.1.4 Test Setup





3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.



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

3.2 Output Power Measurement

3.2.1 Limit of Output Power

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

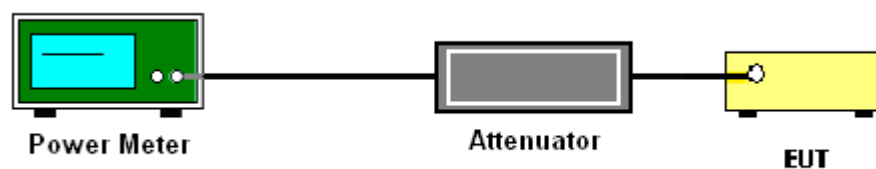
3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

3.2.3 Test Procedures

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

3.2.4 Test Setup



3.2.5 Test Result of Average Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

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

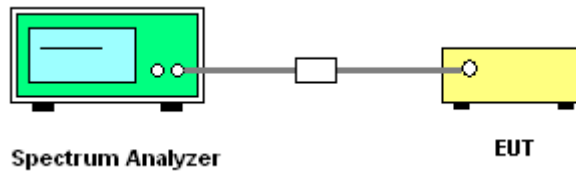
If measurements performed using method (2) plus $10 \log(N)$ exceeds the emission limit, the test should choose method (1) before declaring that the device fails the emission limit.

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

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

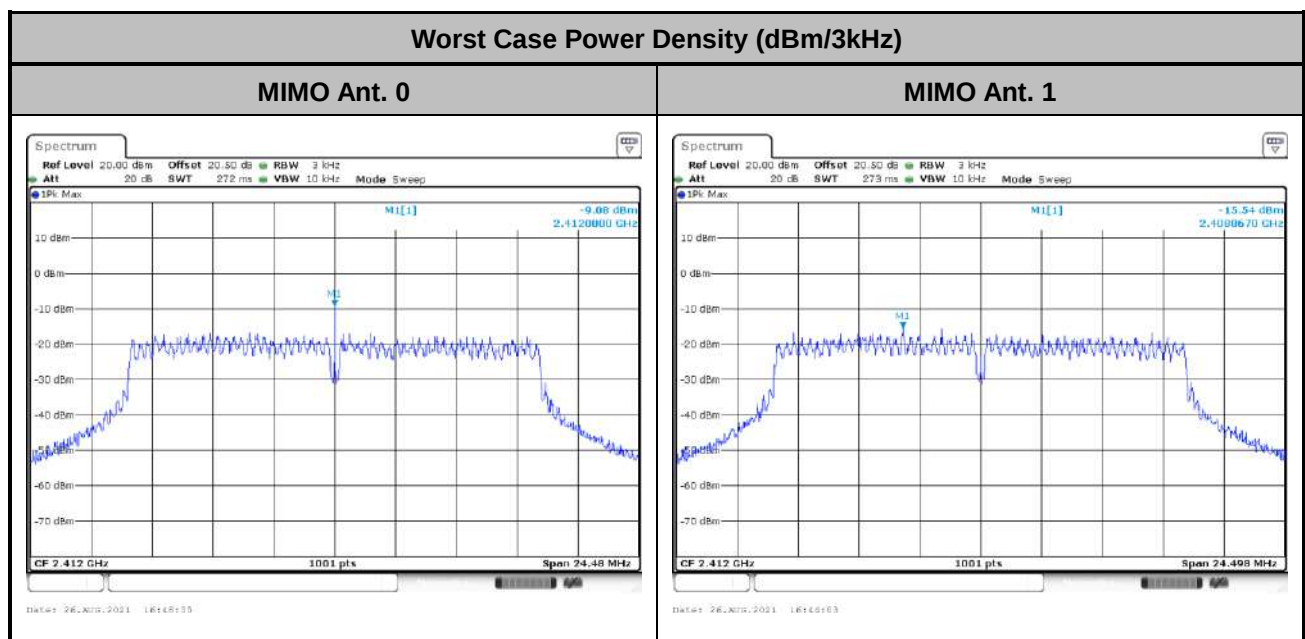
Method (2): Measure and add $10 \log(N)$ dB, where N is the number of outputs. (N=2)

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

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

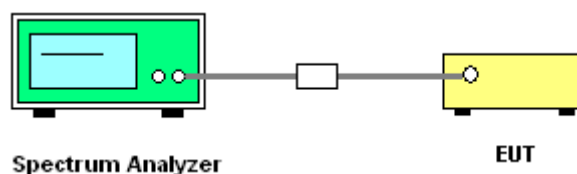
3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

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

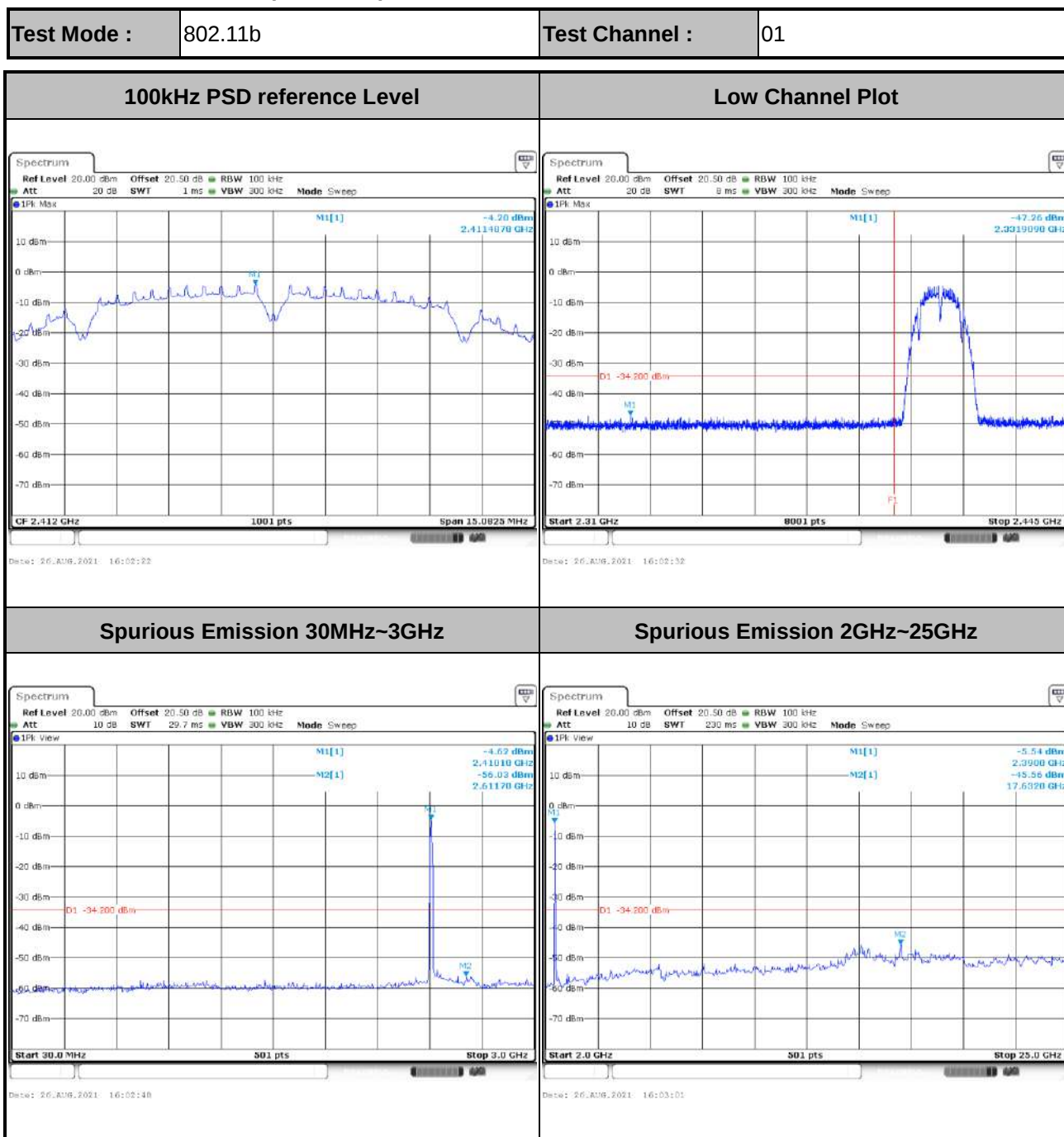
3.4.4 Test Setup





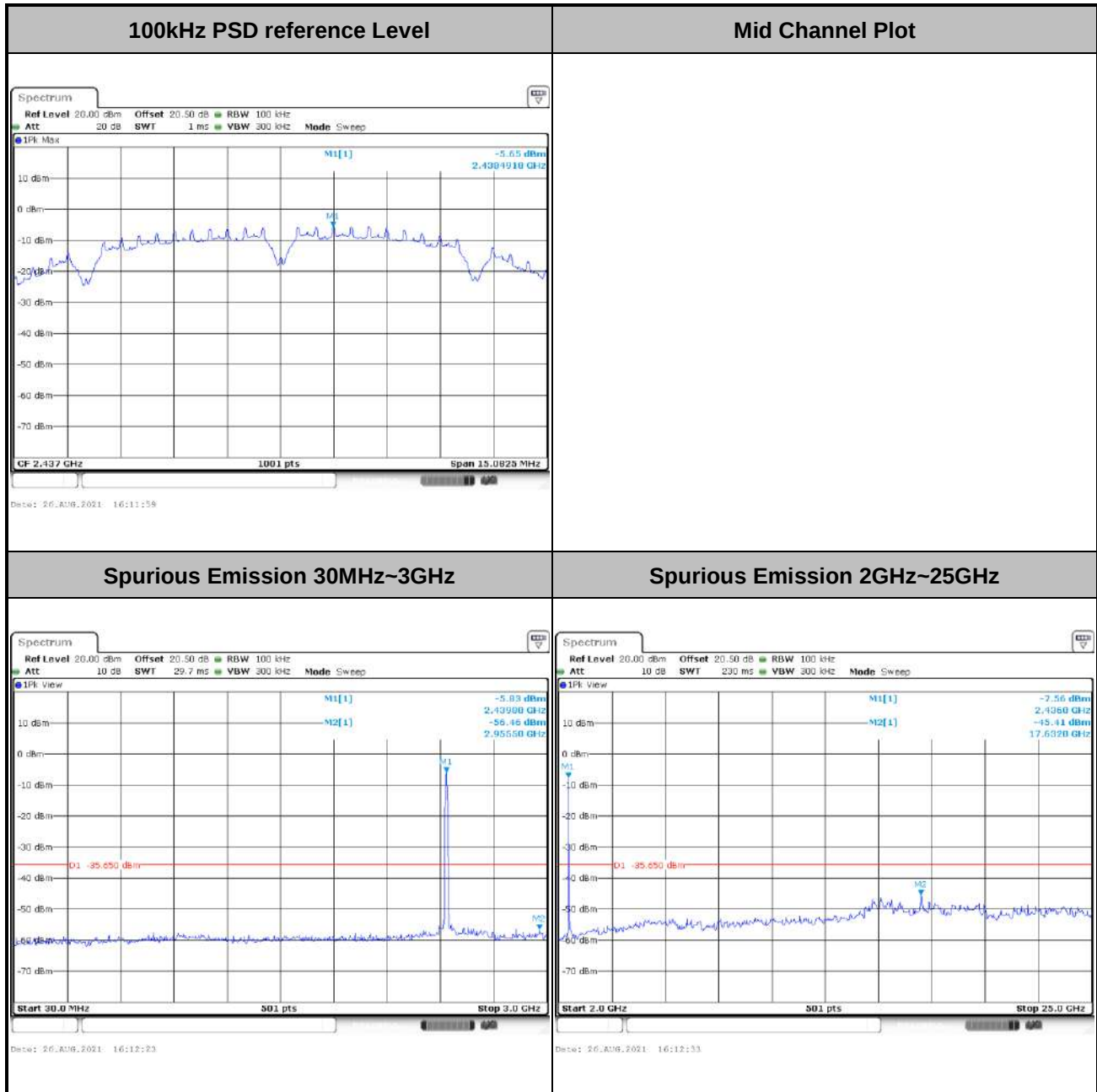
3.4.5 Test Result of Conducted Band Edges and Spurious Emission

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





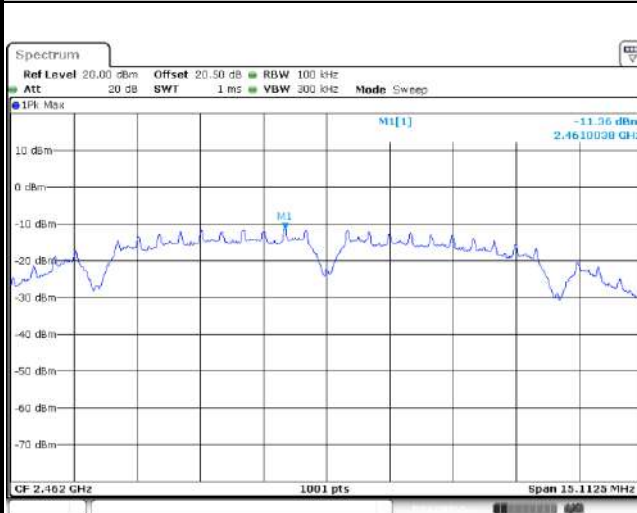
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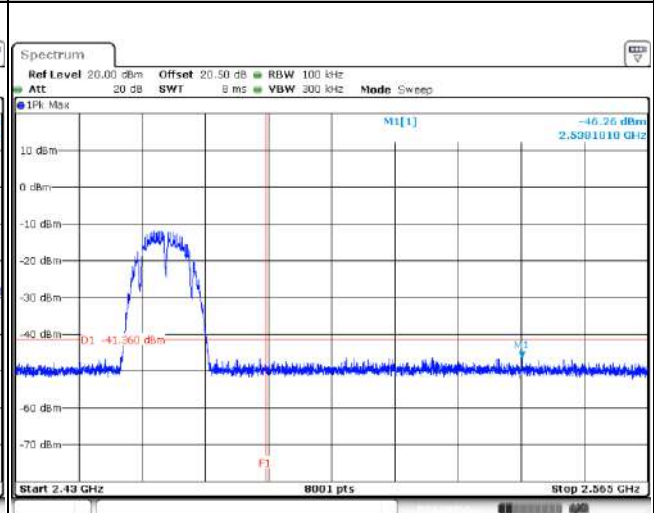
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100kHz PSD reference Level



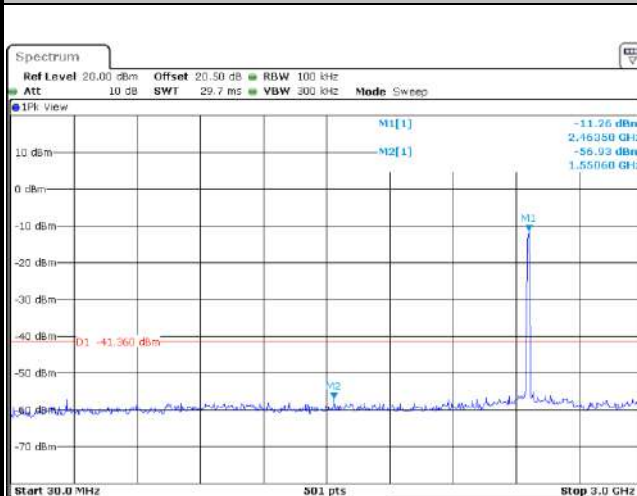
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High Channel Plot



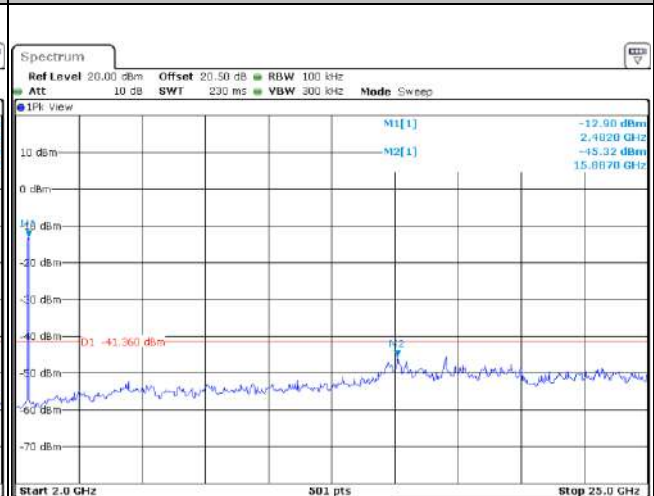
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Spurious Emission 30MHz~3GHz



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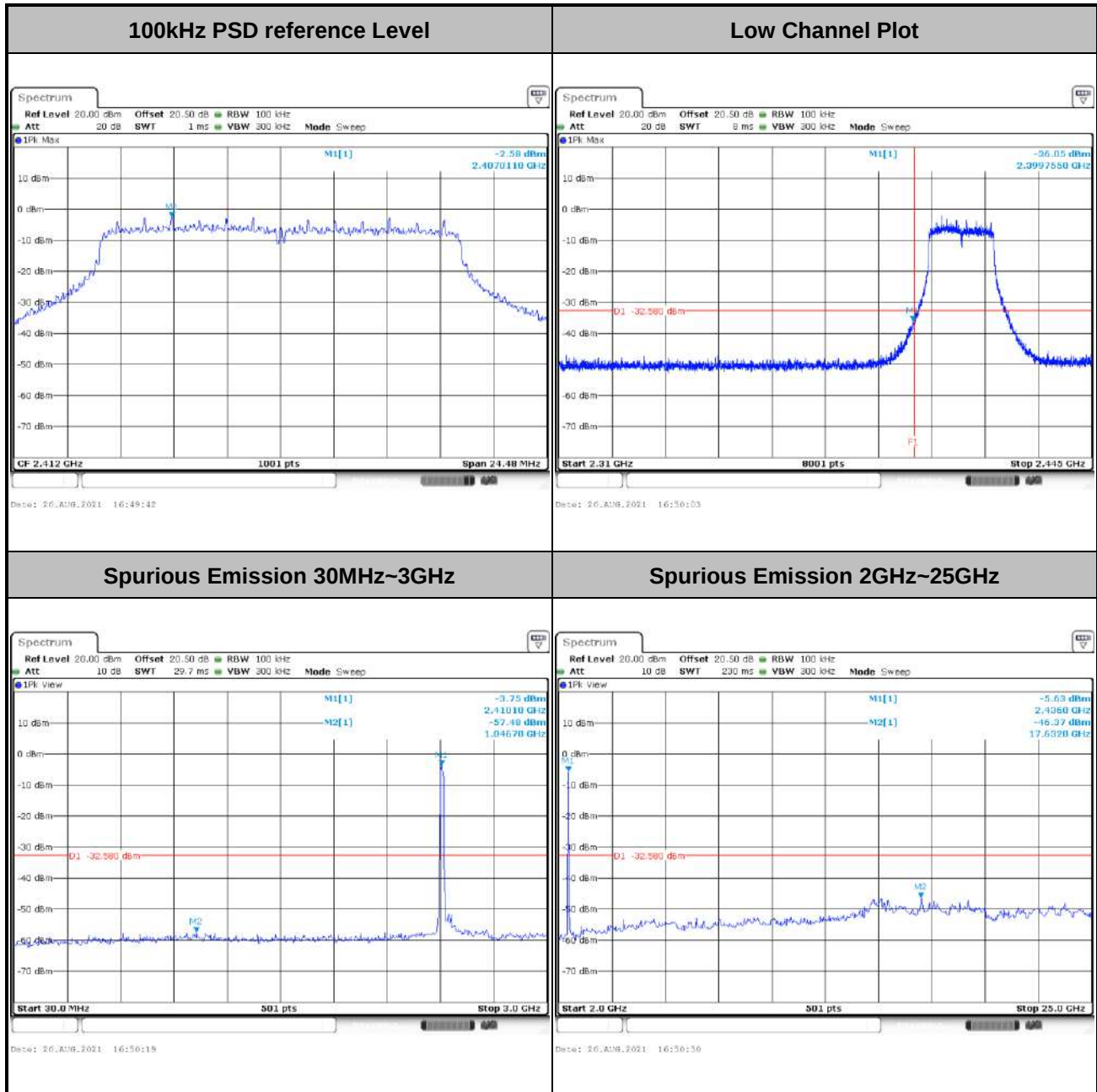
Spurious Emission 2GHz~25GHz



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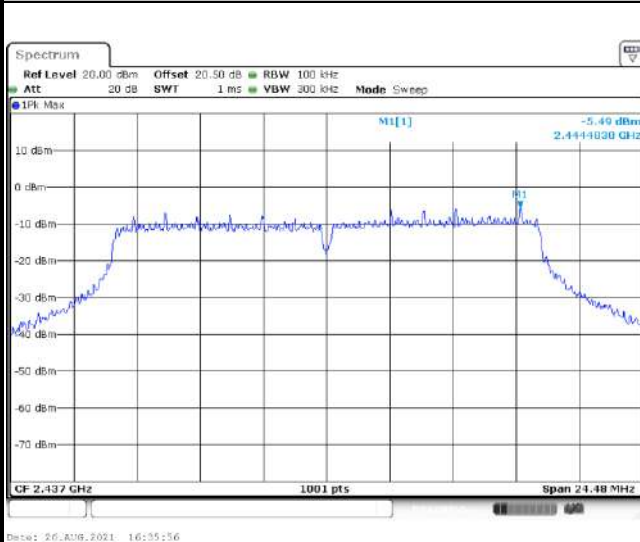
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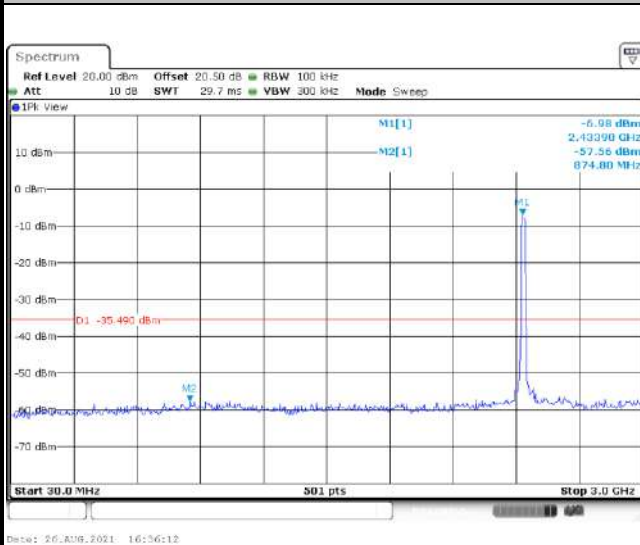
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100kHz PSD reference Level

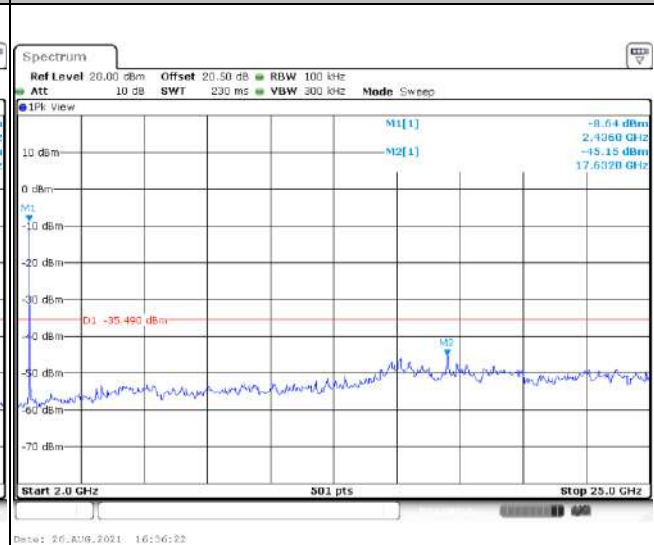


Mid Channel Plot

Spurious Emission 30MHz~3GHz



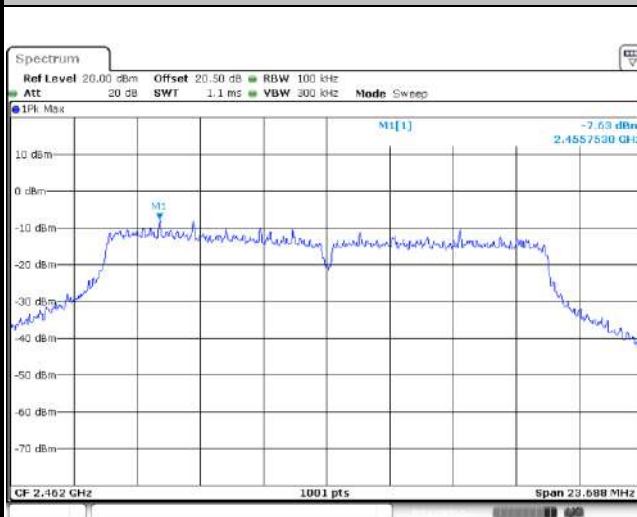
Spurious Emission 2GHz~25GHz



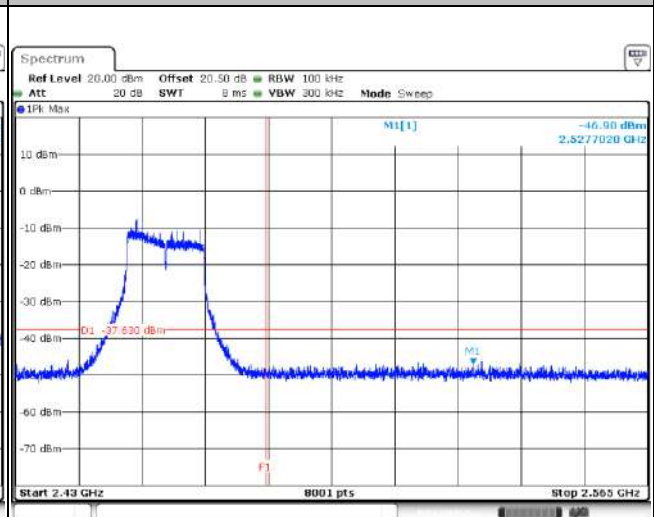


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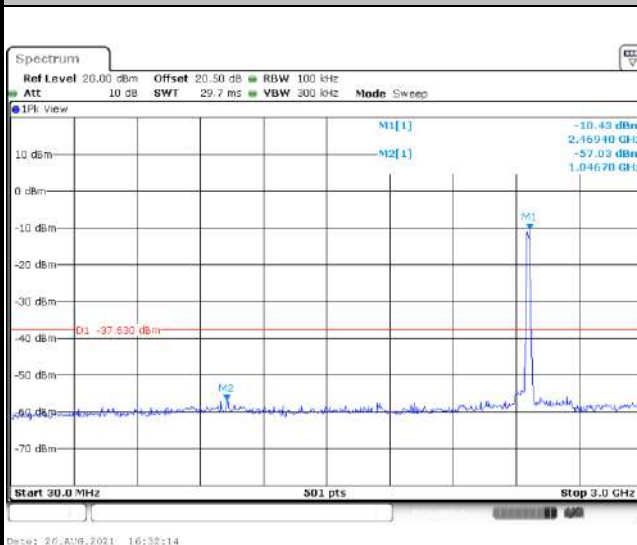
100kHz PSD reference Level



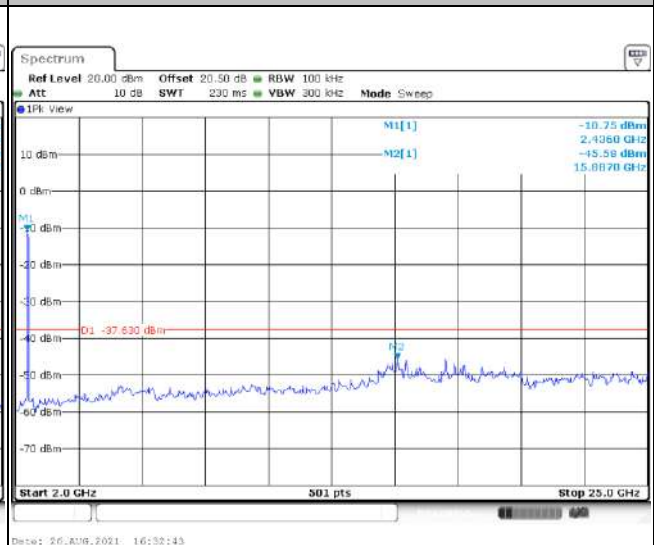
High Channel Plot



Spurious Emission 30MHz~3GHz



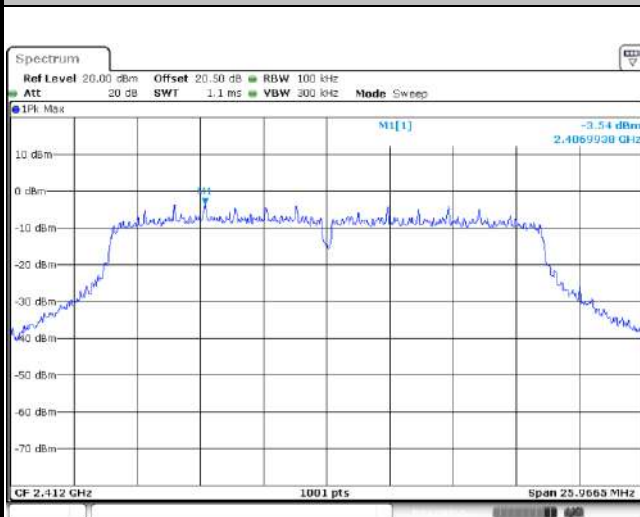
Spurious Emission 2GHz~25GHz





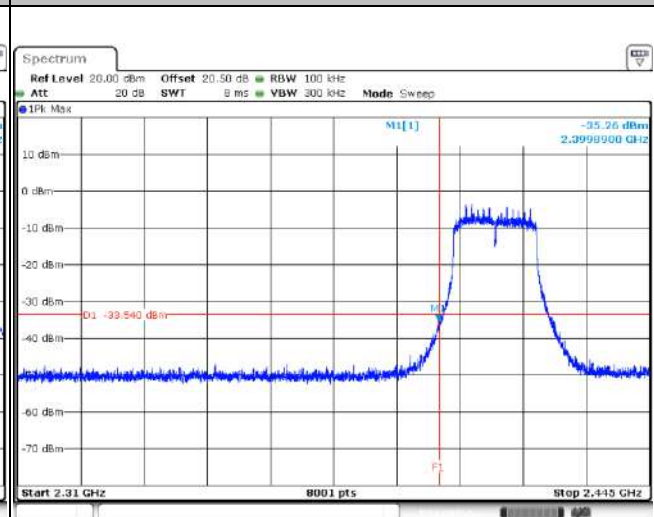
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100kHz PSD reference Level



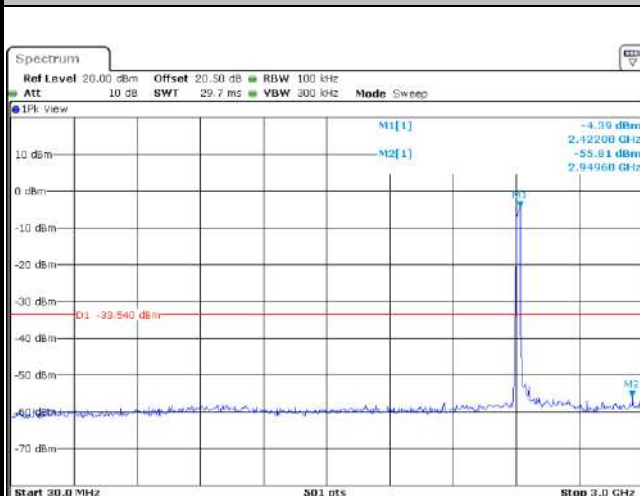
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Low Channel Plot



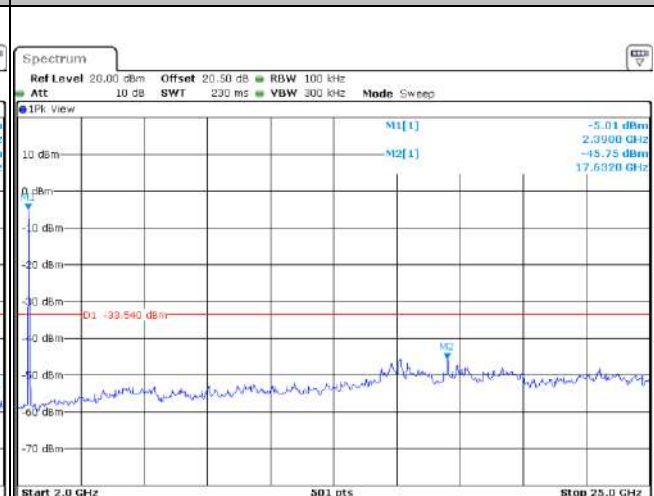
Date: 26.AUG.2021 16:54:15

Spurious Emission 30MHz~3GHz



Date: 26.AUG.2021 16:54:27

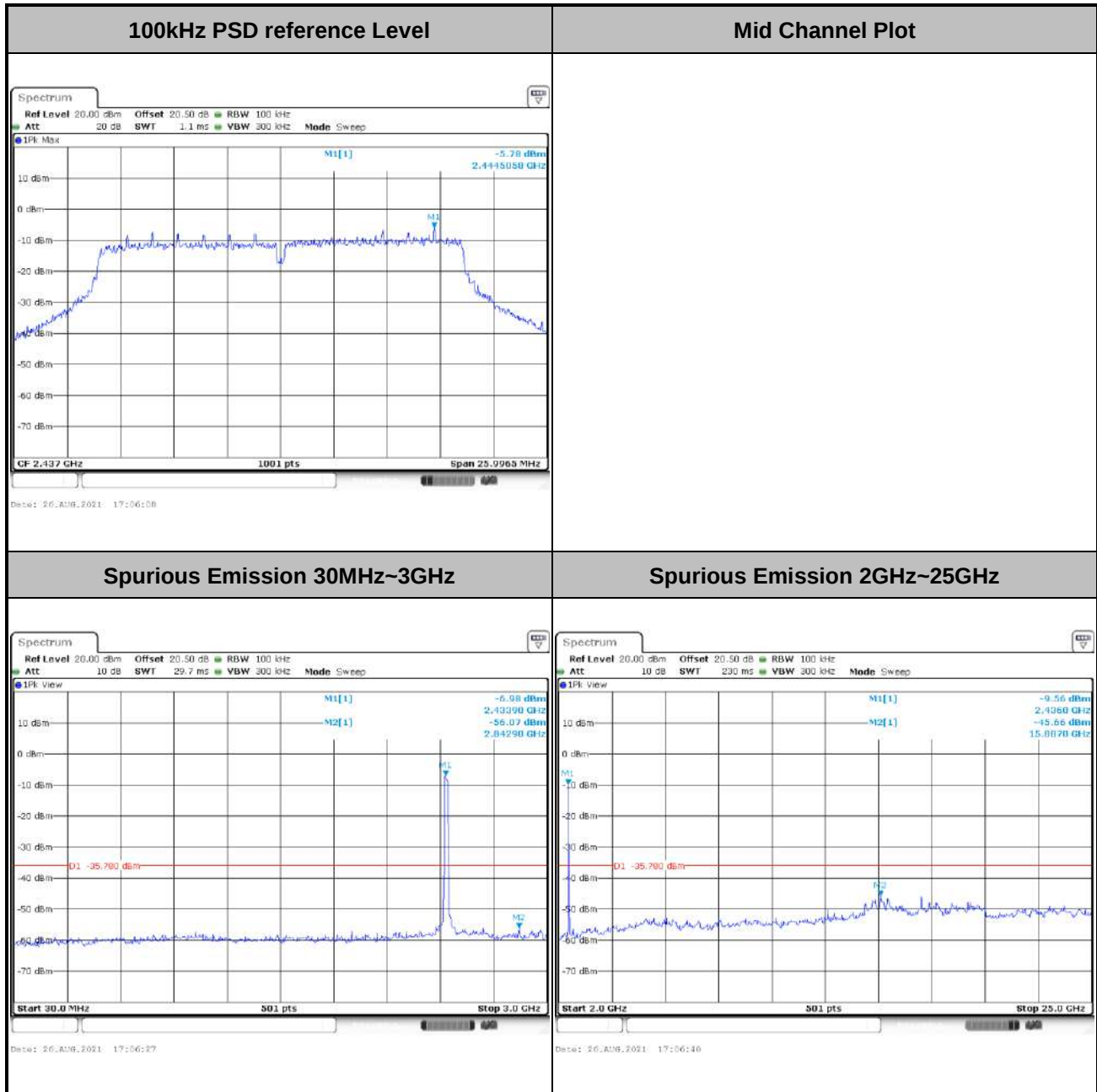
Spurious Emission 2GHz~25GHz



Date: 26.AUG.2021 16:54:38

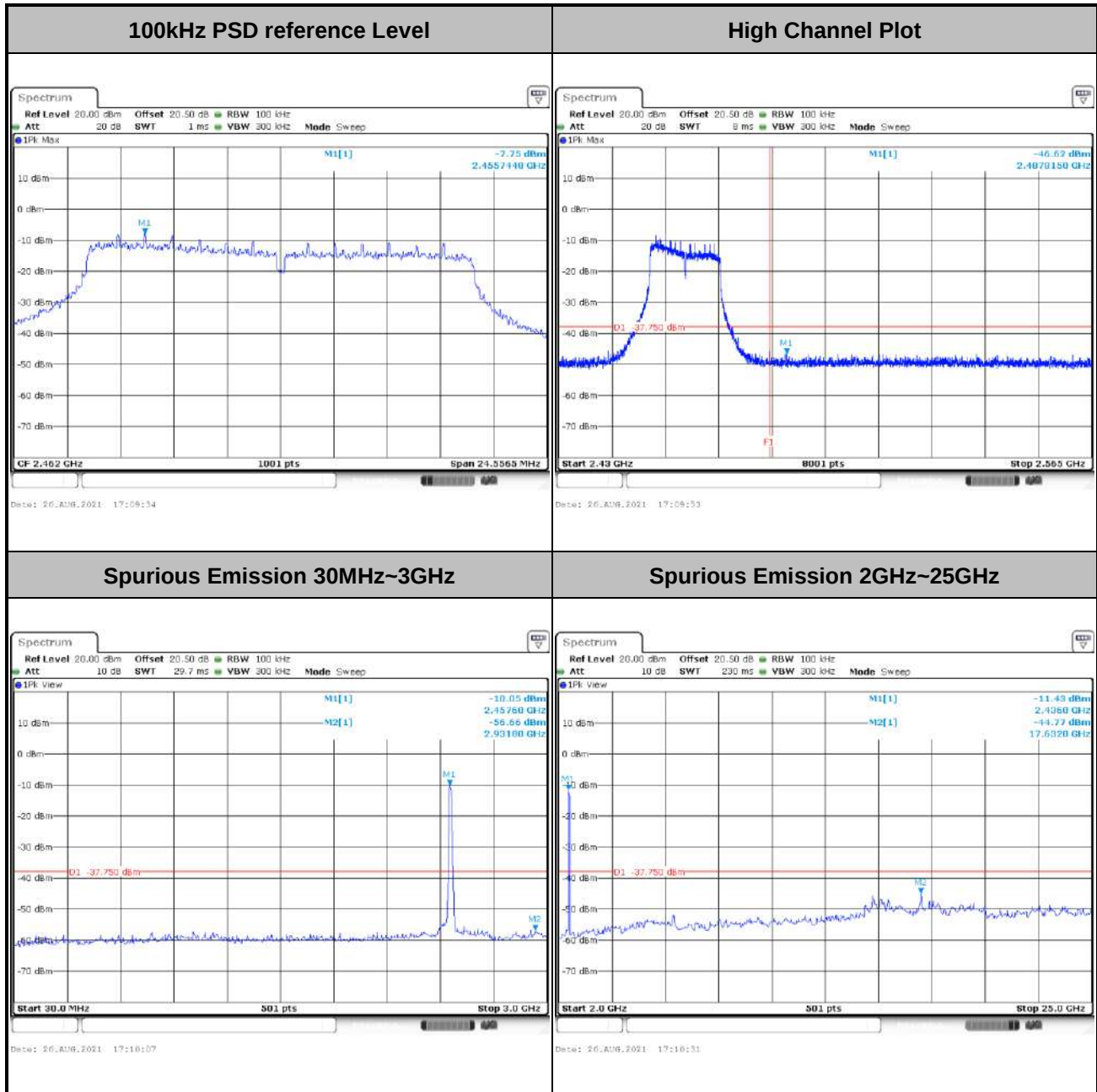


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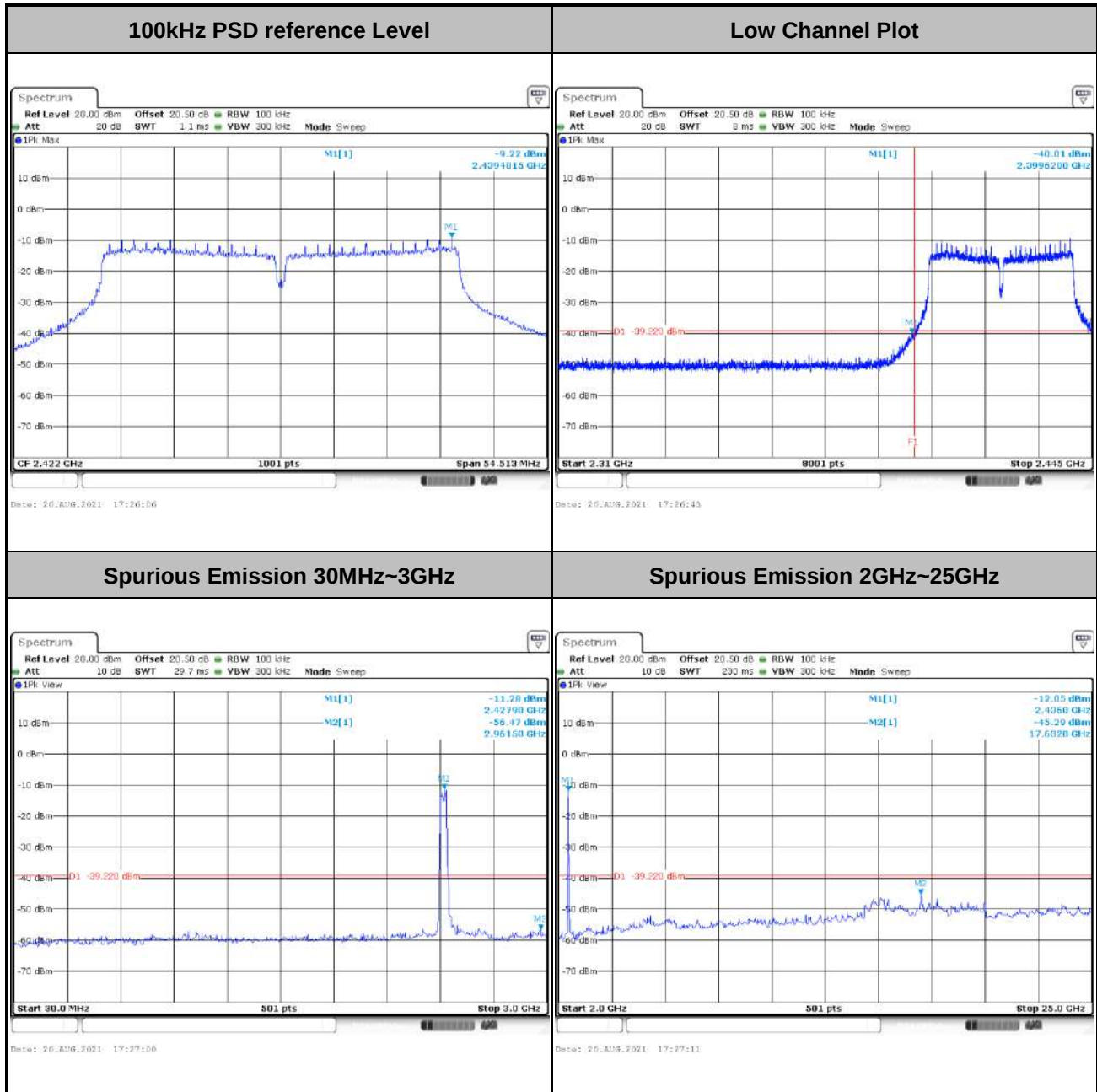


Test Mode :	802.11n HT20	Test Channel :	11
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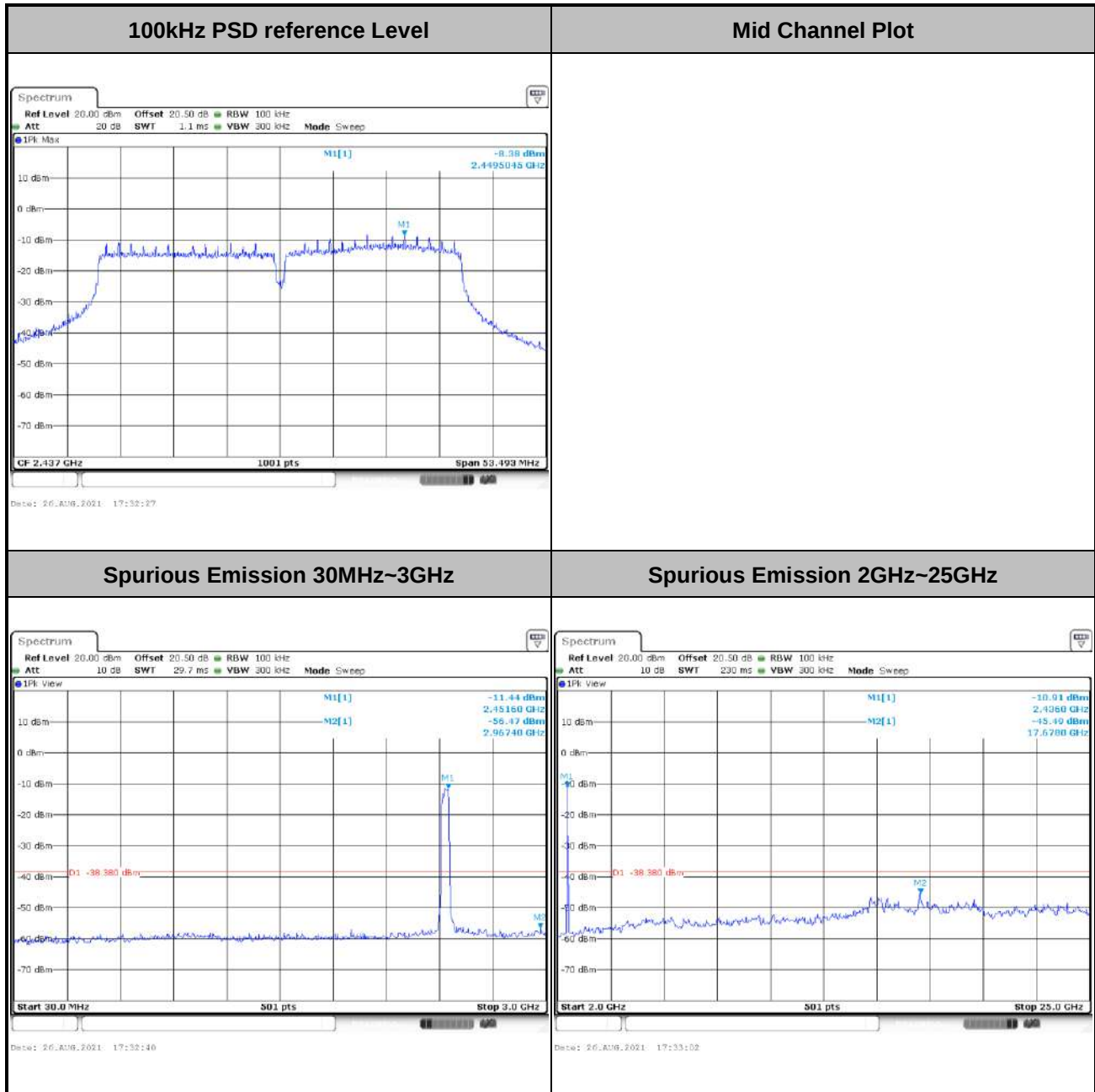


Test Mode :	802.11n HT40	Test Channel :	03
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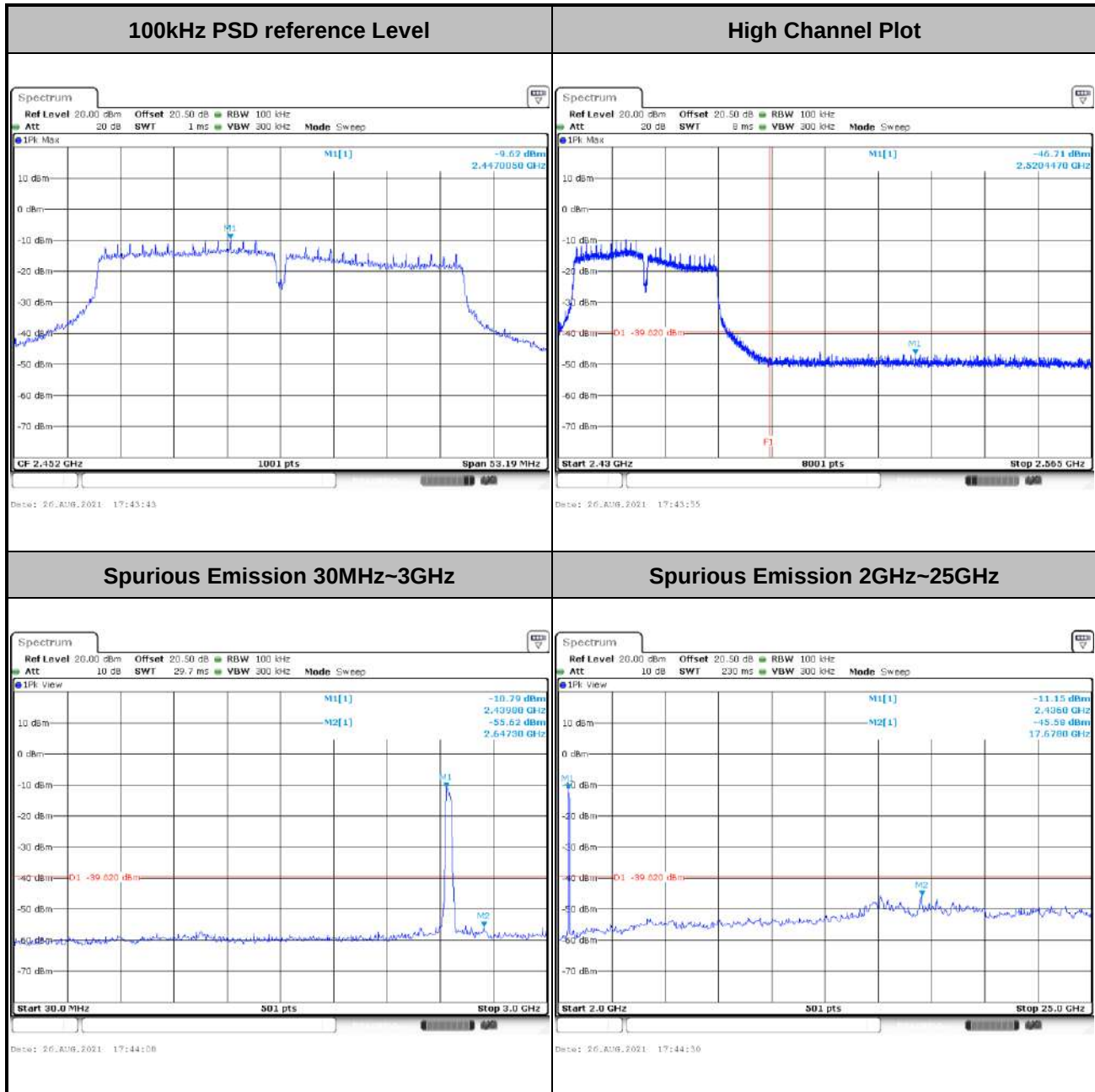




Test Mode :	802.11n HT40	Test Channel :	06
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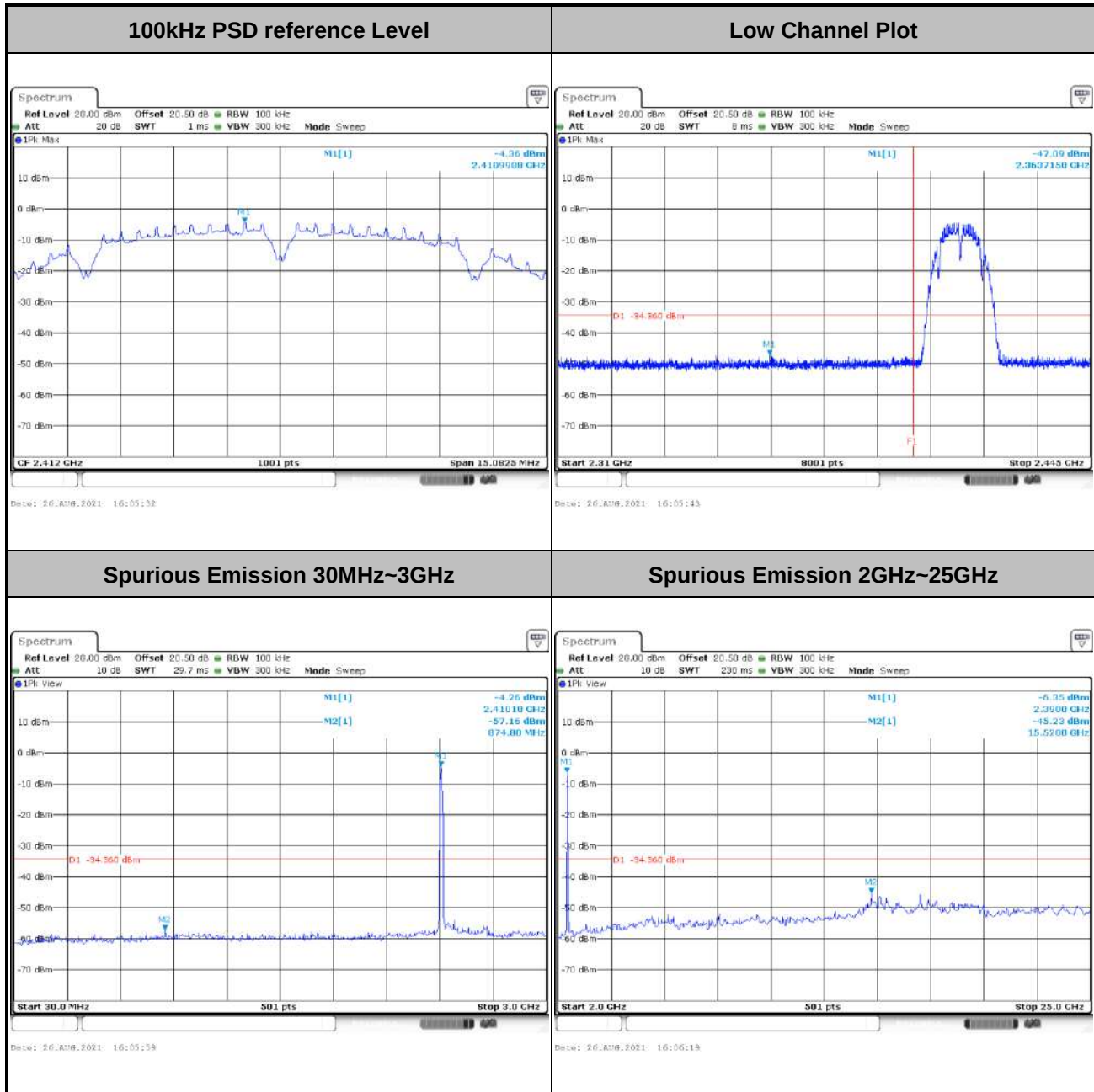
Test Mode :	802.11n HT40	Test Channel :	09
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Number of TX = 2, Ant. 1 (Measured)

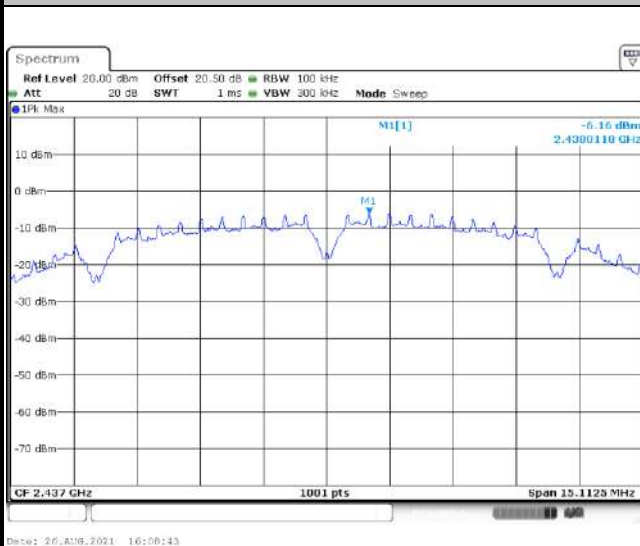
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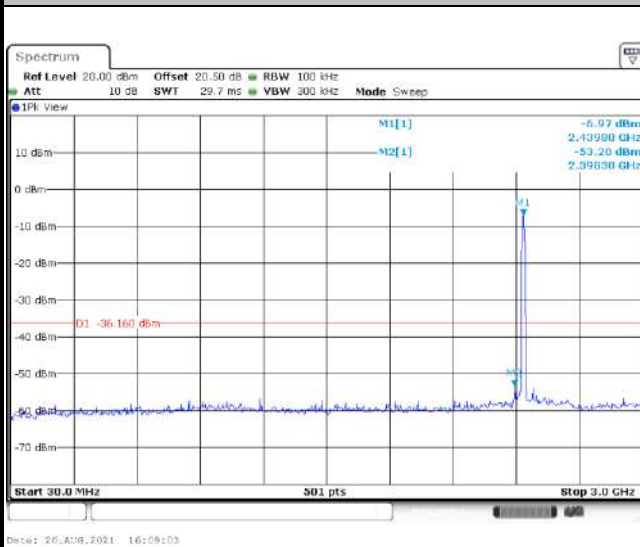
Test Mode :	802.11b	Test Channel :	06
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100kHz PSD reference Level

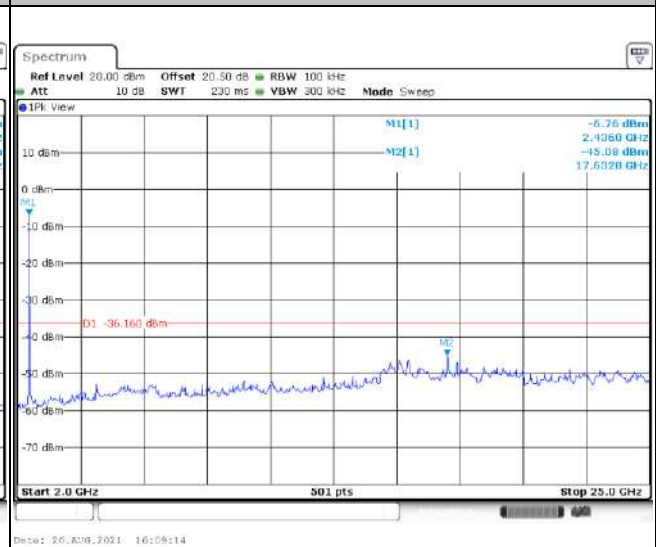


Mid Channel Plot

Spurious Emission 30MHz~3GHz

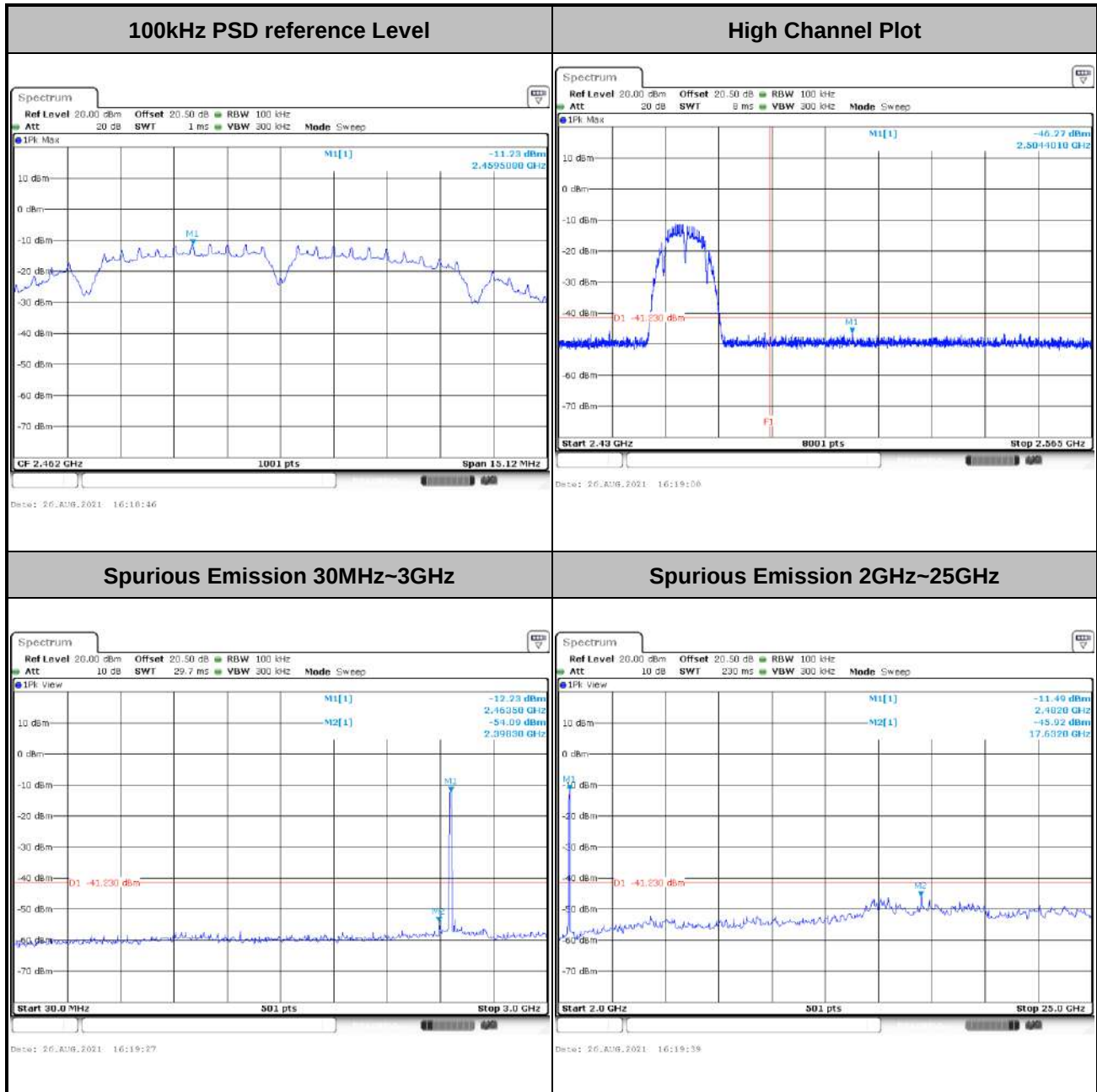


Spurious Emission 2GHz~25GHz



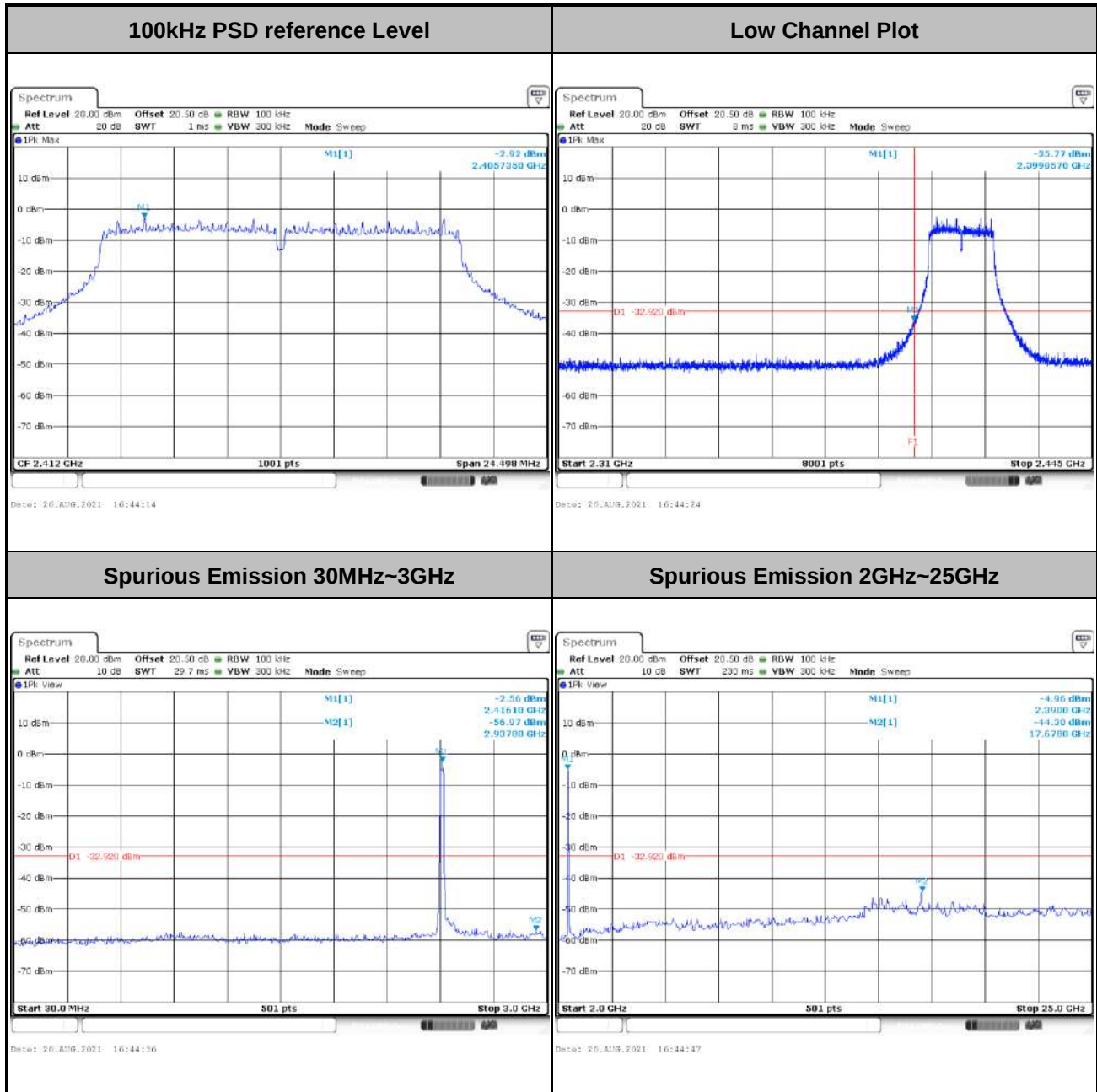


Test Mode :	802.11b	Test Channel :	11
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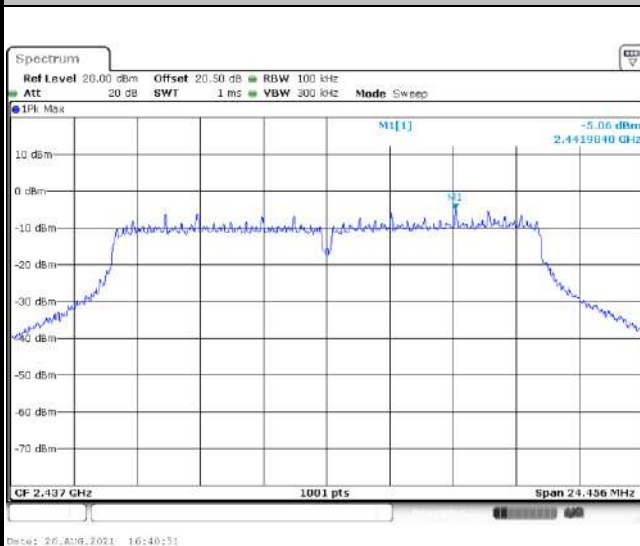
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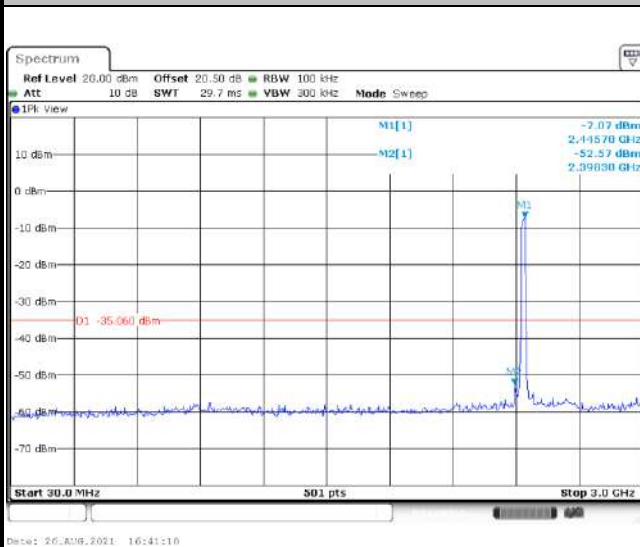
Test Mode :	802.11g	Test Channel :	06
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100kHz PSD reference Level

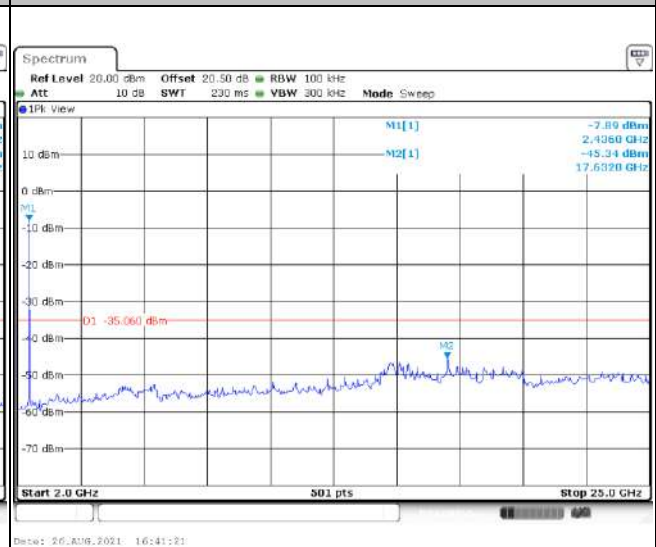


Mid Channel Plot

Spurious Emission 30MHz~3GHz

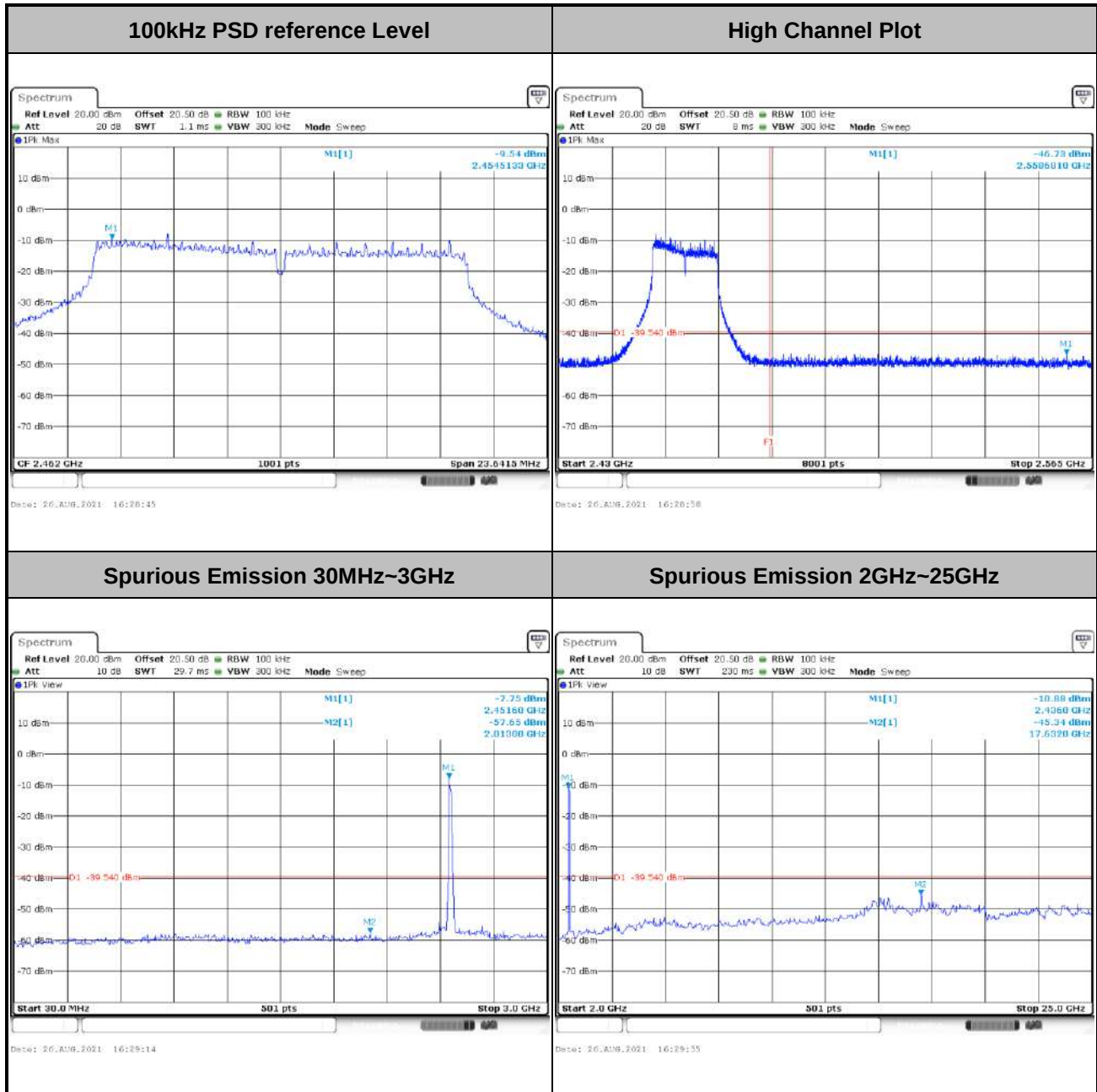


Spurious Emission 2GHz~25GHz



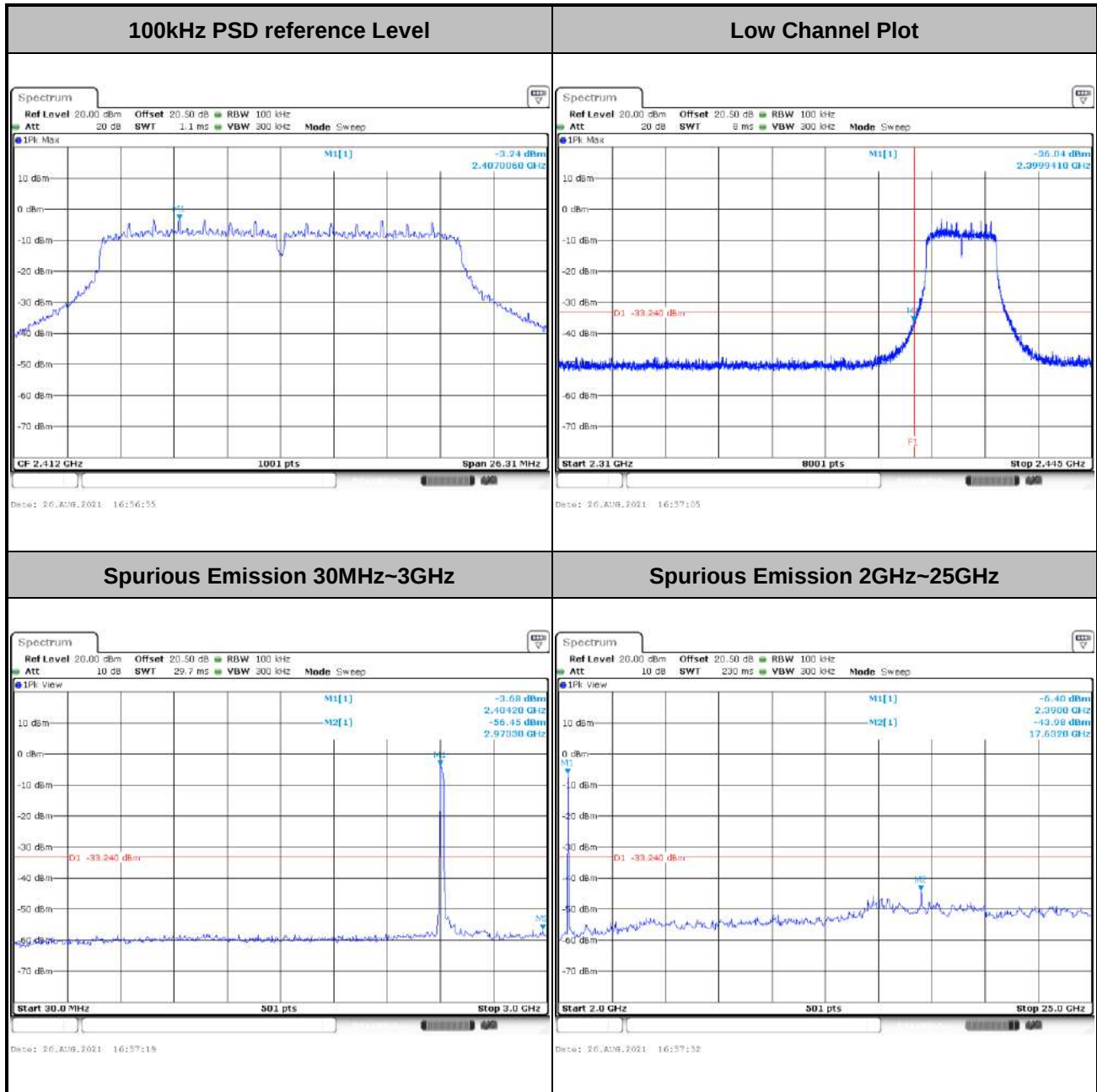


Test Mode :	802.11g	Test Channel :	11
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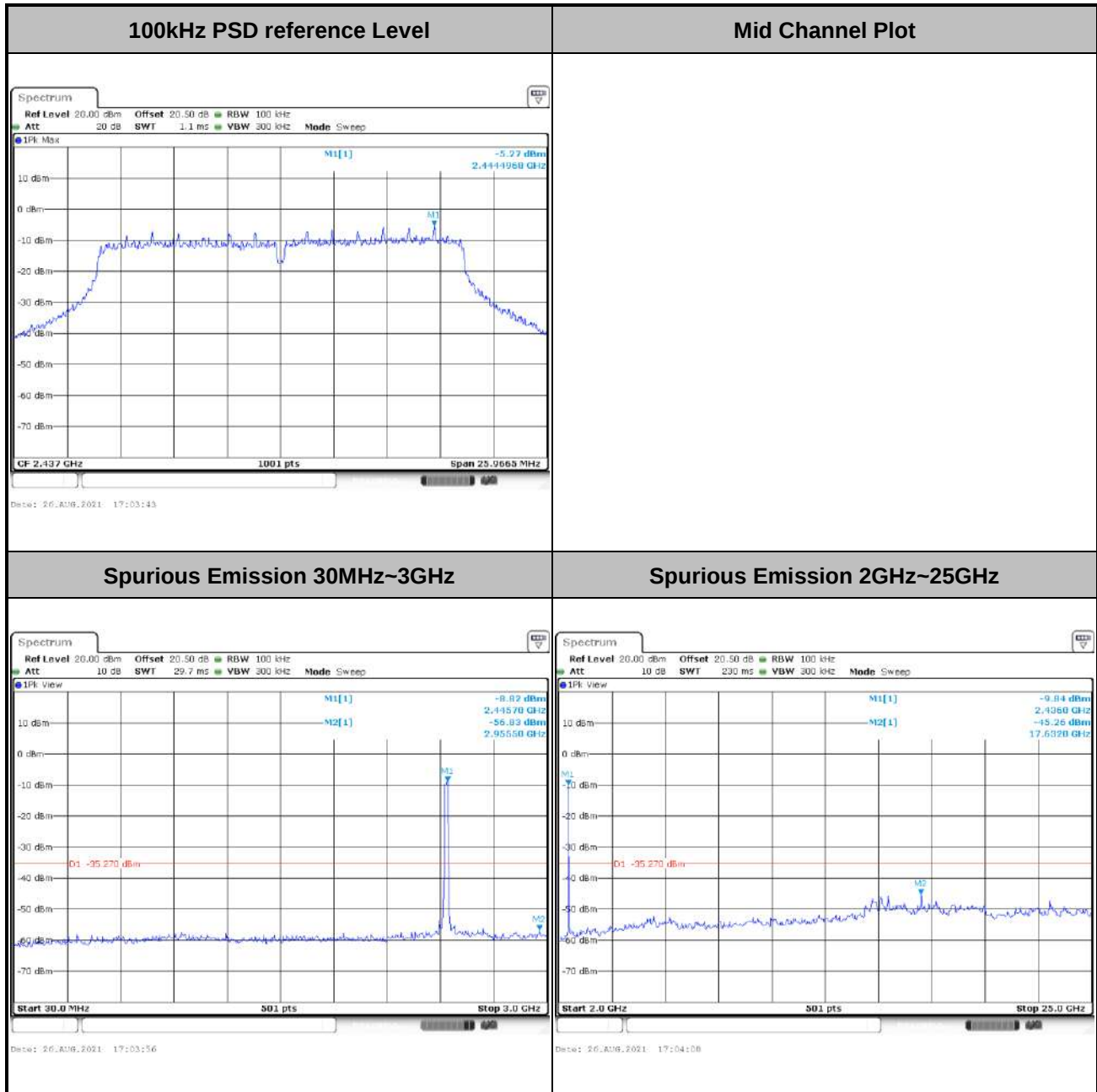


Test Mode :	802.11n HT20	Test Channel :	01
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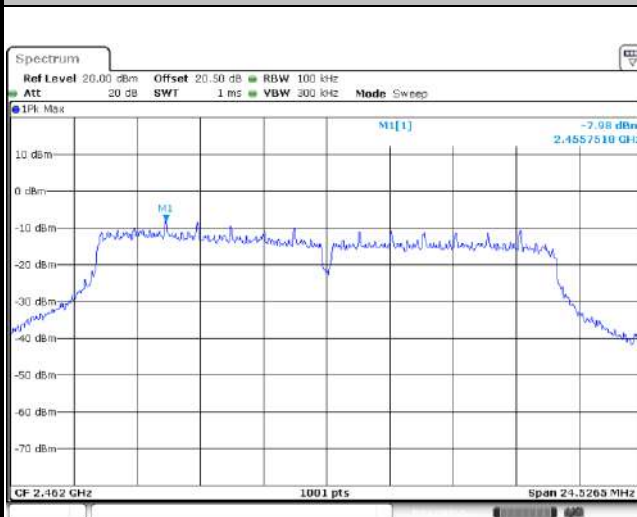
Test Mode :	802.11n HT20	Test Channel :	06
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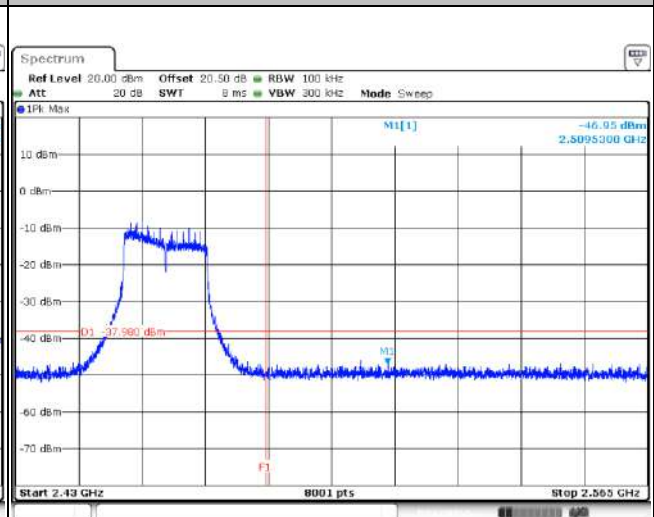
Test Mode :	802.11n HT20	Test Channel :	11
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100kHz PSD reference Level



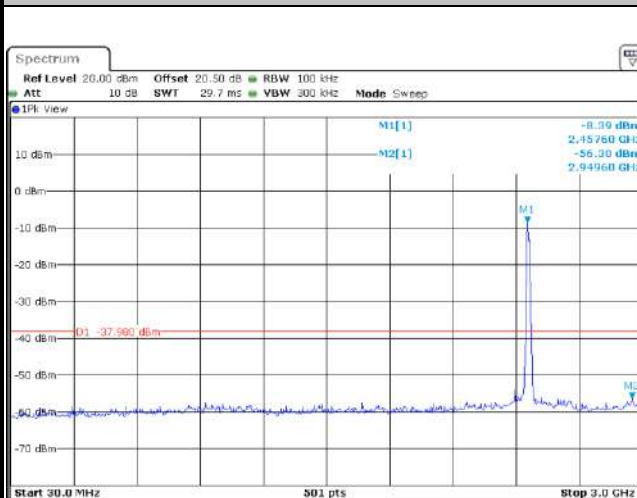
Date: 26.AUG.2021 17:13:03

High Channel Plot



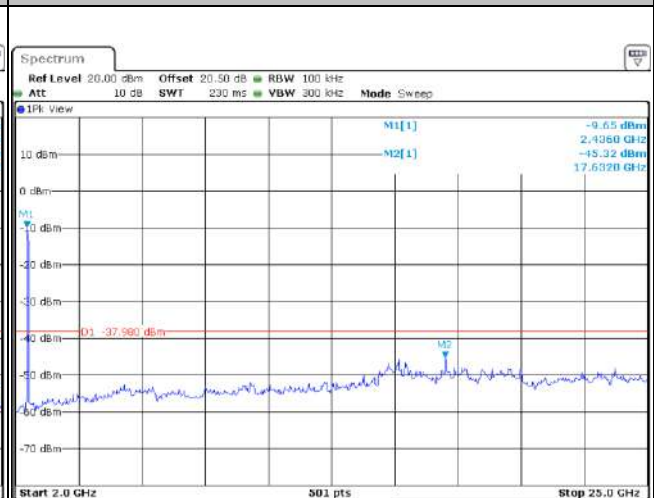
Date: 26.AUG.2021 17:13:15

Spurious Emission 30MHz~3GHz



Date: 26.AUG.2021 17:13:32

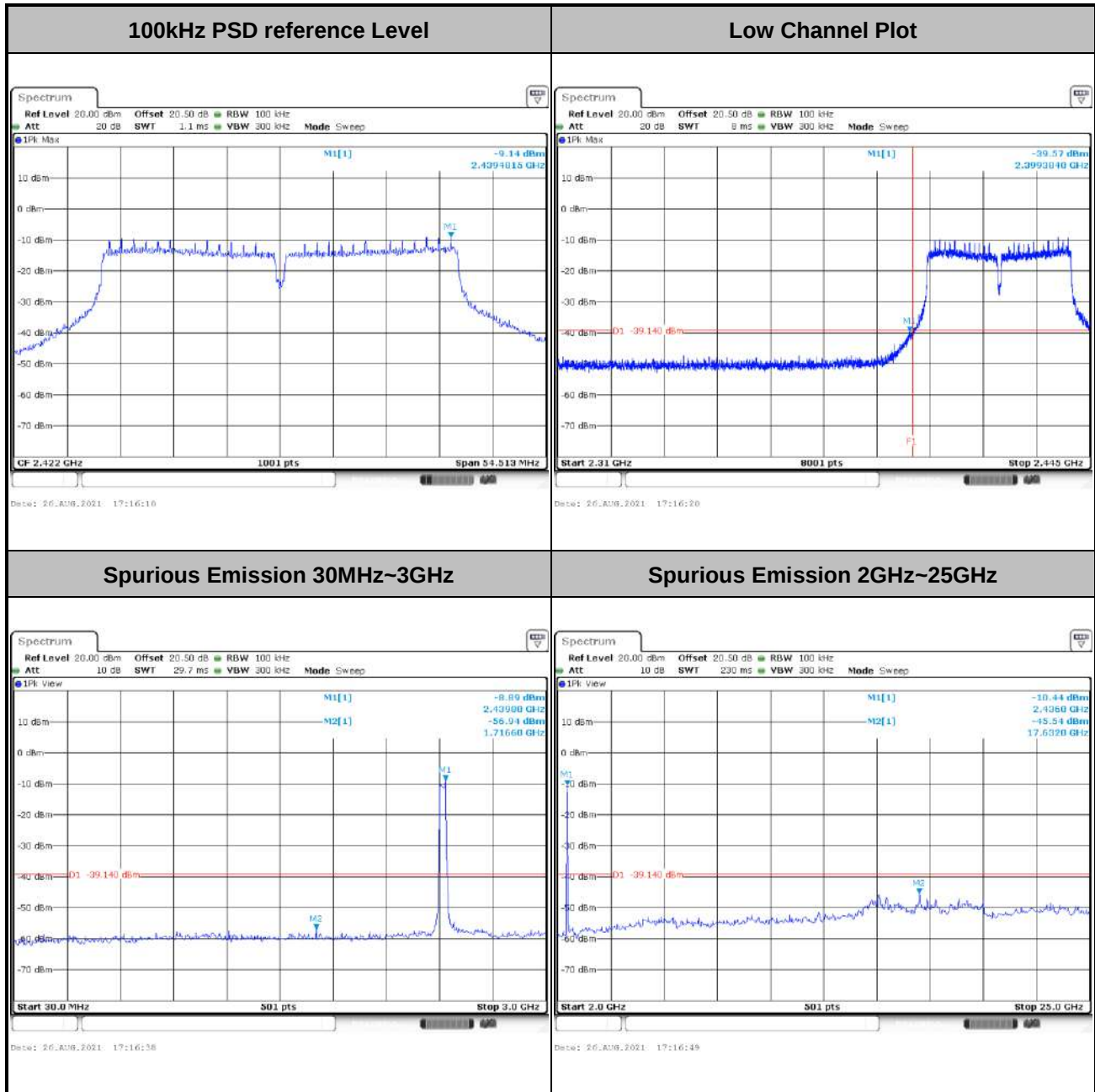
Spurious Emission 2GHz~25GHz



Date: 26.AUG.2021 17:13:54

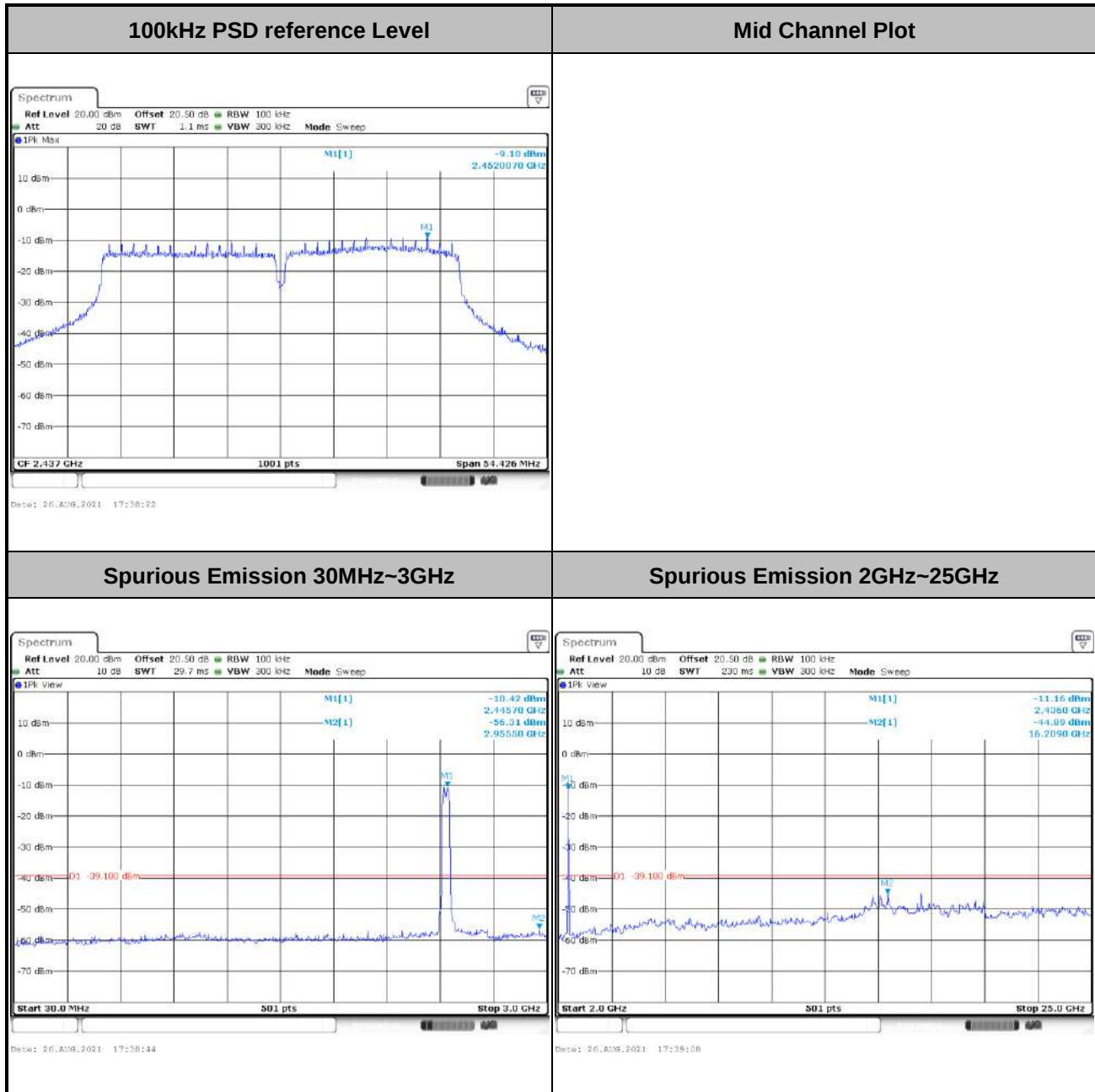


Test Mode :	802.11n HT40	Test Channel :	03
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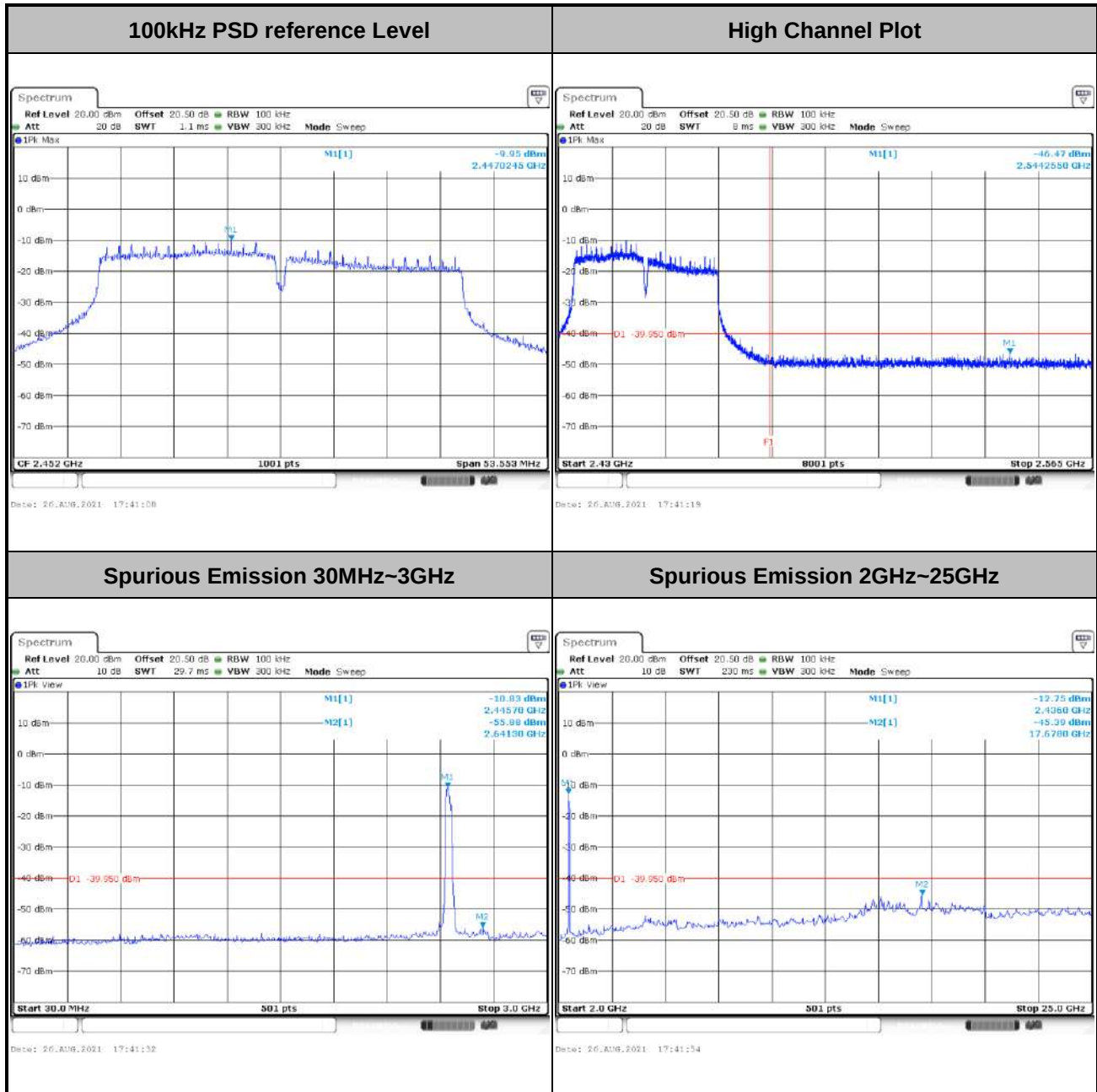


Test Mode :	802.11n HT40	Test Channel :	06
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Test Mode :	802.11n HT40	Test Channel :	09
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3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

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

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

3.5.2 Measuring Instruments

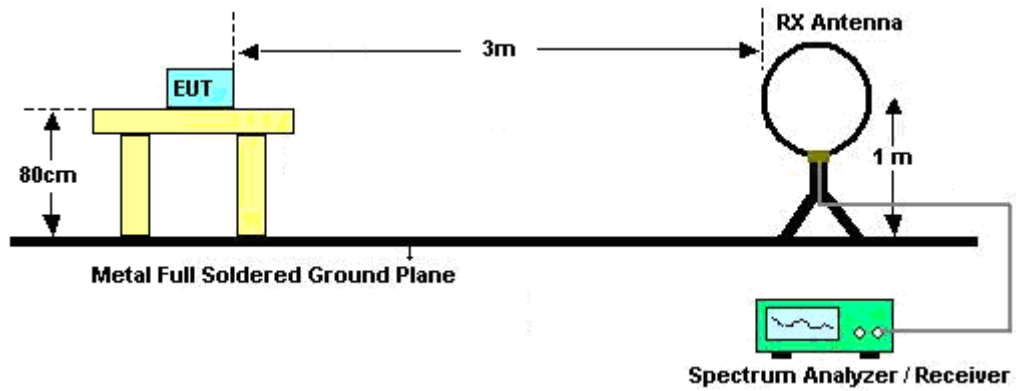
See list of measuring equipment of this test report.

3.5.3 Test Procedures

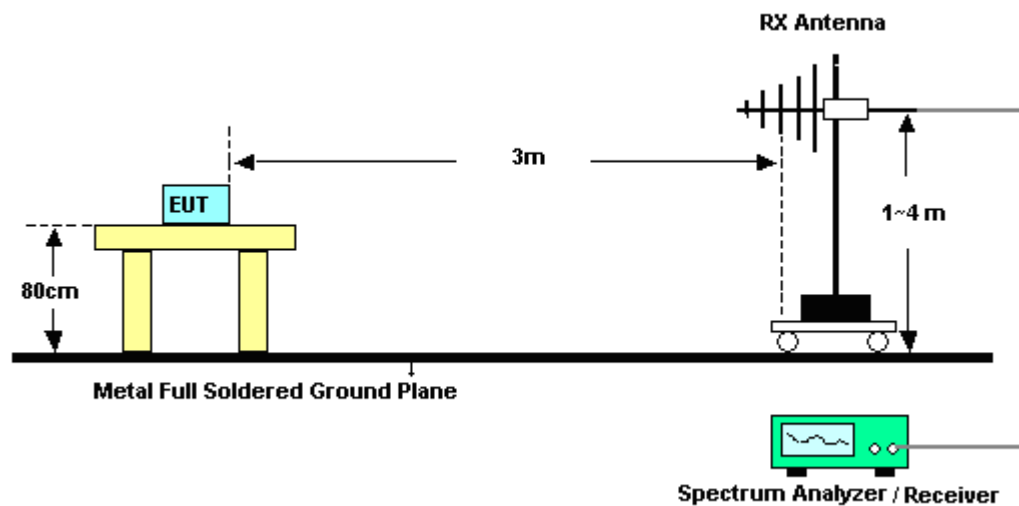
1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For testing below 1 GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1 GHz, the emission level of the EUT in peak mode was 20 dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW = 100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3 MHz for $f \geq 1$ GHz for peak measurement.
For average measurement:
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

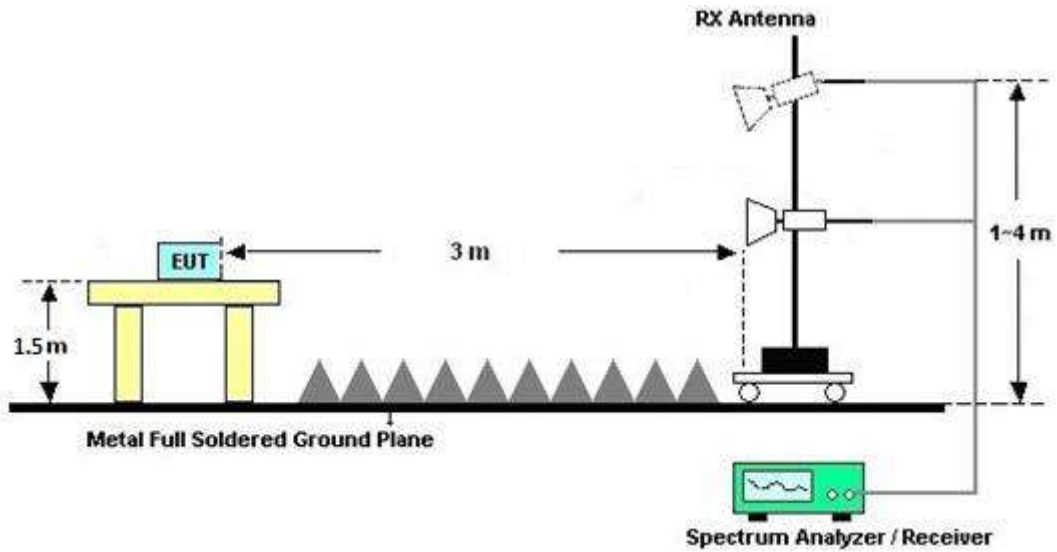
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated test above 1GHz



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

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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

Frequency of Emission (MHz)	Conducted Limit (dB μ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

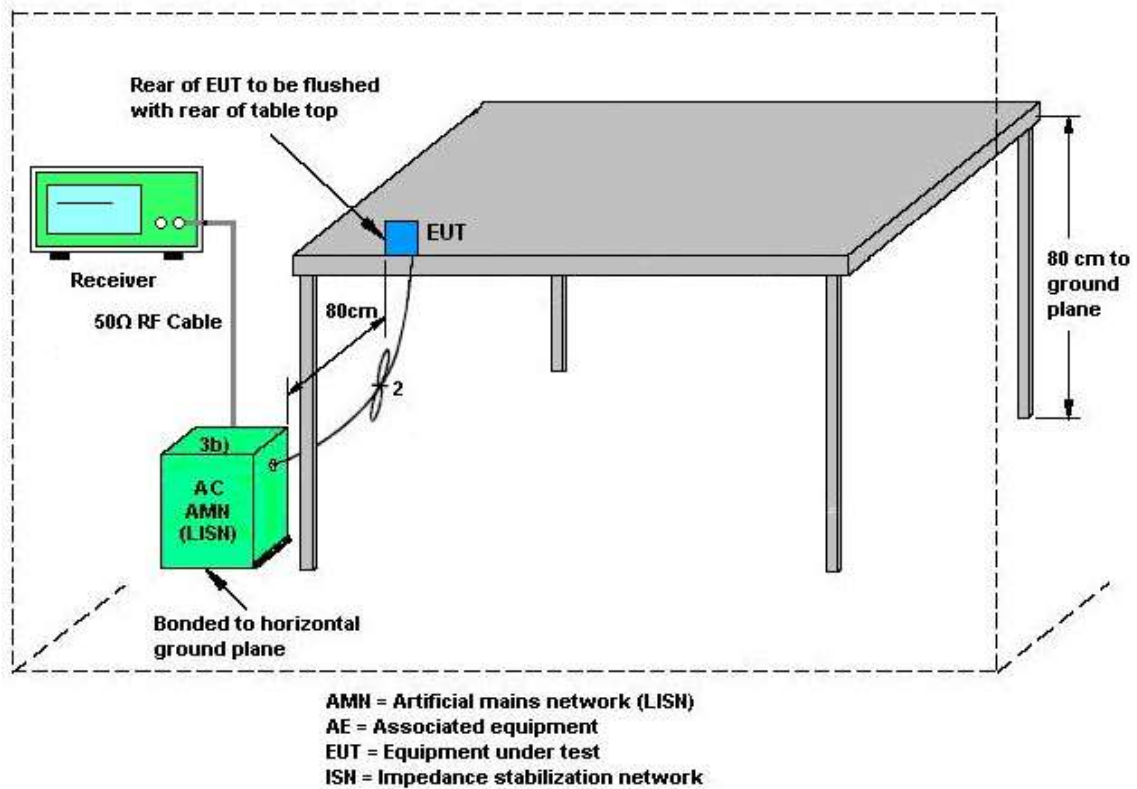
3.6.2 Measuring Instruments

See list of measuring equipment of this test report.

3.6.3 Test Procedures

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

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.7 Antenna Requirements

3.7.1 Standard Applicable

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

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

<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	2.44	2.44	2.44	5.45	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	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Jan. 04, 2021	Aug. 06, 2021~ Aug. 24, 2021	Jan. 03, 2022	Radiation (03CH16-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00802N1D01N -06	47020 & 06	30MHz to 1GHz	Oct. 11, 2020	Aug. 06, 2021~ Aug. 24, 2021	Oct. 10, 2021	Radiation (03CH16-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1522	1G~18GHz	Sep. 29, 2020	Aug. 06, 2021~ Aug. 24, 2021	Sep. 28, 2021	Radiation (03CH16-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	00993	18GHz ~40GHz	Nov. 19, 2020	Aug. 06, 2021~ Aug. 24, 2021	Nov. 18, 2021	Radiation (03CH16-HY)
Amplifier	SONOMA	310N	371607	9kHz~1G	Jul. 05, 2021	Aug. 06, 2021~ Aug. 24, 2021	Jul. 04, 2022	Radiation (03CH16-HY)
Amplifier	Jet-Power	JPA0118-55-30 3	17100018000 54001	1-18GHz	Jun. 16, 2021	Aug. 06, 2021~ Aug. 24, 2021	Jun. 15, 2022	Radiation (03CH16-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz~40GHz	Dec. 11, 2020	Aug. 06, 2021~ Aug. 24, 2021	Dec. 10, 2021	Radiation (03CH16-HY)
Preamplifier	Keysight	83017A	MY53270264	1GHz~26.5GHz	Dec. 10, 2020	Aug. 06, 2021~ Aug. 24, 2021	Dec. 09, 2021	Radiation (03CH16-HY)
EMI Test Receiver	Keysight	N9038A	MY57290111	3Hz~26.5GHz	Dec. 11, 2020	Aug. 06, 2021~ Aug. 24, 2021	Dec. 10, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11680/4P E	NA	Aug. 29, 2020	Aug. 06, 2021~ Aug. 24, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11688/4P E	NA	Aug. 29, 2020	Aug. 06, 2021~ Aug. 24, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	EC-A5-300-5 757	NA	Aug. 29, 2020	Aug. 06, 2021~ Aug. 24, 2021	Aug. 28, 2021	Radiation (03CH16-HY)
Software	Audix	E3 6.2009-8-24	RK-001136	N/A	N/A	Aug. 06, 2021~ Aug. 24, 2021	N/A	Radiation (03CH16-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Aug. 06, 2021~ Aug. 24, 2021	N/A	Radiation (03CH16-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Aug. 06, 2021~ Aug. 24, 2021	N/A	Radiation (03CH16-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Aug. 06, 2021~ Aug. 24, 2021	N/A	Radiation (03CH16-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 01, 2021	Aug. 25, 2021~ Aug. 26, 2021	Feb. 28, 2022	Conducted (TH02-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO 12	10MHz~6GHz	Dec. 16, 2020	Aug. 25, 2021~ Aug. 26, 2021	Dec. 15, 2021	Conducted (TH02-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101565	10Hz ~ 40GHz	Nov. 13, 2020	Aug. 25, 2021~ Aug. 26, 2021	Nov. 12, 2021	Conducted (TH02-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2021	Aug. 25, 2021~ Aug. 26, 2021	Mar. 16, 2022	Conducted (TH02-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Mar. 31, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 30, 2020	Mar. 31, 2021	Nov. 29, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Mar. 31, 2021	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Mar. 31, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Mar. 31, 2021	N/A	Conduction (CO05-HY)
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100851	N/A	Feb. 25, 2021	Mar. 31, 2021	Feb. 24, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Mar. 31, 2021	Dec. 30, 2021	Conduction (CO05-HY)



5 Uncertainty of Evaluation

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

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

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.8 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.6 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer:	Richard Qiu	Temperature:	24.5~25.1	°C
Test Date:	2021/8/25~2021/8/26	Relative Humidity:	46.6~50.7	%

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	14.04	14.14	10.06	10.06	0.50	Pass
11b	1Mbps	2	6	2437	14.34	14.34	10.06	10.08	0.50	Pass
11b	1Mbps	2	11	2462	14.89	14.79	10.08	10.08	0.50	Pass
11g	6Mbps	2	1	2412	18.38	18.03	16.32	16.33	0.50	Pass
11g	6Mbps	2	6	2437	18.93	18.38	16.32	16.30	0.50	Pass
11g	6Mbps	2	11	2462	19.58	18.88	15.79	15.76	0.50	Pass
HT20	MCS0	2	1	2412	19.28	19.13	17.31	17.54	0.50	Pass
HT20	MCS0	2	6	2437	19.88	19.48	17.33	17.31	0.50	Pass
HT20	MCS0	2	11	2462	20.38	20.03	16.37	16.35	0.50	Pass
HT40	MCS0	2	3	2422	38.96	38.66	36.34	36.34	0.50	Pass
HT40	MCS0	2	6	2437	37.86	37.66	35.66	36.28	0.50	Pass
HT40	MCS0	2	9	2452	38.06	37.86	35.46	35.70	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant0	Ant1	SUM	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	Ant0	Ant1	
11b	1Mbps	2	1	2412	5.30	5.30	8.31	30.00		2.44		10.75		36.00		Pass
11b	1Mbps	2	6	2437	3.80	3.80	6.81	30.00		2.44		9.25		36.00		Pass
11b	1Mbps	2	11	2462	-2.50	-2.50	0.51	30.00		2.44		2.95		36.00		Pass
11g	6Mbps	2	1	2412	9.60	9.70	12.66	30.00		2.44		15.10		36.00		Pass
11g	6Mbps	2	6	2437	5.90	6.10	9.01	30.00		2.44		11.45		36.00		Pass
11g	6Mbps	2	11	2462	2.00	2.30	5.16	30.00		2.44		7.60		36.00		Pass
HT20	MCS0	2	1	2412	8.60	8.80	11.71	30.00		2.44		14.15		36.00		Pass
HT20	MCS0	2	6	2437	5.20	5.50	8.36	30.00		2.44		10.80		36.00		Pass
HT20	MCS0	2	11	2462	2.60	2.80	5.71	30.00		2.44		8.15		36.00		Pass
HT40	MCS0	2	3	2422	4.20	4.90	7.57	30.00		2.44		10.01		36.00		Pass
HT40	MCS0	2	6	2437	4.90	5.00	7.96	30.00		2.44		10.40		36.00		Pass
HT40	MCS0	2	9	2452	3.40	2.70	6.07	30.00		2.44		8.51		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	-17.97	-18.29	-14.96	5.45		8.00		Pass
11b	1Mbps	2	6	2437	-19.51	-20.40	-16.50	5.45		8.00		Pass
11b	1Mbps	2	11	2462	-25.43	-25.58	-22.42	5.45		8.00		Pass
11g	6Mbps	2	1	2412	-9.08	-15.54	-6.07	5.45		8.00		Pass
11g	6Mbps	2	6	2437	-18.24	-18.90	-15.23	5.45		8.00		Pass
11g	6Mbps	2	11	2462	-21.73	-20.94	-17.93	5.45		8.00		Pass
HT20	MCS0	2	1	2412	-17.21	-17.03	-14.02	5.45		8.00		Pass
HT20	MCS0	2	6	2437	-19.68	-20.01	-16.67	5.45		8.00		Pass
HT20	MCS0	2	11	2462	-22.40	-21.80	-18.79	5.45		8.00		Pass
HT40	MCS0	2	3	2422	-24.14	-23.10	-20.09	5.45		8.00		Pass
HT40	MCS0	2	6	2437	-23.59	-22.65	-19.64	5.45		8.00		Pass
HT40	MCS0	2	9	2452	-24.42	-25.49	-21.41	5.45		8.00		Pass

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



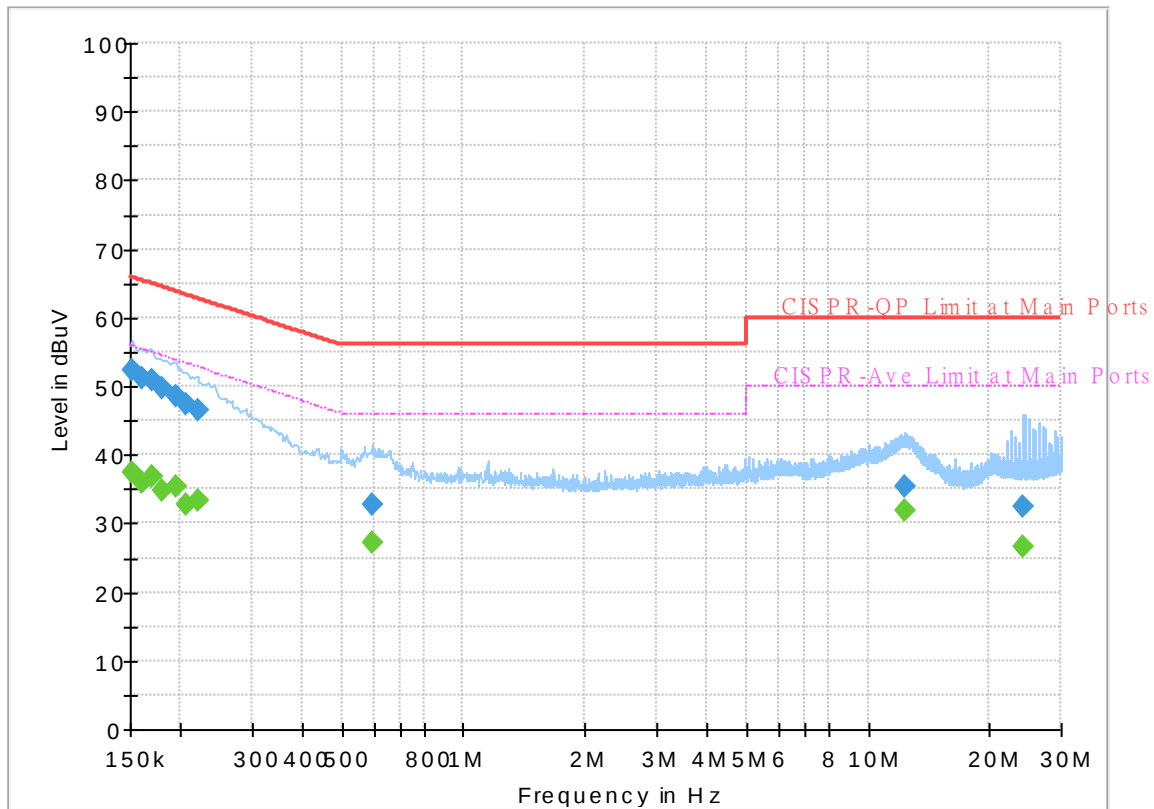
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Tom Lee	Temperature :	23~26℃
		Relative Humidity :	40~50%

EUT Information

Report NO : 111402
Test Mode : Mode 1
Test Voltage : 120Vac/60Hz
Phase : Line

Full Spectrum



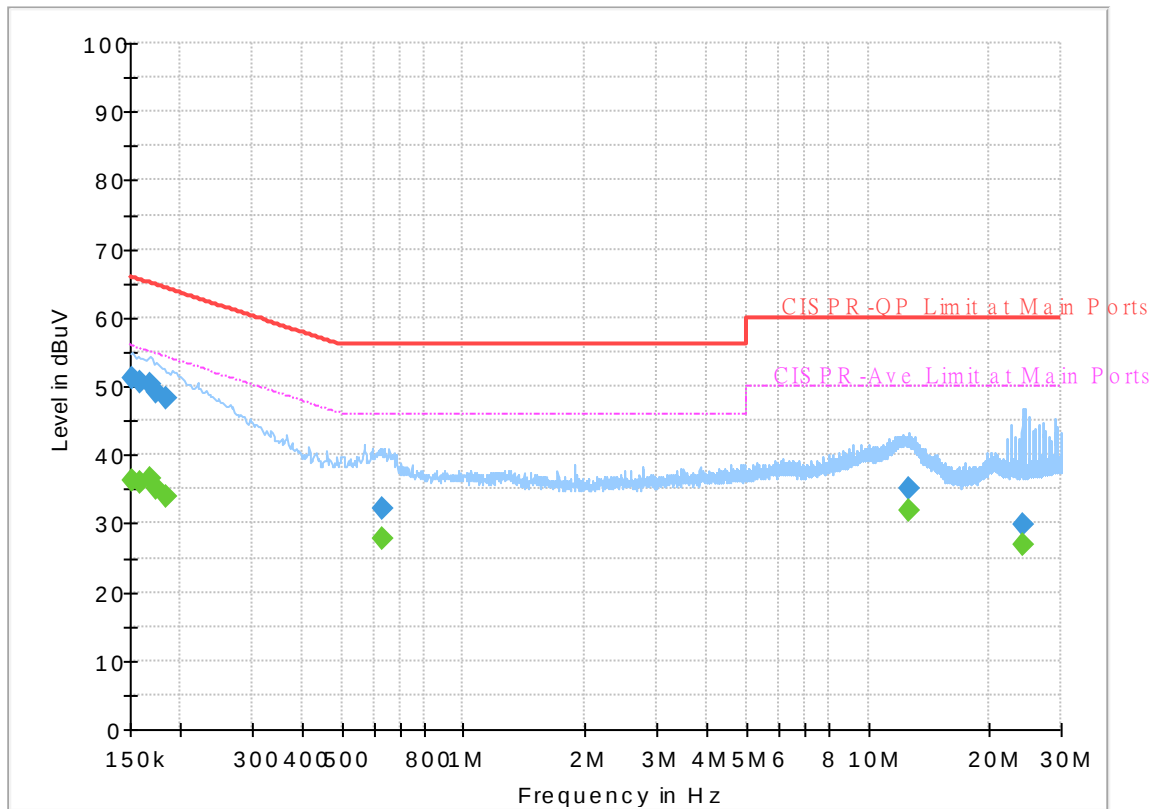
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	37.28	55.88	18.60	L1	OFF	19.7
0.152250	52.41	---	65.88	13.47	L1	OFF	19.7
0.161250	---	36.04	55.40	19.36	L1	OFF	19.7
0.161250	51.03	---	65.40	14.37	L1	OFF	19.7
0.170250	---	36.96	54.95	17.99	L1	OFF	19.7
0.170250	50.96	---	64.95	13.99	L1	OFF	19.7
0.179250	---	34.76	54.52	19.76	L1	OFF	19.7
0.179250	49.67	---	64.52	14.85	L1	OFF	19.7
0.195000	---	35.31	53.82	18.51	L1	OFF	19.7
0.195000	48.52	---	63.82	15.30	L1	OFF	19.7
0.206250	---	32.73	53.36	20.63	L1	OFF	19.7
0.206250	47.23	---	63.36	16.13	L1	OFF	19.7
0.219750	---	33.23	52.83	19.60	L1	OFF	19.7
0.219750	46.37	---	62.83	16.46	L1	OFF	19.7
0.595500	---	27.33	46.00	18.67	L1	OFF	20.0
0.595500	32.66	---	56.00	23.34	L1	OFF	20.0
12.302250	---	31.92	50.00	18.08	L1	OFF	20.3
12.302250	35.34	---	60.00	24.66	L1	OFF	20.3
24.040500	---	26.50	50.00	23.50	L1	OFF	20.7
24.040500	32.48	---	60.00	27.52	L1	OFF	20.7

EUT Information

Report NO : 111402
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	36.28	55.88	19.60	N	OFF	19.7
0.152250	51.04	---	65.88	14.84	N	OFF	19.7
0.159000	---	35.89	55.52	19.63	N	OFF	19.7
0.159000	50.54	---	65.52	14.98	N	OFF	19.7
0.168000	---	36.47	55.06	18.59	N	OFF	19.7
0.168000	50.18	---	65.06	14.88	N	OFF	19.7
0.174750	---	34.96	54.73	19.77	N	OFF	19.7
0.174750	49.10	---	64.73	15.63	N	OFF	19.7
0.183750	---	33.88	54.31	20.43	N	OFF	19.7
0.183750	48.26	---	64.31	16.05	N	OFF	19.7
0.627000	---	27.73	46.00	18.27	N	OFF	20.0
0.627000	32.24	---	56.00	23.76	N	OFF	20.0
12.603750	---	31.77	50.00	18.23	N	OFF	20.3
12.603750	35.18	---	60.00	24.82	N	OFF	20.3
24.036000	---	26.80	50.00	23.20	N	OFF	20.8
24.036000	29.76	---	60.00	30.24	N	OFF	20.8



Appendix C. Radiated Spurious Emission

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

<Sample 1>

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preampl Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2387.28	56.67	-17.33	74	40.89	27.58	18.48	30.28	100	333	P	H
		2356.305	44.05	-9.95	54	28.16	27.76	18.42	30.29	100	333	A	H
	*	2412	94.99	-	-	79.26	27.48	18.52	30.27	100	333	P	H
	*	2412	91.99	-	-	76.26	27.48	18.52	30.27	100	333	A	H
													H
													H
		2323.755	56.25	-17.75	74	40.34	27.85	18.36	30.3	190	210	P	V
		2390	44.23	-9.77	54	28.47	27.56	18.48	30.28	190	210	A	V
	*	2412	105.6	-	-	89.87	27.48	18.52	30.27	190	210	P	V
	*	2412	102.4	-	-	86.67	27.48	18.52	30.27	190	210	A	V
													V
													V
802.11b CH 06 2437MHz		2338.7	56.62	-17.38	74	40.71	27.82	18.39	30.3	100	307	P	H
		2349.76	44.17	-9.83	54	28.25	27.8	18.41	30.29	100	307	A	H
	*	2437	87.83	-	-	72.1	27.43	18.57	30.27	100	307	P	H
	*	2437	85.08	-	-	69.35	27.43	18.57	30.27	100	307	A	H
		2498.32	56.25	-17.75	74	40.41	27.4	18.69	30.25	100	307	P	H
		2492.65	44.32	-9.68	54	28.49	27.4	18.68	30.25	100	307	A	H
		2349.76	56.59	-17.41	74	40.67	27.8	18.41	30.29	230	99	P	V
		2320.78	44.12	-9.88	54	28.21	27.86	18.35	30.3	230	99	A	V
	*	2437	102.65	-	-	86.92	27.43	18.57	30.27	230	99	P	V
	*	2437	99.43	-	-	83.7	27.43	18.57	30.27	230	99	A	V
		2495.45	56.76	-17.24	74	40.92	27.4	18.69	30.25	230	99	P	V
		2483.62	44.88	-9.12	54	29.07	27.4	18.66	30.25	230	99	A	V



802.11b CH 11 2462MHz	*	2462	87.22	-	-	71.46	27.4	18.62	30.26	119	331	P	H
	*	2462	83.97	-	-	68.21	27.4	18.62	30.26	119	331	A	H
		2495.44	56.4	-17.6	74	40.56	27.4	18.69	30.25	119	331	P	H
		2496.64	44.31	-9.69	54	28.47	27.4	18.69	30.25	119	331	A	H
													H
													H
	*	2462	97.63	-	-	81.87	27.4	18.62	30.26	244	255	P	V
	*	2462	94.35	-	-	78.59	27.4	18.62	30.26	244	255	A	V
		2488.68	57.25	-16.75	74	41.43	27.4	18.67	30.25	244	255	P	V
		2483.68	44.62	-9.38	54	28.81	27.4	18.66	30.25	244	255	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	42.46	-31.54	74	56.03	31.15	13.35	58.07	100	0	P	H
													H
													H
													H
													H
													H
		4824	54.11	-19.89	74	67.68	31.15	13.35	58.07	210	60	P	V
		4824	52.64	-1.36	54	66.21	31.15	13.35	58.07	210	60	A	V
													V
													V
													V
													V
													V
													V
802.11b CH 06 2437MHz		4874	40.4	-33.6	74	53.95	31.15	13.35	58.05	100	0	P	H
		7311	44.17	-29.83	74	49.39	36.42	16.32	57.96	100	0	P	H
													H
													H
													H
													H
		4874	53.46	-20.54	74	67.01	31.15	13.35	58.05	224	187	P	V
		4874	52.41	-1.59	54	65.96	31.15	13.35	58.05	224	187	A	V
		7311	45.32	-28.68	74	50.54	36.42	16.32	57.96	100	0	P	V
													V
													V
													V
													V
													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)
802.11b CH 11 2462MHz		4924	41.2	-32.8	74	54.7	31.2	13.33	58.03	100	0	P	H
		7386	47.81	-26.19	74	52.76	36.43	16.6	57.98	100	0	P	H
													H
													H
													H
													H
		4924	51.67	-22.33	74	65.17	31.2	13.33	58.03	211	180	P	V
		4924	49.31	-4.69	54	62.81	31.2	13.33	58.03	211	180	A	V
		7386	47.69	-26.31	74	52.64	36.43	16.6	57.98	100	0	P	V
													V
													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		2350.845	57.21	-16.79	74	41.3	27.79	18.41	30.29	100	335	P	H
		2388.33	46.13	-7.87	54	30.36	27.57	18.48	30.28	100	335	A	H
	*	2412	100.38	-	-	84.65	27.48	18.52	30.27	100	335	P	H
	*	2412	92.77	-	-	77.04	27.48	18.52	30.27	100	335	A	H
													H
													H
		2389.59	63.76	-10.24	74	48	27.56	18.48	30.28	188	210	P	V
		2389.59	52.86	-1.14	54	37.1	27.56	18.48	30.28	188	210	A	V
	*	2412	109.86	-	-	94.13	27.48	18.52	30.27	188	210	P	V
	*	2412	102.7	-	-	86.97	27.48	18.52	30.27	188	210	A	V
													V
													V
802.11g CH 06 2437MHz		2366.84	56.45	-17.55	74	40.6	27.7	18.44	30.29	100	334	P	H
		2369.08	45.38	-8.62	54	29.54	27.69	18.44	30.29	100	334	A	H
	*	2437	97.6	-	-	81.87	27.43	18.57	30.27	100	334	P	H
	*	2437	90.04	-	-	74.31	27.43	18.57	30.27	100	334	A	H
		2498.46	56.13	-17.87	74	40.29	27.4	18.69	30.25	100	334	P	H
		2490.27	45.51	-8.49	54	29.68	27.4	18.68	30.25	100	334	A	H
		2322.04	57.02	-16.98	74	41.1	27.86	18.36	30.3	186	218	P	V
		2322.18	45.56	-8.44	54	29.64	27.86	18.36	30.3	186	218	A	V
	*	2437	107.08	-	-	91.35	27.43	18.57	30.27	186	218	P	V
	*	2437	99.66	-	-	83.93	27.43	18.57	30.27	186	218	A	V
		2493.77	56.48	-17.52	74	40.65	27.4	18.68	30.25	186	218	P	V
		2484.32	46.26	-7.74	54	30.45	27.4	18.66	30.25	186	218	A	V



802.11g CH 11 2462MHz	*	2462	93.78	-	-	78.02	27.4	18.62	30.26	122	331	P	H
	*	2462	87.04	-	-	71.28	27.4	18.62	30.26	122	331	A	H
		2495.96	56.45	-17.55	74	40.61	27.4	18.69	30.25	122	331	P	H
		2484.64	45.7	-8.3	54	29.88	27.4	18.67	30.25	122	331	A	H
													H
													H
	*	2462	104.62	-	-	88.86	27.4	18.62	30.26	207	85	P	V
	*	2462	97.3	-	-	81.54	27.4	18.62	30.26	207	85	A	V
		2483.6	57.44	-16.56	74	41.63	27.4	18.66	30.25	207	85	P	V
		2483.64	46.89	-7.11	54	31.08	27.4	18.66	30.25	207	85	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	40.21	-33.79	74	53.78	31.15	13.35	58.07	100	0	P	H
													H
													H
													H
													H
													H
		4824	64.01	-9.99	74	77.58	31.15	13.35	58.07	221	240	P	V
		4824	52.85	-1.15	54	66.42	31.15	13.35	58.07	221	240	A	V
													V
													V
													V
													V
													V
802.11g CH 06 2437MHz		4874	43.9	-30.1	74	57.45	31.15	13.35	58.05	100	0	P	H
		7311	46.28	-27.72	74	51.5	36.42	16.32	57.96	100	0	P	H
													H
													H
													H
													H
		4874	64.14	-9.86	74	77.69	31.15	13.35	58.05	231	198	P	V
		4874	52.23	-1.77	54	65.78	31.15	13.35	58.05	231	198	A	V
		7311	59.95	-14.05	74	65.17	36.42	16.32	57.96	198	200	P	V
		7311	44.8	-9.2	54	50.02	36.42	16.32	57.96	198	200	A	V
													V
													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)
802.11g CH 11 2462MHz		4924	41.09	-32.91	74	54.59	31.2	13.33	58.03	100	0	P	H
		7386	48.18	-25.82	74	53.13	36.43	16.6	57.98	100	0	P	H
													H
													H
													H
													H
		4924	65.82	-8.18	74	79.32	31.2	13.33	58.03	210	204	P	V
		4924	52.88	-1.12	54	66.38	31.2	13.33	58.03	210	204	A	V
		7386	58.45	-15.55	74	63.4	36.43	16.6	57.98	189	210	P	V
		7386	44.31	-9.69	54	49.26	36.43	16.6	57.98	189	210	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 (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		2365.65	56.93	-17.07	74	41.07	27.71	18.44	30.29	338	312	P	H
		2389.905	46.02	-7.98	54	30.26	27.56	18.48	30.28	338	312	A	H
	*	2412	96.63	-	-	80.9	27.48	18.52	30.27	338	312	P	H
	*	2412	89.16	-	-	73.43	27.48	18.52	30.27	338	312	A	H
													H
													H
		2389.905	63.55	-10.45	74	47.79	27.56	18.48	30.28	219	210	P	V
		2390	52.44	-1.56	54	36.68	27.56	18.48	30.28	219	210	A	V
	*	2412	108.24	-	-	92.51	27.48	18.52	30.27	219	210	P	V
	*	2412	100.72	-	-	84.99	27.48	18.52	30.27	219	210	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2360.82	56.22	-17.78	74	40.34	27.74	18.43	30.29	121	332	P	H
		2320.64	45.37	-8.63	54	29.46	27.86	18.35	30.3	121	332	A	H
	*	2437	97.49	-	-	81.76	27.43	18.57	30.27	121	332	P	H
	*	2437	89.66	-	-	73.93	27.43	18.57	30.27	121	332	A	H
		2496.5	55.69	-18.31	74	39.85	27.4	18.69	30.25	121	332	P	H
		2491.81	45.8	-8.2	54	29.97	27.4	18.68	30.25	121	332	A	H
		2359.98	56.75	-17.25	74	40.87	27.74	18.43	30.29	190	196	P	V
		2349.2	45.32	-8.68	54	29.4	27.8	18.41	30.29	190	196	A	V
	*	2437	106.85	-	-	91.12	27.43	18.57	30.27	190	196	P	V
	*	2437	98.8	-	-	83.07	27.43	18.57	30.27	190	196	A	V
		2485.86	56.97	-17.03	74	41.15	27.4	18.67	30.25	190	196	P	V
		2484.18	45.91	-8.09	54	30.1	27.4	18.66	30.25	190	196	A	V



802.11n HT20 CH 11 2462MHz	*	2462	93.07	-	-	77.31	27.4	18.62	30.26	149	333	P	H
	*	2462	85.31	-	-	69.55	27.4	18.62	30.26	149	333	A	H
		2490.96	57.92	-16.08	74	42.09	27.4	18.68	30.25	149	333	P	H
		2485.76	45.7	-8.3	54	29.88	27.4	18.67	30.25	149	333	A	H
													H
													H
	*	2462	105	-	-	89.24	27.4	18.62	30.26	264	99	P	V
	*	2462	97.39	-	-	81.63	27.4	18.62	30.26	264	99	A	V
		2497.16	56.63	-17.37	74	40.79	27.4	18.69	30.25	264	99	P	V
		2483.56	46.63	-7.37	54	30.82	27.4	18.66	30.25	264	99	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	45.44	-28.56	74	59.01	31.15	13.35	58.07	100	0	P	H
													H
													H
													H
													H
													H
		4824	62.75	-11.25	74	76.32	31.15	13.35	58.07	227	242	P	V
		4824	50.67	-3.33	54	64.24	31.15	13.35	58.07	227	242	A	V
													V
													V
													V
													V
802.11n HT20 CH 06 2437MHz		4874	40.96	-33.04	74	54.51	31.15	13.35	58.05	100	0	P	H
		7311	47.14	-26.86	74	52.36	36.42	16.32	57.96	100	0	P	H
													H
													H
													H
													H
		4874	65	-9	74	78.55	31.15	13.35	58.05	251	197	P	V
		4874	52.37	-1.63	54	65.92	31.15	13.35	58.05	251	197	A	V
		7311	58.09	-15.91	74	63.31	36.42	16.32	57.96	204	206	P	V
		7311	42.76	-11.24	54	47.98	36.42	16.32	57.96	204	206	A	V
													V
													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)
802.11n HT20 CH 11 2462MHz		4924	41.83	-32.17	74	55.33	31.2	13.33	58.03	100	0	P	H
		7386	47.07	-26.93	74	52.02	36.43	16.6	57.98	100	0	P	H
													H
													H
													H
													H
		4924	64.96	-9.04	74	78.46	31.2	13.33	58.03	234	239	P	V
		4924	52.33	-1.67	54	65.83	31.2	13.33	58.03	234	239	A	V
		7386	58.74	-15.26	74	63.69	36.43	16.6	57.98	187	203	P	V
		7386	44.73	-9.27	54	49.68	36.43	16.6	57.98	187	203	A	V
													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 HT40 (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 HT40 CH 03 2422MHz		2356.2	57.26	-16.74	74	41.37	27.76	18.42	30.29	300	24	P	H
		2382.66	46.39	-7.61	54	30.6	27.6	18.47	30.28	300	24	A	H
	*	2422	90.06	-	-	74.33	27.46	18.54	30.27	300	24	P	H
	*	2422	82.72	-	-	66.99	27.46	18.54	30.27	300	24	A	H
		2485.02	56.55	-17.45	74	40.73	27.4	18.67	30.25	300	24	P	H
		2492.09	46.19	-7.81	54	30.36	27.4	18.68	30.25	300	24	A	H
		2389.52	61.02	-12.98	74	45.26	27.56	18.48	30.28	211	212	P	V
		2389.24	52.89	-1.11	54	37.13	27.56	18.48	30.28	211	212	A	V
	*	2422	102.12	-	-	86.39	27.46	18.54	30.27	211	212	P	V
	*	2422	94.87	-	-	79.14	27.46	18.54	30.27	211	212	A	V
		2487.4	58.2	-15.8	74	42.38	27.4	18.67	30.25	211	212	P	V
		2483.83	46.96	-7.04	54	31.15	27.4	18.66	30.25	211	212	A	V
802.11n HT40 CH 06 2437MHz		2383.64	56.47	-17.53	74	40.68	27.6	18.47	30.28	146	324	P	H
		2312.8	46.54	-7.46	54	30.63	27.87	18.34	30.3	146	324	A	H
	*	2437	94.21	-	-	78.48	27.43	18.57	30.27	146	324	P	H
	*	2437	86.51	-	-	70.78	27.43	18.57	30.27	146	324	A	H
		2484.18	55.91	-18.09	74	40.1	27.4	18.66	30.25	146	324	P	H
		2495.73	46.52	-7.48	54	30.68	27.4	18.69	30.25	146	324	A	H
		2388.68	57.42	-16.58	74	41.65	27.57	18.48	30.28	235	73	P	V
		2389.38	47.87	-6.13	54	32.11	27.56	18.48	30.28	235	73	A	V
	*	2437	104.39	-	-	88.66	27.43	18.57	30.27	235	73	P	V
	*	2437	97	-	-	81.27	27.43	18.57	30.27	235	73	A	V
		2486.07	61.79	-12.21	74	45.97	27.4	18.67	30.25	235	73	P	V
		2484.6	50.04	-3.96	54	34.23	27.4	18.66	30.25	235	73	A	V



802.11n HT40 CH 09 2452MHz		2343.6	55.92	-18.08	74	40	27.81	18.4	30.29	300	24	P	H
		2318.82	46.2	-7.8	54	30.29	27.86	18.35	30.3	300	24	A	H
	*	2452	90.31	-	-	74.57	27.4	18.6	30.26	300	24	P	H
	*	2452	82.87	-	-	67.13	27.4	18.6	30.26	300	24	A	H
		2494.82	56.18	-17.82	74	40.35	27.4	18.68	30.25	300	24	P	H
		2486.77	46.48	-7.52	54	30.66	27.4	18.67	30.25	300	24	A	H
		2325.54	56.54	-17.46	74	40.63	27.85	18.36	30.3	217	77	P	V
		2349.62	46.13	-7.87	54	30.21	27.8	18.41	30.29	217	77	A	V
	*	2452	101.2	-	-	85.46	27.4	18.6	30.26	217	77	P	V
	*	2452	93.6	-	-	77.86	27.4	18.6	30.26	217	77	A	V
		2485.16	61.72	-12.28	74	45.9	27.4	18.67	30.25	217	77	P	V
		2483.62	52.75	-1.25	54	36.94	27.4	18.66	30.25	217	77	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (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 HT40 CH 03 2422MHz		4844	40.43	-33.57	74	53.95	31.19	13.35	58.06	100	0	P	H
		7266	45.57	-28.43	74	51.1	36.26	16.16	57.95	100	0	P	H
													H
													H
													H
													H
		4844	55.28	-18.72	74	68.8	31.19	13.35	58.06	217	240	P	V
		4844	42.73	-11.27	54	56.25	31.19	13.35	58.06	217	240	A	V
		7266	45.08	-28.92	74	50.61	36.26	16.16	57.95	100	0	P	V
													V
													V
													V
802.11n HT40 CH 06 2437MHz		4874	41.86	-32.14	74	55.41	31.15	13.35	58.05	100	0	P	H
		7311	45.39	-28.61	74	50.61	36.42	16.32	57.96	100	0	P	H
													H
													H
													H
													H
		4874	63.24	-10.76	74	76.79	31.15	13.35	58.05	200	202	P	V
		4874	52.6	-1.4	54	66.15	31.15	13.35	58.05	200	202	A	V
		7311	56.16	-17.84	74	61.38	36.42	16.32	57.96	201	206	P	V
		7311	43.36	-10.64	54	48.58	36.42	16.32	57.96	201	206	A	V
													V
													V



802.11n HT40 CH 09 2452MHz		4904	43.1	-30.9	74	56.69	31.12	13.33	58.04	100	0	P	H
		7356	46.1	-27.9	74	51.09	36.49	16.49	57.97	100	0	P	H
													H
													H
													H
													H
		4904	58.83	-15.17	74	72.42	31.12	13.33	58.04	225	175	P	V
		4904	48.48	-5.52	54	62.07	31.12	13.33	58.04	225	175	A	V
		7356	49.79	-24.21	74	54.78	36.49	16.49	57.97	100	0	P	V
													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 802.11n HT40 (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 802.11n HT40 LF		120.21	42.71	-0.79	43.5	55.71	17.54	1.73	32.27	298	249	Q	H
		199.75	38.36	-5.14	43.5	53.2	15.09	2.33	32.26	161	319	Q	H
		280.26	37.75	-8.25	46	48.33	18.88	2.81	32.27	-	-	P	H
		359.8	33.11	-12.89	46	41.35	20.82	3.2	32.26	-	-	P	H
		440.31	36.63	-9.37	46	42.35	23.13	3.57	32.42	-	-	P	H
		519.85	39.7	-6.3	46	44.07	24.08	3.92	32.37	-	-	P	H
													H
													H
													H
													H
													H
													H
		120.21	36.11	-7.39	43.5	49.11	17.54	1.73	32.27	-	-	P	V
		199.75	35.9	-7.6	43.5	50.74	15.09	2.33	32.26	-	-	P	V
		280.26	35.98	-10.02	46	46.56	18.88	2.81	32.27	-	-	P	V
		440.31	36.58	-9.42	46	42.3	23.13	3.57	32.42	-	-	P	V
		519.85	40.1	-5.9	46	44.47	24.08	3.92	32.37	107	70	Q	V
		919.49	38.61	-7.39	46	34.93	29.71	5.38	31.41	-	-	P	V
													V
													V
												V	
												V	
												V	
												V	
												V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



<Sample 2>

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
0+1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 03 2422MHz		2310.7	55.85	-18.15	74	39.94	27.88	18.33	30.3	101	325	P	H
		2382.38	46.43	-7.57	54	30.63	27.61	18.47	30.28	101	325	A	H
	*	2422	89.86	-	-	74.13	27.46	18.54	30.27	101	325	P	H
	*	2422	82.22	-	-	66.49	27.46	18.54	30.27	101	325	A	H
		2483.76	56.68	-17.32	74	40.87	27.4	18.66	30.25	101	325	P	H
		2487.47	46.66	-7.34	54	30.84	27.4	18.67	30.25	101	325	A	H
		2318.54	56.58	-17.42	74	40.67	27.86	18.35	30.3	233	250	P	V
		2389.38	47.45	-6.55	54	31.69	27.56	18.48	30.28	233	250	A	V
	*	2422	101.5	-	-	85.77	27.46	18.54	30.27	233	250	P	V
	*	2422	93.82	-	-	78.09	27.46	18.54	30.27	233	250	A	V
		2497.06	56.59	-17.41	74	40.75	27.4	18.69	30.25	233	250	P	V
		2484.11	46.8	-7.2	54	30.99	27.4	18.66	30.25	233	250	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (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 HT40 CH 03 2422MHz		4844	40.8	-33.2	74	54.32	31.19	13.35	58.06	100	0	P	H
		7266	45.78	-28.22	74	51.31	36.26	16.16	57.95	100	0	P	H
													H
													H
													H
													H
		4844	45.49	-28.51	74	59.01	31.19	13.35	58.06	100	0	P	V
		7266	45.35	-28.65	74	50.88	36.26	16.16	57.95	100	0	P	V
													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 802.11n HT40 (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 802.11n HT40 LF		199.75	32	-11.5	43.5	46.84	15.09	2.33	32.26	-	-	P	H
		280.26	34.31	-11.69	46	44.89	18.88	2.81	32.27	-	-	P	H
		359.8	33.94	-12.06	46	42.18	20.82	3.2	32.26	-	-	P	H
		440.31	34.96	-11.04	46	40.68	23.13	3.57	32.42	-	-	P	H
		519.85	39.89	-6.11	46	44.26	24.08	3.92	32.37	100	0	P	H
		679.9	33.65	-12.35	46	34.93	26.62	4.53	32.43	-	-	P	H
													H
													H
													H
													H
													H
													H
		63.95	28.88	-11.12	40	48.02	11.94	1.19	32.27	-	-	P	V
		199.75	29.68	-13.82	43.5	44.52	15.09	2.33	32.26	-	-	P	V
		280.26	29.88	-16.12	46	40.46	18.88	2.81	32.27	-	-	P	V
		440.31	31.39	-14.61	46	37.11	23.13	3.57	32.42	-	-	P	V
		519.85	36.97	-9.03	46	41.34	24.08	3.92	32.37	100	0	P	V
		600.36	33.8	-12.2	46	36.46	25.65	4.28	32.59	-	-	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 :	Karl Hou and Andy Yang	Temperature :	20~25°C
		Relative Humidity :	50~60%

Note symbol

-L	Low channel location
-R	High channel location



<Sample 1>

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto

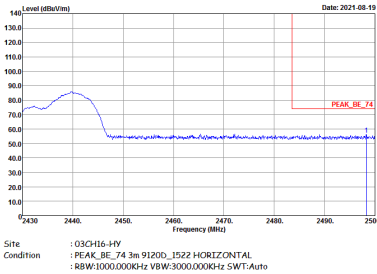
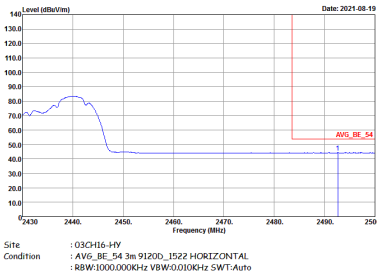


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

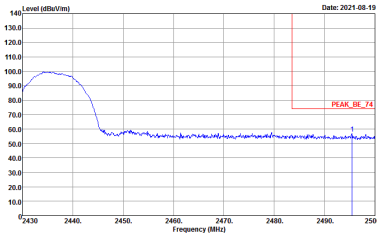
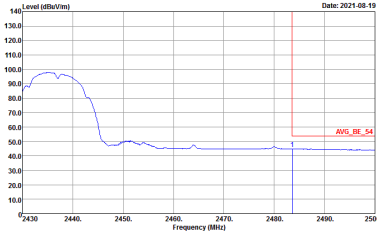


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

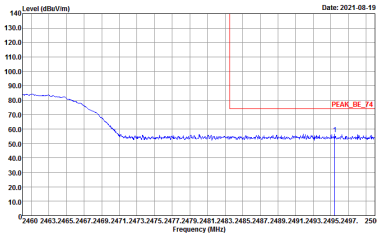
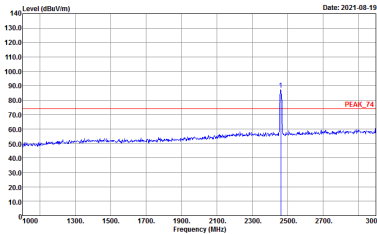
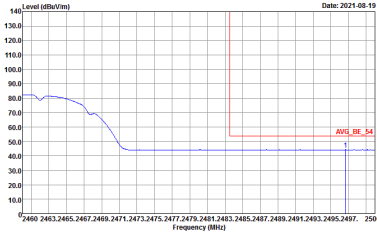
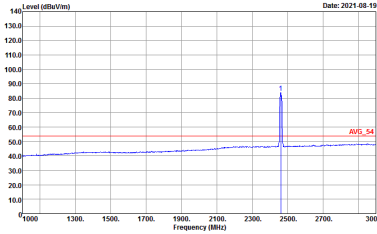


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

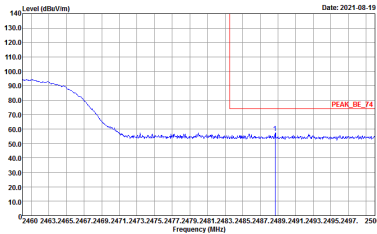
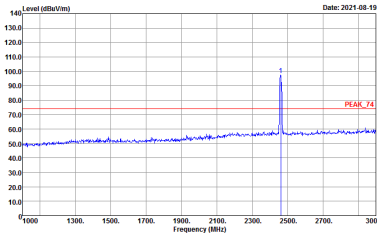
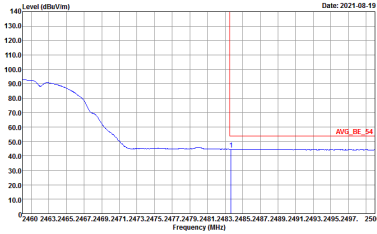
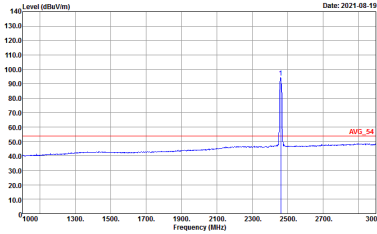


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

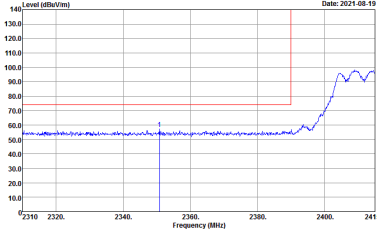
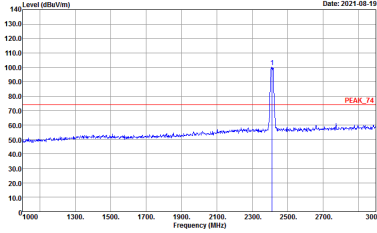
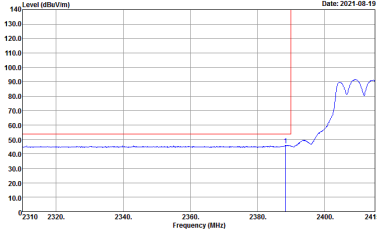
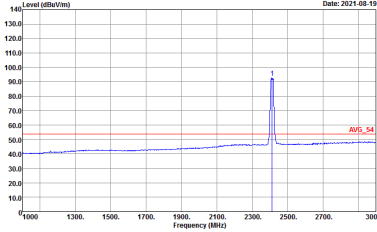


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

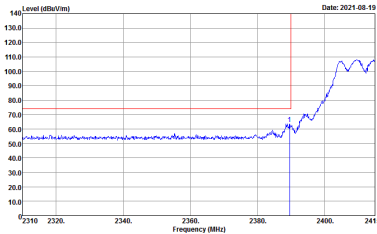
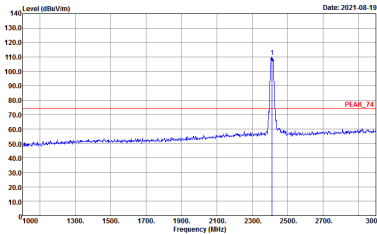
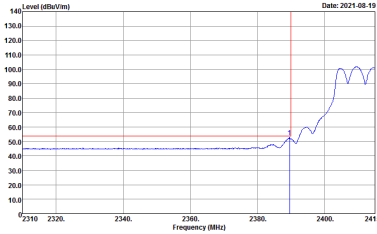
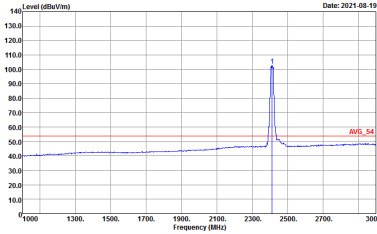


2.4GHz 2400~2483.5MHz

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 : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:1000kHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:1000kHz SWT:Auto

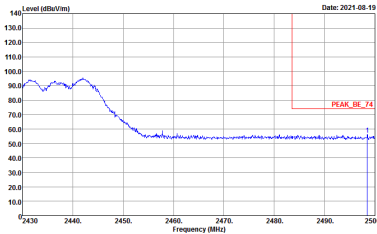
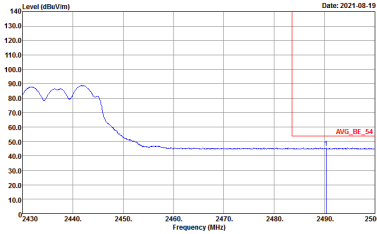


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

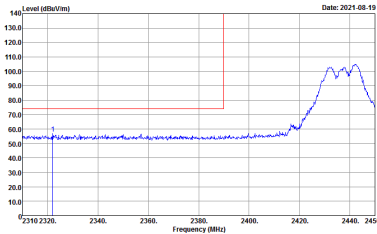
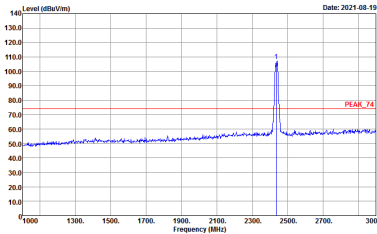
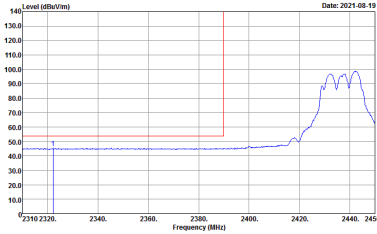
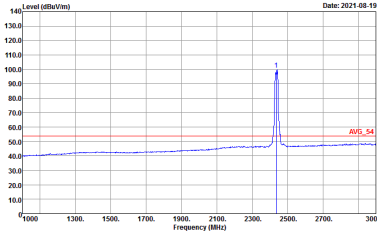


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

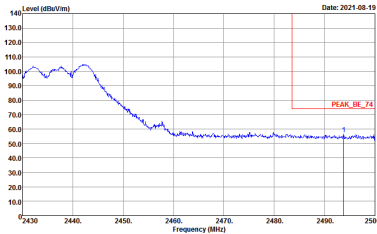
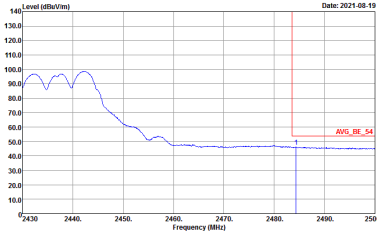


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank

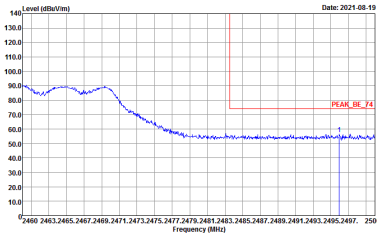
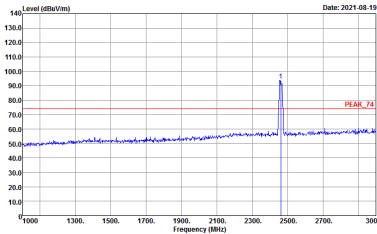
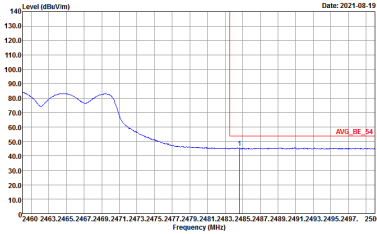
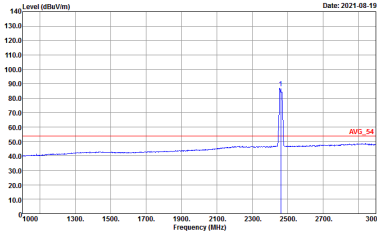


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

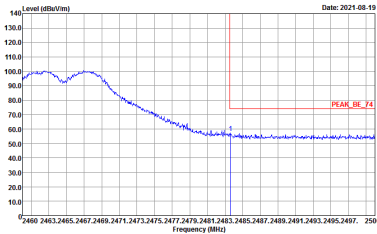
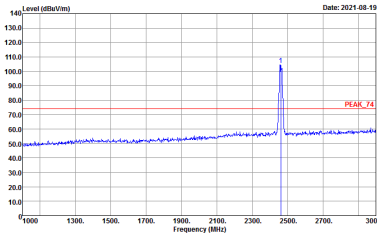
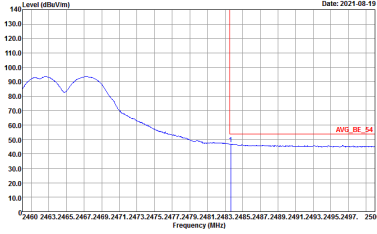
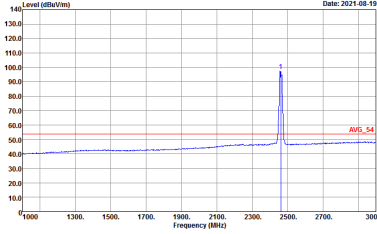


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

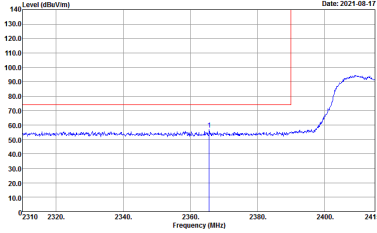
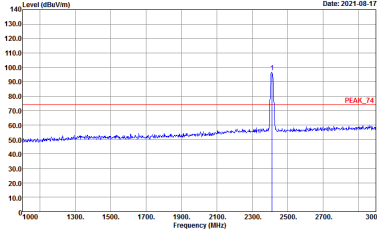
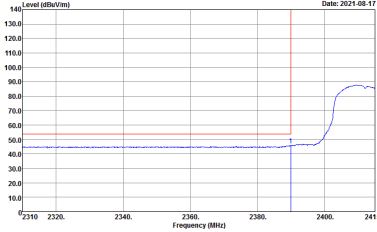
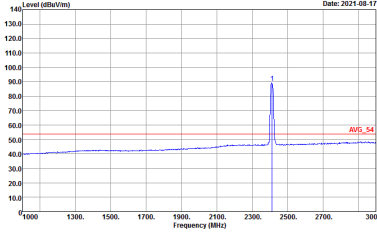


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

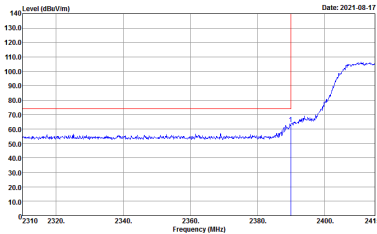
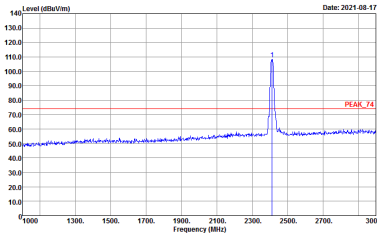
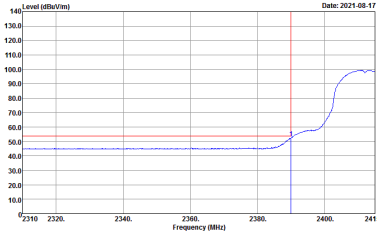
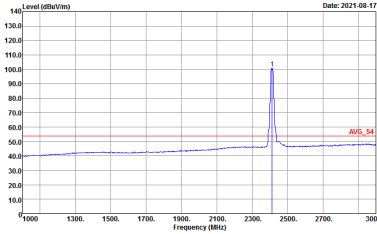


2.4GHz 2400~2483.5MHz

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 : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

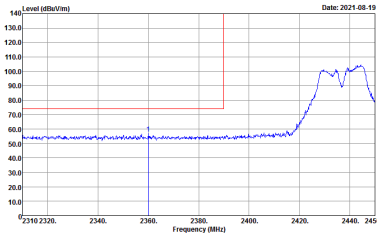
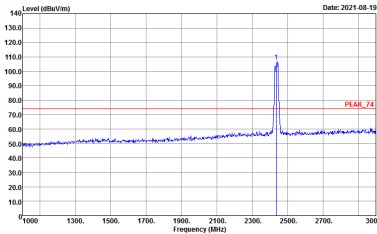
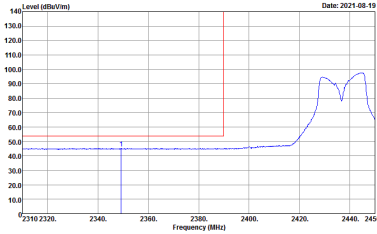
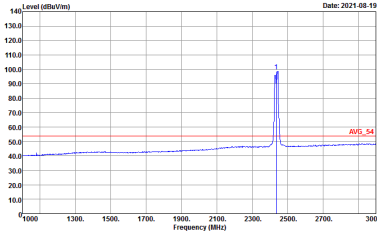


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

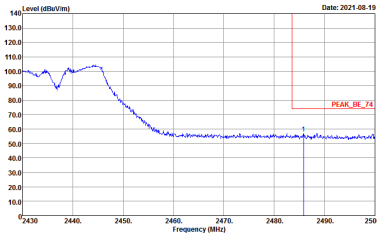
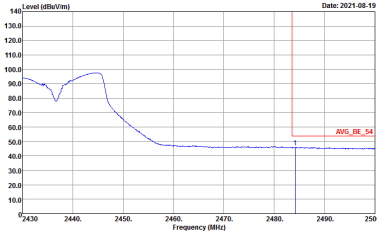


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto

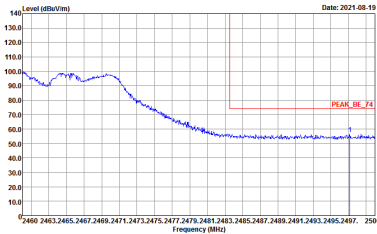
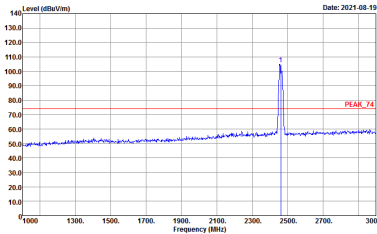
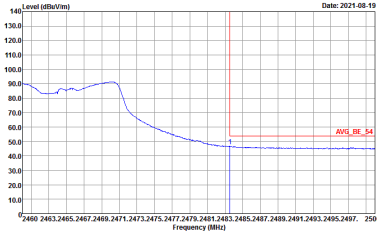
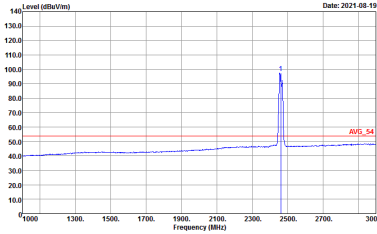


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
0+1	Horizontal	Fundamental
Peak	Level (dBuV/m) Frequency (MHz) Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Level (dBuV/m) Frequency (MHz) Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Level (dBuV/m) Frequency (MHz) Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Level (dBuV/m) Frequency (MHz) Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

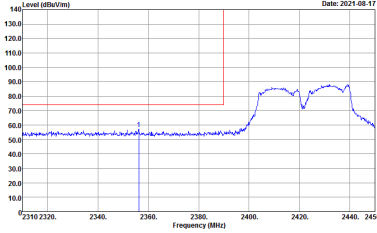
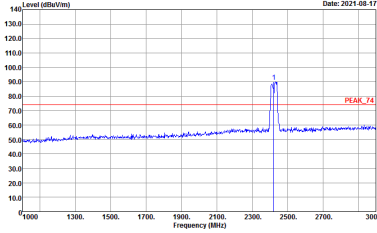
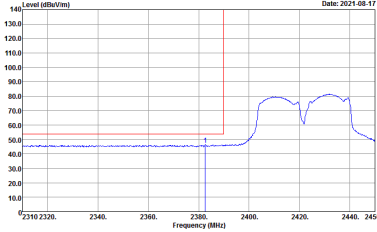
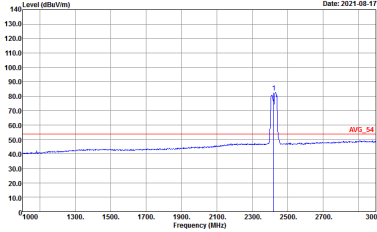


WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto
Avg.		

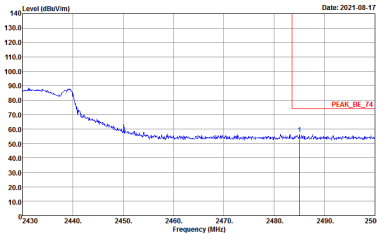
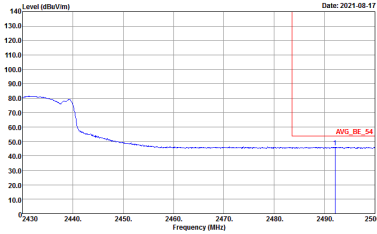


2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto

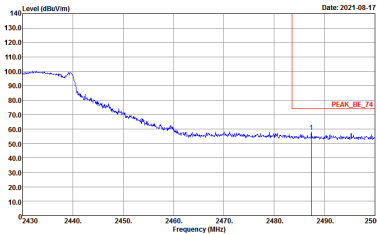
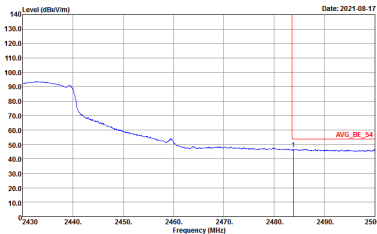


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank

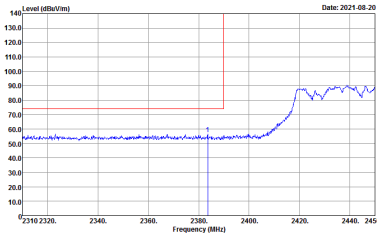
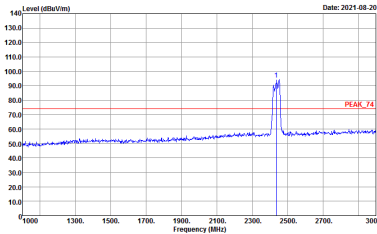
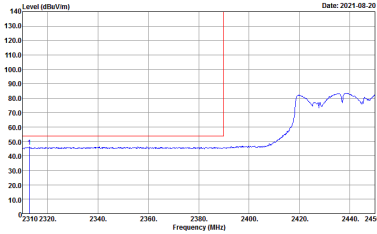
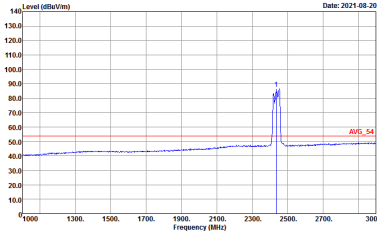


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
0+1	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

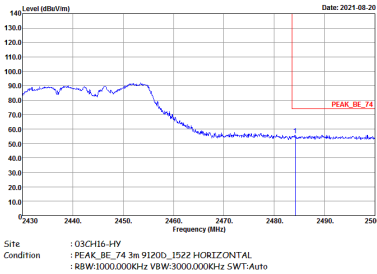
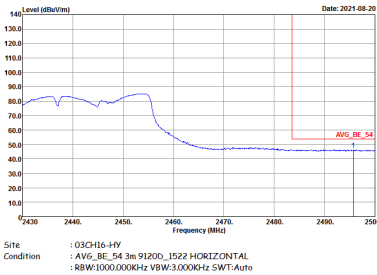


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

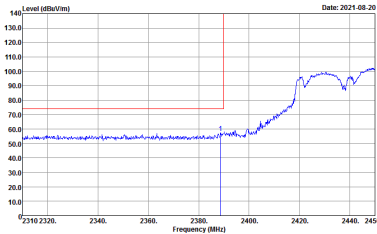
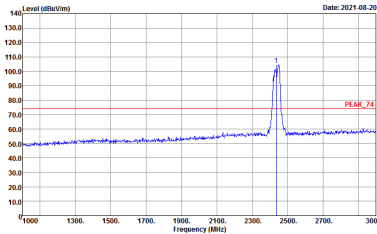
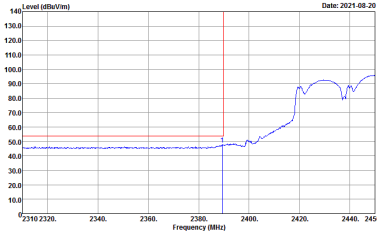
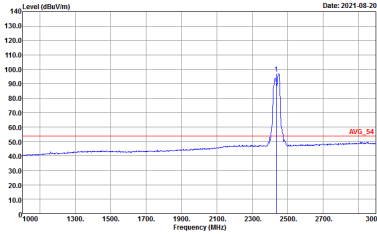


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

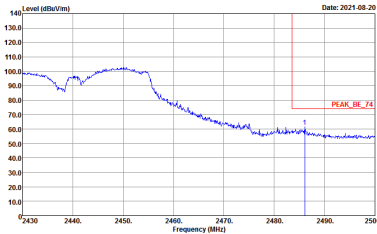
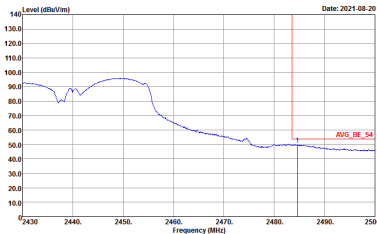


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

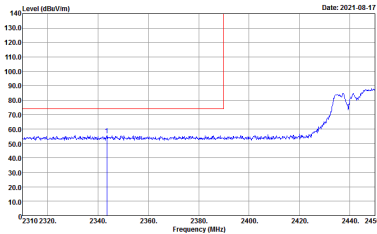
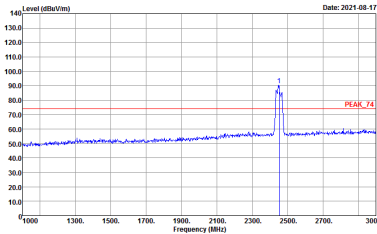
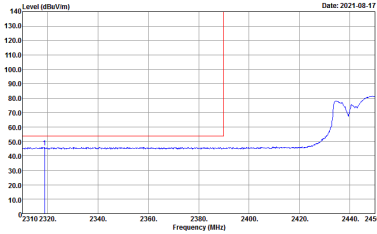
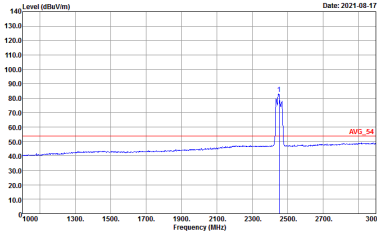


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

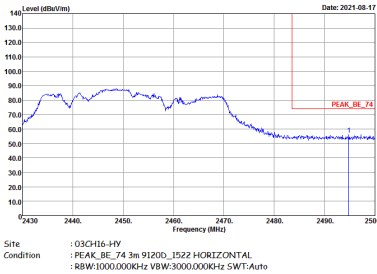
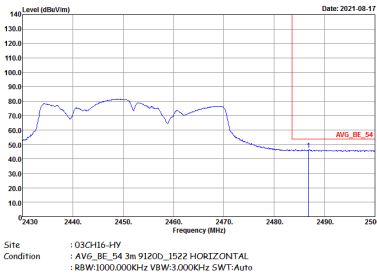


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

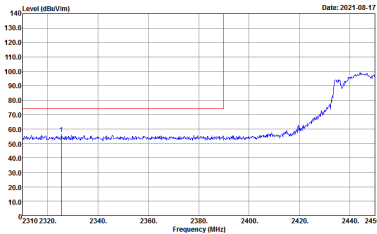
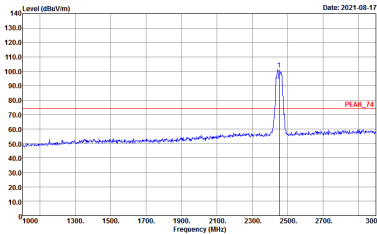
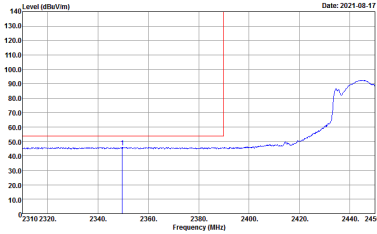
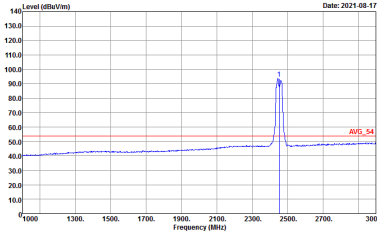


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

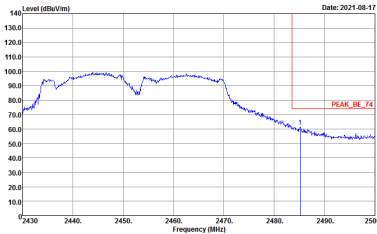
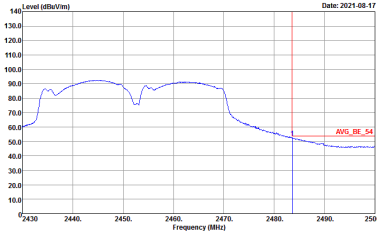


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
0+1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBm/5m) Date: 2021-08-18 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBm/5m) Date: 2021-08-18 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-08-18 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-08-18 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBu/V/m) Date: 2021-08-18 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBu/V/m) Date: 2021-08-18 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBm/5m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBm/5m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBu/V/m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBu/V/m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBu/1m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBu/1m) Date: 2021-08-18 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-08-19 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-08-24 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-08-24 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL

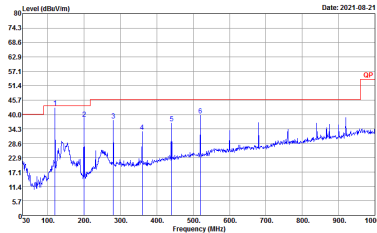
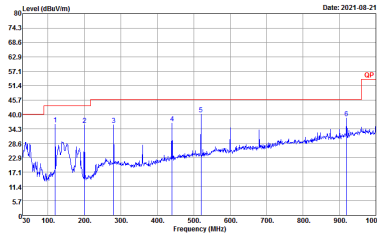


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH06 2437MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-08-24 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-08-20 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
0+1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-08-24 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL	Level (dBuV/m) Date: 2021-08-20 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL

Emission below 1GHz
2.4GHz WIFI 802.11n HT40 (LF)

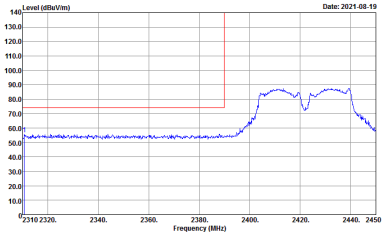
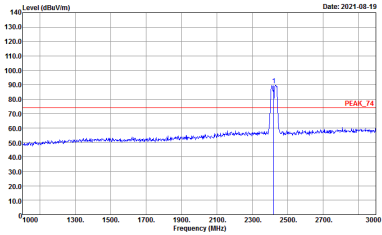
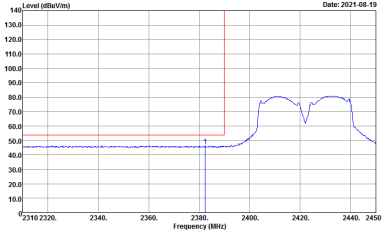
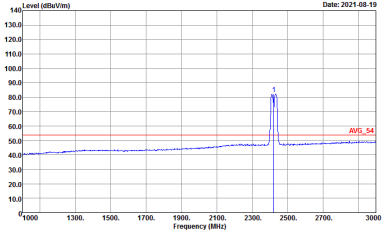
WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 LF	
0+1	Horizontal	Vertical
QP / Peak	 Site : 03CH16-HY Condition : QP 3m B1LOG_47020406 HORIZONTAL	 Site : 03CH16-HY Condition : QP 3m B1LOG_47020406 VERTICAL



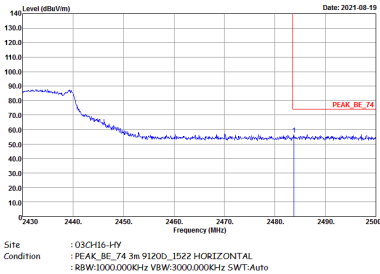
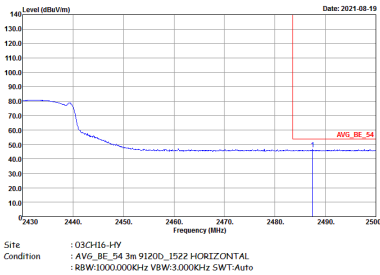
<Sample 2>

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
0+1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto	 Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto

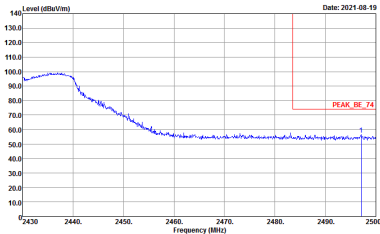
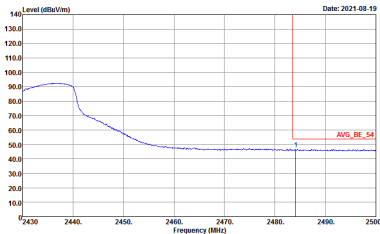


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
0+1	Horizontal	Fundamental
Peak		Left Blank
Avg.		Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
0+1	Vertical	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : PEAK_74 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH16-HY Condition : AVG_54 3m 91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

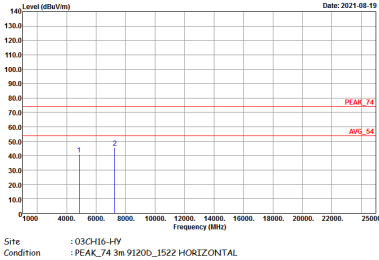
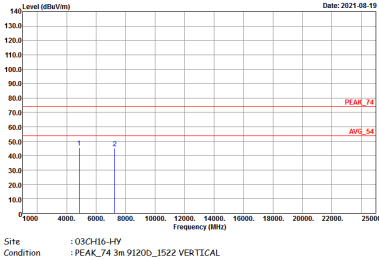


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
0+1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

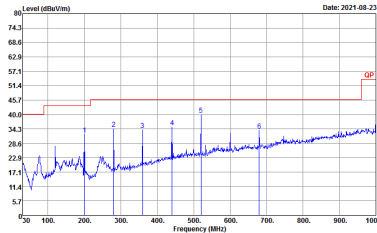
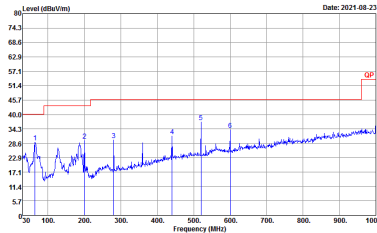


2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
0+1	Horizontal	Vertical
Peak Avg.	 Site Condition : 03CH16-HY : PEAK_74 3m 91200_1522 HORIZONTAL	 Site Condition : 03CH16-HY : PEAK_74 3m 91200_1522 VERTICAL

Emission below 1GHz
2.4GHz WIFI 802.11n HT40 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 LF	
0+1	Horizontal	Vertical
QP / Peak	 Site : 03CH16-HY Condition : QP 3m BIL06_47020406 HORIZONTAL	 Site : 03CH16-HY Condition : QP 3m BIL06_47020406 VERTICAL



Appendix E. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
0+1	802.11b	99.51	-	-	10Hz
0+1	802.11g	97.59	2025	0.49	1kHz
0+1	2.4GHz 802.11n HT20	97.42	1885	0.53	1kHz
0+1	2.4GHz 802.11n HT40	95.96	927	1.08	3kHz

MIMO <Ant. 0+1>

