



FCC RADIO TEST REPORT

FCC ID : 2A3DW-MZ1000
Equipment : Head-mounted tablet
Brand Name : Moziware
Model Name : MZ1000
Marketing Name : cimo
Applicant : RealWear (Shanghai) Intelligent Technology Co., Ltd.
2F,Block21, No.55 Chuanhe Road,
Pudong New District, Shanghai, China
Manufacturer : RealWear (Shanghai) Intelligent Technology Co., Ltd.
2F,Block21, No.55 Chuanhe Road,
Pudong New District, Shanghai, China
Standard : FCC Part 15 Subpart C §15.247

The product was received on Oct. 01, 2021 and testing was started from Oct. 14, 2021 and completed on Oct. 27, 2021. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

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



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Product Feature of Equipment Under Test.....	5
1.2 Modification of EUT	5
1.3 Testing Location	6
1.4 Applicable Standards.....	6
2 Test Configuration of Equipment Under Test	7
2.1 Carrier Frequency and Channel	7
2.2 Test Mode.....	7
2.3 Connection Diagram of Test System.....	8
2.4 Support Unit used in test configuration and system	9
2.5 EUT Operation Test Setup	9
2.6 Measurement Results Explanation Example.....	9
3 Test Result	10
3.1 6dB and 99% Bandwidth Measurement	10
3.2 Output Power Measurement.....	13
3.3 Power Spectral Density Measurement	14
3.4 Conducted Band Edges and Spurious Emission Measurement	16
3.5 Radiated Band Edges and Spurious Emission Measurement	29
3.6 AC Conducted Emission Measurement.....	33
3.7 Antenna Requirements	35
4 List of Measuring Equipment.....	36
5 Uncertainty of Evaluation	38
Appendix A. Conducted Test Results	
Appendix B. AC Conducted Emission Test Result	
Appendix C. Radiated Spurious Emission	
Appendix D. Radiated Spurious Emission Plots	
Appendix E. Duty Cycle Plots	
Appendix F. Setup Photographs	



History of this test report

Report No.	Version	Description	Issued Date
FR193007C	01	Initial issue of report	Nov. 18, 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 5.24 dB at 2484.400 MHz
3.6	15.207	AC Conducted Emission	Pass	Under limit 13.45 dB at 0.908 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: Sheng Kuo

Report Producer: Clio Lo



1 General Description

1.1 Product Feature of Equipment Under Test

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

Product Specification subjective to this standard	
Antenna Type	WLAN: PIFA Antenna Bluetooth: PIFA Antenna

Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	0.11

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. CO05-HY (TAF Code: 1190)
Remark	The Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory.

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

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY ; 03CH11-HY

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

FCC designation No.: TW1190 and TW3786

1.4 Applicable Standards

According to the specifications 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.
- ♦ ANSI C63.10-2013

Remark:

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

2 Test Configuration of Equipment Under Test

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

2.1 Carrier Frequency and Channel

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

2.2 Test Mode

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

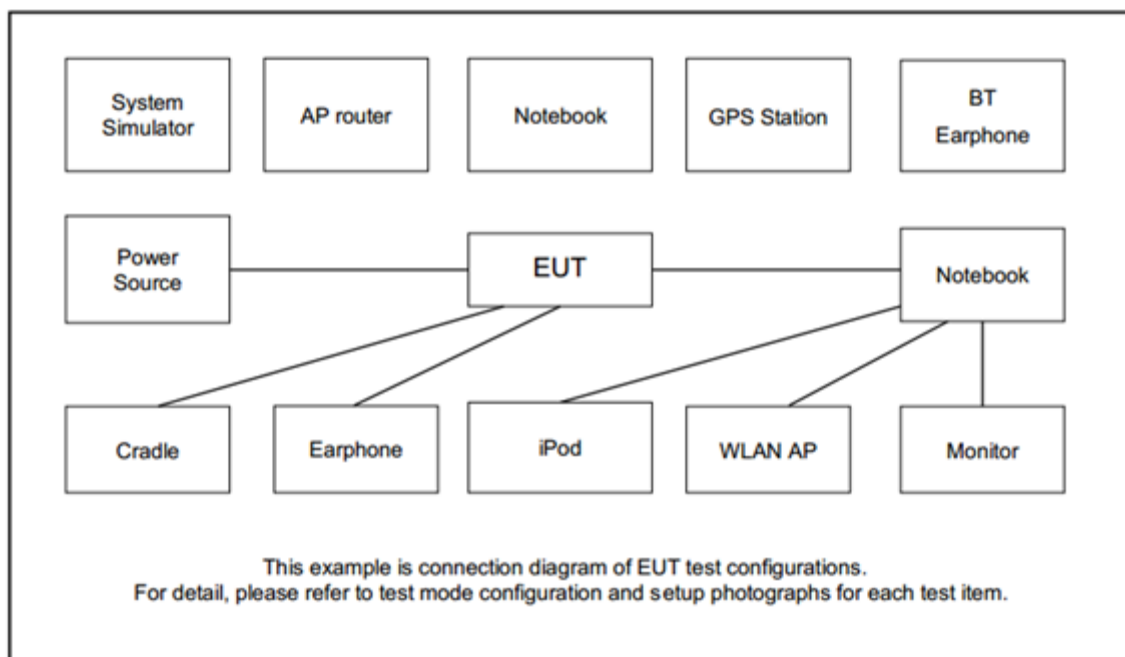
Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4GHz) Link + Bluetooth Link + Main Camera, LED light on, Laser Light on + Earphone + USB Cable (Charging from Adapter)

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.	Bluetooth Earphone	Sony Ericsson	MW600	PY700A2029	N/A	N/A
2.	Earphone	Sony	AG-1100	N/A	Unshielded, 1.5m	N/A
3.	iPod Earphone	Apple	N/A	Verification	Unshielded, 1.0 m	N/A
4.	WLAN AP	ASUS	RT-AC66U	MSQ-RTAC66U	N/A	Unshielded, 1.8m
5.	Notebook	Dell	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
6.	Adapter	DVE	DSA-5PFM-05 FUS 050100	FCC DoC	N/A	N/A
7.	Adapter	Sony	CAA-002016-TW	N/A	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, utility "QRCT Ver.4.0.00175.0" was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

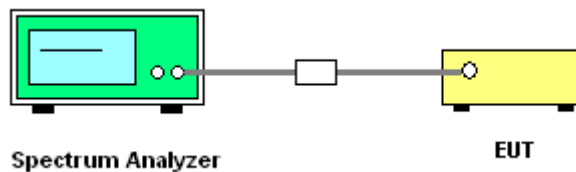
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

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

3.1.4 Test Setup

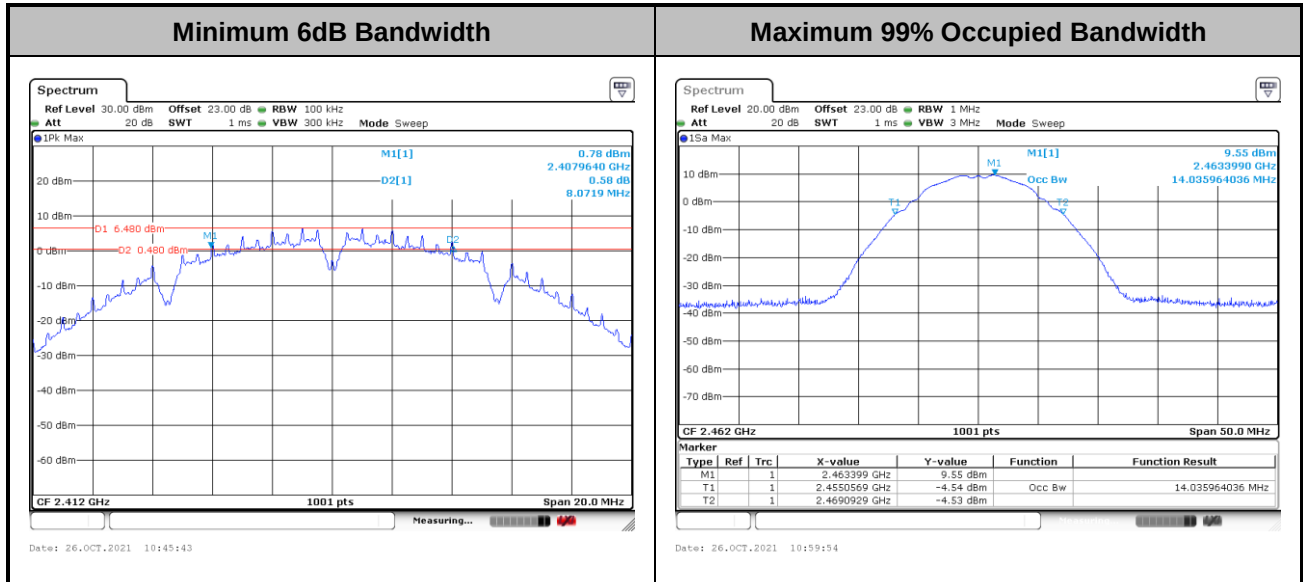




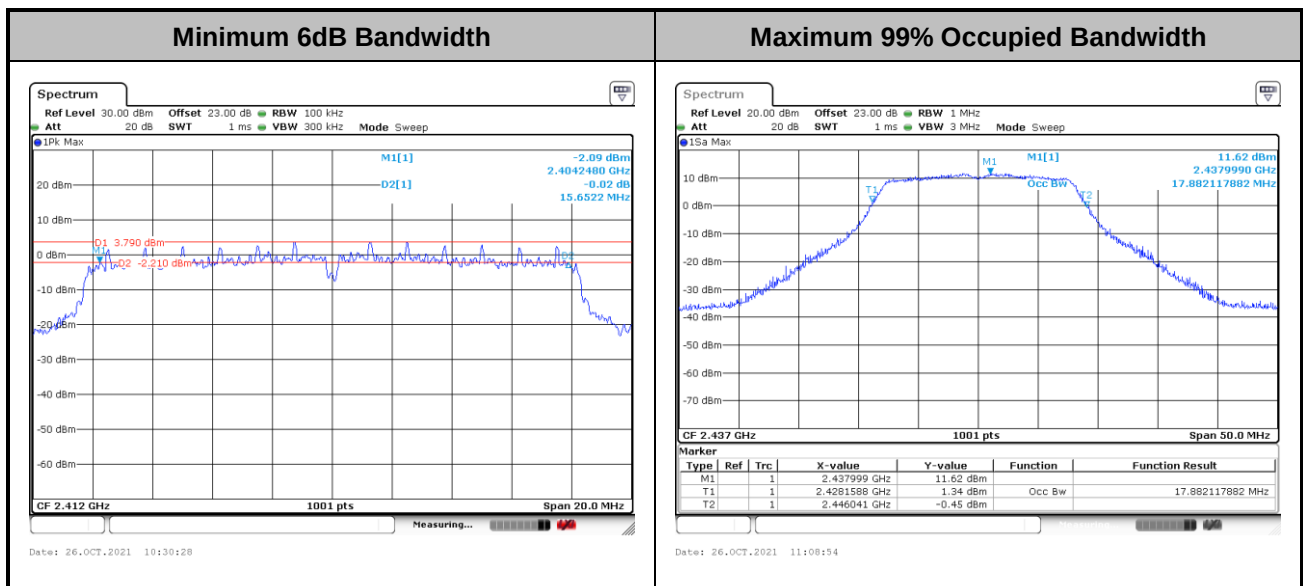
3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.

<802.11b>

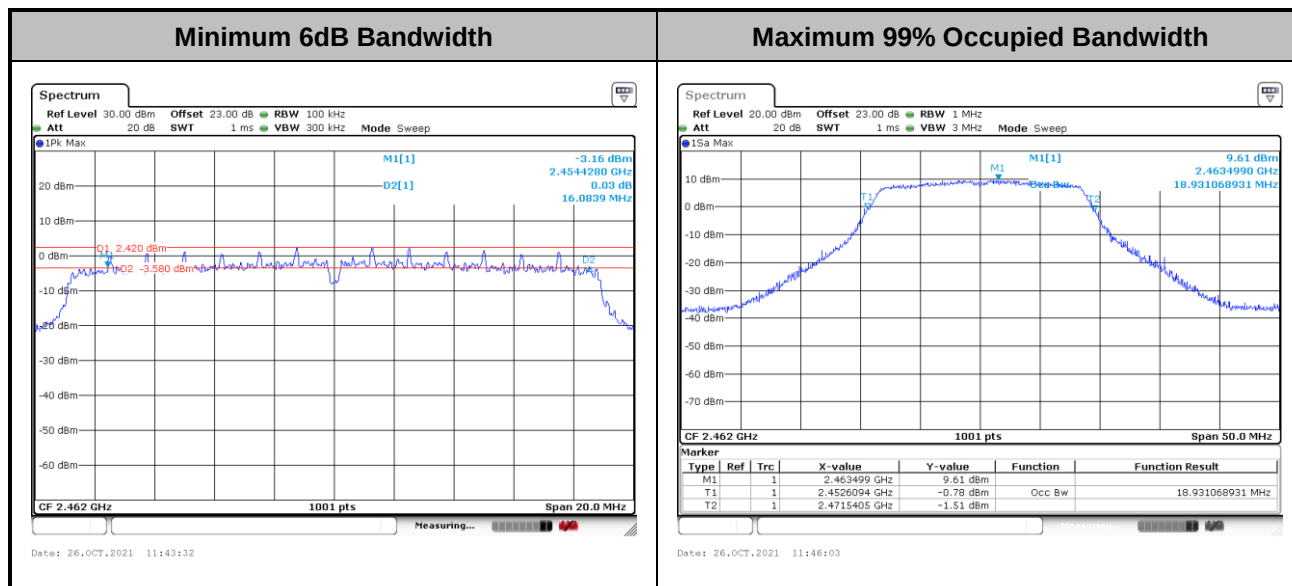


<802.11g>

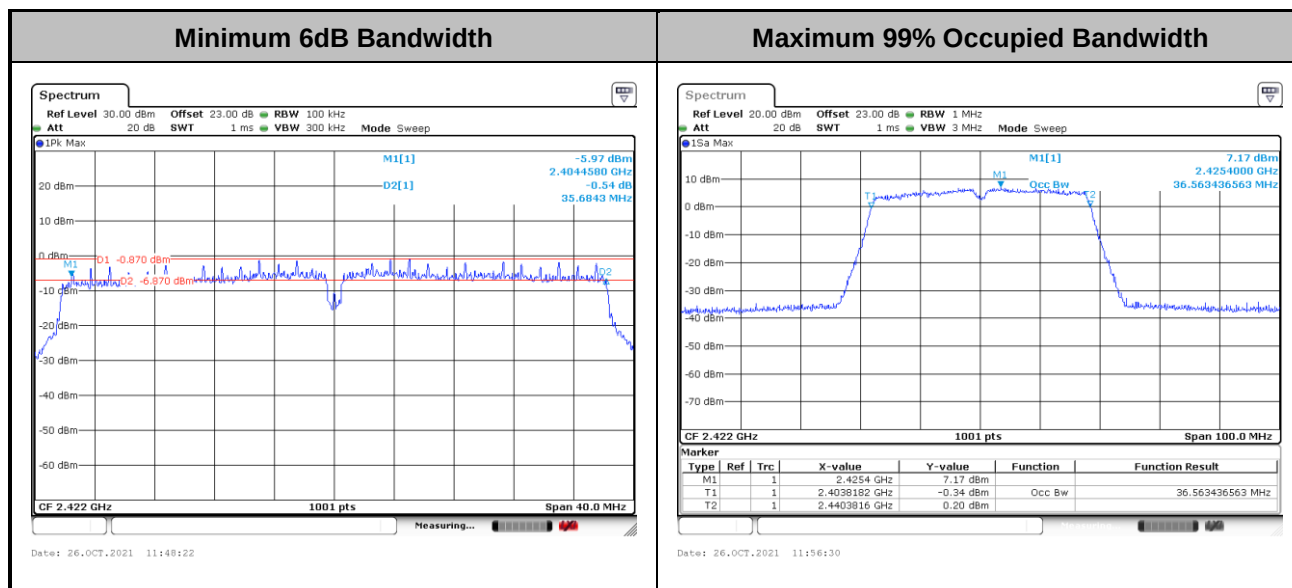




<802.11n HT20>



<802.11n HT40>



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.

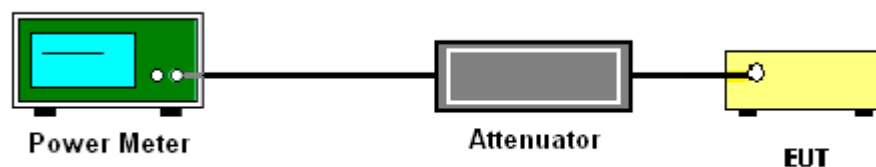
3.2.2 Measuring Instruments

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.

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.

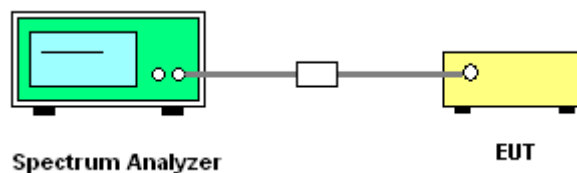
3.3.2 Measuring Instruments

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.

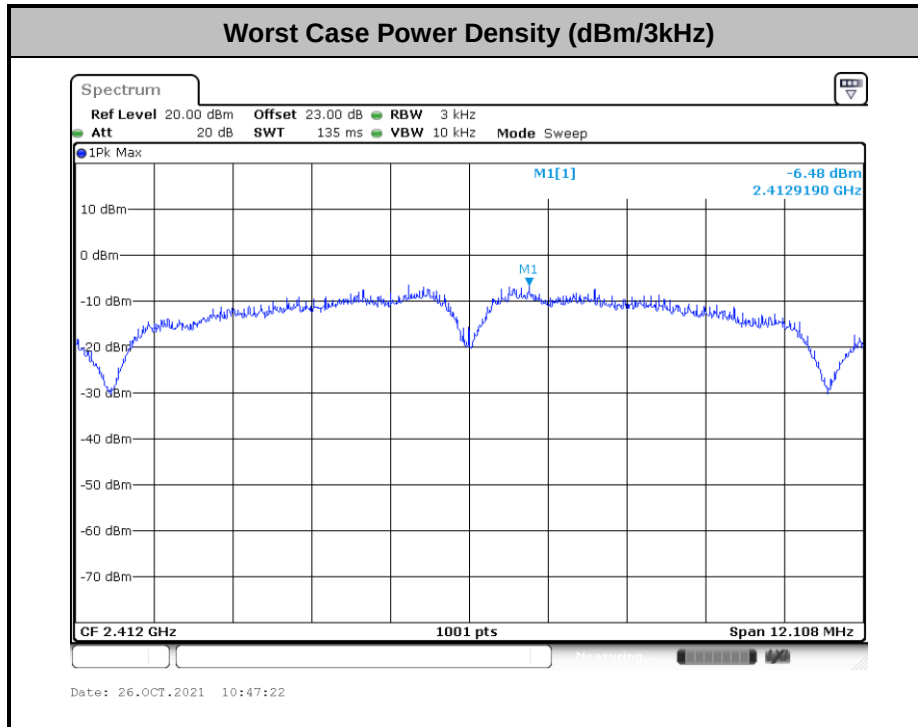
3.3.4 Test Setup





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.

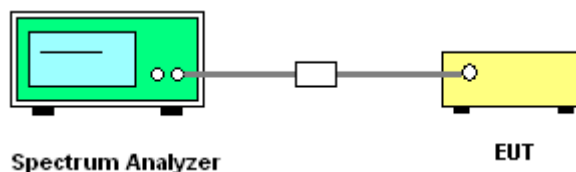
3.4.2 Measuring Instruments

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.

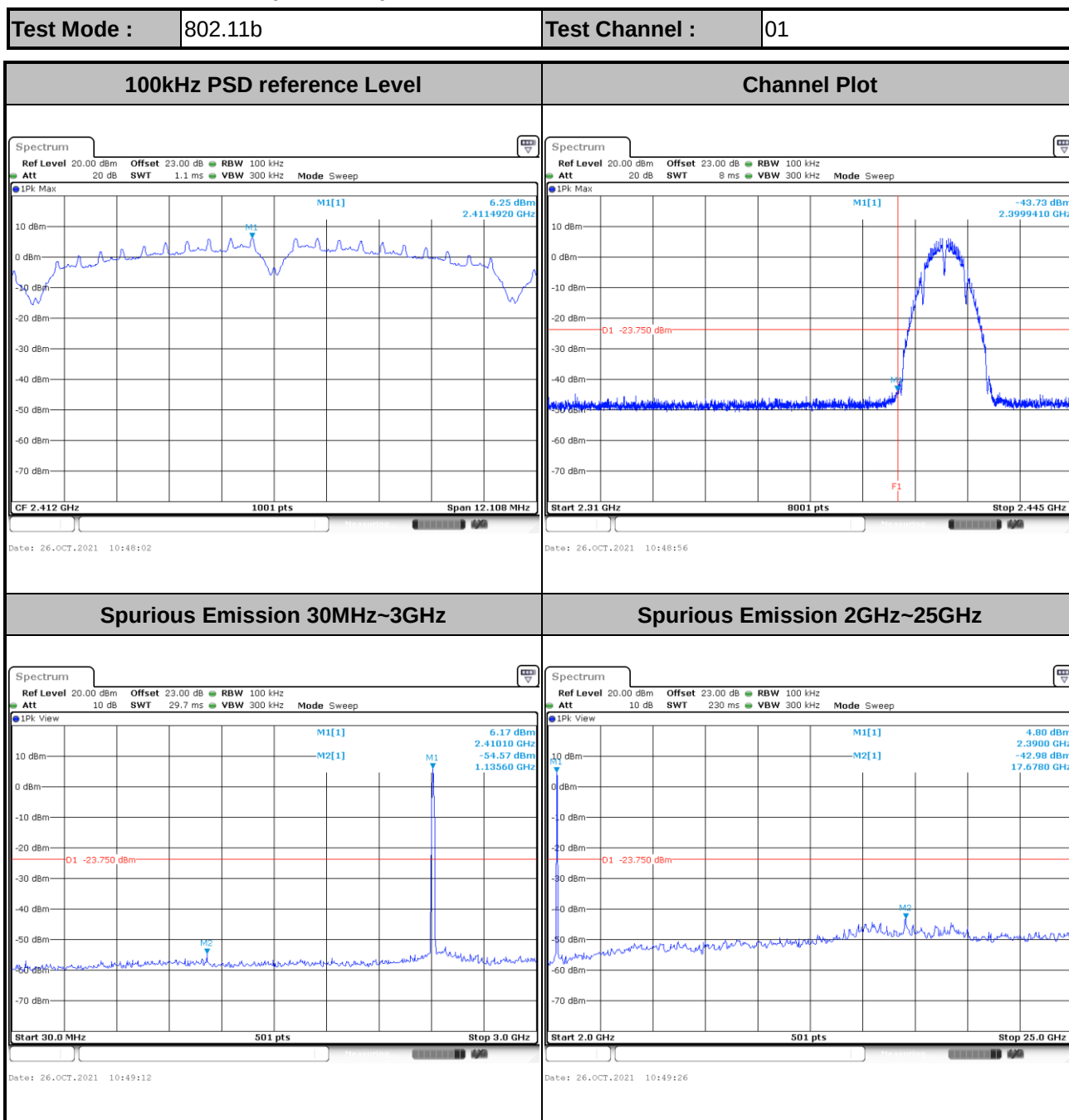
3.4.4 Test Setup





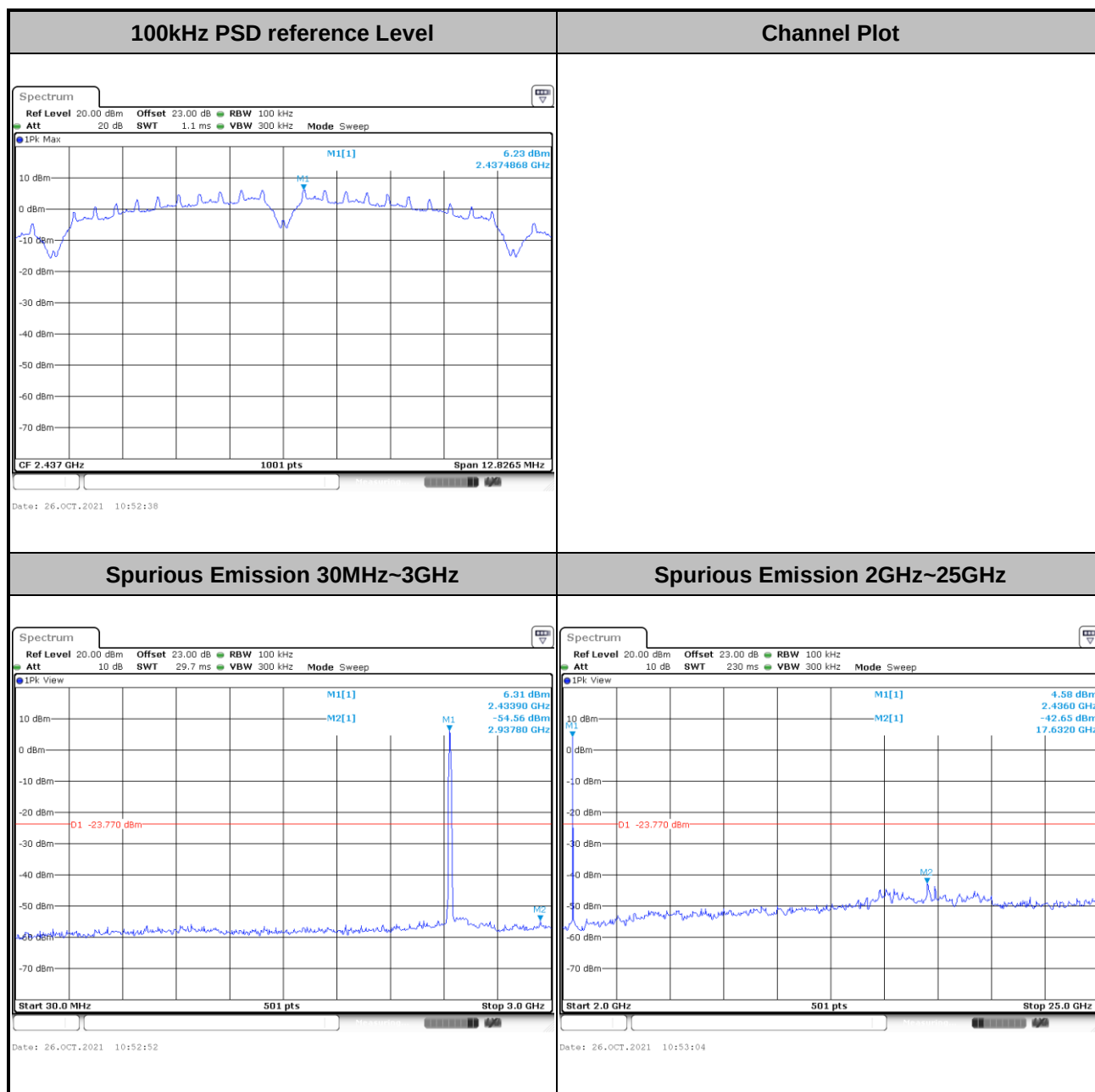
3.4.5 Test Result of Conducted Band Edges and Spurious Emission

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



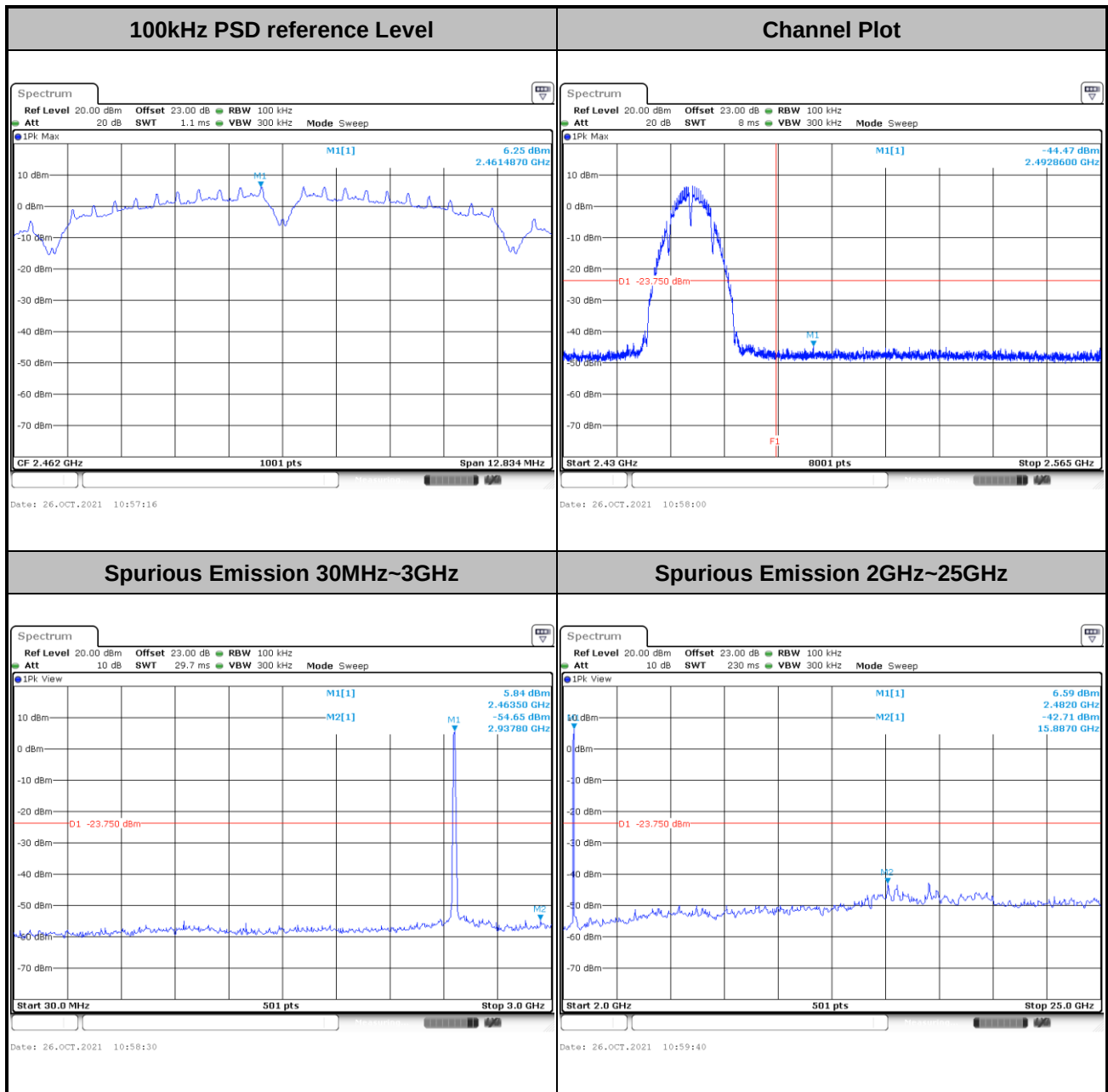


Test Mode :	802.11b	Test Channel :	06
-------------	---------	----------------	----





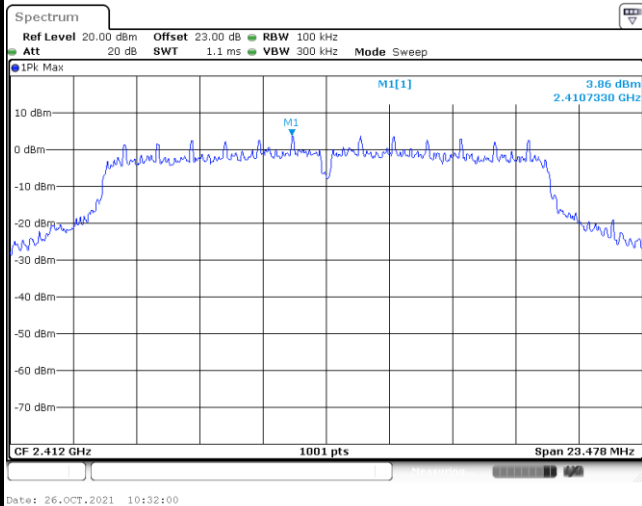
Test Mode :	802.11b	Test Channel :	11
-------------	---------	----------------	----



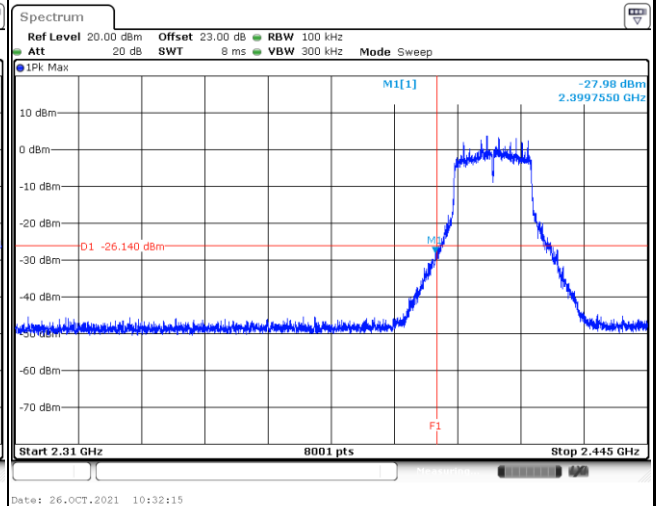


Test Mode :	802.11g	Test Channel :	01
-------------	---------	----------------	----

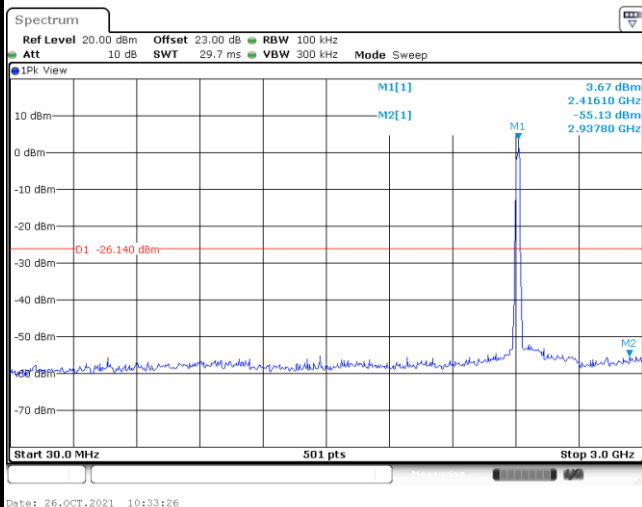
100kHz PSD reference Level



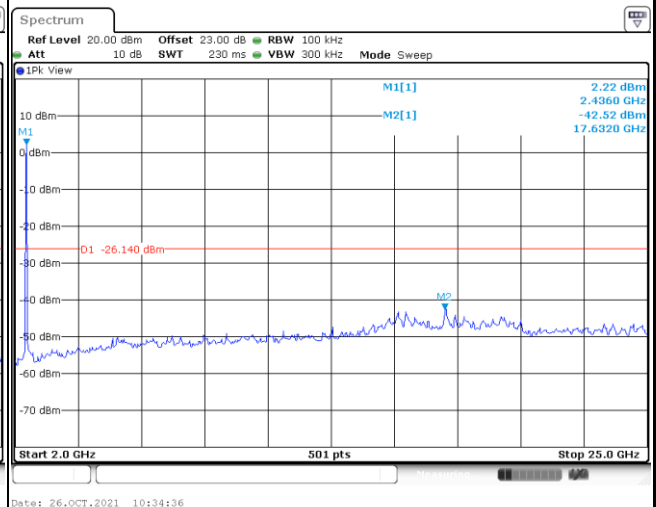
Channel Plot



Spurious Emission 30MHz~3GHz



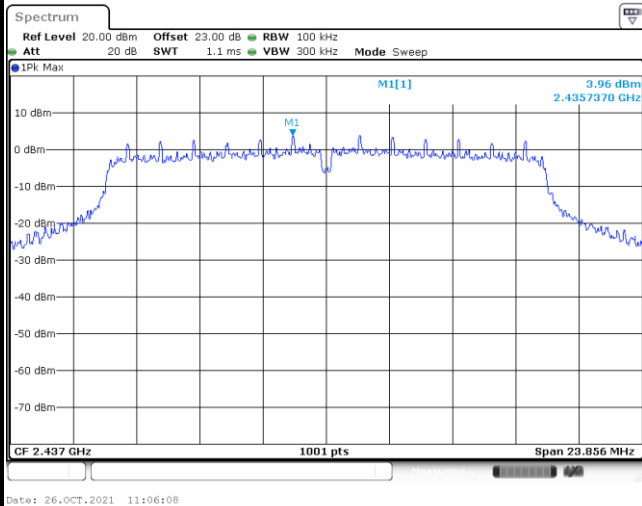
Spurious Emission 2GHz~25GHz





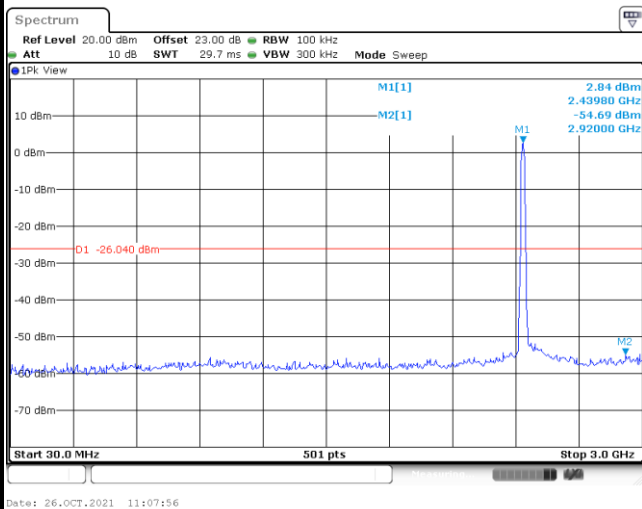
Test Mode :	802.11g	Test Channel :	06
-------------	---------	----------------	----

100kHz PSD reference Level

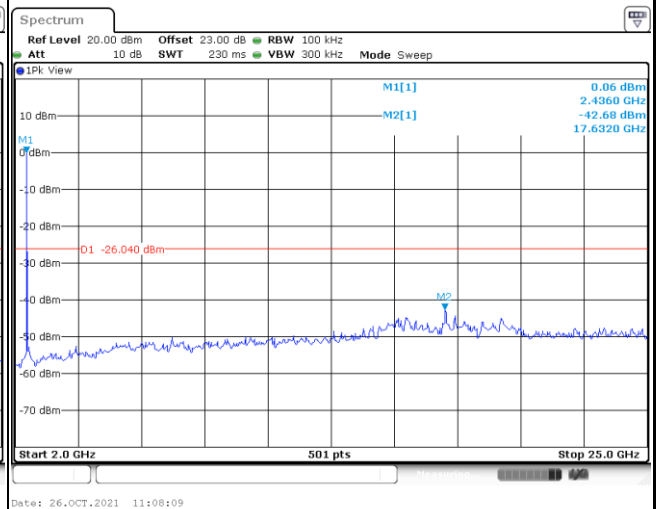


Channel Plot

Spurious Emission 30MHz~3GHz

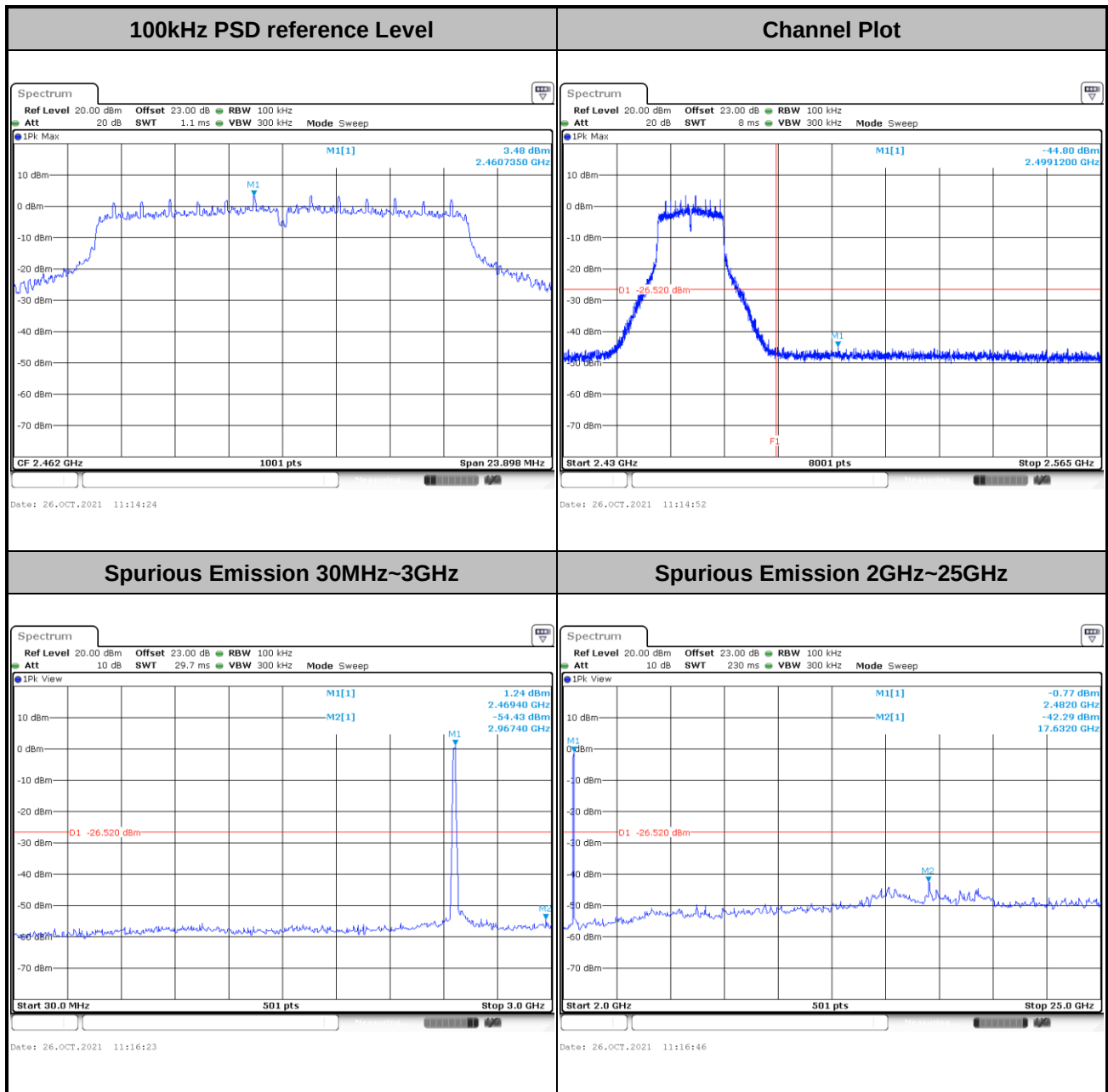


Spurious Emission 2GHz~25GHz





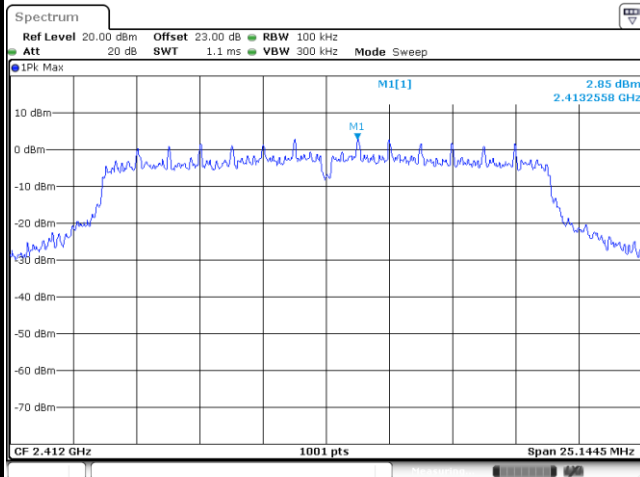
Test Mode :	802.11g	Test Channel :	11
-------------	---------	----------------	----



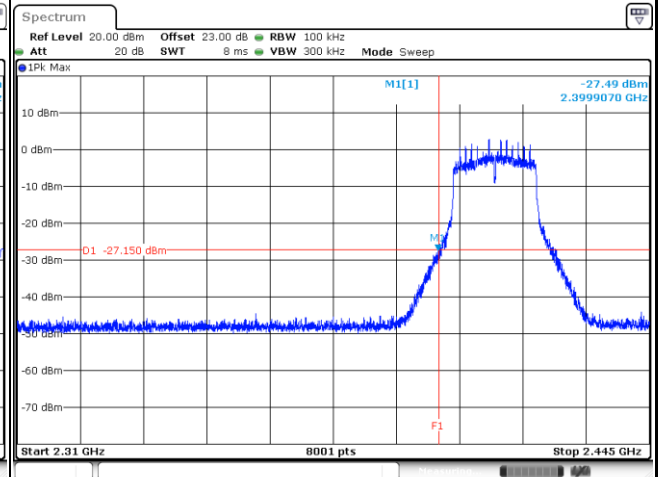


Test Mode :	802.11n HT20	Test Channel :	01
-------------	--------------	----------------	----

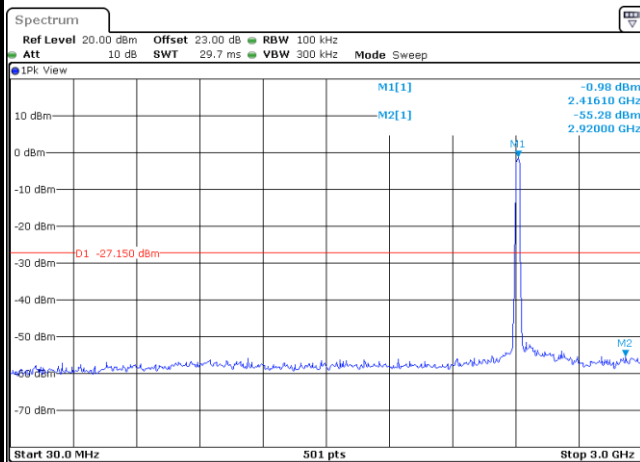
100kHz PSD reference Level



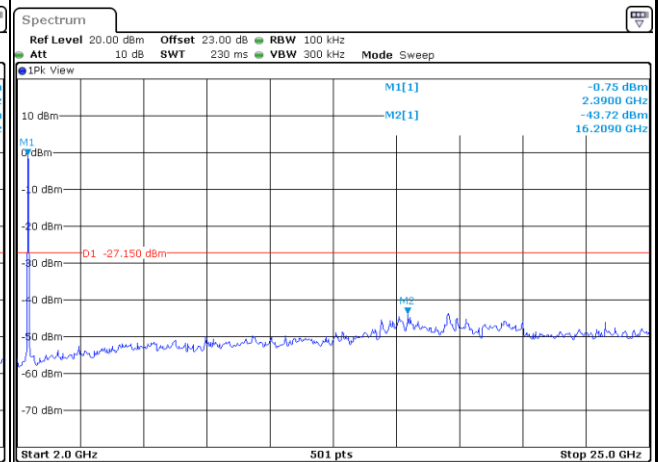
Channel Plot



Spurious Emission 30MHz~3GHz

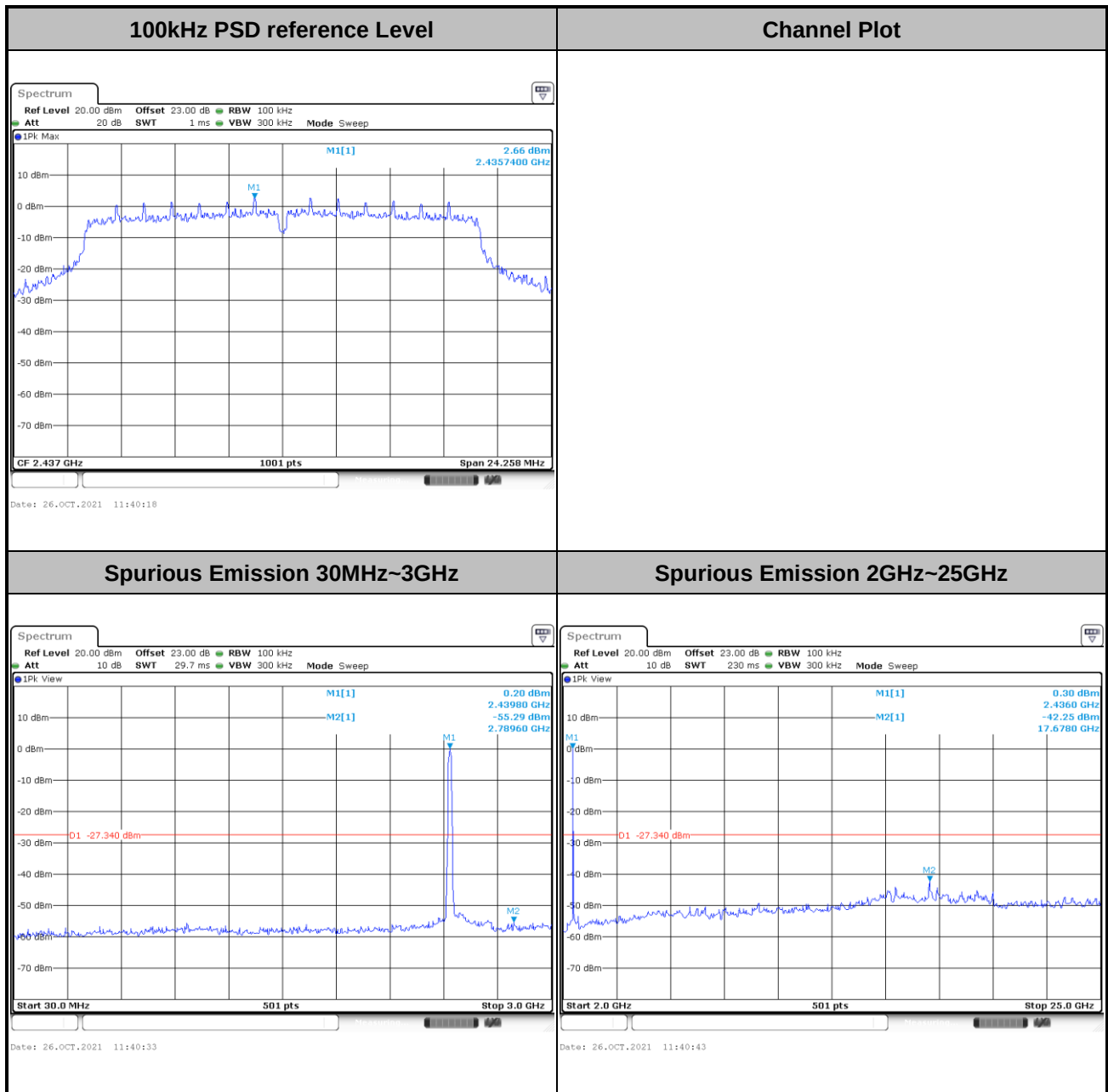


Spurious Emission 2GHz~25GHz



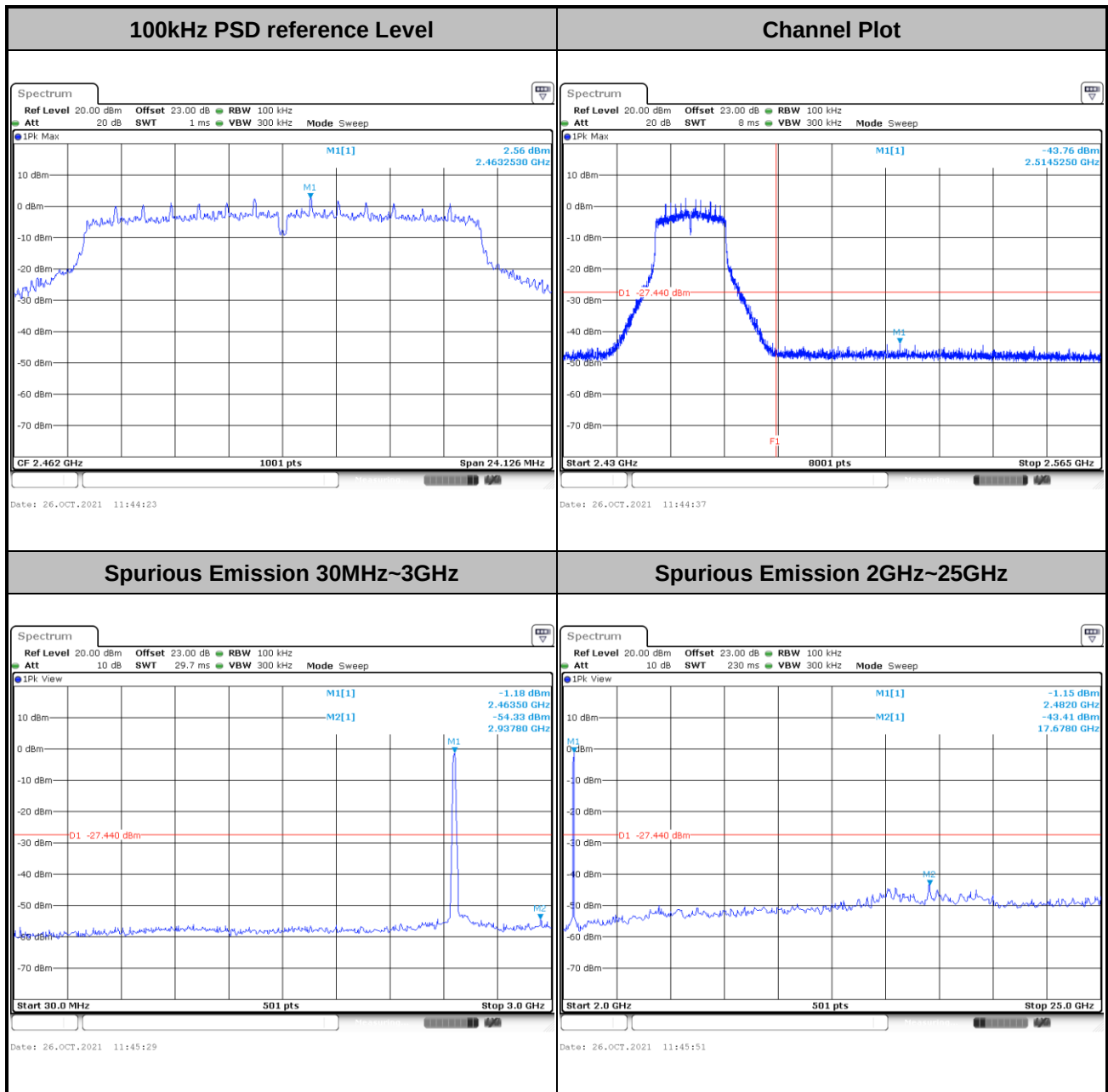


Test Mode :	802.11n HT20	Test Channel :	06
--------------------	--------------	-----------------------	----



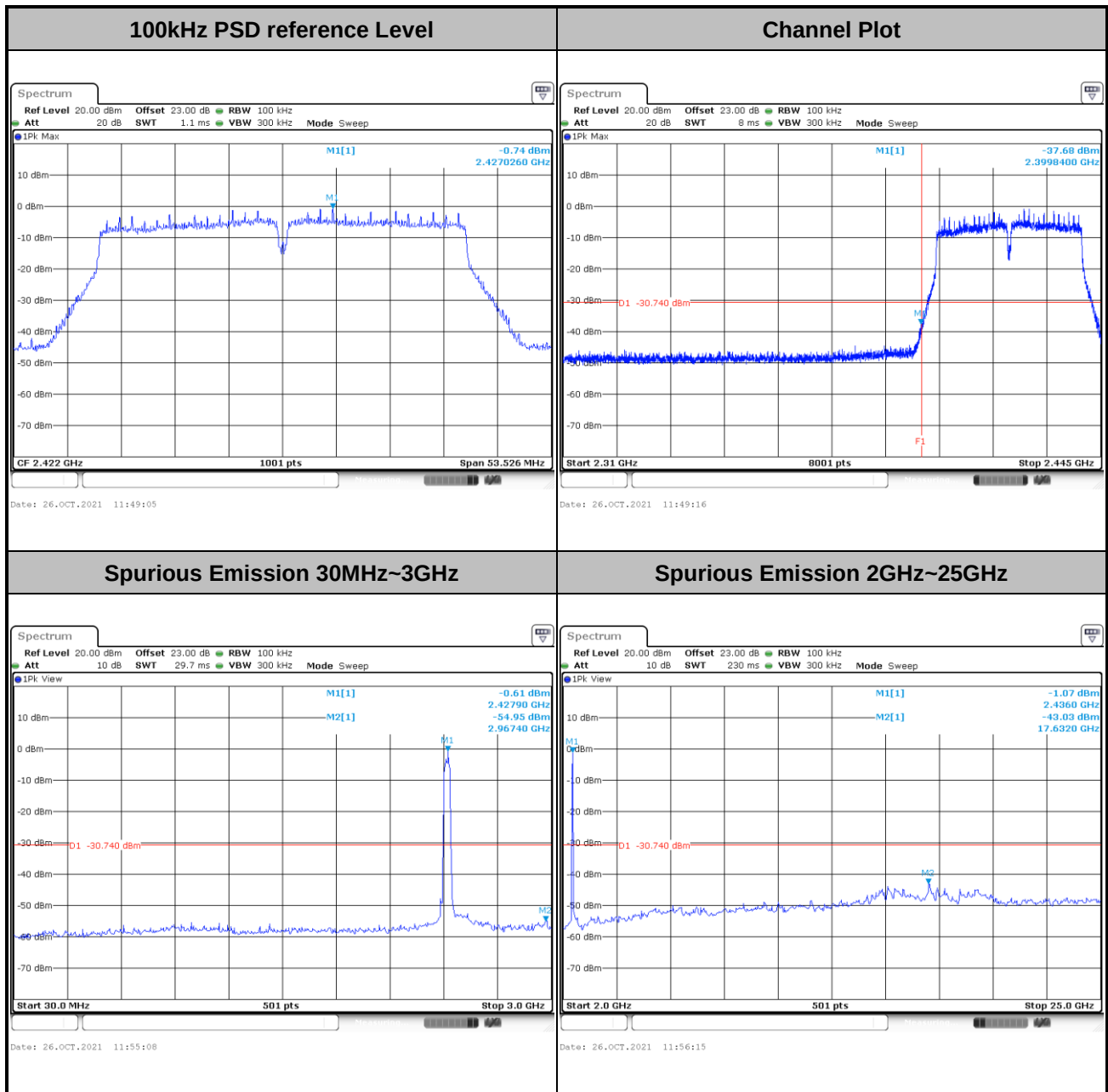


Test Mode :	802.11n HT20	Test Channel :	11
-------------	--------------	----------------	----





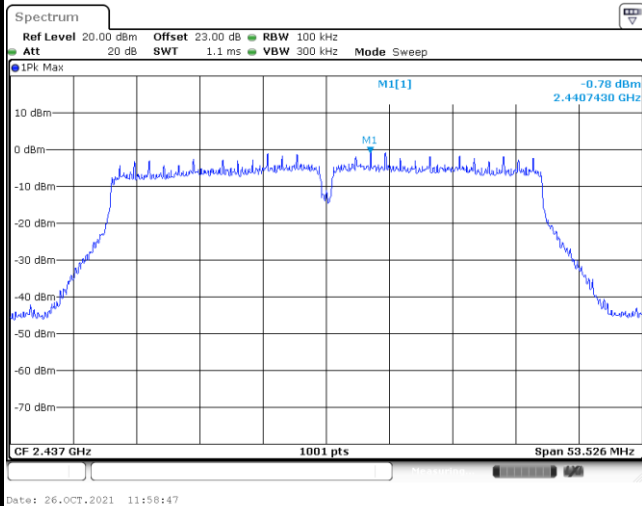
Test Mode :	802.11n HT40	Test Channel :	03
-------------	--------------	----------------	----





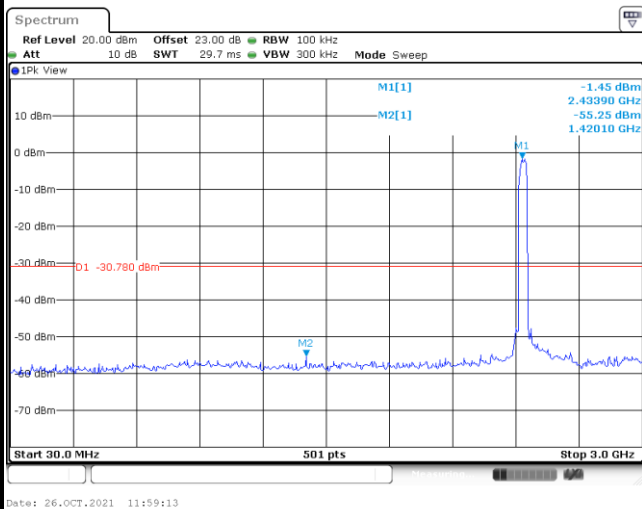
Test Mode :	802.11n HT40	Test Channel :	06
-------------	--------------	----------------	----

100kHz PSD reference Level

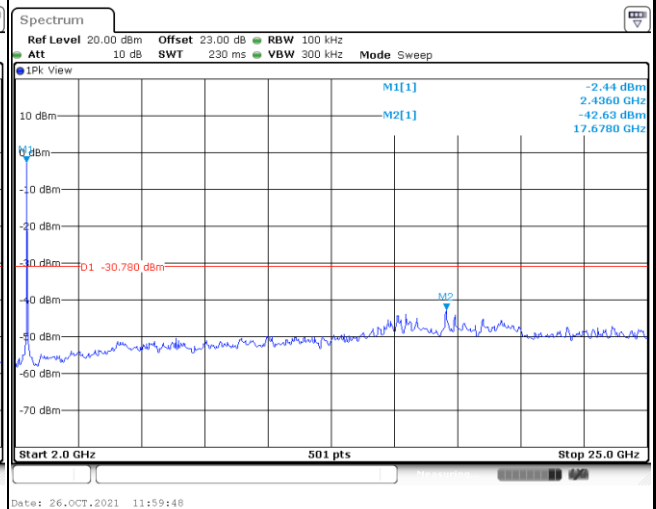


Channel Plot

Spurious Emission 30MHz~3GHz

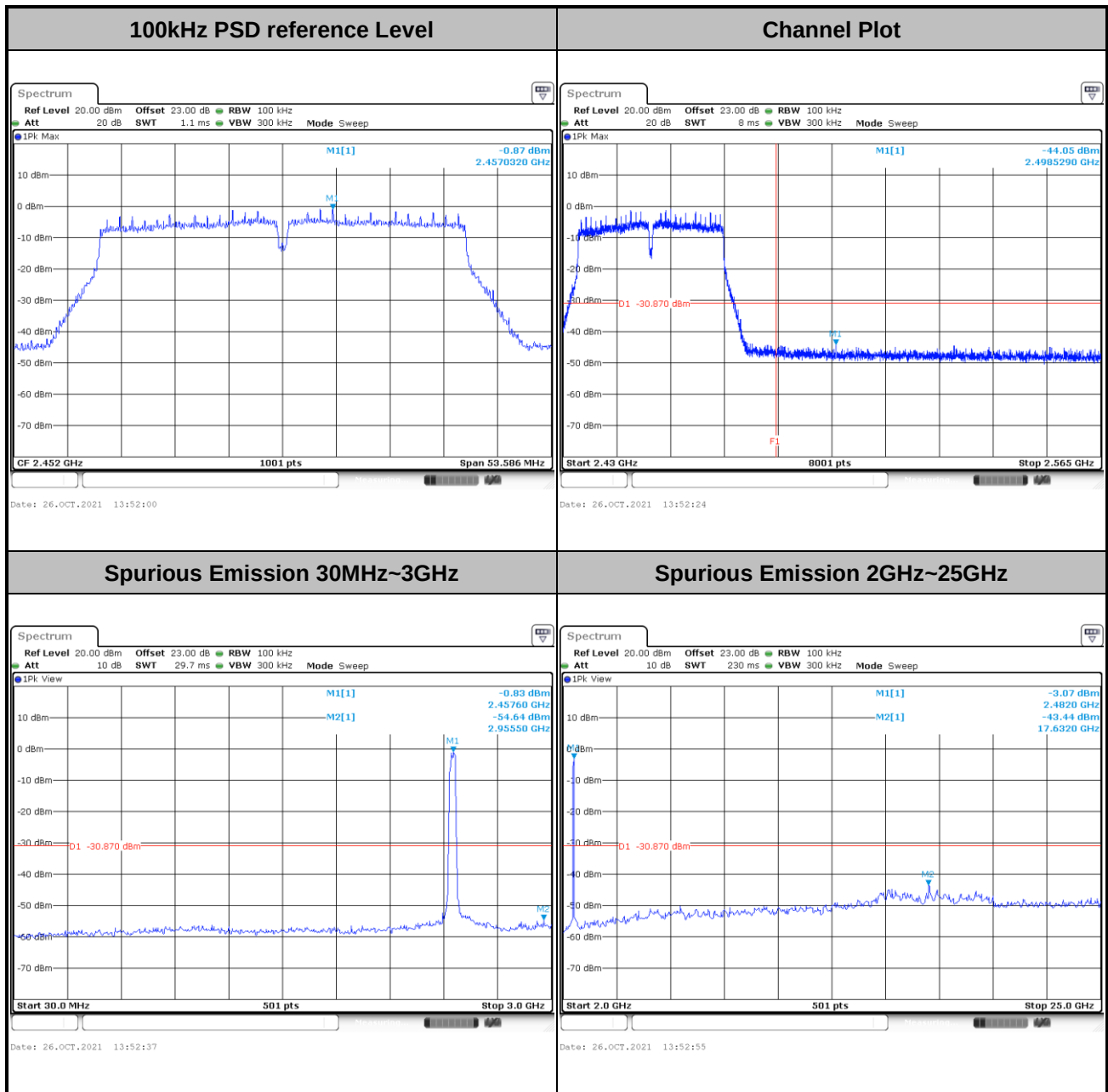


Spurious Emission 2GHz~25GHz





Test Mode :	802.11n HT40	Test Channel :	09
--------------------	--------------	-----------------------	----





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

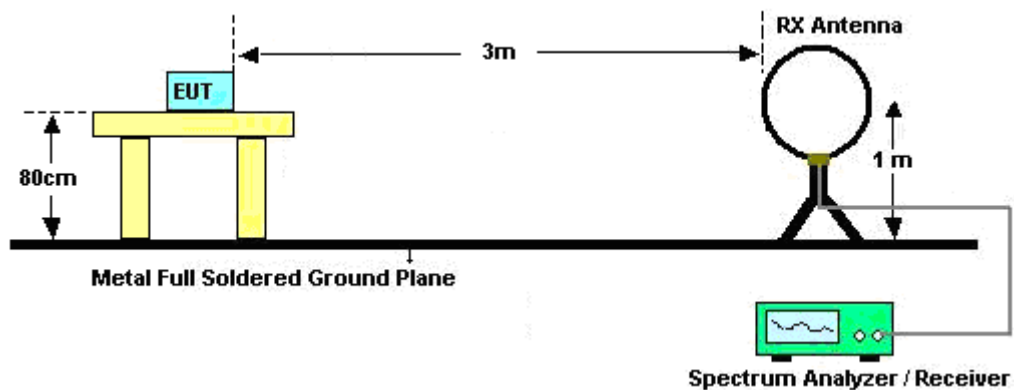
6. Radiated testing below 1GHz was performed by adjusting the antenna tower from 1m to 4m and by rotating the turn table from 0degree to 360 degree to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6dB margin against QP limit line, the position is marked as “-”.
7. Radiated testing above 1GHz was performed by adjusting the antenna tower from 1m to 4m and by rotating the turn table from 0degree to 360 degree to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6dB margin against average limit line, the position is marked as “-”.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW = 100 kHz for $f < 1$ GHz; VBW $\geq$ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3 MHz for $f \geq 1$ GHz for peak measurement.

For average measurement:

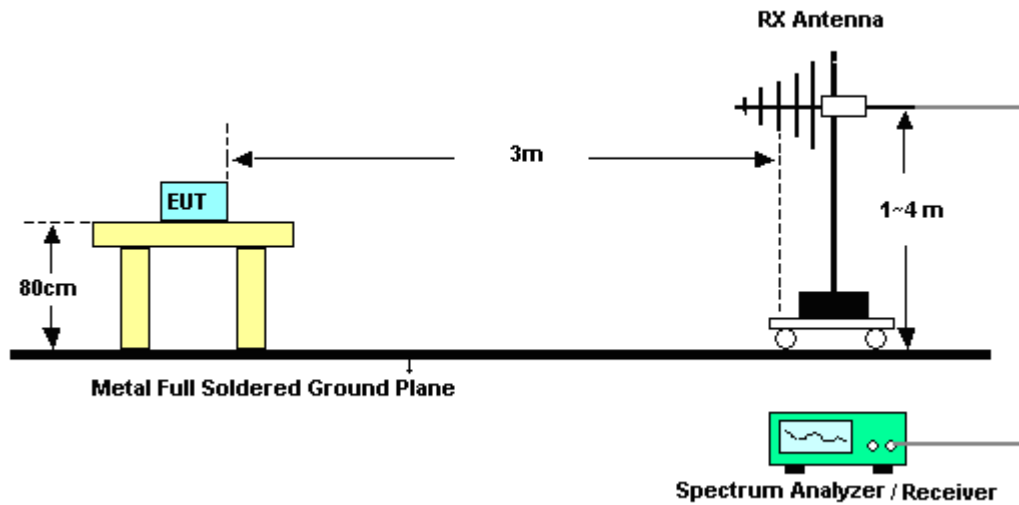
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

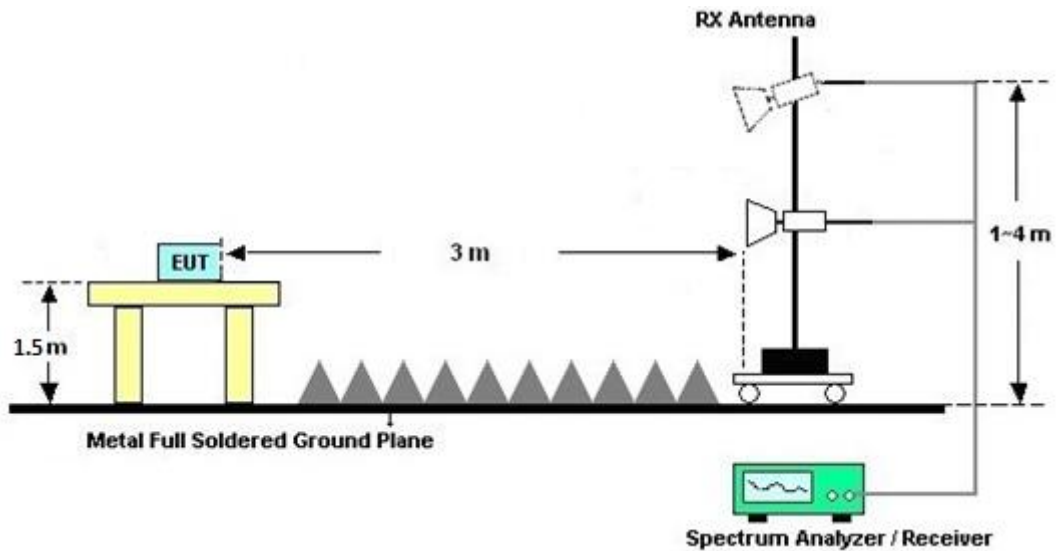
For radiated emissions below 30MHz



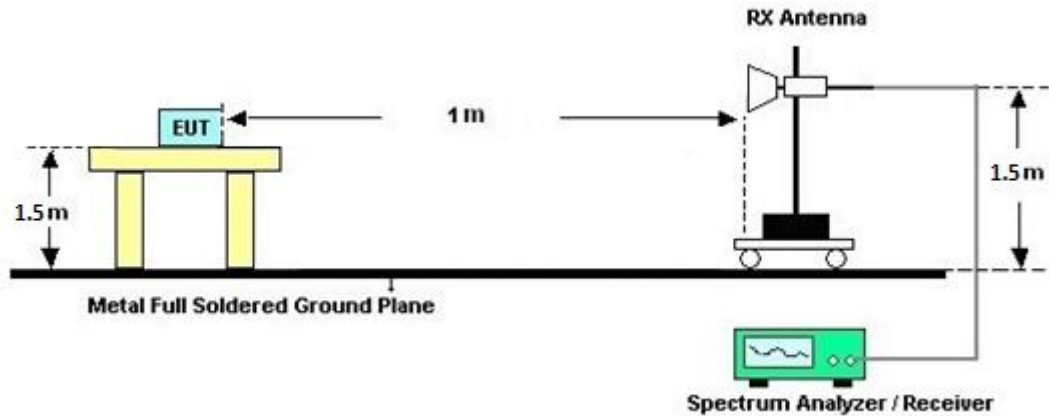
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

The low frequency, which 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.

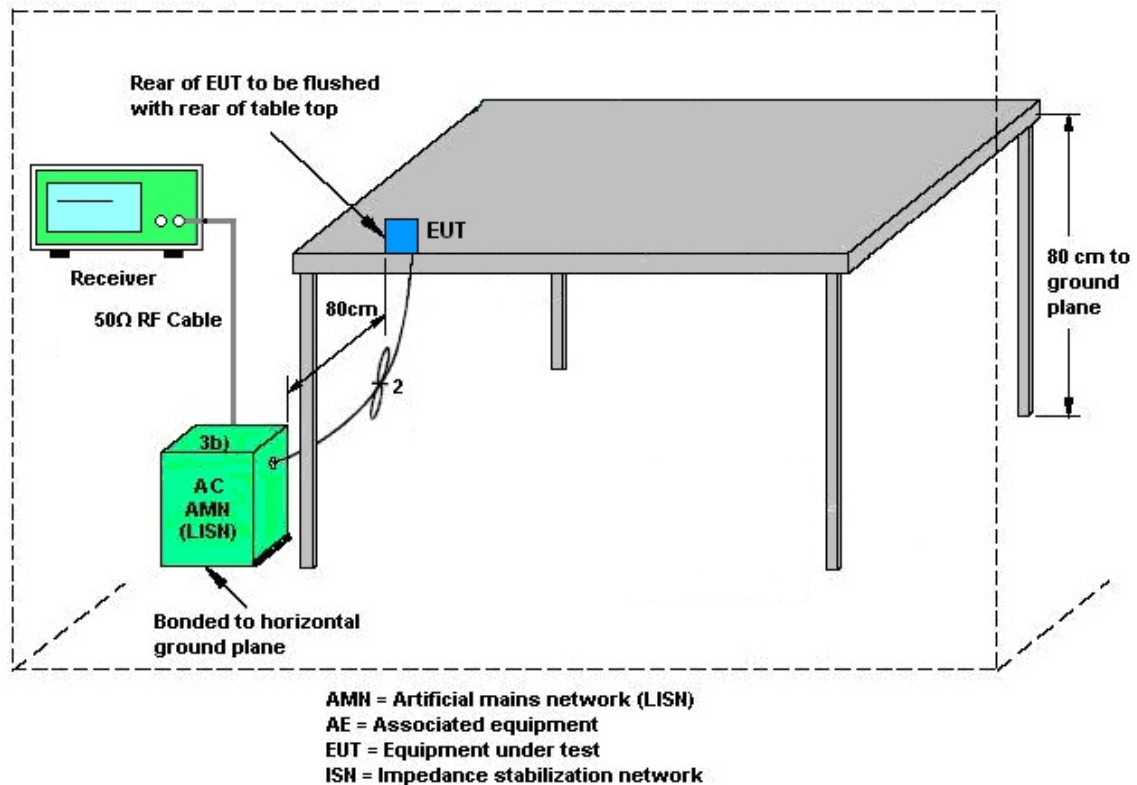
3.6.2 Measuring Instruments

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

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~50 MHz	Sep. 07, 2021	Oct. 20, 2021~ Oct. 26, 2021	Sep. 06, 2022	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01 N-06	40103 & 07	30MHz~1GHz	Apr. 28, 2021	Oct. 20, 2021~ Oct. 26, 2021	Apr. 27, 2022	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02114	1GHz ~ 18GHz	Aug. 04, 2021	Oct. 20, 2021~ Oct. 26, 2021	Aug. 03, 2022	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA9170	00993	18GHz~40GHz	Nov. 19, 2020	Oct. 20, 2021~ Oct. 26, 2021	Nov. 18, 2021	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Dec. 02, 2020	Oct. 20, 2021~ Oct. 26, 2021	Dec. 01, 2021	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 12, 2020	Oct. 20, 2021~ Oct. 26, 2021	Nov. 11, 2021	Radiation (03CH11-HY)
Preamplifier	Jet-Power	JPA0118-55-30 3	17100018000 55007	1GHz~18GHz	Jun. 16, 2021	Oct. 20, 2021~ Oct. 26, 2021	Jun. 15, 2022	Radiation (03CH11-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 22, 2021	Oct. 20, 2021~ Oct. 26, 2021	Jun. 21, 2022	Radiation (03CH11-HY)
Signal Analyzer	Keysight	N9010B	MY60240520	NA	Dec. 02, 2020	Oct. 20, 2021~ Oct. 26, 2021	Dec. 01, 2021	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY55420170	20MHz~8.4GHz	Jul. 15, 2021	Oct. 20, 2021~ Oct. 26, 2021	Jul. 14, 2022	Radiation (03CH11-HY)
Controller	EMEC	EM 1000	N/A	Control Turn table & Ant Mast	N/A	Oct. 20, 2021~ Oct. 26, 2021	N/A	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Oct. 20, 2021~ Oct. 26, 2021	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Oct. 20, 2021~ Oct. 26, 2021	N/A	Radiation (03CH11-HY)
Software	Audix	E3 6.2009-8-24	RK-001053	N/A	N/A	Oct. 20, 2021~ Oct. 26, 2021	N/A	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2859/2	30MHz-40GHz	Mar. 11, 2021	Oct. 20, 2021~ Oct. 26, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	9kHz-30MHz	Mar. 11, 2021	Oct. 20, 2021~ Oct. 26, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY9837/4PE	30M-18G	Mar. 11, 2021	Oct. 20, 2021~ Oct. 26, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY11681/4P E	30MHz-18GHz	Mar. 11, 2021	Oct. 20, 2021~ Oct. 26, 2021	Mar. 10, 2022	Radiation (03CH11-HY)
Filter	Wainwright	WLK4-1000-15 30-8000-40SS	SN11	1.53G Low Pass	Sep. 13, 2021	Oct. 20, 2021~ Oct. 26, 2021	Sep. 12, 2022	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 OSS	SN3	3GHz High Pass Filter	Sep. 13, 2021	Oct. 20, 2021~ Oct. 26, 2021	Sep. 12, 2022	Radiation (03CH11-HY)
Hygrometer	TECEPIL	DTM-303B	TP140325	N/A	Nov. 18, 2020	Oct. 20, 2021~ Oct. 26, 2021	Nov. 17, 2021	Radiation (03CH11-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	Oct. 27, 2021	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Nov. 30, 2020	Oct. 27, 2021	Nov. 29, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Nov. 18, 2020	Oct. 27, 2021	Nov. 17, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 01, 2020	Oct. 27, 2021	Nov. 30, 2021	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 16, 2020	Oct. 27, 2021	Nov. 15, 2021	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Oct. 27, 2021	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-FN	00691	N/A	Jul. 28, 2021	Oct. 27, 2021	Jul. 27, 2022	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	260260	N/A	Dec. 31, 2020	Oct. 27, 2021	Dec. 30, 2021	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 01, 2021	Oct. 14, 2021~ Oct. 26, 2021	Feb. 28, 2022	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	16I00054SNO 12	10MHz~6GHz	Dec. 16, 2020	Oct. 14, 2021~ Oct. 26, 2021	Dec. 15, 2021	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101565	10Hz ~ 40GHz	Nov. 13, 2020	Oct. 14, 2021~ Oct. 26, 2021	Nov. 12, 2021	Conducted (TH05-HY)
Switch Box & RF Cable	EM Electronics	EMSW18SE	SW200302	N/A	Mar. 17, 2021	Oct. 14, 2021~ Oct. 26, 2021	Mar. 16, 2022	Conducted (TH05-HY)

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.1 dB
---	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.8 dB
---	--------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.4 dB
---	--------

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.9 dB
---	--------

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Jacob Yu	Temperature:	21.7~23.7	°C
Test Date:	2021/10/14-2021/10/26	Relative Humidity:	51.4~55.3	%

TEST RESULTS DATA
6dB and 99% Occupied Bandwidth

2.4GHz Band Single Antenna										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant1	Ant2	Ant1	Ant2		
11b	1Mbps	1	1	2412	13.99	-	8.07	-	0.50	Pass
11b	1Mbps	1	6	2437	13.99	-	8.55	-	0.50	Pass
11b	1Mbps	1	11	2462	14.04	-	8.56	-	0.50	Pass
11g	6Mbps	1	1	2412	17.58	-	15.65	-	0.50	Pass
11g	6Mbps	1	6	2437	17.88	-	15.90	-	0.50	Pass
11g	6Mbps	1	11	2462	17.73	-	15.93	-	0.50	Pass
HT20	MCS0	1	1	2412	18.78	-	16.76	-	0.50	Pass
HT20	MCS0	1	6	2437	18.78	-	16.17	-	0.50	Pass
HT20	MCS0	1	11	2462	18.93	-	16.08	-	0.50	Pass
HT40	MCS0	1	3	2422	36.56	-	35.68	-	0.50	Pass
HT40	MCS0	1	6	2437	36.56	-	35.68	-	0.50	Pass
HT40	MCS0	1	9	2452	36.56	-	35.72	-	0.50	Pass

TEST RESULTS DATA
Average Output Power

2.4GHz Band Single Antenna																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant1	Ant2	SUM	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	15.00	-		30.00	-	0.11	-	15.11	-	36.00	-	Pass
11b	1Mbps	1	6	2437	14.80	-		30.00	-	0.11	-	14.91	-	36.00	-	Pass
11b	1Mbps	1	11	2462	14.80	-		30.00	-	0.11	-	14.91	-	36.00	-	Pass
11g	6Mbps	1	1	2412	14.00	-		30.00	-	0.11	-	14.11	-	36.00	-	Pass
11g	6Mbps	1	6	2437	14.00	-		30.00	-	0.11	-	14.11	-	36.00	-	Pass
11g	6Mbps	1	11	2462	13.60	-		30.00	-	0.11	-	13.71	-	36.00	-	Pass
HT20	MCS0	1	1	2412	12.90	-		30.00	-	0.11	-	13.01	-	36.00	-	Pass
HT20	MCS0	1	6	2437	12.90	-		30.00	-	0.11	-	13.01	-	36.00	-	Pass
HT20	MCS0	1	11	2462	12.60	-		30.00	-	0.11	-	12.71	-	36.00	-	Pass
HT40	MCS0	1	3	2422	12.80	-		30.00	-	0.11	-	12.91	-	36.00	-	Pass
HT40	MCS0	1	6	2437	12.70	-		30.00	-	0.11	-	12.81	-	36.00	-	Pass
HT40	MCS0	1	9	2452	12.80	-		30.00	-	0.11	-	12.91	-	36.00	-	Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

2.4GHz Band Single Antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant1	Ant2	Worse + 3.01	Ant1	Ant2	Ant1	Ant2	
11b	1Mbps	1	1	2412	-6.48	-		0.11	-	8.00	-	Pass
11b	1Mbps	1	6	2437	-6.77	-		0.11	-	8.00	-	Pass
11b	1Mbps	1	11	2462	-7.31	-		0.11	-	8.00	-	Pass
11g	6Mbps	1	1	2412	-9.71	-		0.11	-	8.00	-	Pass
11g	6Mbps	1	6	2437	-9.40	-		0.11	-	8.00	-	Pass
11g	6Mbps	1	11	2462	-9.44	-		0.11	-	8.00	-	Pass
HT20	MCS0	1	1	2412	-13.84	-		0.11	-	8.00	-	Pass
HT20	MCS0	1	6	2437	-11.83	-		0.11	-	8.00	-	Pass
HT20	MCS0	1	11	2462	-12.40	-		0.11	-	8.00	-	Pass
HT40	MCS0	1	3	2422	-15.58	-		0.11	-	8.00	-	Pass
HT40	MCS0	1	6	2437	-15.55	-		0.11	-	8.00	-	Pass
HT40	MCS0	1	9	2452	-15.80	-		0.11	-	8.00	-	Pass

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



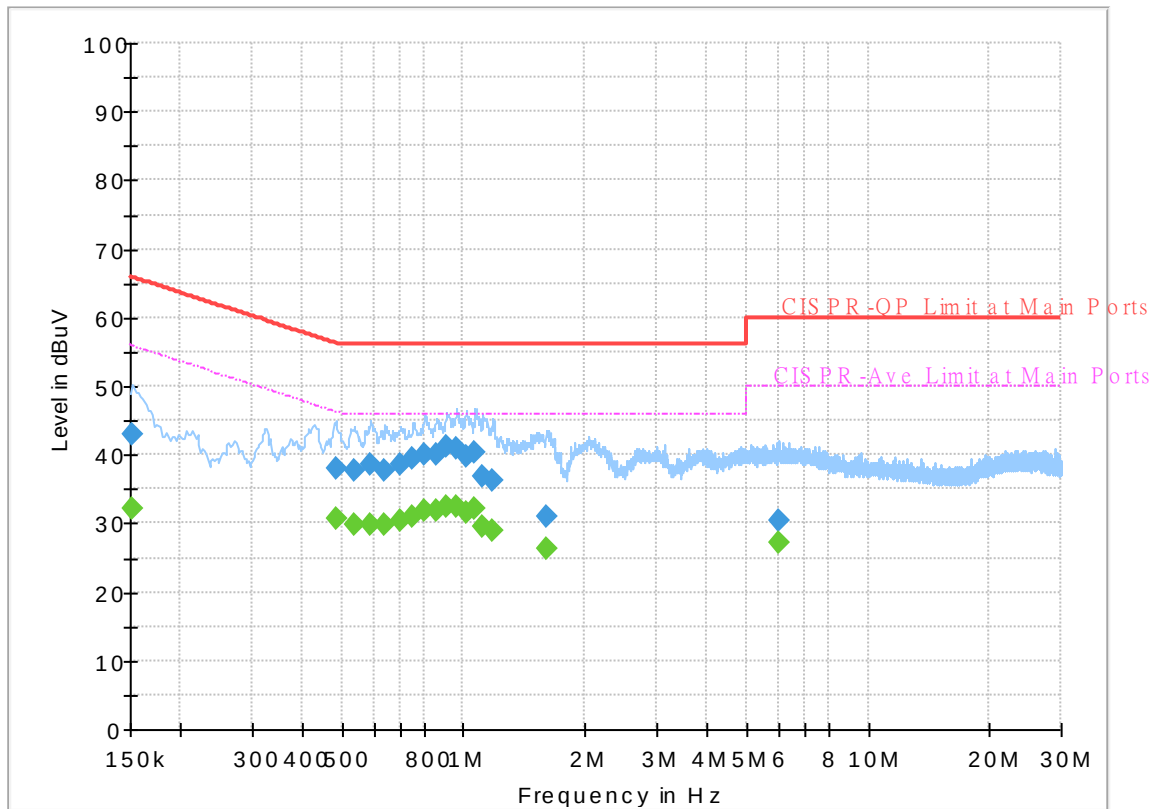
Appendix B. AC Conducted Emission Test Results

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

EUT Information

Report NO : 193007
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



Final_Result

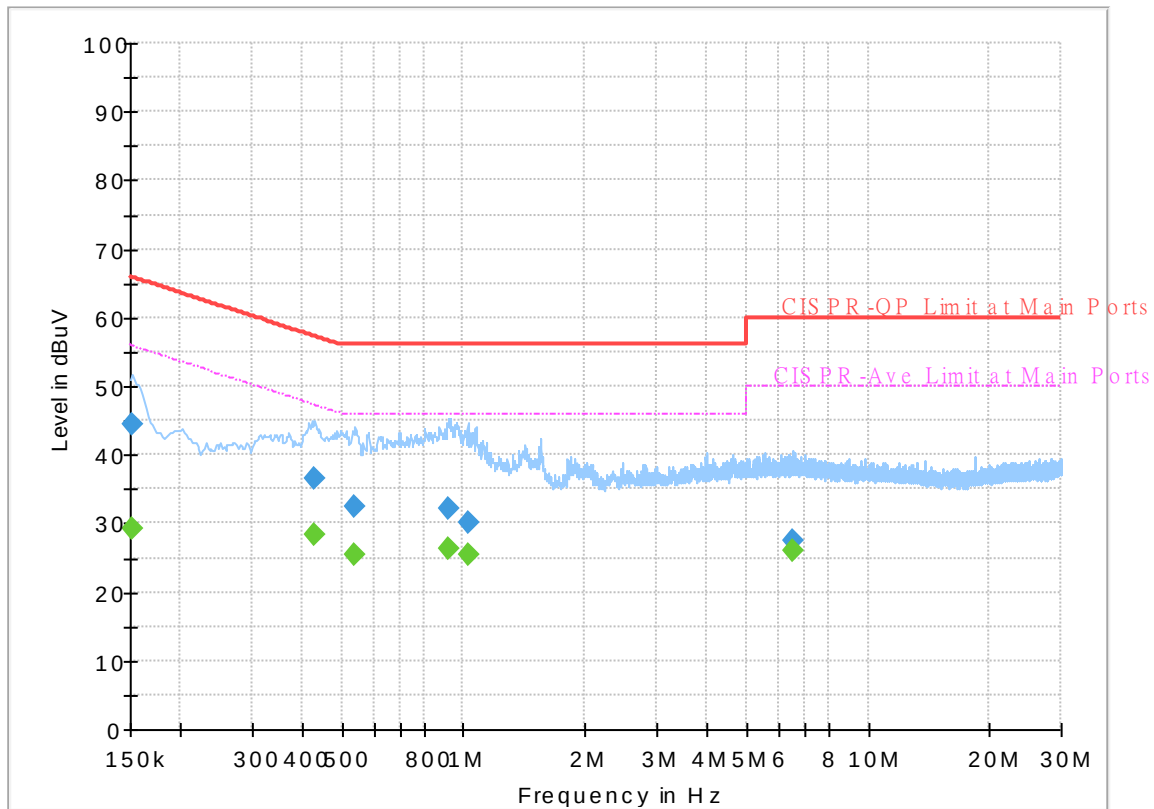
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	32.26	55.88	23.62	L1	OFF	19.7
0.152250	42.90	---	65.88	22.98	L1	OFF	19.7
0.483000	---	30.81	46.29	15.48	L1	OFF	19.8
0.483000	37.94	---	56.29	18.35	L1	OFF	19.8
0.537000	---	29.94	46.00	16.06	L1	OFF	19.9
0.537000	37.59	---	56.00	18.41	L1	OFF	19.9
0.588750	---	29.94	46.00	16.06	L1	OFF	19.9
0.588750	38.57	---	56.00	17.43	L1	OFF	19.9
0.640500	---	29.83	46.00	16.17	L1	OFF	19.9
0.640500	37.84	---	56.00	18.16	L1	OFF	19.9
0.696750	---	30.43	46.00	15.57	L1	OFF	20.0
0.696750	38.65	---	56.00	17.35	L1	OFF	20.0
0.750750	---	31.05	46.00	14.95	L1	OFF	20.0
0.750750	39.40	---	56.00	16.60	L1	OFF	20.0
0.804750	---	31.79	46.00	14.21	L1	OFF	20.1
0.804750	40.00	---	56.00	16.00	L1	OFF	20.1
0.856500	---	31.81	46.00	14.19	L1	OFF	20.1
0.856500	40.04	---	56.00	15.96	L1	OFF	20.1
0.908250	---	32.55	46.00	13.45	L1	OFF	20.1
0.908250	41.11	---	56.00	14.89	L1	OFF	20.1
0.962250	---	32.41	46.00	13.59	L1	OFF	20.2

0.962250	40.86	---	56.00	15.14	L1	OFF	20.2
1.014000	---	31.64	46.00	14.36	L1	OFF	20.2
1.014000	39.82	---	56.00	16.18	L1	OFF	20.2
1.065750	---	32.29	46.00	13.71	L1	OFF	20.2
1.065750	40.36	---	56.00	15.64	L1	OFF	20.2
1.115250	---	29.46	46.00	16.54	L1	OFF	20.2
1.115250	36.99	---	56.00	19.01	L1	OFF	20.2
1.180500	---	29.06	46.00	16.94	L1	OFF	20.2
1.180500	36.36	---	56.00	19.64	L1	OFF	20.2
1.596750	---	26.24	46.00	19.76	L1	OFF	20.2
1.596750	31.10	---	56.00	24.90	L1	OFF	20.2
6.006750	---	27.32	50.00	22.68	L1	OFF	20.0
6.006750	30.46	---	60.00	29.54	L1	OFF	20.0

EUT Information

Report NO : 193007
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	---	29.17	55.88	26.71	N	OFF	19.7
0.152250	44.33	---	65.88	21.55	N	OFF	19.7
0.429000	---	28.51	47.27	18.76	N	OFF	19.7
0.429000	36.47	---	57.27	20.80	N	OFF	19.7
0.539250	---	25.41	46.00	20.59	N	OFF	19.9
0.539250	32.32	---	56.00	23.68	N	OFF	19.9
0.919500	---	26.41	46.00	19.59	N	OFF	20.2
0.919500	32.07	---	56.00	23.93	N	OFF	20.2
1.027500	---	25.41	46.00	20.59	N	OFF	20.2
1.027500	30.18	---	56.00	25.82	N	OFF	20.2
6.504000	---	25.97	50.00	24.03	N	OFF	20.1
6.504000	27.51	---	60.00	32.49	N	OFF	20.1



Appendix C. Radiated Spurious Emission

Test Engineer :	Harvey Guo and Fu Chen	Temperature :	23.1 ~ 24.6°C
		Relative Humidity :	64.3 ~ 68.5%

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	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2367.015	52.88	-21.12	74	42.04	27.27	17.04	33.47	100	113	P	H
		2387.28	42.71	-11.29	54	31.76	27.35	17.06	33.46	100	113	A	H
	*	2412	106.99	-	-	95.89	27.45	17.09	33.44	100	113	P	H
	*	2412	103.82	-	-	92.72	27.45	17.09	33.44	100	113	A	H
													H
													H
		2361.135	52.81	-21.19	74	42	27.24	17.04	33.47	100	285	P	V
		2386.86	41.91	-12.09	54	30.96	27.35	17.06	33.46	100	285	A	V
	*	2412	101.04	-	-	89.94	27.45	17.09	33.44	100	285	P	V
	*	2412	97.84	-	-	86.74	27.45	17.09	33.44	100	285	A	V
													V
													V
802.11b CH 06 2437MHz		2386	53.27	-20.73	74	42.33	27.34	17.06	33.46	100	113	P	H
		2385.2	42.14	-11.86	54	31.2	27.34	17.06	33.46	100	113	A	H
	*	2437	106.98	-	-	95.73	27.55	17.13	33.43	100	113	P	H
	*	2437	103.86	-	-	92.61	27.55	17.13	33.43	100	113	A	H
		2498.88	54.4	-19.6	74	42.69	27.89	17.22	33.4	100	113	P	H
		2488.24	43.51	-10.49	54	31.88	27.83	17.21	33.41	100	113	A	H
		2372.56	53.32	-20.68	74	42.44	27.29	17.05	33.46	106	305	P	V
		2386.32	41.7	-12.3	54	30.75	27.35	17.06	33.46	106	305	A	V
	*	2437	101.24	-	-	89.99	27.55	17.13	33.43	106	305	P	V
	*	2437	98.11	-	-	86.86	27.55	17.13	33.43	106	305	A	V
		2493.68	53.61	-20.39	74	41.93	27.86	17.22	33.4	106	305	P	V
		2497.92	42.67	-11.33	54	30.96	27.89	17.22	33.4	106	305	A	V



802.11b CH 11 2462MHz	*	2462	104.63	-	-	93.21	27.67	17.17	33.42	100	124	P	H
	*	2462	101.56	-	-	90.14	27.67	17.17	33.42	100	124	A	H
		2485.36	55.99	-18.01	74	44.39	27.81	17.2	33.41	100	124	P	H
		2493.36	43.77	-10.23	54	32.1	27.86	17.21	33.4	100	124	A	H
													H
													H
	*	2462	100.04	-	-	88.62	27.67	17.17	33.42	350	102	P	V
	*	2462	96.74	-	-	85.32	27.67	17.17	33.42	350	102	A	V
		2497.08	54.95	-19.05	74	43.25	27.88	17.22	33.4	350	102	P	V
		2498.16	43	-11	54	31.29	27.89	17.22	33.4	350	102	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1	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	37.68	-36.32	74	52.58	32.45	11.11	58.46	-	-	P	H
		11370	47.12	-26.88	74	52.1	39.2	17.76	61.94	-	-	P	H
		14470	47.5	-26.5	74	48.89	40.4	21.25	63.04	-	-	P	H
		18000	50.81	-23.19	74	40.4	43	24.01	56.6	-	-	P	H
		18000	45.77	-8.23	54	35.36	43	24.01	56.6	-	-	A	H
													H
		4824	36.96	-37.04	74	51.86	32.45	11.11	58.46	-	-	P	V
		11985	47.39	-26.61	74	53.33	38.69	18.34	62.97	-	-	P	V
		14475	48.03	-25.97	74	49.4	40.4	21.26	63.03	-	-	P	V
		14475	40.94	-13.06	54	42.31	40.4	21.26	63.03	-	-	A	V
		17955	51.63	-22.37	74	41.73	42.64	23.97	56.71	-	-	P	V
		17955	45.64	-8.36	54	35.74	42.64	23.97	56.71	-	-	A	V
802.11b CH 06 2437MHz		4874	39.48	-34.52	74	54.12	32.6	11.23	58.47	-	-	P	H
		7311	40.76	-33.24	74	49.63	36.78	13.53	59.18	-	-	P	H
		10905	46.87	-27.13	74	52.13	38.81	17.32	61.39	-	-	P	H
		14470	48.22	-25.78	74	49.61	40.4	21.25	63.04	-	-	P	H
		14470	41.13	-12.87	54	42.52	40.4	21.25	63.04	-	-	A	H
		17925	51.13	-22.87	74	41.57	42.4	23.94	56.78	-	-	P	H
		4874	38.26	-35.74	74	52.9	32.6	11.23	58.47	-	-	P	V
		7311	41.12	-32.88	74	49.99	36.78	13.53	59.18	-	-	P	V
		11445	47.28	-26.72	74	52.46	39.02	17.83	62.03	-	-	P	V
		14470	47.47	-26.53	74	48.86	40.4	21.25	63.04	-	-	P	V
		18000	51.02	-22.98	74	40.61	43	24.01	56.6	-	-	P	V
		18000	46.2	-7.8	54	35.79	43	24.01	56.6	-	-	A	V



WIFI Ant. 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	38.33	-35.67	74	52.64	32.84	11.33	58.48	-	-	P	H
		7386	40.08	-33.92	74	49.17	36.41	13.65	59.15	-	-	P	H
		10755	47.08	-26.92	74	51.99	39.11	17.19	61.21	-	-	P	H
		14470	47.36	-26.64	74	48.75	40.4	21.25	63.04	-	-	P	H
		17985	52.2	-21.8	74	41.96	42.88	24	56.64	-	-	P	H
		17985	46.69	-7.31	54	36.45	42.88	24	56.64	-	-	A	H
		4924	38.37	-35.63	74	52.68	32.84	11.33	58.48	-	-	P	V
		7386	40.64	-33.36	74	49.73	36.41	13.65	59.15	-	-	P	V
		11370	46.51	-27.49	74	51.49	39.2	17.76	61.94	-	-	P	V
		14470	47.73	-26.27	74	49.12	40.4	21.25	63.04	-	-	P	V
		17970	51.04	-22.96	74	40.97	42.76	23.98	56.67	-	-	P	V
		17970	46.19	-7.81	54	36.12	42.76	23.98	56.67	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



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

WIFI Ant. 1	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		2382.03	55.7	-18.3	74	44.78	27.33	17.05	33.46	103	184	P	H
		2390	44.53	-9.47	54	33.57	27.36	17.06	33.46	103	184	A	H
	*	2412	106.53	-	-	95.43	27.45	17.09	33.44	103	184	P	H
	*	2412	98.9	-	-	87.8	27.45	17.09	33.44	103	184	A	H
													H
													H
		2380.665	52.99	-21.01	74	42.08	27.32	17.05	33.46	342	288	P	V
		2390	42.8	-11.2	54	31.84	27.36	17.06	33.46	342	288	A	V
	*	2412	102.81	-	-	91.71	27.45	17.09	33.44	342	288	P	V
	*	2412	95.41	-	-	84.31	27.45	17.09	33.44	342	288	A	V
													V
													V
802.11g CH 06 2437MHz		2379.6	53.18	-20.82	74	42.27	27.32	17.05	33.46	312	360	P	H
		2381.04	42.13	-11.87	54	31.22	27.32	17.05	33.46	312	360	A	H
	*	2437	95.47	-	-	84.22	27.55	17.13	33.43	312	360	P	H
	*	2437	87.87	-	-	76.62	27.55	17.13	33.43	312	360	A	H
		2488	54.04	-19.96	74	42.41	27.83	17.21	33.41	312	360	P	H
		2499.04	42.64	-11.36	54	30.93	27.89	17.22	33.4	312	360	A	H
		2348.88	52.77	-21.23	74	42.03	27.2	17.02	33.48	300	153	P	V
		2383.28	41.92	-12.08	54	31	27.33	17.05	33.46	300	153	A	V
	*	2437	88.96	-	-	77.71	27.55	17.13	33.43	300	153	P	V
	*	2437	81.2	-	-	69.95	27.55	17.13	33.43	300	153	A	V
		2490.96	53.06	-20.94	74	41.4	27.85	17.21	33.4	300	153	P	V
		2499.28	42.8	-11.2	54	31.08	27.9	17.22	33.4	300	153	A	V



802.11g CH 11 2462MHz	*	2462	106.86	-	-	95.44	27.67	17.17	33.42	176	182	P	H
	*	2462	98.96	-	-	87.54	27.67	17.17	33.42	176	182	A	H
		2484.76	57.62	-16.38	74	46.02	27.81	17.2	33.41	176	182	P	H
		2483.56	46.48	-7.52	54	34.89	27.8	17.2	33.41	176	182	A	H
													H
													H
	*	2462	100.86	-	-	89.44	27.67	17.17	33.42	356	97	P	V
	*	2462	93.19	-	-	81.77	27.67	17.17	33.42	356	97	A	V
		2499.16	54.36	-19.64	74	42.65	27.89	17.22	33.4	356	97	P	V
		2483.52	43.7	-10.3	54	32.11	27.8	17.2	33.41	356	97	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI Ant. 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	37.62	-36.38	74	52.52	32.45	11.11	58.46	-	-	P	H
		11055	47.15	-26.85	74	52.37	38.9	17.45	61.57	-	-	P	H
		14470	47.97	-26.03	74	49.36	40.4	21.25	63.04	-	-	P	H
		17955	51.12	-22.88	74	41.22	42.64	23.97	56.71	-	-	P	H
		17955	40.48	-13.52	54	30.58	42.64	23.97	56.71	-	-	A	H
													H
		4824	37.84	-36.16	74	52.74	32.45	11.11	58.46	-	-	P	V
		11460	46.95	-27.05	74	52.2	38.96	17.84	62.05	-	-	P	V
		14470	48.48	-25.52	74	49.87	40.4	21.25	63.04	-	-	P	V
		14470	37.81	-16.19	54	39.2	40.4	21.25	63.04	-	-	A	V
		17970	50.42	-23.58	74	40.35	42.76	23.98	56.67	-	-	P	V
		17970	40.6	-13.4	54	30.53	42.76	23.98	56.67	-	-	A	V
802.11g CH 06 2437MHz		4874	38.65	-35.35	74	53.29	32.6	11.23	58.47	-	-	P	H
		7311	40.86	-33.14	74	49.73	36.78	13.53	59.18	-	-	P	H
		11130	47.19	-26.81	74	52.4	38.93	17.52	61.66	-	-	P	H
		14475	47.06	-26.94	74	48.43	40.4	21.26	63.03	-	-	P	H
		17970	50.39	-23.61	74	40.32	42.76	23.98	56.67	-	-	P	H
		17970	40.44	-13.56	54	30.37	42.76	23.98	56.67	-	-	A	H
		4874	38.87	-35.13	74	53.51	32.6	11.23	58.47	-	-	P	V
		7311	40.66	-33.34	74	49.53	36.78	13.53	59.18	-	-	P	V
		11400	46.85	-27.15	74	51.85	39.2	17.78	61.98	-	-	P	V
		14470	47.29	-26.71	74	48.68	40.4	21.25	63.04	-	-	P	V
		17985	51.12	-22.88	74	40.88	42.88	24	56.64	-	-	P	V
		17985	40.98	-13.02	54	30.74	42.88	24	56.64	-	-	A	V



WIFI Ant. 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	39.81	-34.19	74	54.12	32.84	11.33	58.48	-	-	P	H
		7386	41.26	-32.74	74	50.35	36.41	13.65	59.15	-	-	P	H
		12600	46.95	-27.05	74	52.82	38.8	18.89	63.56	-	-	P	H
		14470	47.33	-26.67	74	48.72	40.4	21.25	63.04	-	-	P	H
		17970	50.85	-23.15	74	40.78	42.76	23.98	56.67	-	-	P	H
		17970	40.42	-13.58	54	30.35	42.76	23.98	56.67	-	-	A	H
		4924	39.11	-34.89	74	53.42	32.84	11.33	58.48	-	-	P	V
		7386	40.72	-33.28	74	49.81	36.41	13.65	59.15	-	-	P	V
		11280	47.32	-26.68	74	52.33	39.16	17.67	61.84	-	-	P	V
		14470	47.53	-26.47	74	48.92	40.4	21.25	63.04	-	-	P	V
		17955	50.86	-23.14	74	40.96	42.64	23.97	56.71	-	-	P	V
		17955	40.11	-13.89	54	30.21	42.64	23.97	56.71	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 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		2384.865	54.53	-19.47	74	43.59	27.34	17.06	33.46	148	63	P	H
		2390	44.32	-9.68	54	33.36	27.36	17.06	33.46	148	63	A	H
	*	2412	104.07	-	-	92.97	27.45	17.09	33.44	148	63	P	H
	*	2412	96.1	-	-	85	27.45	17.09	33.44	148	63	A	H
													H
													H
		2385.075	53.8	-20.2	74	42.86	27.34	17.06	33.46	111	274	P	V
		2388.96	43.66	-10.34	54	32.7	27.36	17.06	33.46	111	274	A	V
	*	2412	102.08	-	-	90.98	27.45	17.09	33.44	111	274	P	V
	*	2412	94.17	-	-	83.07	27.45	17.09	33.44	111	274	A	V
													V
													V
802.11n HT20 CH 06 2437MHz		2372.56	53.24	-20.76	74	42.36	27.29	17.05	33.46	104	116	P	H
		2390	43.27	-10.73	54	32.31	27.36	17.06	33.46	104	116	A	H
	*	2437	105.57	-	-	94.32	27.55	17.13	33.43	104	116	P	H
	*	2437	97.65	-	-	86.4	27.55	17.13	33.43	104	116	A	H
		2499.12	54.85	-19.15	74	43.14	27.89	17.22	33.4	104	116	P	H
		2486.64	44.96	-9.04	54	33.35	27.82	17.2	33.41	104	116	A	H
		2383.12	53.05	-20.95	74	42.13	27.33	17.05	33.46	100	79	P	V
		2380.72	42.96	-11.04	54	32.05	27.32	17.05	33.46	100	79	A	V
	*	2437	101.55	-	-	90.3	27.55	17.13	33.43	100	79	P	V
	*	2437	93.86	-	-	82.61	27.55	17.13	33.43	100	79	A	V
		2490.32	54.49	-19.51	74	42.84	27.84	17.21	33.4	100	79	P	V
		2493.84	43.77	-10.23	54	32.09	27.86	17.22	33.4	100	79	A	V



802.11n HT20 CH 11 2462MHz	*	2462	105.08	-	-	93.66	27.67	17.17	33.42	114	112	P	H
	*	2462	97.1	-	-	85.68	27.67	17.17	33.42	114	112	A	H
		2483.85	55.66	-18.34	74	44.07	27.8	17.2	33.41	114	112	P	H
		2483.55	45.73	-8.27	54	34.14	27.8	17.2	33.41	114	112	A	H
													H
													H
	*	2462	99.48	-	-	88.06	27.67	17.17	33.42	100	296	P	V
	*	2462	91.5	-	-	80.08	27.67	17.17	33.42	100	296	A	V
		2484.8	53.77	-20.23	74	42.17	27.81	17.2	33.41	100	296	P	V
		2483.6	44.36	-9.64	54	32.77	27.8	17.2	33.41	100	296	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. 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	38.12	-35.88	74	53.02	32.45	11.11	58.46	-	-	P	H
		11190	47.93	-26.07	74	53.09	38.99	17.58	61.73	-	-	P	H
		14470	47.52	-26.48	74	48.91	40.4	21.25	63.04	-	-	P	H
		17970	50.93	-23.07	74	40.86	42.76	23.98	56.67	-	-	P	H
		17970	41.18	-12.82	54	31.11	42.76	23.98	56.67	-	-	A	H
													H
		4824	38.03	-35.97	74	52.93	32.45	11.11	58.46	-	-	P	V
		11895	47.04	-26.96	74	53.01	38.59	18.25	62.81	-	-	P	V
		14470	47.59	-26.41	74	48.98	40.4	21.25	63.04	-	-	P	V
		18000	50.66	-23.34	74	40.25	43	24.01	56.6	-	-	P	V
		18000	41.49	-12.51	54	31.08	43	24.01	56.6	-	-	A	V
													V
		4874	38.59	-35.41	74	53.23	32.6	11.23	58.47	-	-	P	H
		7311	40.69	-33.31	74	49.56	36.78	13.53	59.18	-	-	P	H
802.11n HT20 CH 06 2437MHz		12480	46.79	-27.21	74	52.96	38.72	18.78	63.67	-	-	P	H
		14470	47.65	-26.35	74	49.04	40.4	21.25	63.04	-	-	P	H
		18000	50.73	-23.27	74	40.32	43	24.01	56.6	-	-	P	H
		18000	41.15	-12.85	54	30.74	43	24.01	56.6	-	-	A	H
		4874	38.4	-35.6	74	53.04	32.6	11.23	58.47	-	-	P	V
		7311	42.4	-31.6	74	51.27	36.78	13.53	59.18	-	-	P	V
		11400	46.93	-27.07	74	51.93	39.2	17.78	61.98	-	-	P	V
		14470	48.37	-25.63	74	49.76	40.4	21.25	63.04	-	-	P	V
		17985	51.35	-22.65	74	41.11	42.88	24	56.64	-	-	P	V
		17985	41.5	-12.5	54	31.26	42.88	24	56.64	-	-	A	V



WIFI Ant. 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	39.34	-34.66	74	53.65	32.84	11.33	58.48	-	-	P	H
		7386	41.2	-32.8	74	50.29	36.41	13.65	59.15	-	-	P	H
		11025	46.97	-27.03	74	52.18	38.9	17.42	61.53	-	-	P	H
		14475	47.12	-26.88	74	48.49	40.4	21.26	63.03	-	-	P	H
		18000	51.48	-22.52	74	41.07	43	24.01	56.6	-	-	P	H
		18000	41.65	-12.35	54	31.24	43	24.01	56.6	-	-	A	H
		4924	38.93	-35.07	74	53.24	32.84	11.33	58.48	-	-	P	V
		7386	40.2	-33.8	74	49.29	36.41	13.65	59.15	-	-	P	V
		12540	47.13	-26.87	74	53.2	38.74	18.83	63.64	-	-	P	V
		14470	47.4	-26.6	74	48.79	40.4	21.25	63.04	-	-	P	V
		17985	50.65	-23.35	74	40.41	42.88	24	56.64	-	-	P	V
		17985	41.39	-12.61	54	31.15	42.88	24	56.64	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 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		2390	56.55	-17.45	74	45.59	27.36	17.06	33.46	104	111	P	H
		2389.52	46.95	-7.05	54	35.99	27.36	17.06	33.46	104	111	A	H
	*	2422	102.01	-	-	90.86	27.49	17.1	33.44	104	111	P	H
	*	2422	94.02	-	-	82.87	27.49	17.1	33.44	104	111	A	H
		2488.48	55.16	-18.84	74	43.53	27.83	17.21	33.41	104	111	P	H
		2486	45.51	-8.49	54	33.9	27.82	17.2	33.41	104	111	A	H
		2389.52	53.2	-20.8	74	42.24	27.36	17.06	33.46	116	306	P	V
		2389.04	44.44	-9.56	54	33.48	27.36	17.06	33.46	116	306	A	V
	*	2422	96.76	-	-	85.61	27.49	17.1	33.44	116	306	P	V
	*	2422	89.22	-	-	78.07	27.49	17.1	33.44	116	306	A	V
		2493.52	53.82	-20.18	74	42.15	27.86	17.21	33.4	116	306	P	V
		2485.52	44.65	-9.35	54	33.05	27.81	17.2	33.41	116	306	A	V
802.11n HT40 CH 06 2437MHz		2385.2	53.53	-20.47	74	42.59	27.34	17.06	33.46	104	113	P	H
		2388.72	44.37	-9.63	54	33.42	27.35	17.06	33.46	104	113	A	H
	*	2437	103.2	-	-	91.95	27.55	17.13	33.43	104	113	P	H
	*	2437	95.35	-	-	84.1	27.55	17.13	33.43	104	113	A	H
		2485.84	55.21	-18.79	74	43.6	27.82	17.2	33.41	104	113	P	H
		2487.52	45.76	-8.24	54	34.13	27.83	17.21	33.41	104	113	A	H
		2366.48	53.04	-20.96	74	42.2	27.27	17.04	33.47	108	298	P	V
		2384.24	43.36	-10.64	54	32.42	27.34	17.06	33.46	108	298	A	V
	*	2437	97.84	-	-	86.59	27.55	17.13	33.43	108	298	P	V
	*	2437	90.09	-	-	78.84	27.55	17.13	33.43	108	298	A	V
		2491.44	53.79	-20.21	74	42.13	27.85	17.21	33.4	108	298	P	V
		2500	44.71	-9.29	54	32.98	27.9	17.23	33.4	108	298	A	V



802.11n HT40 CH 09 2452MHz		2334.64	53.4	-20.6	74	42.7	27.17	17.01	33.48	100	115	P	H
		2369.68	43.84	-10.16	54	32.99	27.28	17.04	33.47	100	115	A	H
	*	2452	102.31	-	-	90.97	27.61	17.15	33.42	100	115	P	H
	*	2452	94.88	-	-	83.54	27.61	17.15	33.42	100	115	A	H
		2484.88	59.81	-14.19	74	48.21	27.81	17.2	33.41	100	115	P	H
		2484.4	48.76	-5.24	54	37.16	27.81	17.2	33.41	100	115	A	H
		2377.84	52.67	-21.33	74	41.77	27.31	17.05	33.46	100	297	P	V
		2385.36	43.94	-10.06	54	33	27.34	17.06	33.46	100	297	A	V
	*	2452	97.47	-	-	86.13	27.61	17.15	33.42	100	297	P	V
	*	2452	89.38	-	-	78.04	27.61	17.15	33.42	100	297	A	V
		2484.64	54.61	-19.39	74	43.01	27.81	17.2	33.41	100	297	P	V
		2483.68	45.75	-8.25	54	34.16	27.8	17.2	33.41	100	297	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. 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	38.04	-35.96	74	52.86	32.49	11.16	58.47	-	-	P	H
		7266	41.02	-32.98	74	49.89	36.87	13.45	59.19	-	-	P	H
		11160	46.92	-27.08	74	52.1	38.96	17.55	61.69	-	-	P	H
		14475	47.24	-26.76	74	48.61	40.4	21.26	63.03	-	-	P	H
		17985	50.89	-23.11	74	40.65	42.88	24	56.64	-	-	P	H
		17985	41.53	-12.47	54	31.29	42.88	24	56.64	-	-	A	H
		4844	38.24	-35.76	74	53.06	32.49	11.16	58.47	-	-	P	V
		7266	40.74	-33.26	74	49.61	36.87	13.45	59.19	-	-	P	V
		10995	47.42	-26.58	74	52.6	38.9	17.41	61.49	-	-	P	V
		14470	48.04	-25.96	74	49.43	40.4	21.25	63.04	-	-	P	V
		14470	38.44	-15.56	54	39.83	40.4	21.25	63.04	-	-	A	V
		18000	51.42	-22.58	74	41.01	43	24.01	56.6	-	-	P	V
		18000	41.65	-12.35	54	31.24	43	23.19	56.6	-	-	A	V
802.11n HT40 CH 06 2437MHz		4874	40.42	-33.58	74	55.06	32.6	11.23	58.47	-	-	P	H
		7311	42.13	-31.87	74	51	36.78	13.53	59.18	-	-	P	H
		10815	47.39	-26.61	74	52.29	39.14	17.24	61.28	-	-	P	H
		14470	48.05	-25.95	74	49.44	40.4	21.25	63.04	-	-	P	H
		14470	38.26	-15.74	54	39.65	40.4	21.25	63.04	-	-	A	H
		17985	50.93	-23.07	74	40.69	42.88	24	56.64	-	-	P	H
		17985	41.54	-12.46	54	31.3	42.88	23.18	56.64	-	-	A	H
		4874	39.13	-34.87	74	53.77	32.6	11.23	58.47	-	-	P	V
		7311	41.04	-32.96	74	49.91	36.78	13.53	59.18	-	-	P	V
		11250	47.12	-26.88	74	52.18	39.1	17.64	61.8	-	-	P	V
		14470	48.01	-25.99	74	49.4	40.4	21.25	63.04	-	-	P	V
		17985	51.08	-22.92	74	40.84	42.88	24	56.64	-	-	P	V
		17985	41.3	-12.7	54	31.06	42.88	24	56.64	-	-	A	V



802.11n HT40 CH 09 2452MHz		4904	38.74	-35.26	74	53.22	32.72	11.28	58.48	-	-	P	H
		7356	41.14	-32.86	74	50.05	36.65	13.6	59.16	-	-	P	H
		11205	47.51	-26.49	74	52.65	39.01	17.6	61.75	-	-	P	H
		14470	47.67	-26.33	74	49.06	40.4	21.25	63.04	-	-	P	H
		17970	50.89	-23.11	74	40.82	42.76	23.98	56.67	-	-	P	H
		17970	41.97	-12.03	54	31.9	42.76	23.98	56.67	-	-	A	H
		4904	38.74	-35.26	74	53.22	32.72	11.28	58.48	-	-	P	V
		7356	40.8	-33.2	74	49.71	36.65	13.6	59.16	-	-	P	V
		11010	46.65	-27.35	74	51.85	38.9	17.41	61.51	-	-	P	V
		14470	47.53	-26.47	74	48.92	40.4	21.25	63.04	-	-	P	V
		17910	50.3	-23.7	74	40.92	42.28	23.92	56.82	-	-	P	V
		17910	40.76	-13.24	54	31.38	42.28	23.92	56.82	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 4. The emission level close to 18GHz is checked that the average emission level is noise floor only.												

Emission above 18GHz

2.4GHz WIFI 802.11n HT40 (SHF)

[illegible]

Emission below 1GHz

2.4GHz WIFI 802.11n HT40 (LF)

[illegible]



Note symbol

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



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
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 :	Harvey Guo and Fu Chen	Temperature :	23.1 ~ 24.6°C
		Relative Humidity :	64.3 ~ 68.5%

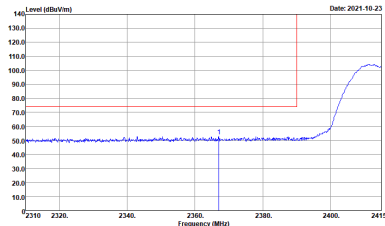
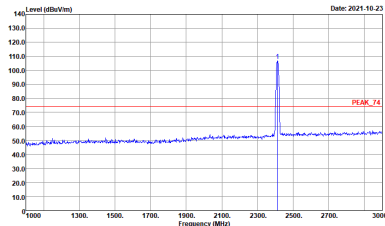
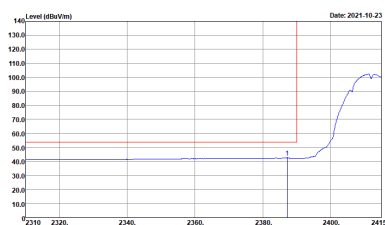
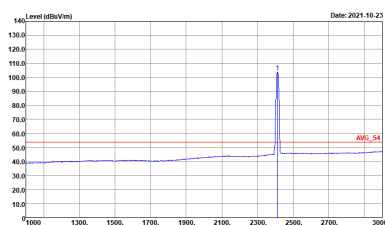
Note symbol

-L	Low channel location
-R	High channel location

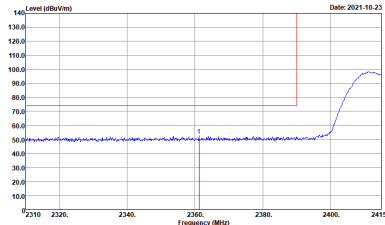
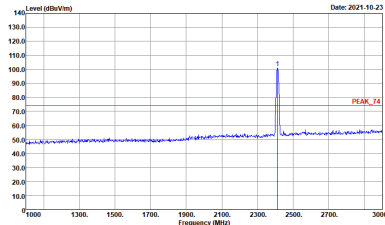
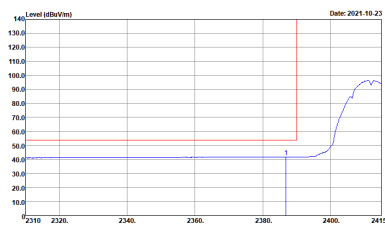
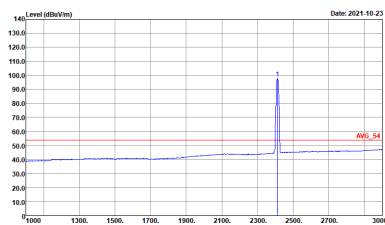


2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

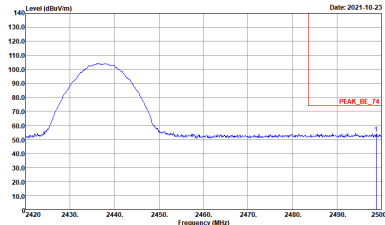
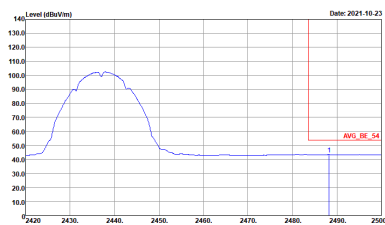


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

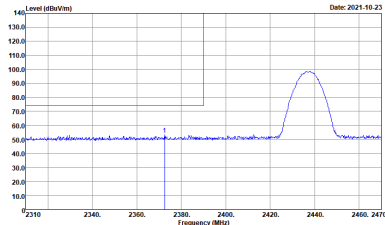
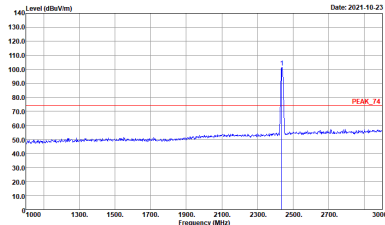
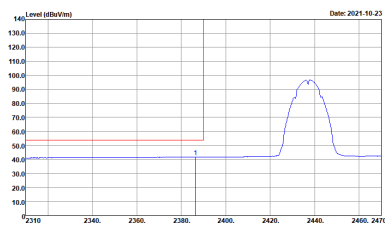
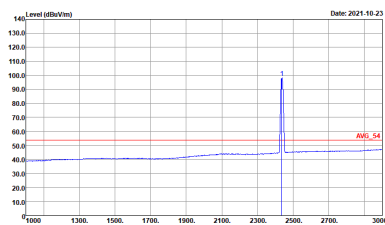


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

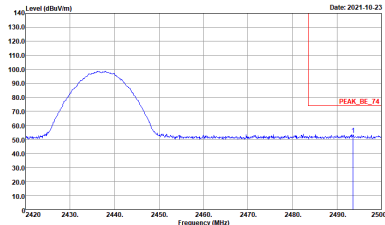
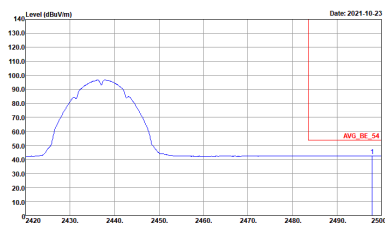


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

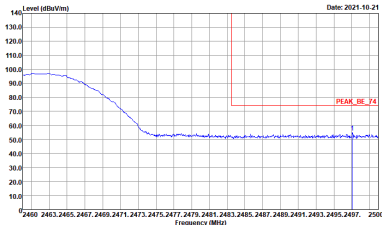
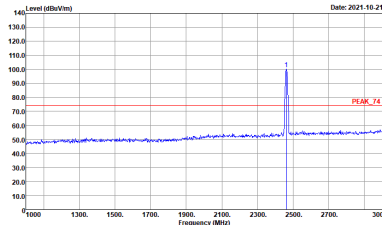
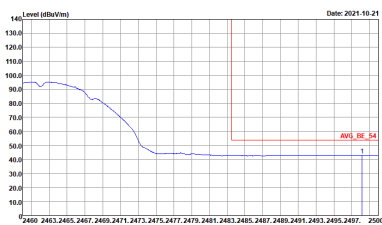
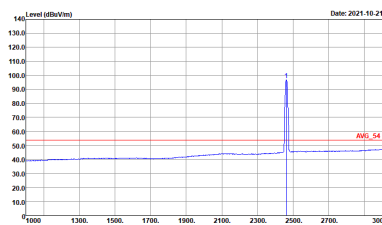


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank



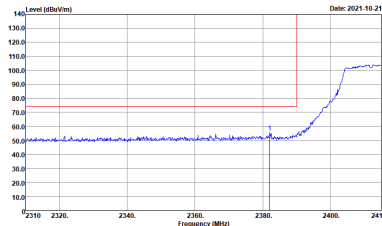
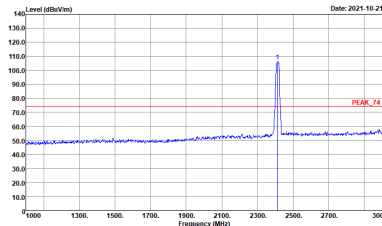
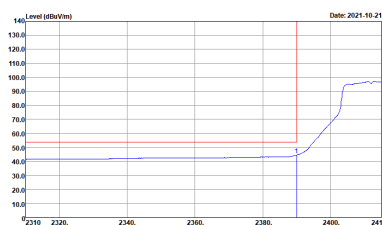
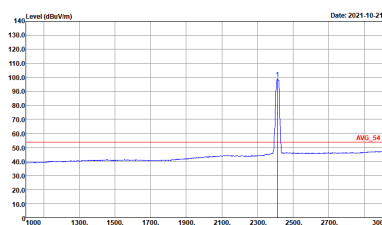
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH11-HY Condition : PEAK_F4 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH11-HY Condition : AVG_F4 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



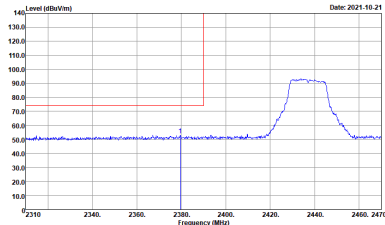
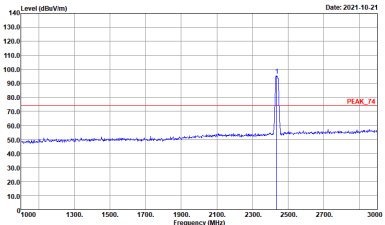
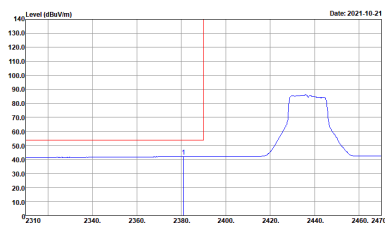
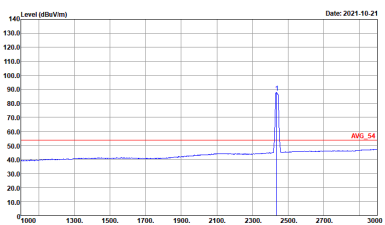
2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto

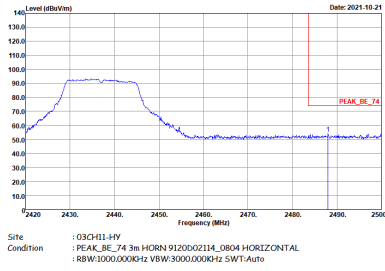
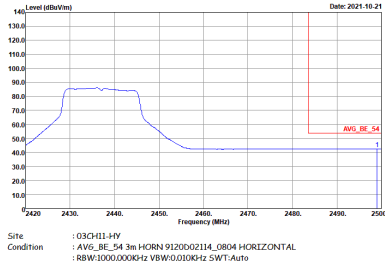


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

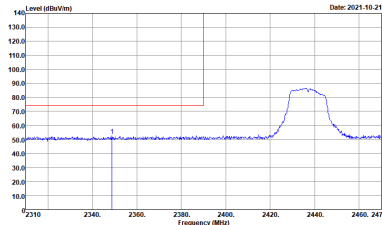
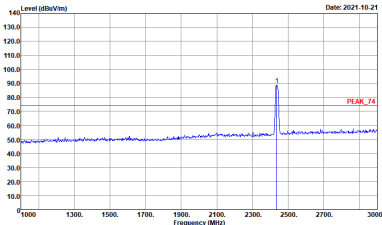
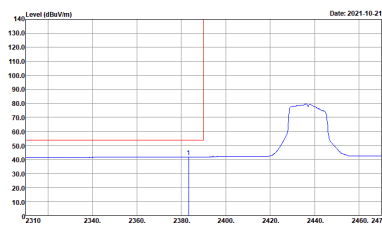
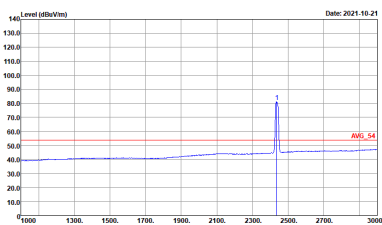


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

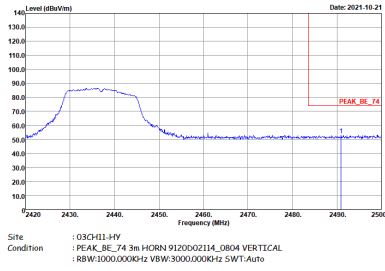
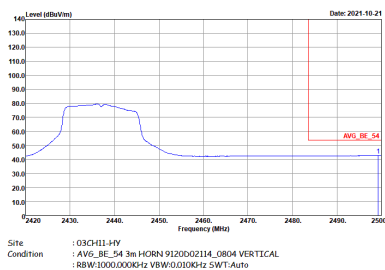


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

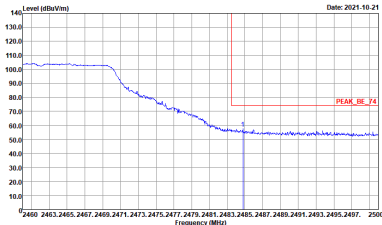
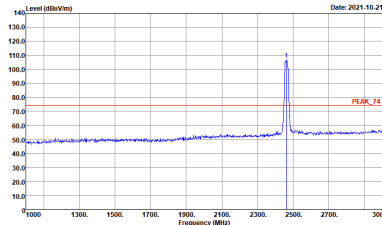
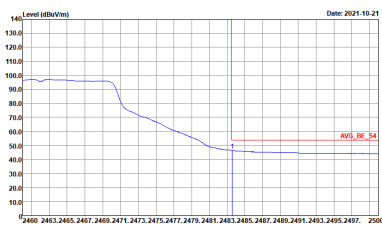
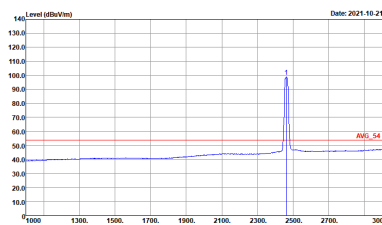


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

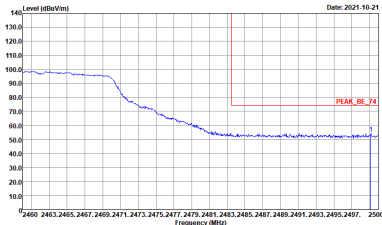
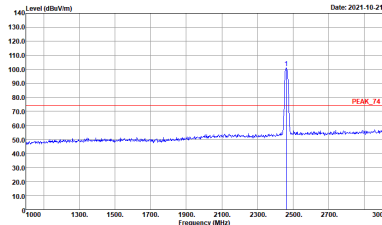
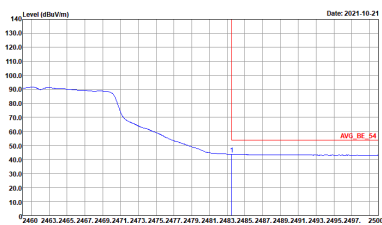
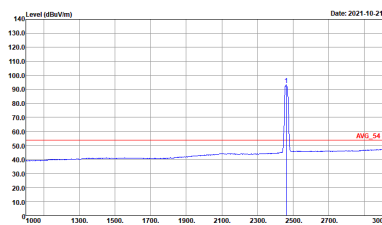


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak		Left Blank
Avg.		Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

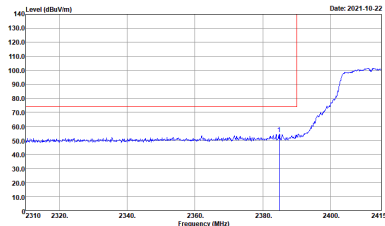
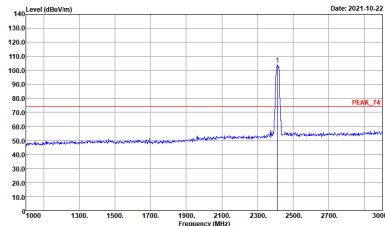
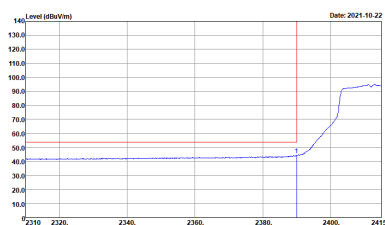
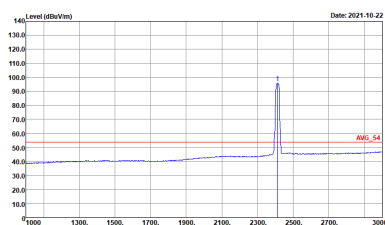


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

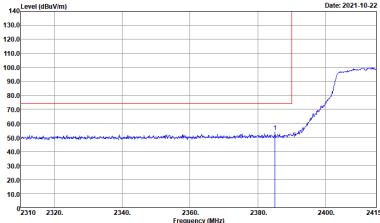
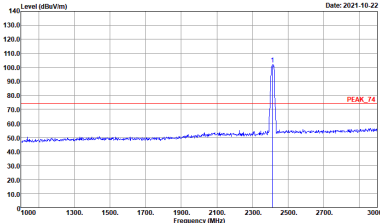
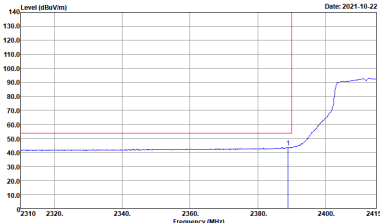
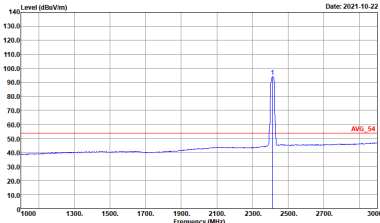


2.4GHz 2400~2483.5MHz

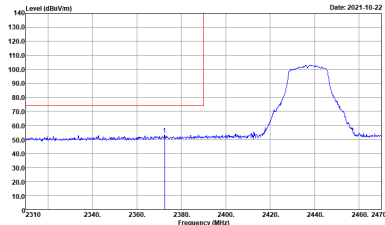
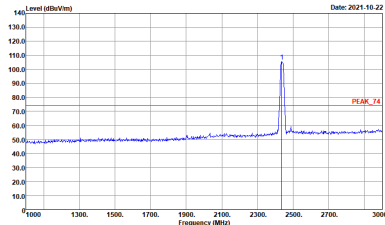
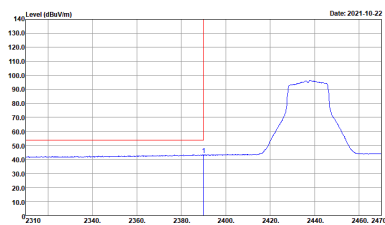
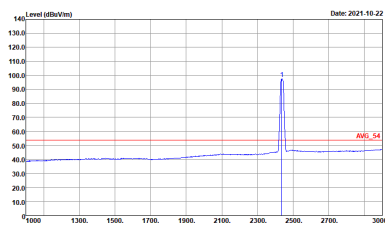
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

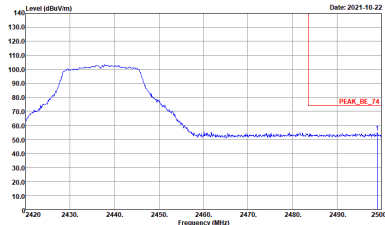
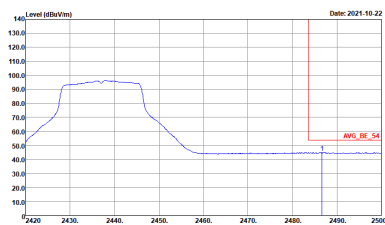


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

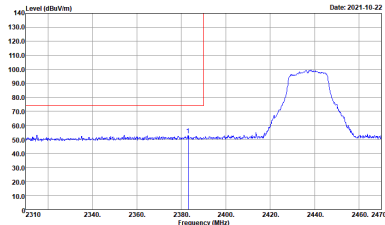
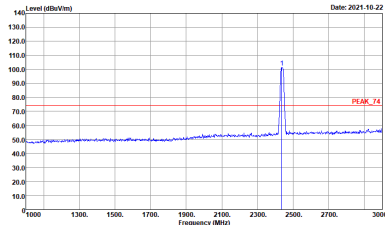
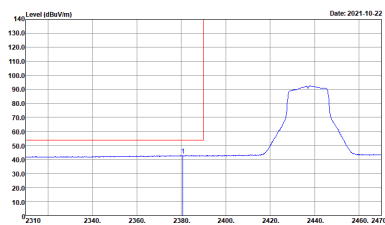
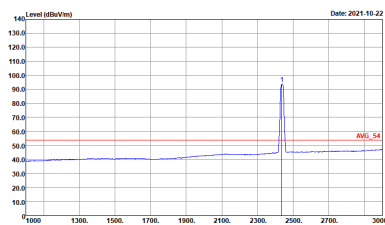


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:1000kHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:1000kHz SWT:Auto

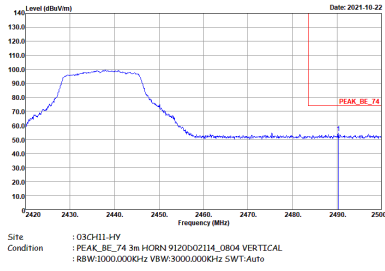
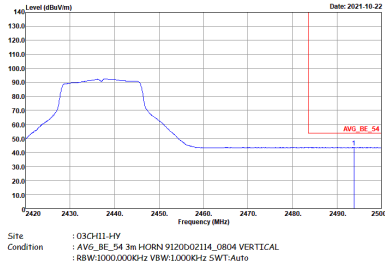


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 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	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:10000kHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:10000kHz SWT:Auto

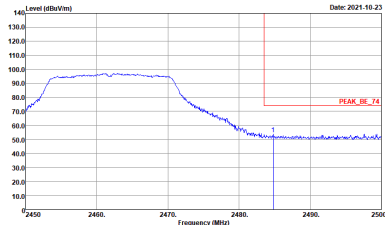
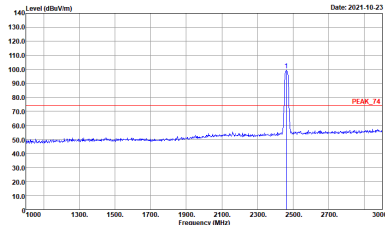
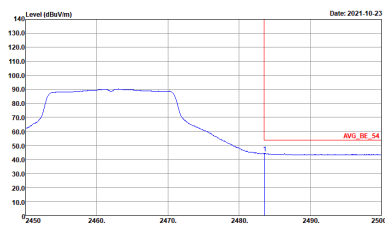
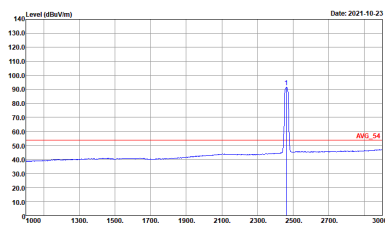


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left Blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 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	
1	Horizontal	Fundamental
Peak	Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto

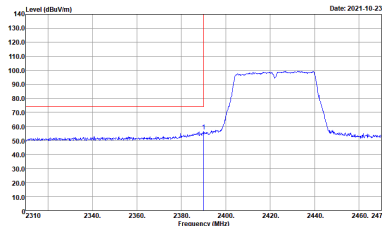
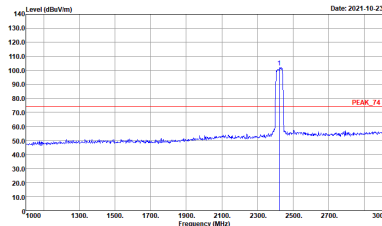
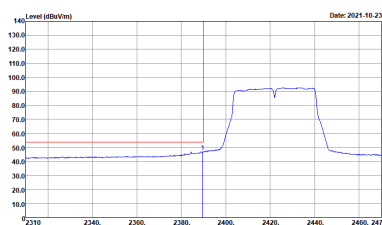
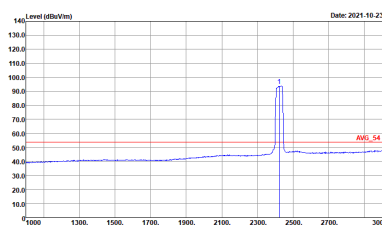


WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto
Avg.		

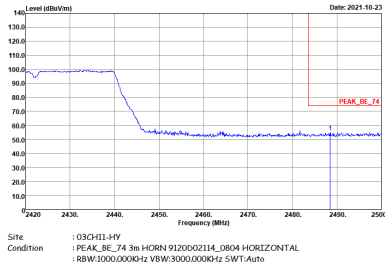
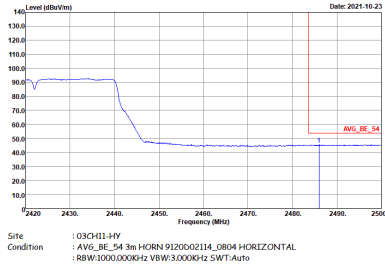


2.4GHz 2400~2483.5MHz

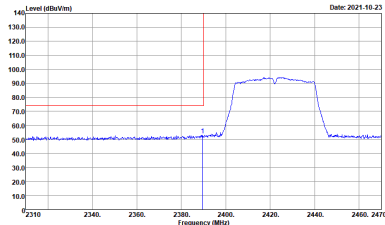
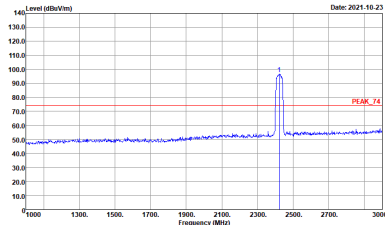
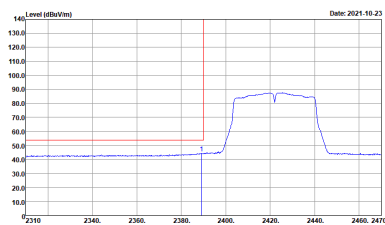
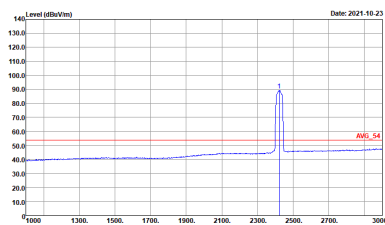
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

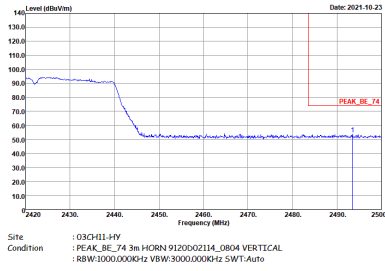
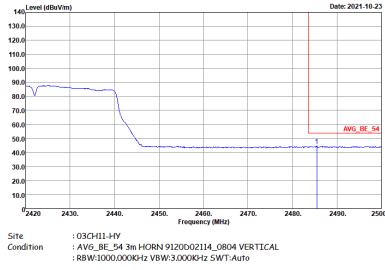


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Horizontal	Fundamental
Peak		Left Blank
Avg.		Left Blank

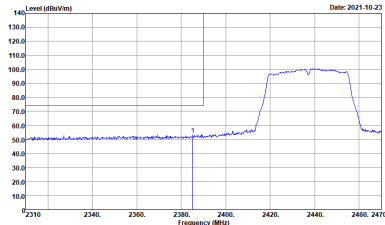
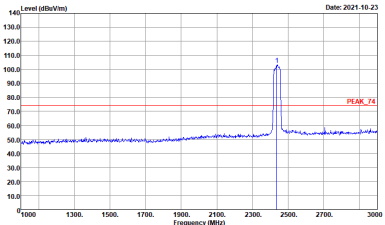
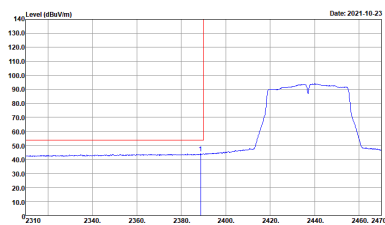
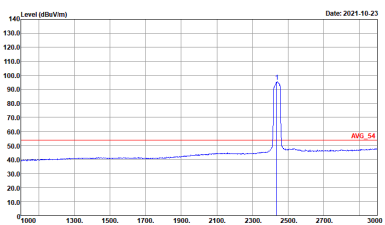


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

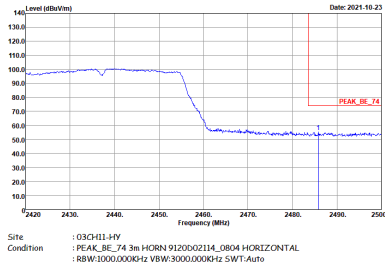
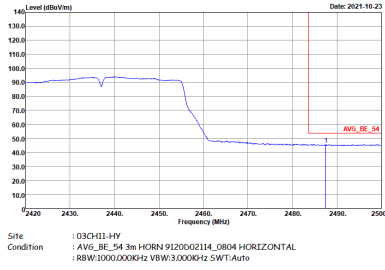


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH03 2422MHz - R	
1	Vertical	Fundamental
Peak		Left blank
Avg.		Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

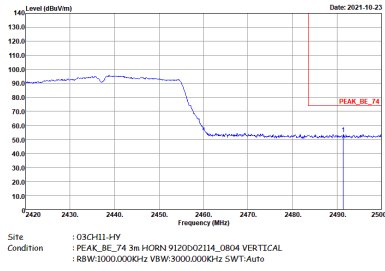
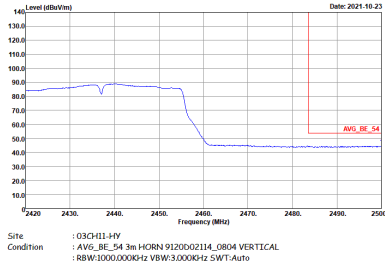


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank

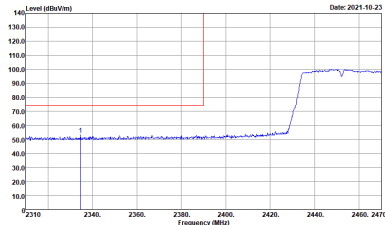
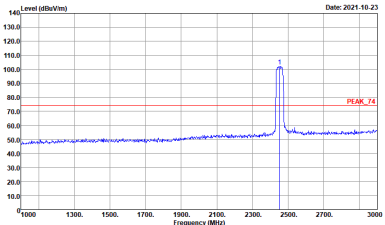
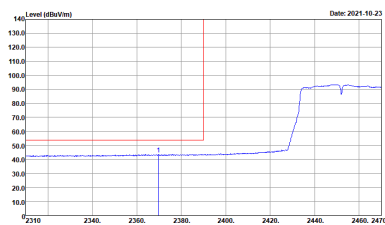
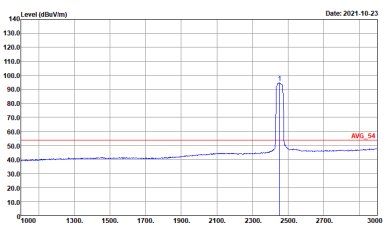


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.0000Hz VBW:3000.0000Hz SWT:Auto	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.0000Hz VBW:3000.0000Hz SWT:Auto
Avg.	Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.0000Hz VBW:3000.0000Hz SWT:Auto	Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.0000Hz VBW:3000.0000Hz SWT:Auto

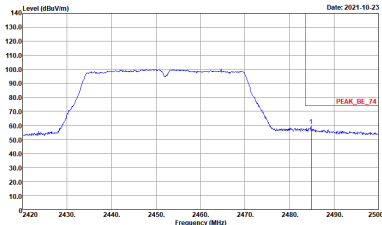
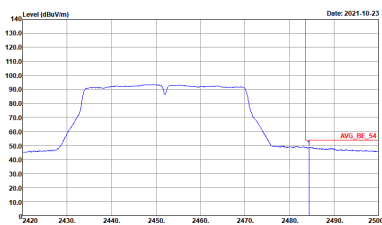


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak		Left blank
Avg.		Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH11-HY Condition : AVG_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH11-HY Condition : AVG_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

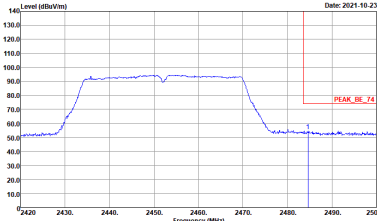
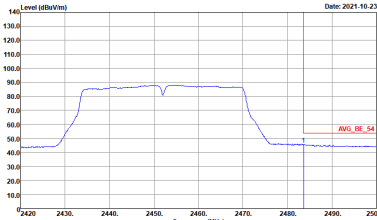


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 HORIZONTAL : 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	
1	Vertical	Fundamental
Peak	Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

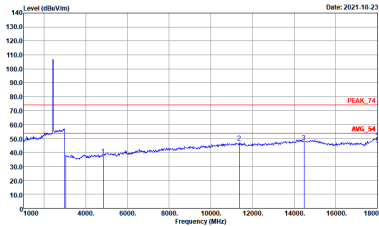
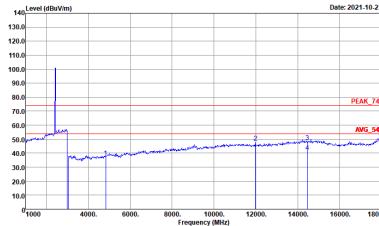


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT40 CH09 2452MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.0000Hz VBW:3000.0000Hz SWT:Auto	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D02114_0804 VERTICAL : RBW:1000.0000Hz VBW:3000.0000Hz SWT:Auto	Left blank

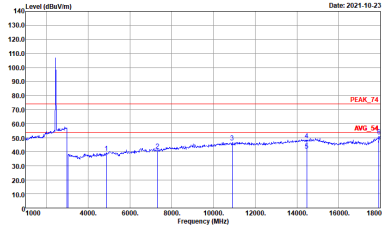
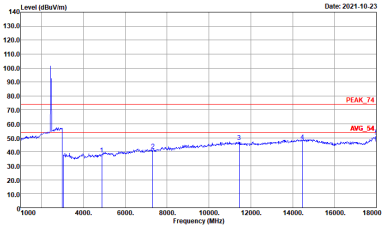


2.4GHz 2400~2483.5MHz

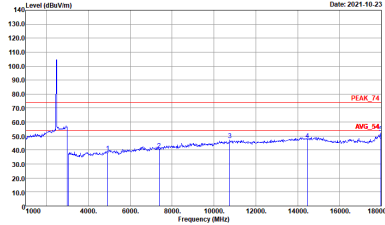
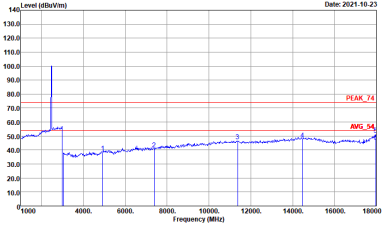
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-RY Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL	 Site : 03CH11-RY Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL

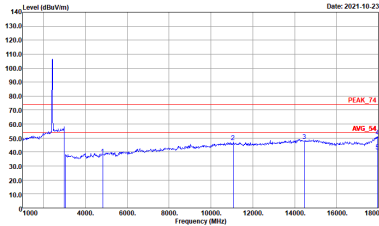
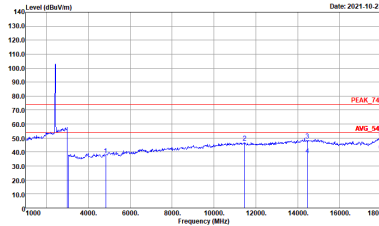


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL

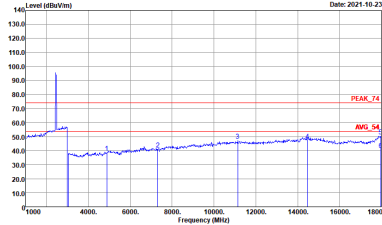
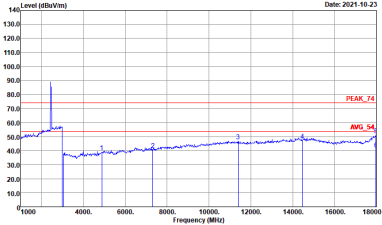


2.4GHz 2400~2483.5MHz

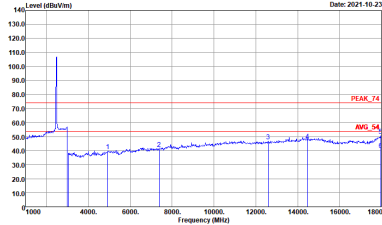
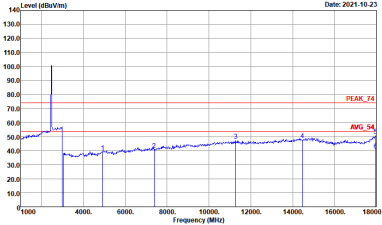
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 9120502114_0804 HORIZONTAL	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 9120502114_0804 VERTICAL



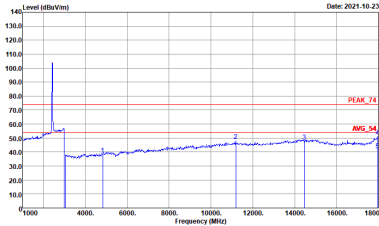
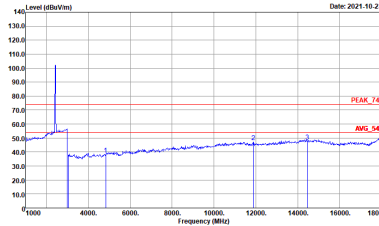
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL



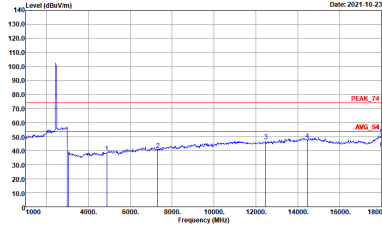
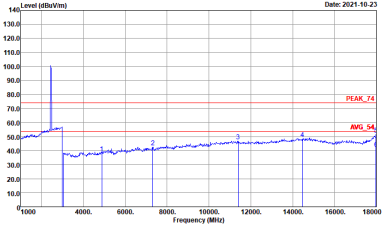
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL



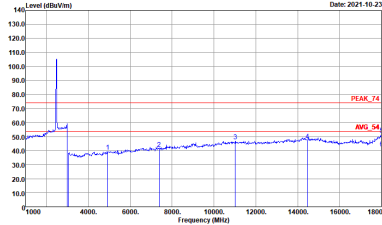
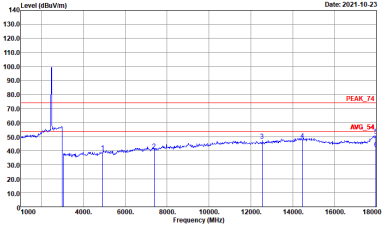
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 9120502114_0804 HORIZONTAL	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 9120502114_0804 VERTICAL



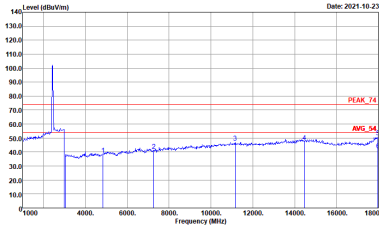
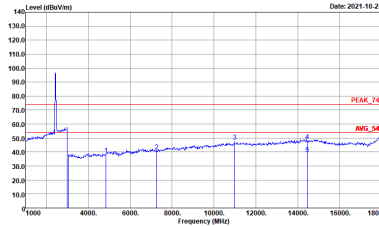
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL



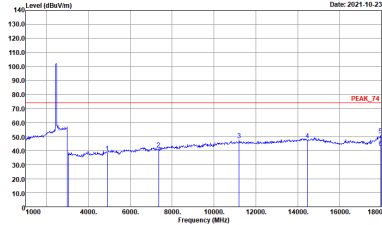
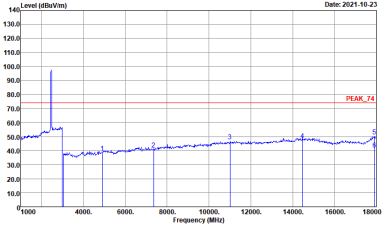
2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH03 2422MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 9120502114_0804 HORIZONTAL	 Site : 03CH11-14Y Condition : PEAK_74 3m HORN 9120502114_0804 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL	Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT40 CH09 2452MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 HORIZONTAL	 Site : 03CH11-4Y Condition : PEAK_74 3m HORN 9120D02114_0804 VERTICAL

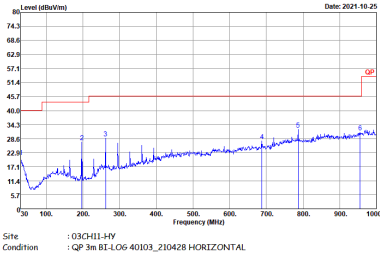
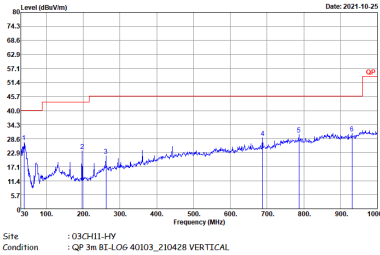


Emission above 18GHz
2.4GHz WIFI 802.11n HT40 (SHF @ 1m)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 SHF	
1	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2021-10-25 Frequency (MHz) Site : 03CHI1-HY Condition : PEAK(UNIT)_1M 1m SHF_BBHA917000993 HORIZONTAL	Level (dBuV/m) Date: 2021-10-25 Frequency (MHz) Site : 03CHI1-HY Condition : PEAK(UNIT)_1M 1m SHF_BBHA917000993 VERTICAL



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

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT40 LF	
1	Horizontal	Vertical
QP / Peak	 Site : 03CH11-HY Condition : QP 3m BT-LOG 40103_210428 HORIZONTAL	 Site : 03CH11-HY Condition : QP 3m BT-LOG 40103_210428 VERTICAL



Appendix E. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11b	99.44	-	-	10Hz
802.11g	98.57	-	-	10Hz
2.4GHz 802.11n HT20	97.96	1920	0.52	1kHz
2.4GHz 802.11n HT40	94.89	948	1.05	3kHz

