



FCC RADIO TEST REPORT

FCC ID : APYHRO00331
Equipment : Smart phone
Brand Name : SHARP
Model Name : APYHRO00331
Applicant : SHARP CORPORATION
1 Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan
Manufacturer : SHARP CORPORATION
1 Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan
Standard : FCC Part 15 Subpart C §15.247

The product was received on Mar. 11, 2024 and testing was performed from Mar. 19, 2024 to Apr. 17, 2024. 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 from 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 6

 1.3 Testing Location 6

 1.4 Applicable Standards..... 6

2 Test Configuration of Equipment Under Test 7

 2.1 Carrier Frequency and Channel 7

 2.2 Test Mode..... 8

 2.3 Connection Diagram of Test System..... 9

 2.4 Support Unit used in test configuration and system 9

 2.5 EUT Operation Test Setup 9

 2.6 Measurement Results Explanation Example..... 10

3 Test Result 11

 3.1 6dB and 99% Bandwidth Measurement 11

 3.2 Output Power Measurement..... 12

 3.3 Power Spectral Density Measurement 13

 3.4 Conducted Band Edges and Spurious Emission Measurement 14

 3.5 Radiated Band Edges and Spurious Emission Measurement 15

 3.6 AC Conducted Emission Measurement..... 19

 3.7 Antenna Requirements 21

4 List of Measuring Equipment..... 22

5 Measurement Uncertainty 24

Appendix A. Conducted Test Results

Appendix B. AC Conducted Emission Test Result

Appendix C. Radiated Spurious Emission

Appendix D. Radiated Spurious Emission Plots

Appendix E. Duty Cycle Plots

Appendix F. Setup Photographs



History of this test report

Report No.	Version	Description	Issue Date
FR3D2225C	01	Initial issue of report	May 09, 2024



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	3.23 dB under the limit at 2488.69 MHz
3.6	15.207	AC Conducted Emission	Pass	14.97 dB under the limit at 1.49 MHz
3.7	15.203	Antenna Requirement	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Keven Cheng

Report Producer: Rebecca Wu



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature		
General Specs GSM/WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n/ac, Wi-Fi 5GHz 802.11a/n/ac, NFC, and GNSS.		
Antenna Type WWAN: <Ant. 0>: Monopole Antenna <Ant. 1>: PIFA Antenna <Ant. 2>: Monopole Antenna WLAN: Loop Antenna Bluetooth: Loop Antenna GPS / Glonass / BDS / Galileo: PIFA Antenna NFC: Loop Antenna		
Antenna information		
2400 MHz ~ 2483.5 MHz	Peak Gain (dBi)	-4.3

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

Item	Main		2nd Source			
	Main Sample		Sample 2		Sample 3	
	Vendor	Model Number	Vendor	Model Number	Vendor	Model Number
Memory	SAMSUNG	SA05P91D010	Hynix	SA0QG9G5010	Micron	SA0D81SF010
PA	QORVO	SA07048B020 (QM77048B)	QORVO	SA077048020 (QM77048)	QORVO	SA077048020 (QM77048)
FPC_USB	PBH	MESX314004A	SUNFLEX	MESX114012A	SUNFLEX	MESX114012A
FPC_AJ	PBH	MESX314003A	SUNFLEX	MESX114013A	SUNFLEX	MESX114013A
FPC_Main	PBH	MESX414001A	SUNFLEX	MESX414011A	SUNFLEX	MESX414011A
FPC_SPK	AKM	MESX414004A	SUNFLEX	MESX114015A	SUNFLEX	MESX114015A
FPC_Side_Key	PBH	MESX414002A	AKM	MESX414012A	AKM	MESX414012A
FPC_flashlight	PBH	MESX414003A	SUNFLEX	MESX414013A	SUNFLEX	MESX414013A
rear housing	DY	MESX461130A	COXON	MESX461131A	COXON	MESX461131A
Battery	SCUD	BPSX400001S (SX4)	EVE	BPSX400002S (X4)	EVE	BPSX400002S (X4)
Display	DJN	SLX1462BX00	CPT	SLX65WM2X00	CPT	SLX65WM2X00
Camera 50M	Shinotech	S0CNN72B000	Union Image	S0C50A350A0	Union Image	S0C50A350A0
Camera 8M	Shinotech	S0CF891B060	Union Image	S0C8F357060	Union Image	S0C8F357060
E-compass	MEMSIC	SA0C56030A0	QST	SA0C6308130	QST	SA0C6308130
DPDT	MAXSCEND	SA08546C020	CANAANTEK	SA01122N080	CANAANTEK	SA01122N080
Switch	MAXSCEND	SA08621E080	Richwave	SA086102080	Richwave	SA086102080
P-sensor	EMINENT	SA0MN789080	Sensortek	SA033562020	Sensortek	SA033562020
G- sensor	TDK	SA042670020	Bosch	SA0MI320020	Bosch	SA0MI320020



1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

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, CO07-HY, 03CH15-HY

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

FCC designation No.: TW3786

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 15.247 Meas Guidance v05r02
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ ANSI C63.10-2013

Remark:

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



2 Test Configuration of Equipment Under Test

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

- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

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



2.2 Test Mode

The power for 802.11ac mode is smaller than 802.11n mode, so all other conducted and radiated test is covered by 802.11n mode.

The final test modes include the worst data rates for each modulation shown in the table below.

Single Antenna

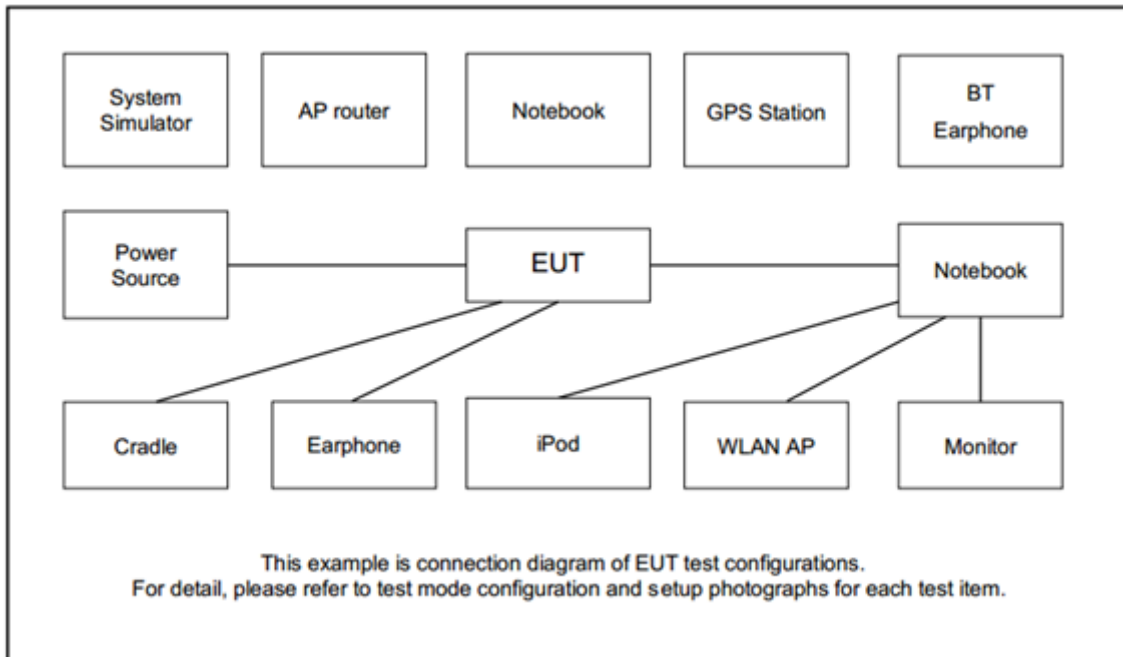
Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20 (Covered by HT20)	MCS0
802.11ac VHT40 (Covered by HT40)	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WLAN (2.4GHz) Link + Bluetooth Link + Earphone + MPEG4 + Battery 1 + USB Cable (Charging from AC Adapter) for Main Sample
Remark: For Radiated Test Cases, the tests were performed with Battery 1 and Main Sample.	

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 modulation and the data rate picked for testing are determined by 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.	WLAN AP	ASUS	RT-AC52	MSQ-RTAC4A00	N/A	Unshielded, 1.8 m
3.	Notebook	DELL	Latitude 3400	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
4.	Earphone	NOKIA	WH-108	N/A	Unshielded, 1.5 m	N/A

2.5 EUT Operation Test Setup

The RF test items, make the EUT (SW: A3130) get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.



2.6 Measurement Results Explanation Example

For all conducted test items:

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

Example:

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

Offset = RF cable loss + attenuator factor.

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

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

3 Test Result

3.1 6dB and 99% Bandwidth Measurement

3.1.1 Limit of 6dB and 99% Bandwidth

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

3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

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

3.1.4 Test Setup



3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Output Power Measurement

3.2.1 Limit of Output Power

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

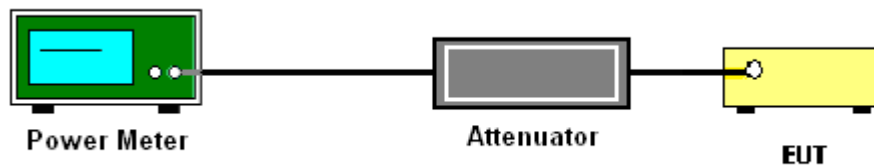
3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

1. For Average Power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G
2. The RF output of EUT is connected to the power meter by RF cable and attenuator. The path loss is compensated to the results for each measurement.
3. Set the maximum power setting and enable the EUT to transmit continuously.
4. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup



3.2.5 Test Result of Average Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

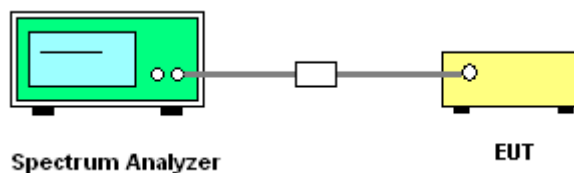
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

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

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.

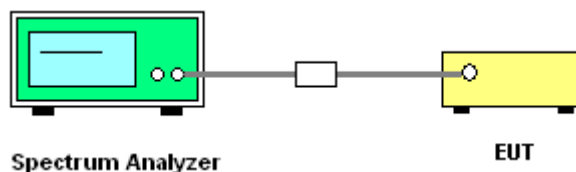
3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

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

3.4.4 Test Setup



3.4.5 Test Result of Conducted Band Edges and Spurious Emission

Please refer to Appendix A.



3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

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

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

3.5.2 Measuring Instruments

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

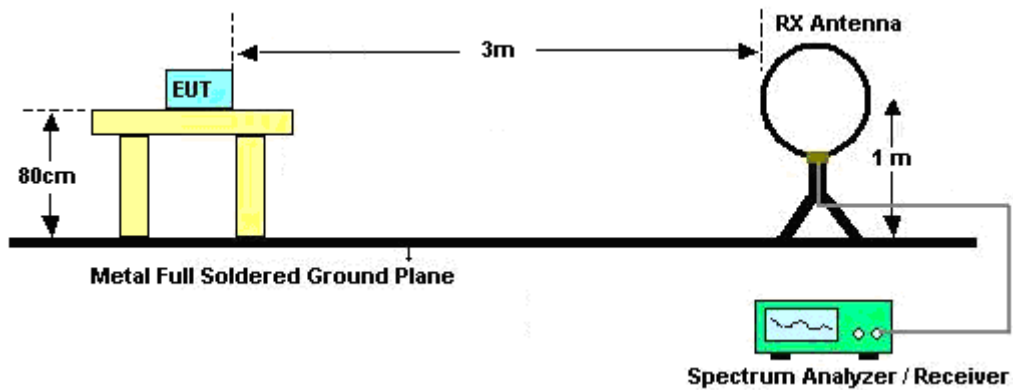
3.5.3 Test Procedures

1. The testing follows the ANSI C63.10 Section 11.12.1 Radiated emission measurements.
2. The EUT is arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
4. The EUT is set 3 meters away from the receiving antenna, which is mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-“.

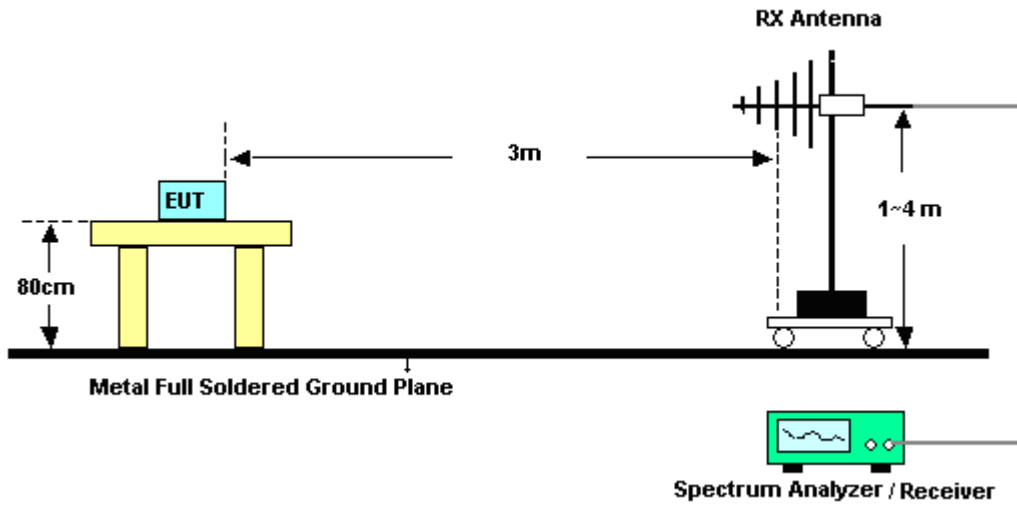
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-“.
8. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW = 100 kHz for $f < 1$ GHz; VBW \geq RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3 MHz for $f \geq 1$ GHz for peak measurement.For average measurement:
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

3.5.4 Test Setup

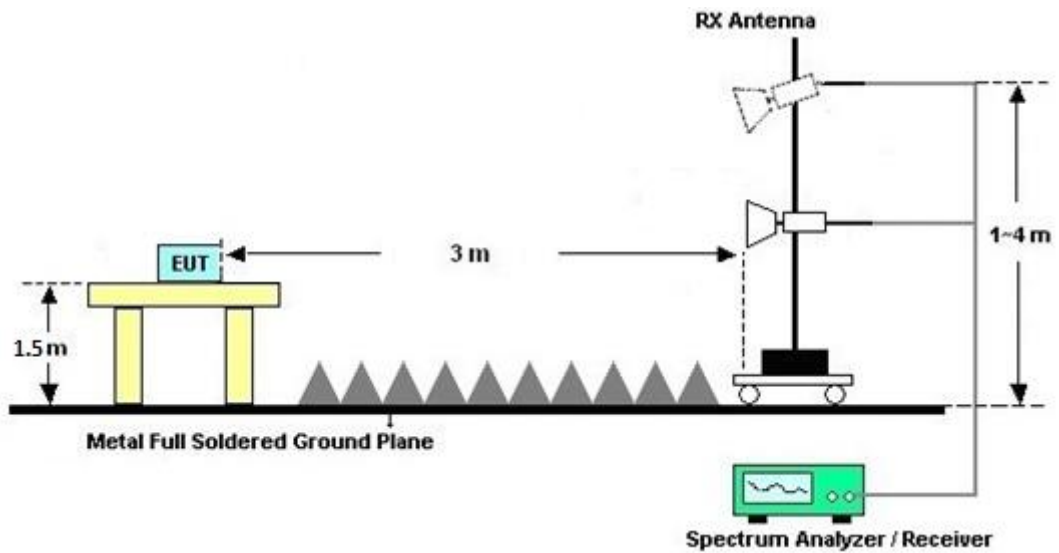
For radiated emissions below 30MHz



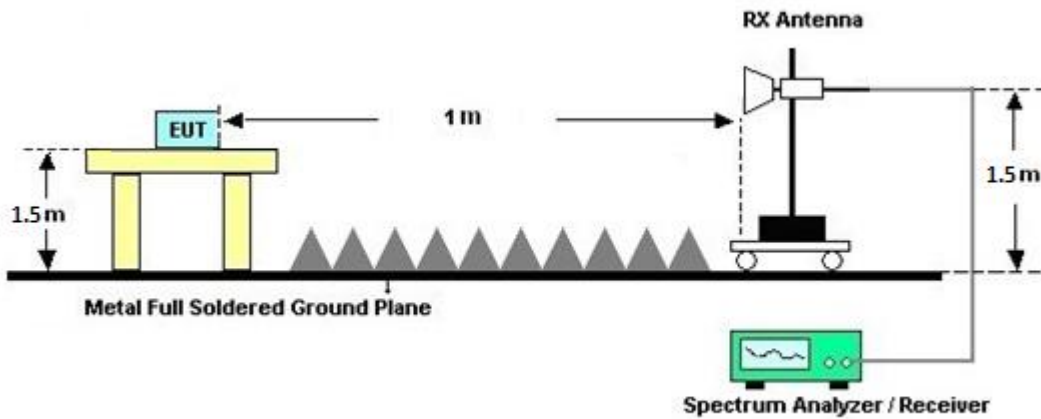
For radiated emissions from 30MHz to 1GHz



For radiated test from 1GHz to 18GHz



For radiated test above 18GHz



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

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

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

3.5.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and D.

3.5.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and D.



3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

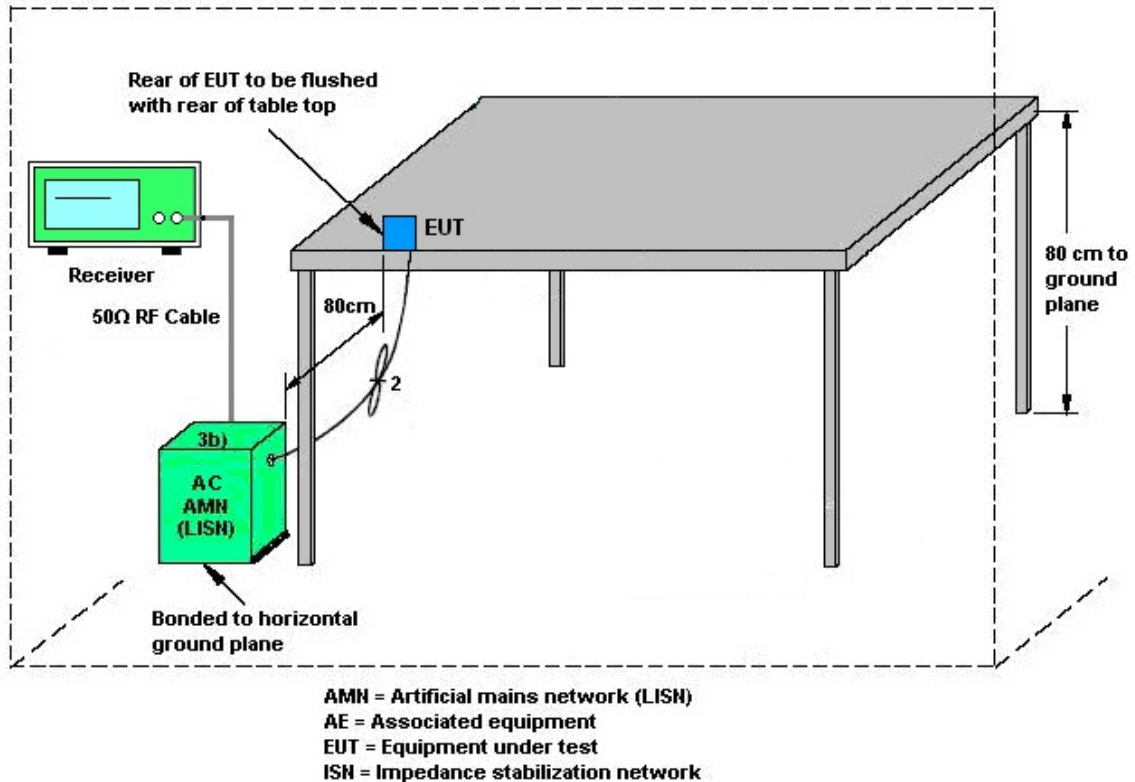
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

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

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.7 Antenna Requirements

3.7.1 Standard Applicable

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.



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~30 MHz	Sep. 12, 2023	Mar. 29, 2024~ Apr. 17, 2024	Sep. 11, 2024	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N -06	41912 & 05	30MHz~1GHz	Feb. 04, 2024	Mar. 29, 2024~ Apr. 17, 2024	Feb. 03, 2025	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-02294	1GHz~18GHz	Jun. 30, 2023	Mar. 29, 2024~ Apr. 17, 2024	Jun. 29, 2024	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	1223	18GHz~40GHz	Jul. 10, 2023	Mar. 29, 2024~ Apr. 17, 2024	Jul. 09, 2024	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 25, 2023	Mar. 29, 2024~ Apr. 17, 2024	Dec. 24, 2024	Radiation (03CH15-HY)
Preamplifier	EMEC	EM01G18G	060837	1GHz~18GHz	Feb. 15, 2024	Mar. 29, 2024~ Apr. 17, 2024	Feb. 14, 2025	Radiation (03CH15-HY)
Preamplifier	EM Electronics	EM01G18G	060802	1GHz~18GHz	Feb. 29, 2024	Mar. 29, 2024~ Apr. 17, 2024	Feb. 28, 2025	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	Jun. 27, 2023	Mar. 29, 2024~ Apr. 17, 2024	Jun. 26, 2024	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY53290045	20MHz~8.4GHz	Oct. 06, 2023	Mar. 29, 2024~ Apr. 17, 2024	Oct. 05, 2024	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9010B	MY60241058	10Hz~44GHz	Jul. 06, 2023	Mar. 29, 2024~ Apr. 17, 2024	Jul. 05, 2024	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Mar. 29, 2024~ Apr. 17, 2024	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Mar. 29, 2024~ Apr. 17, 2024	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(k5)	RK-000451	N/A	N/A	Mar. 29, 2024~ Apr. 17, 2024	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY582185/4, 519228/2,803 950/2	N/A	Jun. 13, 2023	Mar. 29, 2024~ Apr. 17, 2024	Jun. 12, 2024	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2,804 012/2	18-40G	Jan. 02, 2024	Mar. 29, 2024~ Apr. 17, 2024	Jan. 01, 2025	Radiation (03CH15-HY)
Filter	Wainwright	WLJ4-1000-15 30-6000-40ST	SN4	1.53GHz Low Pass Filter	Jun. 14, 2023	Mar. 29, 2024~ Apr. 17, 2024	Jun. 13, 2024	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700 -3000-18000-6 0ST	SN4	3GHz High Pass Filter	Jun. 14, 2023	Mar. 29, 2024~ Apr. 17, 2024	Jun. 13, 2024	Radiation (03CH15-HY)
Hygrometer	TECEPEL	DTM-302	SN4	N/A	Jul. 26, 2023	Mar. 29, 2024~ Apr. 17, 2024	Jul. 25, 2024	Radiation (03CH15-HY)
Hygrometer	TECEPEL	DTM-303A	TP201996	N/A	Nov. 07, 2023	Mar. 19, 2024~ Apr. 11, 2024	Nov. 06, 2024	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	13I00030SNO 31 (NO:182)	10MHz~6GHz	Dec. 29, 2023	Mar. 19, 2024~ Apr. 11, 2024	Dec. 28, 2024	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101466	10HZ~44GHZ	Jan. 24, 2024	Mar. 19, 2024~ Apr. 11, 2024	Jan. 23, 2025	Conducted (TH05-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Apr. 08, 2024	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Apr. 08, 2024	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Oct. 20, 2023	Apr. 08, 2024	Oct. 19, 2024	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz-30MHz	Mar. 14, 2024	Apr. 08, 2024	Mar. 13, 2025	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 10, 2024	Apr. 08, 2024	Mar. 09, 2025	Conduction (CO07-HY)
Four-Line V-Network	TESEQ	NNB 52	36122	N/A	Mar. 10, 2024	Apr. 08, 2024	Mar. 09, 2025	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz-3.6GHz	Sep. 20, 2023	Apr. 08, 2024	Sep. 19, 2024	Conduction (CO07-HY)



5 Measurement Uncertainty

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.44 dB
---	---------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.30 dB
---	---------

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.50 dB
---	---------

Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.50 dB
---	---------

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.40 dB
---	---------

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Wei Shun	Temperature:	21~25	°C
Test Date:	2024/03/19~2024/04/11	Relative Humidity:	51~54	%

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
					Ant4	Ant2	Ant4	Ant2		
11b	1Mbps	1	1	2412	13.06	-	8.05	-	0.50	Pass
11b	1Mbps	1	6	2437	13.04	-	8.07	-	0.50	Pass
11b	1Mbps	1	11	2462	13.06	-	8.06	-	0.50	Pass
11g	6Mbps	1	1	2412	16.83	-	15.13	-	0.50	Pass
11g	6Mbps	1	6	2437	17.02	-	15.11	-	0.50	Pass
11g	6Mbps	1	11	2462	16.73	-	15.43	-	0.50	Pass
HT20	MCS0	1	1	2412	17.91	-	15.12	-	0.50	Pass
HT20	MCS0	1	6	2437	18.04	-	15.13	-	0.50	Pass
HT20	MCS0	1	11	2462	17.78	-	15.12	-	0.50	Pass
HT40	MCS0	1	3	2422	36.51	-	35.10	-	0.50	Pass
HT40	MCS0	1	6	2437	36.73	-	35.11	-	0.50	Pass
HT40	MCS0	1	9	2452	36.38	-	35.10	-	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
					Ant4	Ant2	SUM	Ant4	Ant2	Ant4	Ant2	Ant4	Ant2	Ant4	Ant2	
11b	1Mbps	1	1	2412	18.80	-		30.00	-	-4.30	-	14.50	-	36.00	-	Pass
11b	1Mbps	1	6	2437	18.80	-		30.00	-	-4.30	-	14.50	-	36.00	-	Pass
11b	1Mbps	1	11	2462	18.70	-		30.00	-	-4.30	-	14.40	-	36.00	-	Pass
11g	6Mbps	1	1	2412	17.10	-		30.00	-	-4.30	-	12.80	-	36.00	-	Pass
11g	6Mbps	1	6	2437	18.60	-		30.00	-	-4.30	-	14.30	-	36.00	-	Pass
11g	6Mbps	1	11	2462	15.10	-		30.00	-	-4.30	-	10.80	-	36.00	-	Pass
HT20	MCS0	1	1	2412	17.00	-		30.00	-	-4.30	-	12.70	-	36.00	-	Pass
HT20	MCS0	1	6	2437	18.50	-		30.00	-	-4.30	-	14.20	-	36.00	-	Pass
HT20	MCS0	1	11	2462	15.10	-		30.00	-	-4.30	-	10.80	-	36.00	-	Pass
HT40	MCS0	1	3	2422	14.60	-		30.00	-	-4.30	-	10.30	-	36.00	-	Pass
HT40	MCS0	1	6	2437	16.40	-		30.00	-	-4.30	-	12.10	-	36.00	-	Pass
HT40	MCS0	1	9	2452	13.40	-		30.00	-	-4.30	-	9.10	-	36.00	-	Pass
VHT20	MCS0	1	1	2412	16.90	-		30.00	-	-4.30	-	12.60	-	36.00	-	Pass
VHT20	MCS0	1	6	2437	18.40	-		30.00	-	-4.30	-	14.10	-	36.00	-	Pass
VHT20	MCS0	1	11	2462	15.00	-		30.00	-	-4.30	-	10.70	-	36.00	-	Pass
VHT40	MCS0	1	3	2422	14.50	-		30.00	-	-4.30	-	10.20	-	36.00	-	Pass
VHT40	MCS0	1	6	2437	16.30	-		30.00	-	-4.30	-	12.00	-	36.00	-	Pass
VHT40	MCS0	1	9	2452	13.30	-		30.00	-	-4.30	-	9.00	-	36.00	-	Pass

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

TEST RESULTS DATA
Peak Power Spectral Density

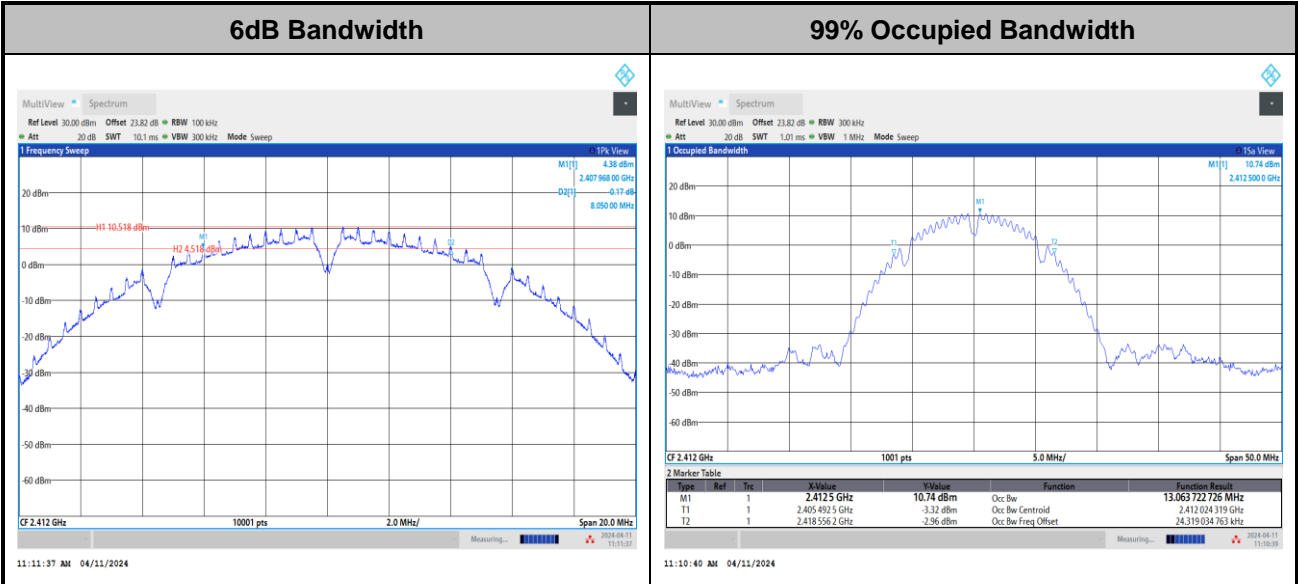
2.4GHz Band Single Antenna												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Peak PSD (dBm/3kHz)			DG (dBi)		Peak PSD Limit (dBm/3kHz)		Pass/Fail
					Ant4	Ant2	Worse + 3.01	Ant4	Ant2	Ant4	Ant2	
11b	1Mbps	1	1	2412	-3.42	-		-4.30	-	8.00	-	Pass
11b	1Mbps	1	6	2437	-3.83	-		-4.30	-	8.00	-	Pass
11b	1Mbps	1	11	2462	-3.70	-		-4.30	-	8.00	-	Pass
11g	6Mbps	1	1	2412	-7.93	-		-4.30	-	8.00	-	Pass
11g	6Mbps	1	6	2437	-5.22	-		-4.30	-	8.00	-	Pass
11g	6Mbps	1	11	2462	-9.76	-		-4.30	-	8.00	-	Pass
HT20	MCS0	1	1	2412	-8.38	-		-4.30	-	8.00	-	Pass
HT20	MCS0	1	6	2437	-6.70	-		-4.30	-	8.00	-	Pass
HT20	MCS0	1	11	2462	-9.46	-		-4.30	-	8.00	-	Pass
HT40	MCS0	1	3	2422	-13.57	-		-4.30	-	8.00	-	Pass
HT40	MCS0	1	6	2437	-11.98	-		-4.30	-	8.00	-	Pass
HT40	MCS0	1	9	2452	-14.39	-		-4.30	-	8.00	-	Pass

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



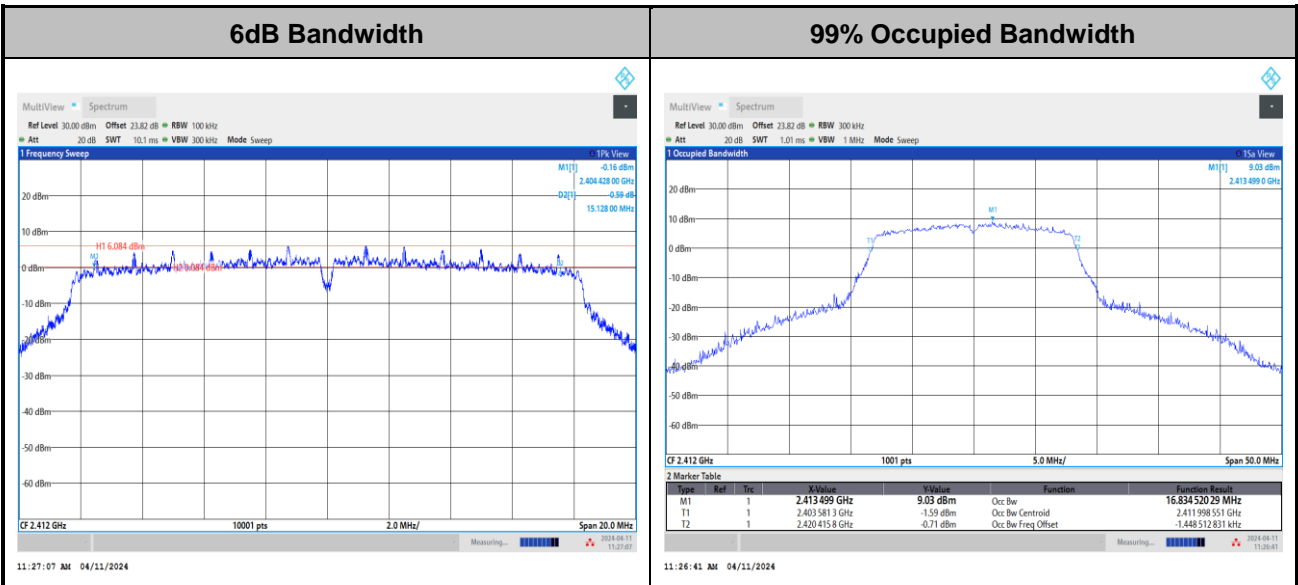
6dB and 99% Occupied Bandwidth

<802.11b>



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

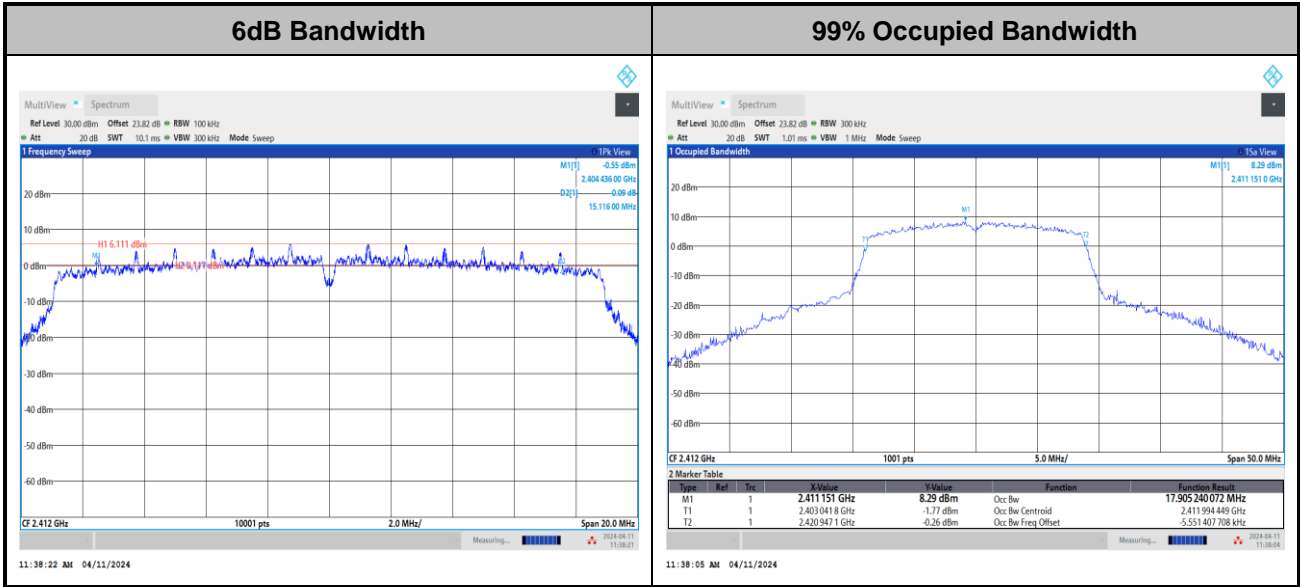
<802.11g>



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

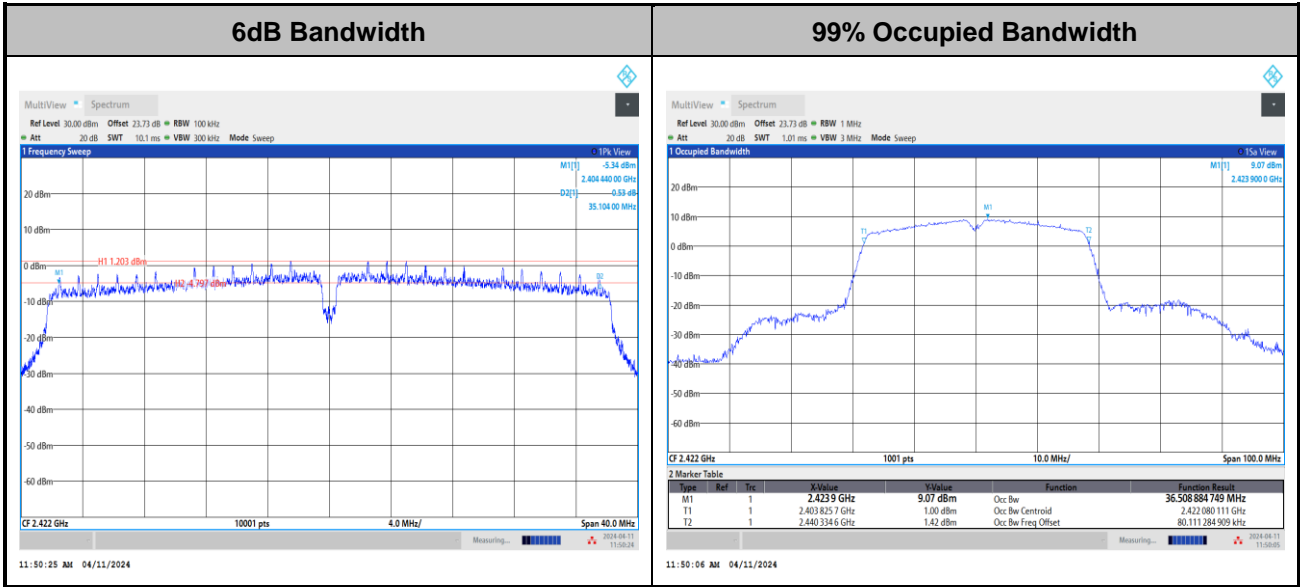


<802.11n HT20>



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

<802.11n HT40>

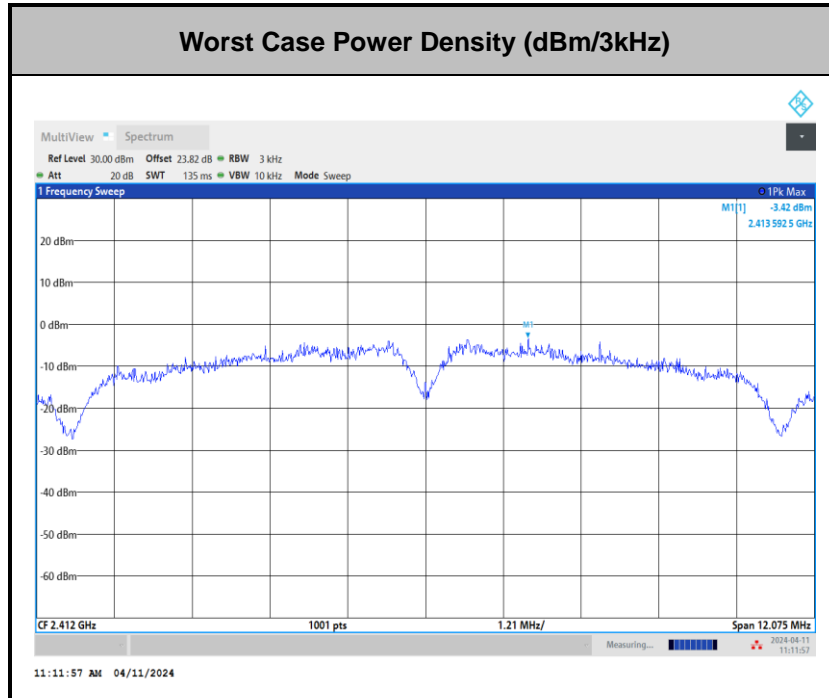


Note: The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

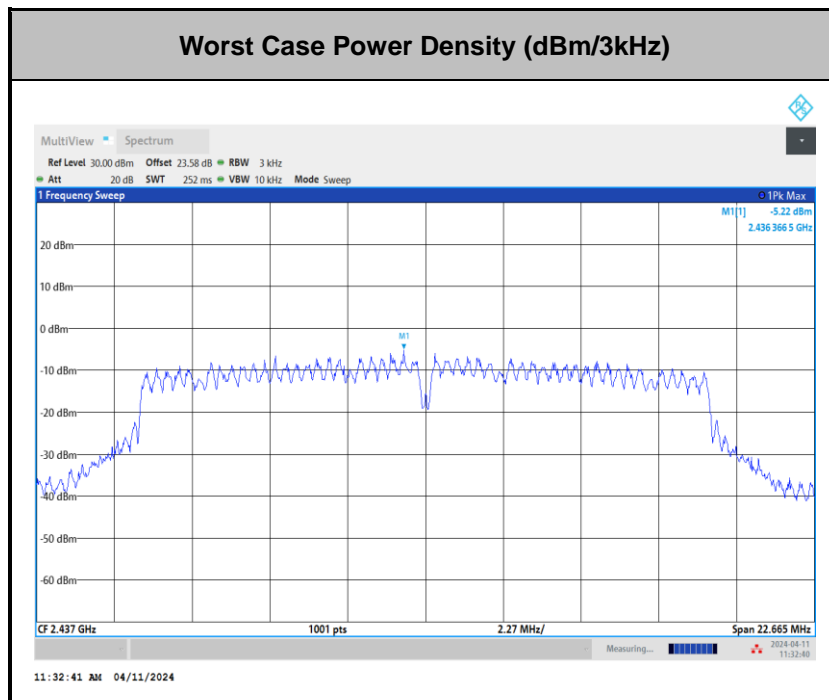


Power Spectral Density(dBm/3kHz)

<802.11b>

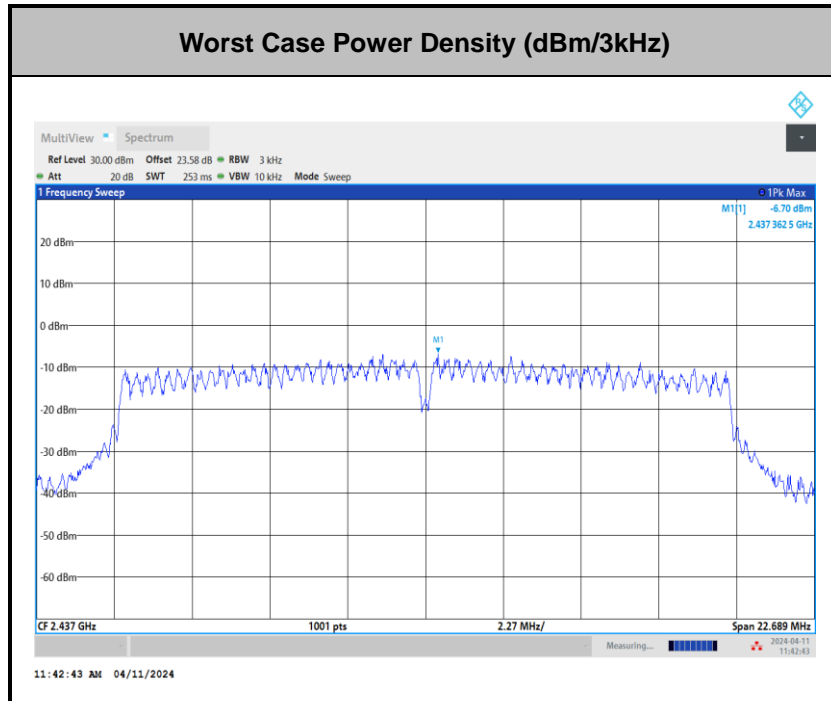


<802.11g>

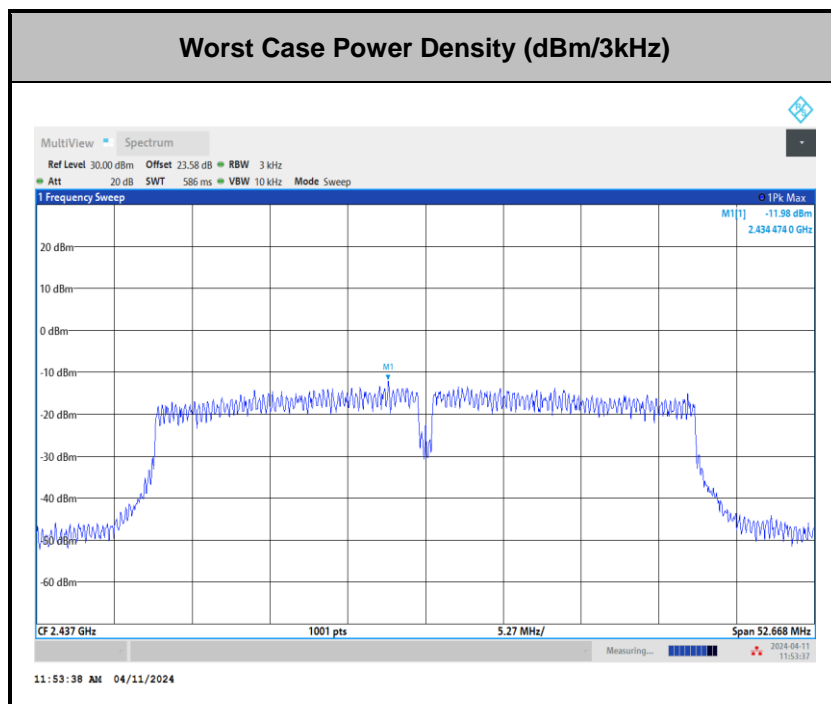




<802.11n HT20>



<802.11n HT40>

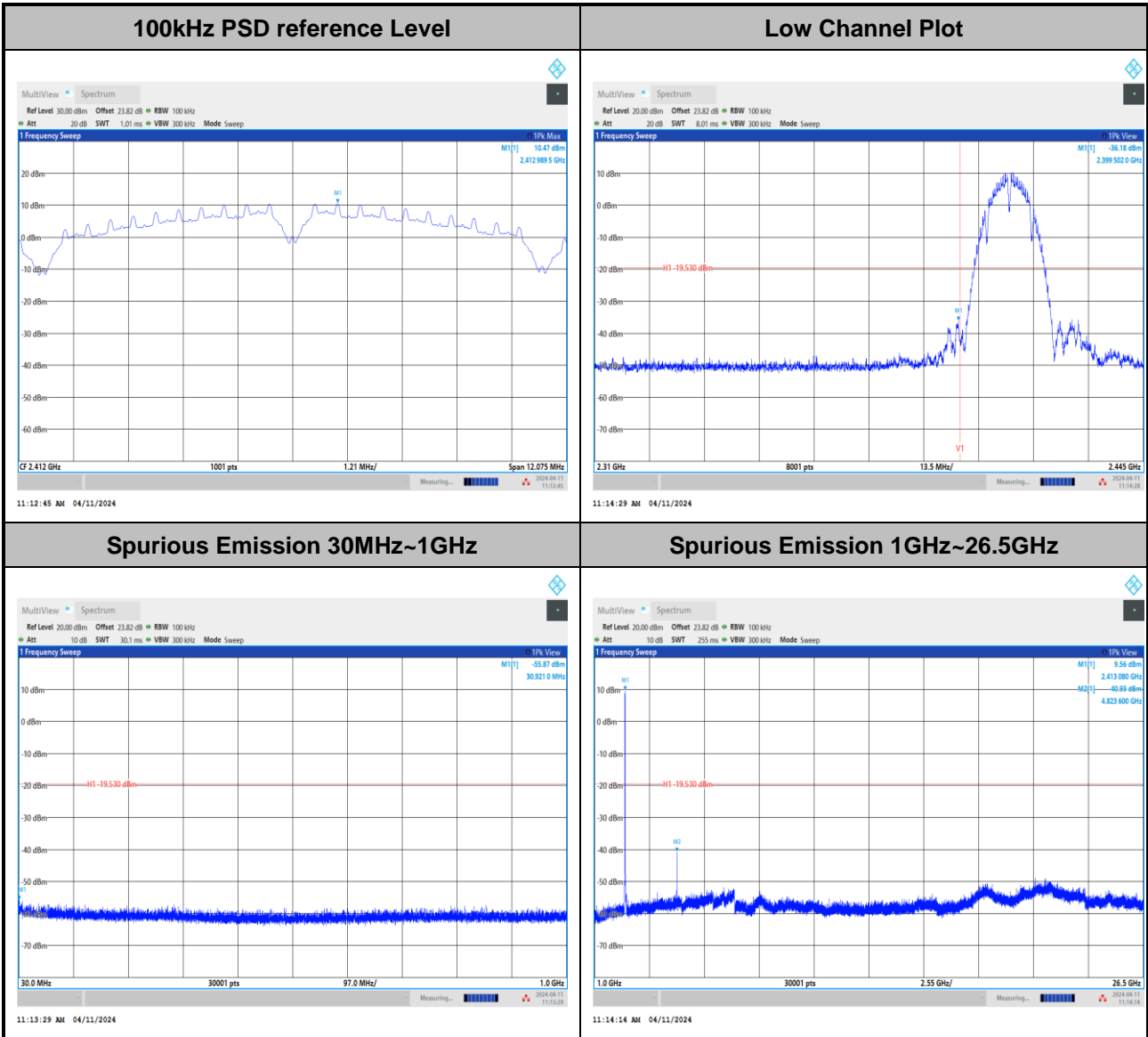




Band Edges and Spurious Emission

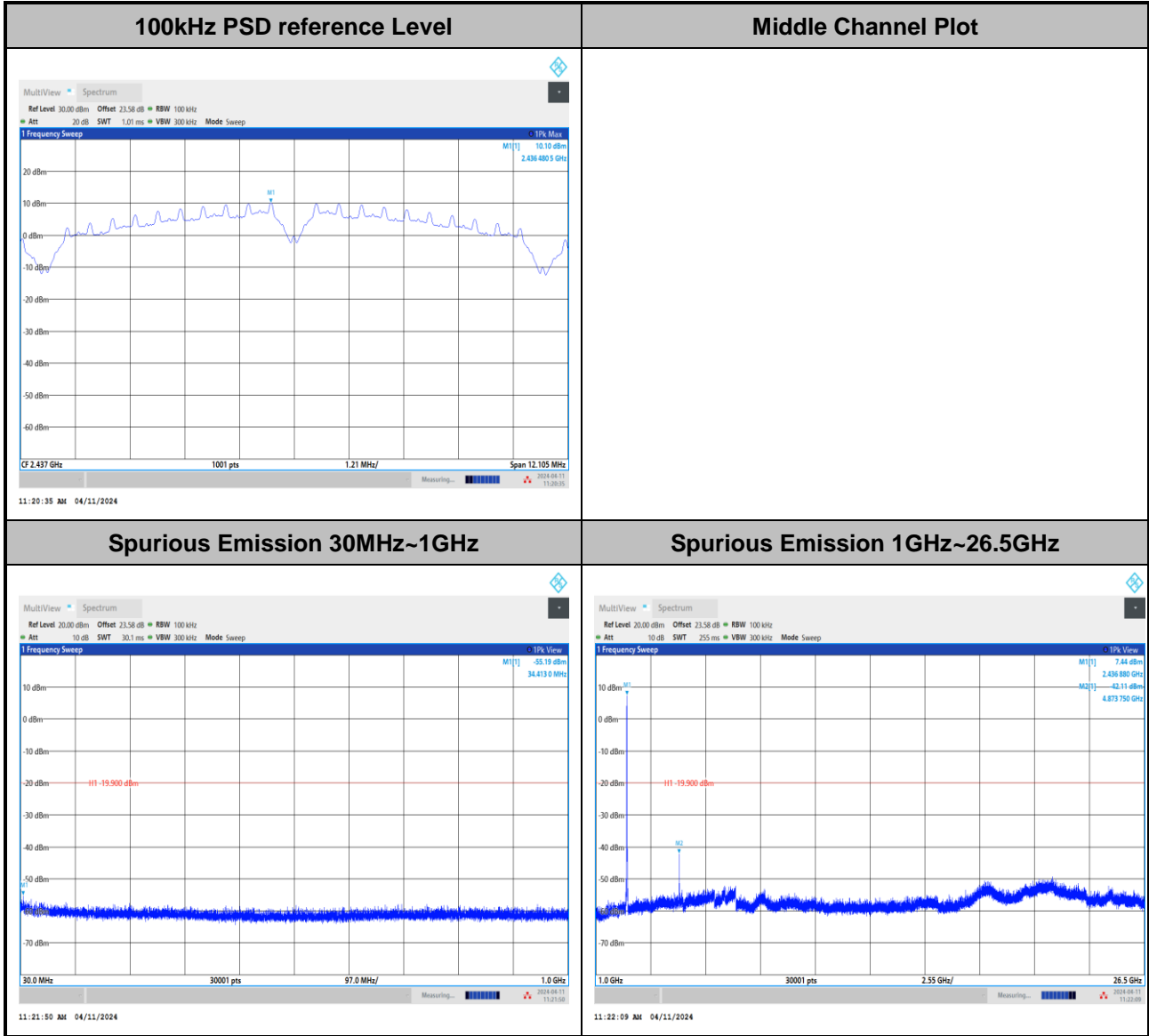
Number of TX = 1, Ant. 4 (Measured)

Test Mode :	802.11b	Test Channel :	01
-------------	---------	----------------	----



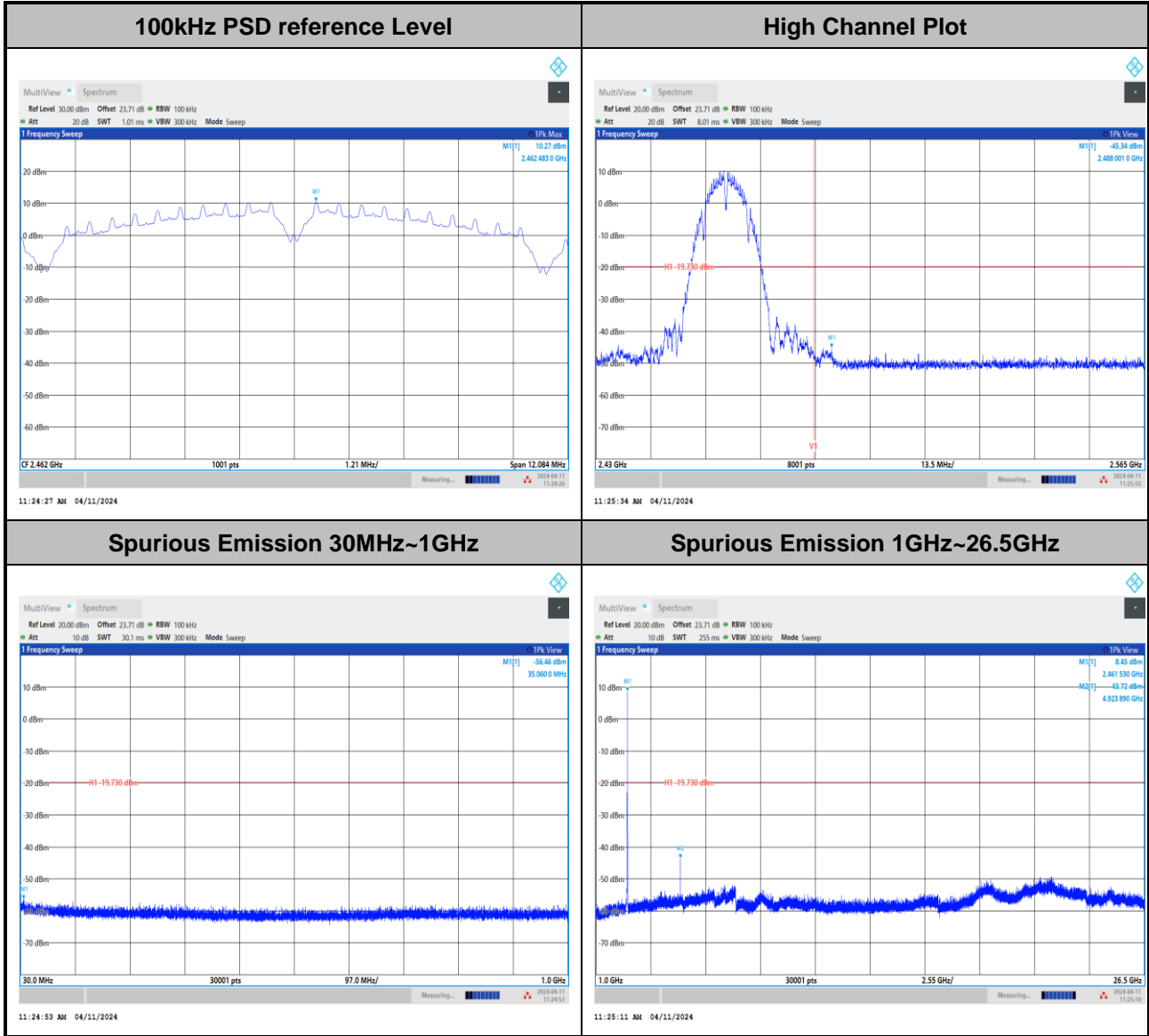


Test Mode :	802.11b	Test Channel :	06
-------------	---------	----------------	----



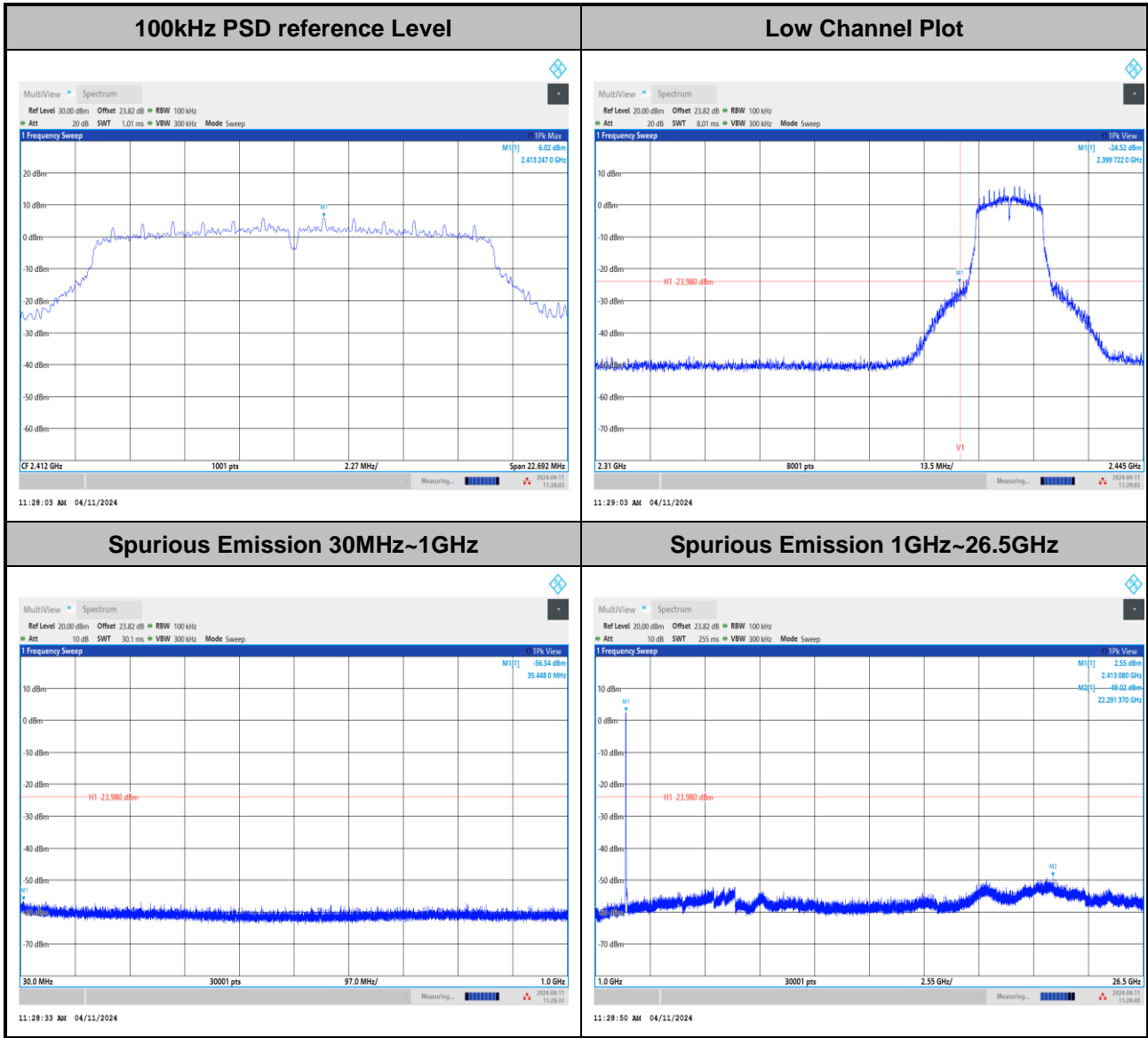


Test Mode :	802.11b	Test Channel :	11
-------------	---------	----------------	----





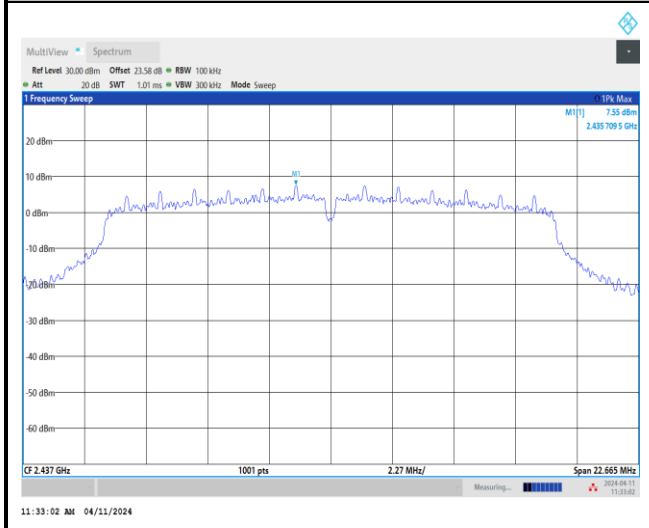
Test Mode :	802.11g	Test Channel :	01
-------------	---------	----------------	----



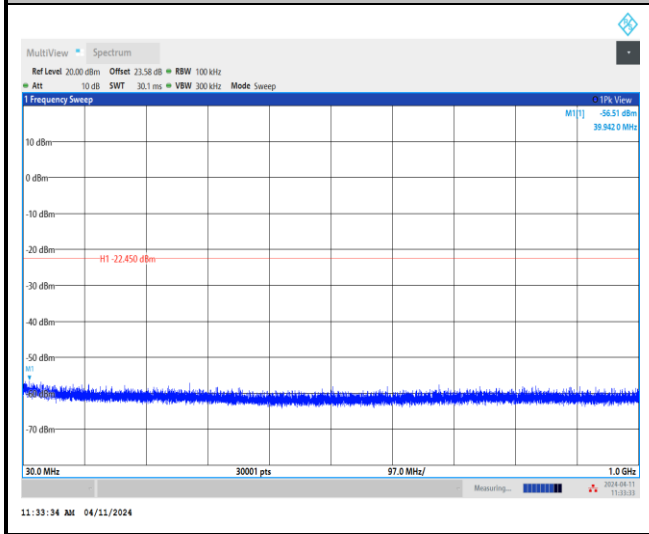


Test Mode :	802.11g	Test Channel :	06
--------------------	---------	-----------------------	----

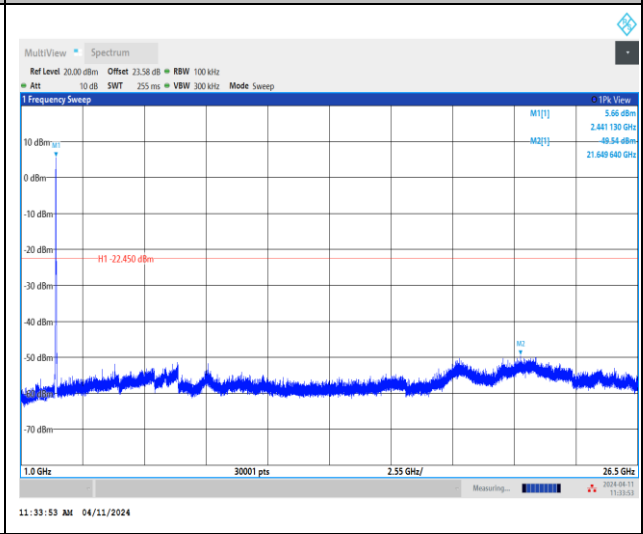
100kHz PSD reference Level	Middle Channel Plot
-----------------------------------	----------------------------



Spurious Emission 30MHz~1GHz

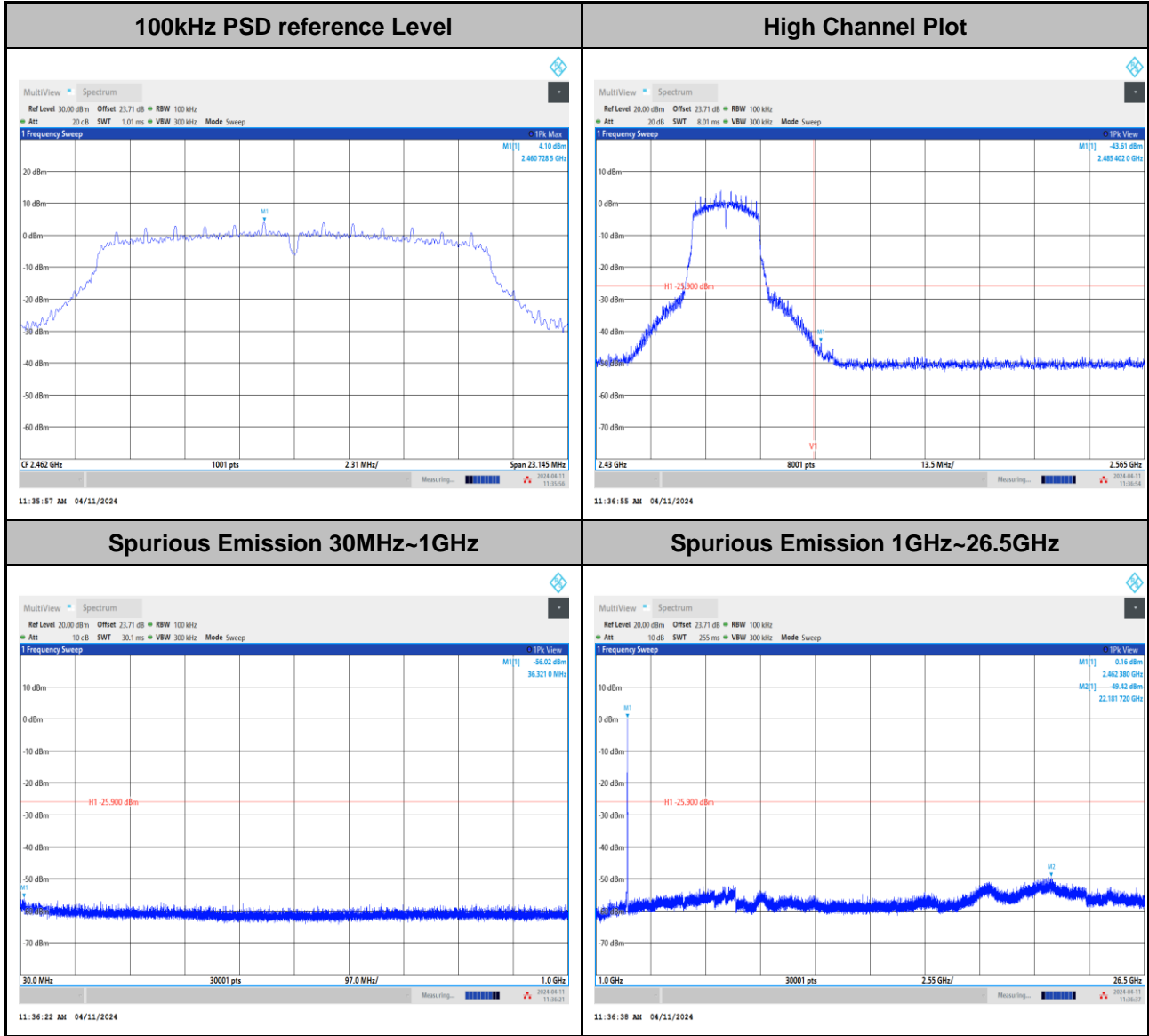


Spurious Emission 1GHz~26.5GHz



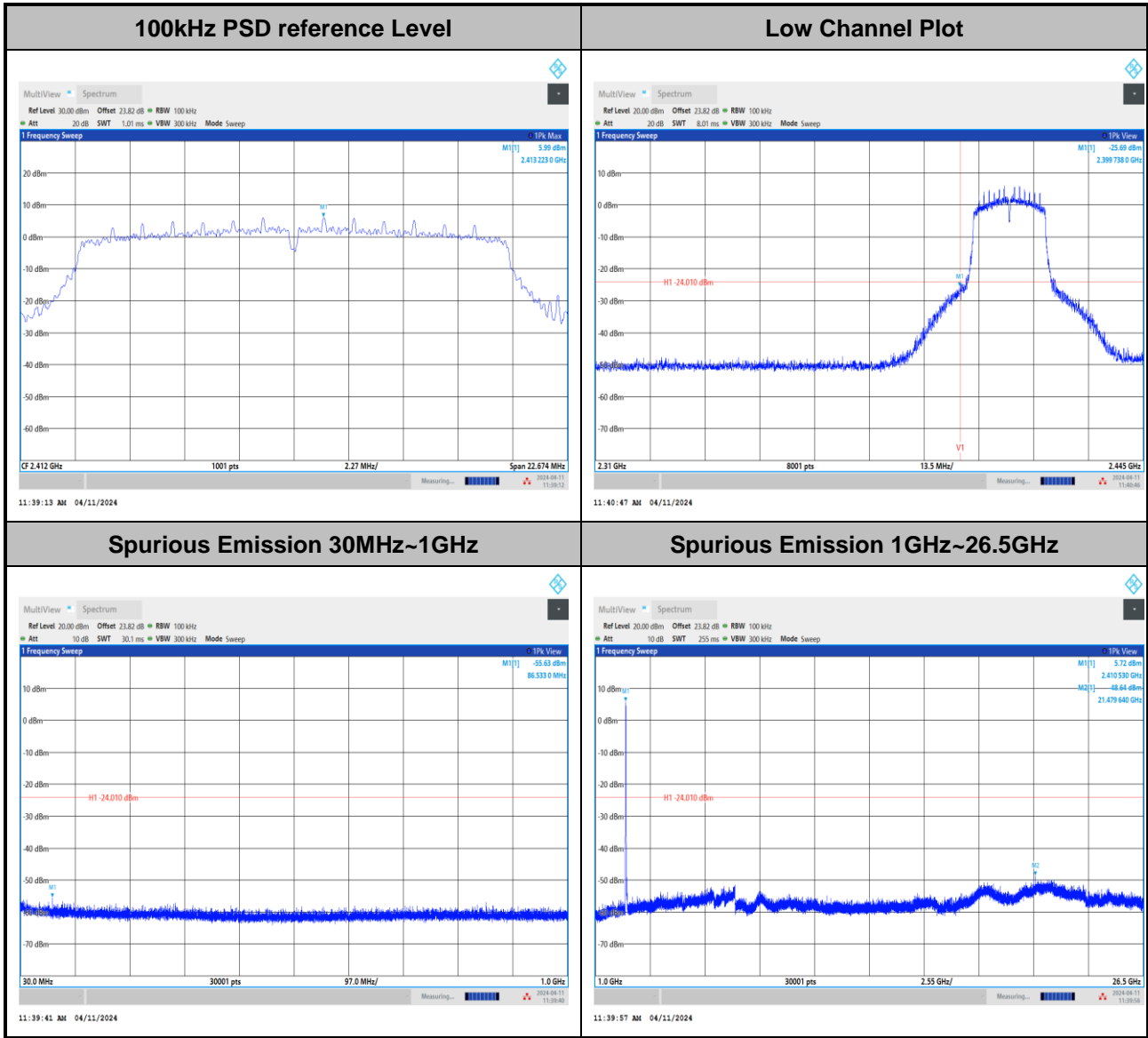


Test Mode :	802.11g	Test Channel :	11
-------------	---------	----------------	----



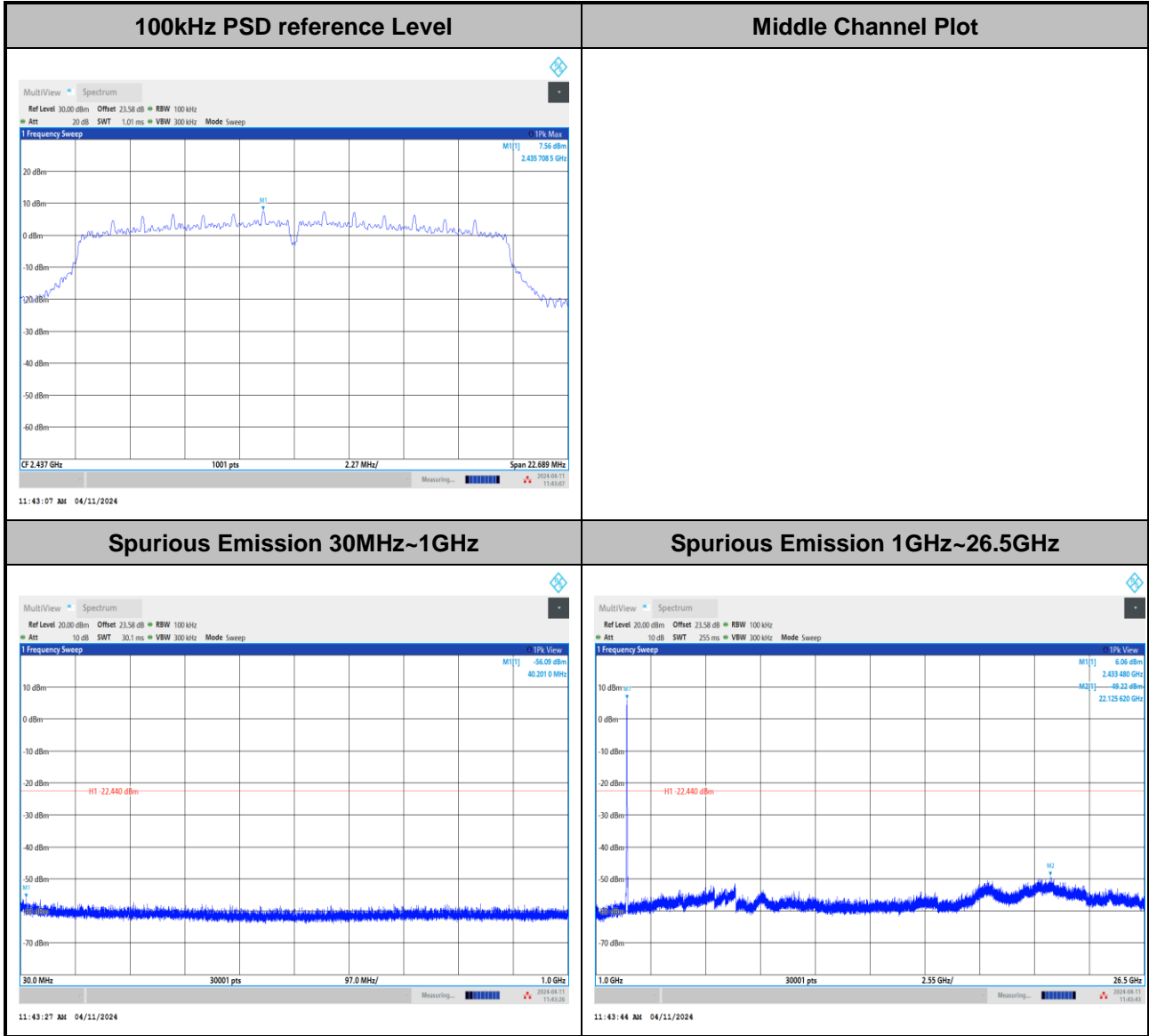


Test Mode :	802.11n HT20	Test Channel :	01
-------------	--------------	----------------	----



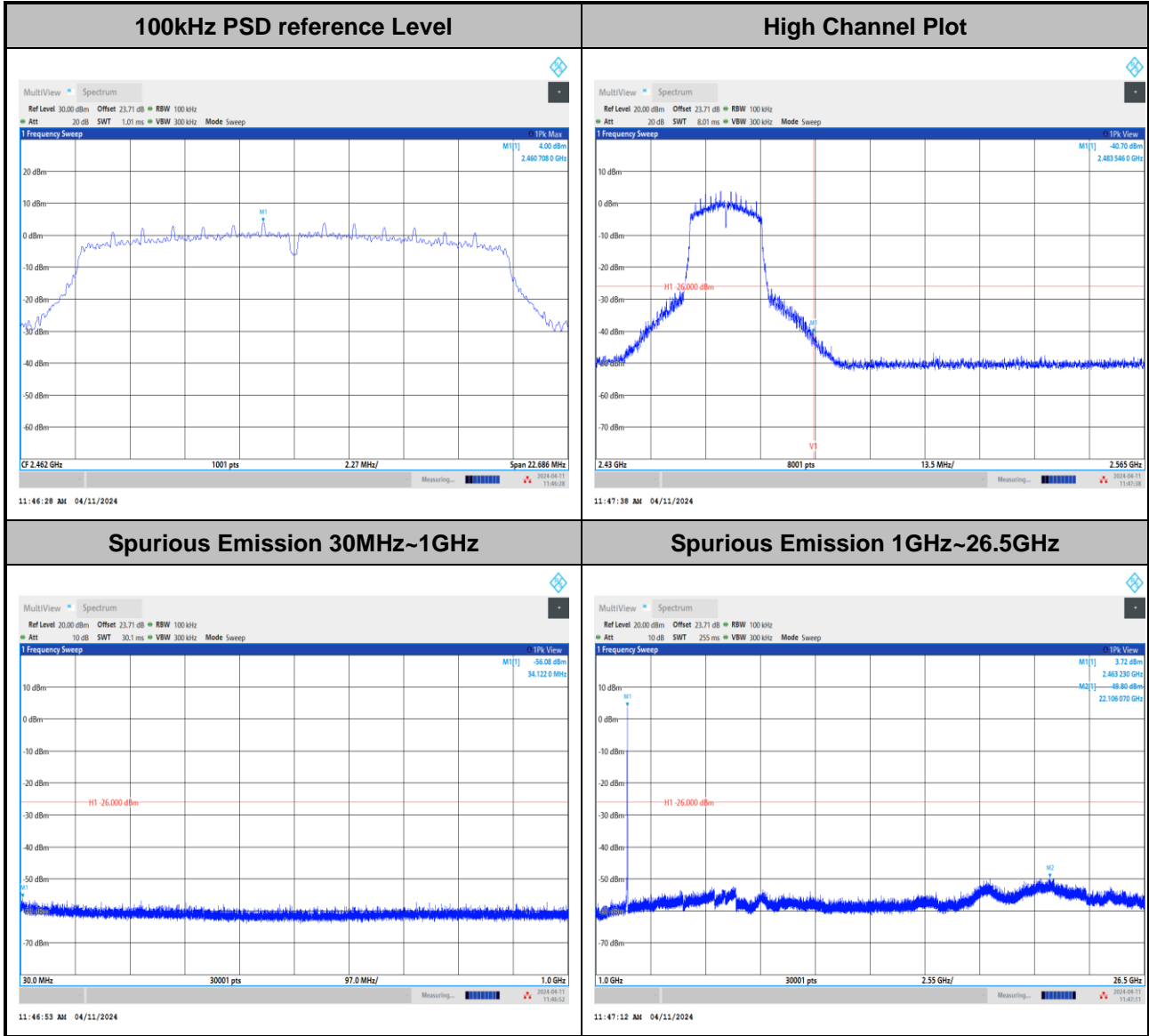


Test Mode :	802.11n HT20	Test Channel :	06
-------------	--------------	----------------	----



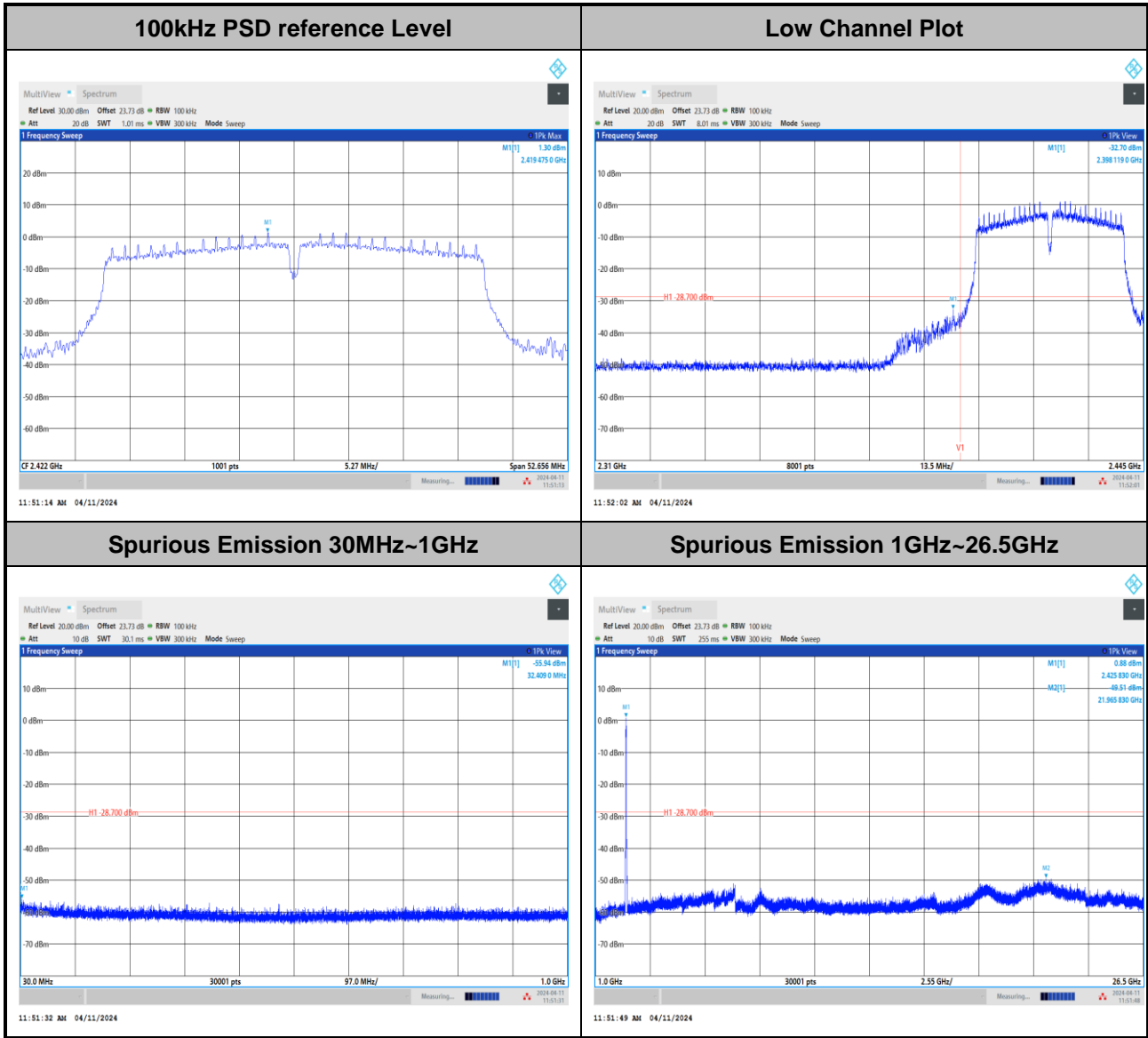


Test Mode :	802.11n HT20	Test Channel :	11
-------------	--------------	----------------	----





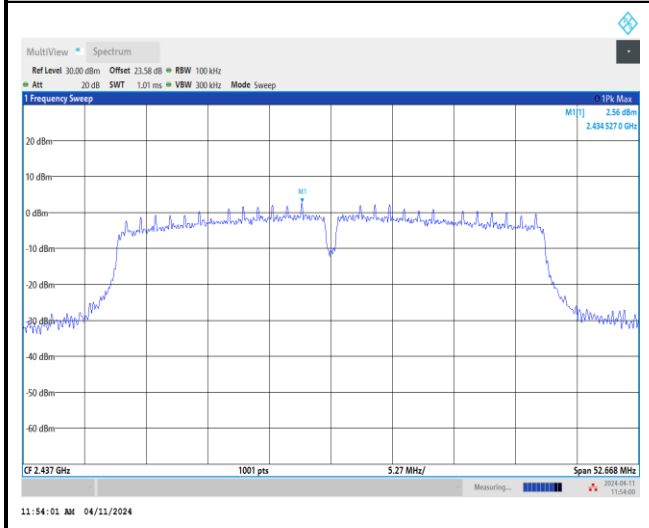
Test Mode :	802.11n HT40	Test Channel :	03
--------------------	--------------	-----------------------	----



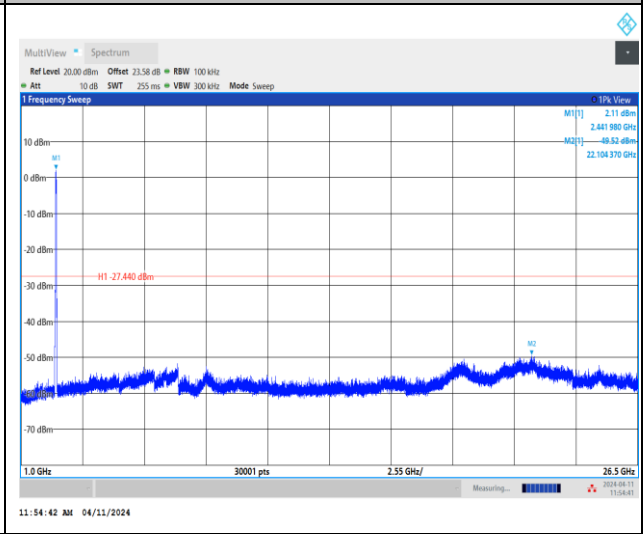
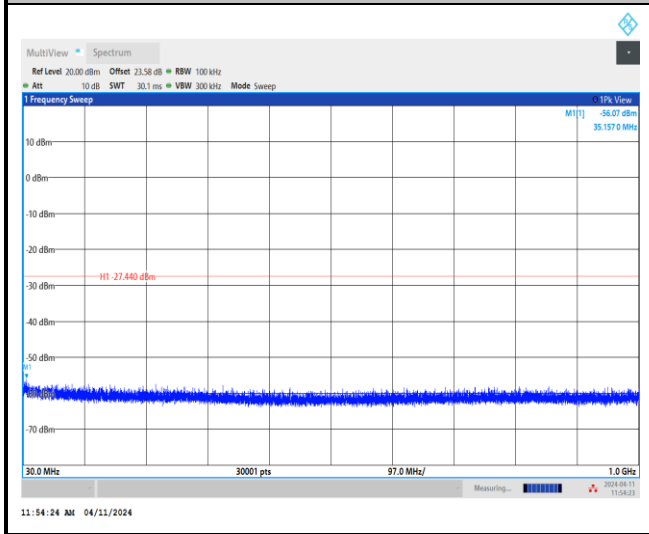


Test Mode : 802.11n HT40	Test Channel : 06
---------------------------------	--------------------------

100kHz PSD reference Level	Middle Channel Plot
-----------------------------------	----------------------------

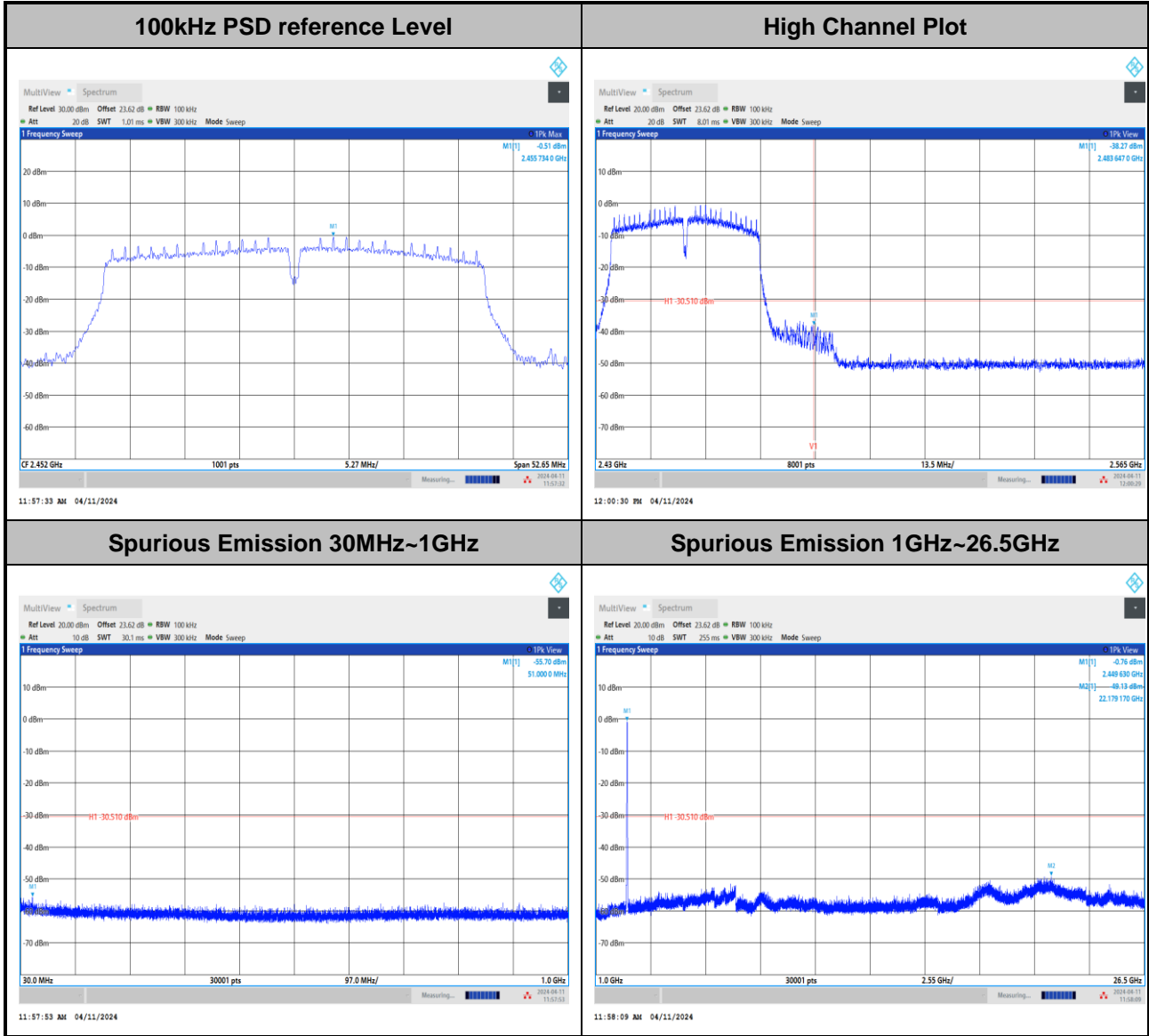


Spurious Emission 30MHz~1GHz	Spurious Emission 1GHz~26.5GHz
-------------------------------------	---------------------------------------





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





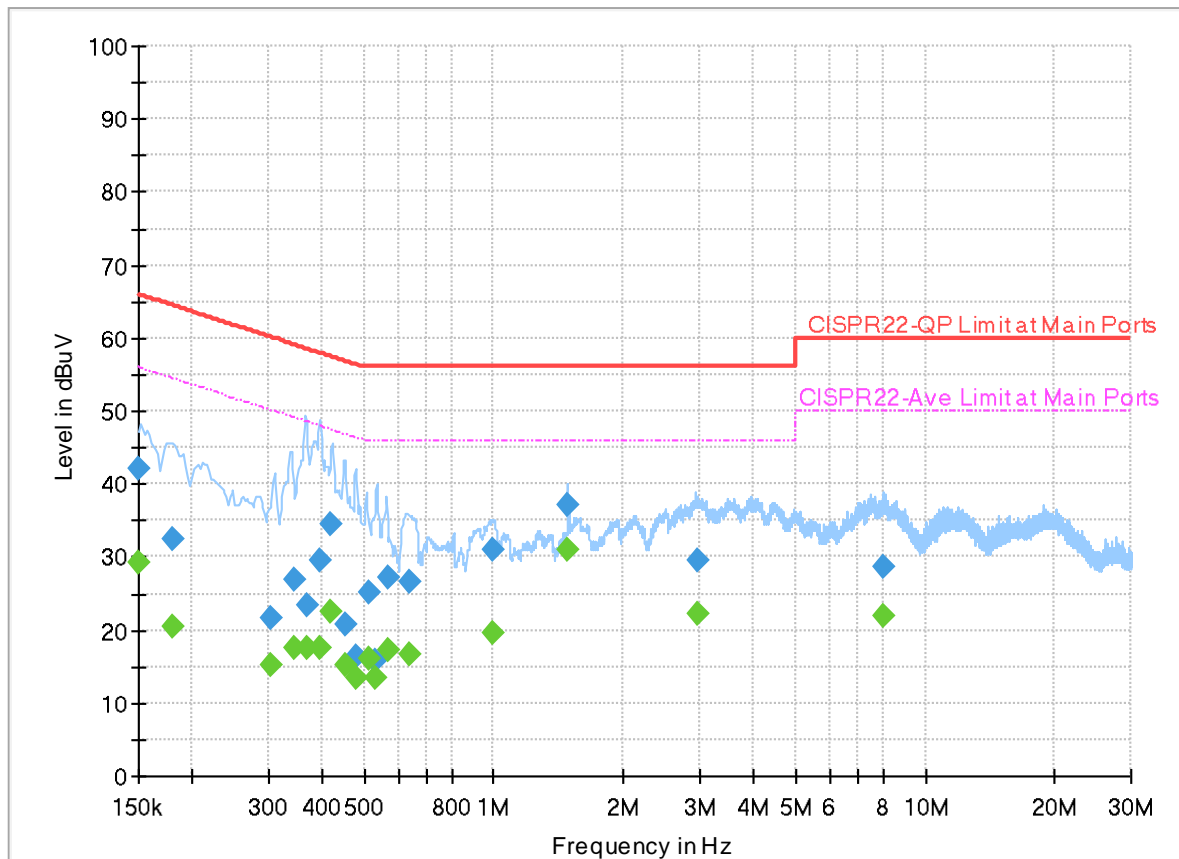
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	Temperature :	20.7~22.3°C
		Relative Humidity :	49.0~74.8%

EUT Information

Report NO : 3D2225
 Test Mode : Mode 1
 Test Voltage : 120Vac/60Hz
 Phase : Line

Full Spectrum



Final_Result

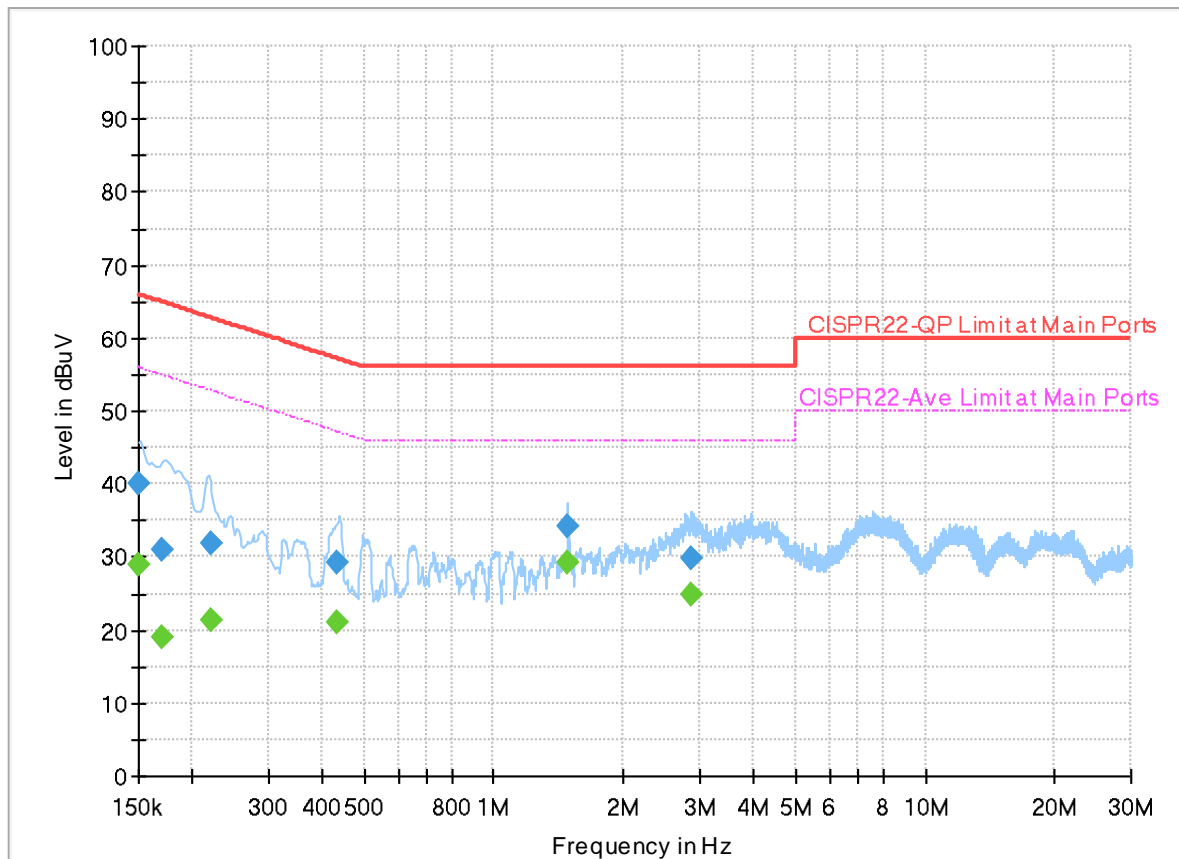
Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.150000	---	29.35	56.00	26.65	L1	OFF	19.9
0.150000	42.15	---	66.00	23.85	L1	OFF	19.9
0.180870	---	20.41	54.45	34.04	L1	OFF	19.9
0.180870	32.48	---	64.45	31.97	L1	OFF	19.9
0.305250	---	15.33	50.10	34.77	L1	OFF	19.9
0.305250	21.58	---	60.10	38.52	L1	OFF	19.9
0.343500	---	17.50	49.12	31.62	L1	OFF	19.9
0.343500	26.96	---	59.12	32.16	L1	OFF	19.9
0.370500	---	17.42	48.49	31.07	L1	OFF	19.9
0.370500	23.37	---	58.49	35.12	L1	OFF	19.9
0.395970	---	17.45	47.94	30.49	L1	OFF	19.9
0.395970	29.56	---	57.94	28.38	L1	OFF	19.9
0.420540	---	22.57	47.44	24.87	L1	OFF	19.9
0.420540	34.59	---	57.44	22.85	L1	OFF	19.9
0.450420	---	15.22	46.87	31.65	L1	OFF	19.9
0.450420	20.77	---	56.87	36.10	L1	OFF	19.9
0.480030	---	13.54	46.34	32.80	L1	OFF	19.9
0.480030	16.30	---	56.34	40.04	L1	OFF	19.9
0.512250	---	15.94	46.00	30.06	L1	OFF	19.9

0.512250	25.10	---	56.00	30.90	L1	OFF	19.9
0.533490	---	13.36	46.00	32.64	L1	OFF	19.9
0.533490	15.71	---	56.00	40.29	L1	OFF	19.9
0.566250	---	17.29	46.00	28.71	L1	OFF	19.9
0.566250	27.33	---	56.00	28.67	L1	OFF	19.9
0.634740	---	16.63	46.00	29.37	L1	OFF	19.9
0.634740	26.63	---	56.00	29.37	L1	OFF	19.9
0.996000	---	19.57	46.00	26.43	L1	OFF	19.9
0.996000	31.12	---	56.00	24.88	L1	OFF	19.9
1.485240	---	31.03	46.00	14.97	L1	OFF	19.9
1.485240	37.05	---	56.00	18.95	L1	OFF	19.9
2.973750	---	22.26	46.00	23.74	L1	OFF	20.0
2.973750	29.42	---	56.00	26.58	L1	OFF	20.0
8.009250	---	21.90	50.00	28.10	L1	OFF	20.0
8.009250	28.77	---	60.00	31.23	L1	OFF	20.0

EUT Information

Report NO : 3D2225
 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)
0.150405	---	29.04	55.98	26.94	N	OFF	19.9
0.150405	39.92	---	65.98	26.06	N	OFF	19.9
0.170250	---	18.97	54.95	35.98	N	OFF	19.9
0.170250	30.90	---	64.95	34.05	N	OFF	19.9
0.222000	---	21.28	52.74	31.46	N	OFF	19.9
0.222000	31.78	---	62.74	30.96	N	OFF	19.9
0.433500	---	21.10	47.19	26.09	N	OFF	19.9
0.433500	29.37	---	57.19	27.82	N	OFF	19.9
1.484340	---	29.26	46.00	16.74	N	OFF	19.9
1.484340	34.25	---	56.00	21.75	N	OFF	19.9
2.872860	---	24.94	46.00	21.06	N	OFF	20.0
2.872860	29.88	---	56.00	26.12	N	OFF	20.0



Appendix C. Radiated Spurious Emission

Test Engineer :	Daniel Lee, Quentin Liu, and Bigshow Wang	Temperature :	21.0~23.4°C
		Relative Humidity :	47~58%

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
802.11b CH 01 2412MHz		2360.508	50.73	-23.27	74	44.41	27.32	15.49	36.49	281	0	P	H	
		2389.3	39.45	-14.55	54	33.02	27.38	15.53	36.48	281	0	A	H	
	*	2412	100.56	-	-	94.04	27.45	15.55	36.48	281	0	P	H	
	*	2412	97.65	-	-	91.13	27.45	15.55	36.48	281	0	A	H	
													H	
			2387.836	50.62	-23.38	74	44.2	27.38	15.52	36.48	211	277	P	V
			2389.422	39.5	-14.5	54	33.07	27.38	15.53	36.48	211	277	A	V
	*		2412	101.2	-	-	94.68	27.45	15.55	36.48	211	277	P	V
	*		2412	98.29	-	-	91.77	27.45	15.55	36.48	211	277	A	V
														V
802.11b CH 06 2437MHz		2337.342	50.64	-23.36	74	44.41	27.27	15.46	36.5	100	298	P	H	
		2389.674	39.06	-14.94	54	32.63	27.38	15.53	36.48	100	298	A	H	
	*	2437	100.43	-	-	93.77	27.55	15.58	36.47	100	298	P	H	
	*	2437	97.4	-	-	90.74	27.55	15.58	36.47	100	298	A	H	
			2488.048	51.2	-22.8	74	44.27	27.75	15.64	36.46	100	298	P	H
			2487.716	39.96	-14.04	54	33.03	27.75	15.64	36.46	100	298	A	H
			2321.907	51.25	-22.75	74	45.08	27.24	15.43	36.5	212	246	P	V
			2389.968	39.09	-14.91	54	32.66	27.38	15.53	36.48	212	246	A	V
	*		2437	101.69	-	-	95.03	27.55	15.58	36.47	212	246	P	V
	*		2437	98.76	-	-	92.1	27.55	15.58	36.47	212	246	A	V
			2487.467	50.93	-23.07	74	44	27.75	15.64	36.46	212	246	P	V
			2487.384	40.1	-13.9	54	33.17	27.75	15.64	36.46	212	246	A	V



WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 11 2462MHz	*	2462	103.88	-	-	97.09	27.65	15.61	36.47	100	299	P	H
	*	2462	100.53	-	-	93.74	27.65	15.61	36.47	100	299	A	H
		2488.458	55	-19	74	48.07	27.75	15.64	36.46	100	299	P	H
		2488.052	47.15	-6.85	54	40.22	27.75	15.64	36.46	100	299	A	H
													H
													H
	*	2462	103.07	-	-	96.28	27.65	15.61	36.47	299	282	P	V
	*	2462	100.11	-	-	93.32	27.65	15.61	36.47	299	282	A	V
		2488.11	54.49	-19.51	74	47.56	27.75	15.64	36.46	299	282	P	V
		2487.994	47.33	-6.67	54	40.4	27.75	15.64	36.46	299	282	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	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 01 2412MHz		4824	42.2	-31.8	74	60.62	32.24	8.51	59.17	100	287	P	H
		4824	37.46	-16.54	54	55.88	32.24	8.51	59.17	100	287	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
			4824	45.6	-28.4	74	64.02	32.24	8.51	59.17	234	63	P
		4824	42	-12	54	60.42	32.24	8.51	59.17	234	63	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V



WIFI	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11b CH 06 2437MHz		4874	50.62	-23.38	74	68.71	32.54	8.56	59.19	100	286	P	H	
		4874	47.77	-6.23	54	65.86	32.54	8.56	59.19	100	286	A	H	
		7311	43.84	-30.16	74	56.6	36.73	10.34	59.83	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4874	51.63	-22.37	74	69.72	32.54	8.56	59.19	240	68	P	V
			4874	48.86	-5.14	54	66.95	32.54	8.56	59.19	240	68	A	V
			7311	43.42	-30.58	74	56.18	36.73	10.34	59.83	-	-	P	V
														V
														V
														V
														V
														V
														V
													V	



WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11b CH 11 2462MHz		4924	50.3	-23.7	74	68.08	32.82	8.6	59.2	100	285	P	H	
		4924	47.44	-6.56	54	65.22	32.82	8.6	59.2	100	285	A	H	
		7386	42.31	-31.69	74	55.57	36.28	10.38	59.92	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4924	50.73	-23.27	74	68.51	32.82	8.6	59.2	252	84	P	V
			4924	47.84	-6.16	54	65.62	32.82	8.6	59.2	252	84	A	V
			7386	42.15	-31.85	74	55.41	36.28	10.38	59.92	-	-	P	V
														V
														V
														V
														V
														V
														V
													V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



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

WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11g CH 01 2412MHz		2390	62.14	-11.86	74	55.71	27.38	15.53	36.48	100	299	P	H	
		2390	49.8	-4.2	54	43.37	27.38	15.53	36.48	100	299	A	H	
	*	2412	102.51	-	-	95.99	27.45	15.55	36.48	100	299	P	H	
	*	2412	94.57	-	-	88.05	27.45	15.55	36.48	100	299	A	H	
													H	
														H
			2390	64.28	-9.72	74	57.85	27.38	15.53	36.48	291	276	P	V
			2390	50.73	-3.27	54	44.3	27.38	15.53	36.48	291	276	A	V
	*		2412	102.43	-	-	95.91	27.45	15.55	36.48	291	276	P	V
	*		2412	94.61	-	-	88.09	27.45	15.55	36.48	291	276	A	V
														V
														V
802.11g CH 06 2437MHz		2389.821	53.3	-20.7	74	46.87	27.38	15.53	36.48	100	299	P	H	
		2389.968	40.64	-13.36	54	34.21	27.38	15.53	36.48	100	299	A	H	
	*	2437	103.97	-	-	97.31	27.55	15.58	36.47	100	299	P	H	
	*	2437	96.1	-	-	89.44	27.55	15.58	36.47	100	299	A	H	
			2483.981	59.29	-14.71	74	52.37	27.74	15.64	36.46	100	299	P	H
			2487.218	44.47	-9.53	54	37.54	27.75	15.64	36.46	100	299	A	H
			2389.821	50.51	-23.49	74	44.08	27.38	15.53	36.48	309	279	P	V
			2389.968	40.36	-13.64	54	33.93	27.38	15.53	36.48	309	279	A	V
	*		2437	104.58	-	-	97.92	27.55	15.58	36.47	309	279	P	V
	*		2437	97.03	-	-	90.37	27.55	15.58	36.47	309	279	A	V
			2483.483	60.75	-89.25	150	53.84	27.73	15.64	36.46	309	279	P	V
			2487.218	43.94	-10.06	54	37.01	27.75	15.64	36.46	309	279	A	V



WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 11 2462MHz	*	2462	102.06	-	-	95.27	27.65	15.61	36.47	100	297	P	H
	*	2462	94.4	-	-	87.61	27.65	15.61	36.47	100	297	A	H
		2488.69	66.48	-7.52	74	59.55	27.75	15.64	36.46	100	297	P	H
		2488.052	49.7	-4.3	54	42.77	27.75	15.64	36.46	100	297	A	H
													H
													H
	*	2462	102.16	-	-	95.37	27.65	15.61	36.47	297	282	P	V
	*	2462	94.5	-	-	87.71	27.65	15.61	36.47	297	282	A	V
		2485.558	68.24	-5.76	74	61.32	27.74	15.64	36.46	297	282	P	V
		2488.69	50.77	-3.23	54	43.84	27.75	15.64	36.46	297	282	A	V
													V
													V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



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

WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11g CH 01 2412MHz		4824	43.72	-30.28	74	62.14	32.24	8.51	59.17	100	286	P	H
		4824	30.66	-23.34	54	49.08	32.24	8.51	59.17	100	286	A	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
			4824	43.98	-30.02	74	62.4	32.24	8.51	59.17	300	228	P
		4824	30.79	-23.21	54	49.21	32.24	8.51	59.17	300	228	A	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V



WiFi	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11g CH 06 2437MHz		4874	47.22	-26.78	74	65.31	32.54	8.56	59.19	100	286	P	H	
		4874	35.63	-18.37	54	53.72	32.54	8.56	59.19	100	286	A	H	
		7311	42.86	-31.14	74	55.62	36.73	10.34	59.83	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4874	46.7	-27.3	74	64.79	32.54	8.56	59.19	303	68	P	V
			4874	36.21	-17.79	54	54.3	32.54	8.56	59.19	303	68	A	V
			7311	43.47	-30.53	74	56.23	36.73	10.34	59.83	-	-	P	V
														V
														V
														V
														V
														V
														V
														V
														V
														V



WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11g CH 11 2462MHz		4924	43.9	-30.1	74	61.68	32.82	8.6	59.2	100	285	P	H	
		4924	32.8	-21.2	54	50.58	32.82	8.6	59.2	100	285	A	H	
		7386	42.82	-31.18	74	56.08	36.28	10.38	59.92	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4924	44.58	-29.42	74	62.36	32.82	8.6	59.2	247	82	P	V
			4924	33.47	-20.53	54	51.25	32.82	8.6	59.2	247	82	A	V
			7386	42.56	-31.44	74	55.82	36.28	10.38	59.92	-	-	P	V
														V
														V
														V
														V
														V
														V
													V	
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



**2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 01 2412MHz		2390	65.39	-8.61	74	58.96	27.38	15.53	36.48	100	295	P	H	
		2390	50.25	-3.75	54	43.82	27.38	15.53	36.48	100	295	A	H	
	*	2412	100.7	-	-	94.18	27.45	15.55	36.48	100	295	P	H	
	*	2412	92.94	-	-	86.42	27.45	15.55	36.48	100	295	A	H	
													H	
														H
			2390	64.45	-9.55	74	58.02	27.38	15.53	36.48	257	297	P	V
			2390	50.47	-3.53	54	44.04	27.38	15.53	36.48	257	297	A	V
		*	2412	100.17	-	-	93.65	27.45	15.55	36.48	257	297	P	V
		*	2412	92.59	-	-	86.07	27.45	15.55	36.48	257	297	A	V
													V	
													V	
802.11n HT20 CH 06 2437MHz		2382.03	51.29	-22.71	74	44.9	27.36	15.52	36.49	100	296	P	H	
		2389.821	40.6	-13.4	54	34.17	27.38	15.53	36.48	100	296	A	H	
		*	2437	102.56	-	-	95.9	27.55	15.58	36.47	100	296	P	H
		*	2437	95.04	-	-	88.38	27.55	15.58	36.47	100	296	A	H
			2484.728	59.61	-14.39	74	52.69	27.74	15.64	36.46	100	296	P	H
			2488.629	43.65	-10.35	54	36.72	27.75	15.64	36.46	100	296	A	H
			2389.674	51.09	-22.91	74	44.66	27.38	15.53	36.48	211	252	P	V
			2389.968	40.6	-13.4	54	34.17	27.38	15.53	36.48	211	252	A	V
		*	2437	103.98	-	-	97.32	27.55	15.58	36.47	211	252	P	V
		*	2437	95.99	-	-	89.33	27.55	15.58	36.47	211	252	A	V
		2485.309	58.8	-15.2	74	51.88	27.74	15.64	36.46	211	252	P	V	
		2488.214	44.39	-9.61	54	37.46	27.75	15.64	36.46	211	252	A	V	



WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 11 2462MHz	*	2462	99.54	-	-	92.75	27.65	15.61	36.47	294	355	P	H
	*	2462	91.6	-	-	84.81	27.65	15.61	36.47	294	355	A	H
		2488.226	66.35	-7.65	74	59.42	27.75	15.64	36.46	294	355	P	H
		2487.936	47.99	-6.01	54	41.06	27.75	15.64	36.46	294	355	A	H
													H
													H
	*	2462	102.48	-	-	95.69	27.65	15.61	36.47	244	252	P	V
	*	2462	94.79	-	-	88	27.65	15.61	36.47	244	252	A	V
		2484.05	68.71	-5.29	74	61.79	27.74	15.64	36.46	244	252	P	V
		2483.528	50.17	-3.83	54	43.26	27.73	15.64	36.46	244	252	A	V
													V
													V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



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

WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 01 2412MHz		4824	38.59	-35.41	74	57.01	32.24	8.51	59.17	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
			4824	38.02	-35.98	74	56.44	32.24	8.51	59.17	-	-	P	V
														V
														V
														V



WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 06 2437MHz		4874	45.16	-28.84	74	63.25	32.54	8.56	59.19	100	286	P	H	
		4874	34.05	-19.95	54	52.14	32.54	8.56	59.19	100	286	A	H	
		7311	43.4	-30.6	74	56.16	36.73	10.34	59.83	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4874	45.44	-28.56	74	63.53	32.54	8.56	59.19	257	66	P	V
			4874	34.32	-19.68	54	52.41	32.54	8.56	59.19	257	66	A	V
			7311	43.04	-30.96	74	55.8	36.73	10.34	59.83	-	-	P	V
														V
														V
														V
														V
														V
													V	



WIFI	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT20 CH 11 2462MHz		4924	43.9	-30.1	74	61.68	32.82	8.6	59.2	100	284	P	H	
		4924	32.76	-21.24	54	50.54	32.82	8.6	59.2	100	284	A	H	
		7386	41.91	-32.09	74	55.17	36.28	10.38	59.92	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4924	42.91	-31.09	74	60.69	32.82	8.6	59.2	259	81	P	V
			4924	32.33	-21.67	54	50.11	32.82	8.6	59.2	259	81	A	V
			7386	42.86	-31.14	74	56.12	36.28	10.38	59.92	-	-	P	V
													V	
													V	
													V	
													V	
													V	
												V		
												V		
												V		
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 													



**2.4GHz 2400~2483.5MHz
WIFI 802.11n HT40 (Band Edge @ 3m)**

WIFI	Note	Frequency (MHz)	Level (dBµV/m)	Margin (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 03 2422MHz		2389.804	62.85	-11.15	74	56.42	27.38	15.53	36.48	100	298	P	H
		2389.946	48.91	-5.09	54	42.48	27.38	15.53	36.48	100	298	A	H
	*	2422	97.2	-	-	90.62	27.49	15.57	36.48	100	298	P	H
	*	2422	89.45	-	-	82.87	27.49	15.57	36.48	100	298	A	H
		2490.712	53	-21	74	46.06	27.76	15.64	36.46	100	298	P	H
		2488.876	43.2	-10.8	54	36.26	27.76	15.64	36.46	100	298	A	H
		2389.804	64.87	-9.13	74	58.44	27.38	15.53	36.48	249	280	P	V
		2389.662	49.41	-4.59	54	42.98	27.38	15.53	36.48	249	280	A	V
	*	2422	98.83	-	-	92.25	27.49	15.57	36.48	249	280	P	V
	*	2422	91.01	-	-	84.43	27.49	15.57	36.48	249	280	A	V
		2488.768	53.25	-20.75	74	46.31	27.76	15.64	36.46	249	280	P	V
		2489.524	43.84	-10.16	54	36.9	27.76	15.64	36.46	249	280	A	V
802.11n HT40 CH 06 2437MHz		2390	58.93	-15.07	74	52.5	27.38	15.53	36.48	186	297	P	H
		2390	45.78	-8.22	54	39.35	27.38	15.53	36.48	186	297	A	H
	*	2437	98.01	-	-	91.35	27.55	15.58	36.47	186	297	P	H
	*	2437	90.14	-	-	83.48	27.55	15.58	36.47	186	297	A	H
		2484.841	61.25	-12.75	74	54.33	27.74	15.64	36.46	186	297	P	H
		2483.911	48.3	-5.7	54	41.38	27.74	15.64	36.46	186	297	A	H
		2389.442	58.67	-15.33	74	52.24	27.38	15.53	36.48	243	248	P	V
		2390	46.22	-7.78	54	39.79	27.38	15.53	36.48	243	248	A	V
	*	2437	100.55	-	-	93.89	27.55	15.58	36.47	243	248	P	V
	*	2437	92.63	-	-	85.97	27.55	15.58	36.47	243	248	A	V
		2484.934	65.18	-8.82	74	58.26	27.74	15.64	36.46	243	248	P	V
		2483.539	50.75	-3.25	54	43.84	27.73	15.64	36.46	243	248	A	V



WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 09 2452MHz		2389.056	50.5	-23.5	74	44.07	27.38	15.53	36.48	100	298	P	H
		2389.704	40.43	-13.57	54	34	27.38	15.53	36.48	100	298	A	H
	*	2452	97.05	-	-	90.31	27.61	15.6	36.47	100	298	P	H
	*	2452	89.5	-	-	82.76	27.61	15.6	36.47	100	298	A	H
		2488.848	61.67	-12.33	74	54.73	27.76	15.64	36.46	100	298	P	H
		2488.304	47.88	-6.12	54	40.95	27.75	15.64	36.46	100	298	A	H
		2326.2	50.47	-23.53	74	44.28	27.25	15.44	36.5	232	248	P	V
		2327.334	40.61	-13.39	54	34.42	27.25	15.44	36.5	232	248	A	V
	*	2452	99.21	-	-	92.47	27.61	15.6	36.47	232	248	P	V
	*	2452	91.62	-	-	84.88	27.61	15.6	36.47	232	248	A	V
		2487.692	64.27	-9.73	74	57.34	27.75	15.64	36.46	232	248	P	V
		2488.1	49.87	-4.13	54	42.94	27.75	15.64	36.46	232	248	A	V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. 												



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

WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT40 CH 03 2422MHz		4844	37.59	-36.41	74	55.88	32.36	8.53	59.18	-	-	P	H	
		7266	42.1	-31.9	74	54.87	36.7	10.31	59.78	-	-	P	H	
													H	
													H	
													H	
													H	
														H
														H
														H
														H



WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)	
802.11n HT40 CH 06 2437MHz		4874	39.01	-34.99	74	57.1	32.54	8.56	59.19	-	-	P	H	
		7311	43.21	-30.79	74	55.97	36.73	10.34	59.83	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
													H	
			4874	39.16	-34.84	74	57.25	32.54	8.56	59.19	-	-	P	V
			7311	43.66	-30.34	74	56.42	36.73	10.34	59.83	-	-	P	V
														V
														V
														V
														V
														V
														V
													V	
													V	
													V	
													V	



WIFI	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 09 2452MHz		4904	38.58	-35.42	74	56.48	32.72	8.58	59.2	-	-	P	H
		7356	42.74	-31.26	74	55.81	36.46	10.36	59.89	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
	802.11n HT40 CH 09 2452MHz		4904	38.29	-35.71	74	56.19	32.72	8.58	59.2	-	-	P
		7356	41.83	-32.17	74	54.9	36.46	10.36	59.89	-	-	P	V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	<ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only. 												



Emission above 18GHz

2.4GHz WIFI 802.11g (SHF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz 802.11g SHF		24786	39.73	-34.27	74	56.17	39.37	-2.42	53.39	-	-	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
			24669	40.11	-33.89	74	56.49	39.46	-2.41	53.43	-	-	P
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against limit line. 3. The emission position marked as "-" means no suspected emission found with sufficient margin against limit line or noise floor only.												



Emission below 1GHz
2.4GHz WIFI 802.11g (LF)

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)	
2.4GHz 802.11g LF		31.8	23.32	-16.68	40	30.96	23.95	0.73	32.32	-	-	P	H	
		90.12	27.65	-15.85	43.5	44.02	14.73	1.26	32.36	-	-	P	H	
		109.92	37.31	-6.19	43.5	51.5	16.82	1.34	32.35	-	-	P	H	
		200.1	26.4	-17.1	43.5	42.09	14.78	1.85	32.32	-	-	P	H	
		264	32.47	-13.53	46	42.87	19.92	2.06	32.38	-	-	P	H	
		843.2	31.62	-14.38	46	31.76	28.24	3.46	31.84	-	-	P	H	
														H
														H
														H
														H
														H
														H
			49.98	27.86	-12.14	40	44.82	14.58	0.92	32.46	-	-	P	V
			59.88	28.66	-11.34	40	48.09	11.96	1.04	32.43	-	-	P	V
			66	28.76	-11.24	40	47.95	12.15	1.08	32.42	-	-	P	V
			80.04	29.73	-10.27	40	47.42	13.55	1.18	32.42	-	-	P	V
			110.1	30.18	-13.32	43.5	44.46	16.83	1.33	32.44	-	-	P	V
			896	35.11	-10.89	46	34.88	28.12	3.6	31.49	-	-	P	V
														V
														V
													V	
													V	
													V	
													V	

Remark

- No other spurious found.
- All results are PASS against limit line.
- The emission position marked as "-" means no suspected emission found and emission level has at least 6dB margin against limit or emission is noise floor only.



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 Margin line.
P/A	Peak or Average
H/V	Horizontal or Vertical



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

WIFI	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
		(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					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

- Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
- Level(dBμV/m) =
Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
- Margin (dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

- 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)
- Margin (dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

- 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)
- Margin (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 :	Daniel Lee, Quentin Liu, and Bigshow Wang	Temperature :	21.0~23.4°C
		Relative Humidity :	47~58%

Note symbol

-L	Low channel location
-R	High channel location

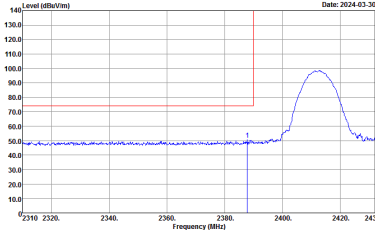
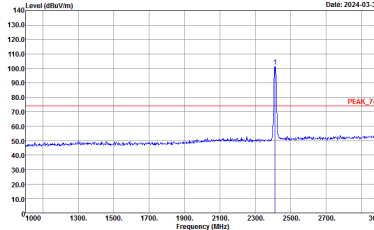
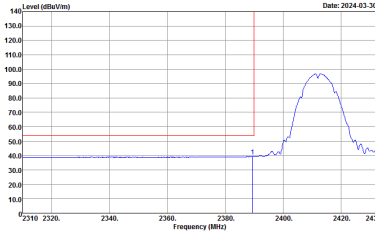
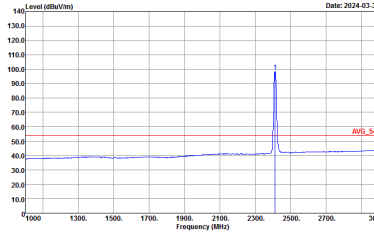


2.4GHz 2400~2483.5MHz

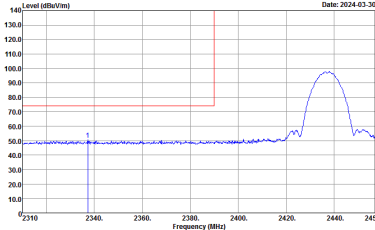
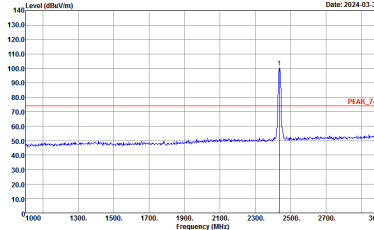
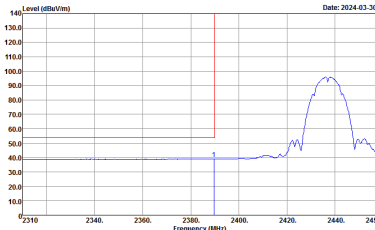
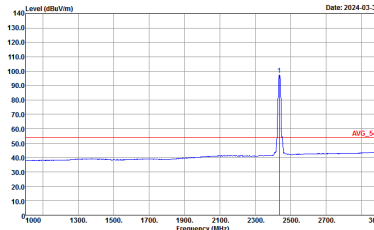
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH01 2412MHz	
	Horizontal	Fundamental
Peak	<p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	<p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	<p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11b CH01 2412MHz		
	Vertical	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

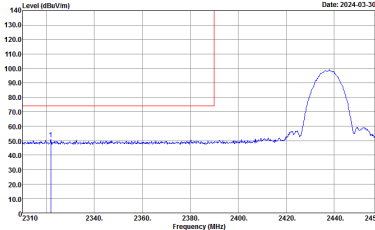
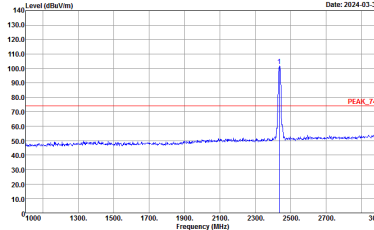
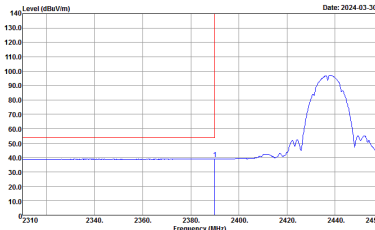
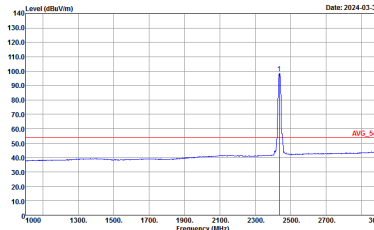


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH06 2437MHz - L	
	Horizontal	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

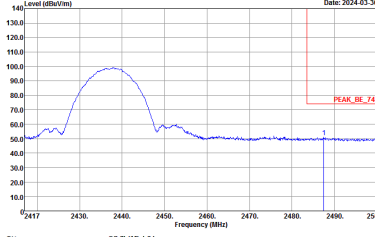
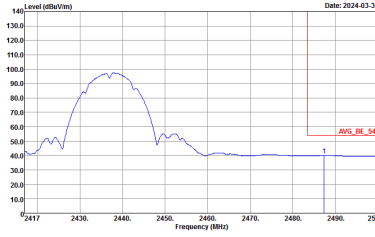


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH06 2437MHz - R	
	Horizontal	Fundamental
Peak	<p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank
Avg.	<p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank

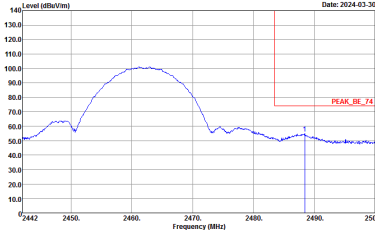
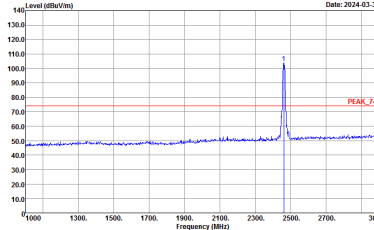
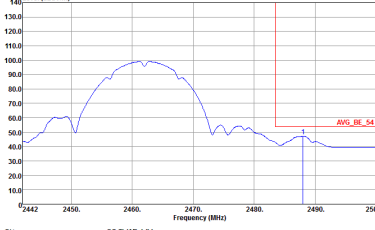
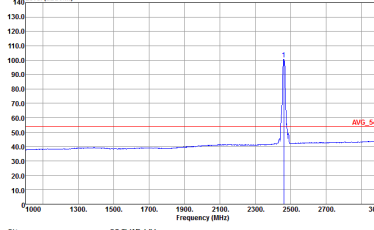


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11b CH06 2437MHz - L		
	Vertical	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>

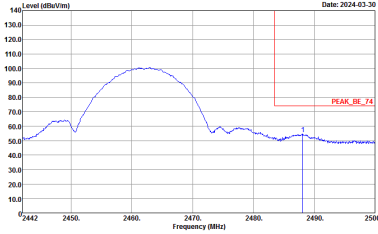
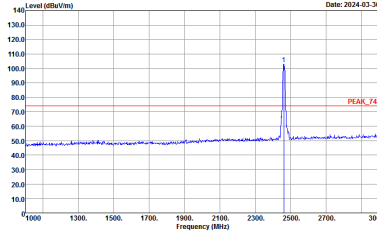
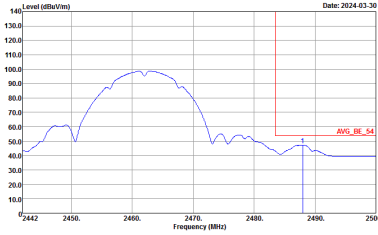
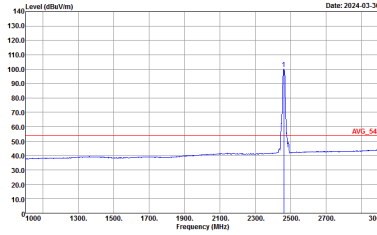


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11b CH06 2437MHz - R	
	Vertical	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11b CH11 2462MHz		
	Horizontal	Fundamental
Peak	 <p>Level (dBm/100kHz) vs Frequency (MHz) plot showing a peak at 2462 MHz. The y-axis ranges from 10.0 to 140.0 dBm/100kHz, and the x-axis ranges from 2442 to 2500 MHz. A red vertical line marks the peak at 2462 MHz, labeled 'PEAK_BE_74'.</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Level (dBm/100kHz) vs Frequency (MHz) plot showing a sharp peak at 2462 MHz. The y-axis ranges from 10.0 to 140.0 dBm/100kHz, and the x-axis ranges from 1900 to 3000 MHz. A red vertical line marks the peak at 2462 MHz, labeled 'PEAK_74'.</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	 <p>Level (dBm/100kHz) vs Frequency (MHz) plot showing the average spectrum. The y-axis ranges from 10.0 to 140.0 dBm/100kHz, and the x-axis ranges from 2442 to 2500 MHz. A red vertical line marks the average level at 2462 MHz, labeled 'AVG_BE_54'.</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>	 <p>Level (dBm/100kHz) vs Frequency (MHz) plot showing the average spectrum. The y-axis ranges from 10.0 to 140.0 dBm/100kHz, and the x-axis ranges from 1900 to 3000 MHz. A red vertical line marks the average level at 2462 MHz, labeled 'AVG_54'.</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:0.010kHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11b CH11 2462MHz		
	Vertical	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto</p>

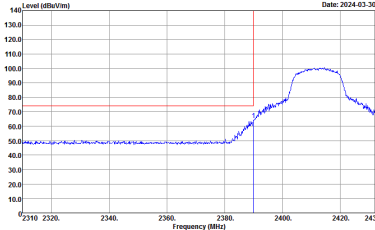
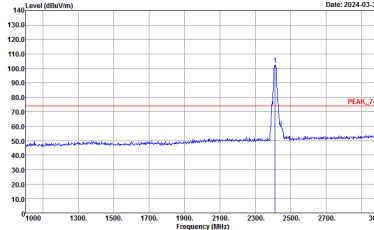
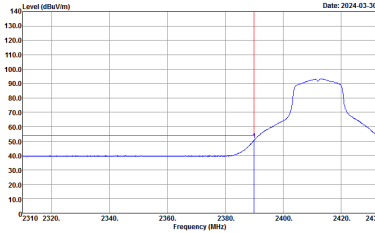
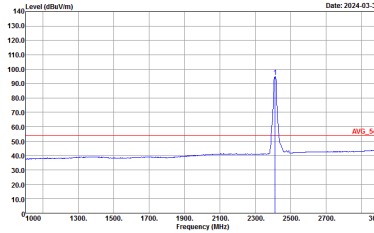


2.4GHz 2400~2483.5MHz

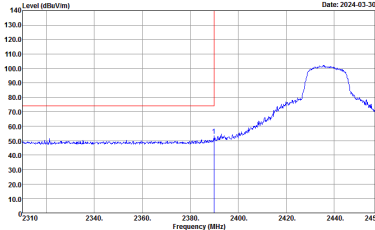
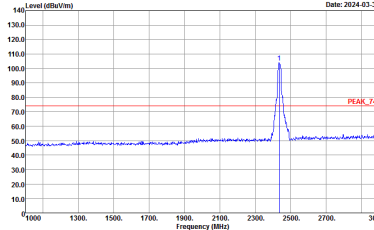
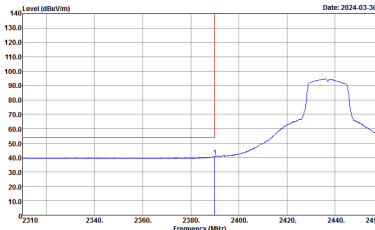
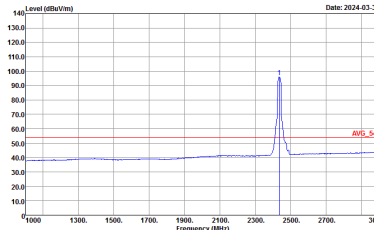
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11g CH01 2412MHz	
	Horizontal	Fundamental
Peak	<p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	<p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>	<p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>

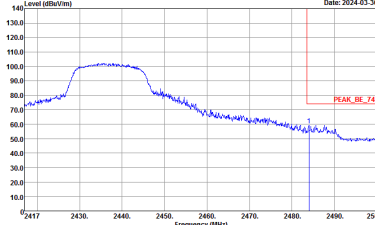
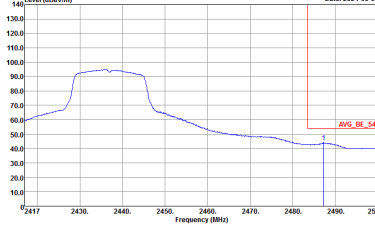


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11g CH01 2412MHz		
	Vertical	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>

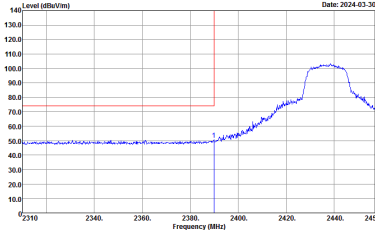
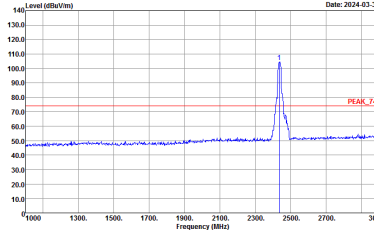
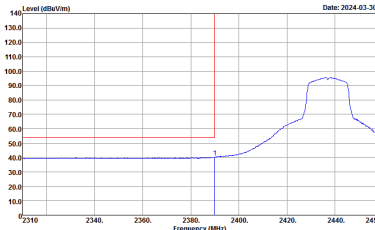
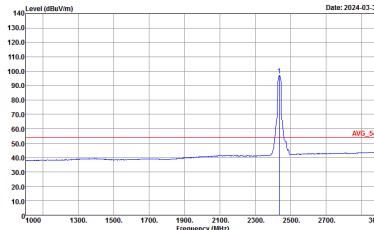


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11g CH06 2437MHz - L		
	Horizontal	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11g CH06 2437MHz - R		
Horizontal		Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.750KHz SWF:Auto</p>	Left blank

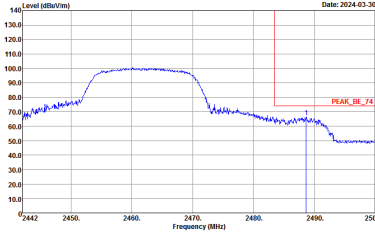
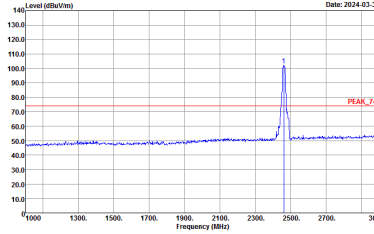
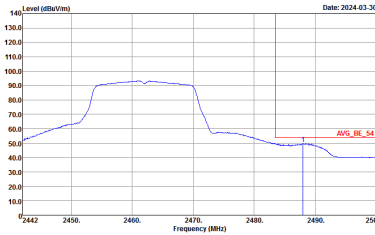
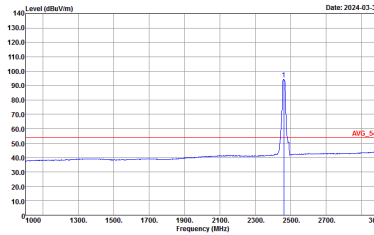


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11g CH06 2437MHz - L		
	Vertical	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site Condition : 03CH15-HY : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site Condition : 03CH15-HY : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site Condition : 03CH15-HY : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site Condition : 03CH15-HY : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>

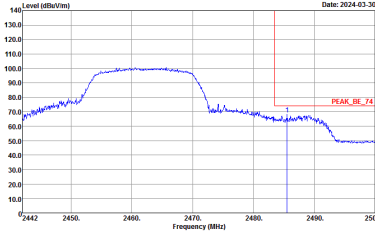
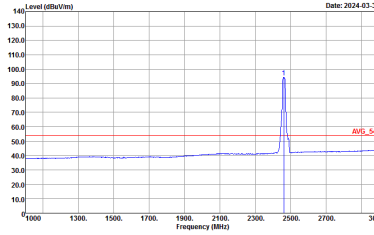


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11g CH06 2437MHz - R	
	Vertical	Fundamental
Peak	<p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left Blank
Avg.	<p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.750KHz SWF:Auto</p>	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11g CH11 2462MHz		
	Horizontal	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11g CH11 2462MHz		
	Vertical	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>

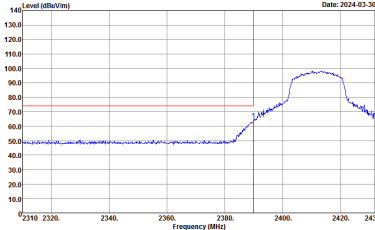
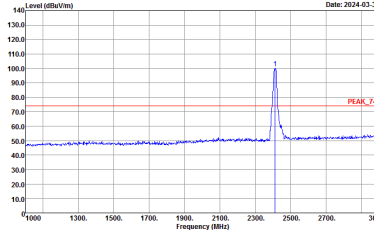
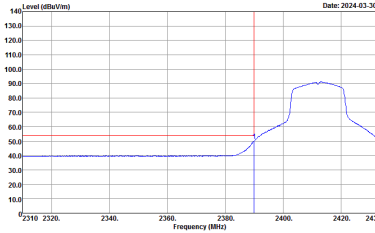
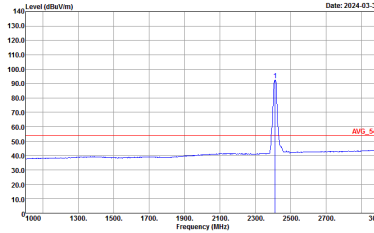


2.4GHz 2400~2483.5MHz

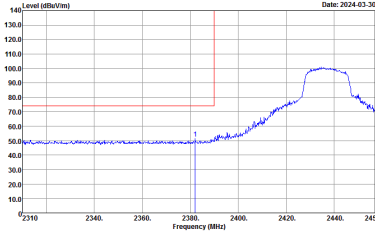
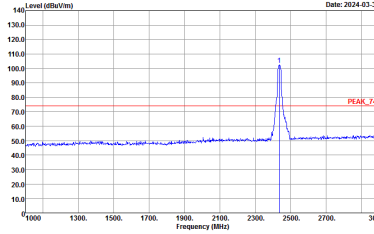
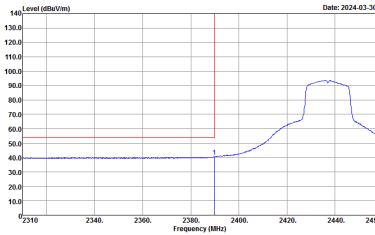
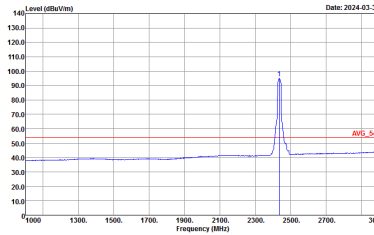
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH01 2412MHz	
	Horizontal	Fundamental
Peak	<p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	<p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.820KHz SWT:Auto</p>	<p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.820KHz SWT:Auto</p>

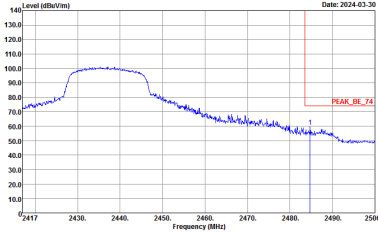
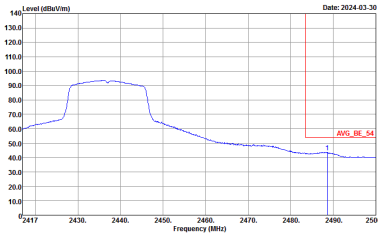


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT20 CH01 2412MHz		
	Vertical	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.820KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.820KHz SWT:Auto</p>

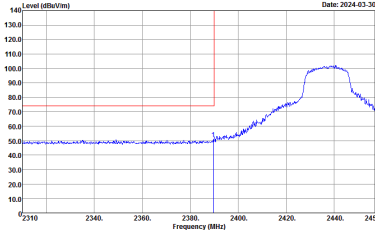
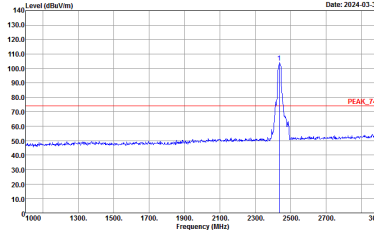
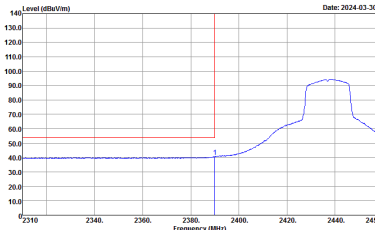
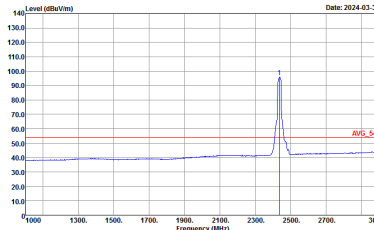


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH06 2437MHz - L	
	Horizontal	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.820KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>

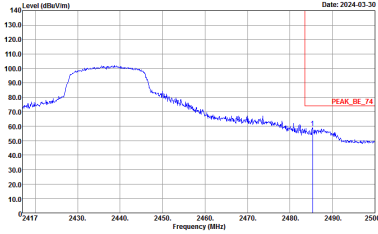
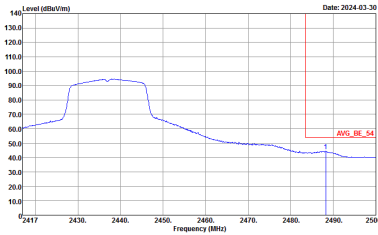


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH06 2437MHz - R	
	Horizontal	Fundamental
Peak	 <p>Date: 2024.03.30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank
Avg.	 <p>Date: 2024.03.30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:0.520KHz SWF:Auto</p>	Left blank

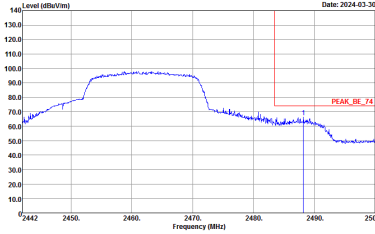
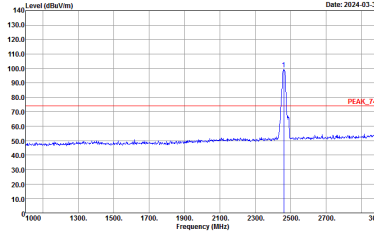
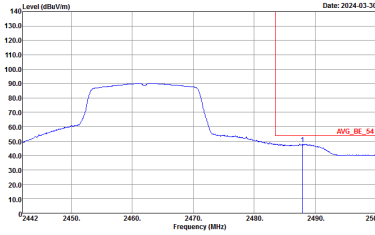
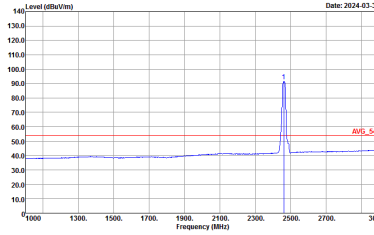


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH06 2437MHz - L	
	Vertical	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.820KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto</p>

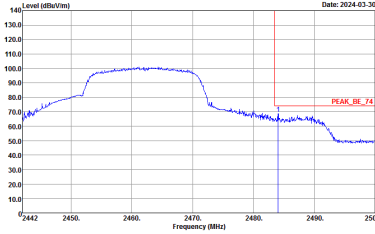
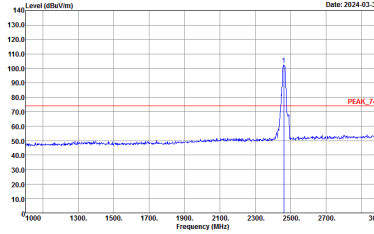
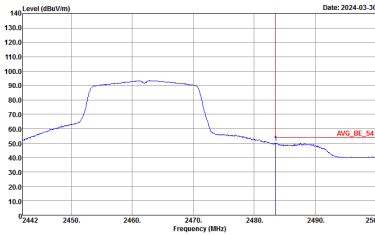
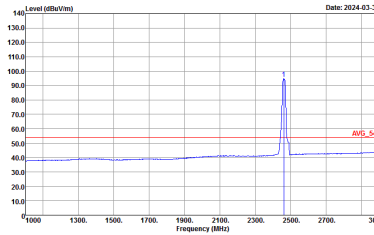


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT20 CH06 2437MHz - R	
	Vertical	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left Blank
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.820KHz SWF:Auto</p>	Left Blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT20 CH11 2462MHz		
	Horizontal	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:0.820kHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000kHz VBW:0.750kHz SWT:Auto</p>

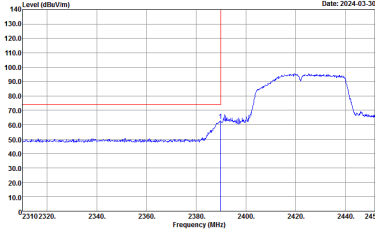
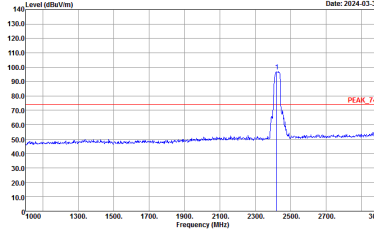
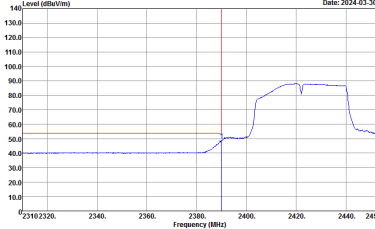
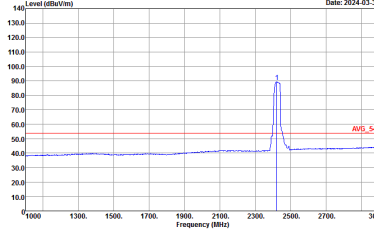


WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
802.11n HT20 CH11 2462MHz		
	Vertical	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.820KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:0.750KHz SWT:Auto</p>

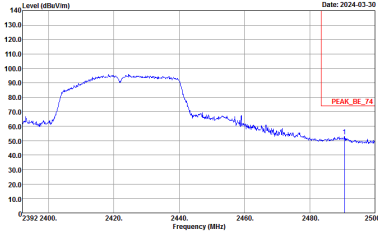
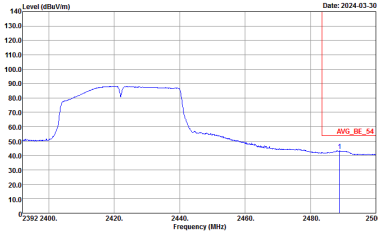


2.4GHz 2400~2483.5MHz

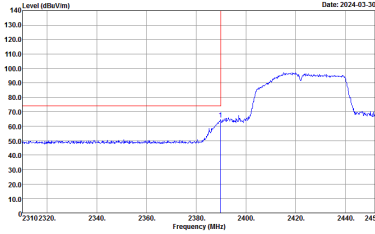
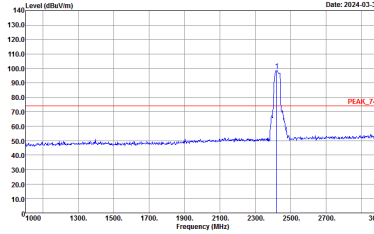
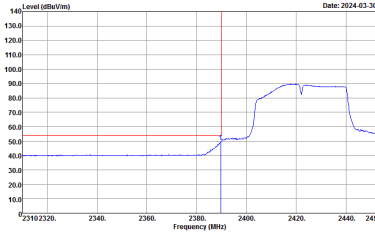
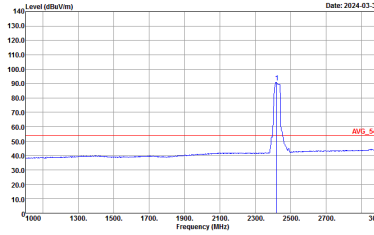
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT40 CH03 2422MHz - L	
	Horizontal	Fundamental
Peak	 <p>Level (dBm/1m) vs Frequency (MHz) plot showing a peak at approximately 2422 MHz. The y-axis ranges from 10.0 to 140.0 dBm/1m, and the x-axis ranges from 2310 to 2452 MHz. A red vertical line marks the peak frequency.</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Level (dBm/1m) vs Frequency (MHz) plot showing a sharp peak at approximately 2422 MHz. The y-axis ranges from 10.0 to 140.0 dBm/1m, and the x-axis ranges from 1900 to 3000 MHz. A red horizontal line indicates the peak level, labeled 'PEAK_74'.</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Level (dBm/1m) vs Frequency (MHz) plot showing the average spectrum. The y-axis ranges from 10.0 to 140.0 dBm/1m, and the x-axis ranges from 2310 to 2452 MHz. A red vertical line marks the peak frequency.</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:2.000KHz SWT:Auto</p>	 <p>Level (dBm/1m) vs Frequency (MHz) plot showing the average spectrum. The y-axis ranges from 10.0 to 140.0 dBm/1m, and the x-axis ranges from 1900 to 3000 MHz. A red horizontal line indicates the average level, labeled 'AVG_54'.</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:2.000KHz SWT:Auto</p>

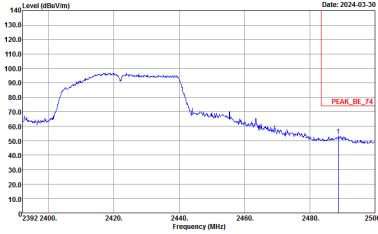
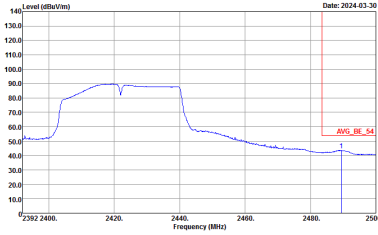


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT40 CH03 2422MHz - R		
Horizontal		Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left Blank
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:2.000KHz SWF:Auto</p>	Left Blank

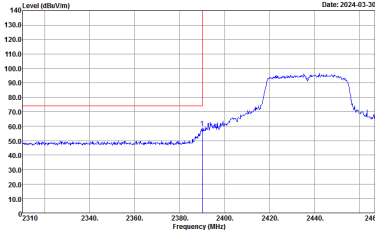
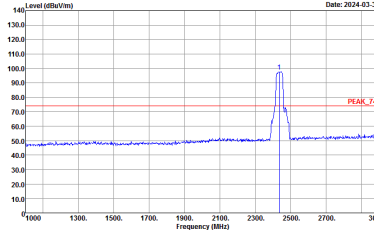
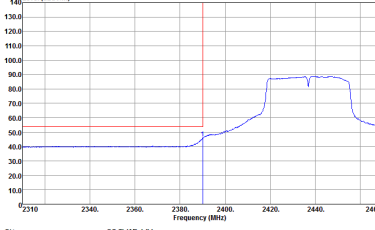
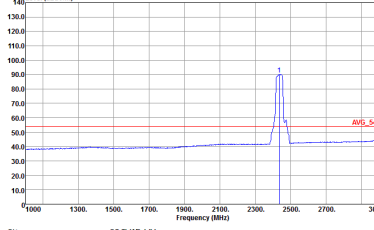


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT40 CH03 2422MHz - L		
	Vertical	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:2.000KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:2.000KHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT40 CH03 2422MHz - R		
	Vertical	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:2.000KHz SWF:Auto</p>	Left blank

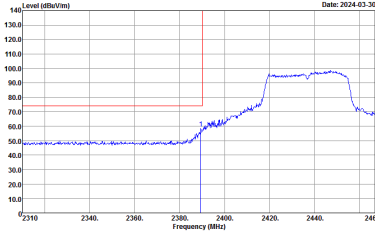
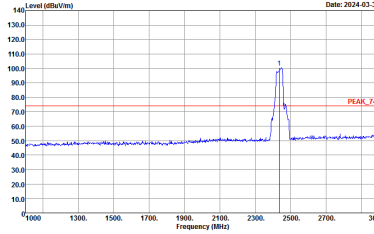
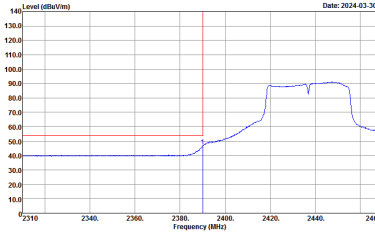
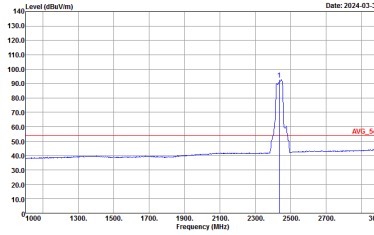


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT40 CH06 2437MHz - L		
	Horizontal	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:1.600KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:1.600KHz SWT:Auto</p>

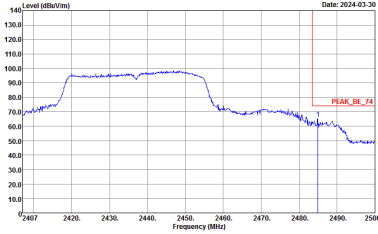
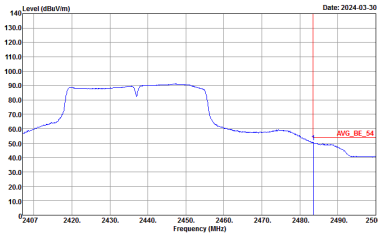


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT40 CH06 2437MHz - R		
Horizontal		Fundamental
Peak	<p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank
Avg.	<p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:1.600KHz SWF:Auto</p>	Left blank

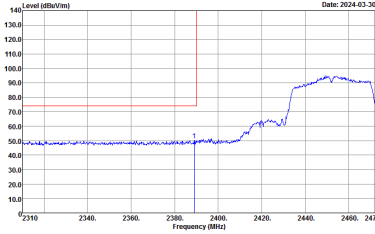
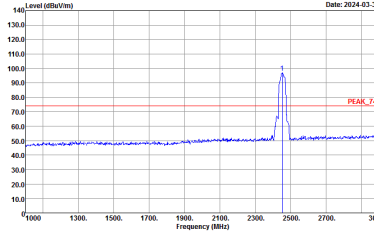
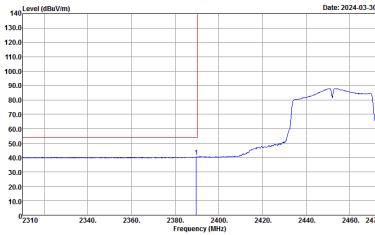
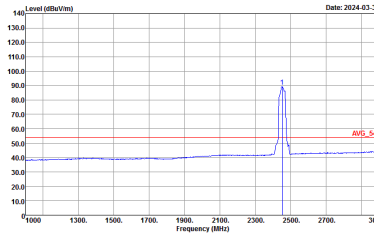


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT40 CH06 2437MHz - L		
	Vertical	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:1.600KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:1.600KHz SWT:Auto</p>

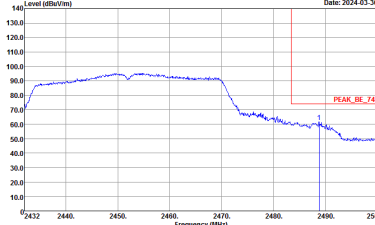
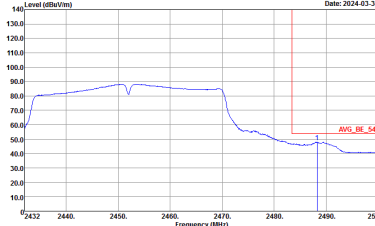


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT40 CH06 2437MHz - R	
	Horizontal	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:1.600KHz SWF:Auto</p>	Left blank

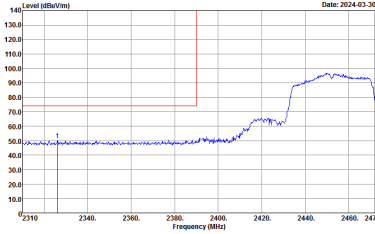
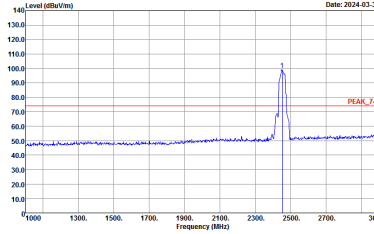
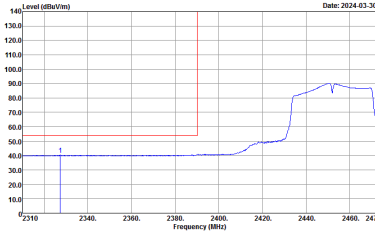
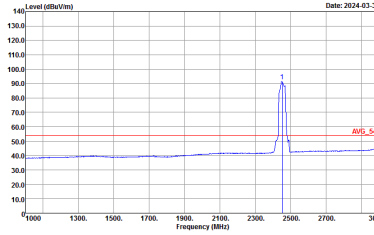


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	802.11n HT40 CH09 2452MHz - L	
	Horizontal	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:1.600KHz SWT:Auto</p>	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:1.600KHz SWT:Auto</p>

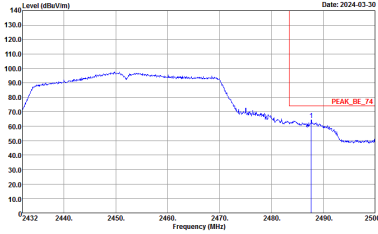
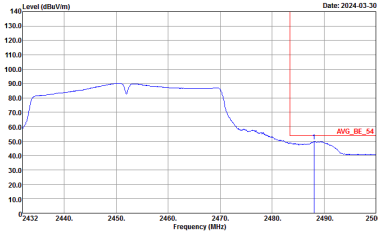


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT40 CH09 2452MHz - R		
Horizontal		Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWF:Auto</p>	Left blank
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 HORIZONTAL : RBW:1000.000KHz VBW:1.600KHz SWF:Auto</p>	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT40 CH09 2452MHz - L		
	Vertical	Fundamental
Peak	 <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : PEAK_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Avg.	 <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:1.600KHz SWT:Auto</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:1.600KHz SWT:Auto</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
802.11n HT40 CH09 2452MHz - R		
	Vertical	Fundamental
Peak	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : PEAK_BE_74 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank
Avg.	 <p>Date: 2024-03-30</p> <p>Site : 03CH15-HY Condition : AVG_BE_54 3m 91200_02294_230630 VERTICAL : RBW:1000.000KHz VBW:1.600KHz SWT:Auto</p>	Left blank

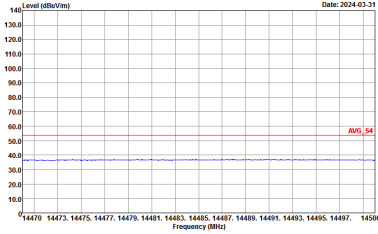
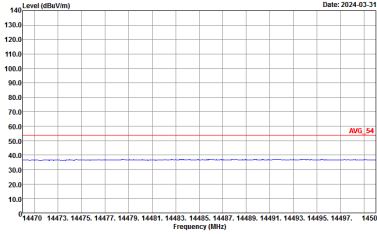
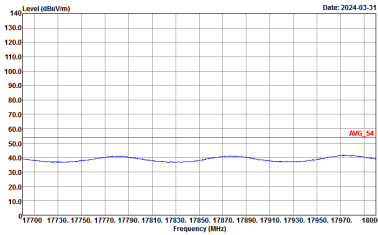
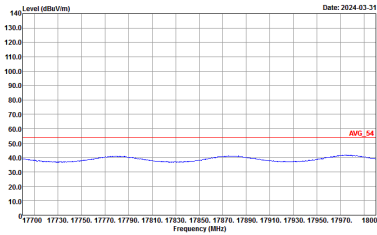


2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11b CH01 2412MHz	
	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH15-HV Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL</p>	<p>Site : 03CH15-HV Condition : PEAK_74 3m 91200_02294_230630 VERTICAL</p>

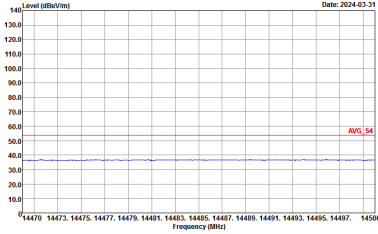
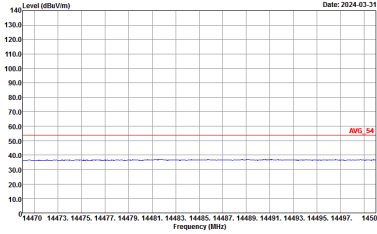
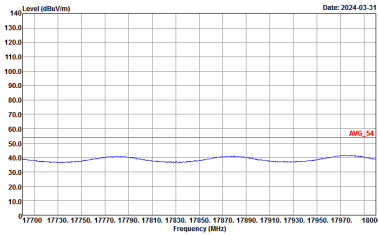
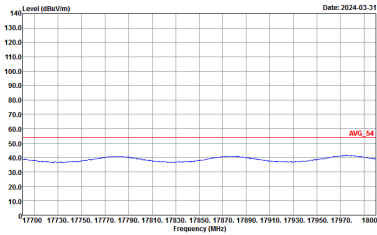


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11b CH01 2412MHz	
	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 HORIZONTAL</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 VERTICAL</p>
<p>17.7G ~18G Avg.</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 HORIZONTAL</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11b CH06 2437MHz	
	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH15-14Y Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL</p>	<p>Site : 03CH15-14Y Condition : PEAK_74 3m 91200_02294_230630 VERTICAL</p>

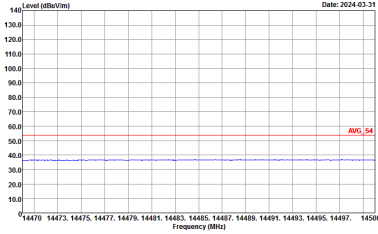
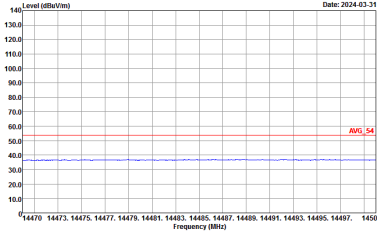
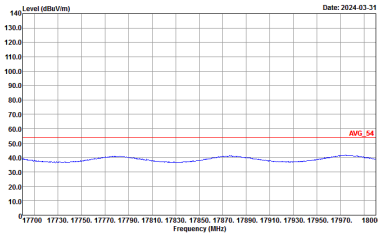
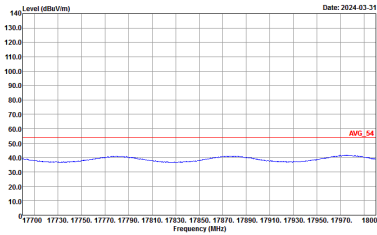


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
802.11b CH06 2437MHz		
Horizontal		Vertical
<p>14.47G ~14.5G Avg.</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 HORIZONTAL</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 VERTICAL</p>
<p>17.7G ~18G Avg.</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 HORIZONTAL</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11b CH11 2462MHz	
	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-11Y Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL</p>	<p>Site : 03CH11-11Y Condition : PEAK_74 3m 91200_02294_230630 VERTICAL</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11b CH11 2462MHz	
	Horizontal	Vertical
<p>14.47G ~14.5G Avg.</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 9120D_02294_230630 HORIZONTAL</p>	 <p>Site : 03CH15-HY Condition : AVG_54 3m 9120D_02294_230630 VERTICAL</p>
<p>17.7G ~18G Avg.</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 HORIZONTAL</p>	 <p>Site : 03CH15-HY Condition : AV6_54 3m 9120D_02294_230630 VERTICAL</p>



2.4GHz 2400~2483.5MHz

WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	802.11g CH01 2412MHz	
	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH15-HV Condition : PEAK_74 3m 91200_02294_230630 HORIZONTAL</p>	<p>Site : 03CH15-HV Condition : PEAK_74 3m 91200_02294_230630 VERTICAL</p>