FCC Test Report

FCC ID	:	**MXF-Q9500WK**
Equipment	:	**Wi-Fi AP**
Model No.	:	**Q9500WK**
Brand Name	:	**Quantum FIBER**
Applicant	:	**Gemtek Technology Co., Ltd.**
Address	:	**No. 15-1 Zhonghua Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, 30352.**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Jun. 25, 2022**
Tested Date	:	**Jun. 28 ~ Jul. 14, 2022**

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

Table of Contents

Release Record

Report No.	Version	Description	Issued Date
FR263001AC	Rev. 01	Initial issue	Aug. 19, 2022

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	[dBuV]: 0.419MHz 47.61 (Margin -9.85dB) - QP	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 2390.00MHz 53.80 (Margin -0.20dB) - AV	Pass
15.247(b)(3)	Conducted Output Power	Max Power [dBm]: ***Non-beamforming mode*** 27.42 ***Beamforming mode*** 27.35	Pass
15.247(a)(2)	6dB Bandwidth	Meet the requirement of limit	Pass
15.247(e)	Power Spectral Density	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
2400-2483.5	b	2412-2462	1-11 [11]	1	1-11 Mbps
2400-2483.5	g	2412-2462	1-11 [11]	2	6-54 Mbps
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	2	MCS 0-15
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	2	MCS 0-15
2400-2483.5	ax (HE20)	2412-2462	1-11 [11]	2	MCS 0-11
2400-2483.5	ax (HE40)	2422-2452	3-9 [7]	2	MCS 0-11
Note 1: RF output power specifies that Maximum Conducted (Average) Output Power. Note 2: DSSS-DBPSK, DQPSK, CCK modulation OFDM/OFDMA- BPSK, QPSK, 16QAM, 64QAM, 256QAM and 1024QAM modulation. Note 3: 802.11ax supports beamforming function.					

1.1.2 Antenna Details

Ant. No.	**Type**	**Connector**	**Operating Frequencies (MHz) / Antenna Gain (dBi)**		
			2400~2483.5	**5150~5250**	**5725~5850**
2G5GL Ant1	PIFA	UFL	2.29	1.94	--
2G5GL Ant2	PIFA	UFL	2.13	2.42	--
5GH Ant1	PIFA	UFL	--	--	2.26
5GH Ant2	PIFA	UFL	--	--	2.18
5GH Ant3	PIFA	UFL	--	--	3.22
5GH Ant4	PIFA	UFL	--	--	2.42

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	100~120Vac

1.1.4 Source of Power Board

Source of Power Board	Description
1	Brand: Leader Model: SL36-3120300-3C I/P: 100~120Vac, 50-60Hz, 0.8A O/P: 12Vdc, 3A
2	Brand: LUCENT TRANS Model: 1A104-US1230 I/P: 100~120Vac, 50-60Hz, 1A O/P: 12Vdc, 3A

1.1.5 Channel List

Frequency band (MHz)		2400~2483.5	
802.11 b / g / n HT20 / ax HE20		802.11n HT40 / ax HE40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	2412	3	2422
2	2417	4	2427
3	2422	5	2432
4	2427	6	2437
5	2432	7	2442
6	2437	8	2447
7	2442	9	2452
8	2447	---	---
9	2452	---	---
10	2457	---	---
11	2462	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	Intel DUT, version: 610.50		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11b	100.00%	0.00
	11g	100.00%	0.00
	ax HE20-OFDMA	100.00%	0.00
	ax HE40-OFDMA	100.00%	0.00

1.1.7 Power Index of Test Tool

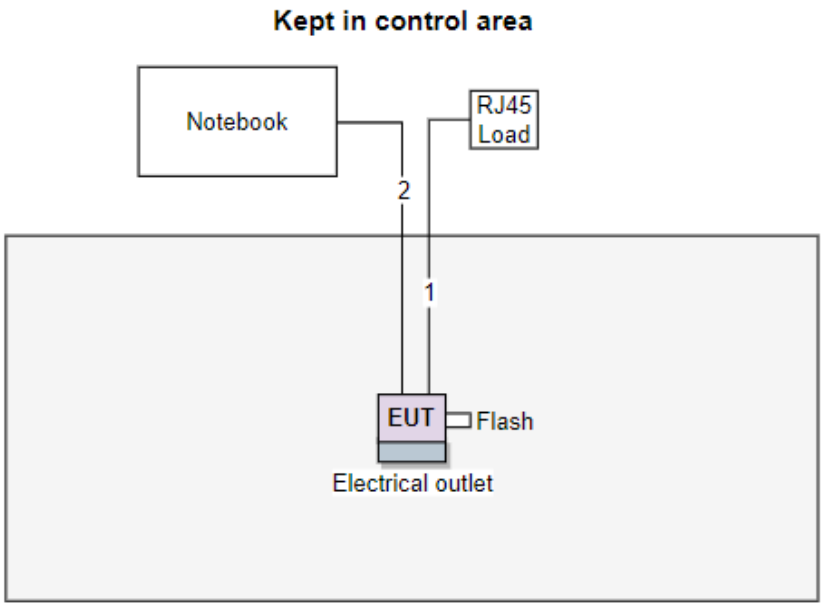
Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	26
11b	2437	26
11b	2462	26
11g	2412	21
11g	2437	26
11g	2462	22
ax HE20-OFDMA	2412	20
ax HE20-OFDMA	2437	26
ax HE20-OFDMA	2462	20
ax HE40-OFDMA	2422	18.5
ax HE40-OFDMA	2437	21.5
ax HE40-OFDMA	2452	18.5

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E5470	DoC	---
2	USB 3.0 Flash	Transcend	JetFlash 700	---	---
3	RJ45 Load	ICC	DTSE9	---	---

1.3 Test Setup Chart

Test Setup Diagram



No.	Signal cable / Length (m)
1	RJ45, 1.3m non-shielded with load.
2	RJ45, 10m non-shielded.

1.4 The Equipment List

Test Item	Radiated Emission below 1GHz				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Jul. 07, 2022				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Mar. 15, 2022	Mar. 14, 2023
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 08, 2021	Nov. 07, 2022
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Jun. 28, 2022	Jun. 27, 2023
Preamplifier	EMC	EMC02325	980225	Jun. 28, 2022	Jun. 27, 2023
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 05, 2021	Oct. 04, 2022
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 05, 2021	Oct. 04, 2022
LF cable 11M	EMC	EMCCFD400-NW-NW-11000	200801	Oct. 05, 2021	Oct. 04, 2022
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 05, 2021	Oct. 04, 2022
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission above 1GHz				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Jun. 28, 2022				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Nov. 29, 2021	Nov. 28, 2022
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 03, 2021	Dec. 02, 2022
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170508	Jan. 11, 2022	Jan. 10, 2023
Preamplifier	Agilent	83017A	MY39501308	Sep. 28, 2021	Sep. 27, 2022
Preamplifier	EMC	EMC184045B	980192	Jul. 14, 2021	Jul. 13, 2022
RF Cable	EMC	EMC104-35M-35M-8000	210920	Oct. 05, 2021	Oct. 04, 2022
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 05, 2021	Oct. 04, 2022
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Jul. 12, 2022				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101658	Feb. 16, 2022	Feb. 15, 2023
LISN	R&S	ENV216	101579	Apr. 21, 2022	Apr. 20, 2023
LISN (Support Unit)	SCHWARZBECK	NSLK 8127	8127667	Jan .07, 2022	Jan .06, 2023
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 19, 2021	Oct. 18, 2022
50 ohm terminal (Support Unit)	NA	50	04	May 10, 2022	May 09, 2023
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Jul. 14, 2022				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101910	Apr. 18, 2022	Apr. 17, 2023
Power Meter	Anritsu	ML2495A	1241002	Nov. 07, 2021	Nov. 06, 2022
Power Sensor	Anritsu	MA2411B	1207366	Nov. 07, 2021	Nov. 06, 2022
Measurement Software	Sporton	SENSE-15247_DTS	V5.10	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.247
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02
FCC KDB 662911 D01 Multiple Transmitter Output v02r01

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.130 Hz
Conducted power	±0.808 dB
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
Unwanted Emission ≤ 1GHz	±3.41 dB
Unwanted Emission > 1GHz	±4.59 dB

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, 03CH01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Non-beamforming mode				
AC Power Line Conducted Emission	ax HE20-OFDMA	2437	MCS 0	---
Unwanted Emissions ≤ 1GHz	ax HE20-OFDMA	2437	MCS 0	---
Unwanted Emissions >1GHz Conducted Output Power 6dB bandwidth Power spectral density	11b 11g ax HE20-OFDMA ax HE40-OFDMA	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462 2422 / 2437 / 2452	1 Mbps 6 Mbps MCS 0 MCS 0	---
Beamforming mode				
Conducted Output Power	ax HE20-OFDMA ax HE40-OFDMA	2412 / 2437 / 2462 2422 / 2437 / 2452	MCS 0 MCS 0	---

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **X-plane** results were found as the worst case and were shown in this report.
2. Two power boards (Leader & LUCENT TRANS) had been covered during the pretest and found that **Leader power board** was the worst case and was selected for final test.
3. Non-beamforming and beamforming mode had been covered during the pretest. The worst mode is Non-beamforming thus Non-beamforming is tested for all test items.

3 Transmitter Test Results

3.1 6dB and Occupied Bandwidth

3.1.1 Limit of 6dB Bandwidth

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

3.1.2 Test Procedures

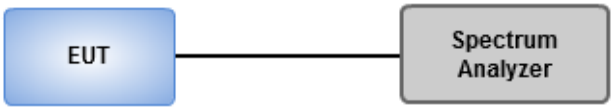
6dB Bandwidth

1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth = 300 kHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission.

Occupied Bandwidth

1. Set resolution bandwidth (RBW) = 1% ~ 5 % of OBW, Video bandwidth = 3 x RBW
2. Detector = Sample, Trace mode = max hold.
3 Sweep = auto couple, Allow the trace to stabilize.
4. Use the OBW measurement function of spectrum analyzer to measure the occupied bandwidth.

3.1.3 Test Setup



3.1.4 Test Results

Ambient Condition	24°C / 68%	Tested By	Roger Lu

Refer to Appendix A.

3.2 Conducted Output Power

3.2.1 Limit of Conducted Output Power

Conducted power shall not exceed 1Watt.

Antenna gain <= 6dBi, no any corresponding reduction is in output power limit.

Antenna gain > 6dBi

Non Fixed, point to point operations.
The conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dB

Fixed, point to point operations
Systems operating in the 2400–2483.5 MHz band that are used exclusively for fixed, point-to-point Operations, maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Test Procedures

A broadband RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power.

3.2.3 Test Setup

3.2.4 Test Results

Ambient Condition	24°C / 68%	**Tested By**	Roger Lu

Refer to Appendix B.

3.3 Power Spectral Density

3.3.1 Limit of Power Spectral Density

Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

3.3.2 Test Procedures

Peak PSD

1. Set the RBW = 3 kHz, VBW = 10 kHz.
2. Detector = Peak, Sweep time = auto couple.
3. Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

Average PSD, duty cycle ≥ 98%

1. Set the RBW = 30 kHz, VBW = 100 kHz.
2. Detector = RMS, Sweep time = auto couple.
3. Sweep time = auto couple.
4. Employ trace averaging (RMS) mode over a minimum of 100 traces.
5. Use the peak marker function to determine the maximum amplitude level.

Average PSD, duty cycle < 98%

1 Set the RBW = 30 kHz, VBW = 100 kHz. Detector = RMS.

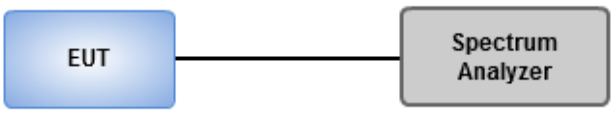
2 Set the sweep time to: ≥ 10 (number of measurement points in sweep) x (total on/off period of the transmitted signal).

3 Perform the measurement over a single sweep.

4 Use the peak marker function to determine the maximum amplitude level.

5 Add 10 log (1/x), where x is the duty cycle.

3.3.3 Test Setup



3.3.4 Test Results

Ambient Condition	24°C / 68%	**Tested By**	Roger Lu

Refer to Appendix C.

3.4 Unwanted Emissions into Restricted Frequency Bands

3.4.1 Limit of Unwanted Emissions into Restricted Frequency Bands

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit
Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.4.2 Test Procedures

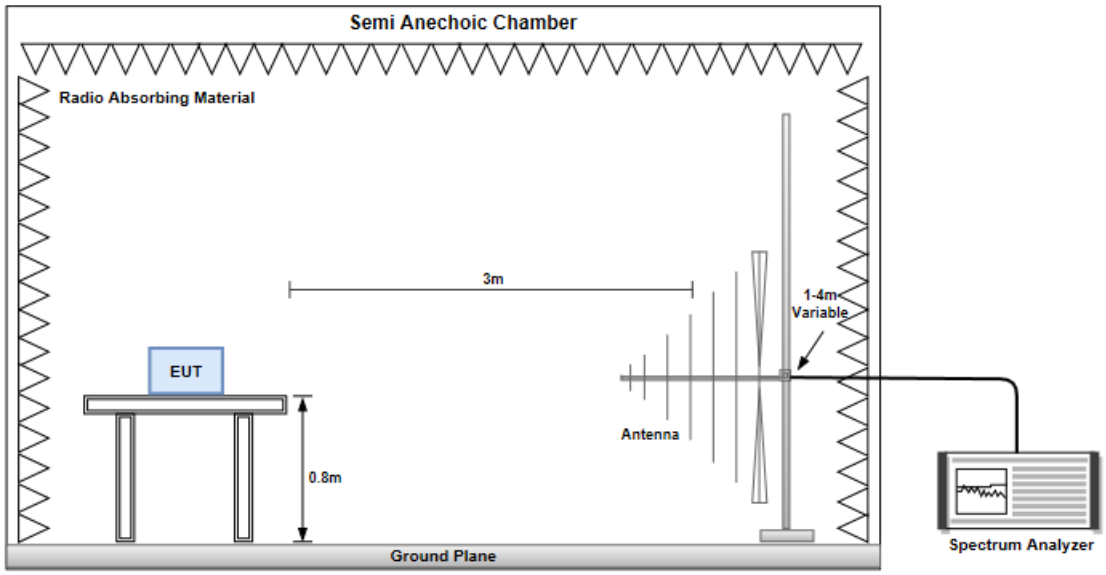
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

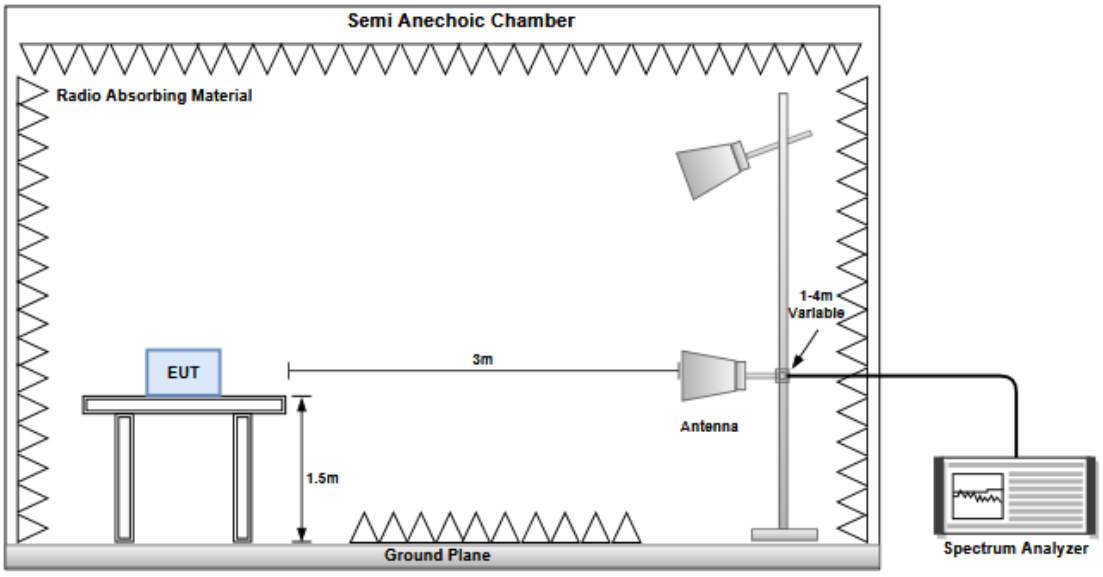
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.4.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.4.4 Test Results

Refer to Appendix D.

3.5 Emissions in Non-Restricted Frequency Bands

3.5.1 Emissions in Non-Restricted Frequency Bands Limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.5.2 Test Procedures

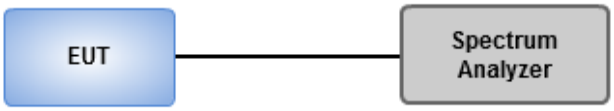
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.5.3 Test Setup



3.5.4 Test Results

Ambient Condition	24°C / 68%	Tested By	Roger Lu

Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

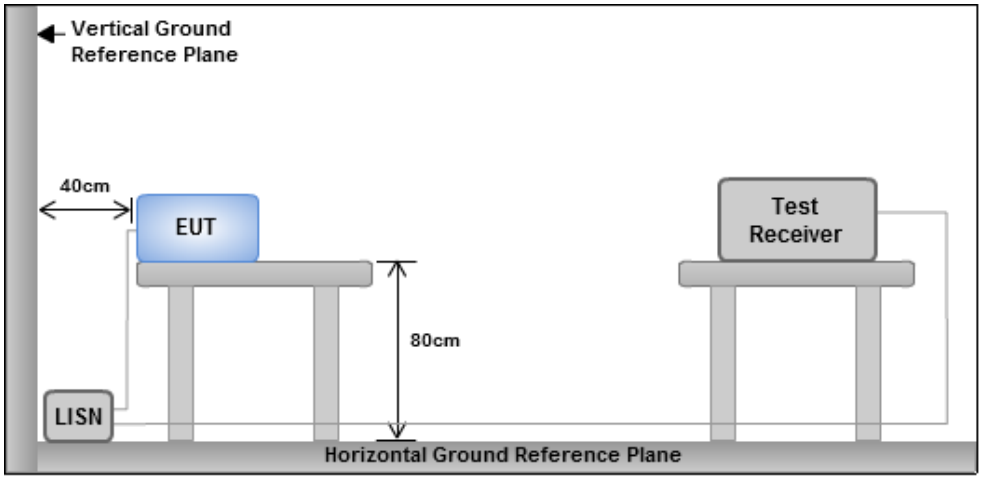
3.6.1 Limit of AC Power Line Conducted Emissions

Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.6.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

3.6.3 Test Setup



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.6.4 Test Results

Refer to Appendix F.

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan (R.O.C.)

Kwei Shan

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

No.2-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 333, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666
Fax: 886-3-318-0345
Email: ICC_Service@icertifi.com.tw

==END==

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	8.55M	11.644M	11M6G1D	8.025M	11.569M
802.11g_Nss1,(6Mbps)_2TX	16.575M	17.116M	17M1D1D	16.525M	16.767M
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	19.1M	19.14M	19M1D1D	19.05M	18.891M
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	38.3M	38.631M	38M6D1D	38.1M	37.981M

Max-N dB = Maximum 6dB down bandwidth; Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; Min-OBW = Minimum 99% occupied bandwidth

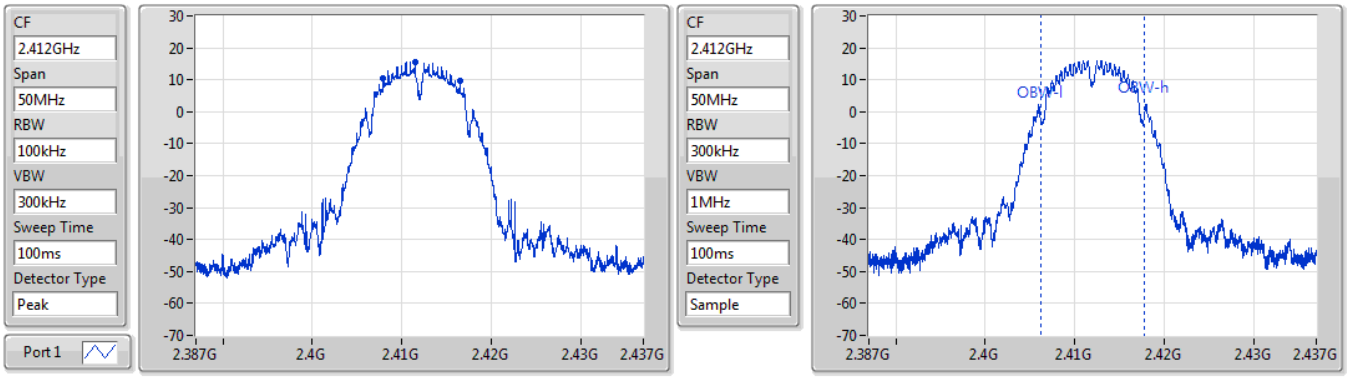
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.55M	11.644M		
2437MHz	Pass	500k	8.025M	11.569M		
2462MHz	Pass	500k	8.05M	11.644M		
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.55M	16.817M	16.55M	16.767M
2437MHz	Pass	500k	16.55M	16.967M	16.55M	17.116M
2462MHz	Pass	500k	16.575M	16.792M	16.525M	16.792M
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-
2412MHz	Pass	500k	19.075M	18.991M	19.1M	19.065M
2437MHz	Pass	500k	19.075M	19.115M	19.05M	19.14M
2462MHz	Pass	500k	19.05M	18.891M	19.075M	18.891M
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-
2422MHz	Pass	500k	38.15M	38.131M	38.2M	37.981M
2437MHz	Pass	500k	38.1M	38.031M	38.1M	38.131M
2452MHz	Pass	500k	38.3M	38.631M	38.25M	38.631M

Port X-N dB = Port X 6dB down bandwidth;
Port X-OBW = Port X 99% occupied bandwidth

802.11b_Nss1,(1Mbps)_1TX EBW

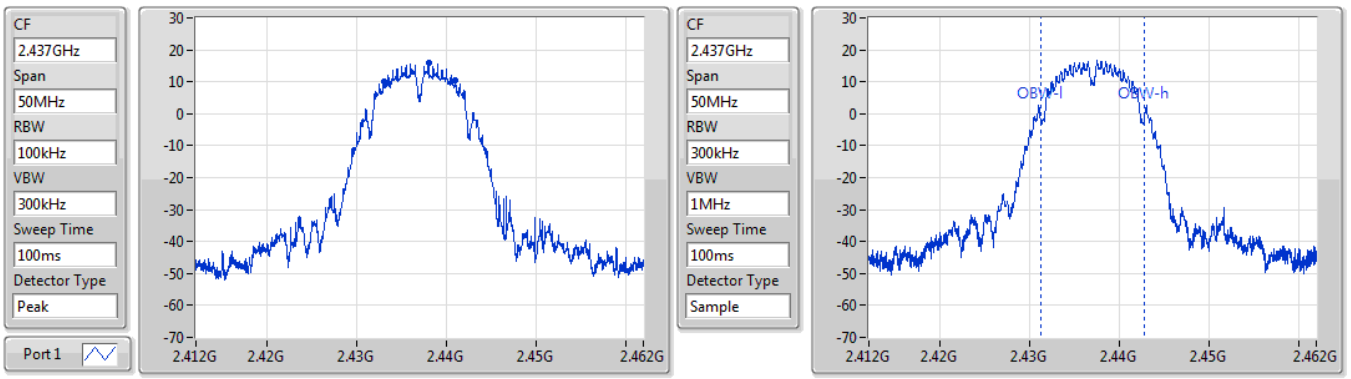
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.55M	2.40795G	2.4165G	11.644M	2.406178G	2.417822G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

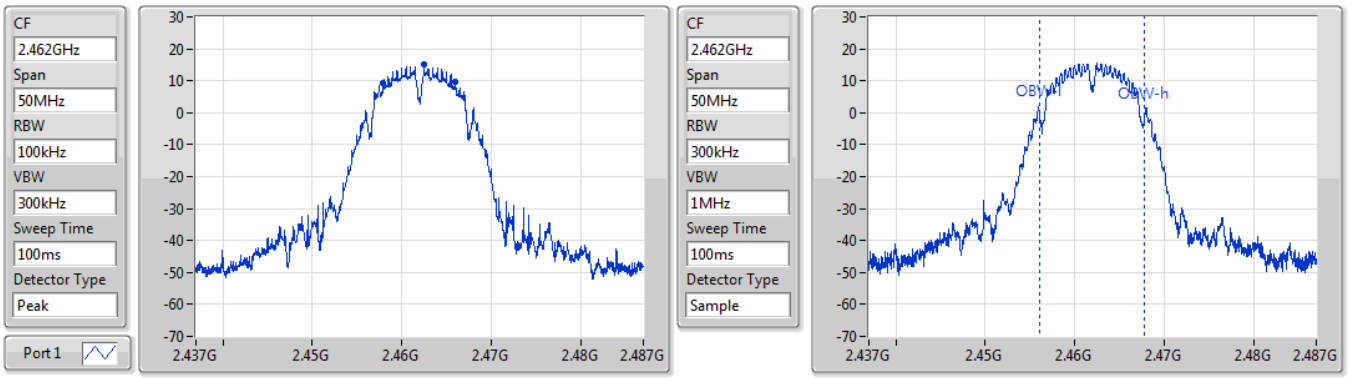
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.025M	2.432975G	2.441G	11.569M	2.431203G	2.442772G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

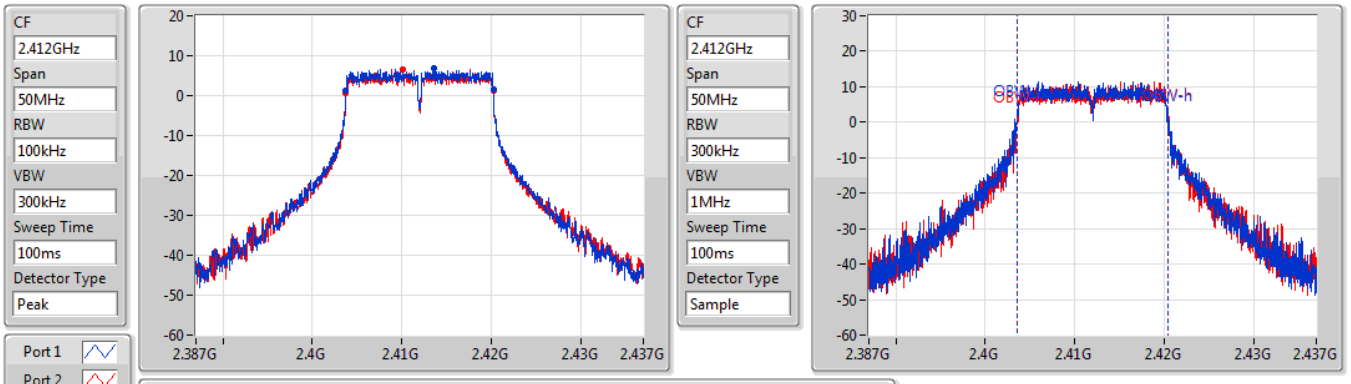
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.05M	2.45795G	2.466G	11.644M	2.456128G	2.467772G	500k	1

802.11g_Nss1,(6Mbps)_2TX EBW

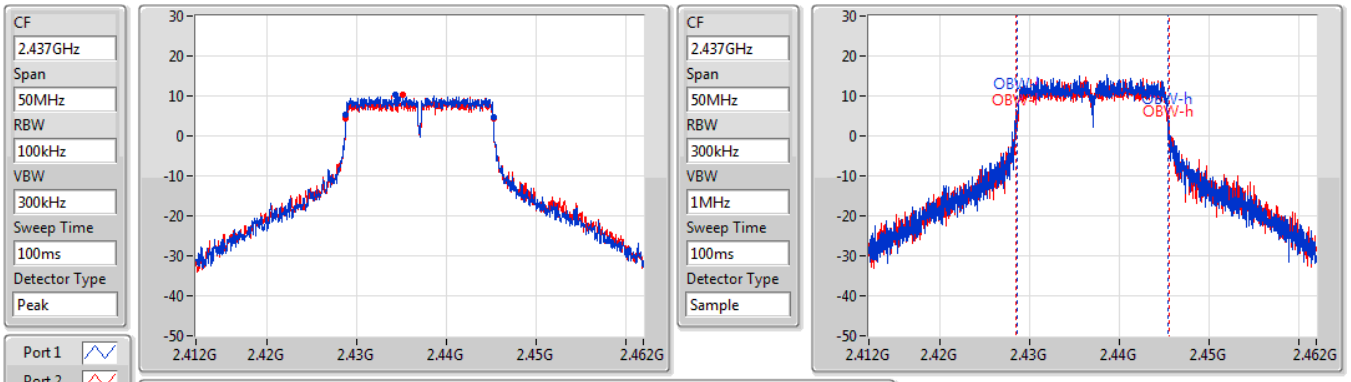
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.55M	2.403725G	2.420275G	16.817M	2.403579G	2.420396G	500k	1
16.55M	2.403725G	2.420275G	16.767M	2.403604G	2.420371G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

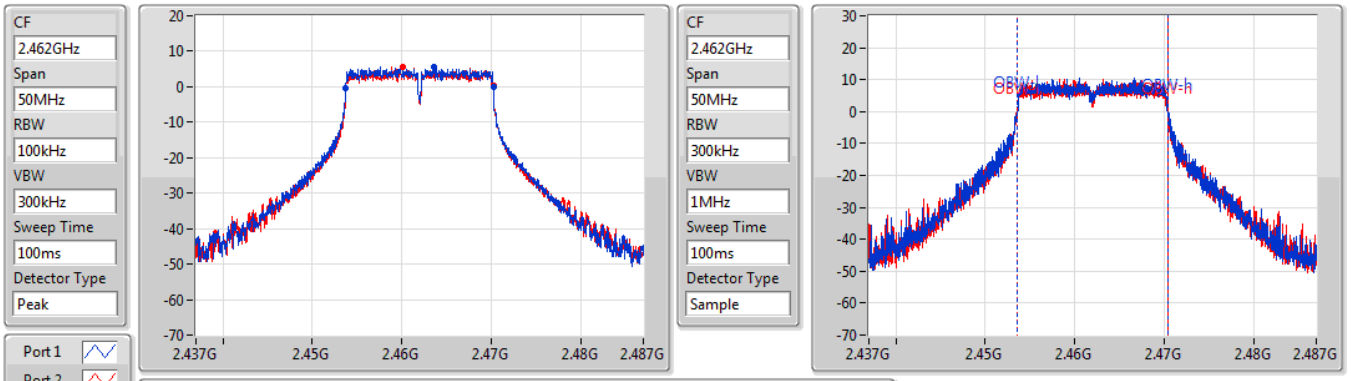
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.55M	2.428725G	2.445275G	16.967M	2.428504G	2.445471G	500k	1
16.55M	2.428725G	2.445275G	17.116M	2.428429G	2.445546G	500k	2

802.11g_Nss1,(6Mbps)_2TX EBW

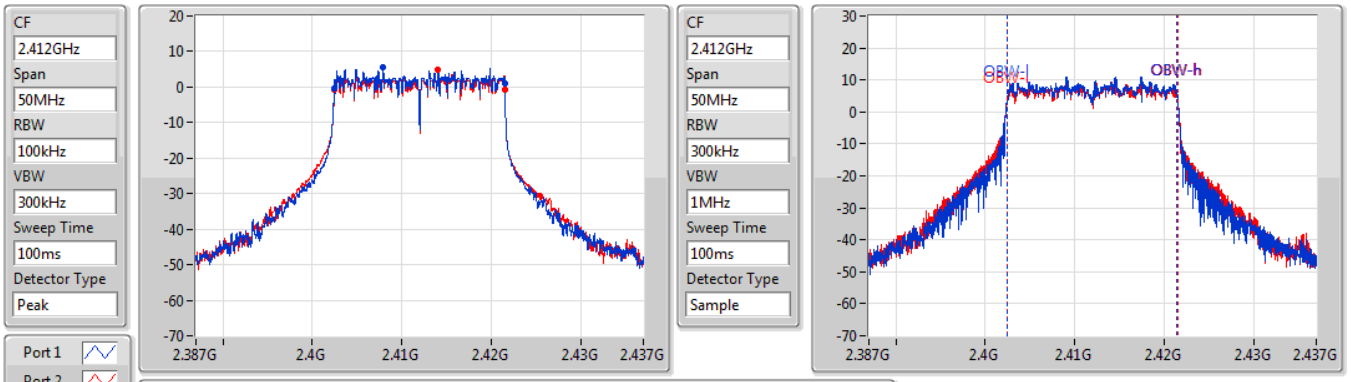
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.575M	2.4537G	2.470275G	16.792M	2.453604G	2.470396G	500k	1
16.525M	2.453725G	2.47025G	16.792M	2.453604G	2.470396G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

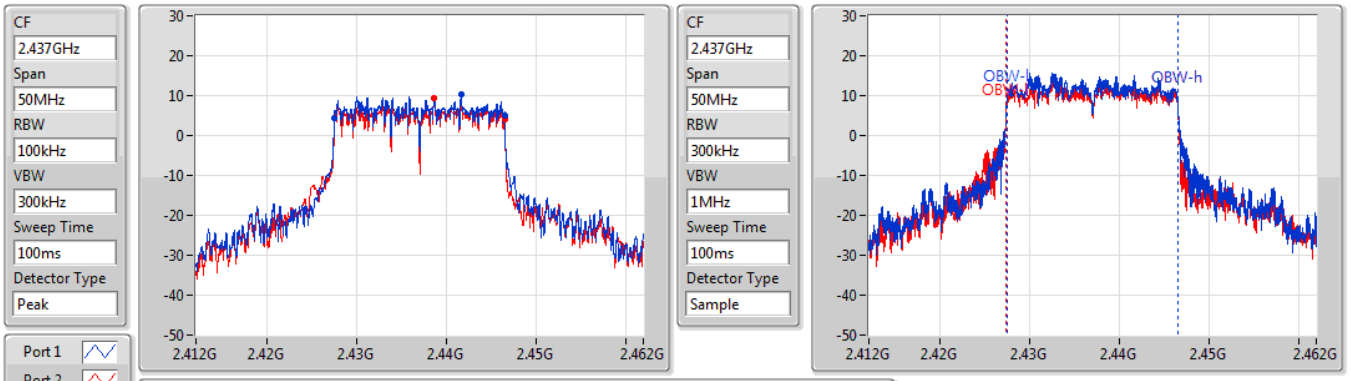
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.075M	2.40245G	2.421525G	18.991M	2.40248G	2.42147G	500k	1
19.1M	2.40245G	2.42155G	19.065M	2.40243G	2.421495G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

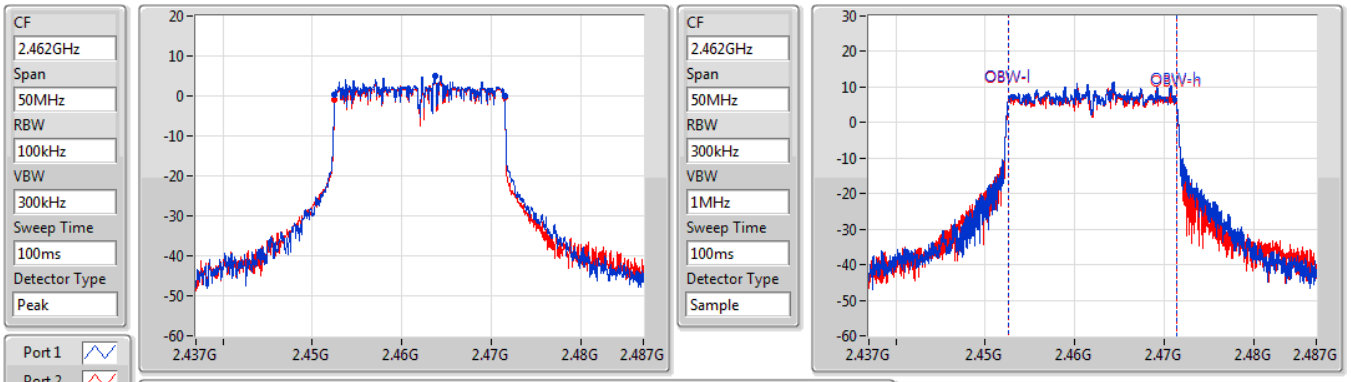
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.075M	2.42745G	2.446525G	19.115M	2.427405G	2.44652G	500k	1
19.05M	2.427475G	2.446525G	19.14M	2.427355G	2.446495G	500k	2

802.11ax HEW20_Nss1,(MCS0)_2TX EBW

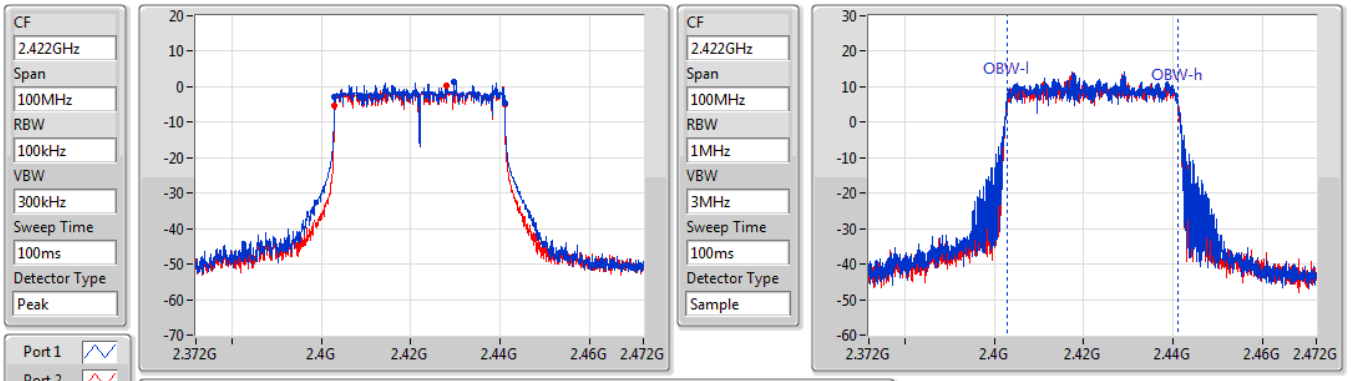
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
19.05M	2.452475G	2.471525G	18.891M	2.45253G	2.47142G	500k	1
19.075M	2.45245G	2.471525G	18.891M	2.45253G	2.47142G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

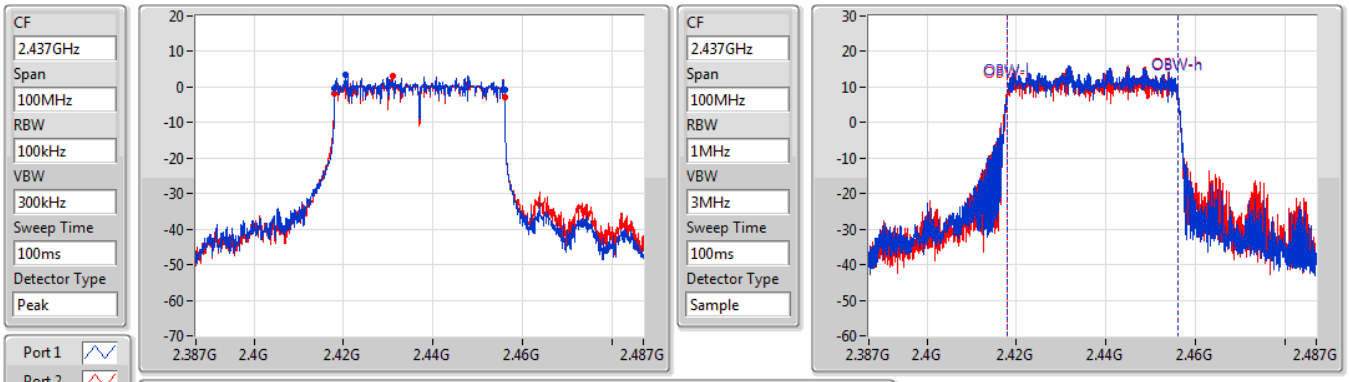
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.15M	2.40295G	2.4411G	38.131M	2.40291G	2.44104G	500k	1
38.2M	2.4029G	2.4411G	37.981M	2.403009G	2.440991G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

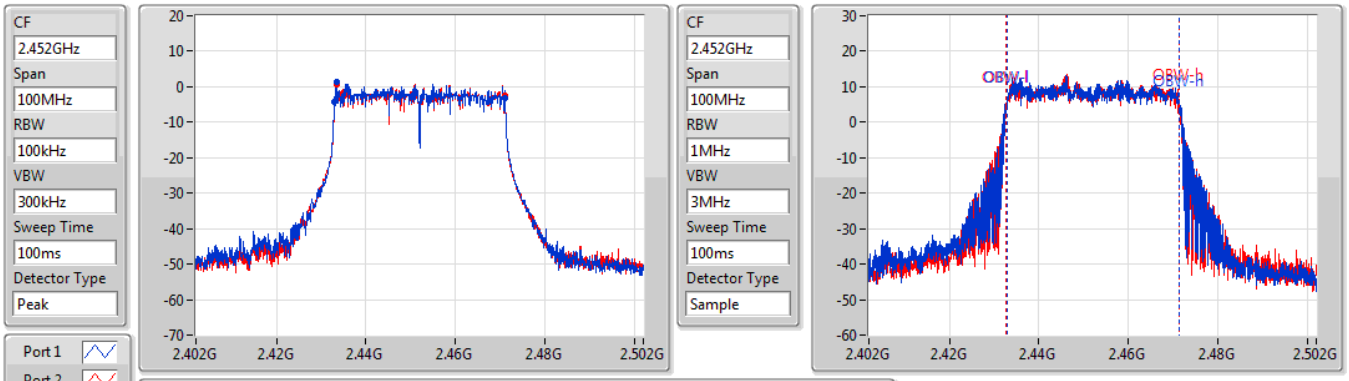
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.1M	2.41795G	2.45605G	38.031M	2.41796G	2.455991G	500k	1
38.1M	2.418G	2.4561G	38.131M	2.41791G	2.45604G	500k	2

802.11ax HEW40_Nss1,(MCS0)_2TX EBW

2452MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
38.3M	2.43285G	2.47115G	38.631M	2.43281G	2.47144G	500k	1
38.25M	2.4329G	2.47115G	38.631M	2.43276G	2.47139G	500k	2

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	24.54	0.28445
802.11g_Nss1,(6Mbps)_2TX	27.25	0.53088
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	27.42	0.55208
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	24.61	0.28907

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.29	24.54		24.54	30.00	26.83	36.00
2437MHz	Pass	2.29	24.25		24.25	30.00	26.54	36.00
2462MHz	Pass	2.29	24.05		24.05	30.00	26.34	36.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.29	21.31	20.75	24.05	30.00	26.34	36.00
2437MHz	Pass	2.29	24.45	24.02	27.25	30.00	29.54	36.00
2462MHz	Pass	2.29	21.65	21.26	24.47	30.00	26.76	36.00
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-	-	-
2412MHz	Pass	2.29	20.56	19.95	23.28	30.00	25.57	36.00
2437MHz	Pass	2.29	24.65	24.15	27.42	30.00	29.71	36.00
2462MHz	Pass	2.29	20.39	20.11	23.26	30.00	25.55	36.00
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-	-	-
2422MHz	Pass	2.29	19.56	18.79	22.20	30.00	24.49	36.00
2437MHz	Pass	2.29	21.61	21.59	24.61	30.00	26.90	36.00
2452MHz	Pass	2.29	19.38	19.42	22.41	30.00	24.70	36.00

DG = Directional Gain; Port X = Port X output power

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX-OFDMA	27.35	0.54325
802.11ax HEW40-BF_Nss1,(MCS0)_2TX-OFDMA	24.49	0.28119

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11ax HEW20-BF_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-	-	-
2412MHz	Pass	2.88	20.43	19.89	23.18	30.00	26.06	36.00
2437MHz	Pass	2.88	24.59	24.08	27.35	30.00	30.23	36.00
2462MHz	Pass	2.88	20.26	20.03	23.16	30.00	26.04	36.00
802.11ax HEW40-BF_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-	-	-
2422MHz	Pass	2.88	19.48	18.66	22.10	30.00	24.98	36.00
2437MHz	Pass	2.88	21.52	21.43	24.49	30.00	27.37	36.00
2452MHz	Pass	2.88	19.32	19.36	22.35	30.00	25.23	36.00

DG = Directional Gain; Port X = Port X output power

Directional gain is measured. Please refer to antenna test report.

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-5.06
802.11g_Nss1,(6Mbps)_2TX	-4.70
802.11ax HEW20_Nss1,(MCS0)_2TX	7.31
802.11ax HEW40_Nss1,(MCS0)_2TX	0.59

RBW = 3kHz;

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	2.29	-5.06		-5.06	8.00
2437MHz	Pass	2.29	-5.10		-5.10	8.00
2462MHz	Pass	2.29	-5.19		-5.19	8.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	2.88	-10.09	-11.34	-8.06	8.00
2437MHz	Pass	2.88	-7.30	-6.96	-4.70	8.00
2462MHz	Pass	2.88	-11.44	-12.48	-9.94	8.00
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-
2412MHz	Pass	2.88	0.21	0.15	3.15	8.00
2437MHz	Pass	2.88	4.78	3.77	7.31	8.00
2462MHz	Pass	2.88	0.22	-0.09	3.08	8.00
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-
2422MHz	Pass	2.88	-3.18	-3.63	-0.39	8.00
2437MHz	Pass	2.88	-1.94	-2.34	0.59	8.00
2452MHz	Pass	2.88	-4.10	-4.24	-1.32	8.00

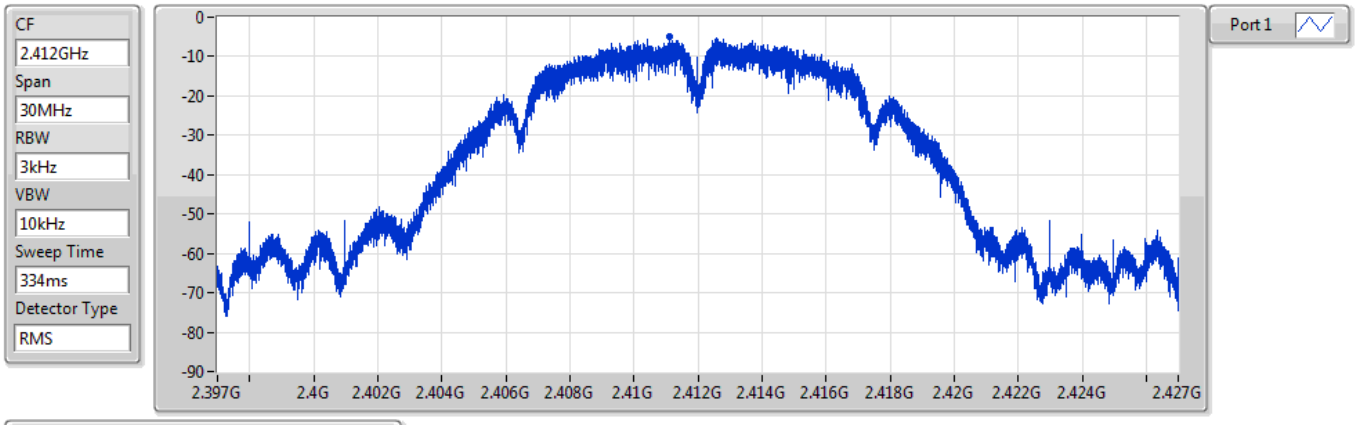
DG = Directional Gain; RBW = 3kHz;

PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;

Directional gain of 2TX is measured. Please refer to antenna test report.

802.11b_Nss1,(1Mbps)_1TX PSD

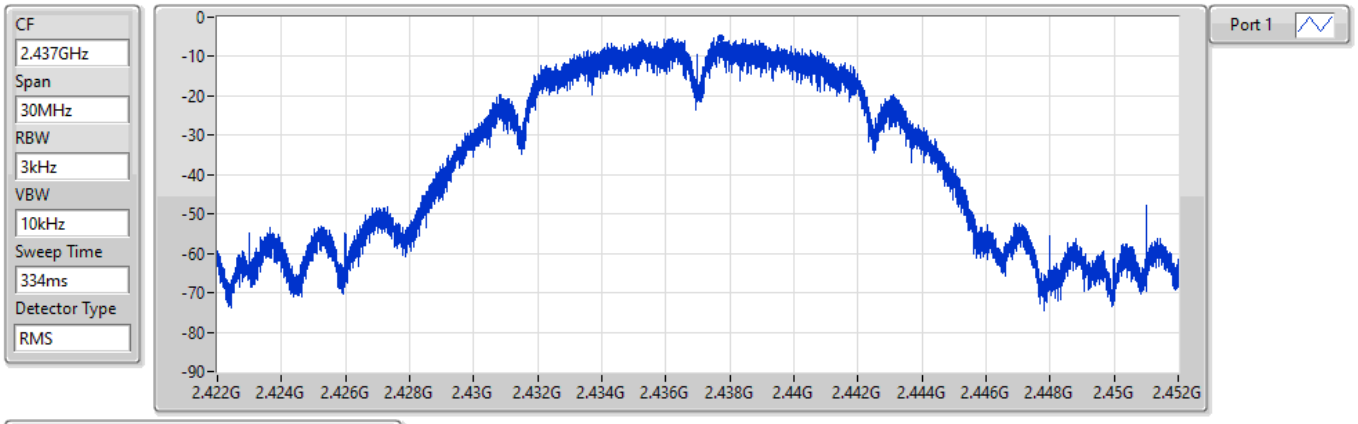
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.06	-5.06	-5.06

802.11b_Nss1,(1Mbps)_1TX PSD

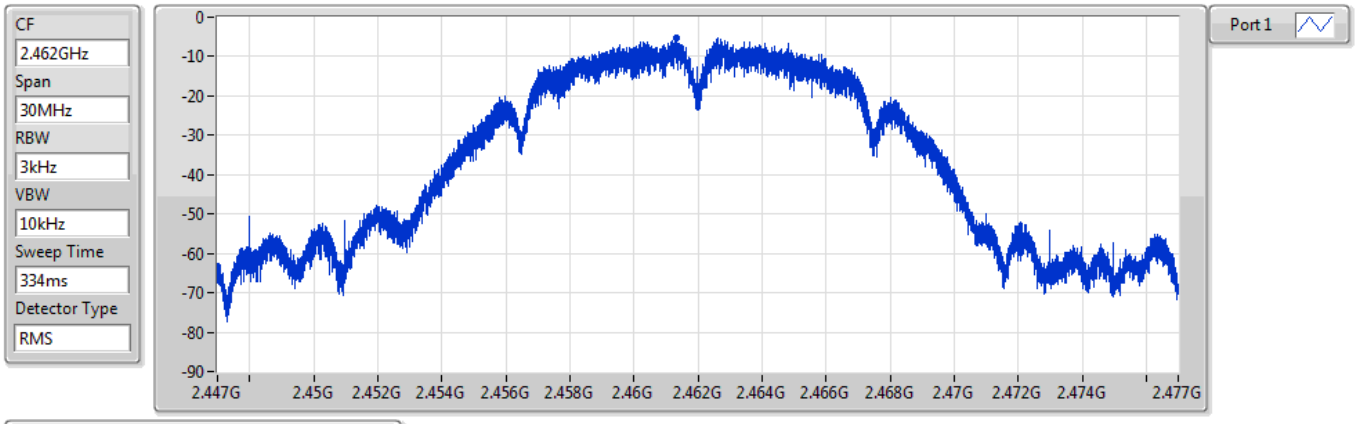
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.10	-5.10	-5.10

802.11b_Nss1,(1Mbps)_1TX PSD

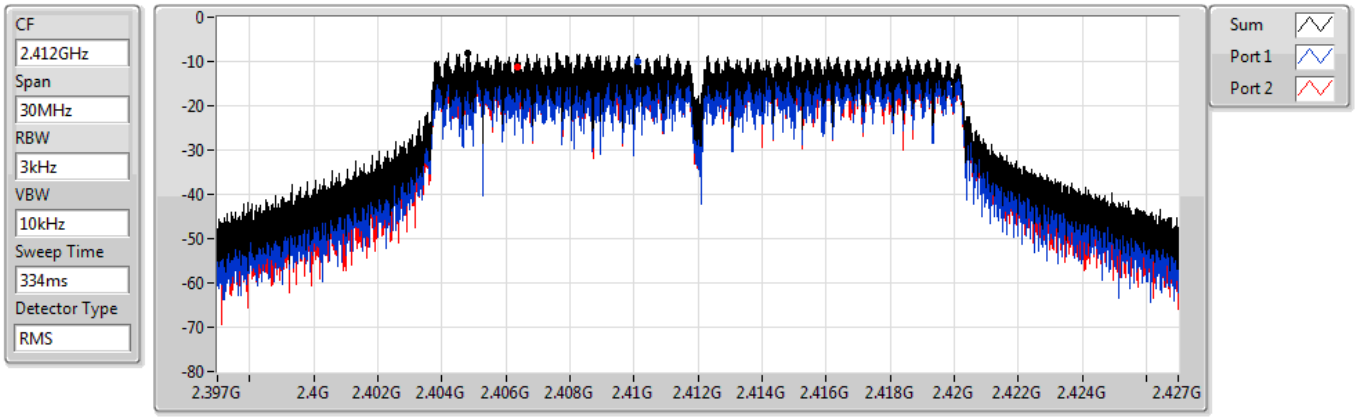
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.19	-5.19	-5.19

802.11g_Nss1,(6Mbps)_2TX PSD

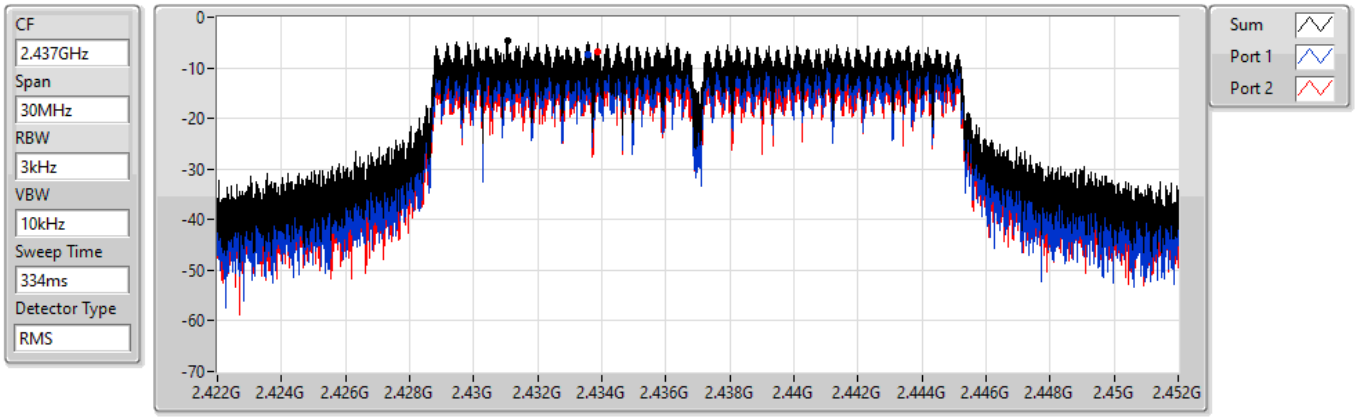
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.06	-8.06	-10.09	-11.34

802.11g_Nss1,(6Mbps)_2TX PSD

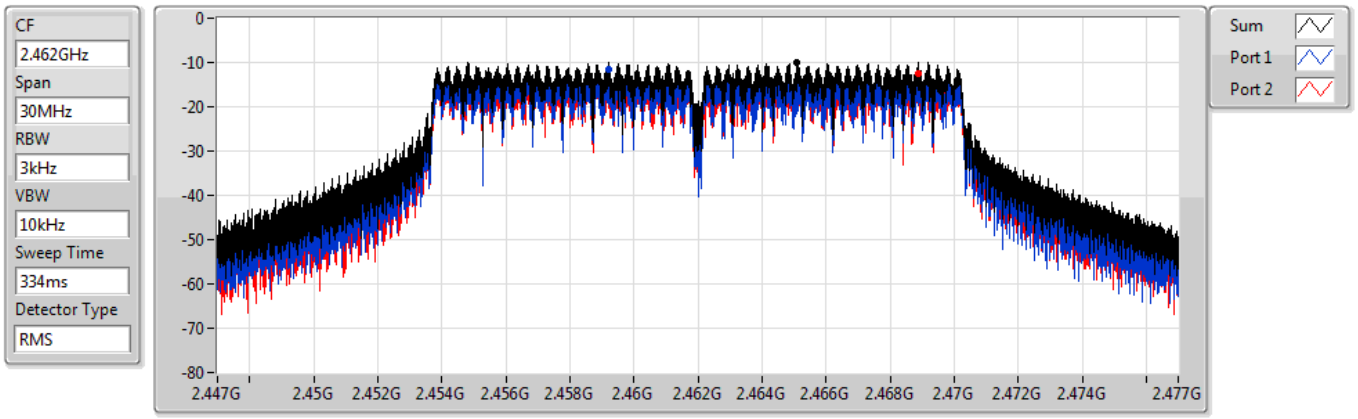
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.70	-4.70	-7.30	-6.96

802.11g_Nss1,(6Mbps)_2TX PSD

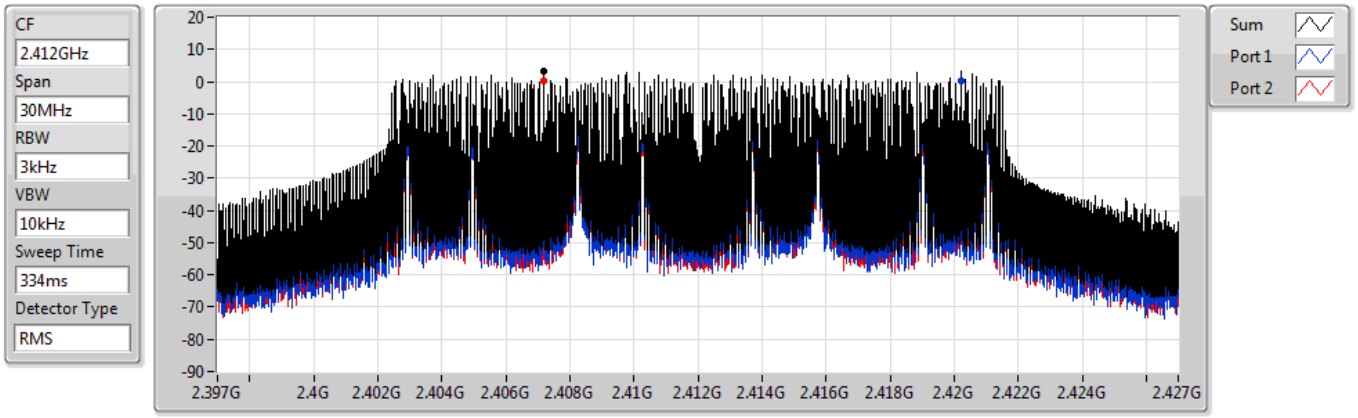
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.94	-9.94	-11.44	-12.48

802.11ax HEW20_Nss1,(MCS0)_2TX PSD

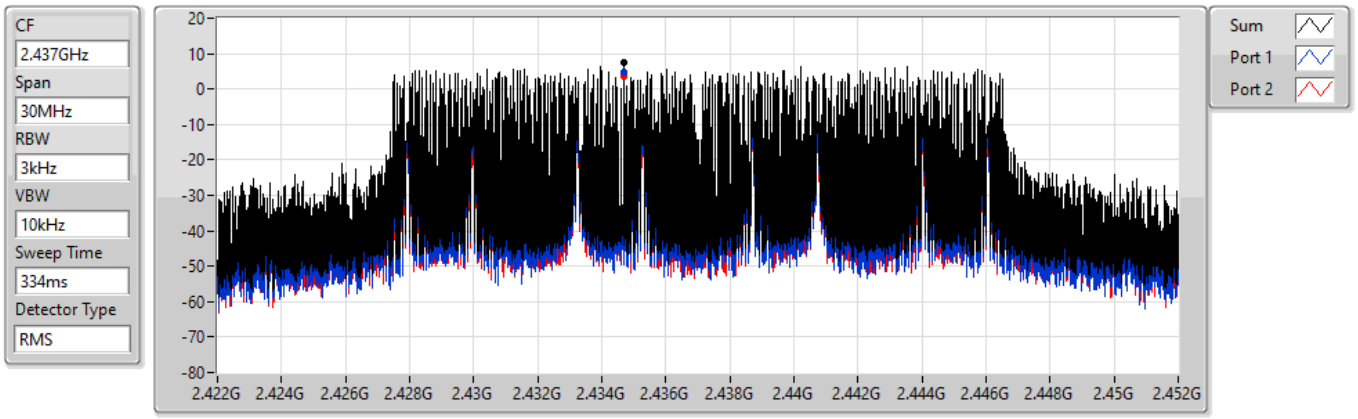
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.15	3.15	0.21	0.15

802.11ax HEW20_Nss1,(MCS0)_2TX PSD

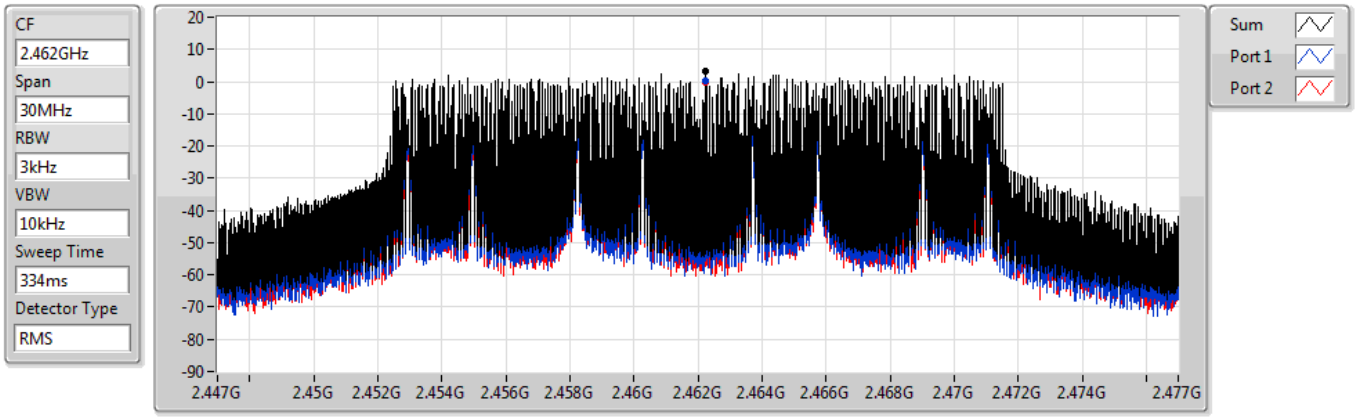
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
7.31	7.31	4.78	3.77

802.11ax HEW20_Nss1,(MCS0)_2TX PSD

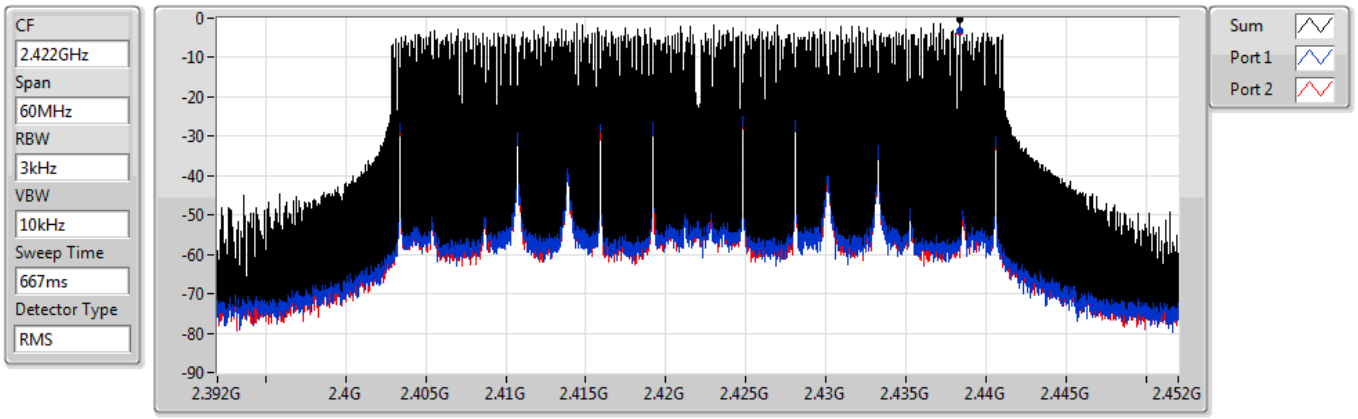
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.08	3.08	0.22	-0.09

802.11ax HEW40_Nss1,(MCS0)_2TX PSD

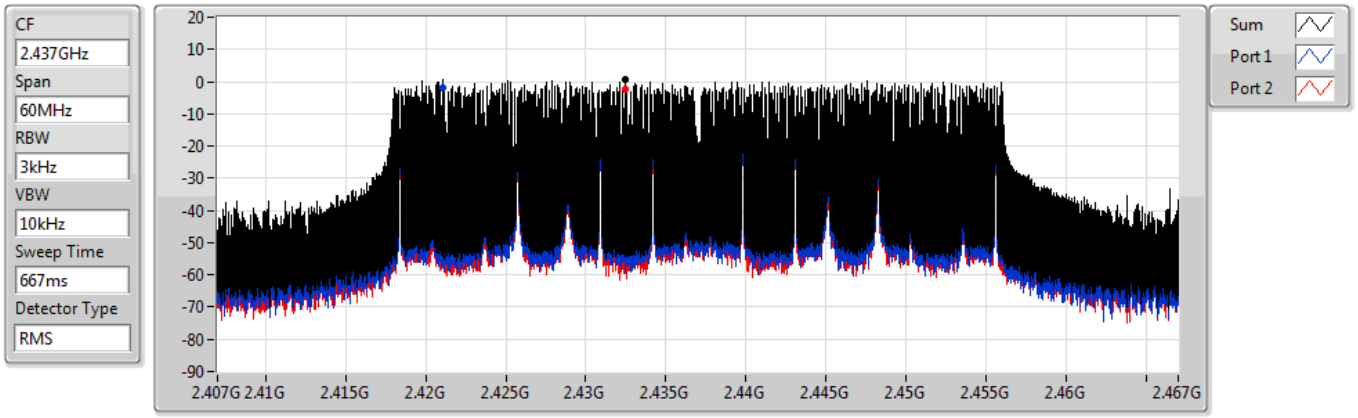
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.39	-0.39	-3.18	-3.63

802.11ax HEW40_Nss1,(MCS0)_2TX PSD

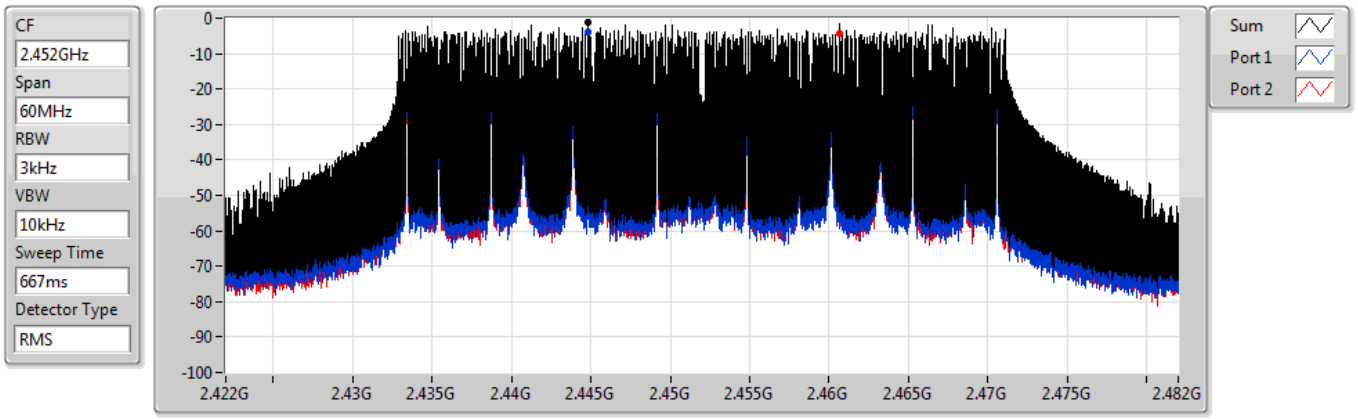
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.59	0.59	-1.94	-2.34

802.11ax HEW40_Nss1,(MCS0)_2TX PSD

2452MHz

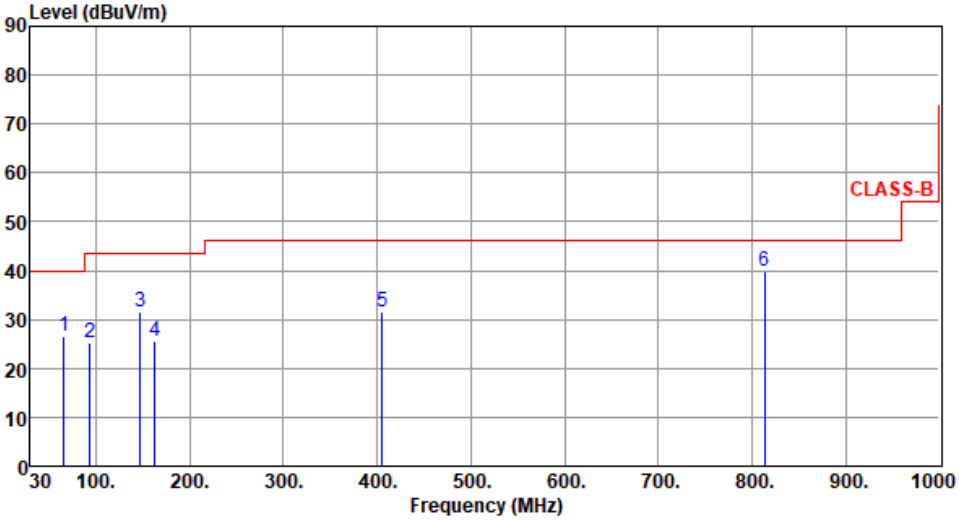


Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.32	-1.32	-4.10	-4.24

Unwanted Emissions (Below 1GHz)

Modulation	ax HE20-OFDMA	**Test Freq. (MHz)**	2437
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):25 Humidity(%):62

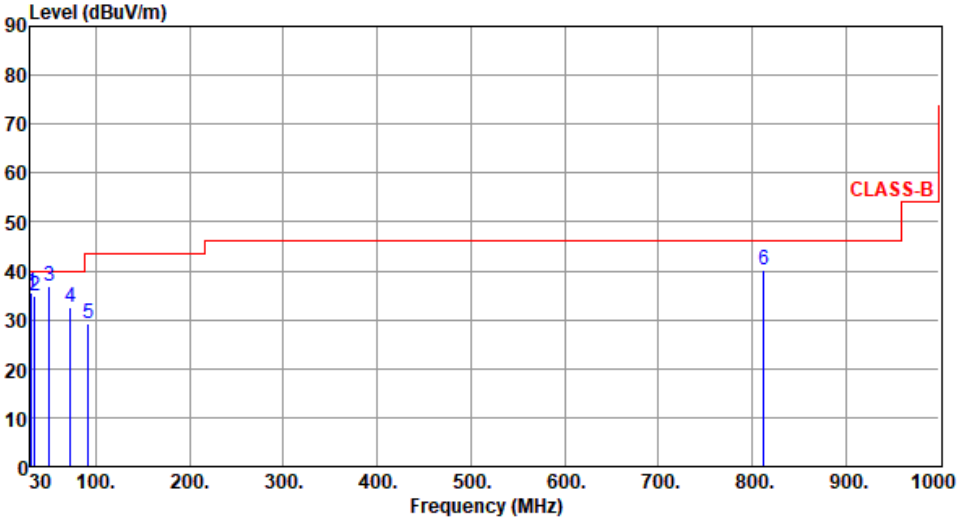


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	65.77	26.56	40.00	-13.44	37.22	-10.66	Peak	---	---
2	93.84	25.39	43.50	-18.11	39.86	-14.47	Peak	---	---
3	146.95	31.45	43.50	-12.05	40.31	-8.86	Peak	---	---
4	162.52	25.70	43.50	-17.80	34.61	-8.91	Peak	---	---
5	405.47	31.56	46.00	-14.44	37.35	-5.79	Peak	---	---
6	813.00	39.83	46.00	-6.17	37.89	1.94	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	ax HE20-OFDMA	**Test Freq. (MHz)**	2437
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):25 Humidity(%):62



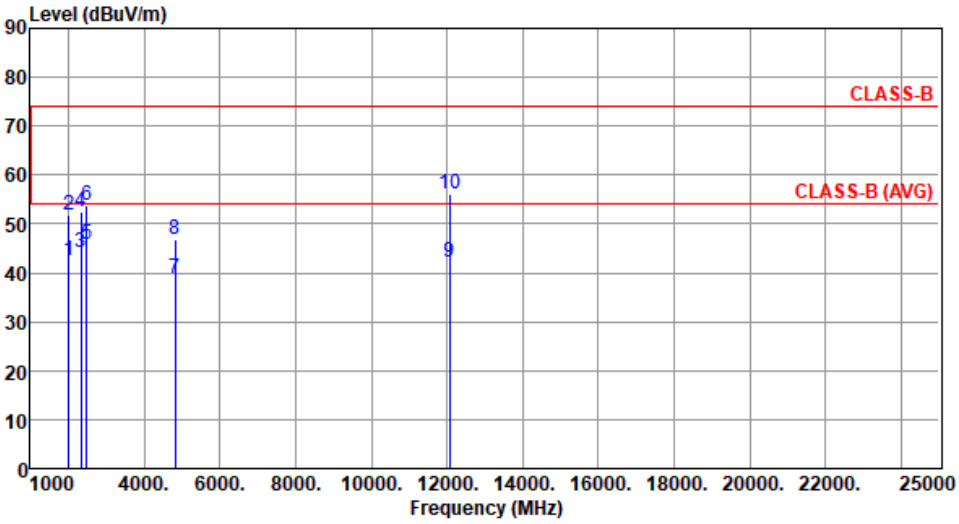
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	31.21	35.45	40.00	-4.55	45.55	-10.10	Peak	---	---
2	34.48	34.88	40.00	-5.12	44.93	-10.05	Peak	---	---
3	50.15	36.86	40.00	-3.14	45.42	-8.56	QP	101	62
4	72.88	32.47	40.00	-7.53	44.37	-11.90	Peak	---	---
5	91.58	29.26	43.50	-14.24	43.97	-14.71	Peak	---	---
6	812.52	40.23	46.00	-5.77	38.29	1.94	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Unwanted Emission (Above 1GHz) for 11b

Modulation	11b	**Test Freq. (MHz)**	2412
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

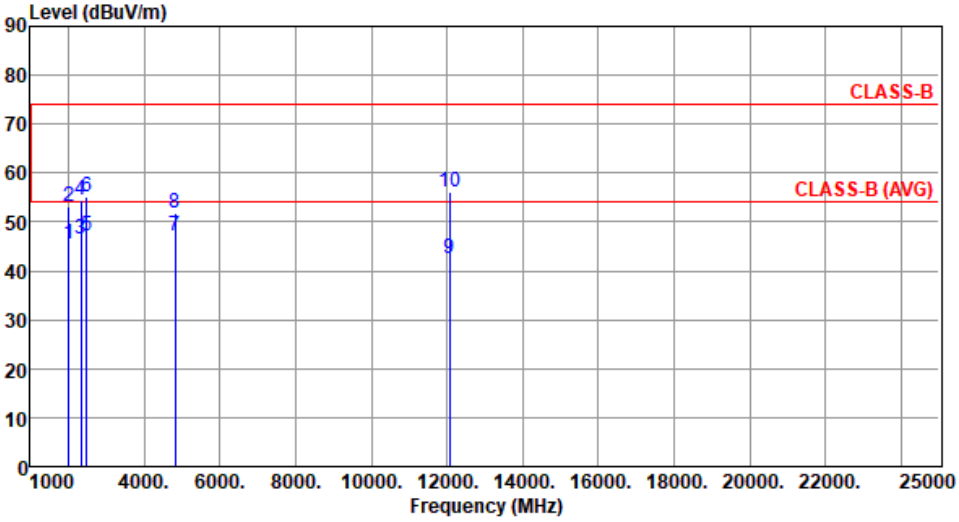


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2016.00	42.45	54.00	-11.55	46.97	-4.52	Average	166	125
2	2016.00	51.72	74.00	-22.28	56.24	-4.52	Peak	166	125
3	2338.00	44.31	54.00	-9.69	46.88	-2.57	Average	165	161
4	2338.00	52.46	74.00	-21.54	55.03	-2.57	Peak	165	161
5	2486.00	45.85	54.00	-8.15	48.54	-2.69	Average	156	149
6	2486.00	53.86	74.00	-20.14	56.55	-2.69	Peak	156	149
7	4824.00	38.96	54.00	-15.04	34.82	4.14	Average	244	45
8	4824.00	46.75	74.00	-27.25	42.61	4.14	Peak	244	45
9	12060.00	42.24	54.00	-11.76	28.45	13.79	Average	100	62
10	12060.00	56.01	74.00	-17.99	42.22	13.79	Peak	100	62

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	**Test Freq. (MHz)**	2412
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

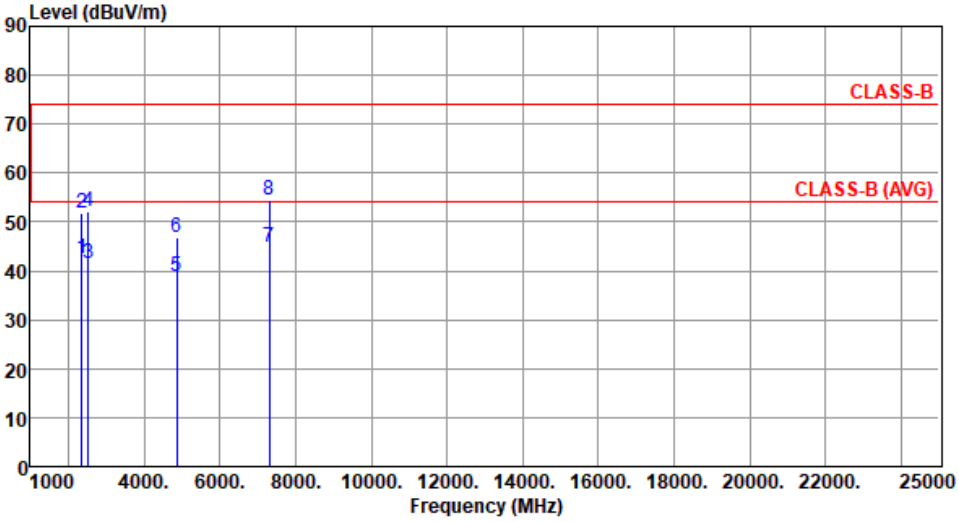


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2016.00	45.42	54.00	-8.58	49.94	-4.52	Average	301	50
2	2016.00	53.04	74.00	-20.96	57.56	-4.52	Peak	301	50
3	2338.00	46.62	54.00	-7.38	49.19	-2.57	Average	336	30
4	2338.00	54.51	74.00	-19.49	57.08	-2.57	Peak	336	30
5	2486.00	47.04	54.00	-6.96	49.73	-2.69	Average	341	39
6	2486.00	55.08	74.00	-18.92	57.77	-2.69	Peak	341	39
7	4824.00	47.20	54.00	-6.80	43.06	4.14	Average	105	77
8	4824.00	51.70	74.00	-22.30	47.56	4.14	Peak	105	77
9	12060.00	42.37	54.00	-11.63	28.58	13.79	Average	100	50
10	12060.00	56.10	74.00	-17.90	42.31	13.79	Peak	100	50

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	**Test Freq. (MHz)**	2437
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

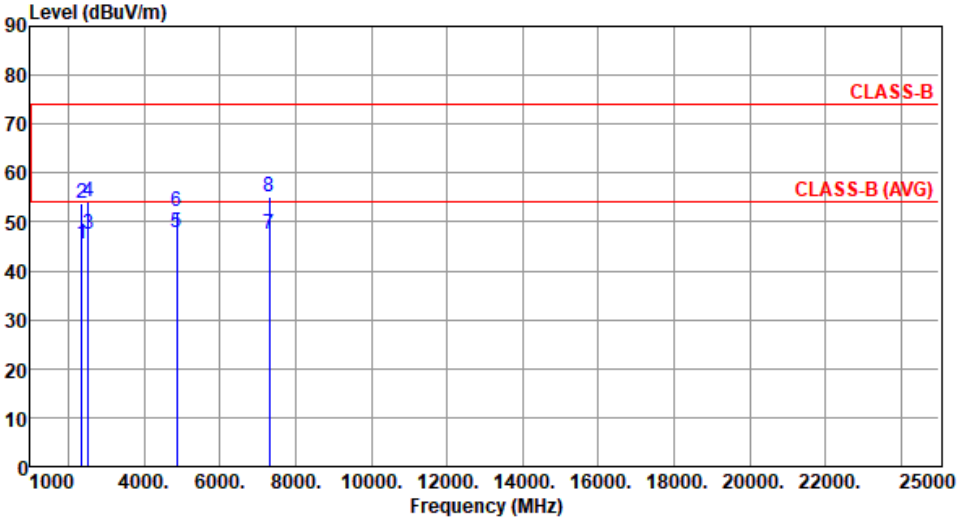


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2353.00	42.54	54.00	-11.46	45.19	-2.65	Average	165	128
2	2353.00	51.80	74.00	-22.20	54.45	-2.65	Peak	165	128
3	2522.00	41.60	54.00	-12.40	44.18	-2.58	Average	154	167
4	2522.00	52.14	74.00	-21.86	54.72	-2.58	Peak	154	167
5	4874.00	38.89	54.00	-15.11	34.76	4.13	Average	243	43
6	4874.00	46.70	74.00	-27.30	42.57	4.13	Peak	243	43
7	7311.00	44.72	54.00	-9.28	35.44	9.28	Average	200	120
8	7311.00	54.40	74.00	-19.60	45.12	9.28	Peak	200	120

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	**Test Freq. (MHz)**	2437
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

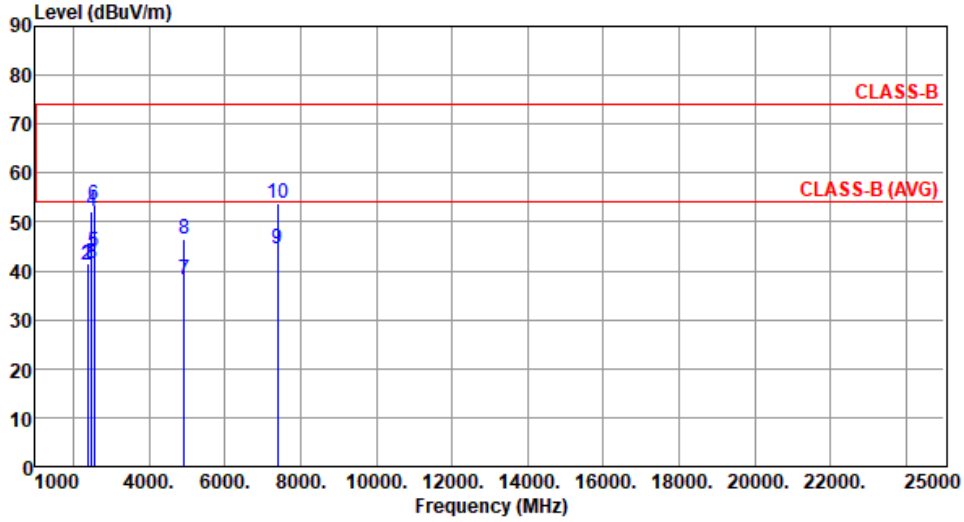


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2353.00	45.65	54.00	-8.35	48.30	-2.65	Average	338	22
2	2353.00	53.65	74.00	-20.35	56.30	-2.65	Peak	338	22
3	2522.00	47.57	54.00	-6.43	50.15	-2.58	Average	331	27
4	2522.00	54.10	74.00	-19.90	56.68	-2.58	Peak	331	27
5	4874.00	47.79	54.00	-6.21	43.66	4.13	Average	100	76
6	4874.00	52.11	74.00	-21.89	47.98	4.13	Peak	100	76
7	7311.00	47.43	54.00	-6.57	38.15	9.28	Average	196	135
8	7311.00	54.97	74.00	-19.03	45.69	9.28	Peak	196	135

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	**Test Freq. (MHz)**	2462
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

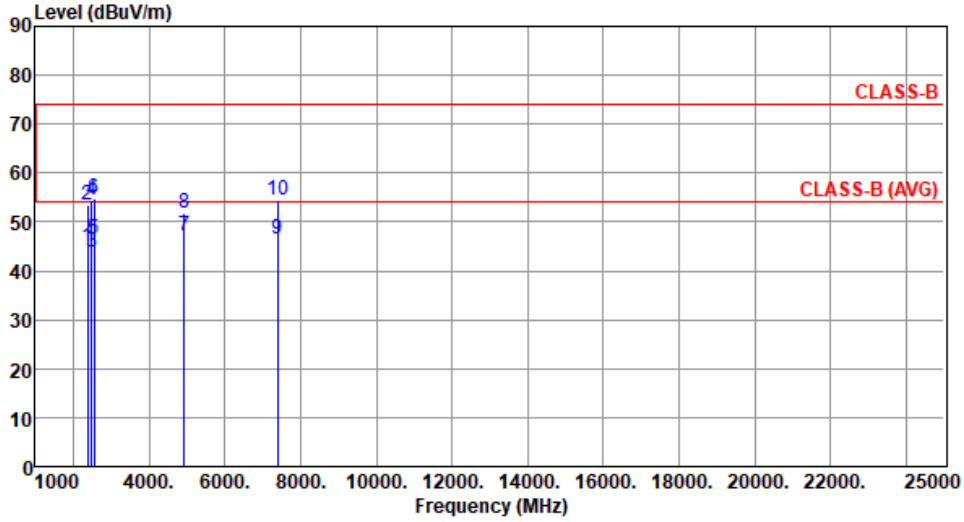


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2377.00	41.51	54.00	-12.49	44.22	-2.71	Average	165	130
2	2377.00	41.25	74.00	-32.75	43.96	-2.71	Peak	165	130
3	2483.50	41.56	54.00	-12.44	44.26	-2.70	Average	165	130
4	2483.50	52.15	74.00	-21.85	54.85	-2.70	Peak	165	130
5	2547.00	43.75	54.00	-10.25	46.25	-2.50	Average	165	130
6	2547.00	53.38	74.00	-20.62	55.88	-2.50	Peak	165	130
7	4924.00	38.31	54.00	-15.69	34.25	4.06	Average	244	50
8	4924.00	46.39	74.00	-27.61	42.33	4.06	Peak	244	50
9	7386.00	44.50	54.00	-9.50	35.25	9.25	Average	200	123
10	7386.00	53.75	74.00	-20.25	44.50	9.25	Peak	200	123

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	Test Freq. (MHz)	2462
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65



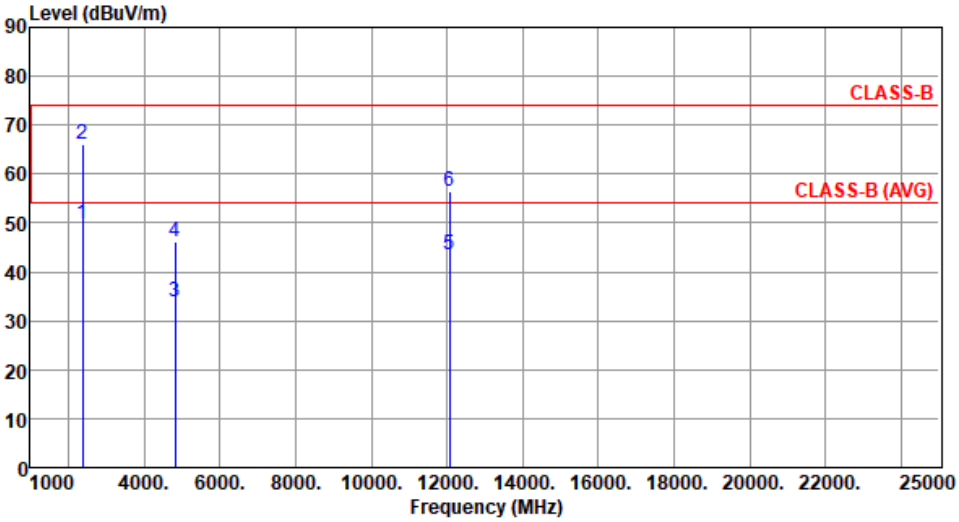
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2377.00	44.94	54.00	-9.06	47.65	-2.71	Average	270	32
2	2377.00	53.32	74.00	-20.68	56.03	-2.71	Peak	270	32
3	2483.50	43.89	54.00	-10.11	46.59	-2.70	Average	297	41
4	2483.50	54.61	74.00	-19.39	57.31	-2.70	Peak	297	41
5	2547.00	46.57	54.00	-7.43	49.07	-2.50	Average	327	35
6	2547.00	54.90	74.00	-19.10	57.40	-2.50	Peak	327	35
7	4924.00	47.27	54.00	-6.73	43.21	4.06	Average	102	74
8	4924.00	51.65	74.00	-22.35	47.59	4.06	Peak	102	74
9	7386.00	46.56	54.00	-7.44	37.31	9.25	Average	195	139
10	7386.00	54.37	74.00	-19.63	45.12	9.25	Peak	195	139

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Unwanted Emissions (Above 1GHz) for 11g

Modulation	11g	**Test Freq. (MHz)**	2412
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

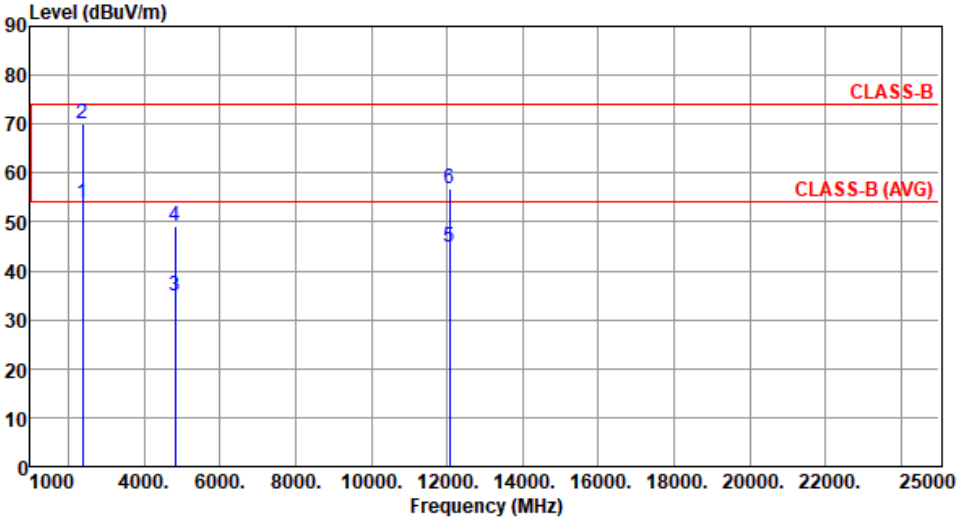


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	49.69	54.00	-4.31	52.44	-2.75	Average	255	183
2	2390.00	66.18	74.00	-7.82	68.93	-2.75	Peak	255	183
3	4824.00	33.92	54.00	-20.08	29.78	4.14	Average	100	66
4	4824.00	46.02	74.00	-27.98	41.88	4.14	Peak	100	66
5	12060.00	43.52	54.00	-10.48	29.73	13.79	Average	100	50
6	12060.00	56.46	74.00	-17.54	42.67	13.79	Peak	100	50

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	**Test Freq. (MHz)**	2412
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

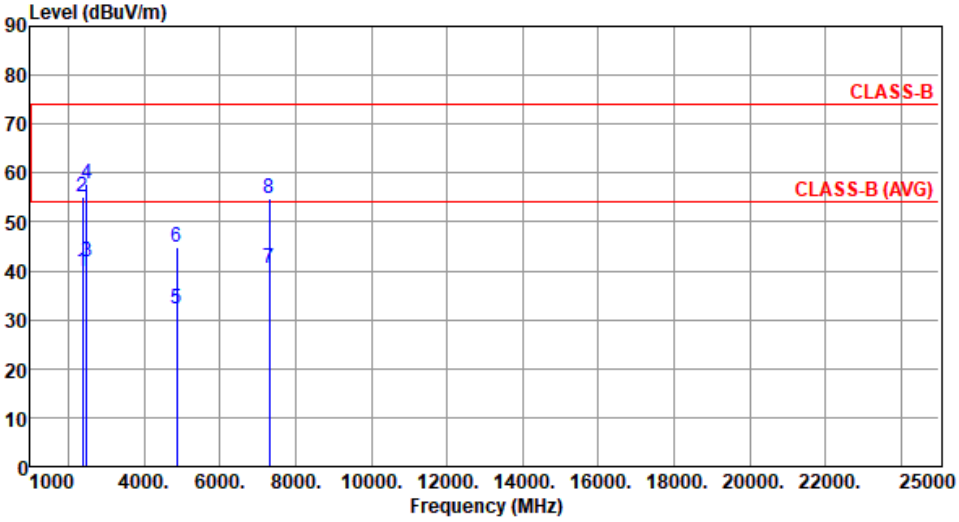


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	53.77	54.00	-0.23	56.52	-2.75	Average	277	122
2	2390.00	70.02	74.00	-3.98	72.77	-2.75	Peak	277	122
3	4824.00	35.02	54.00	-18.98	30.88	4.14	Average	200	80
4	4824.00	49.03	74.00	-24.97	44.89	4.14	Peak	200	80
5	12060.00	44.77	54.00	-9.23	30.98	13.79	Average	100	120
6	12060.00	56.67	74.00	-17.33	42.88	13.79	Peak	100	120

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	**Test Freq. (MHz)**	2437
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

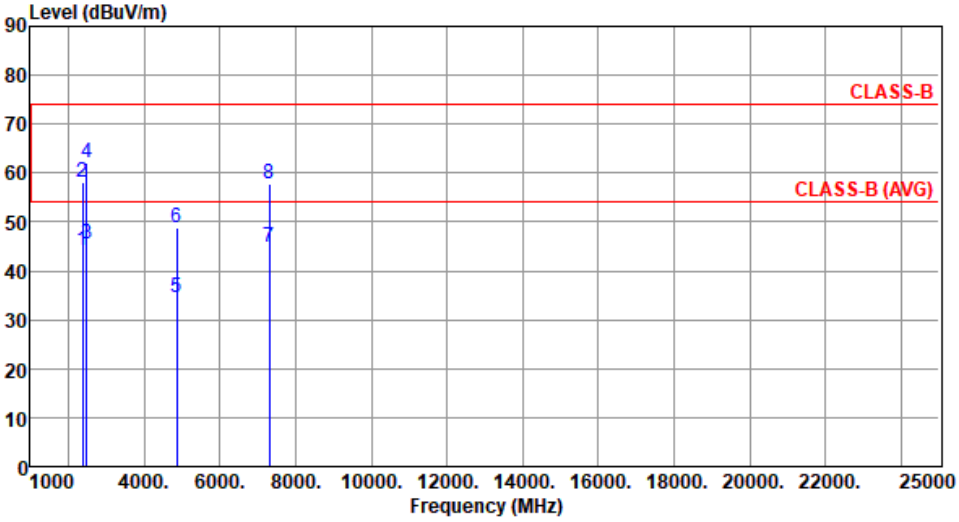


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	39.80	54.00	-14.20	42.55	-2.75	Average	282	181
2	2390.00	55.10	74.00	-18.90	57.85	-2.75	Peak	282	181
3	2483.50	41.85	54.00	-12.15	44.55	-2.70	Average	282	181
4	2483.50	57.88	74.00	-16.12	60.58	-2.70	Peak	282	181
5	4874.00	32.34	54.00	-21.66	28.21	4.13	Average	229	59
6	4874.00	44.72	74.00	-29.28	40.59	4.13	Peak	229	59
7	7311.00	40.61	54.00	-13.39	31.33	9.28	Average	100	143
8	7311.00	54.75	74.00	-19.25	45.47	9.28	Peak	100	143

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	**Test Freq. (MHz)**	2437
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

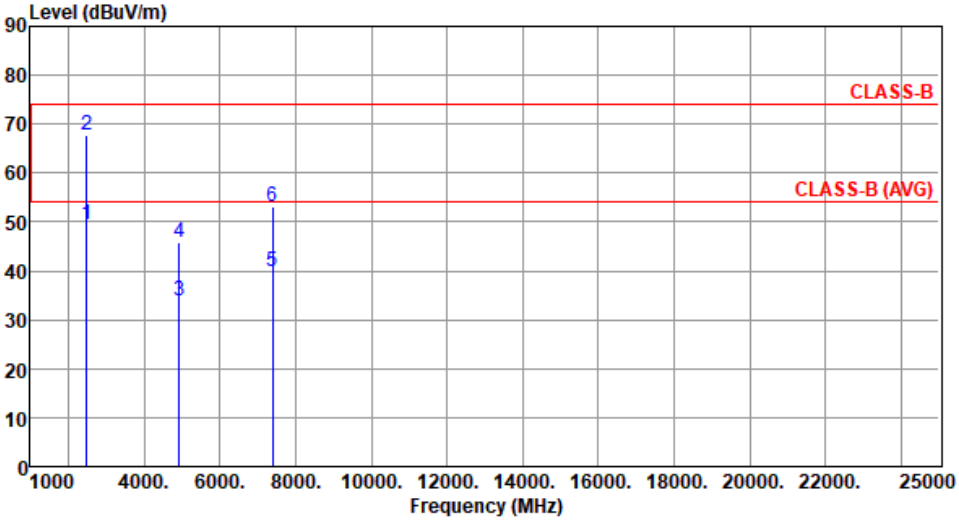


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	44.02	54.00	-9.98	46.77	-2.75	Average	307	37
2	2390.00	58.05	74.00	-15.95	60.80	-2.75	Peak	307	37
3	2483.50	45.54	54.00	-8.46	48.24	-2.70	Average	307	37
4	2483.50	62.26	74.00	-11.74	64.96	-2.70	Peak	307	37
5	4874.00	34.44	54.00	-19.56	30.31	4.13	Average	223	76
6	4874.00	48.83	74.00	-25.17	44.70	4.13	Peak	223	76
7	7311.00	44.71	54.00	-9.29	35.43	9.28	Average	213	112
8	7311.00	57.81	74.00	-16.19	48.53	9.28	Peak	213	112

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	**Test Freq. (MHz)**	2462
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

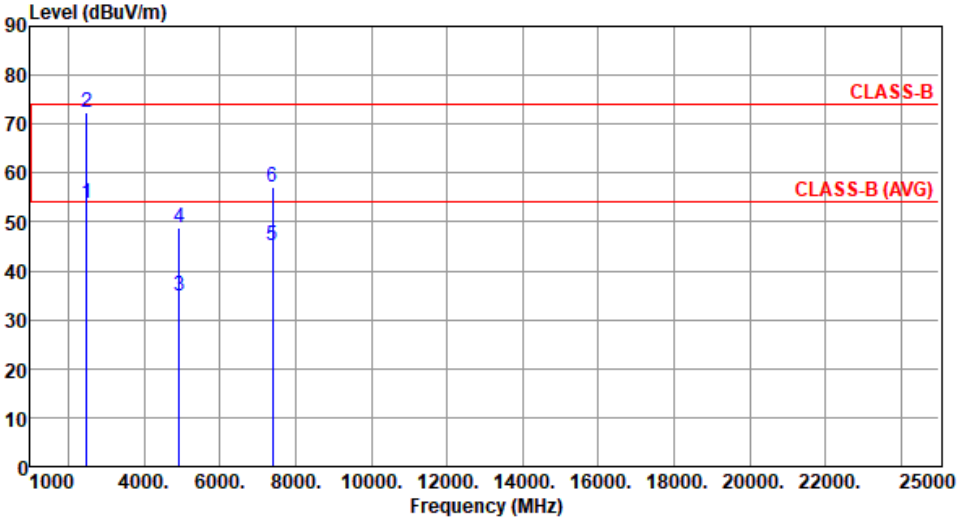


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	49.47	54.00	-4.53	52.17	-2.70	Average	266	184
2	2483.50	67.67	74.00	-6.33	70.37	-2.70	Peak	266	184
3	4924.00	33.75	54.00	-20.25	29.69	4.06	Average	100	62
4	4924.00	45.75	74.00	-28.25	41.69	4.06	Peak	100	62
5	7386.00	39.90	54.00	-14.10	30.65	9.25	Average	100	145
6	7386.00	53.13	74.00	-20.87	43.88	9.25	Peak	100	145

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	**Test Freq. (MHz)**	2462
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65



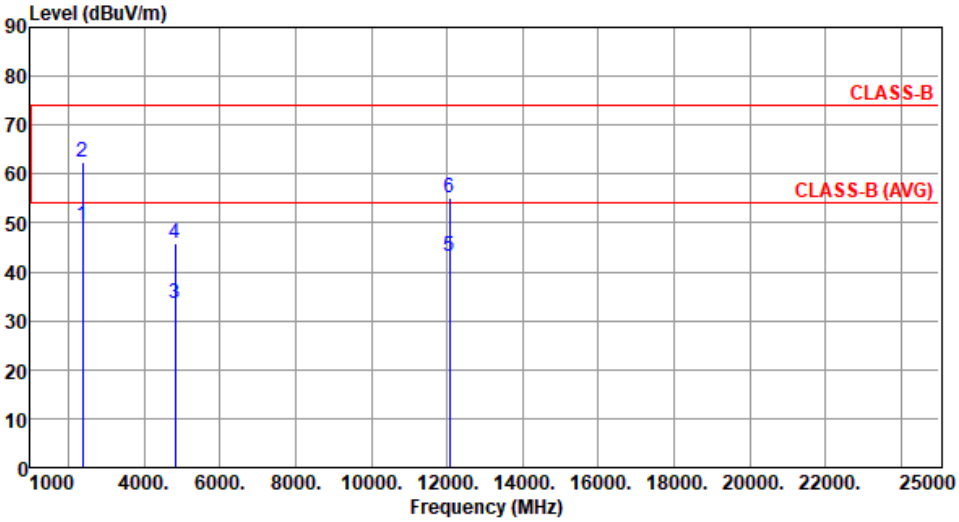
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	53.73	54.00	-0.27	56.43	-2.70	Average	308	28
2	2483.50	72.27	74.00	-1.73	74.97	-2.70	Peak	308	28
3	4924.00	34.95	54.00	-19.05	30.89	4.06	Average	225	75
4	4924.00	48.94	74.00	-25.06	44.88	4.06	Peak	225	75
5	7386.00	45.03	54.00	-8.97	35.78	9.25	Average	214	116
6	7386.00	57.10	74.00	-16.90	47.85	9.25	Peak	214	116

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Unwanted Emissions (Above 1GHz) for ax HE20-OFDMA

Modulation	ax HE20-OFDMA	**Test Freq. (MHz)**	2412
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

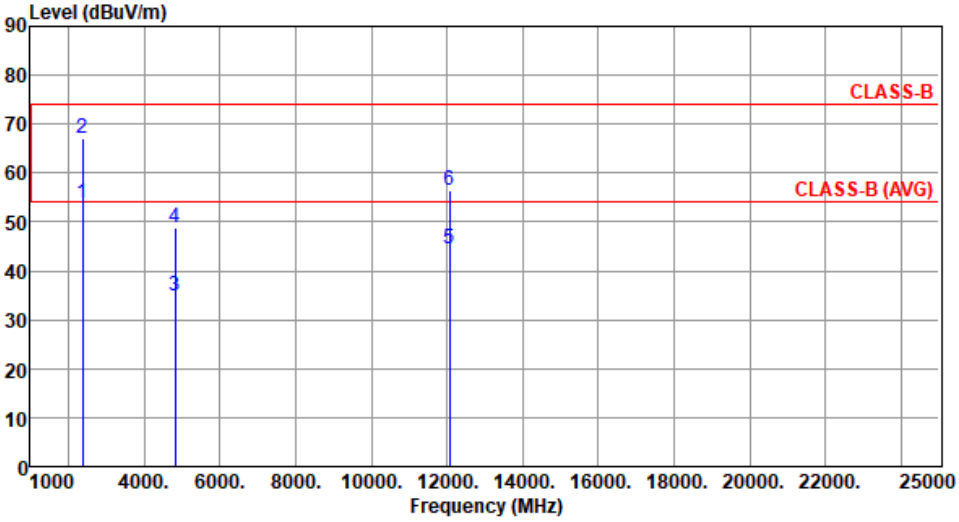


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	49.42	54.00	-4.58	52.17	-2.75	Average	252	190
2	2390.00	62.43	74.00	-11.57	65.18	-2.75	Peak	252	190
3	4824.00	33.66	54.00	-20.34	29.52	4.14	Average	100	55
4	4824.00	45.71	74.00	-28.29	41.57	4.14	Peak	100	55
5	12060.00	43.26	54.00	-10.74	29.47	13.79	Average	100	42
6	12060.00	55.26	74.00	-18.74	41.47	13.79	Peak	100	42

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE20-OFDMA	**Test Freq. (MHz)**	2412
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

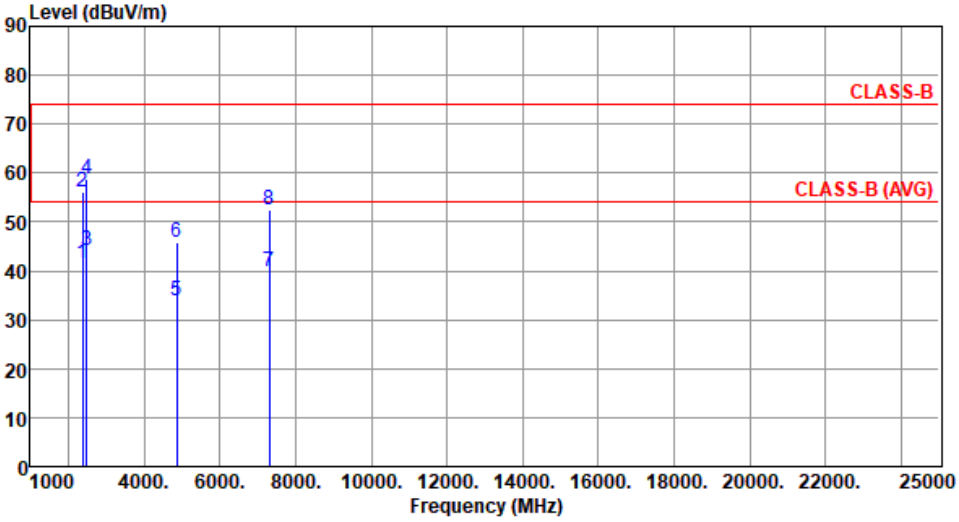


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	53.74	54.00	-0.26	56.49	-2.75	Average	352	200
2	2390.00	67.01	74.00	-6.99	69.76	-2.75	Peak	352	200
3	4824.00	34.90	54.00	-19.10	30.76	4.14	Average	229	74
4	4824.00	48.94	74.00	-25.06	44.80	4.14	Peak	229	74
5	12060.00	44.56	54.00	-9.44	30.77	13.79	Average	100	125
6	12060.00	56.54	74.00	-17.46	42.75	13.79	Peak	100	125

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE20-OFDMA	**Test Freq. (MHz)**	2437
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

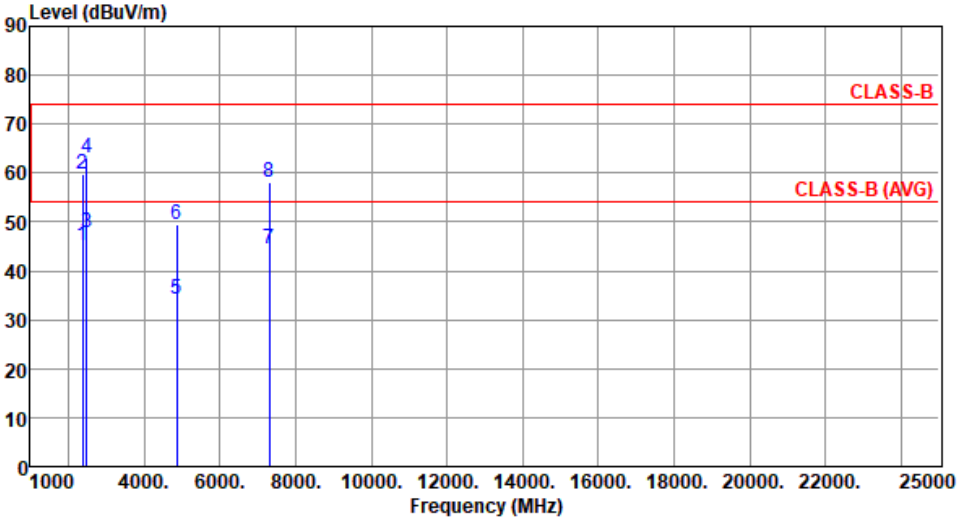


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	41.36	54.00	-12.64	44.11	-2.75	Average	293	177
2	2390.00	56.02	74.00	-17.98	58.77	-2.75	Peak	293	177
3	2483.50	44.25	54.00	-9.75	46.95	-2.70	Average	293	177
4	2483.50	58.78	74.00	-15.22	61.48	-2.70	Peak	293	177
5	4874.00	33.75	54.00	-20.25	29.62	4.13	Average	100	57
6	4874.00	45.70	74.00	-28.30	41.57	4.13	Peak	100	57
7	7311.00	39.91	54.00	-14.09	30.63	9.28	Average	100	144
8	7311.00	52.61	74.00	-21.39	43.33	9.28	Peak	100	144

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE20-OFDMA	**Test Freq. (MHz)**	2437
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

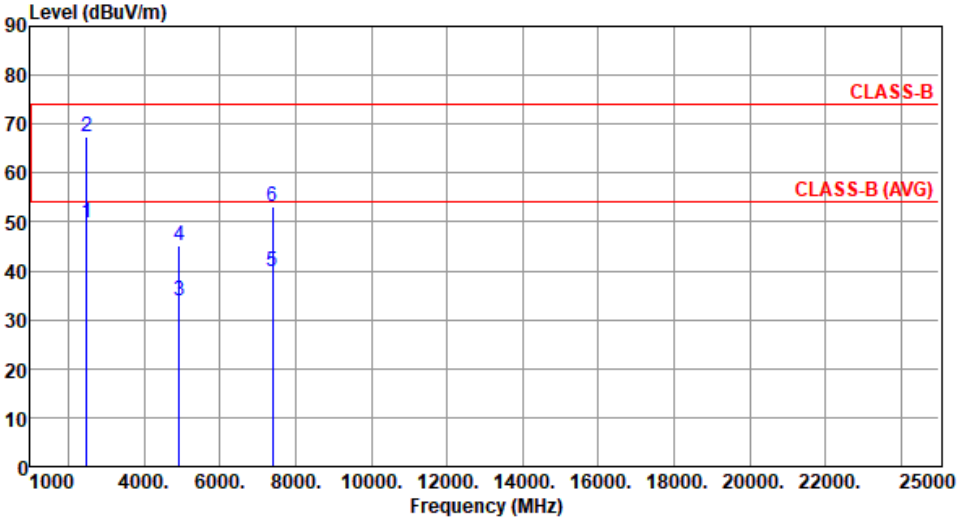


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	45.30	54.00	-8.70	48.05	-2.75	Average	305	38
2	2390.00	59.94	74.00	-14.06	62.69	-2.75	Peak	305	38
3	2483.50	47.71	54.00	-6.29	50.41	-2.70	Average	305	38
4	2483.50	63.15	74.00	-10.85	65.85	-2.70	Peak	305	38
5	4874.00	34.28	54.00	-19.72	30.15	4.13	Average	225	79
6	4874.00	49.34	74.00	-24.66	45.21	4.13	Peak	225	79
7	7311.00	44.49	54.00	-9.51	35.21	9.28	Average	215	116
8	7311.00	58.23	74.00	-15.77	48.95	9.28	Peak	215	116

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE20-OFDMA	**Test Freq. (MHz)**	2462
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

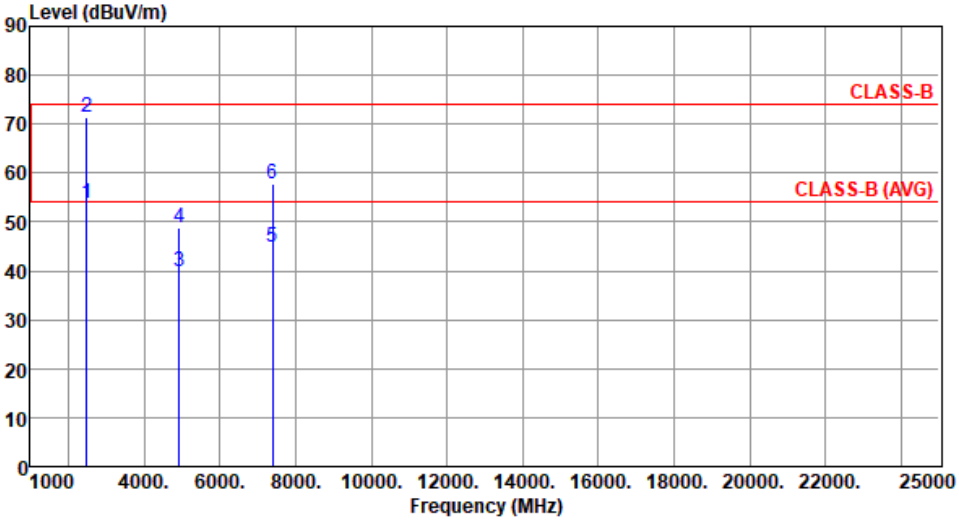


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	49.66	54.00	-4.34	52.36	-2.70	Average	271	173
2	2483.50	67.50	74.00	-6.50	70.20	-2.70	Peak	271	173
3	4924.00	33.95	54.00	-20.05	29.89	4.06	Average	100	62
4	4924.00	45.32	74.00	-28.68	41.26	4.06	Peak	100	62
5	7386.00	39.88	54.00	-14.12	30.63	9.25	Average	100	145
6	7386.00	53.17	74.00	-20.83	43.92	9.25	Peak	100	145

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE20-OFDMA	**Test Freq. (MHz)**	2462
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65



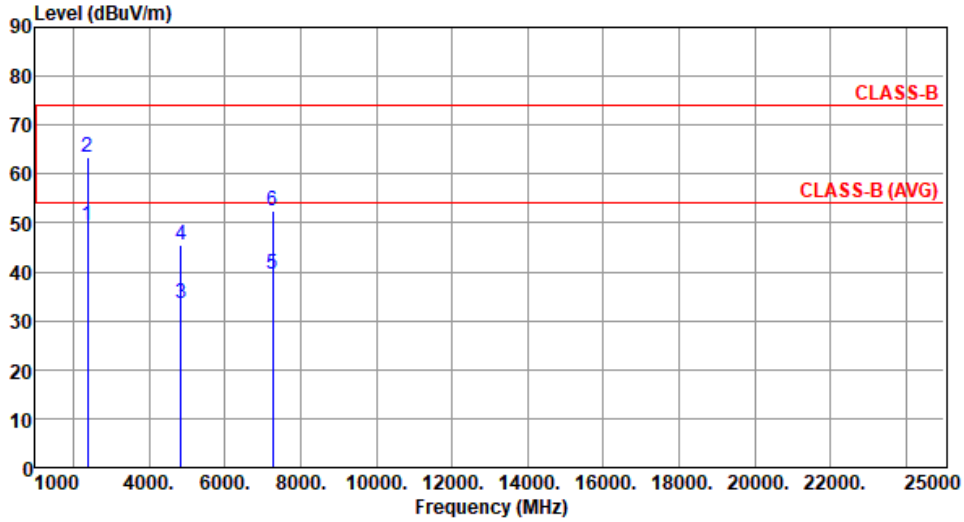
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	53.79	54.00	-0.21	56.49	-2.70	Average	305	18
2	2483.50	71.40	74.00	-2.60	74.10	-2.70	Peak	305	18
3	4924.00	39.75	54.00	-14.25	35.69	4.06	Average	224	70
4	4924.00	48.69	74.00	-25.31	44.63	4.06	Peak	224	70
5	7386.00	44.83	54.00	-9.17	35.58	9.25	Average	221	116
6	7386.00	57.92	74.00	-16.08	48.67	9.25	Peak	221	116

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Unwanted Emissions (Above 1GHz) for ax HE40-OFDMA

Modulation	ax HE40-OFDMA	**Test Freq. (MHz)**	2422
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

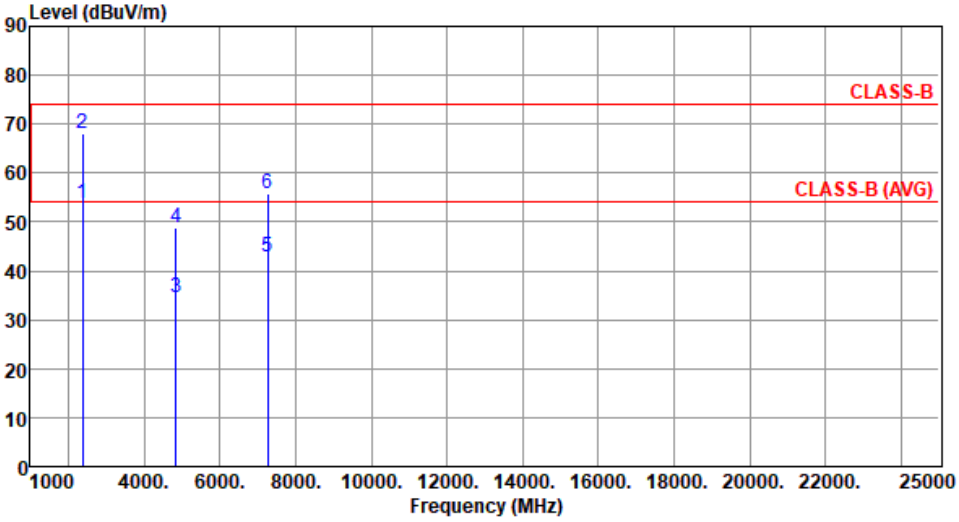


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	49.39	54.00	-4.61	52.14	-2.75	Average	255	190
2	2390.00	63.47	74.00	-10.53	66.22	-2.75	Peak	255	190
3	4844.00	33.58	54.00	-20.42	29.42	4.16	Average	100	50
4	4844.00	45.55	74.00	-28.45	41.39	4.16	Peak	100	50
5	7266.00	39.60	54.00	-14.40	30.37	9.23	Average	100	141
6	7266.00	52.49	74.00	-21.51	43.26	9.23	Peak	100	141

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE40-OFDMA	**Test Freq. (MHz)**	2422
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

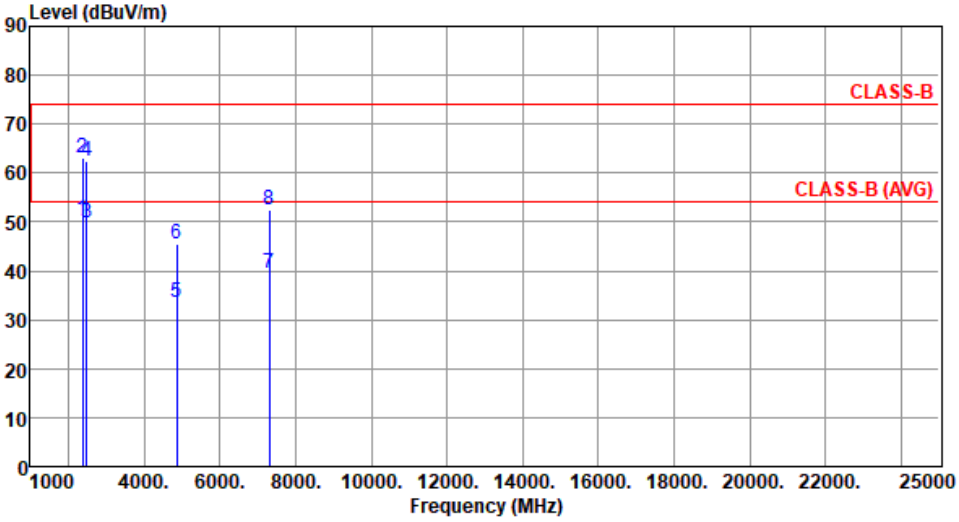


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	53.80	54.00	-0.20	56.55	-2.75	Average	312	156
2	2390.00	67.97	74.00	-6.03	70.72	-2.75	Peak	312	156
3	4844.00	34.56	54.00	-19.44	30.40	4.16	Average	225	75
4	4844.00	48.82	74.00	-25.18	44.66	4.16	Peak	225	75
5	7266.00	42.87	54.00	-11.13	33.64	9.23	Average	215	115
6	7266.00	55.86	74.00	-18.14	46.63	9.23	Peak	215	115

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE40-OFDMA	**Test Freq. (MHz)**	2437
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

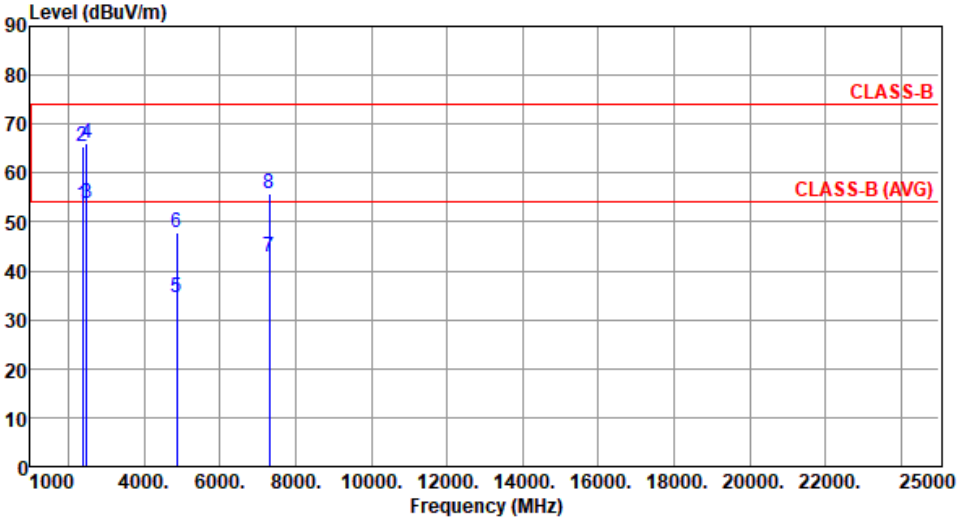


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	50.56	54.00	-3.44	53.31	-2.75	Average	261	172
2	2390.00	62.98	74.00	-11.02	65.73	-2.75	Peak	261	172
3	2483.50	49.84	54.00	-4.16	52.54	-2.70	Average	252	177
4	2483.50	62.32	74.00	-11.68	65.02	-2.70	Peak	252	177
5	4874.00	33.42	54.00	-20.58	29.29	4.13	Average	100	57
6	4874.00	45.46	74.00	-28.54	41.33	4.13	Peak	100	57
7	7311.00	39.43	54.00	-14.57	30.15	9.28	Average	100	149
8	7311.00	52.49	74.00	-21.51	43.21	9.28	Peak	100	149

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE40-OFDMA	**Test Freq. (MHz)**	2437
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

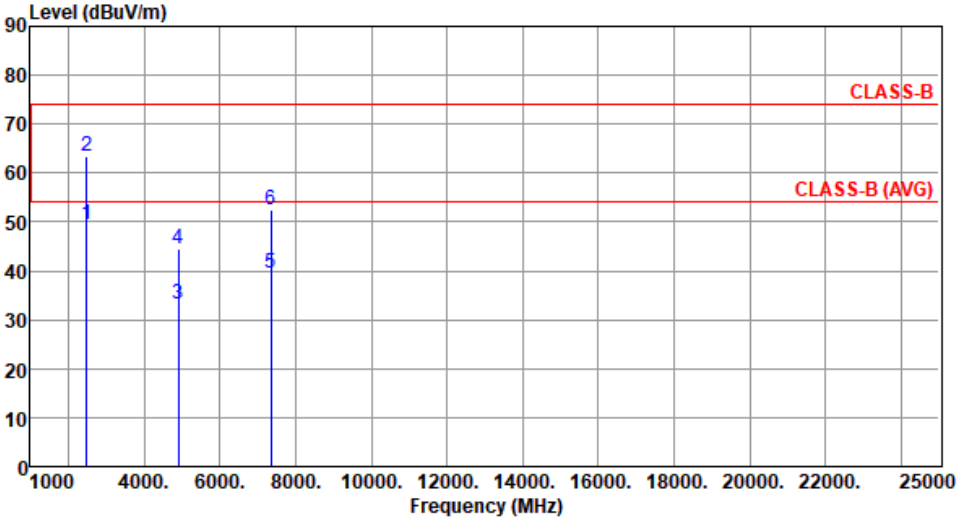


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	53.46	54.00	-0.54	56.21	-2.75	Average	300	129
2	2390.00	65.54	74.00	-8.46	68.29	-2.75	Peak	300	129
3	2483.50	53.75	54.00	-0.25	56.45	-2.70	Average	300	25
4	2483.50	66.17	74.00	-7.83	68.87	-2.70	Peak	300	25
5	4874.00	34.61	54.00	-19.39	30.48	4.13	Average	224	71
6	4874.00	47.79	74.00	-26.21	43.66	4.13	Peak	224	71
7	7311.00	42.93	54.00	-11.07	33.65	9.28	Average	213	119
8	7311.00	55.71	74.00	-18.29	46.43	9.28	Peak	213	119

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE40-OFDMA	**Test Freq. (MHz)**	2452
Polarization	Horizontal		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

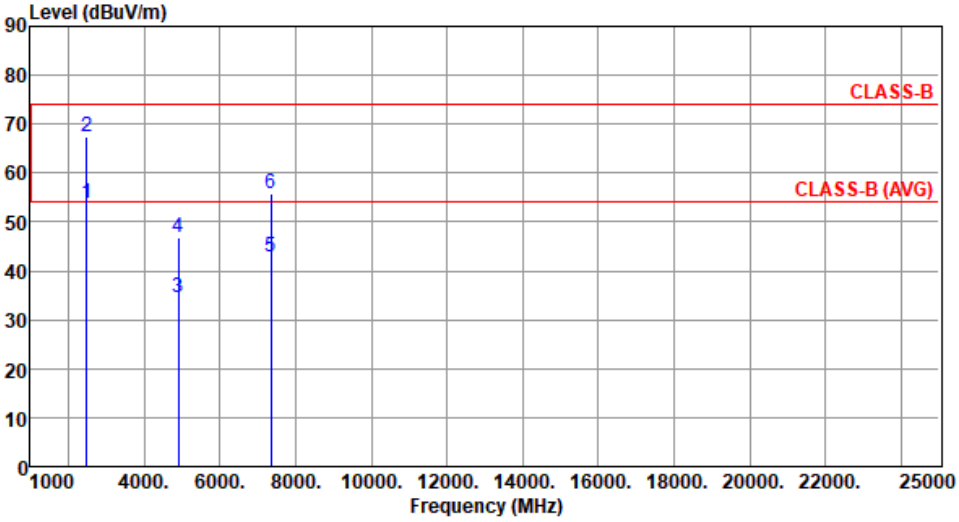


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	49.62	54.00	-4.38	52.32	-2.70	Average	259	183
2	2483.50	63.56	74.00	-10.44	66.26	-2.70	Peak	259	183
3	4904.00	33.36	54.00	-20.64	29.27	4.09	Average	100	47
4	4904.00	44.48	74.00	-29.52	40.39	4.09	Peak	100	47
5	7356.00	39.48	54.00	-14.52	30.22	9.26	Average	100	142
6	7356.00	52.47	74.00	-21.53	43.21	9.26	Peak	100	142

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	ax HE40-OFDMA	**Test Freq. (MHz)**	2452
Polarization	Vertical		

Test By :Roger Lu Temperature(℃):24 Humidity(%):65

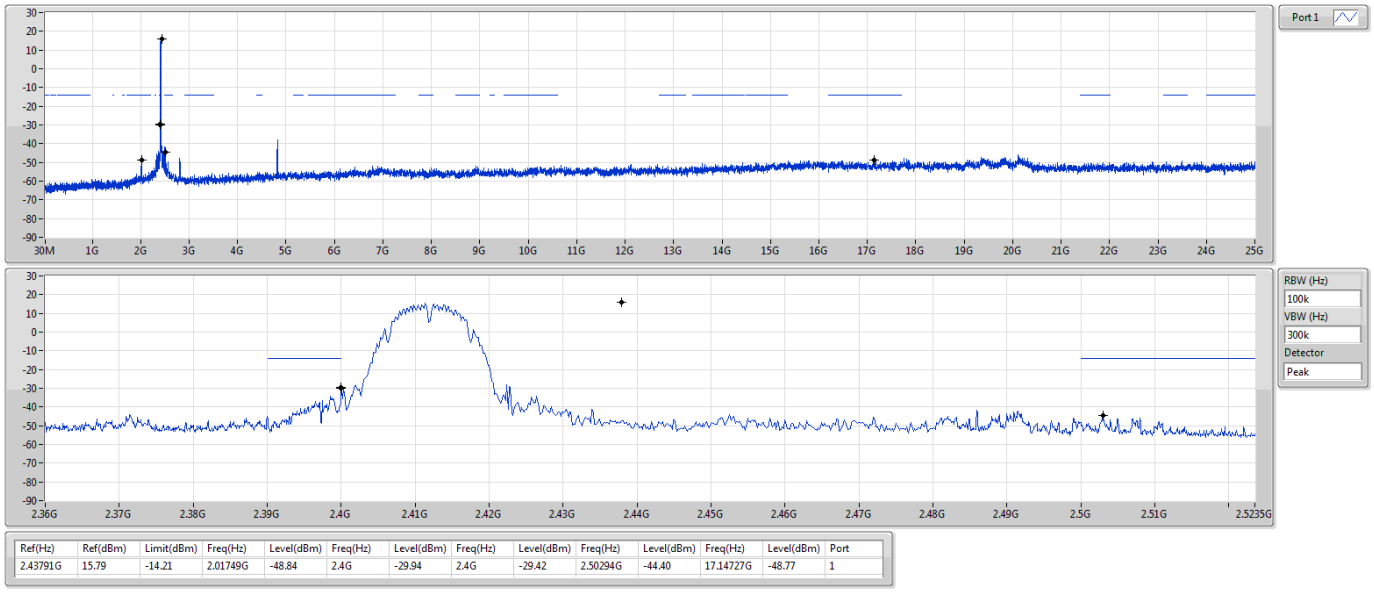


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	53.73	54.00	-0.27	56.43	-2.70	Average	301	44
2	2483.50	67.50	74.00	-6.50	70.20	-2.70	Peak	301	44
3	4904.00	34.51	54.00	-19.49	30.42	4.09	Average	222	77
4	4904.00	46.78	74.00	-27.22	42.69	4.09	Peak	222	77
5	7356.00	42.89	54.00	-11.11	33.63	9.26	Average	224	114
6	7356.00	55.78	74.00	-18.22	46.52	9.26	Peak	224	114

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

802.11b_Nss1,(1Mbps)_1TX **CSENdB**

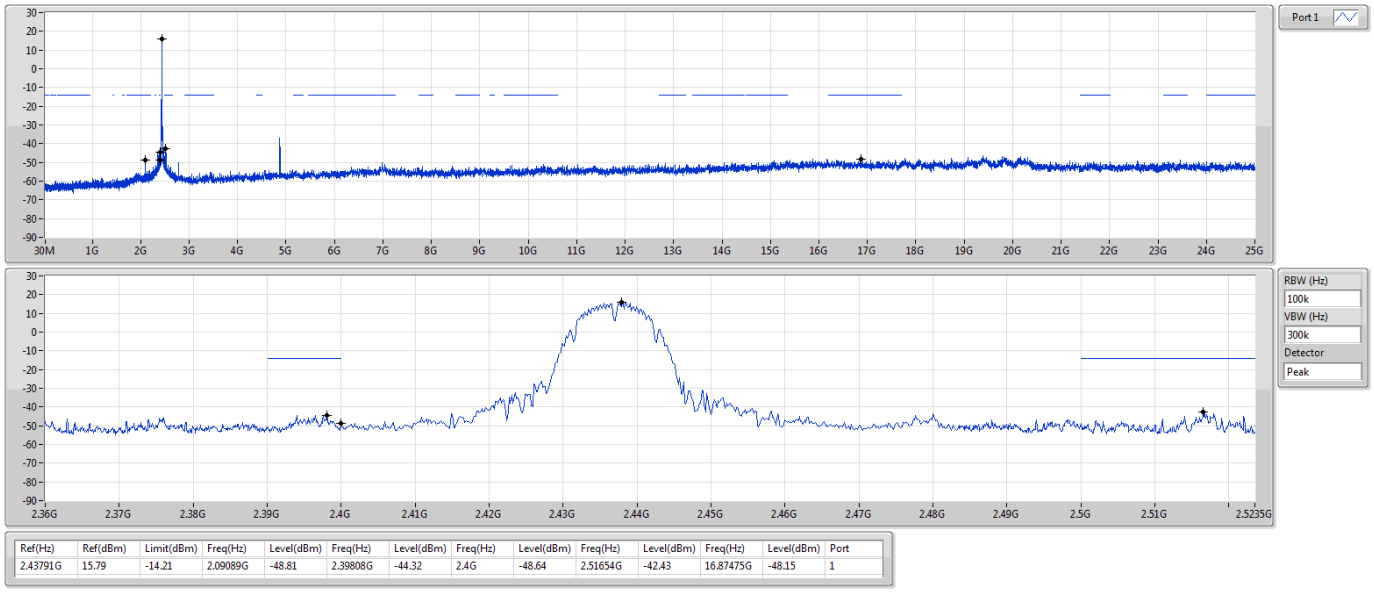
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43791G	15.79	-14.21	2.01749G	-48.84	2.4G	-29.94	2.4G	-29.42	2.50294G	-44.40	17.14727G	-48.77	1

802.11b_Nss1,(1Mbps)_1TX **CSENdB**

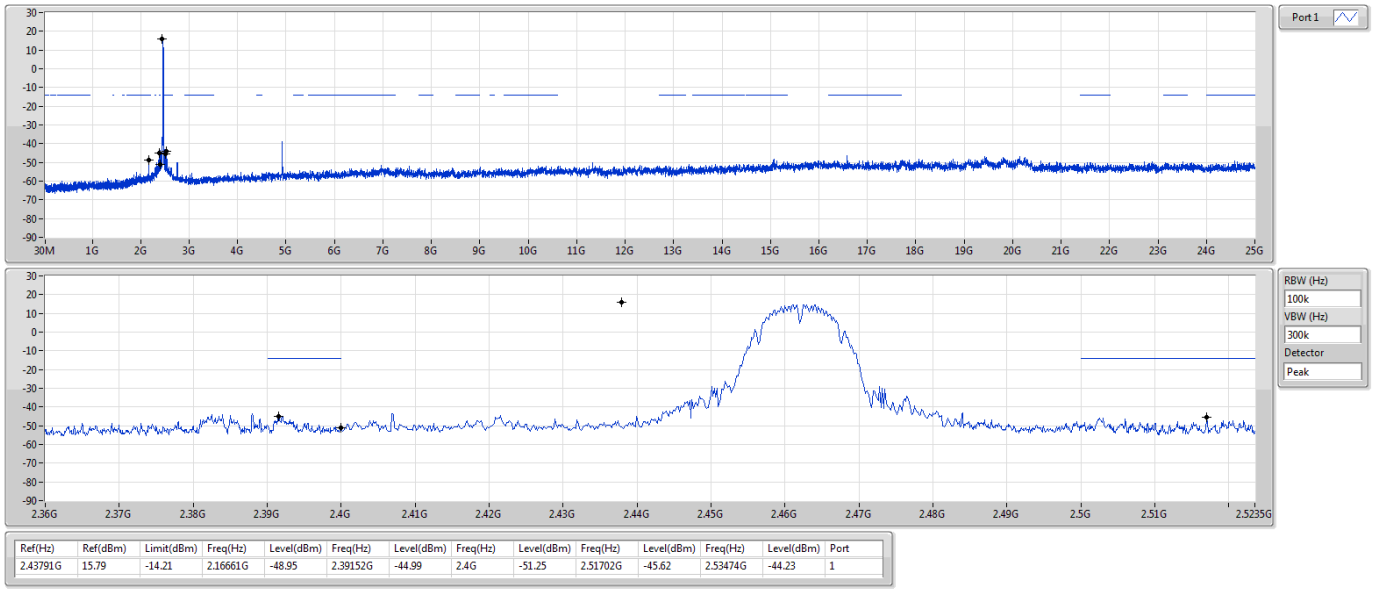
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43791G	15.79	-14.21	2.09089G	-48.81	2.39808G	-44.32	2.4G	-48.64	2.51654G	-42.43	16.87475G	-48.15	1

802.11b_Nss1,(1Mbps)_1TX **CSENdB**

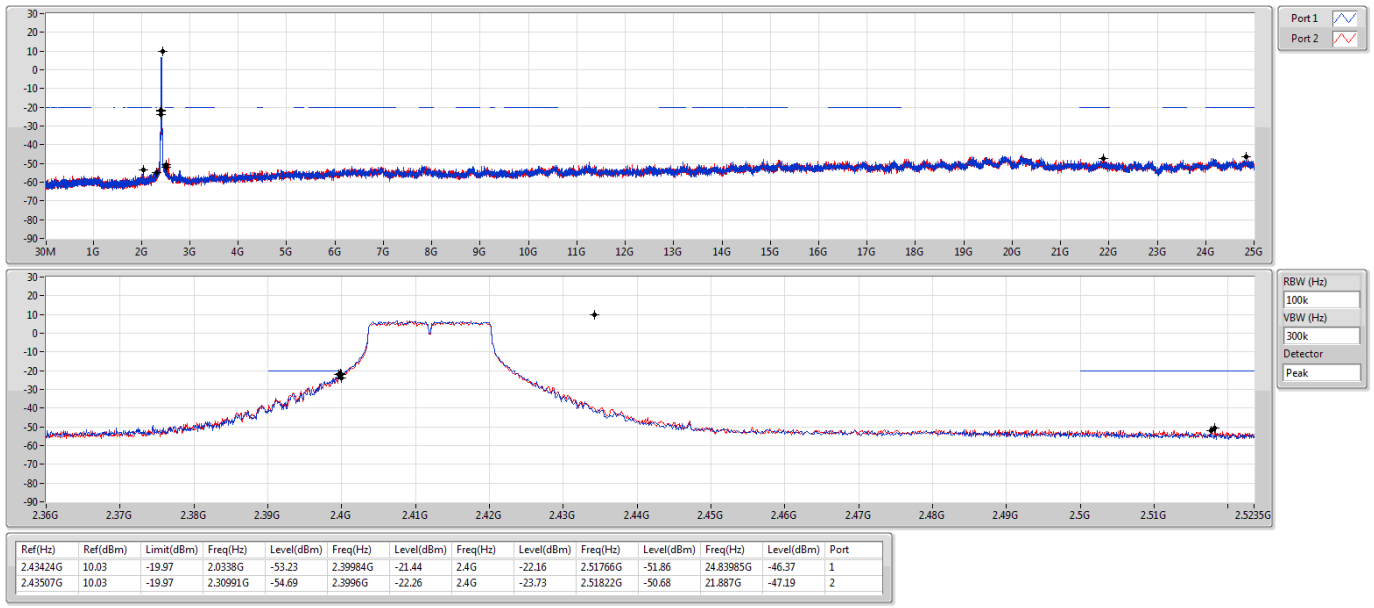
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43791G	15.79	-14.21	2.16661G	-48.95	2.39152G	-44.99	2.4G	-51.25	2.51702G	-45.62	2.53474G	-44.23	1

802.11g_Nss1,(6Mbps)_2TX **CSENdB**

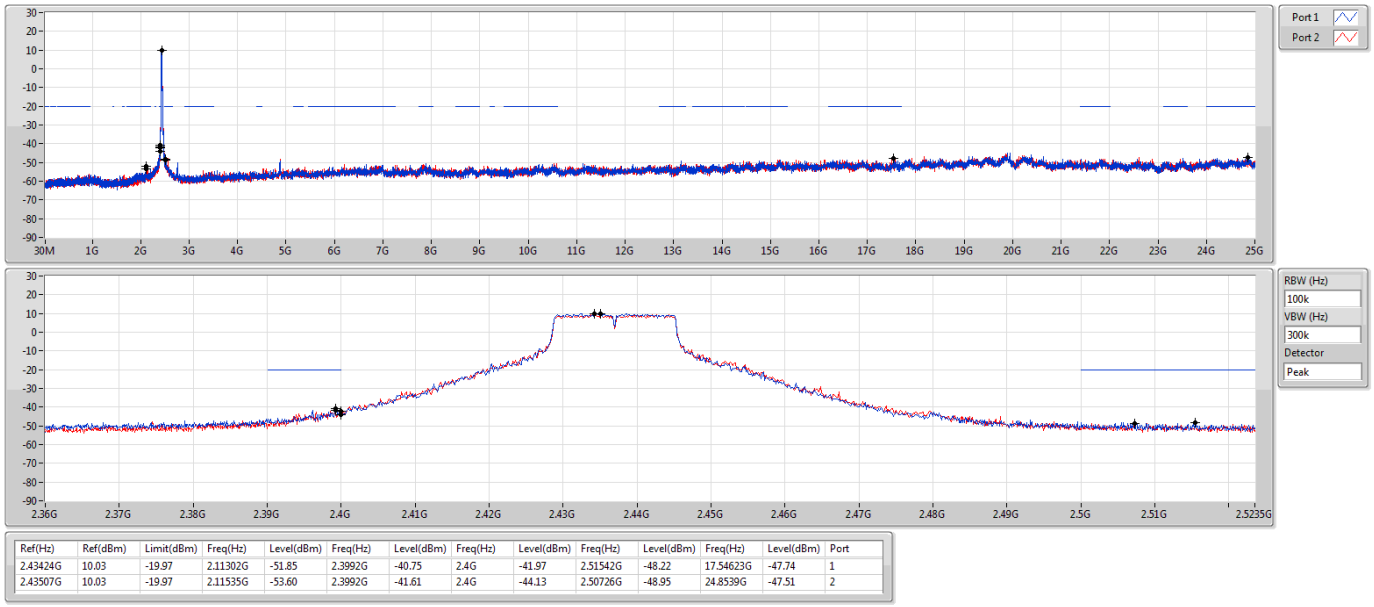
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43424G	10.03	-19.97	2.0338G	-53.23	2.39984G	-21.44	2.4G	-22.16	2.51766G	-51.86	24.83985G	-46.37	1
2.43507G	10.03	-19.97	2.30991G	-54.69	2.3996G	-22.26	2.4G	-23.73	2.51822G	-50.68	21.887G	-47.19	2

802.11g_Nss1,(6Mbps)_2TX **CSENdB**

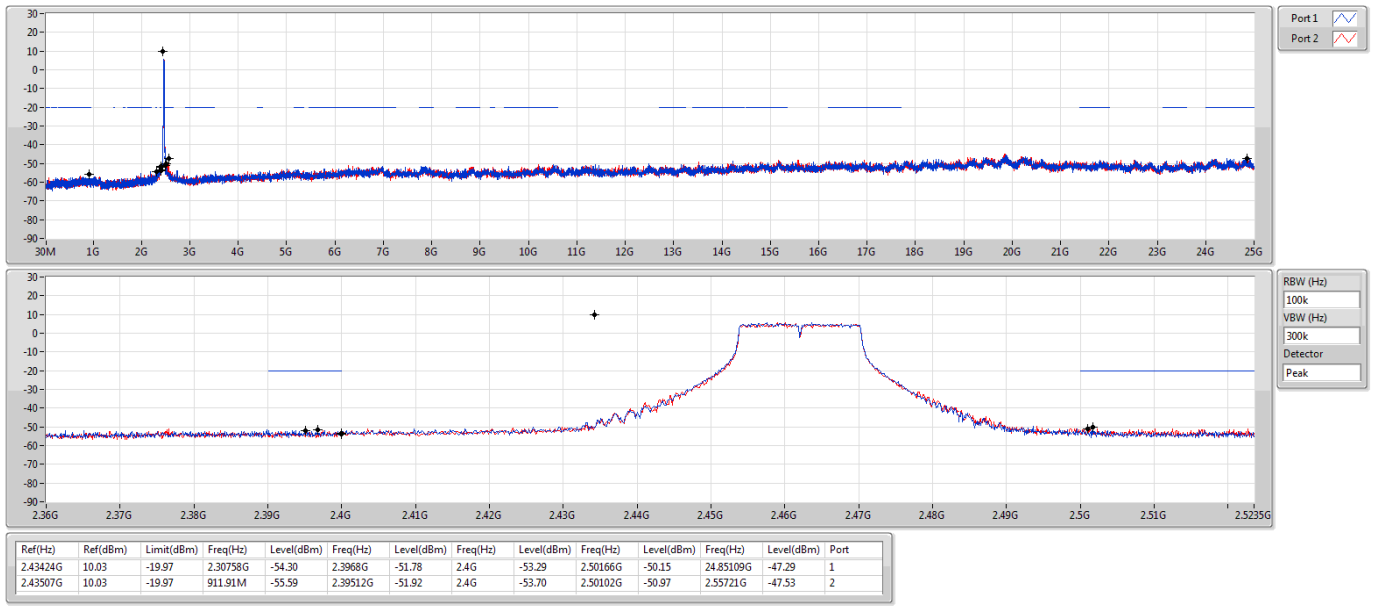
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43424G	10.03	-19.97	2.11302G	-51.85	2.3992G	-40.75	2.4G	-41.97	2.51542G	-48.22	17.54623G	-47.74	1
2.43507G	10.03	-19.97	2.11535G	-53.60	2.3992G	-41.61	2.4G	-44.13	2.50726G	-48.95	24.8539G	-47.51	2

802.11g_Nss1,(6Mbps)_2TX **CSENdB**

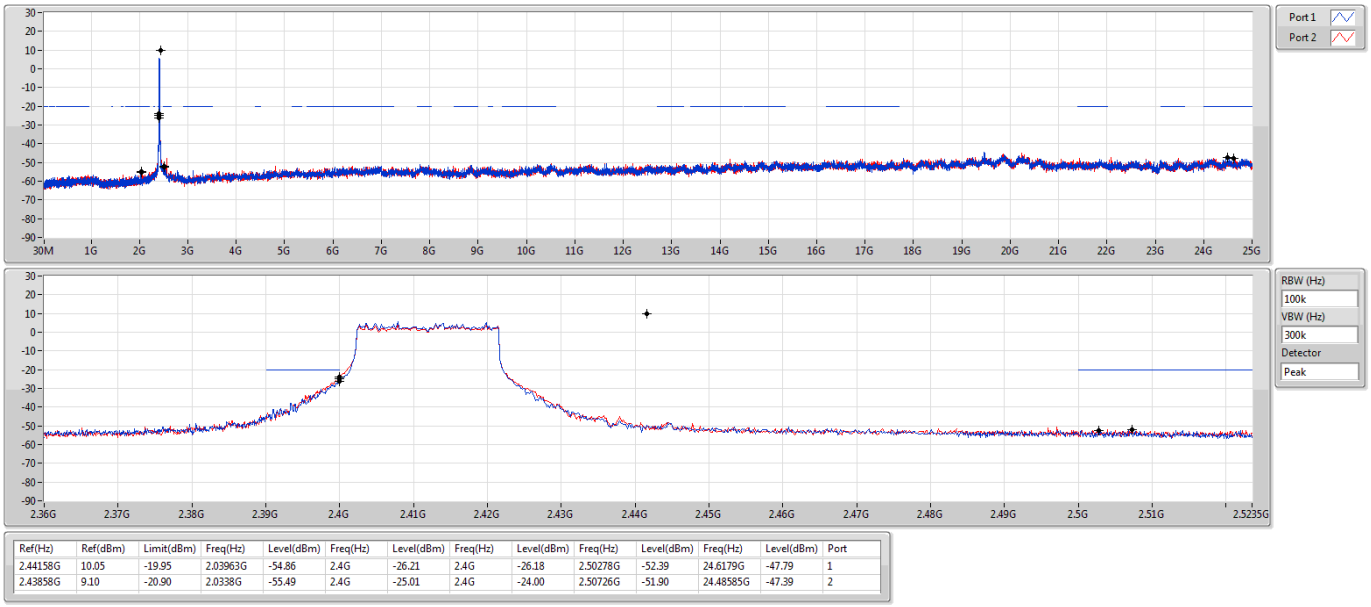
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43424G	10.03	-19.97	2.30758G	-54.30	2.3968G	-51.78	2.4G	-53.29	2.50166G	-50.15	24.85109G	-47.29	1
2.43507G	10.03	-19.97	911.91M	-55.59	2.39512G	-51.92	2.4G	-53.70	2.50102G	-50.97	2.55721G	-47.53	2

802.11ax HEW20_Nss1,(MCS0)_2TX **CSENdB**

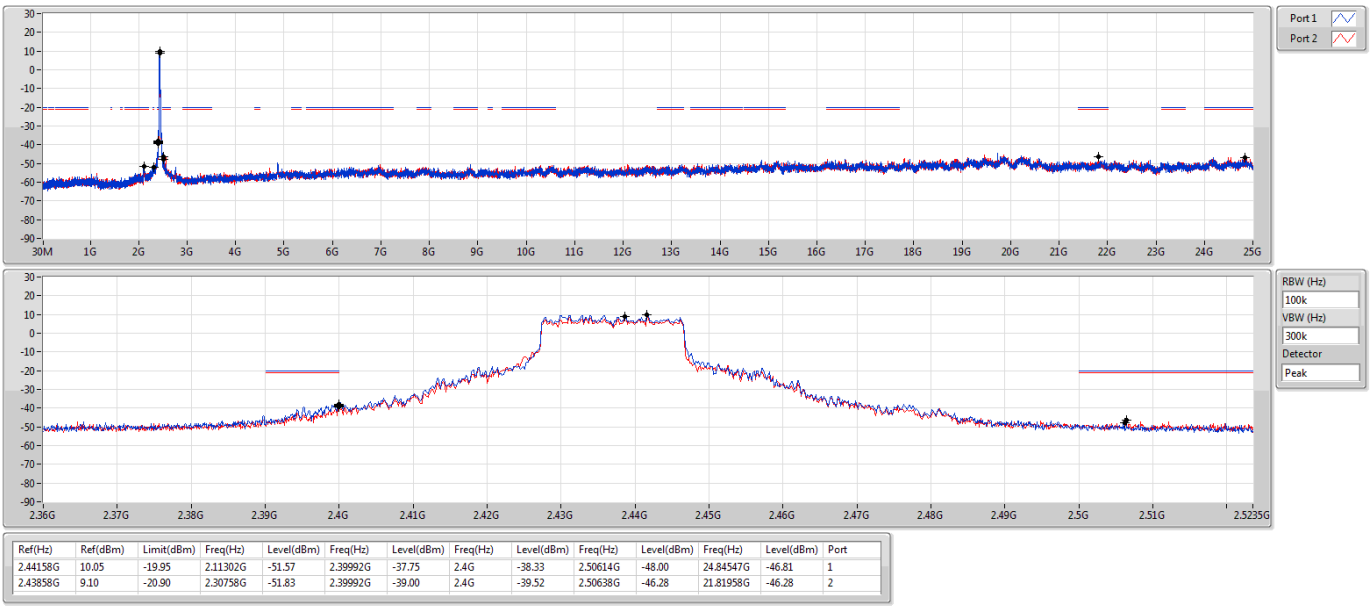
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44158G	10.05	-19.95	2.03963G	-54.86	2.4G	-26.21	2.4G	-26.18	2.50278G	-52.39	24.6179G	-47.79	1
2.43858G	9.10	-20.90	2.0338G	-55.49	2.4G	-25.01	2.4G	-24.00	2.50726G	-51.90	24.48585G	-47.39	2

802.11ax HEW20_Nss1,(MCS0)_2TX **CSENdB**

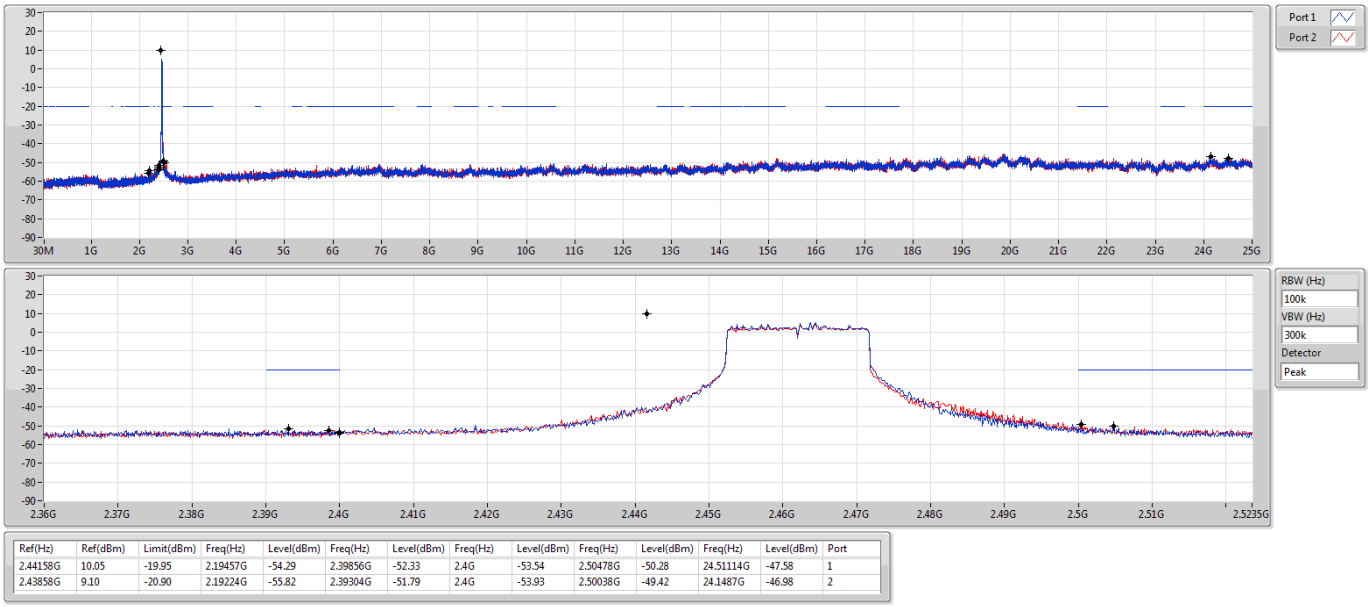
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44158G	10.05	-19.95	2.11302G	-51.57	2.39992G	-37.75	2.4G	-38.33	2.50614G	-48.00	24.84547G	-46.81	1
2.43858G	9.10	-20.90	2.30758G	-51.83	2.39992G	-39.00	2.4G	-39.52	2.50638G	-46.28	21.81958G	-46.28	2

802.11ax HEW20_Nss1,(MCS0)_2TX **CSENdB**

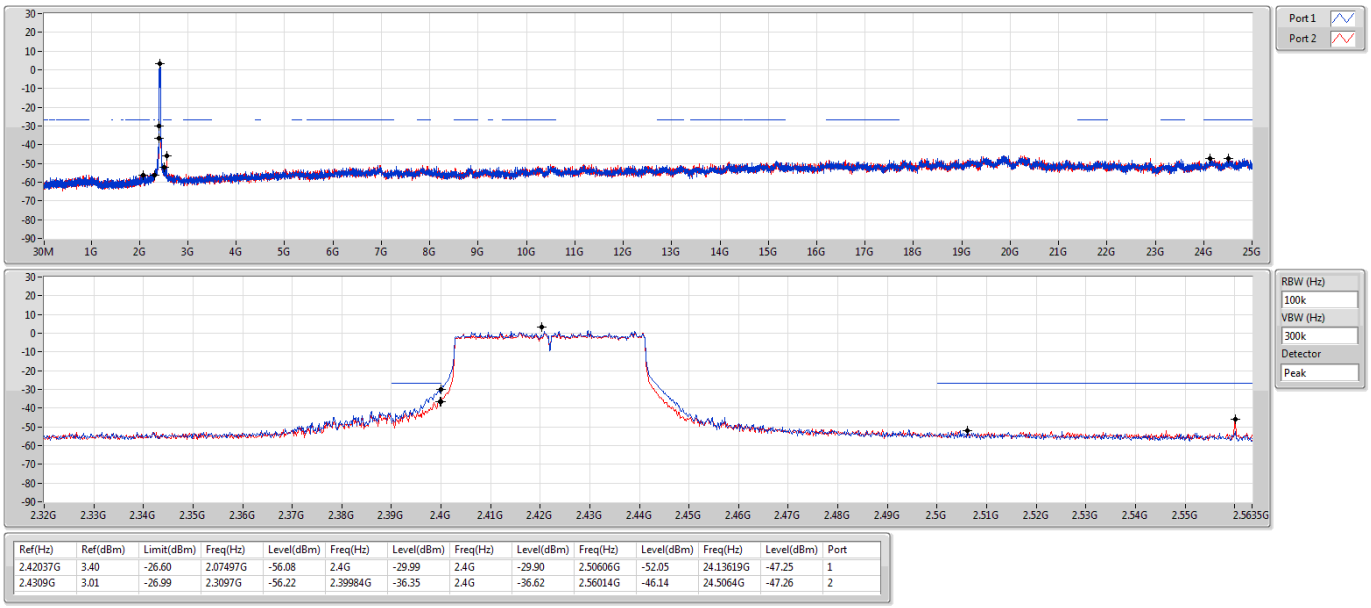
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44158G	10.05	-19.95	2.19457G	-54.29	2.39856G	-52.33	2.4G	-53.54	2.50478G	-50.28	24.51114G	-47.58	1
2.43858G	9.10	-20.90	2.19224G	-55.82	2.39304G	-51.79	2.4G	-53.93	2.50038G	-49.42	24.1487G	-46.98	2

802.11ax HEW40_Nss1,(MCS0)_2TX **CSENdB**

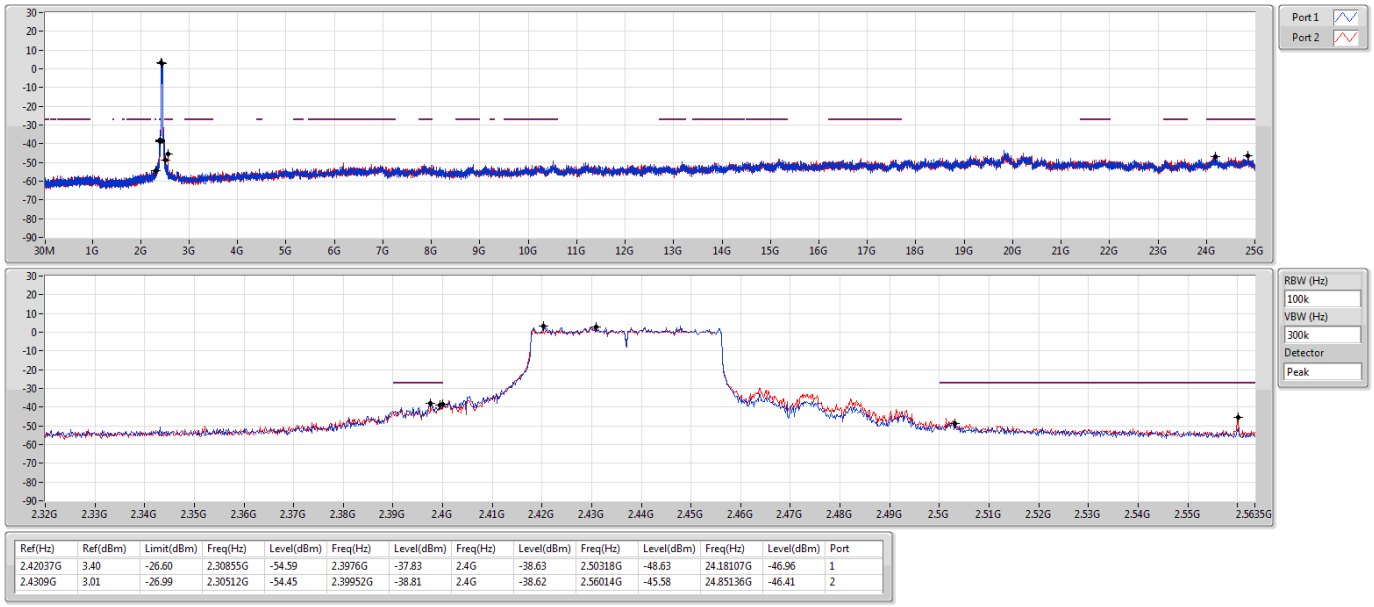
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.42037G	3.40	-26.60	2.07497G	-56.08	2.4G	-29.99	2.4G	-29.90	2.50606G	-52.05	24.13619G	-47.25	1
2.4309G	3.01	-26.99	2.3097G	-56.22	2.39984G	-36.35	2.4G	-36.62	2.56014G	-46.14	24.5064G	-47.26	2

802.11ax HEW40_Nss1,(MCS0)_2TX **CSENdB**

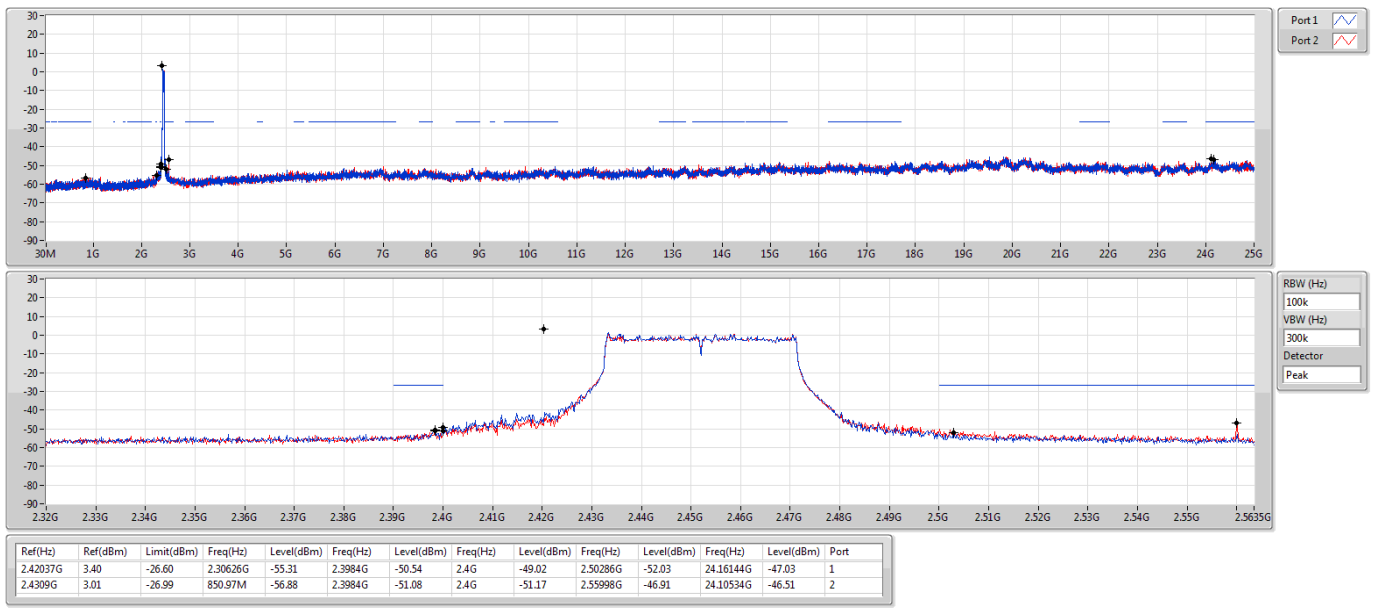
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.42037G	3.40	-26.60	2.30855G	-54.59	2.3976G	-37.83	2.4G	-38.63	2.50318G	-48.63	24.18107G	-46.96	1
2.4309G	3.01	-26.99	2.30512G	-54.45	2.39952G	-38.81	2.4G	-38.62	2.56014G	-45.58	24.85136G	-46.41	2

802.11ax HEW40_Nss1,(MCS0)_2TX **CSENdB**

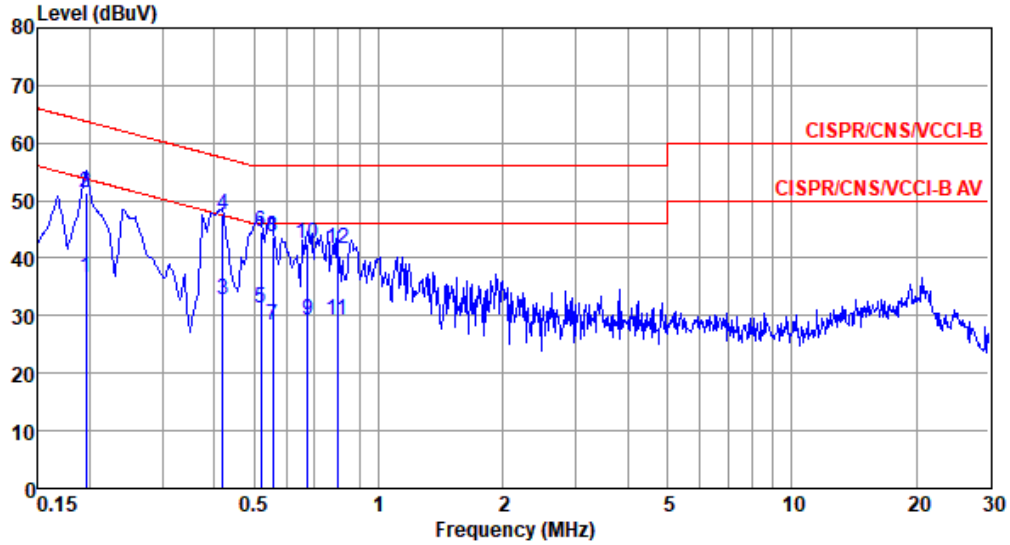
2452MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.42037G	3.40	-26.60	2.30626G	-55.31	2.3984G	-50.54	2.4G	-49.02	2.50286G	-52.03	24.16144G	-47.03	1
2.4309G	3.01	-26.99	850.97M	-56.88	2.3984G	-51.08	2.4G	-51.17	2.55998G	-46.91	24.10534G	-46.51	2

Modulation Mode	ax HE20-OFDMA	**Test Freq. (MHz)**	2437
Power Phase	Line		

Test by : Joe Liao Temperature: 26°C Humidity: 62%

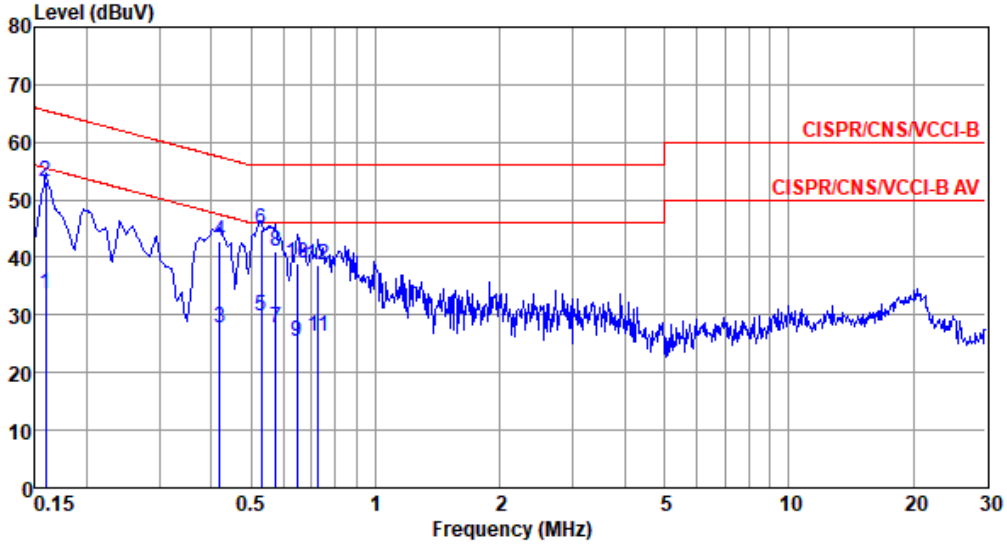


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.195	36.66	53.80	-17.14	26.79	9.61	0.08	0.18	Average
2	0.195	51.25	63.80	-12.55	41.38	9.61	0.08	0.18	QP
3	0.419	32.68	47.46	-14.78	22.80	9.61	0.08	0.19	Average
4*	0.419	47.61	57.46	-9.85	37.73	9.61	0.08	0.19	QP
5	0.518	31.36	46.00	-14.64	21.43	9.61	0.10	0.22	Average
6	0.518	44.68	56.00	-11.32	34.75	9.61	0.10	0.22	QP
7	0.555	28.40	46.00	-17.60	18.46	9.61	0.11	0.22	Average
8	0.555	43.81	56.00	-12.19	33.87	9.61	0.11	0.22	QP
9	0.672	29.14	46.00	-16.86	19.16	9.61	0.13	0.24	Average
10	0.672	42.63	56.00	-13.37	32.65	9.61	0.13	0.24	QP
11	0.796	29.12	46.00	-16.88	19.11	9.61	0.14	0.26	Average
12	0.796	41.55	56.00	-14.45	31.54	9.61	0.14	0.26	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation Mode	ax HE20-OFDMA	**Test Freq. (MHz)**	2437
Power Phase	Neutral		

Test by : Joe Liao Temperature: 26°C Humidity: 62%



	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.159	33.77	55.52	-21.75	23.81	9.68	0.08	0.20	Average
2	0.159	53.17	65.52	-12.35	43.21	9.68	0.08	0.20	QP
3	0.419	27.67	47.46	-19.79	17.56	9.67	0.08	0.36	Average
4	0.419	42.70	57.46	-14.76	32.59	9.67	0.08	0.36	QP
5	0.529	29.80	46.00	-16.20	19.67	9.67	0.10	0.36	Average
6*	0.529	44.92	56.00	-11.08	34.79	9.67	0.10	0.36	QP
7	0.573	27.89	46.00	-18.11	17.75	9.67	0.11	0.36	Average
8	0.573	41.18	56.00	-14.82	31.04	9.67	0.11	0.36	QP
9	0.644	25.25	46.00	-20.75	15.08	9.68	0.12	0.37	Average
10	0.644	38.93	56.00	-17.07	28.76	9.68	0.12	0.37	QP
11	0.727	26.24	46.00	-19.76	16.06	9.68	0.13	0.37	Average
12	0.727	38.58	56.00	-17.42	28.40	9.68	0.13	0.37	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB) + Aux (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).