FCC Test Report

FCC ID	:	**2AJAC-AN520API**
Equipment	:	**Araknis Networks 520-series Wi-Fi 6 AX3000 Indoor Wireless Access Point**
Model No.	:	**AN-520-AP-I**
Brand Name	:	**Araknis Networks**
Applicant	:	**Snap One, LLC**
Address	:	**1800 Continental Blvd Suite 200-300 Charlotte, North Carolina 28273 USA**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Feb. 24, 2022**
Tested Date	:	**Apr. 13 ~ Apr. 26, 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
FR222403AC	Rev. 01	Initial issue	Jun. 09, 2022
FR222403AC	Rev. 02	Adding front end module information.	Jun. 28, 2022

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emission	[dBuV]: 0.529MHz 41.21 (Margin -4.79dB) - AV	Pass
15.247(d) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 2390.00MHz 52.98 (Margin -1.02dB) - AV	Pass
15.247(b)(3)	Conducted Output Power	Max Power [dBm]: 26.71	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]	2	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.					

1.1.2 Antenna Details

Ant. No.	Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)				
				2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850
1	2.4G-1	PIFA	UFL	5.66	---	---	---	---
2	2.4G-2	PIFA	UFL	6.75	---	---	---	---
3	5G-1	PIFA	UFL	---	4.9	5.1	5.8	5.5
4	5G-2	PIFA	UFL	---	5.1	5	5.25	5.13

1.1.3 Source of Front End Module

Source	2.4 GHz Front End Module	5 GHz Front End Module
Source A	Brand: Kxcomtech Model: KCT8248HE	Brand: Kxcomtech Model: KCT8548HE
Source B	Brand: Qorvo Model: QPF4288ATR13	Brand: Qorvo Model: QPF4588ATR13-5K

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12V from AC adapter 54V from POE

Note: The above power supplies are not bundled in market.

1.1.5 Accessories

Accessories		
No.	**Equipment**	**Description**
1	RJ45 cable	0.24m non-shielded without core

1.1.6 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	---	---

1.1.7 Test Tool and Duty Cycle

Test Tool	QPSR, V5.0-00197		
Duty Cycle and Duty Factor	**Mode**	**Duty Cycle (%)**	**Duty Factor (dB)**
	11b	64.90%	1.88
	11g	94.56%	0.24
	ax HE20-OFDMA	92.27%	0.35
	ax HE40-OFDMA	86.01%	0.65

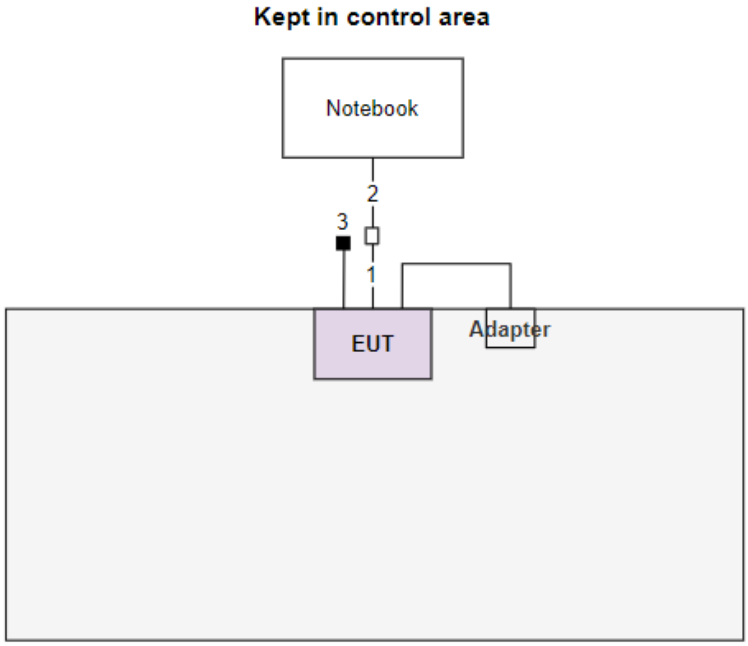
1.1.8 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	21.5
11b	2437	21.5
11b	2462	21.5
11g	2412	22.5
11g	2437	24
11g	2462	22.5
ax HE20-OFDMA	2412	22.5
ax HE20-OFDMA	2437	24
ax HE20-OFDMA	2462	22.5
ax HE40-OFDMA	2422	20.5
ax HE40-OFDMA	2437	21.5
ax HE40-OFDMA	2452	20.5

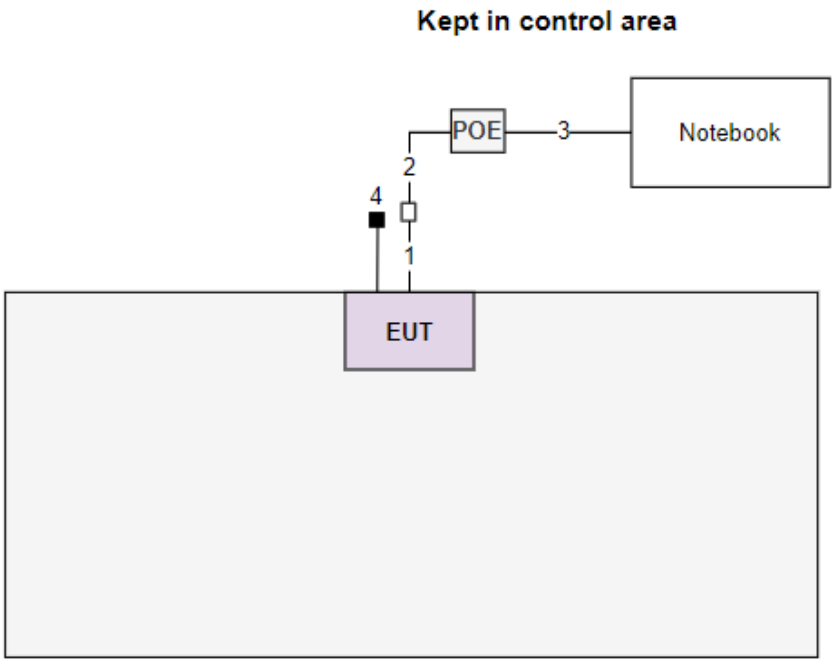
1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E5470	DoC	---
2	Adapter	ASIAN POWER DEVICES INC.	WA-36N12FU	---	Remarks: I/P: 100-240V~, 50~60Hz, 0.9A Max. O/P: 12V⎓3.0A Note 1: Provided by applicant. Note 2: The adapter has 2 models. Model: WA-36N12FU (Undetachable plug) Model: WA-36N12R (Detachable plug)
3	Adapter	ASIAN POWER DEVICES INC.	WA-48B12R	---	Remarks: I/P: 100-240V~, 50~60Hz, 1.5A Max. O/P: 12V⎓4A 48W Note 1: Provided by applicant. Note 2: The adapter has 2 models. Model: WA-48B12R (Detachable plug) Model: WA-48B12FU (Undetachable plug)
4	POE	EnGenius	EPA5006GAT	---	Remarks: I/P: 100-240V~, 50~60Hz, 0.8A O/P: 54V⎓0.6A (Provided by applicant.)

1.3 Test Setup Chart

Test Setup Diagram (Adapter mode)


No.	Signal cable / Length (m)
1	RJ45, 0.24m non-shielded.
2	RJ45, 10m non-shielded.
3	RJ45, 1.3m non-shielded with load.

Test Setup Diagram (POE mode)


No.	Signal cable / Length (m)
1	RJ45, 0.24m non-shielded.
2	RJ45, 10m non-shielded.
3	RJ45, 1.3m non-shielded.
4	RJ45, 1.3m non-shielded with load.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Apr. 26, 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	101295	Jan. 12, 2022	Jan. 11, 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 25, 2021	May 24, 2022
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber3 / (03CH03-WS)				
Tested Date	Apr. 13 ~ Apr. 22, 2022				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Mar. 15, 2022	Mar. 14, 2023
Spectrum Analyzer	R&S	FSV40	101499	Mar. 08, 2022	Mar. 07, 2023
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 08, 2021	Nov. 07, 2022
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	May. 06, 2021	May. 05, 2022
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Dec. 20, 2021	Dec. 19, 2022
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170508	Jan. 11, 2022	Jan. 10, 2023
Preamplifier	EMC	EMC02325	980187	Jul. 26, 2021	Jul. 25, 2022
Preamplifier	Agilent	83017A	MY39501309	Sep. 06, 2021	Sep. 05, 2022
Preamplifier	EMC	EMC184045B	980192	Jul. 14, 2021	Jul. 13, 2022
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 05, 2021	Oct. 04, 2022
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800 -001	Sep. 24, 2021	Sep. 23, 2022
LF cable-3M	EMC	EMC8D-NM-NM-300 0	131103	Sep. 24, 2021	Sep. 23, 2022
LF cable-13M	EMC	EMC8D-NM-NM-130 00	131104	Sep. 24, 2021	Sep. 23, 2022
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Sep. 24, 2021	Sep. 23, 2022
RF cable-8M	EMC	EMC104-SM-SM-80 00	181107	Sep. 24, 2021	Sep. 23, 2022
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Apr. 25, 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	±3.96 dB
Unwanted Emission > 1GHz	±4.51 dB

2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-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.)
Test Site	03CH03-WS
Address of Test Site	No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 333, Taiwan (R.O.C.)

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISED#: 10807C
- 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	11g	2437	6 Mbps	1, 2
Unwanted Emissions ≤ 1GHz	11g	2437	6 Mbps	1, 2
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	1
Beamforming mode				
Conducted Output Power	ax HE20-OFDMA ax HE40-OFDMA	2412 / 2437 / 2462 2422 / 2437 / 2452	MCS 0 MCS 0	1

NOTE:

1. Source of front end module A and B had been covered during the pretest and found that **Source of front end module A** was the worst case and was chosen for final test.
2. Adapter (model: WA-36N12FU) was the worst case and was selected for final testing.
3. Test configurations are listed as below:
   1) Configuration 1: POE mode
   2) Configuration 2: Adapter mode

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

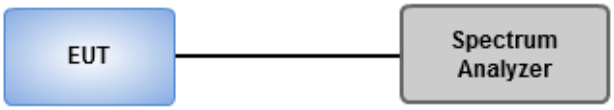
6dB Bandwidth

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	23°C / 67%	Tested By	Aska Huang

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	23°C / 67%	**Tested By**	Aska Huang

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.

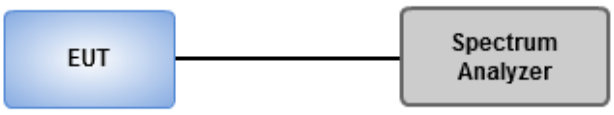
2 Set the sweep time to: ≥ 10 (number of measurement points in sweep) x (total on/off period of the transmitted signal).

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	23°C / 67%	**Tested By**	Aska Huang

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

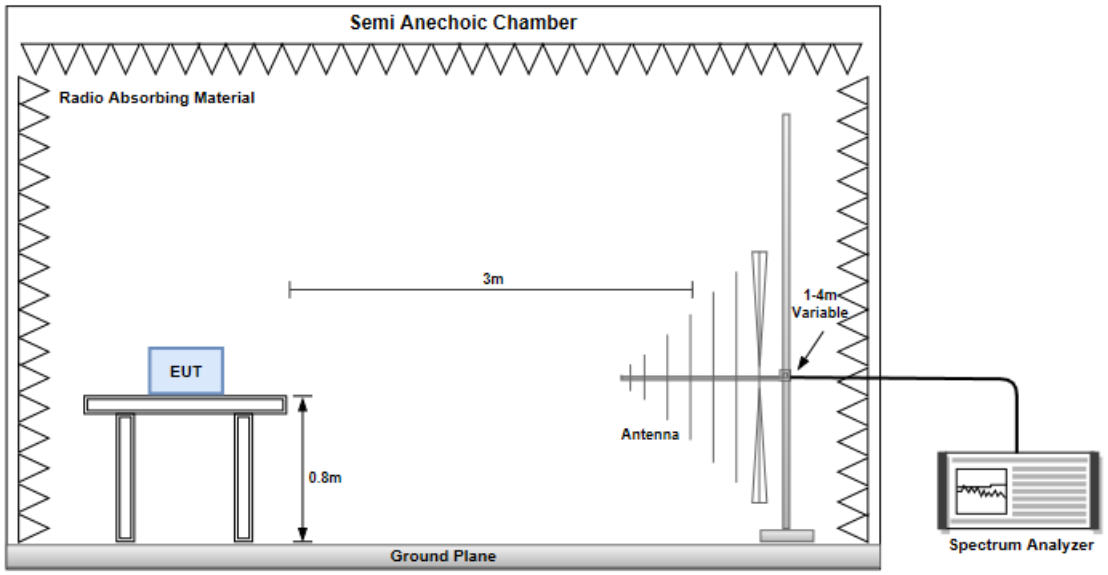
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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:

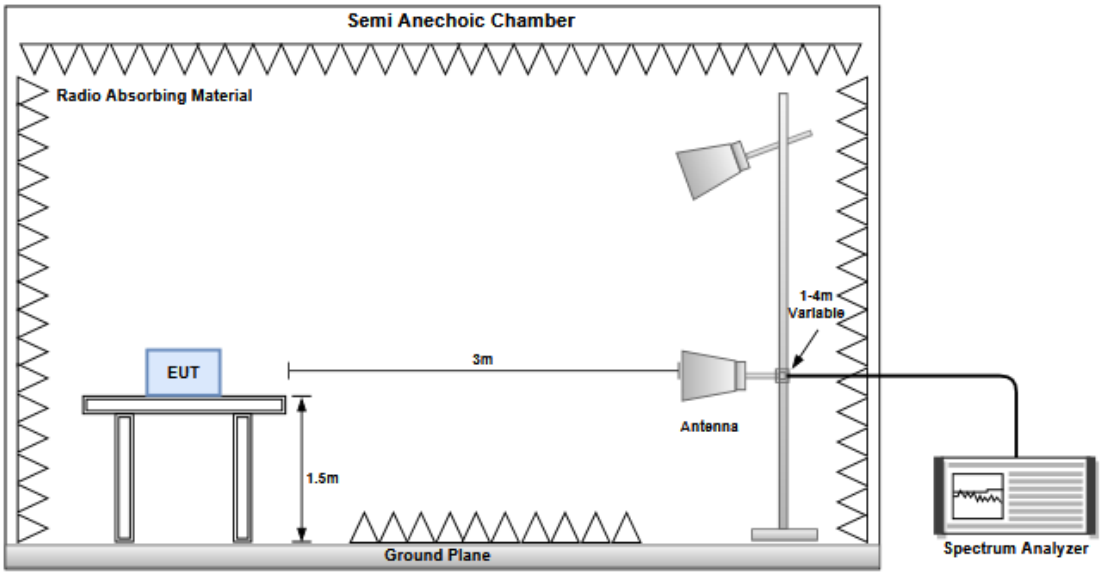
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

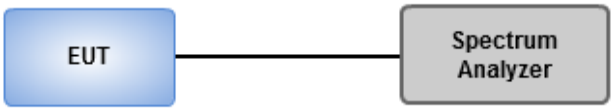
Reference level measurement

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	23°C / 67%	Tested By	Aska Huang

Refer to Appendix E.

3.6 AC Power Line Conducted Emissions

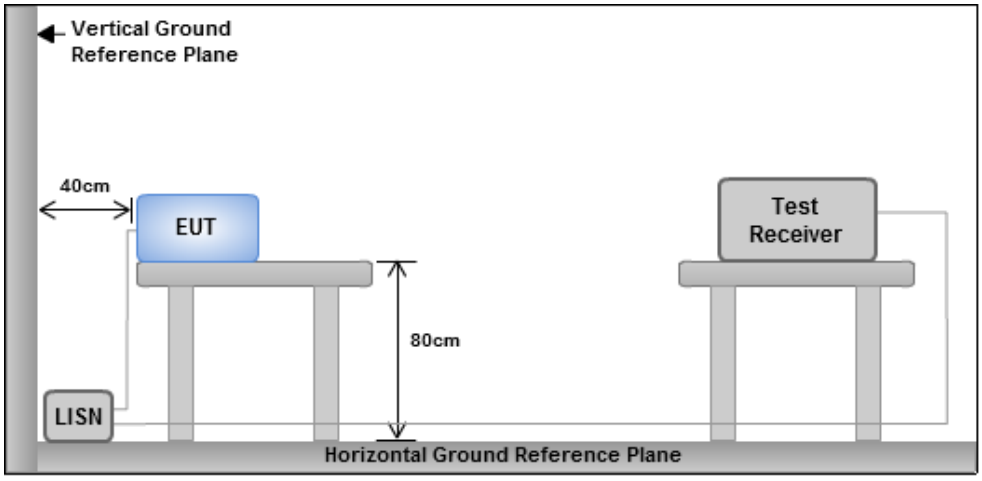
3.6.1 Limit of AC Power Line Conducted Emissions

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	**Kwei Shan**	**Kwei Shan Site II**
Tel: 886-2-2601-1640	Tel: 886-3-271-8666	Tel: 886-3-271-8640
No.30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan (R.O.C.)	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.)	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)_2TX	8.623M	13.242M	13M2G1D	6.087M	12.735M
802.11g_Nss1,(6Mbps)_2TX	16.014M	16.281M	16M3D1D	10.435M	16.064M
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	17.971M	18.886M	18M9D1D	11.304M	18.669M
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	34.203M	37.627M	37M6D1D	28.696M	37.337M

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;

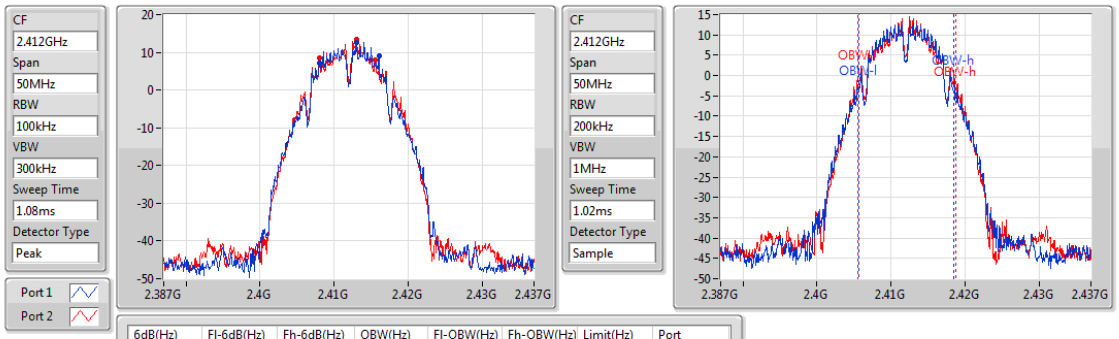
Result

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)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.043M	12.88M	7.536M	13.242M
2437MHz	Pass	500k	6.087M	13.242M	8.623M	12.808M
2462MHz	Pass	500k	7.536M	13.242M	8.623M	12.735M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.145M	16.281M	15.072M	16.136M
2437MHz	Pass	500k	13.913M	16.208M	10.435M	16.136M
2462MHz	Pass	500k	16.014M	16.281M	13.841M	16.064M
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-
2412MHz	Pass	500k	12.536M	18.813M	17.464M	18.669M
2437MHz	Pass	500k	11.304M	18.886M	16.667M	18.669M
2462MHz	Pass	500k	14.058M	18.813M	17.971M	18.813M
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-
2422MHz	Pass	500k	32.464M	37.482M	34.203M	37.337M
2437MHz	Pass	500k	28.696M	37.627M	33.913M	37.482M
2452MHz	Pass	500k	32.464M	37.337M	31.304M	37.627M

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

802.11b_Nss1,(1Mbps)_2TX **EBW**

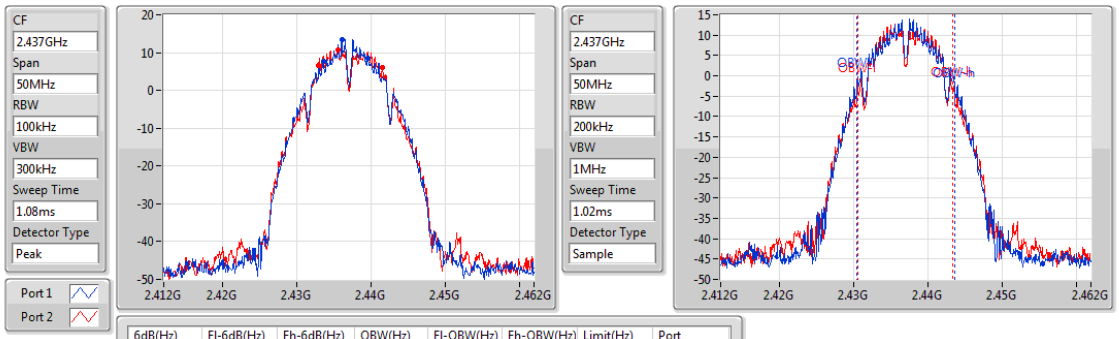
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.043M	2.408014G	2.416058G	12.88M	2.405632G	2.418512G	500k	1
7.536M	2.408014G	2.415551G	13.242M	2.405488G	2.418729G	500k	2

802.11b_Nss1,(1Mbps)_2TX **EBW**

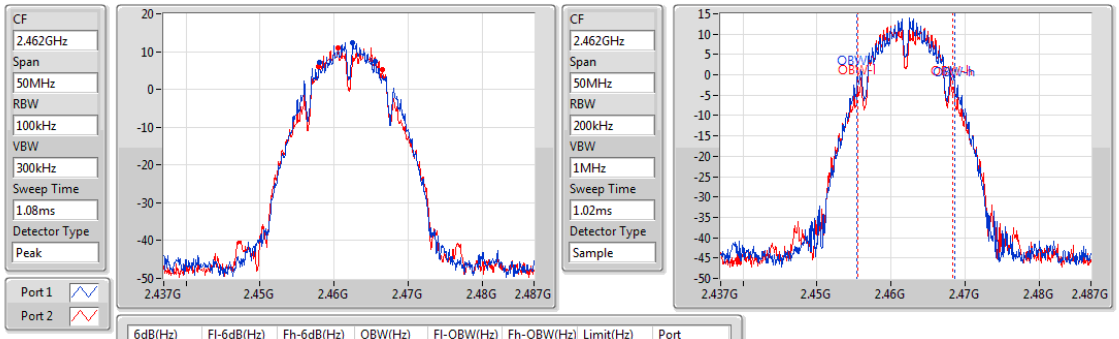
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
6.087M	2.433522G	2.439609G	13.242M	2.430415G	2.443657G	500k	1
8.623M	2.432942G	2.441565G	12.808M	2.43056G	2.443368G	500k	2

802.11b_Nss1,(1Mbps)_2TX **EBW**

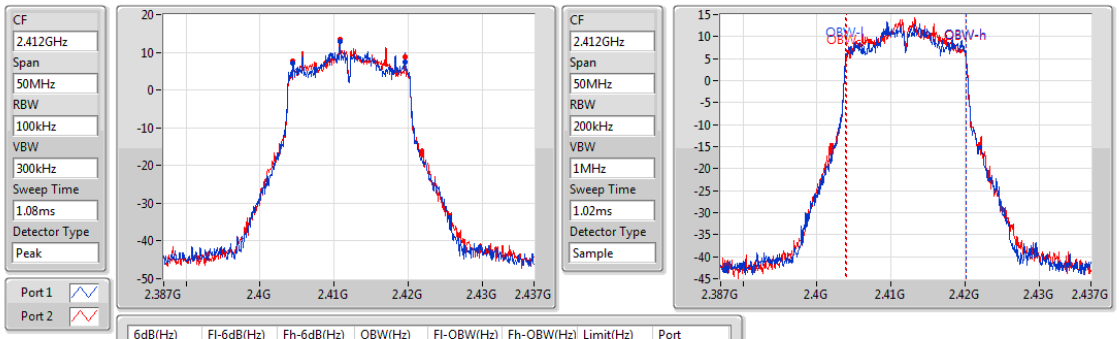
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
7.536M	2.458014G	2.465551G	13.242M	2.455415G	2.468657G	500k	1
8.623M	2.457942G	2.466565G	12.735M	2.45556G	2.468295G	500k	2

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

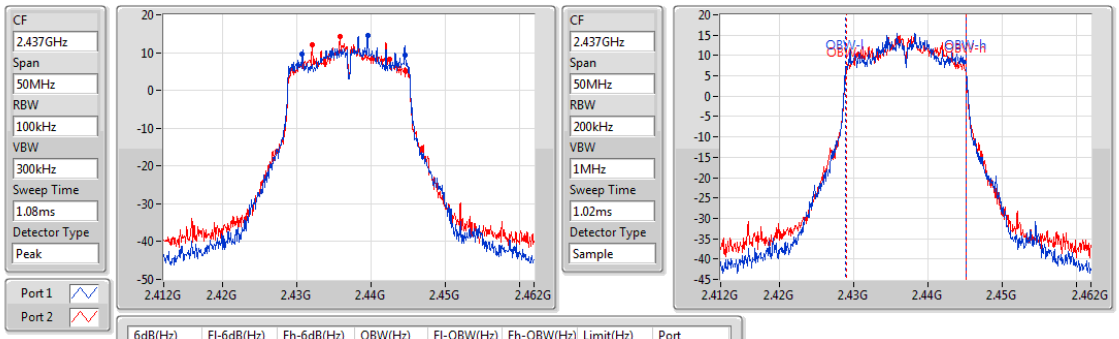
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.145M	2.404464G	2.419609G	16.281M	2.403896G	2.420177G	500k	1
15.072M	2.404464G	2.419536G	16.136M	2.403968G	2.420104G	500k	2

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

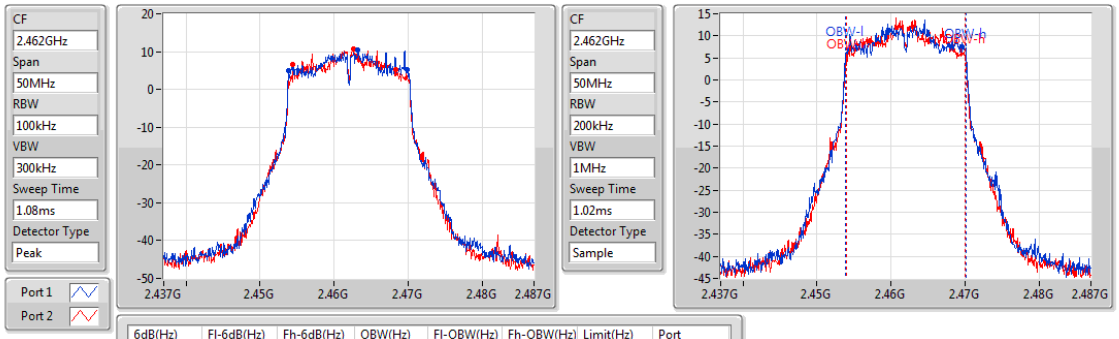
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
13.913M	2.430696G	2.444609G	16.208M	2.428896G	2.445104G	500k	1
10.435M	2.432G	2.442435G	16.136M	2.428968G	2.445104G	500k	2

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

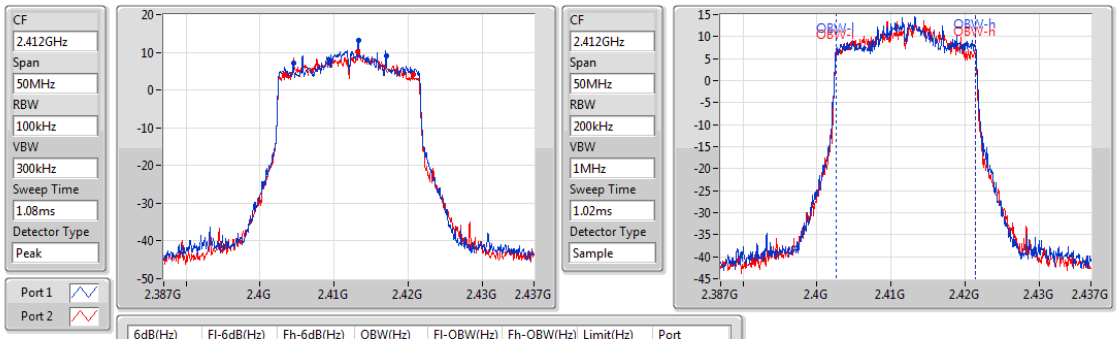
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.014M	2.453884G	2.469899G	16.281M	2.453896G	2.470177G	500k	1
13.841M	2.454464G	2.468304G	16.064M	2.453968G	2.470032G	500k	2

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

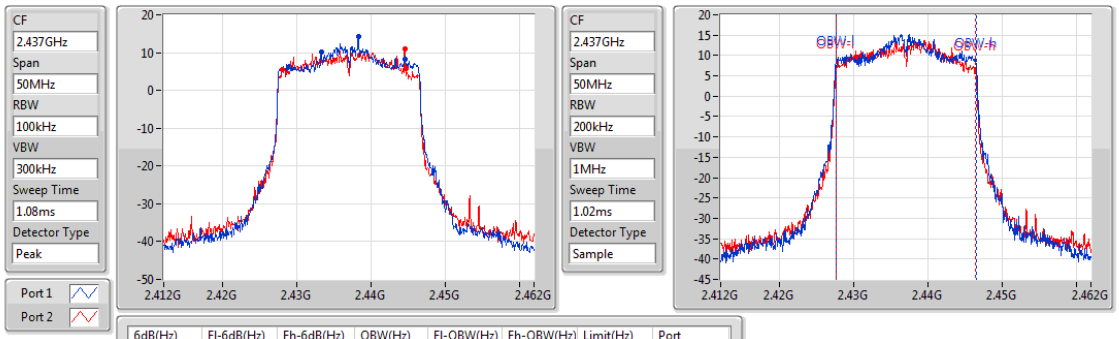
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
12.536M	2.404536G	2.417072G	18.813M	2.402593G	2.421407G	500k	1
17.464M	2.403232G	2.420696G	18.669M	2.402666G	2.421334G	500k	2

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

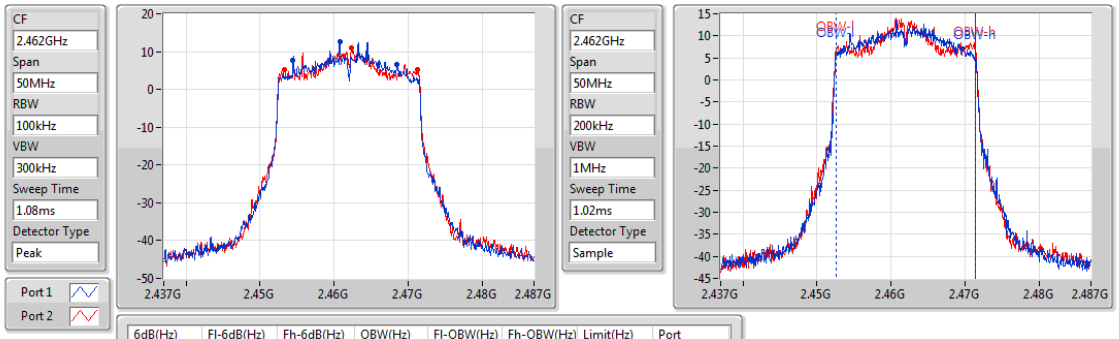
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
11.304M	2.433304G	2.444609G	18.886M	2.427593G	2.446479G	500k	1
16.667M	2.428014G	2.444681G	18.669M	2.427666G	2.446334G	500k	2

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

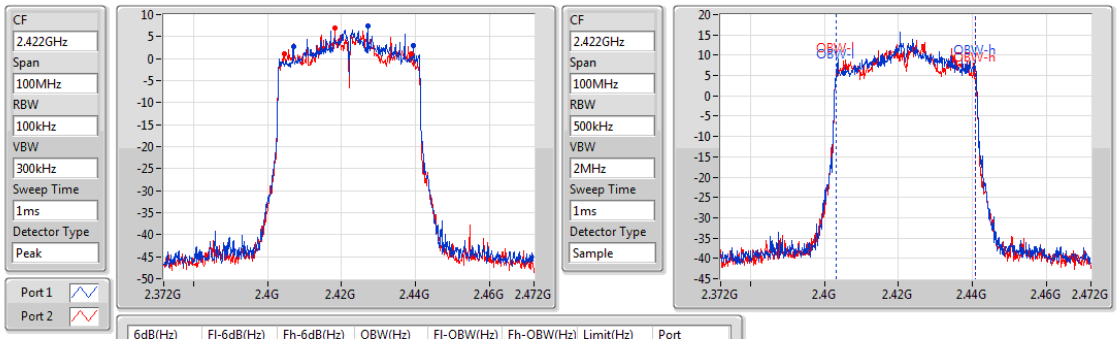
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.058M	2.454464G	2.468522G	18.813M	2.452593G	2.471407G	500k	1
17.971M	2.453304G	2.471275G	18.813M	2.452593G	2.471407G	500k	2

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

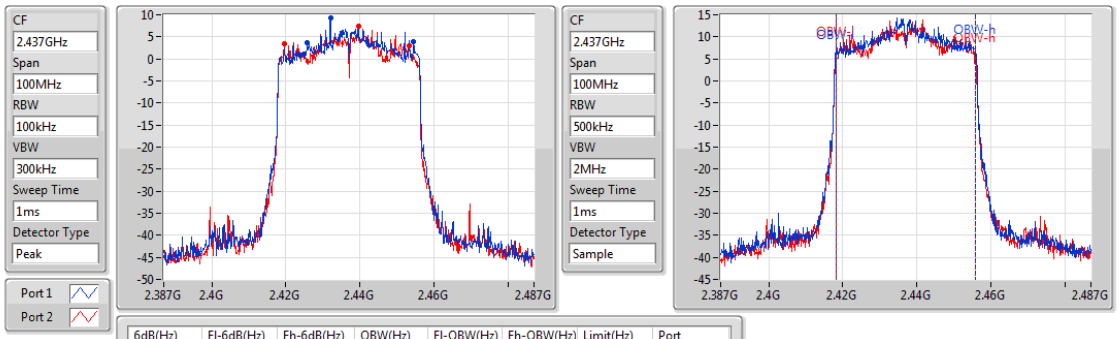
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
32.464M	2.407072G	2.439536G	37.482M	2.403331G	2.440813G	500k	1
34.203M	2.404609G	2.438812G	37.337M	2.403331G	2.440669G	500k	2

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

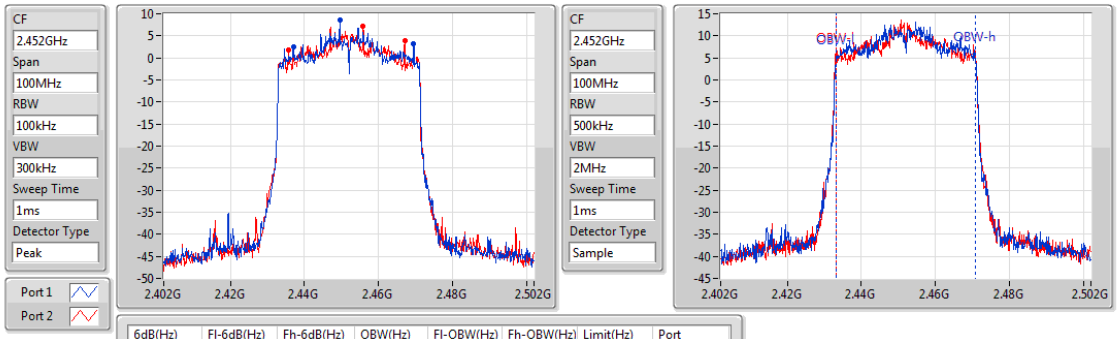
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
28.696M	2.425841G	2.454536G	37.627M	2.418187G	2.455813G	500k	1
33.913M	2.419464G	2.453377G	37.482M	2.418187G	2.455669G	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
32.464M	2.437072G	2.469536G	37.337M	2.433331G	2.470669G	500k	1
31.304M	2.435768G	2.467072G	37.627M	2.433187G	2.470813G	500k	2

Non-beamforming mode

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	24.32	0.27040
802.11g_Nss1,(6Mbps)_2TX	26.71	0.46881
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	26.47	0.44361
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	24.07	0.25527

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)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	6.75	21.35	21.26	24.32	29.25	31.07	36.00
2437MHz	Pass	6.75	20.99	21.24	24.13	29.25	30.88	36.00
2462MHz	Pass	6.75	20.85	21.26	24.07	29.25	30.82	36.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	6.75	22.71	22.35	25.54	29.25	32.29	36.00
2437MHz	Pass	6.75	23.74	23.65	26.71	29.25	33.46	36.00
2462MHz	Pass	6.75	21.63	22.65	25.18	29.25	31.93	36.00
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-	-	-
2412MHz	Pass	6.75	22.1	22.41	25.27	29.25	32.02	36.00
2437MHz	Pass	6.75	23.53	23.38	26.47	29.25	33.22	36.00
2462MHz	Pass	6.75	21.25	22.49	24.92	29.25	31.67	36.00
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-	-	-
2422MHz	Pass	6.75	20.28	20.11	23.21	29.25	29.96	36.00
2437MHz	Pass	6.75	20.75	21.35	24.07	29.25	30.82	36.00
2452MHz	Pass	6.75	19.52	20.46	23.03	29.25	29.78	36.00

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

Beamforming mode

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11ax HEW20-BF_Nss1,(MCS0)_2TX-OFDMA	23.46	0.22182
802.11ax HEW40-BF_Nss1,(MCS0)_2TX-OFDMA	21.06	0.12764

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	9.23	19.09	19.4	22.26	26.77	31.49	36.00
2437MHz	Pass	9.23	20.52	20.37	23.46	26.77	32.69	36.00
2462MHz	Pass	9.23	18.24	19.48	21.91	26.77	31.14	36.00
802.11ax HEW40-BF_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-	-	-
2422MHz	Pass	9.23	17.27	17.1	20.20	26.77	29.43	36.00
2437MHz	Pass	9.23	17.74	18.34	21.06	26.77	30.29	36.00
2452MHz	Pass	9.23	16.51	17.45	20.02	26.77	29.25	36.00

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

DG = Directional Gain = 10 log $[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/N_{ANT}]$;

Ant. No.	Antenna Gain (dBi)
1	5.66
2	6.75
Directional Gain (dBi)	9.23

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_2TX	-2.69
802.11g_Nss1,(6Mbps)_2TX	-2.92
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	-5.52
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	-10.21

RBW= 3 kHz

Result

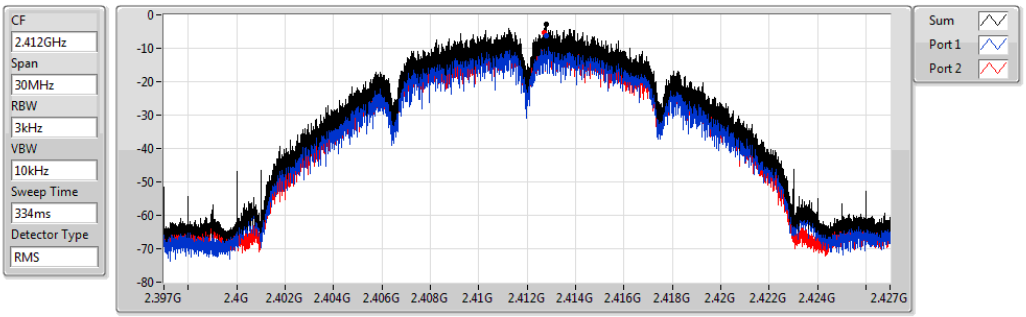
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.23	-6.15	-5.18	-2.69	4.77
2437MHz	Pass	9.23	-4.03	-6.52	-2.91	4.77
2462MHz	Pass	9.23	-5.66	-6.05	-3.49	4.77
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	9.23	-7.35	-6.11	-4.45	4.77
2437MHz	Pass	9.23	-6.24	-5.43	-2.92	4.77
2462MHz	Pass	9.23	-7.79	-6.72	-4.54	4.77
802.11ax HEW20_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-
2412MHz	Pass	9.23	-7.92	-9.91	-6.65	4.77
2437MHz	Pass	9.23	-7.47	-9.12	-5.52	4.77
2462MHz	Pass	9.23	-9.50	-7.88	-6.00	4.77
802.11ax HEW40_Nss1,(MCS0)_2TX-OFDMA	-	-	-	-	-	-
2422MHz	Pass	9.23	-11.81	-14.21	-10.21	4.77
2437MHz	Pass	9.23	-12.45	-13.83	-10.98	4.77
2452MHz	Pass	9.23	-11.97	-12.93	-10.34	4.77

DG = Directional Gain;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;
RBW= 3 kHz
DG = Directional Gain = 10 log $[(10^{G1/20} + 10^{G2/20} + ...+ 10^{GN/20})^2/N_{ANT}]$;

Ant. No.	Antenna Gain (dBi)
1	5.66
2	6.75
Directional Gain (dBi)	9.23

802.11b_Nss1,(1Mbps)_2TX **PSD**

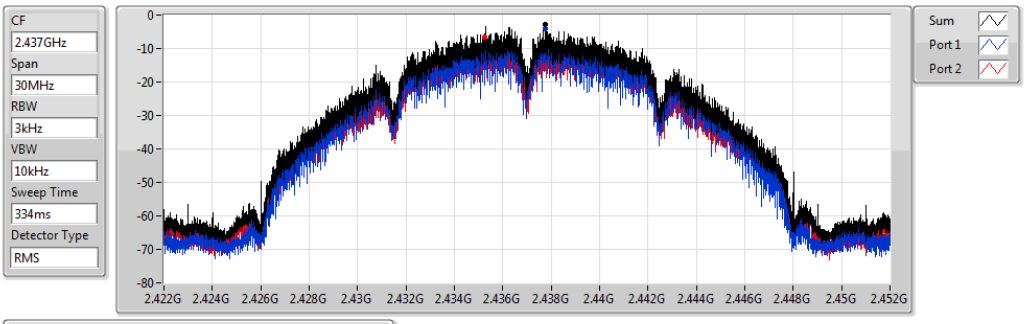
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.69	-2.69	-6.15	-5.18

802.11b_Nss1,(1Mbps)_2TX **PSD**

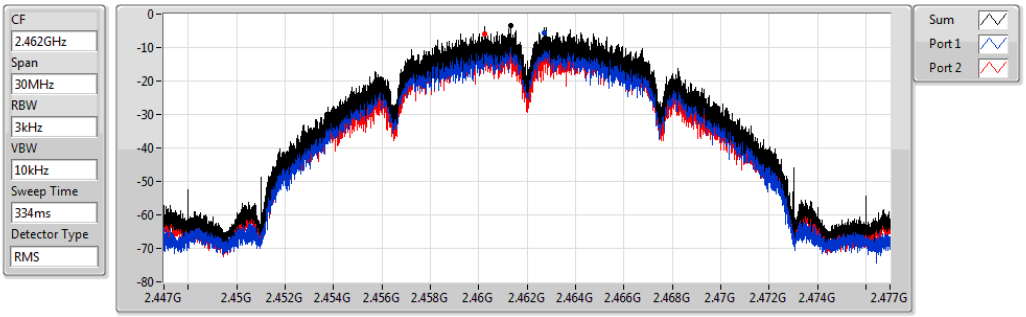
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.91	-2.91	-4.03	-6.52

802.11b_Nss1,(1Mbps)_2TX **PSD**

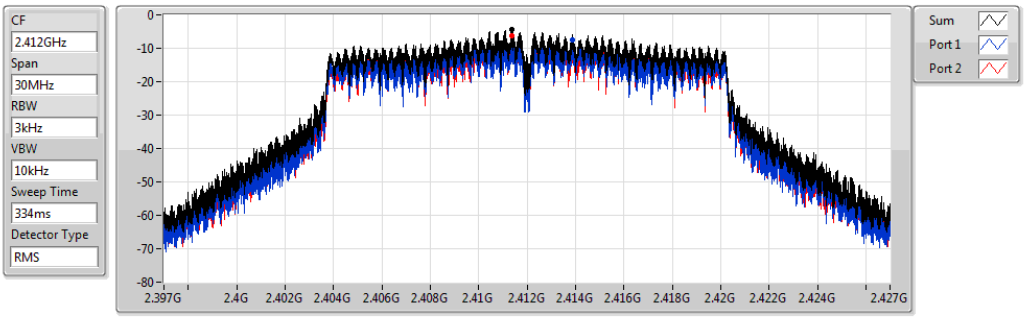
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.49	-3.49	-5.66	-6.05

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

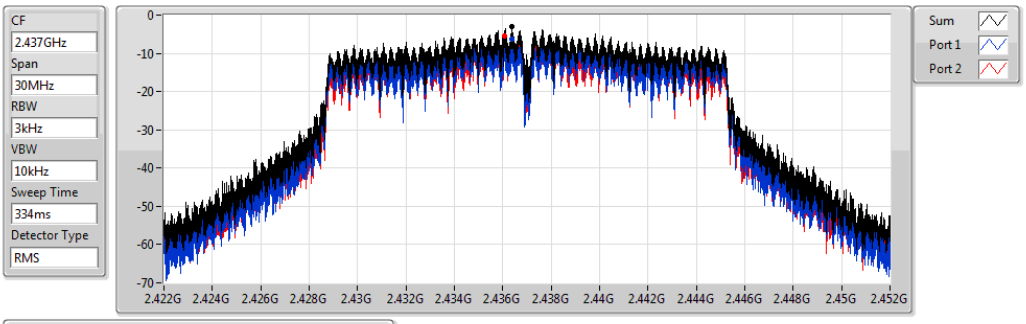
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.45	-4.45	-7.35	-6.11

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

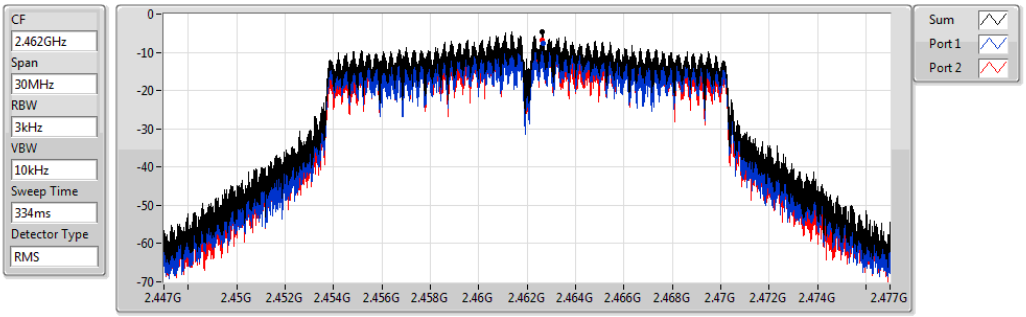
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.92	-2.92	-6.24	-5.43

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

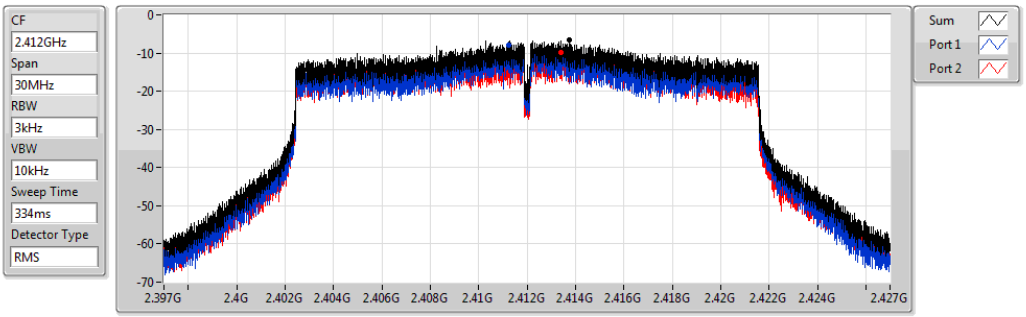
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.54	-4.54	-7.79	-6.72

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

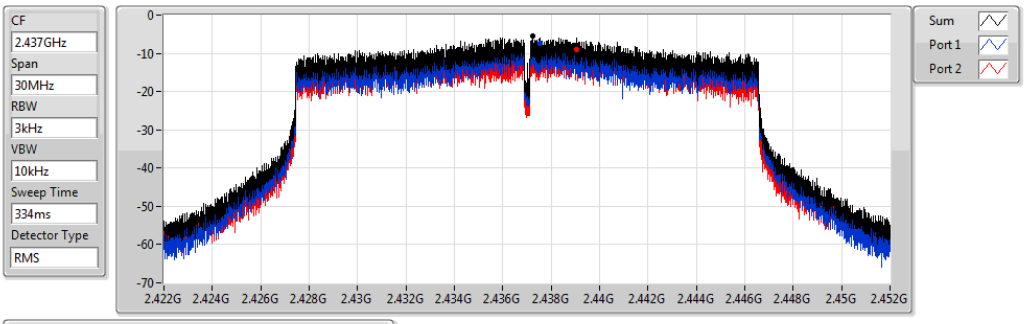
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.65	-6.65	-7.92	-9.91

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

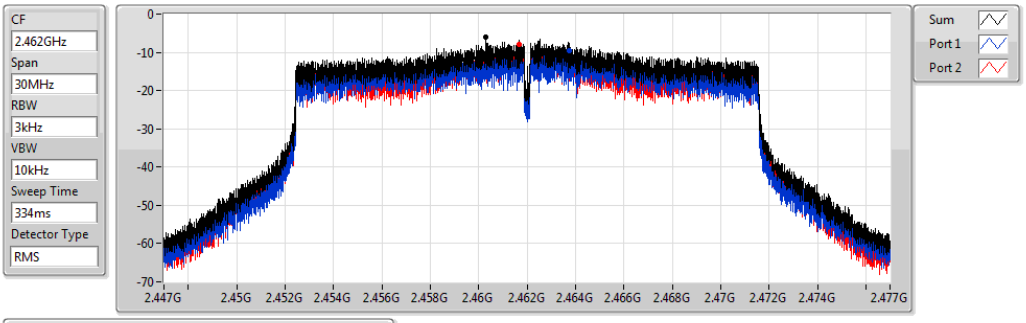
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.52	-5.52	-7.47	-9.12

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

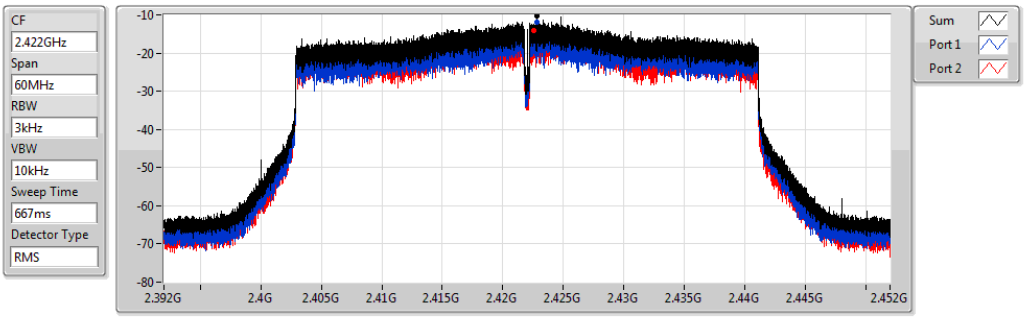
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.00	-6.00	-9.50	-7.88

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

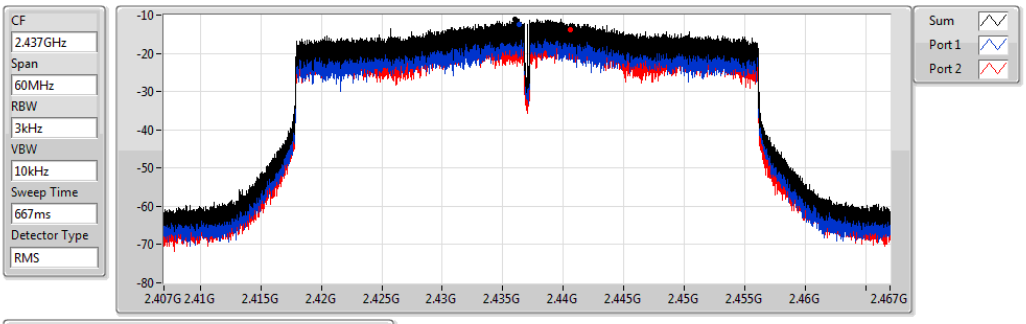
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.21	-10.21	-11.81	-14.21

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

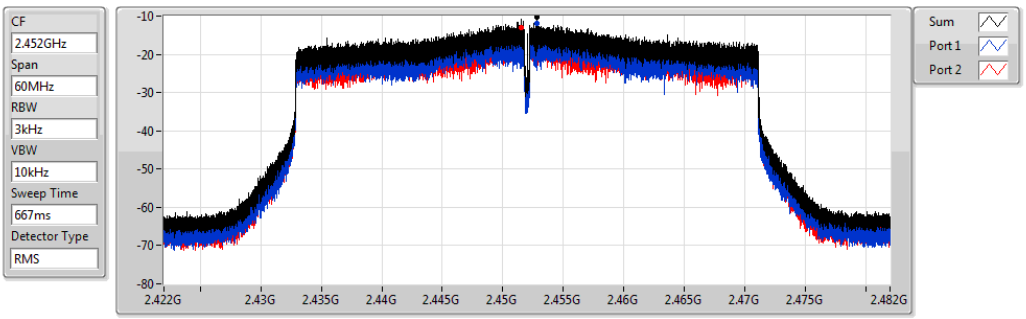
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.98	-10.98	-12.45	-13.83

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

2452MHz



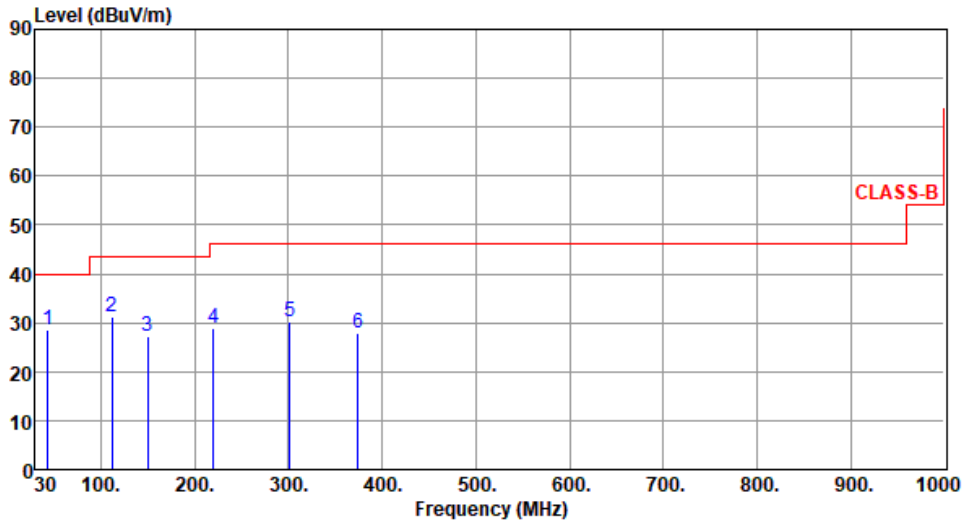
Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.34	-10.34	-11.97	-12.93

Adapter mode

Unwanted Emissions (Below 1GHz)

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

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

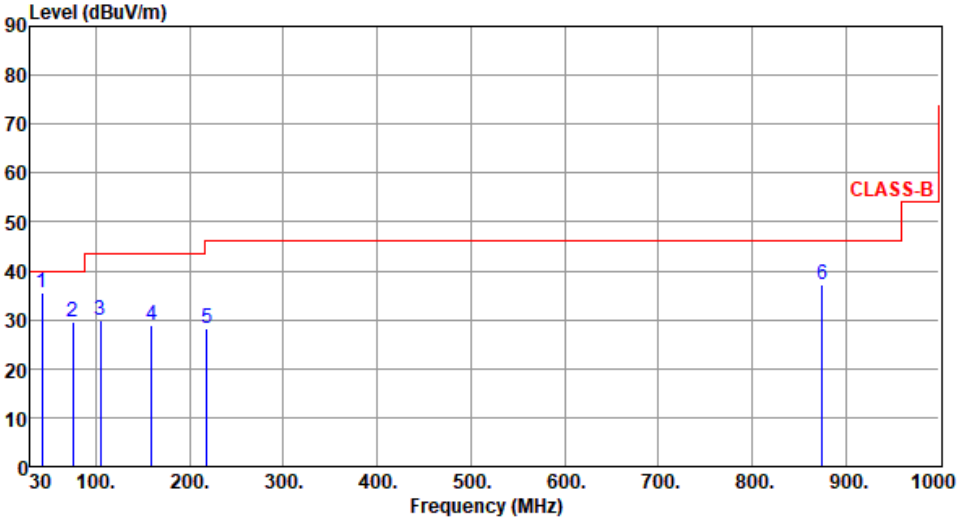


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	43.62	28.49	40.00	-11.51	37.48	-8.99	Peak	---	---
2	111.56	31.25	43.50	-12.25	42.93	-11.68	Peak	---	---
3	149.45	27.26	43.50	-16.24	35.99	-8.73	Peak	---	---
4	220.35	28.85	46.00	-17.15	40.70	-11.85	Peak	---	---
5	301.45	30.25	46.00	-15.75	38.44	-8.19	Peak	---	---
6	374.46	27.88	46.00	-18.12	34.09	-6.21	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	11g	**Test Freq. (MHz)**	2437
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63



	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	42.55	35.64	40.00	-4.36	44.53	-8.89	QP	100	9
2	75.68	29.69	40.00	-10.31	41.82	-12.13	Peak	---	---
3	104.55	29.94	43.50	-13.56	42.59	-12.65	Peak	---	---
4	159.22	28.95	43.50	-14.55	37.34	-8.39	Peak	---	---
5	218.24	28.36	46.00	-17.64	40.18	-11.82	Peak	---	---
6	874.92	37.25	46.00	-8.75	32.76	4.49	Peak	---	---

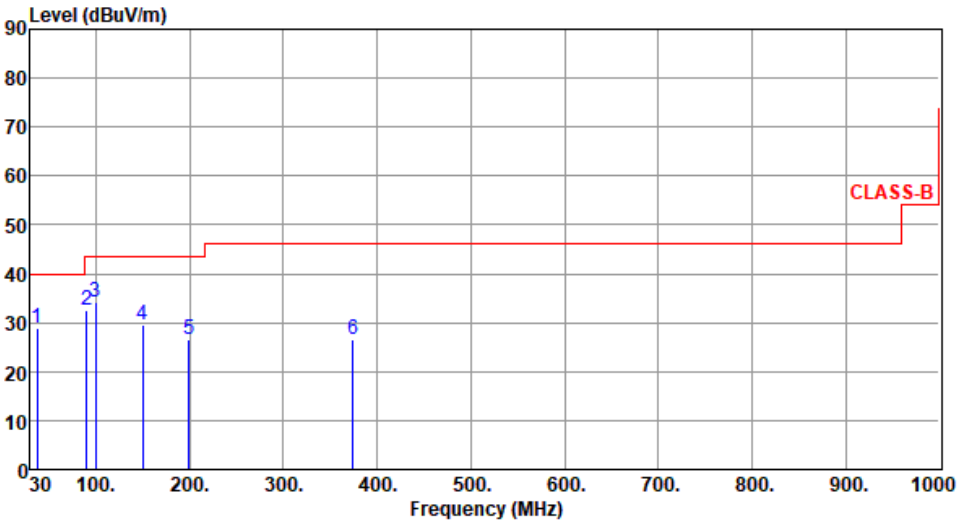
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

POE mode

Unwanted Emissions (Below 1GHz)

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

Test By :Brad Wu Temperature(℃):24 Humidity(%):63

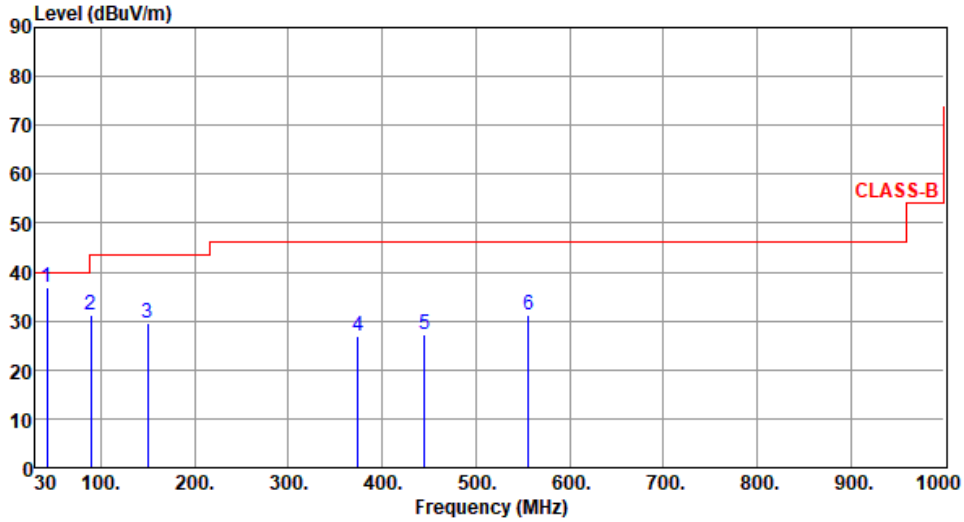


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	36.85	28.91	40.00	-11.09	38.57	-9.66	Peak	---	---
2	90.29	32.68	43.50	-10.82	47.42	-14.74	Peak	---	---
3	99.91	34.35	43.50	-9.15	47.91	-13.56	Peak	---	---
4	149.55	29.46	43.50	-14.04	38.19	-8.73	Peak	---	---
5	199.61	26.54	43.50	-16.96	38.35	-11.81	Peak	---	---
6	374.65	26.41	46.00	-19.59	32.62	-6.21	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	11g	Test Freq. (MHz)	2437
Polarization	Vertical		

Test By :Brad Wu Temperature(℃):24 Humidity(%):63



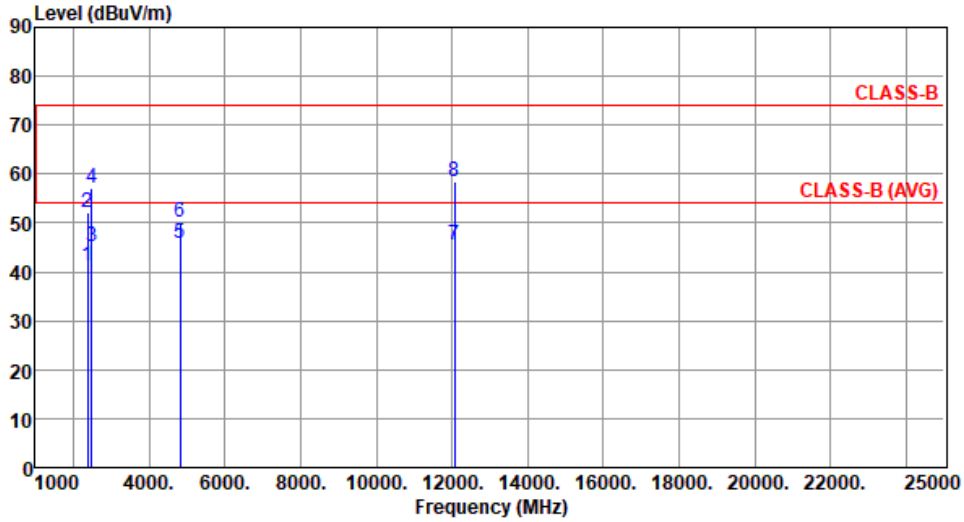
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	42.34	36.72	40.00	-3.28	45.60	-8.88	QP	100	8
2	89.44	31.24	43.50	-12.26	45.95	-14.71	Peak	---	---
3	149.85	29.63	43.50	-13.87	38.36	-8.73	Peak	---	---
4	374.62	26.95	46.00	-19.05	33.16	-6.21	Peak	---	---
5	445.44	27.15	46.00	-18.85	31.01	-3.86	Peak	---	---
6	555.84	31.29	46.00	-14.71	32.91	-1.62	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 :Akun Chung Temperature(℃):23 Humidity(%):66

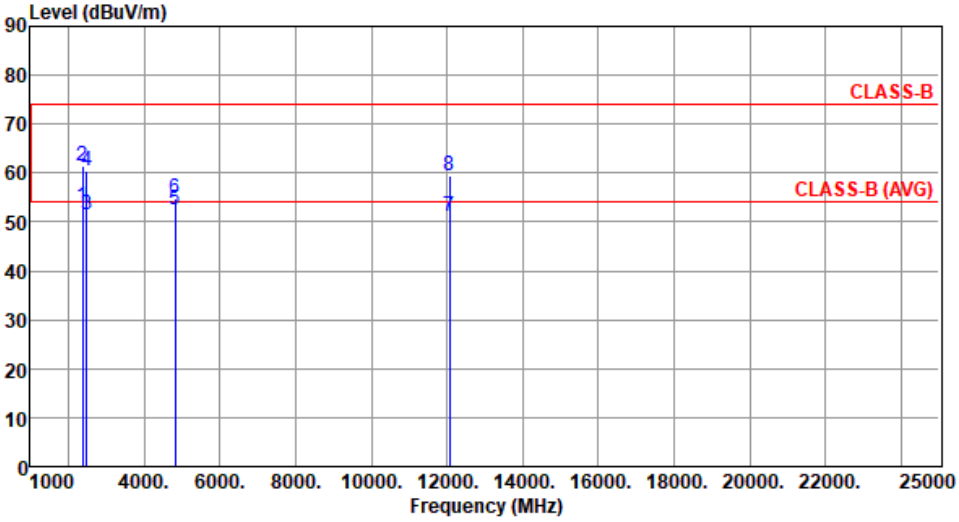


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	41.06	54.00	-12.94	42.55	-1.49	Average	291	355
2	2390.00	52.14	74.00	-21.86	53.63	-1.49	Peak	291	355
3	2496.00	45.15	54.00	-8.85	46.71	-1.56	Average	291	355
4	2496.00	57.24	74.00	-16.76	58.80	-1.56	Peak	291	355
5	4824.00	45.88	54.00	-8.12	40.61	5.27	Average	321	56
6	4824.00	50.14	74.00	-23.86	44.87	5.27	Peak	321	56
7	12060.00	45.36	54.00	-8.64	30.40	14.96	Average	100	59
8	12060.00	58.41	74.00	-15.59	43.45	14.96	Peak	100	59

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 :Akun Chung Temperature(℃):23 Humidity(%):66

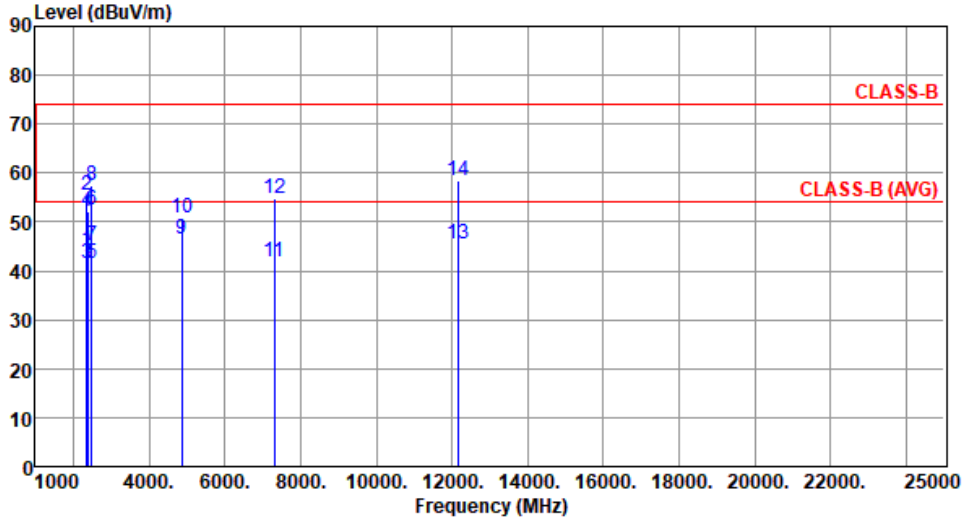


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	52.98	54.00	-1.02	54.47	-1.49	Average	320	229
2	2390.00	61.38	74.00	-12.62	62.87	-1.49	Peak	320	229
3	2496.00	51.42	54.00	-2.58	52.98	-1.56	Average	315	224
4	2496.00	60.45	74.00	-13.55	62.01	-1.56	Peak	315	224
5	4824.00	52.64	54.00	-1.36	47.37	5.27	Average	302	175
6	4824.00	54.90	74.00	-19.10	49.63	5.27	Peak	302	175
7	12060.00	51.09	54.00	-2.91	36.13	14.96	Average	320	75
8	12060.00	59.28	74.00	-14.72	44.32	14.96	Peak	320	75

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 :Akun Chung Temperature(℃):23 Humidity(%):66

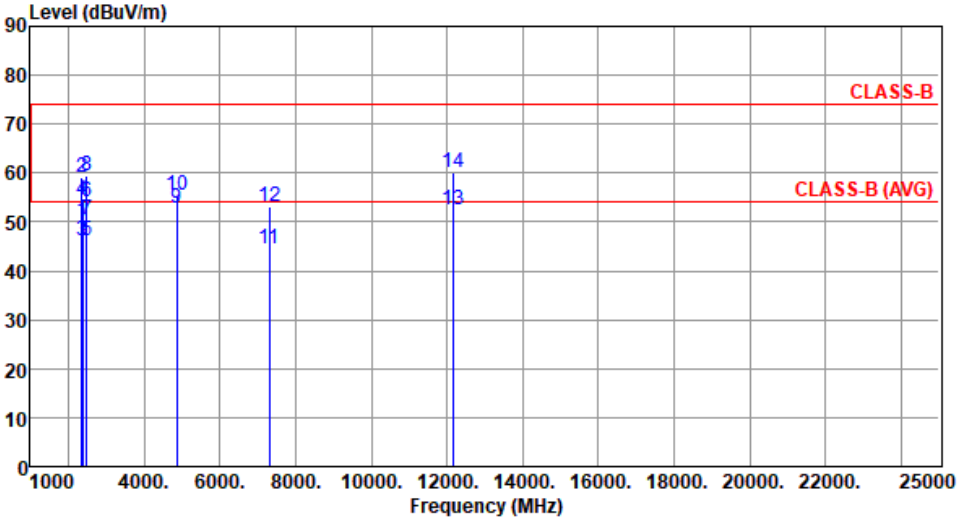


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2364.00	44.20	54.00	-9.80	45.67	-1.47	Average	294	352
2	2364.00	55.38	74.00	-18.62	56.85	-1.47	Peak	294	352
3	2390.00	41.37	54.00	-12.63	42.86	-1.49	Average	294	352
4	2390.00	52.27	74.00	-21.73	53.76	-1.49	Peak	294	352
5	2483.50	41.37	54.00	-12.63	42.95	-1.58	Average	294	352
6	2483.50	52.37	74.00	-21.63	53.95	-1.58	Peak	294	352
7	2496.00	45.32	54.00	-8.68	46.88	-1.56	Average	294	352
8	2496.00	57.31	74.00	-16.69	58.87	-1.56	Peak	294	352
9	4874.00	46.46	54.00	-7.54	41.13	5.33	Average	322	41
10	4874.00	50.77	74.00	-23.23	45.44	5.33	Peak	322	41
11	7311.00	41.87	54.00	-12.13	30.98	10.89	Average	100	255
12	7311.00	54.76	74.00	-19.24	43.87	10.89	Peak	100	255
13	12185.00	45.55	54.00	-8.45	30.66	14.89	Average	100	50
14	12185.00	58.55	74.00	-15.45	43.66	14.89	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	Vertical		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

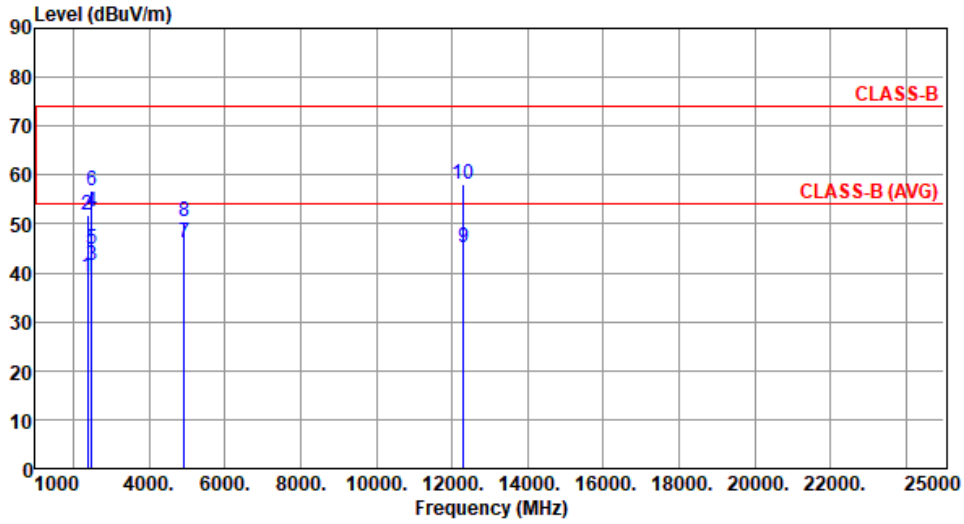


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2364.00	50.07	54.00	-3.93	51.54	-1.47	Average	317	222
2	2364.00	59.19	74.00	-14.81	60.66	-1.47	Peak	317	222
3	2390.00	46.27	54.00	-7.73	47.76	-1.49	Average	321	228
4	2390.00	54.45	74.00	-19.55	55.94	-1.49	Peak	321	228
5	2483.50	46.30	54.00	-7.70	47.88	-1.58	Average	321	228
6	2483.50	54.30	74.00	-19.70	55.88	-1.58	Peak	321	228
7	2496.00	50.31	54.00	-3.69	51.87	-1.56	Average	301	230
8	2496.00	59.58	74.00	-14.42	61.14	-1.56	Peak	301	230
9	4874.00	52.77	54.00	-1.23	47.44	5.33	Average	310	174
10	4874.00	55.47	74.00	-18.53	50.14	5.33	Peak	310	174
11	7311.00	44.48	54.00	-9.52	33.59	10.89	Average	102	161
12	7311.00	53.23	74.00	-20.77	42.34	10.89	Peak	102	161
13	12185.00	52.51	54.00	-1.49	37.62	14.89	Average	321	76
14	12185.00	60.14	74.00	-13.86	45.25	14.89	Peak	321	76

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 :Akun Chung Temperature(℃):23 Humidity(%):66

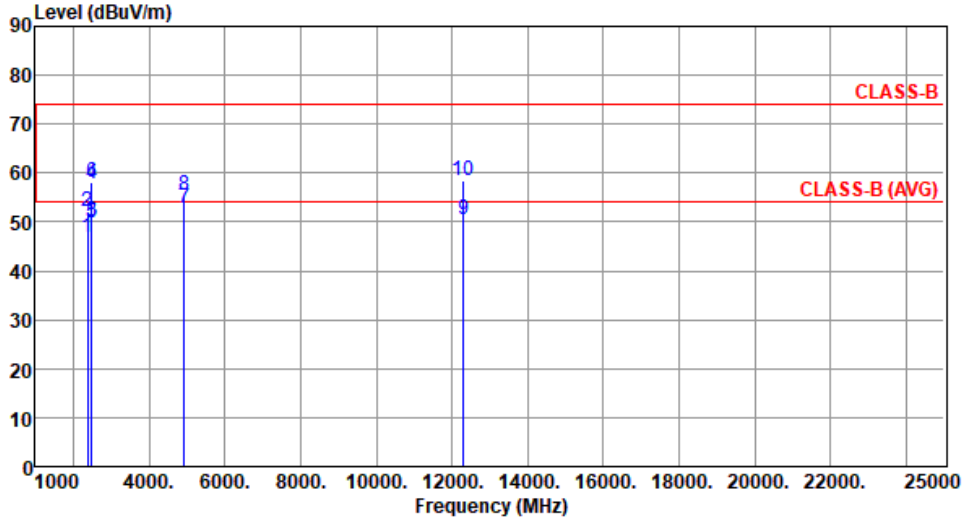


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2389.00	39.19	54.00	-14.81	40.68	-1.49	Average	291	355
2	2389.00	51.92	74.00	-22.08	53.41	-1.49	Peak	291	355
3	2483.50	41.58	54.00	-12.42	43.16	-1.58	Average	291	355
4	2483.50	52.46	74.00	-21.54	54.04	-1.58	Peak	291	355
5	2496.00	44.95	54.00	-9.05	46.51	-1.56	Average	291	355
6	2496.00	56.88	74.00	-17.12	58.44	-1.56	Peak	291	355
7	4924.00	46.25	54.00	-7.75	40.78	5.47	Average	326	55
8	4924.00	50.41	74.00	-23.59	44.94	5.47	Peak	326	55
9	12310.00	45.26	54.00	-8.74	30.61	14.65	Average	100	61
10	12310.00	58.19	74.00	-15.81	43.54	14.65	Peak	100	61

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 :Akun Chung Temperature(℃):23 Humidity(%):66



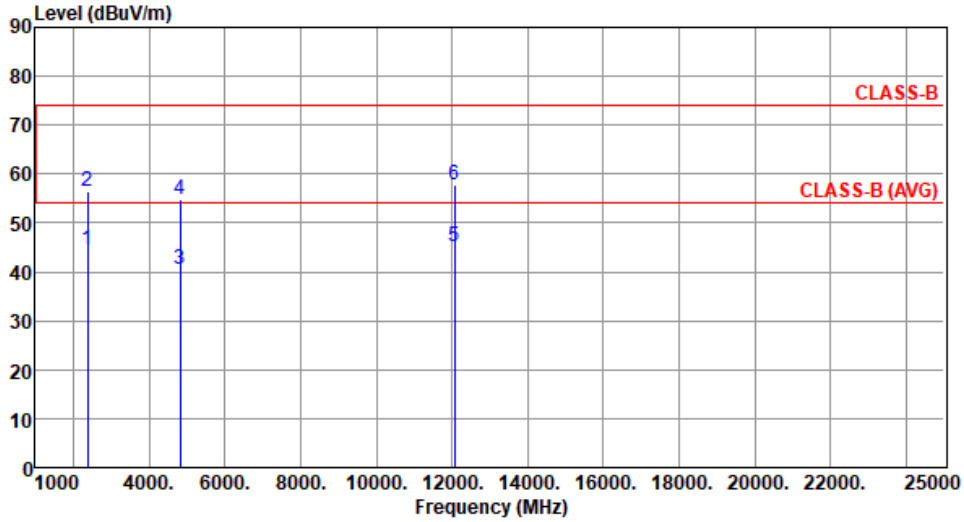
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2389.00	46.72	54.00	-7.28	48.21	-1.49	Average	319	153
2	2389.00	52.05	74.00	-21.95	53.54	-1.49	Peak	319	153
3	2483.50	50.08	54.00	-3.92	51.66	-1.58	Average	306	148
4	2483.50	57.86	74.00	-16.14	59.44	-1.58	Peak	306	148
5	2496.00	49.87	54.00	-4.13	51.43	-1.56	Average	318	223
6	2496.00	58.18	74.00	-15.82	59.74	-1.56	Peak	318	223
7	4924.00	52.91	54.00	-1.09	47.44	5.47	Average	275	174
8	4924.00	55.54	74.00	-18.46	50.07	5.47	Peak	275	174
9	12310.00	50.31	54.00	-3.69	35.66	14.65	Average	318	75
10	12310.00	58.60	74.00	-15.40	43.95	14.65	Peak	318	75

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 :Akun Chung Temperature(℃):23 Humidity(%):66

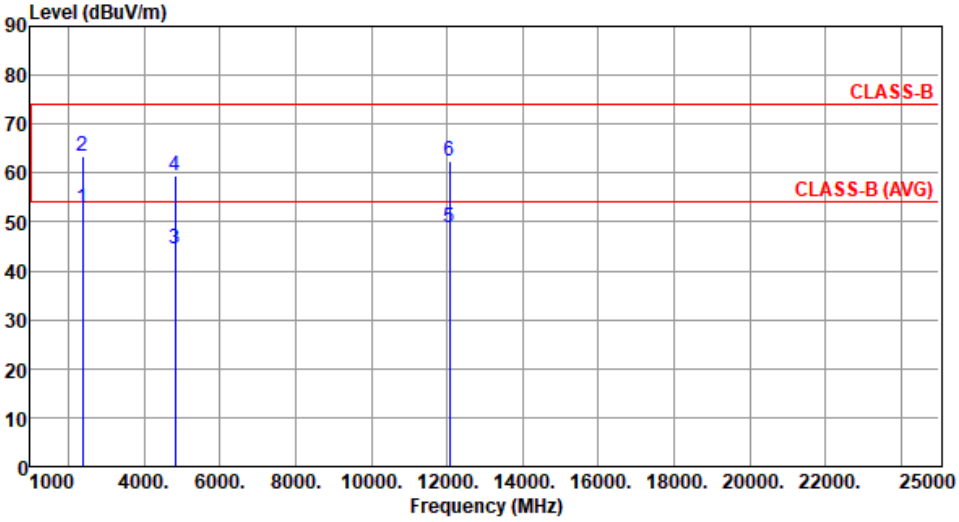


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	44.58	54.00	-9.42	46.07	-1.49	Average	308	345
2	2390.00	56.45	74.00	-17.55	57.94	-1.49	Peak	308	345
3	4824.00	40.39	54.00	-13.61	35.12	5.27	Average	315	42
4	4824.00	54.91	74.00	-19.09	49.64	5.27	Peak	315	42
5	12060.00	45.21	54.00	-8.79	30.25	14.96	Average	100	51
6	12060.00	57.66	74.00	-16.34	42.70	14.96	Peak	100	51

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 :Akun Chung Temperature(℃):23 Humidity(%):66

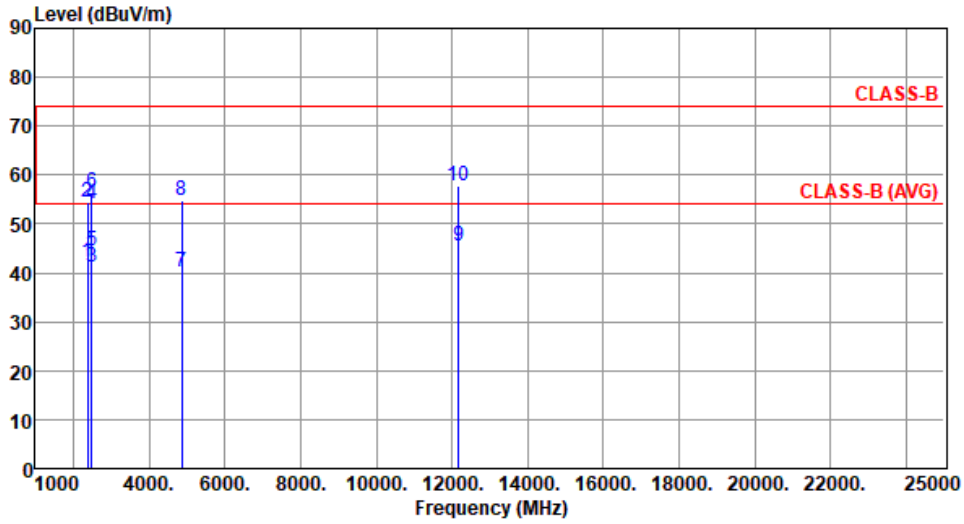


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	52.87	54.00	-1.13	54.36	-1.49	Average	315	224
2	2390.00	63.59	74.00	-10.41	65.08	-1.49	Peak	315	224
3	4824.00	44.42	54.00	-9.58	39.15	5.27	Average	305	177
4	4824.00	59.52	74.00	-14.48	54.25	5.27	Peak	305	177
5	12060.00	48.92	54.00	-5.08	33.96	14.96	Average	320	75
6	12060.00	62.52	74.00	-11.48	47.56	14.96	Peak	320	75

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 :Akun Chung Temperature(℃):23 Humidity(%):66

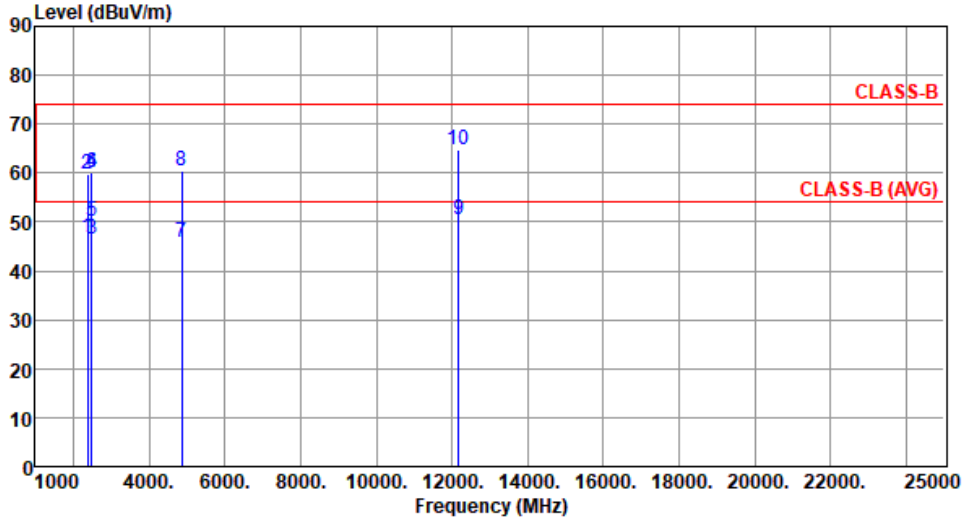


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	42.16	54.00	-11.84	43.65	-1.49	Average	305	344
2	2390.00	54.38	74.00	-19.62	55.87	-1.49	Peak	305	344
3	2483.50	41.08	54.00	-12.92	42.66	-1.58	Average	305	344
4	2483.50	54.19	74.00	-19.81	55.77	-1.58	Peak	305	344
5	2496.00	44.65	54.00	-9.35	46.21	-1.56	Average	288	348
6	2496.00	56.38	74.00	-17.62	57.94	-1.56	Peak	288	348
7	4874.00	40.21	54.00	-13.79	34.88	5.33	Average	317	39
8	4874.00	54.77	74.00	-19.23	49.44	5.33	Peak	317	39
9	12185.00	45.44	54.00	-8.56	30.55	14.89	Average	100	45
10	12185.00	57.85	74.00	-16.15	42.96	14.89	Peak	100	45

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 :Akun Chung Temperature(℃):23 Humidity(%):66

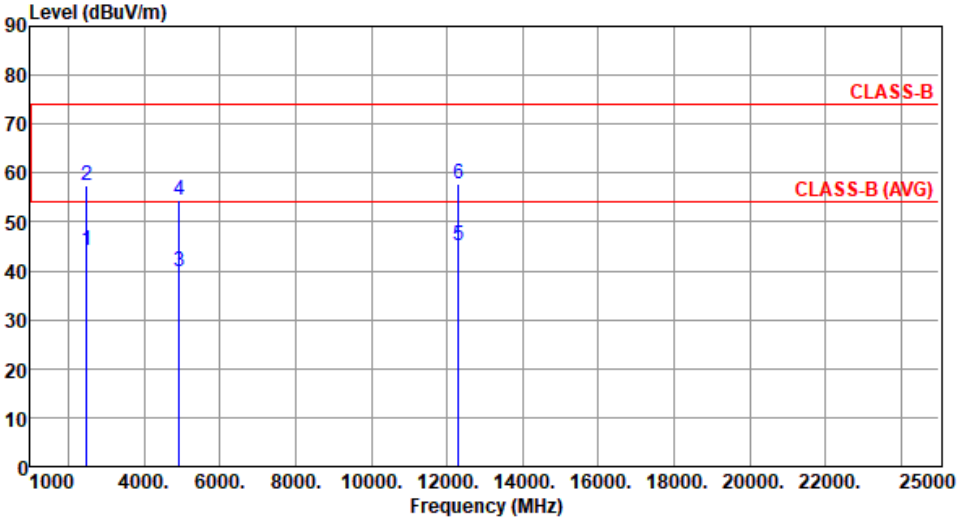


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	46.94	54.00	-7.06	48.43	-1.49	Average	291	218
2	2390.00	59.83	74.00	-14.17	61.32	-1.49	Peak	291	218
3	2483.50	46.57	54.00	-7.43	48.15	-1.58	Average	291	152
4	2483.50	60.19	74.00	-13.81	61.77	-1.58	Peak	291	152
5	2496.00	50.14	54.00	-3.86	51.70	-1.56	Average	311	214
6	2496.00	59.98	74.00	-14.02	61.54	-1.56	Peak	311	214
7	4874.00	45.89	54.00	-8.11	40.56	5.33	Average	307	175
8	4874.00	60.49	74.00	-13.51	55.16	5.33	Peak	307	175
9	12185.00	50.55	54.00	-3.45	35.66	14.89	Average	322	78
10	12185.00	64.74	74.00	-9.26	49.85	14.89	Peak	322	78

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 :Akun Chung Temperature(℃):23 Humidity(%):66

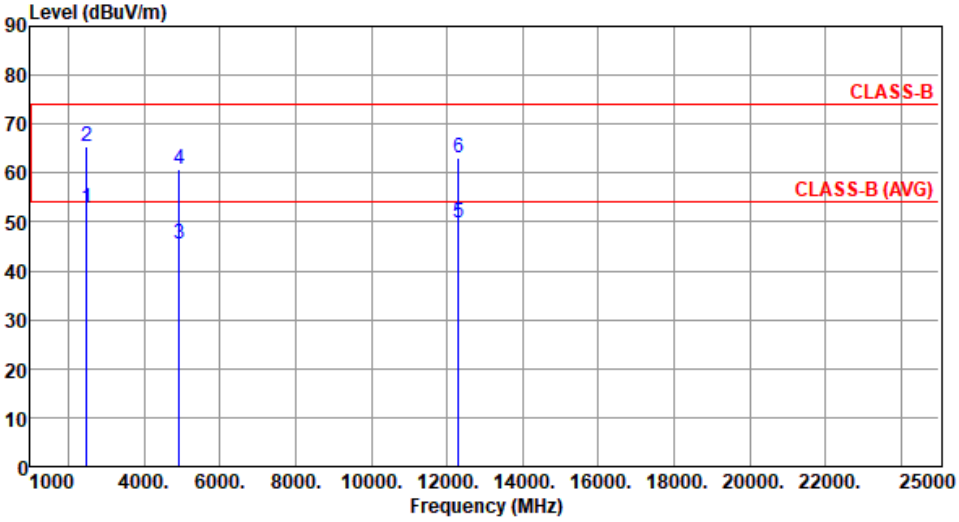


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	44.15	54.00	-9.85	45.73	-1.58	Average	301	349
2	2483.50	57.38	74.00	-16.62	58.96	-1.58	Peak	301	349
3	4924.00	39.96	54.00	-14.04	34.49	5.47	Average	321	45
4	4924.00	54.42	74.00	-19.58	48.95	5.47	Peak	321	45
5	12310.00	45.21	54.00	-8.79	30.56	14.65	Average	100	53
6	12310.00	57.69	74.00	-16.31	43.04	14.65	Peak	100	53

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 :Akun Chung Temperature(℃):23 Humidity(%):66



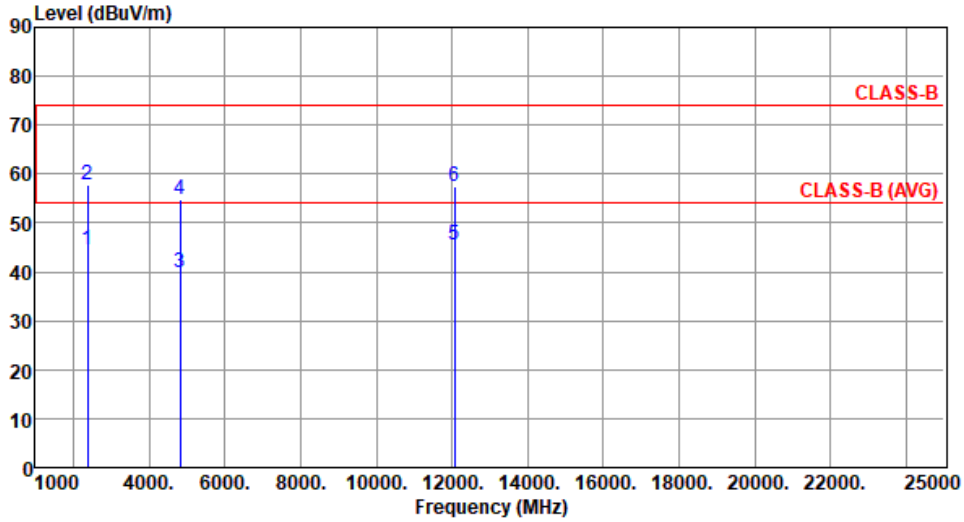
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	52.78	54.00	-1.22	54.36	-1.58	Average	322	226
2	2483.50	65.49	74.00	-8.51	67.07	-1.58	Peak	322	226
3	4924.00	45.59	54.00	-8.41	40.12	5.47	Average	303	171
4	4924.00	60.70	74.00	-13.30	55.23	5.47	Peak	303	171
5	12310.00	49.76	54.00	-4.24	35.11	14.65	Average	319	76
6	12310.00	63.08	74.00	-10.92	48.43	14.65	Peak	319	76

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

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

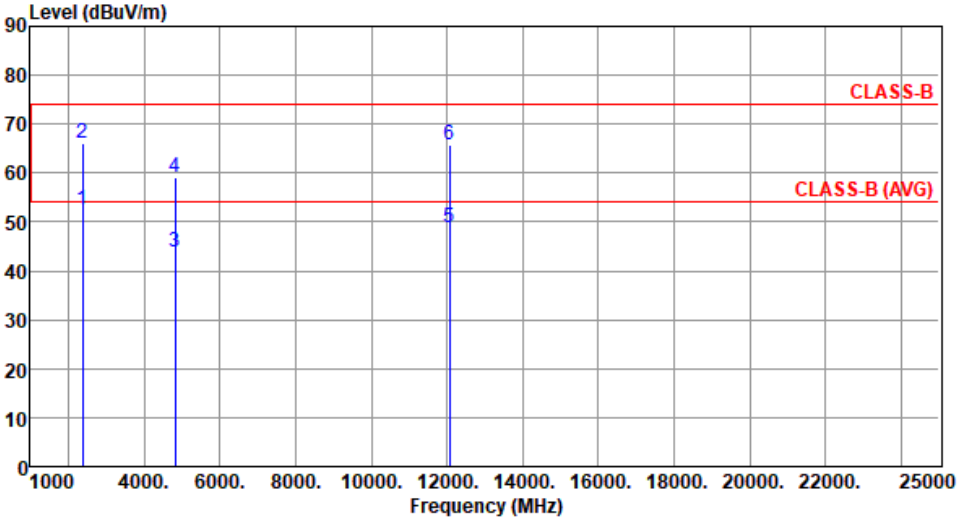


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	44.62	54.00	-9.38	46.11	-1.49	Average	304	359
2	2390.00	57.81	74.00	-16.19	59.30	-1.49	Peak	304	359
3	4824.00	39.98	54.00	-14.02	34.71	5.27	Average	322	45
4	4824.00	54.96	74.00	-19.04	49.69	5.27	Peak	322	45
5	12060.00	45.46	54.00	-8.54	30.50	14.96	Average	100	49
6	12060.00	57.58	74.00	-16.42	42.62	14.96	Peak	100	49

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	**Test Freq. (MHz)**	2412
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

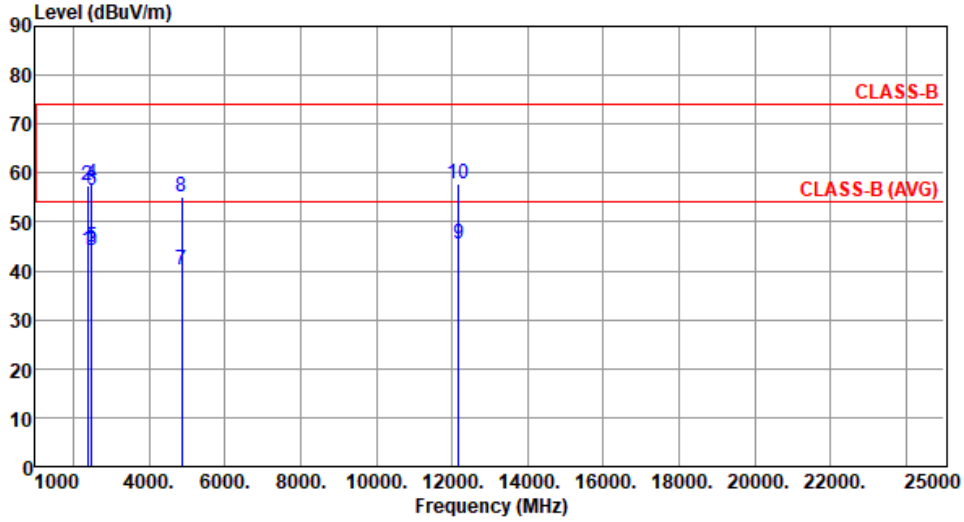


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	52.61	54.00	-1.39	54.10	-1.49	Average	321	220
2	2390.00	66.20	74.00	-7.80	67.69	-1.49	Peak	321	220
3	4824.00	43.77	54.00	-10.23	38.50	5.27	Average	284	172
4	4824.00	59.17	74.00	-14.83	53.90	5.27	Peak	284	172
5	12060.00	48.85	54.00	-5.15	33.89	14.96	Average	312	82
6	12060.00	65.61	74.00	-8.39	50.65	14.96	Peak	312	82

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	**Test Freq. (MHz)**	2437
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

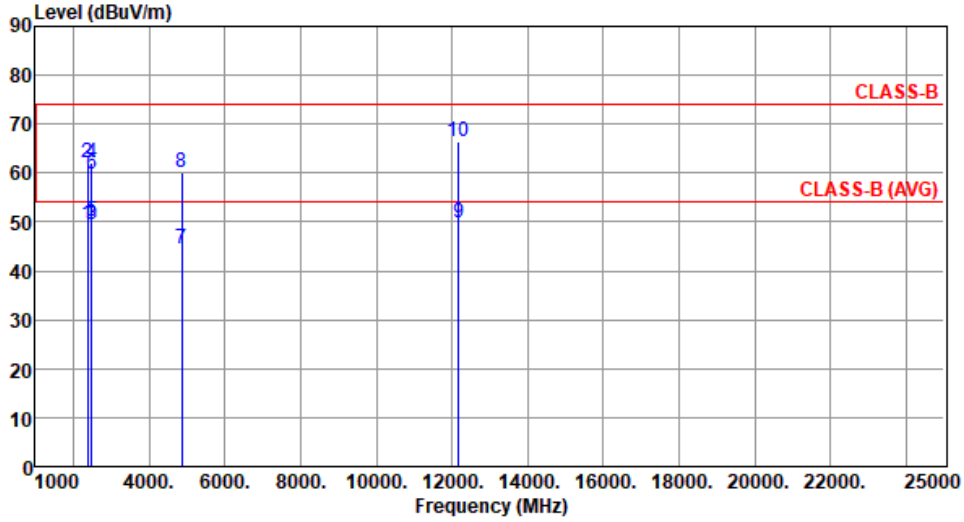


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	44.16	54.00	-9.84	45.65	-1.49	Average	301	355
2	2390.00	57.49	74.00	-16.51	58.98	-1.49	Peak	301	355
3	2483.50	44.19	54.00	-9.81	45.77	-1.58	Average	301	355
4	2483.50	57.75	74.00	-16.25	59.33	-1.58	Peak	301	355
5	2496.00	44.76	54.00	-9.24	46.32	-1.56	Average	277	341
6	2496.00	56.31	74.00	-17.69	57.87	-1.56	Peak	277	341
7	4874.00	40.10	54.00	-13.90	34.77	5.33	Average	320	40
8	4874.00	55.28	74.00	-18.72	49.95	5.33	Peak	320	40
9	12185.00	45.64	54.00	-8.36	30.75	14.89	Average	100	55
10	12185.00	57.64	74.00	-16.36	42.75	14.89	Peak	100	55

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	**Test Freq. (MHz)**	2437
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

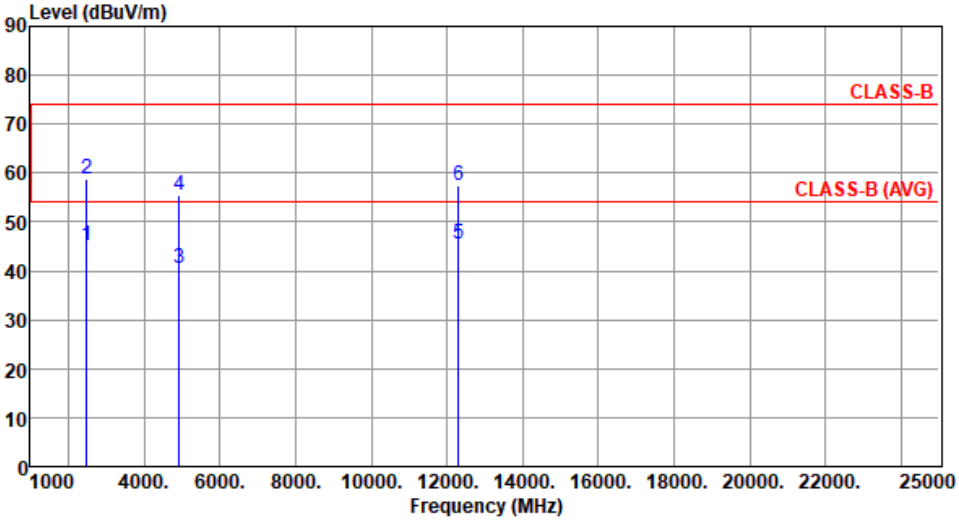


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	49.38	54.00	-4.62	50.87	-1.49	Average	322	227
2	2390.00	62.05	74.00	-11.95	63.54	-1.49	Peak	322	227
3	2483.50	49.37	54.00	-4.63	50.95	-1.58	Average	322	227
4	2483.50	62.08	74.00	-11.92	63.66	-1.58	Peak	322	227
5	2496.00	50.20	54.00	-3.80	51.76	-1.56	Average	312	224
6	2496.00	59.68	74.00	-14.32	61.24	-1.56	Peak	312	224
7	4874.00	44.57	54.00	-9.43	39.24	5.33	Average	292	176
8	4874.00	60.18	74.00	-13.82	54.85	5.33	Peak	292	176
9	12185.00	49.77	54.00	-4.23	34.88	14.89	Average	320	80
10	12185.00	66.44	74.00	-7.56	51.55	14.89	Peak	320	80

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	**Test Freq. (MHz)**	2462
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

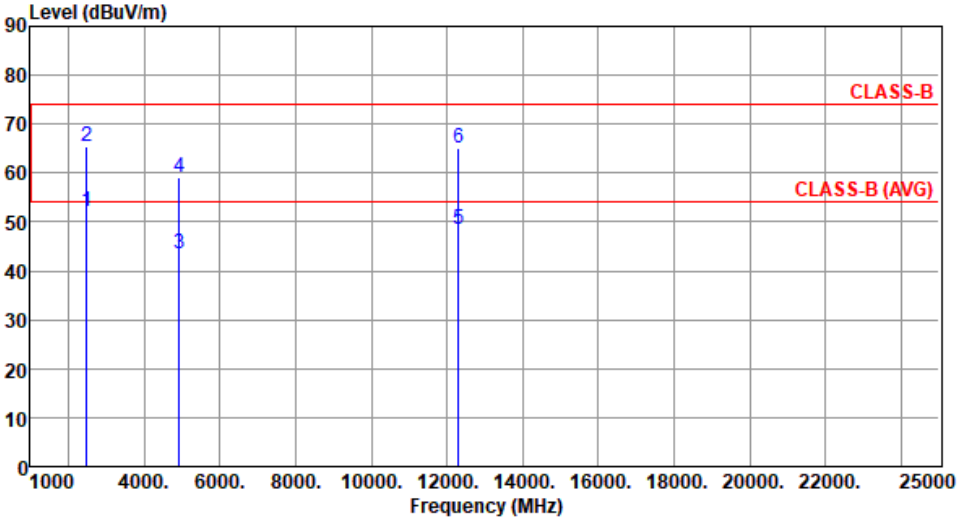


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	45.28	54.00	-8.72	46.86	-1.58	Average	305	349
2	2483.50	58.65	74.00	-15.35	60.23	-1.58	Peak	305	349
3	4924.00	40.36	54.00	-13.64	34.89	5.47	Average	311	51
4	4924.00	55.42	74.00	-18.58	49.95	5.47	Peak	311	51
5	12310.00	45.38	54.00	-8.62	30.73	14.65	Average	100	24
6	12310.00	57.45	74.00	-16.55	42.80	14.65	Peak	100	24

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	**Test Freq. (MHz)**	2462
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66



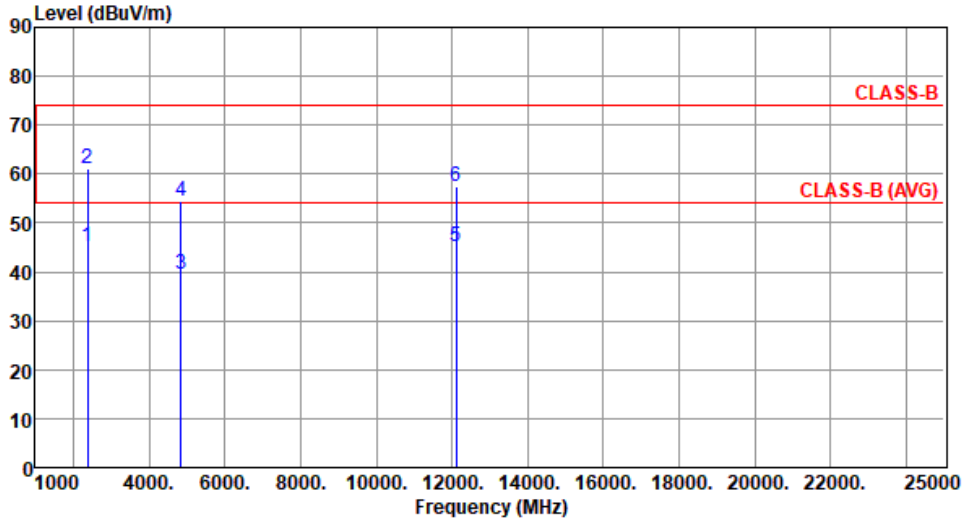
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	52.11	54.00	-1.89	53.69	-1.58	Average	292	45
2	2483.50	65.33	74.00	-8.67	66.91	-1.58	Peak	292	45
3	4924.00	43.59	54.00	-10.41	38.12	5.47	Average	291	177
4	4924.00	59.14	74.00	-14.86	53.67	5.47	Peak	291	177
5	12310.00	48.60	54.00	-5.40	33.95	14.65	Average	315	77
6	12310.00	65.09	74.00	-8.91	50.44	14.65	Peak	315	77

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

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

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

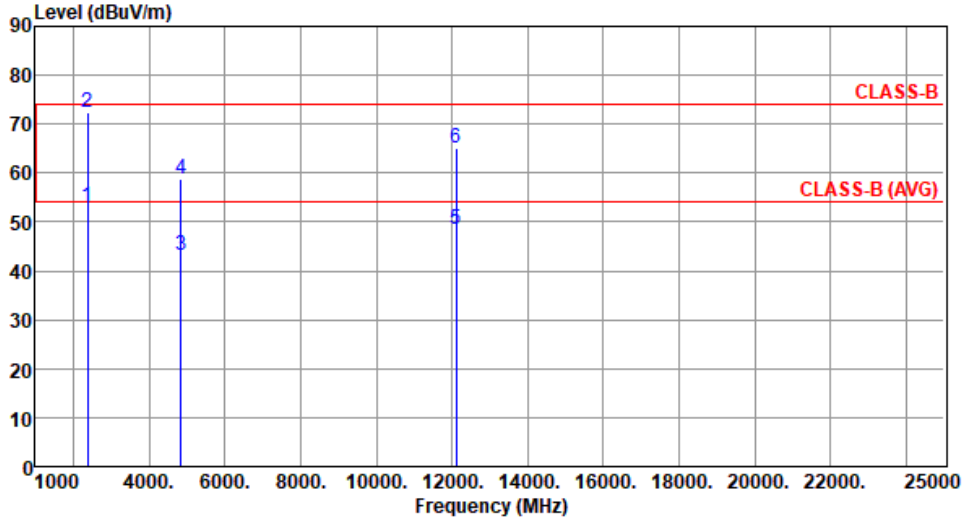


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	45.06	54.00	-8.94	46.55	-1.49	Average	306	352
2	2390.00	61.14	74.00	-12.86	62.63	-1.49	Peak	306	352
3	4844.00	39.41	54.00	-14.59	34.08	5.33	Average	326	39
4	4844.00	54.55	74.00	-19.45	49.22	5.33	Peak	326	39
5	12110.00	45.21	54.00	-8.79	30.11	15.10	Average	100	58
6	12110.00	57.29	74.00	-16.71	42.19	15.10	Peak	100	58

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	**Test Freq. (MHz)**	2422
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

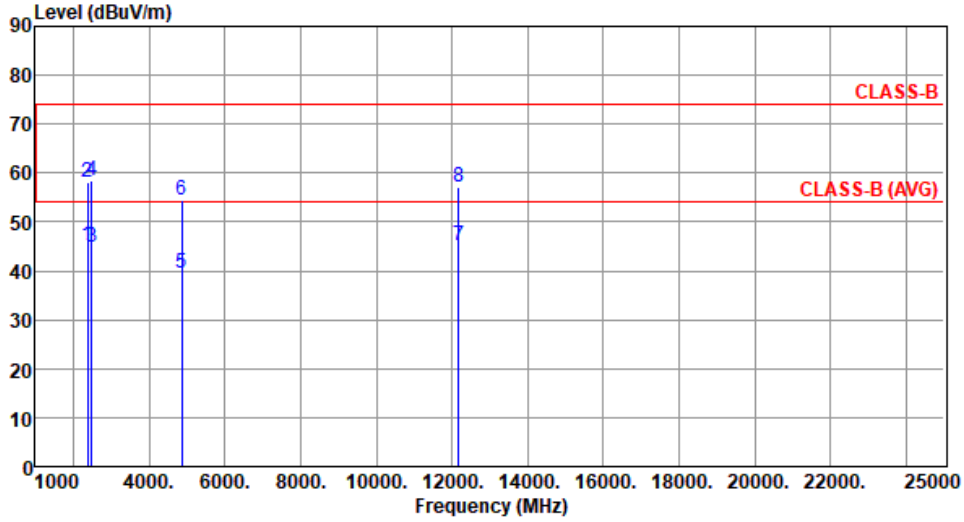


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	52.98	54.00	-1.02	54.47	-1.49	Average	319	224
2	2390.00	72.49	74.00	-1.51	73.98	-1.49	Peak	319	224
3	4844.00	43.24	54.00	-10.76	37.91	5.33	Average	289	175
4	4844.00	58.69	74.00	-15.31	53.36	5.33	Peak	289	175
5	12110.00	48.39	54.00	-5.61	33.29	15.10	Average	316	91
6	12110.00	65.22	74.00	-8.78	50.12	15.10	Peak	316	91

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	**Test Freq. (MHz)**	2437
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

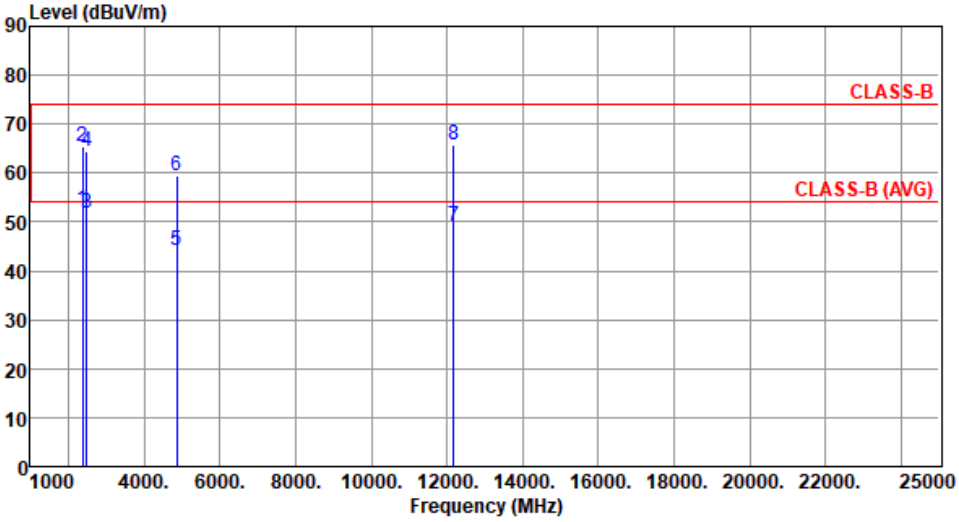


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	45.06	54.00	-8.94	46.55	-1.49	Average	305	349
2	2390.00	58.12	74.00	-15.88	59.61	-1.49	Peak	305	349
3	2483.50	44.85	54.00	-9.15	46.43	-1.58	Average	305	349
4	2483.50	58.52	74.00	-15.48	60.10	-1.58	Peak	305	349
5	4874.00	39.52	54.00	-14.48	34.19	5.33	Average	311	51
6	4874.00	54.61	74.00	-19.39	49.28	5.33	Peak	311	51
7	12185.00	45.29	54.00	-8.71	30.40	14.89	Average	100	48
8	12185.00	57.06	74.00	-16.94	42.17	14.89	Peak	100	48

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	**Test Freq. (MHz)**	2437
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

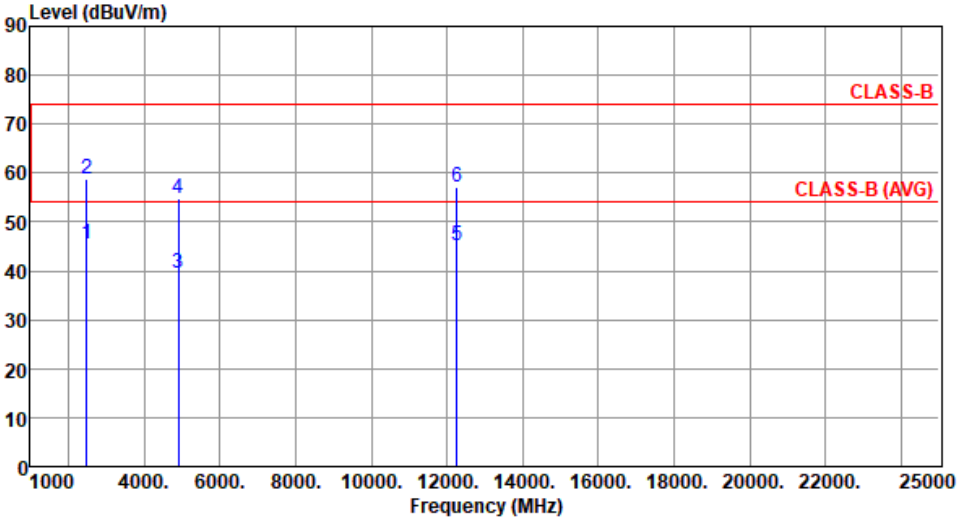


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2390.00	52.55	54.00	-1.45	54.04	-1.49	Average	277	228
2	2390.00	65.56	74.00	-8.44	67.05	-1.49	Peak	277	228
3	2483.50	51.66	54.00	-2.34	53.24	-1.58	Average	321	233
4	2483.50	64.32	74.00	-9.68	65.90	-1.58	Peak	321	233
5	4874.00	44.13	54.00	-9.87	38.80	5.33	Average	288	175
6	4874.00	59.58	74.00	-14.42	54.25	5.33	Peak	288	175
7	12185.00	49.21	54.00	-4.79	34.32	14.89	Average	315	91
8	12185.00	65.86	74.00	-8.14	50.97	14.89	Peak	315	91

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	**Test Freq. (MHz)**	2452
Polarization	Horizontal		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

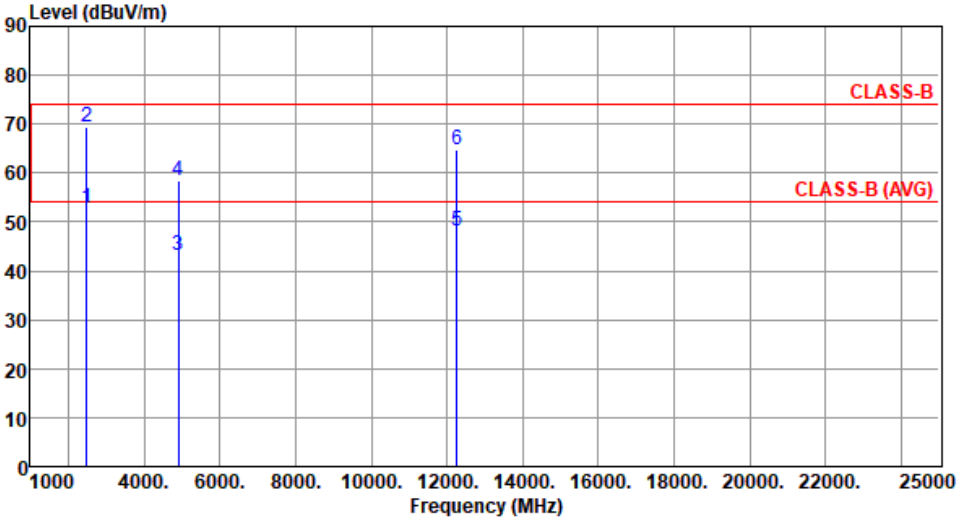


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	45.59	54.00	-8.41	47.17	-1.58	Average	309	338
2	2483.50	58.92	74.00	-15.08	60.50	-1.58	Peak	309	338
3	4904.00	39.52	54.00	-14.48	34.19	5.33	Average	304	29
4	4904.00	54.81	74.00	-19.19	49.48	5.33	Peak	304	29
5	12260.00	45.02	54.00	-8.98	30.28	14.74	Average	100	14
6	12260.00	57.18	74.00	-16.82	42.44	14.74	Peak	100	14

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	**Test Freq. (MHz)**	2452
Polarization	Vertical		

Test By :Akun Chung Temperature(℃):23 Humidity(%):66

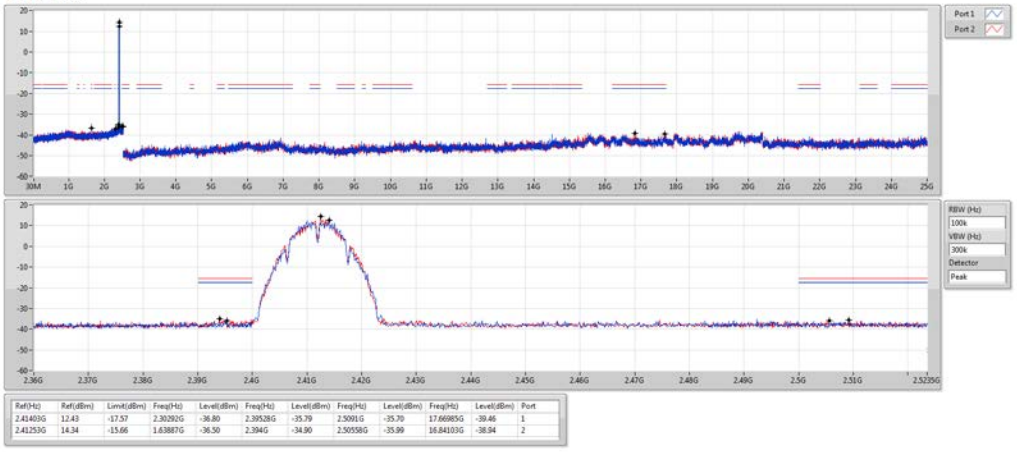


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB/m	Remark	ANT High cm	Turn Table deg
1	2483.50	52.97	54.00	-1.03	54.55	-1.58	Average	322	225
2	2483.50	69.41	74.00	-4.59	70.99	-1.58	Peak	322	225
3	4904.00	43.16	54.00	-10.84	37.83	5.33	Average	284	168
4	4904.00	58.52	74.00	-15.48	53.19	5.33	Peak	284	168
5	12260.00	48.21	54.00	-5.79	33.47	14.74	Average	311	62
6	12260.00	64.69	74.00	-9.31	49.95	14.74	Peak	311	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).

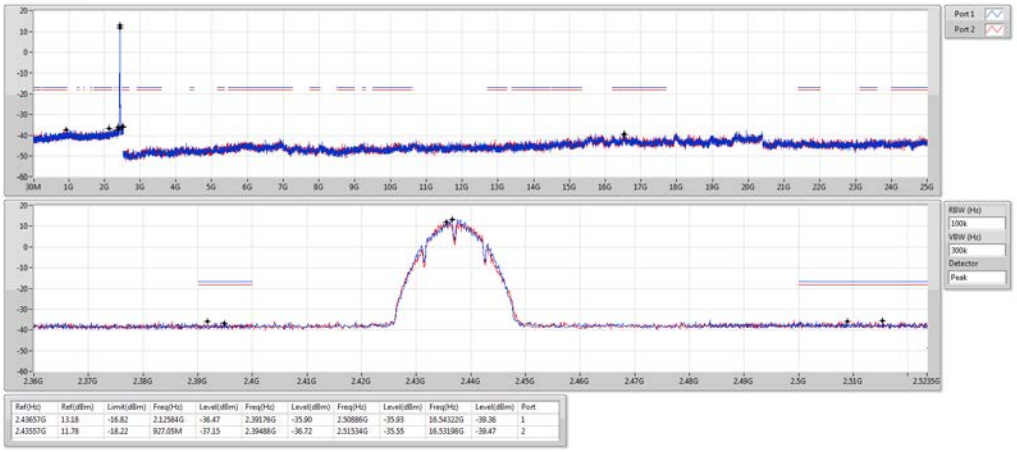
802.11b_Nss1,(1Mbps)_2TX **CSE NdB**

2412MHz



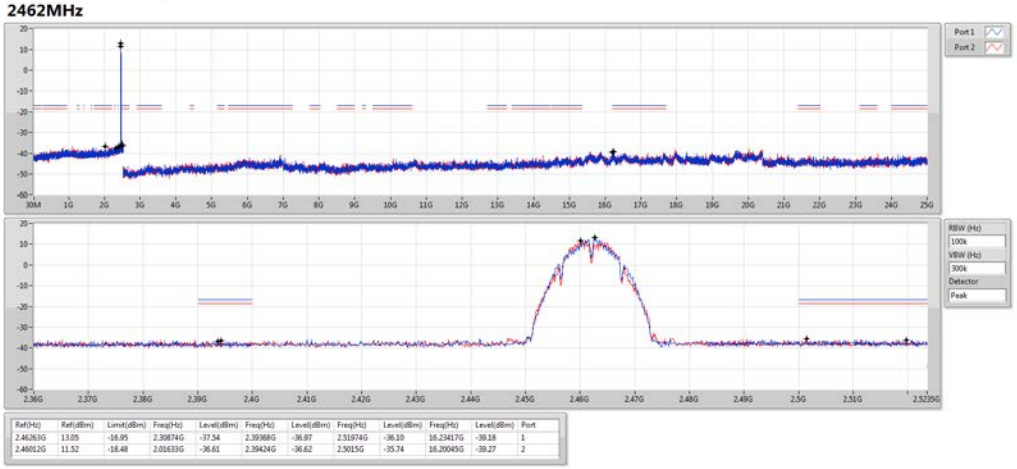
802.11b_Nss1,(1Mbps)_2TX **CSE NdB**

2437MHz



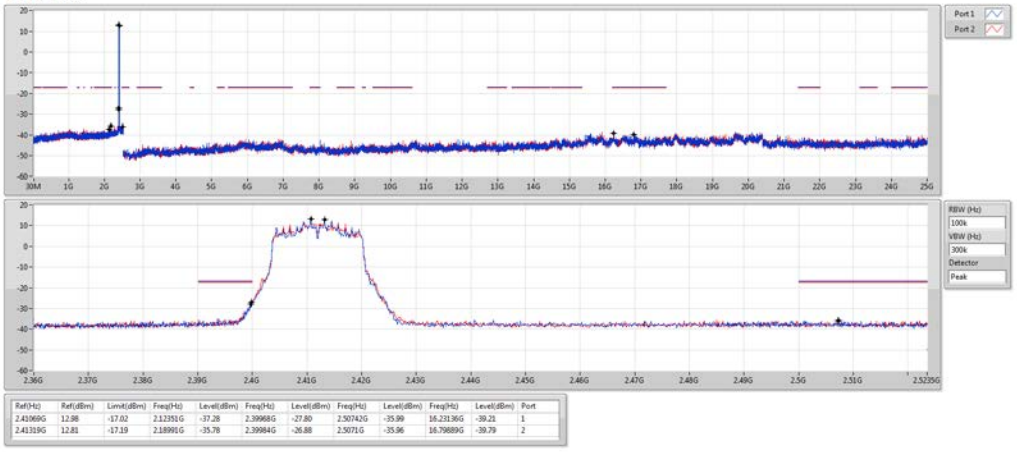
802.11b_Nss1,(1Mbps)_2TX **CSE NdB**

2462MHz



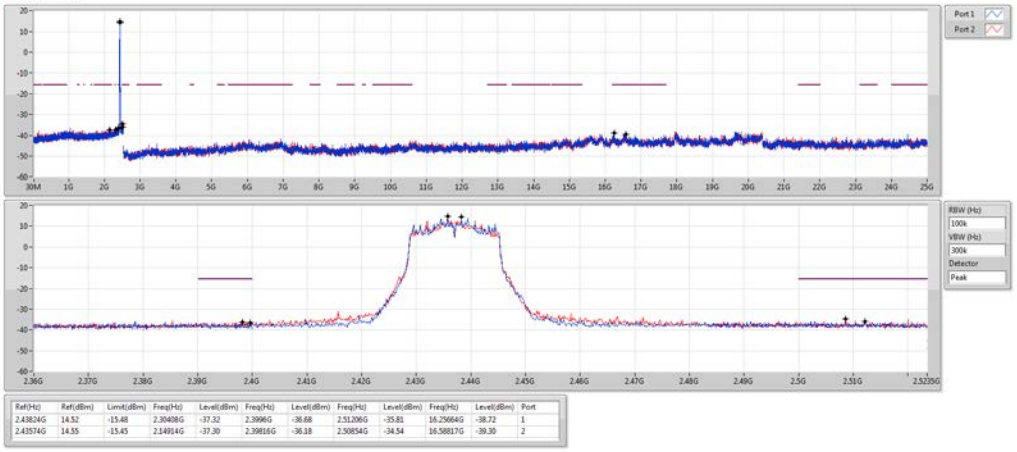
802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

2412MHz



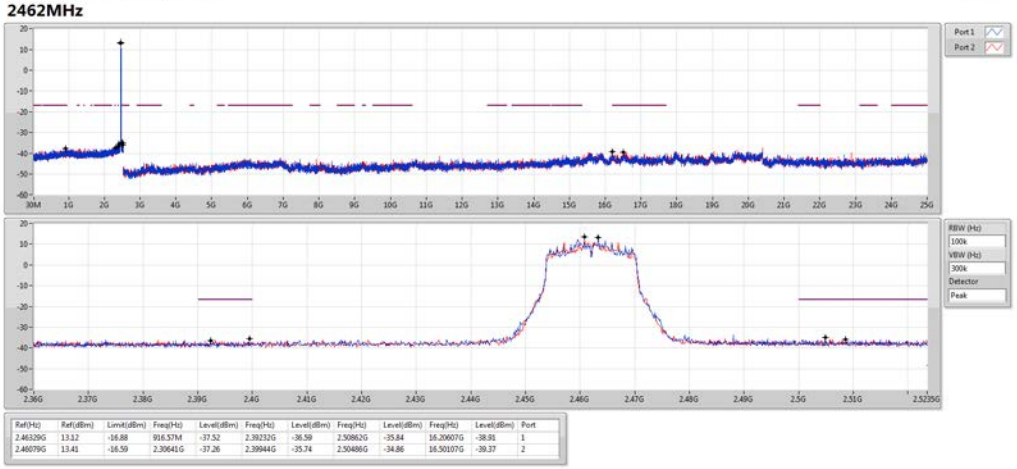
802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

2437MHz



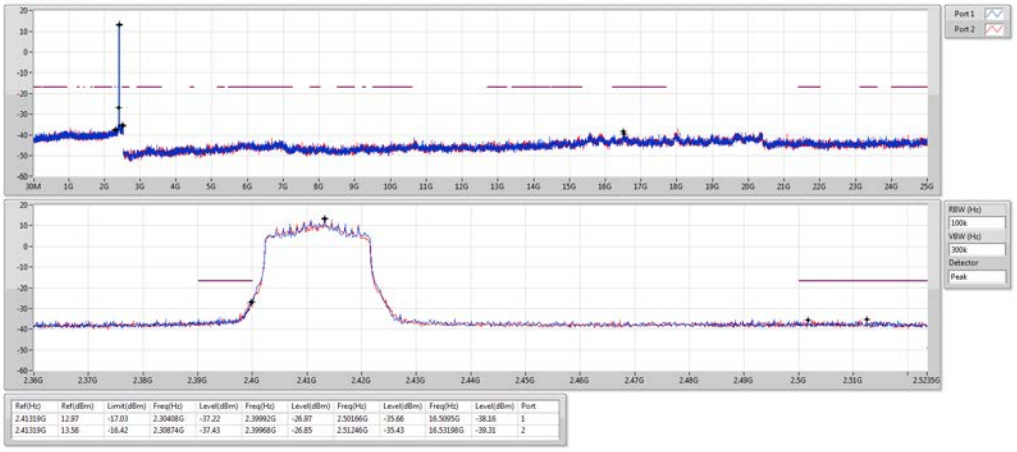
802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

2462MHz



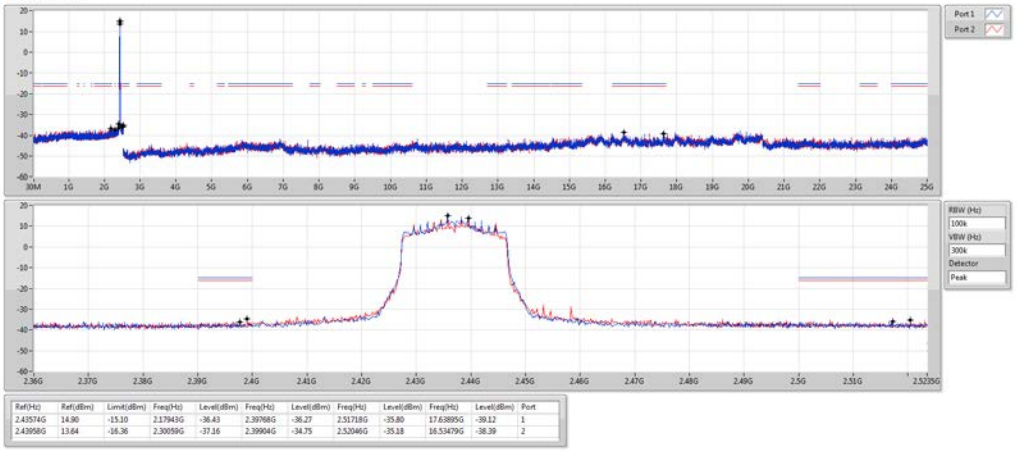
802.11ax HEW20_Nss1,(MCS0)_2TX **CSE NdB**

2412MHz



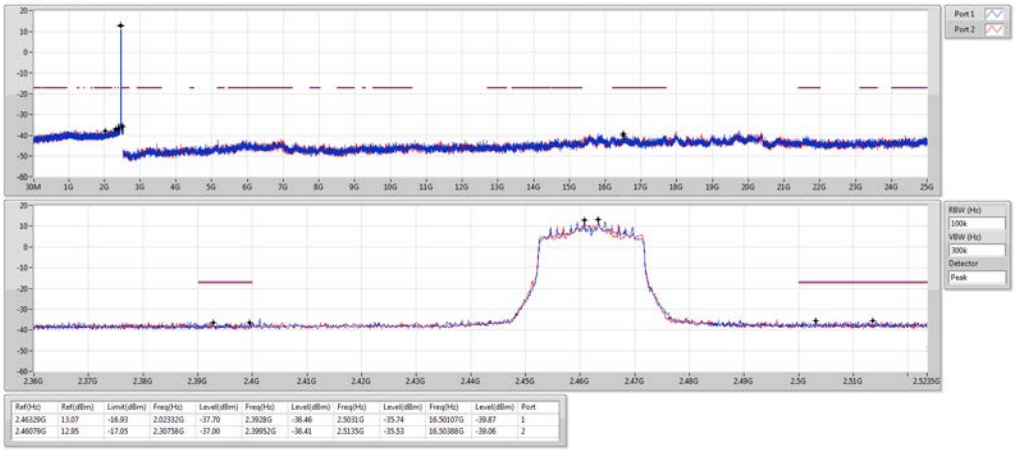
802.11ax HEW20_Nss1,(MCS0)_2TX **CSE NdB**

2437MHz



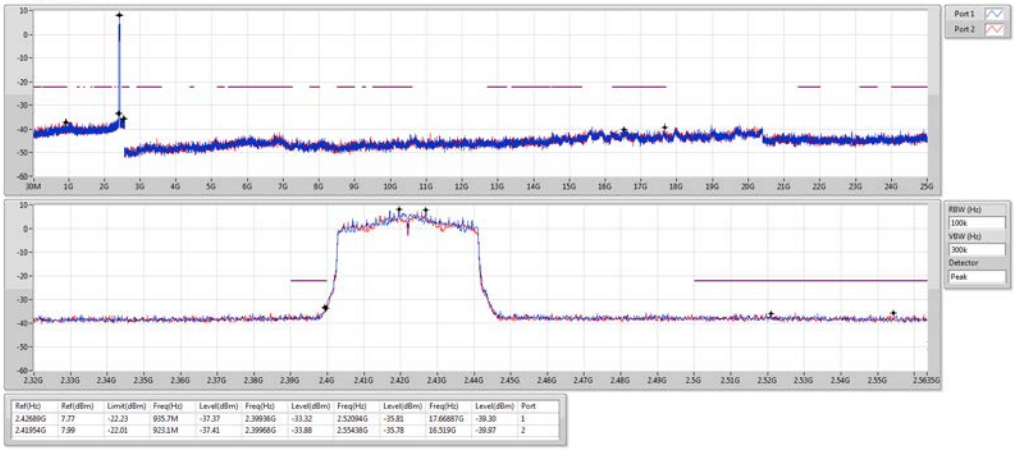
802.11ax HEW20_Nss1,(MCS0)_2TX **CSE NdB**

2462MHz



802.11ax HEW40_Nss1,(MCS0)_2TX **CSE NdB**

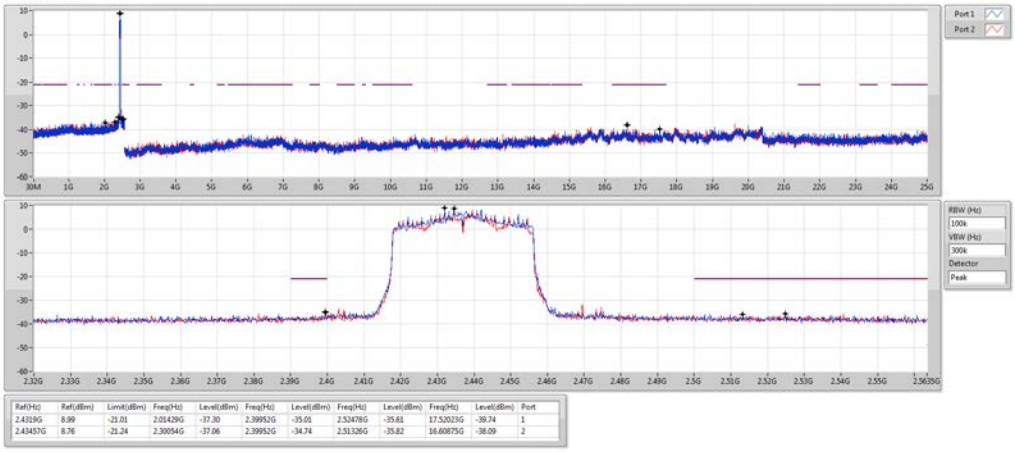
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.42689G	7.77	-22.23	935.7M	-37.37	2.39936G	-33.32	2.52094G	-35.81	17.66887G	-39.30	1
2.41954G	7.99	-22.01	923.1M	-37.41	2.39968G	-33.88	2.55438G	-35.78	16.519G	-39.97	2

802.11ax HEW40_Nss1,(MCS0)_2TX **CSE NdB**

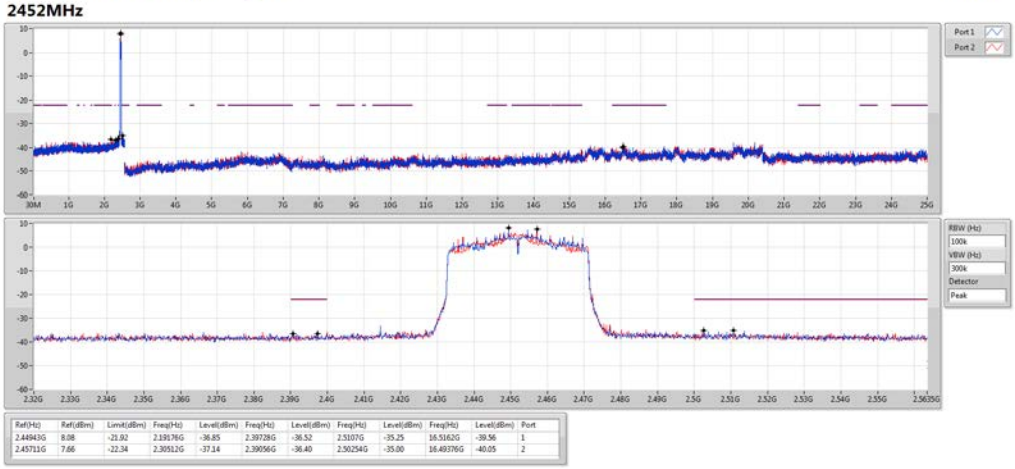
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4319G	8.99	-21.01	2.01429G	-37.30	2.39952G	-35.01	2.52478G	-35.61	17.52023G	-39.74	1
2.43457G	8.76	-21.24	2.30054G	-37.06	2.39952G	-34.74	2.51326G	-35.82	16.60875G	-38.09	2

802.11ax HEW40_Nss1,(MCS0)_2TX **CSE NdB**

2452MHz

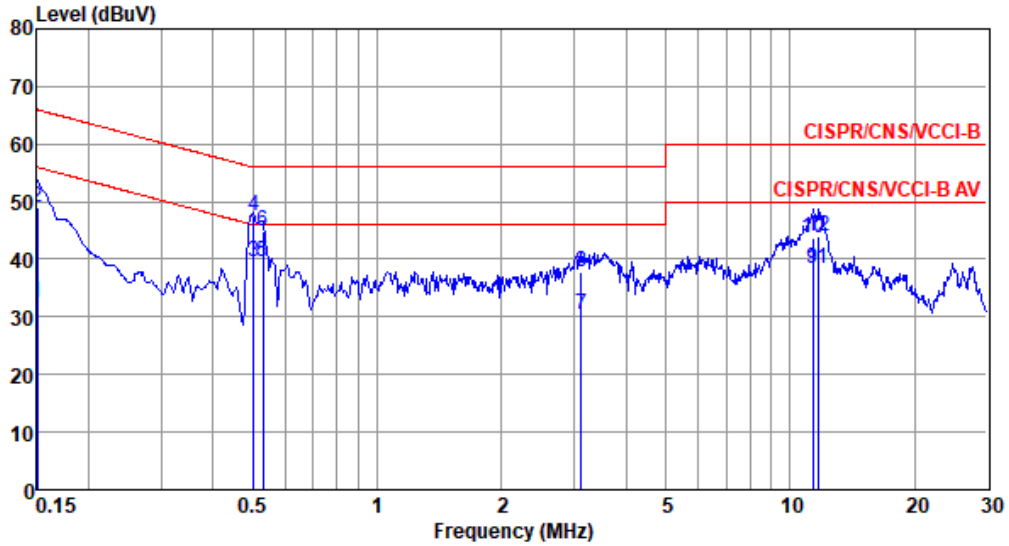


Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44943G	8.08	-21.92	2.19176G	-36.85	2.39728G	-36.52	2.5107G	-35.25	16.5162G	-39.56	1
2.45711G	7.66	-22.34	2.30512G	-37.14	2.39056G	-36.40	2.50254G	-35.00	16.49376G	-40.05	2

POE mode

Modulation Mode	11g	Test Freq. (MHz)	2437
Power Phase	Line		

Test by : Joe Liao Temperature: 20°C Humidity: 60%

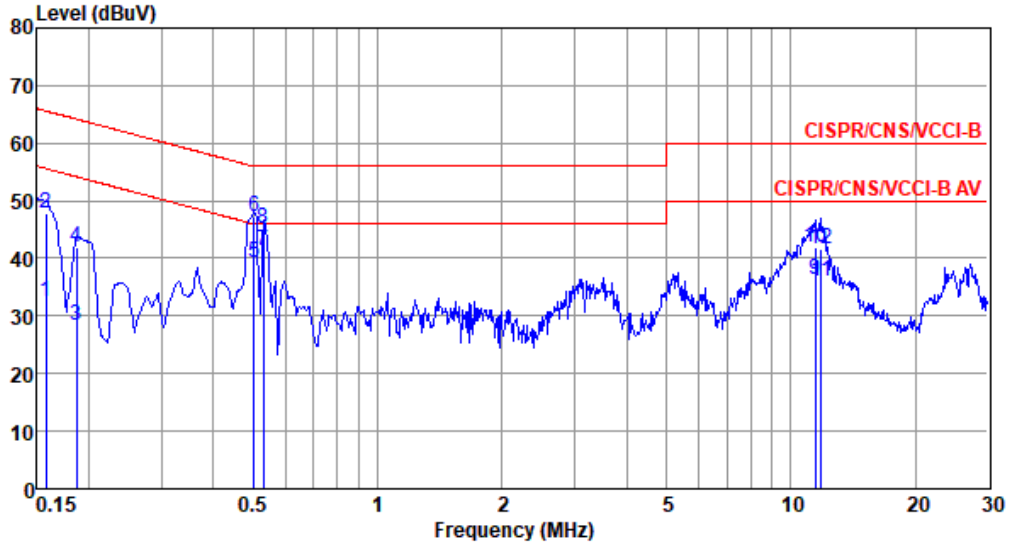


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.150	32.53	56.00	-23.47	22.85	9.60	0.08	0.00	Average
2	0.150	49.01	66.00	-16.99	39.33	9.60	0.08	0.00	QP
3*	0.502	39.67	46.00	-6.33	29.97	9.60	0.10	0.00	Average
4	0.502	47.45	56.00	-8.55	37.75	9.60	0.10	0.00	QP
5	0.529	39.61	46.00	-6.39	29.91	9.60	0.10	0.00	Average
6	0.529	44.77	56.00	-11.23	35.07	9.60	0.10	0.00	QP
7	3.123	30.40	46.00	-15.60	20.56	9.63	0.21	0.00	Average
8	3.123	37.92	56.00	-18.08	28.08	9.63	0.21	0.00	QP
9	11.377	38.35	50.00	-11.65	28.23	9.64	0.48	0.00	Average
10	11.377	43.63	60.00	-16.37	33.51	9.64	0.48	0.00	QP
11	11.683	38.50	50.00	-11.50	28.37	9.64	0.49	0.00	Average
12	11.683	43.84	60.00	-16.16	33.71	9.64	0.49	0.00	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	11g	**Test Freq. (MHz)**	2437
Power Phase	Neutral		

Test by : Joe Liao Temperature: 20°C Humidity: 60%



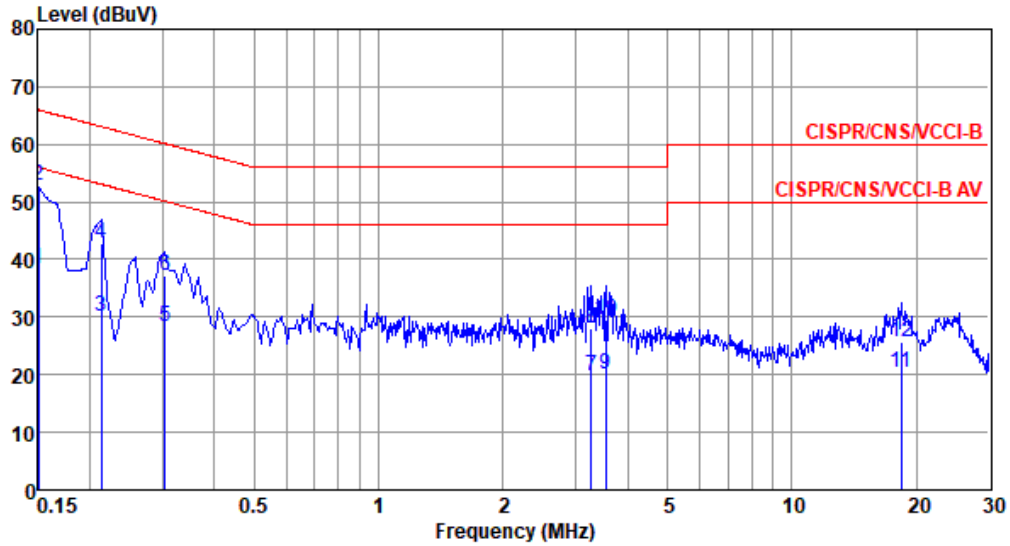
	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.157	32.56	55.60	-23.04	22.89	9.59	0.08	0.00	Average
2	0.157	47.88	65.60	-17.72	38.21	9.59	0.08	0.00	QP
3	0.186	28.23	54.20	-25.97	18.56	9.59	0.08	0.00	Average
4	0.186	41.93	64.20	-22.27	32.26	9.59	0.08	0.00	QP
5	0.502	39.40	46.00	-6.60	29.72	9.58	0.10	0.00	Average
6	0.502	47.28	56.00	-8.72	37.60	9.58	0.10	0.00	QP
7*	0.529	41.21	46.00	-4.79	31.53	9.58	0.10	0.00	Average
8	0.529	45.24	56.00	-10.76	35.56	9.58	0.10	0.00	QP
9	11.438	36.37	50.00	-13.63	26.22	9.66	0.49	0.00	Average
10	11.438	42.01	60.00	-17.99	31.86	9.66	0.49	0.00	QP
11	11.870	36.08	50.00	-13.92	25.92	9.66	0.50	0.00	Average
12	11.870	41.66	60.00	-18.34	31.50	9.66	0.50	0.00	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).

Adapter mode

Modulation Mode	11g	Test Freq. (MHz)	2437
Power Phase	Line		

Test by : Joe Liao Temperature: 20°C Humidity: 60%

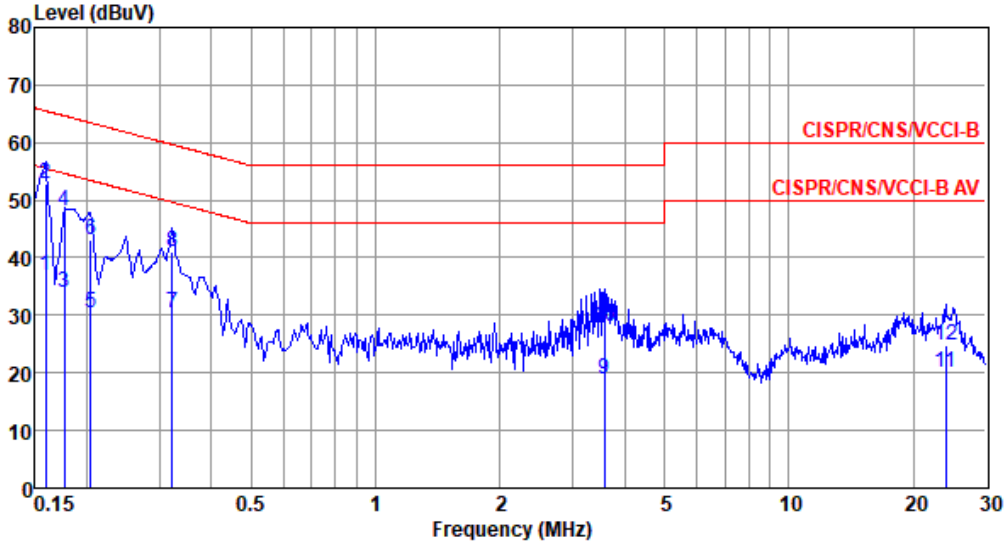


	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.150	38.27	56.00	-17.73	28.39	9.60	0.08	0.20	Average
2*	0.150	52.73	66.00	-13.27	42.85	9.60	0.08	0.20	QP
3	0.213	30.24	53.10	-22.86	20.32	9.61	0.08	0.23	Average
4	0.213	42.83	63.10	-20.27	32.91	9.61	0.08	0.23	QP
5	0.303	28.33	50.15	-21.82	18.35	9.60	0.08	0.30	Average
6	0.303	37.24	60.15	-22.91	27.26	9.60	0.08	0.30	QP
7	3.276	19.70	46.00	-26.30	9.45	9.63	0.21	0.41	Average
8	3.276	27.95	56.00	-28.05	17.70	9.63	0.21	0.41	QP
9	3.547	20.08	46.00	-25.92	9.83	9.63	0.21	0.41	Average
10	3.547	29.51	56.00	-26.49	19.26	9.63	0.21	0.41	QP
11	18.426	20.45	50.00	-29.55	9.61	9.60	0.63	0.61	Average
12	18.426	25.72	60.00	-34.28	14.88	9.60	0.63	0.61	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	11g	**Test Freq. (MHz)**	2437
Power Phase	Neutral		

Test by : Joe Liao Temperature: 20°C Humidity: 60%



	Freq	Level	Limit Line	Over Limit	Read Level	Factor	Cable loss	Aux	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	dB	
1	0.159	36.95	55.52	-18.57	27.12	9.59	0.08	0.16	Average
2*	0.159	52.80	65.52	-12.72	42.97	9.59	0.08	0.16	QP
3	0.177	33.83	54.64	-20.81	23.99	9.59	0.08	0.17	Average
4	0.177	48.11	64.64	-16.53	38.27	9.59	0.08	0.17	QP
5	0.204	30.39	53.45	-23.06	20.54	9.59	0.08	0.18	Average
6	0.204	43.06	63.45	-20.39	33.21	9.59	0.08	0.18	QP
7	0.322	30.34	49.66	-19.32	20.49	9.58	0.08	0.19	Average
8	0.322	41.17	59.66	-18.49	31.32	9.58	0.08	0.19	QP
9	3.584	19.03	46.00	-26.97	8.88	9.61	0.21	0.33	Average
10	3.584	28.14	56.00	-27.86	17.99	9.61	0.21	0.33	QP
11	24.015	19.99	50.00	-30.01	9.14	9.66	0.68	0.51	Average
12	24.015	24.94	60.00	-35.06	14.09	9.66	0.68	0.51	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).